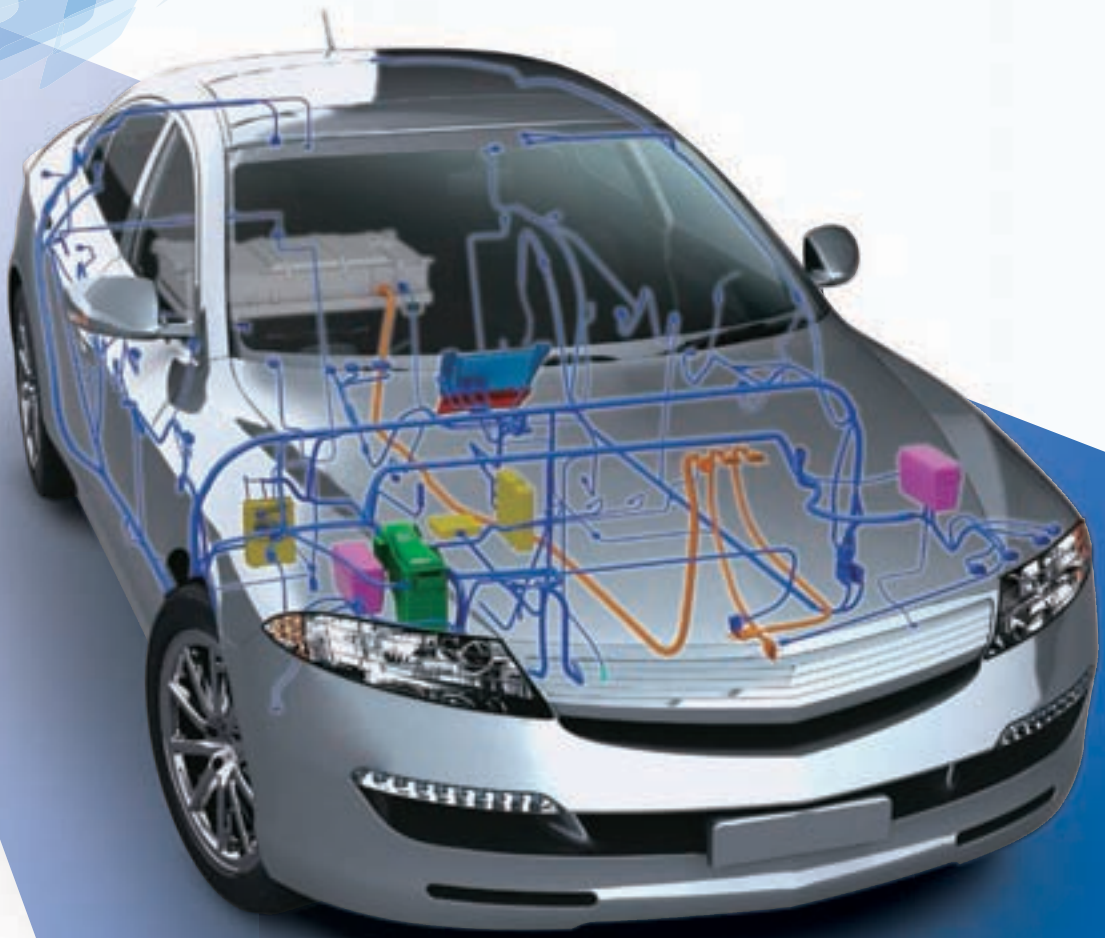
Thanks 100th Anniversary Connect with the Best

CONNECTORS FOR AUTOMOBILES

自動車用コネクタ



住友電装

SUMITOMO ELECTRIC GROUP

CONTENTS

unsealed／sealed 非防水／防水	Connector Series コネクタシリーズ	Terminal Tab Size 端子サイズ		No. of Way Variation 極数バリエーション	Applicable Cable Size 適用電線サイズ	Page 掲載頁	Contact Resistance 接触抵抗（圧着部を含む）	Leak Current リーク電流	Insulation Resistance 絶縁抵抗	Seal シール性	Material 材質
unsealed	TS	0.64 (025)		2, 5, 10, 14, 16, 19, ,22, 24, 28, 32, 36, ,40	0.13 - 0.5	A-02	8mΩ max.(initial) 16mΩ max.(after durability tests)	3mA max.	100MΩ min.	—	ハウジング Housing／PBT ターミナル Terminal／Brass, Heat-Resistant Copper Alloy
		1.5 (060)		2, 4, 8, 12	0.13 - 2.0	A-07	3mΩ max.(initial) 10mΩ max.(after durability tests)				
		2.3 (090)		2, 6, 8, 9, 10, 11, 12, 13, 16, 20	0.22 - 2.0	A-10					ハウジング Housing／PBT, PA6T ターミナル Terminal／Brass, Heat-Resistant Copper Alloy
		4.8 (187)		1, 2, 3, 4, 6, 8, 10	0.3 - 3.0	A-14					
		8.0 (312)		1, 2, 3, 4	0.5 - 8.0	A-18					
		Hybrid	0.64+1.5	12, 18, 20	—	A-20	8mΩ max.(initial) 16mΩ max.(after durability tests)				ハウジング Housing／PBT ターミナル Terminal／Brass, Heat-Resistant Copper Alloy
			0.64+2.3	17, 18, 20	—	A-21					
			0.64+4.8	20	—	A-22					
			2.3+4.8	14, 15, 20	—	A-22	3mΩ max.(initial) 10mΩ max.(after durability tests)				
		PCB	0.64	16, 33, 36, 56, 60, 68	—	A-24	8mΩ max.(initial) 16mΩ max.(after durability tests)				ハウジング Housing／PBT, SPS ターミナル Terminal／Brass
			0.64+1.5	20	—	A-26	8mΩ max.(initial) 16mΩ max.(after durability tests)				ハウジング Housing／LCP ターミナル Terminal／Brass
	HE	0.64 (025)		2, 3, 4, 6, 7, 10, 12, 16, 20, 24, 34	0.22 - 0.75	C-02	5mΩ max.(initial) 10mΩ max.(after durability tests)	1mA max.	100MΩ min.	—	ハウジング Housing／PBT ターミナル Terminal／Brass, Heat-Resistant Copper Alloy
		1.0 (040)		2, 5, 6, 8, 13, 17, 21	0.22 - 0.85	C-06					
		2.3 (090)		2, 3, 4, 5, 6, 8, 10, 14, 16, 20	0.3 - 2.0	C-09	3mΩ max.(initial) 6mΩ max.(after durability tests)				
		4.8 (187)		2, 4, 5	0.3 - 3.0	C-12					
		9.5 (375)		1, 2	2.0 - 10.0	C-14	2mΩ max.(initial) 4mΩ max.(after durability tests)				
		Hybrid	0.64+2.3	12, 13, 18, 20, 23, 28	—	C-16	5mΩ max.(initial) 10mΩ max.(after durability tests)				
			1.0+2.3	9, 10, 14, 23	—	C-18					
			1.0+4.8	12, 14	—	C-19					
			2.3+4.8	8, 14, 16, 18, 20	—	C-20	3mΩ max.(initial) 6mΩ max.(after durability tests)				
			4.8+8.0	6	—	C-21					
		PCB	1.0	13	—	C-22	5mΩ max.(initial) 10mΩ max.(after durability tests)				ハウジング Housing／PBTG30 ターミナル Terminal／Brass
			1.0+2.3	23	—	C-22					
			1.0+4.8	14	—	C-23					
			2.3	6	—	C-23	3mΩ max.(initial) 6mΩ max.(after durability tests)				
	NH	0.64 (025)		3, 4, 8, 10, 12, 16, 24, 32, 40	0.22 - 0.75	F-02	10mΩ max.(initial) 30mΩ max.(after durability tests)	1mA max.	100MΩ min.	—	ハウジング Housing／PBT ターミナル Terminal／Brass, Heat-Resistant Copper Alloy
		Hybrid	0.64+2.3	20	—	F-07					
	SL	1.5 (060)		4, 12, 14, 16	0.3 - 2.0	I-02	3mΩ max.(initial) 10mΩ max.(after durability tests)	3mA max.	100MΩ min.	—	ハウジング Housing／PBT ターミナル Terminal／Heat-Resistant Copper Alloy
		2.3 (090)		2, 4, 6, 12, 14, 16, 18	0.3 - 2.0	I-05					ハウジング Housing／PBT ターミナル Terminal／Brass, Heat-Resistant Copper Alloy
		2.8 (110)		4	0.3 - 3.0	I-08					
		Hybrid	1.5+2.8	14	—	I-10					ハウジング Housing／PBT ターミナル Terminal／Heat-Resistant Copper Alloy
	DL	0.64 (025)		2	0.22 - 0.75	K-02	5mΩ max.(initial) 10mΩ max.(after durability tests)	3mA max.	100MΩ min.	—	ハウジング Housing／PBT ターミナル Terminal／Brass, Heat-Resistant Copper Alloy
		1.0 (040)		4, 8, 12, 16, 20	0.3 - 1.25	K-04	3mΩ max.(initial) 10mΩ max.(after durability tests)				
		2.3 (090)		2, 4, 6, 10, 14, 16	0.3 - 2.0	K-07					

unsealed／sealed 非防水／防水	Connector Series コネクタシリーズ	Terminal Tab Size 端子サイズ		No. of Way Variation 極数バリエーション	Applicable Cable Size 適用電線サイズ	Page 掲載頁	Contact Resistance 接触抵抗（圧着部を含む）	Leak Current リーク電流	Insulation Resistance 絶縁抵抗	Seal シール性	Material 材質
sealed	TS sealed	0.64 (025)		2, 3, 4, 5, 6, 8, 10, 12, 13, 15, 17, 20, 30	0.13 - 0.5	B-02	8mΩ max.(initial) 16mΩ max.(after durability tests)	50μA max.	100MΩ min	50kPa min. (initial) 30kPa min. (after durability tests)	ハウジング Housing／PBT, PA6T ターミナル Terminal／Brass, Heat-Resistant Copper Alloy ワイヤシール Wire Seal／Silicon
		0.64W (025W)		4	0.3 - 0.6	B-08					
		Hybrid	0.64W+2.3+4.8	38, 46	—	B-10					
		2.3 (090)		2, 3, 4, 5, 6, 7	0.3 - 2.0	B-12	3mΩ max.(initial) 10mΩ max.(after durability tests)	100μA max.			
		4.8 (187)		1, 2, 3	0.3 - 3.0	B-19					
		8.0 (312)		1, 2	0.5 - 8.0	B-23					
		Hybrid	0.64+2.3	10, 13, 26	—	B-26	8mΩ max.(initial) 16mΩ max.(after durability tests)	50μA max.			
			0.64+4.8	4, 24, 34, 40, 46	—	B-27					
			0.64+2.3+4.8	42, 52	—	B-28					
			2.3+4.8	4, 5, 6, 11	—	B-29	3mΩ max.(initial) 10mΩ max.(after durability tests)	100μA max.			
			4.8+8.0	3	—	B-30					
	HV/HVG sealed	1.0 (040)		2, 3, 4, 5, 6, 10	0.3 - 1.25	D-02	5mΩ max.(initial) 10mΩ max.(after durability tests)	100μA max.	100MΩ min	98kPa min. (initial) 49kPa min. (after durability tests)	ハウジング Housing／PBT ターミナル Terminal／Brass, Heat-Resistant Copper Alloy ワイヤシール Wire Seal／Silicon
	HX sealed	1.0 (040)		1, 2, 3, 5, 6, 7	0.3 - 1.25	E-02	5mΩ max.(initial) 10mΩ max.(after durability tests)	100μA max.	100MΩ min	98kPa min. (initial) 49kPa min. (after durability tests)	ハウジング Housing／PBT ターミナル Terminal／Brass, Heat-Resistant Copper Alloy ワイヤシール Wire Seal／Silicon
		1.0 (040)		23, 33		E-06					
		Joint Connector		23		E-08					
		Hybrid Joint Connector	0.64+1.0	22	—	E-10					
		1.5 (060)		2, 3, 4, 8, 12	0.13 - 2.0	E-13	3mΩ max.(initial) 6mΩ max.(after durability tests)				
		2.3 (090)		1, 2, 3, 4	0.3 - 2.0	E-17					
		Hybrid	1.0+4.8	13	—	E-21	5mΩ max.(initial) 10mΩ max.(after durability tests)				ハウジング Housing／PBT ターミナル Terminal／Brass, Heat-Resistant Copper Alloy ワイヤシール Wire Seal／Silicon, NBR
			1.5+4.8	4, 5	—	E-21	3mΩ max.(initial) 6mΩ max.(after durability tests)				
			2.3+4.8	10	—	E-22					
	RS	2.3 (090)		1, 2, 3, 4, 5, 6, 8	0.3 - 2.0	G-02	3mΩ max.(initial) 10mΩ max.(after durability tests)	10μA max.	100MΩ min	98kPa min. (initial) 98kPa min. (after durability tests)	ハウジング Housing／PBT ターミナル Terminal／Brass, Heat-Resistant Copper Alloy ワイヤシール Wire Seal／Silicon
	TL	2.3 (090)		1, 2, 4, 5	0.3 - 2.0	H-02	5mΩ max.(initial) 10mΩ max.(after durability tests)	50μA max.	100MΩ min	98kPa min. (initial) 98kPa min. (after durability tests)	ハウジング Housing／PBT ターミナル Terminal／Brass, Heat-Resistant Copper Alloy ワイヤシール Wire Seal／Silicon
	SL sealed	1.5 (060)		2, 3, 14	0.3 - 2.0	J-02	3mΩ max.(initial) 10mΩ max.(after durability tests)	100μA max.	100MΩ min	49.0kPa min. (initial) 29.4kPa min. (after durability tests)	ハウジング Housing／PBT ターミナル Terminal／Brass, Heat-Resistant Copper Alloy ワイヤシール Wire Seal／Silicon
		2.3 (090)		1, 2, 3, 4, 6	0.3 - 2.0	J-06					
		8.0 (312)		2	2.0 - 8.0	J-09					
	DL sealed	2.3 (090)		1, 2, 3, 4, 6, 8, 10, 12, 16	0.3 - 2.0	L-02	3mΩ max.(initial) 10mΩ max.(after durability tests)	100μA max.	100MΩ min	49.0kPa min. (initial) 29.4kPa min. (after durability tests)	ハウジング Housing／PBT ターミナル Terminal／Brass, Heat-Resistant Copper Alloy ワイヤシール Wire Seal／NBR

Introduction　はじめに

Safety, amenity, and functionality, measure the essential performance of an automobile and these predominately depend on in-vehicle electronic controls.
A variety of car electronic devices are systematically connected with each other using "automotive connectors", and the connectors for this purpose are required to be smaller, lighter, and provide direct connection and advanced performance.
At Sumitomo Wiring Systems, we are actively researching and developing components, including terminals and housings, with respect to the "total wiring system," using our experience as an all-round automotive wiring harness manufacturer. This is how we are able to achieve high reliability for our products.
In addition, we are searching for the optimum wiring system and layout, using as little space for wiring as is effectively possible. These are part of our activities to provide services that will further satisfy our customers, and we sincerely ask to be favored with your request for connectors made by Sumitomo Wiring Systems.

安全性、快適性、そして機能性と、自動車に求められる性能は、その制御の大半をエレクトロニクスが担っています。
この各種カーエレクトロニクス機器を、システマティックにつなぐコンポーネントとしての「自動車用コネクタ」には、軽量・コンパクト化、直結化、高機能化などの性能が求められます。
住友電装は、自動車用ワイヤーハーネス総合メーカーとしての実績と、「トータルワイヤリングシステム」の視点から、ターミナル、コネクタをはじめとした構成部品の研究・開発を積極的に進め、製品の高信頼化に努めています。
さらに限られた配線スペースを最大限に活かしたワイヤリングシステムと最適レイアウトを追究し、一層お客様にご満足いただけるサービスをご提供いたしますので、住友電装のコネクタをご用命賜りますようお願い申しあげます。

General Notes　自動車用コネクタカタログの見方について

- All length and area units in this catalog shall marked millimeter (mm) and square millimeter (mm^2).
- This catalog focuses on series of terminals, housings, and does not include terminals and housings not involved in these series. Similarly, some other series and custom-made parts are not included. Please contact our sales staff for details.
- We have also prepared a separate "Automotive Wire, Convoluted Tube" catalog, made by Sumitomo Wiring Systems, and suitable for the connectors. This catalog can be obtained from our sales staff.

- 本カタログで使用する長さの単位はすべてmm（ミリメートル）で、面積の単位はすべてmm^2（平方ミリメートル）です。
- 本カタログは、シリーズのターミナル、コネクタを中心に編集しています。シリーズに含まれないターミナル、コネクタや、一部シリーズ、カスタム開発部品は掲載しておりませんので、詳細は弊社営業担当にお問い合せください。
- コネクタに最適な住友電装の「自動車用電線・コルゲートチューブ」は別途カタログがございますので弊社営業担当にご請求ください。

Digital catalog　電子カタログ

A digital connector catalog is available on the Sumitomo Wiring Systems home page.
Digital catalogue has connectors which are not on this catalogue.

住友電装ホームページに「コネクタ電子カタログ」を掲載中です。
電子カタログには本カタログに掲載されていないコネクタも掲載しております。

URL: http://www.sws.co.jp

＊ Product specifi cations may be subject to change without notice.
Before using the product, please obtain a "customer drawing" "Specifi cations" "Instruction Manuals" from our sales staff.

※製品の仕様は、予告なく変更することがあります。
製品ご使用の際は、弊社営業担当に「お客様用図面」「仕様書」「取扱説明書」をご請求ください。

TS SERIES

Features

The TS connector series has a mechanism of terminal position assurance.
This series consists of 0.64mm, 1.5mm, 2.3mm, 4.8mm and 8.0mm types classified according to terminal size, covering an extensive array of applications from signal to power circuits.

- The connector mechanism only allows the retainer to be set when the terminal is completely inserted.
- Retainers are pre-mounted on connector housings, and are structured to enable setting by the same simple operation regardless of the number of ways, improving operability.
- These connectors can be directly secured to a support on the car body.
- PCB models are also available for connection to printed circuit boards.
- RoHS/ELV Compliant

特　長

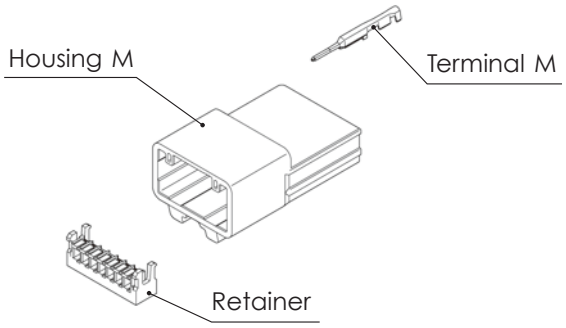
TS シリーズは、挿入不足のターミナルを検知する機構を備えたコネクタシリーズです。
ターミナルサイズにより 0.64mm・1.5mm・2.3mm・4.8mm・8.0mm で構成されており、信号回路からパワー回路まで幅広くご利用いただけます。

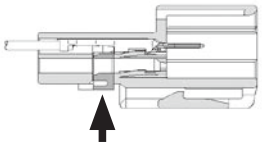
- ターミナルが半挿入の状態では、リテーナが装着できない機構になっています。
- リテーナはコネクタハウジングに予め組み付けられており、また極数に関係なく簡単な同一作業でセットすることができる構造になっているので、作業性が向上します。
- コネクタは、ボデー側のブラケットに直接固定することができます。
- プリント基板との接続に適した PCB タイプも設定いたしました。
- RoHS/ELV 対応

TS SERIES for STANDARD

0.64mm (025)

Structure／構造



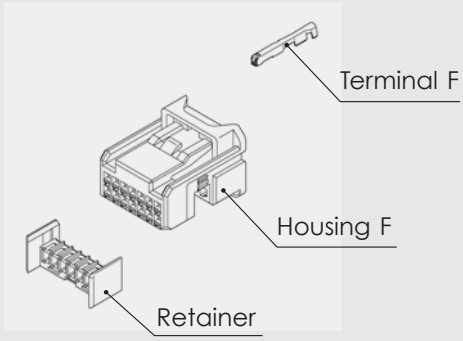


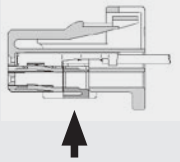
Retainer sliding direction

リテーナを押込むことにより、
端子の半挿入状態を検知できます。

Connector M

Connector F





Retainer sliding direction

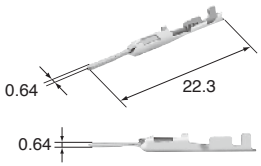
リテーナを押込むことにより、
端子の半挿入状態を検知できます。

0.64mm (025)

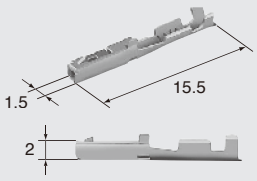
Terminal (UNIT : mm)

(S)

Cable size (mm²) 適用電線サイズ	0.13
Material 材　質	Brass 黄銅
Surface treatment 表面処理	Tin-plated Snメッキ



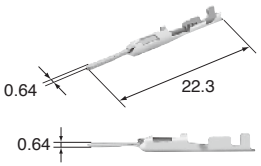
M (8230-4878)　　**F (8240-0182)**



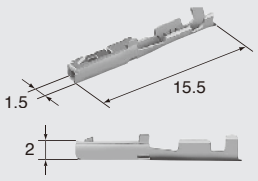
Cable size (mm²) 適用電線サイズ	0.13
Material 材　質	Heat-resistant copper alloy
Surface treatment 表面処理	Tin-plated Snメッキ

(S) Au

Cable size (mm²) 適用電線サイズ	0.13
Material 材　質	Brass 黄銅
Surface treatment 表面処理	Gold-plated Auメッキ



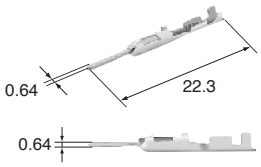
M (8230-5136)　　**F (8240-0338)**



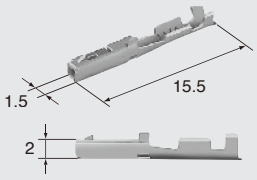
Cable size (mm²) 適用電線サイズ	0.13
Material 材　質	Heat-resistant copper alloy
Surface treatment 表面処理	Gold-plated Auメッキ

(M)

Cable size (mm²) 適用電線サイズ	0.22～0.35
Material 材　質	Brass 黄銅
Surface treatment 表面処理	Tin-plated Snメッキ



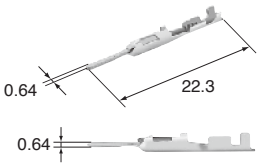
M (8100-3622)　　**F (8100-3624)**



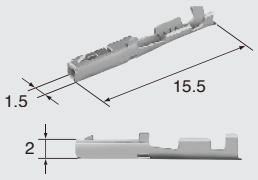
Cable size (mm²) 適用電線サイズ	0.22～0.35
Material 材　質	Heat-resistant copper alloy
Surface treatment 表面処理	Tin-plated Snメッキ

(M) Au

Cable size (mm²) 適用電線サイズ	0.22～0.35
Material 材　質	Brass 黄銅
Surface treatment 表面処理	Gold-plated Auメッキ



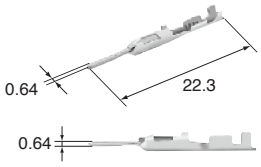
M (8100-3626)　　**F (8100-3628)**



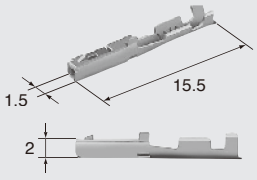
Cable size (mm²) 適用電線サイズ	0.22～0.35
Material 材　質	Heat-resistant copper alloy
Surface treatment 表面処理	Gold-plated Auメッキ

(L)

Cable size (mm²) 適用電線サイズ	0.3～0.5
Material 材　質	Brass 黄銅
Surface treatment 表面処理	Tin-plated Snメッキ



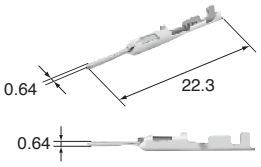
M (8100-3623)　　**F (8100-3625)**



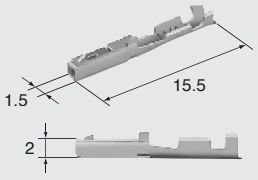
Cable size (mm²) 適用電線サイズ	0.3～0.5
Material 材　質	Heat-resistant copper alloy
Surface treatment 表面処理	Tin-plated Snメッキ

(L) Au

Cable size (mm²) 適用電線サイズ	0.3～0.5
Material 材　質	Brass 黄銅
Surface treatment 表面処理	Gold-plated Auメッキ



M (8100-3627)　　**F (8100-3629)**



Cable size (mm²) 適用電線サイズ	0.3～0.5
Material 材　質	Heat-resistant copper alloy
Surface treatment 表面処理	Gold-plated Auメッキ

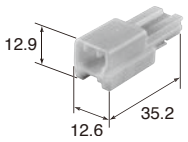
0.64mm (025)

Housing (UNIT : mm)

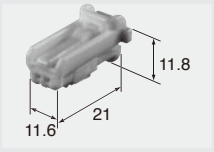
Ref: Terminal part No. ターミナル参照頁	A-02
Material 材　質	PBT

2way

Color
色　相 Natural 自然色



M (6098-6653)

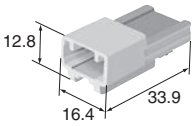


F (6098-6662)

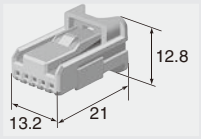
Color
色　相 Natural 自然色

5way

Color
色　相 Natural 自然色



M (6098-3802)

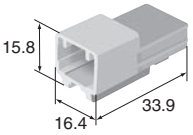


F (6098-3810)

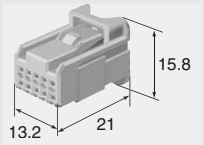
Color
色　相 Natural 自然色

10way

Color
色　相 Natural 自然色



M (6098-3869)

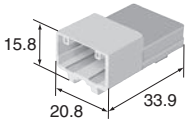


F (6098-3909)

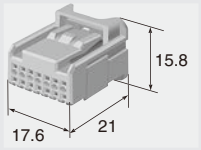
Color
色　相 Natural 自然色

14way

Color
色　相 Natural 自然色



M (6098-3877)

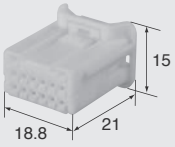


F (6098-3917)

Color
色　相 Natural 自然色

14way

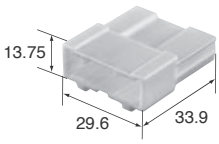
F (6098-7241)



Color
色　相 Natural 自然色

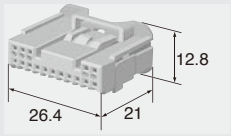
16way

Color 色 相	Natural 自然色



M (6098-7336)

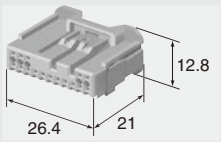
F (6098-4008)



Color 色 相	Natural 自然色

16way

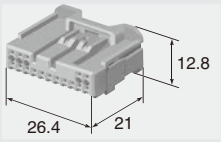
F (6098-6688)



Color 色 相	Natural 自然色

16way

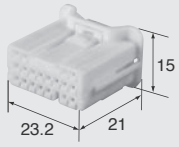
F (6098-6694)



Color 色 相	Natural 自然色

19way

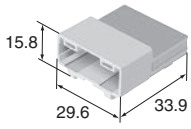
F (6098-7231)



Color 色 相	Natural 自然色

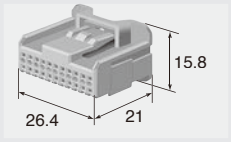
22way

Color 色 相	Natural 自然色



M (6098-3885)

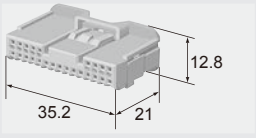
F (6098-3925)



Color 色 相	Natural 自然色

24way

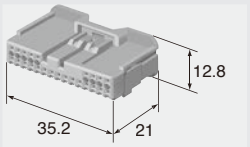
F (6098-4010)



Color 色 相	Natural 自然色

24way

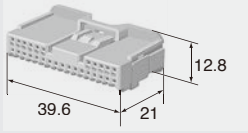
F (6098-6682)



Color 色 相	Natural 自然色

28way

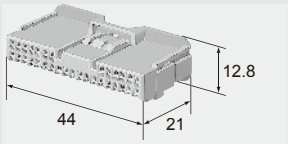
F (6098-4756)



Color 色 相	Natural 自然色

32way

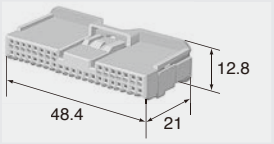
F (6098-4013)



Color 色 相	Natural 自然色

36way

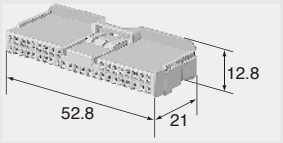
F（6098-4740）



Color **色　相**	Natural 自然色

40way

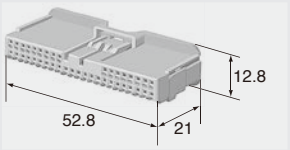
F（6098-4015）



Color **色　相**	Natural 自然色

40way

F（6098-4831）

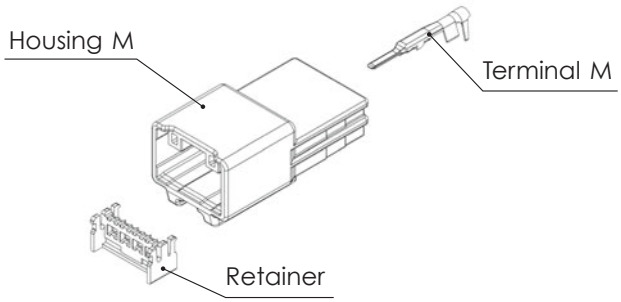


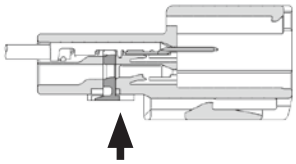
Color **色　相**	Natural 自然色

TS SERIES for STANDARD

1.5mm (060)

Structure／構造



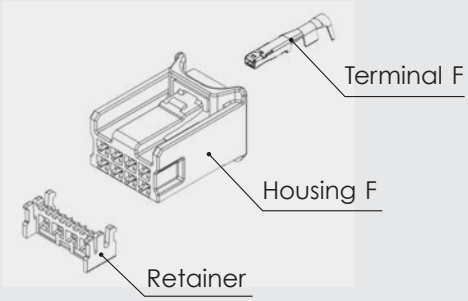


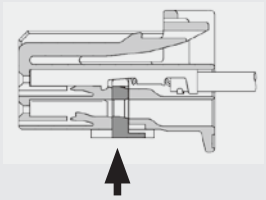
Retainer sliding direction

リテーナを押込むことにより、
端子の半挿入状態を検知できます。

Connector M

Connector F





Retainer sliding direction

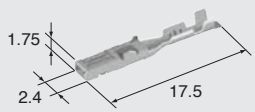
リテーナを押込むことにより、
端子の半挿入状態を検知できます。

1.5mm (060)

Terminal (UNIT : mm)

(3S)

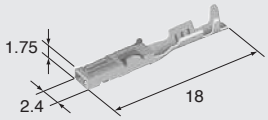
F (8240-0339)



Cable size (mm²) 適用電線サイズ	0.13
Material 材　質	Heat-resistant copper alloy
Surface treatment 表面処理	Tin-plated Snメッキ

(SS)

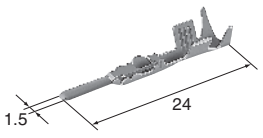
F (8240-0279)



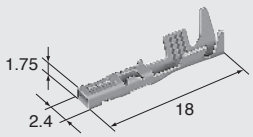
Cable size (mm²) 適用電線サイズ	0.22～0.35
Material 材　質	Heat-resistant copper alloy
Surface treatment 表面処理	Tin-plated Snメッキ

(M)

Cable size (mm²) 適用電線サイズ	0.75～1.25
Material 材　質	Brass 黄銅
Surface treatment 表面処理	Tin-plated Snメッキ



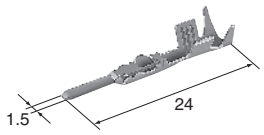
M (8230-4924)　　**F (8240-0213)**



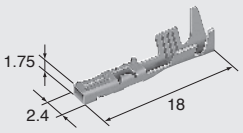
Cable size (mm²) 適用電線サイズ	0.75～1.25
Material 材　質	Heat-resistant copper alloy
Surface treatment 表面処理	Tin-plated Snメッキ

(S)

Cable size (mm²) 適用電線サイズ	0.3～0.5
Material 材　質	Brass 黄銅
Surface treatment 表面処理	Tin-plated Snメッキ



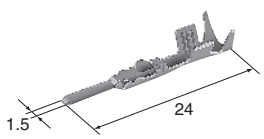
M (8230-4925)　　**F (8240-0215)**



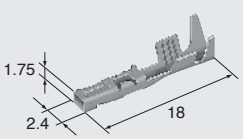
Cable size (mm²) 適用電線サイズ	0.3～0.5
Material 材　質	Heat-resistant copper alloy
Surface treatment 表面処理	Tin-plated Snメッキ

(L)

Cable size (mm²) 適用電線サイズ	2.0
Material 材　質	Heat-resistant copper alloy
Surface treatment 表面処理	Tin-plated Snメッキ



M (8230-4923)　　**F (8240-0214)**



Cable size (mm²) 適用電線サイズ	2.0
Material 材　質	Heat-resistant copper alloy
Surface treatment 表面処理	Tin-plated Snメッキ

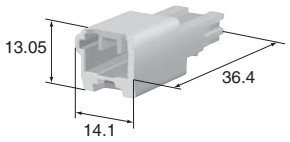
1.5mm (060)

Housing (UNIT : mm)

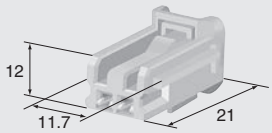
Ref: Terminal part No. **ターミナル参照頁**	A-08
Material **材　質**	PBT

2way

Color
色　相 Natural 自然色



M (6098-6050)

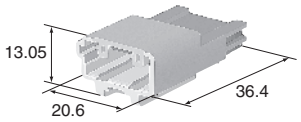


F (6098-6053)

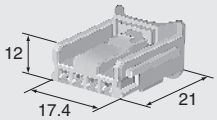
Color
色　相 Natural 自然色

4way

Color
色　相 Natural 自然色



M (6098-5668)

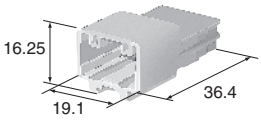


F (6098-5677)

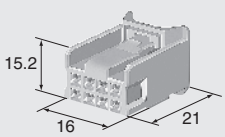
Color
色　相 Natural 自然色

8way

Color
色　相 Natural 自然色



M (6098-5686)

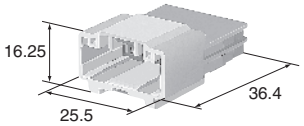


F (6098-5695)

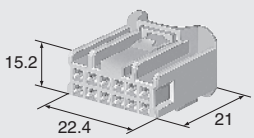
Color
色　相 Natural 自然色

12way

Color
色　相 Natural 自然色



M (6098-5704)



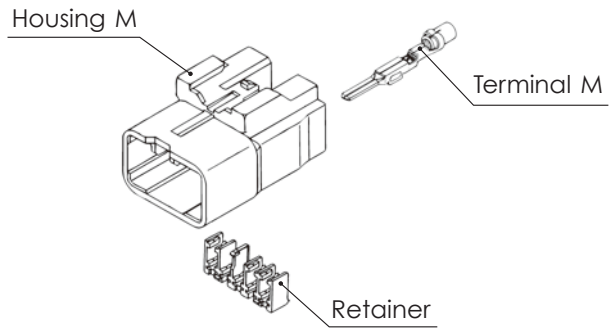
F (6098-5713)

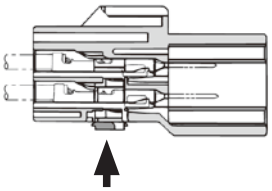
Color
色　相 Natural 自然色

TS SERIES for STANDARD

2.3mm（090）

Structure／構造

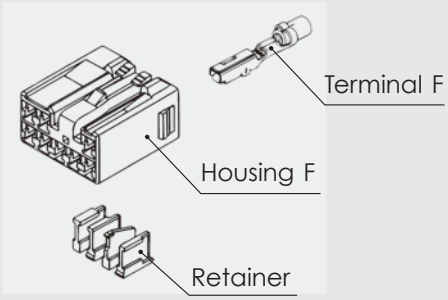




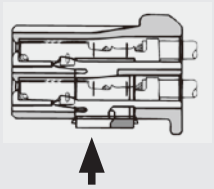
Retainer sliding direction

リテーナを押込むことにより、
端子の半挿入状態を検知できます。

Connector M



Connector F



Retainer sliding direction

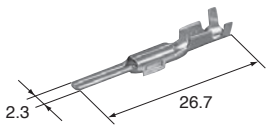
リテーナを押込むことにより、
端子の半挿入状態を検知できます。

2.3mm（090）

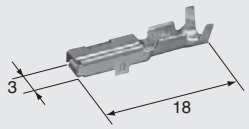
Terminal (UNIT : mm)

（SS）

Cable size（mm²） **適用電線サイズ**	0.22～0.35
Material **材　質**	Brass 黄銅
Surface treatment **表面処理**	Tin-plated Snメッキ



M（8230-4742）

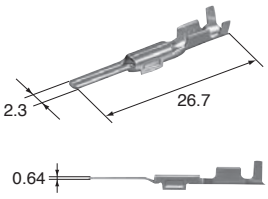


F（8240-0029）

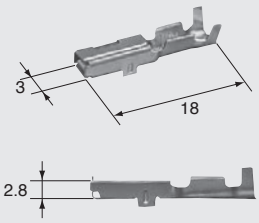
Cable size（mm²） **適用電線サイズ**	0.22～0.35
Material **材　質**	Brass 黄銅
Surface treatment **表面処理**	Tin-plated Snメッキ

(S)

Cable size (mm²) 適用電線サイズ	0.3～0.5
Material 材　質	Brass 黄銅
Surface treatment 表面処理	Tin-plated Snメッキ



M (8230-4492)

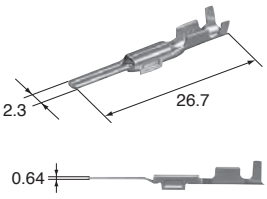


F (8240-4882)

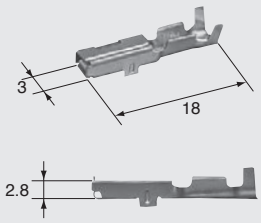
Cable size (mm²) 適用電線サイズ	0.3～0.5
Material 材　質	Brass 黄銅
Surface treatment 表面処理	Tin-plated Snメッキ

(S) Au

Cable size (mm²) 適用電線サイズ	0.3～0.5
Material 材　質	Brass 黄銅
Surface treatment 表面処理	Gold-plated Auメッキ



M (8100-1341)

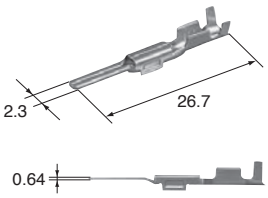


F (8100-1346)

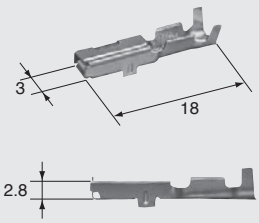
Cable size (mm²) 適用電線サイズ	0.3～0.5
Material 材　質	Brass 黄銅
Surface treatment 表面処理	Gold-plated Auメッキ

(M)

Cable size (mm²) 適用電線サイズ	0.5～1.25
Material 材　質	Brass 黄銅
Surface treatment 表面処理	Tin-plated Snメッキ



M (8230-4502)

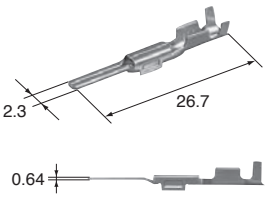


F (8240-4892)

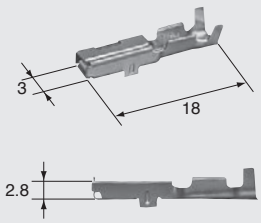
Cable size (mm²) 適用電線サイズ	0.5～1.25
Material 材　質	Brass 黄銅
Surface treatment 表面処理	Tin-plated Snメッキ

(M) Au

Cable size (mm²) 適用電線サイズ	0.5～1.25
Material 材　質	Brass 黄銅
Surface treatment 表面処理	Gold-plated Auメッキ



M (8100-1342)

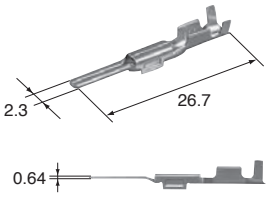


F (8100-1347)

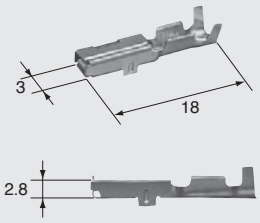
Cable size (mm²) 適用電線サイズ	0.5～1.25
Material 材　質	Brass 黄銅
Surface treatment 表面処理	Gold-plated Auメッキ

(L)

Cable size (mm²) 適用電線サイズ	2.0
Material 材　質	Brass 黄銅
Surface treatment 表面処理	Tin-plated Snメッキ



M (8230-4512)



F (8240-4942)

Cable size (mm²) 適用電線サイズ	2.0
Material 材　質	Heat-resistant copper alloy
Surface treatment 表面処理	Tin-plated Snメッキ

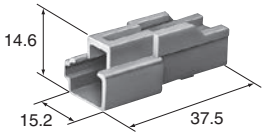
2.3mm (090)

Housing (UNIT : mm)

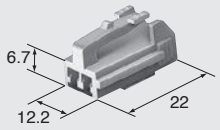
Ref: Terminal part No.
ターミナル参照頁 A-10

2way

Material 材 質	PA6T
Color 色 相	Natural 自然色



M (6520-0549)

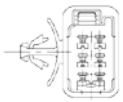


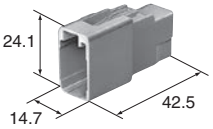
F (6520-0550)

Material 材 質	PA6T
Color 色 相	Natural 自然色

6way

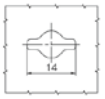
Material 材 質	PBT
Color 色 相	Natural 自然色
Note 備 考	With clamp for 7mm dia. φ7用クランプ付

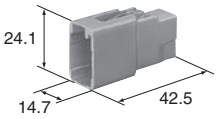




M (6240-1107)

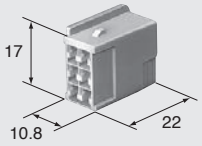
Material 材 質	PBT
Color 色 相	Natural 自然色
Note 備 考	With body fastening clamp. 回り止めクランプ付





M (6249-1243)

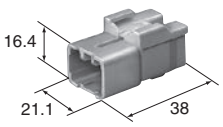
F (6240-5118)



Material 材 質	PBT
Color 色 相	Natural 自然色

6way

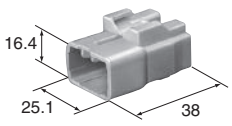
M (6240-1120)



Material 材 質	PBT
Color 色 相	Natural 自然色

8way

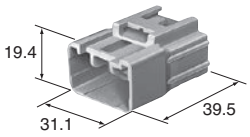
M (6240-1077)



Material 材 質	PBT
Color 色 相	Natural 自然色

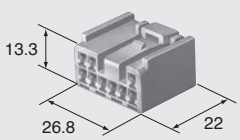
9way

Material 材 質	PBT
Color 色 相	Natural 自然色



M (6249-1229)

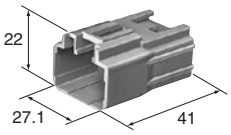
F (6248-5270)



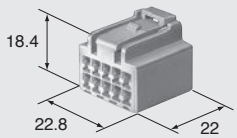
Material 材 質	PBT
Color 色 相	Natural 自然色

10way

Material 材 質	PBT
Color 色 相	Natural 自然色



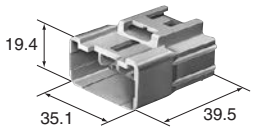
M (6249-1235) **F (6248-5276)**



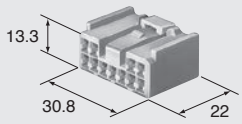
Material 材 質	PBT
Color 色 相	Natural 自然色

11way

Material 材 質	PBT
Color 色 相	Natural 自然色



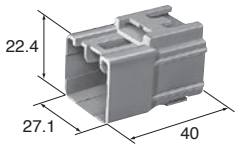
M (6249-1234) **F (6248-5275)**



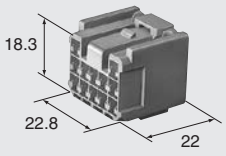
Material 材 質	PBT
Color 色 相	Natural 自然色

12way

Material 材 質	PBT
Color 色 相	Natural 自然色



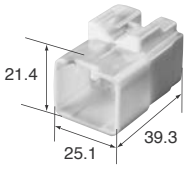
M (6520-1009) **F (6520-1004)**



Material 材 質	PBT
Color 色 相	Natural 自然色

13way

Material 材 質	PBT
Color 色 相	Natural 自然色

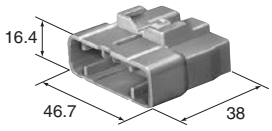


M (6240-1122) **F (6240-5175)**

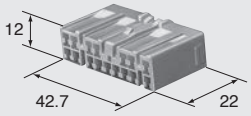
Material 材 質	PBT
Color 色 相	Natural 自然色

16way

Material 材 質	PBT
Color 色 相	Natural 自然色



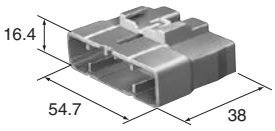
M (6240-1158) **F (6240-5088)**



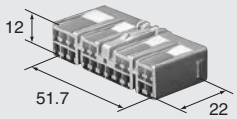
Material 材 質	PBT
Color 色 相	Natural 自然色

20way

Material 材 質	PBT
Color 色 相	Natural 自然色



M (6240-1033) **F (6240-5035)**

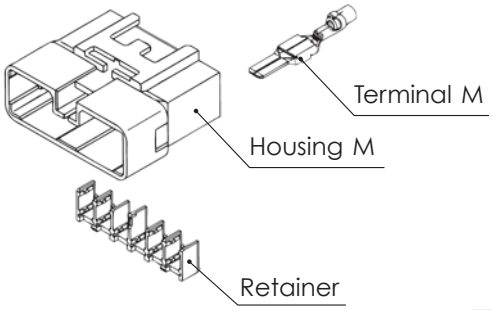


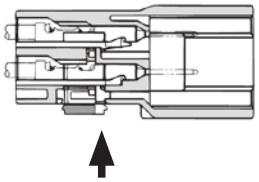
Material 材 質	PBT
Color 色 相	Natural 自然色

TS SERIES for STANDARD

4.8mm（187）

Structure／構造



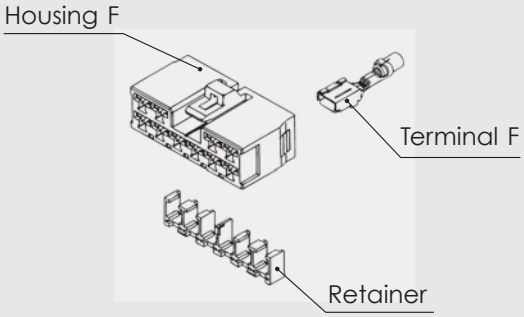


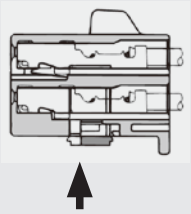
Retainer sliding direction

リテーナを押込むことにより、
端子の半挿入状態を検知できます。

Connector M

Connector F





Retainer sliding direction

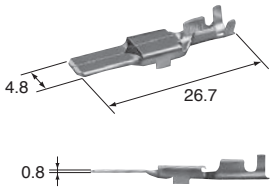
リテーナを押込むことにより、
端子の半挿入状態を検知できます。

4.8mm（187）

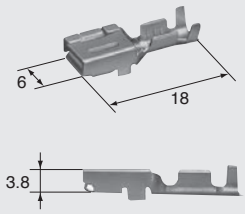
Terminal (UNIT : mm)

(S)

Cable size (mm²) **適用電線サイズ**	0.3～0.5
Material **材　質**	Brass 黄銅
Surface treatment **表面処理**	Tin-plated Snメッキ



M (8230-4522)

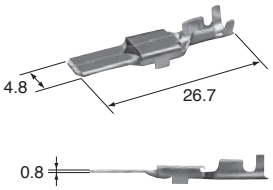


F (8240-4912)

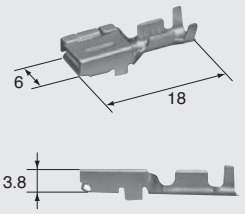
Cable size (mm²) **適用電線サイズ**	0.3～0.5
Material **材　質**	Brass 黄銅
Surface treatment **表面処理**	Tin-plated Snメッキ

(M)

Cable size (mm²) **適用電線サイズ**	0.5～1.25
Material **材　質**	Brass 黄銅
Surface treatment **表面処理**	Tin-plated Snメッキ



M (8230-4532)

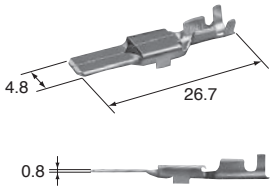


F (8240-4922)

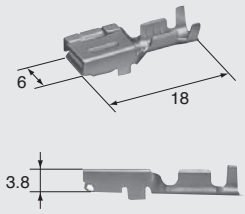
Cable size (mm²) **適用電線サイズ**	0.5～1.25
Material **材　質**	Brass 黄銅
Surface treatment **表面処理**	Tin-plated Snメッキ

(L)

Cable size (mm²) **適用電線サイズ**	2.0～3.0
Material **材　質**	Brass 黄銅
Surface treatment **表面処理**	Tin-plated Snメッキ



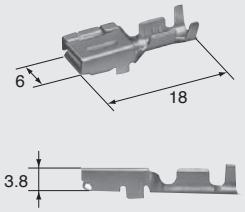
M (8230-4542)



F (8240-4932)

Cable size (mm²) **適用電線サイズ**	2.0～3.0
Material **材　質**	Brass 黄銅
Surface treatment **表面処理**	Tin-plated Snメッキ

(L)



F (8100-1555)

Cable size (mm²) **適用電線サイズ**	2.0～3.0
Material **材　質**	Heat-resistant copper alloy
Surface treatment **表面処理**	Tin-plated Snメッキ

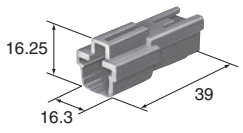
4.8mm (187)

Housing (UNIT : mm)

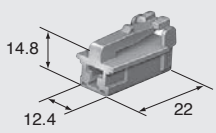
Ref: Terminal part No. **ターミナル参照頁**	A-14
Material **材　質**	PBT

1way

Color **色　相**	Natural 自然色



M (6098-0822)

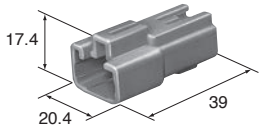


F (6098-0824)

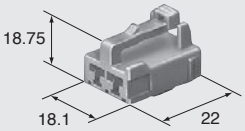
Color **色　相**	Natural 自然色

2way

Color 色 相 Natural 自然色



M (6098-0323)

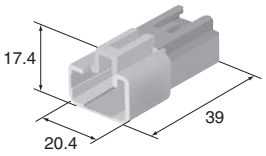


F (6098-0325)

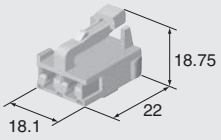
Color 色 相 Natural 自然色

2way

Color 色 相 Natural 自然色



M (6098-0469)

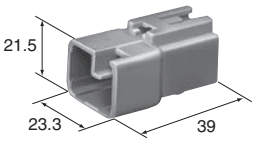


F (6098-0471)

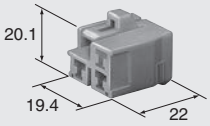
Color 色 相 Natural 自然色

3way

Color 色 相 Natural 自然色



M (6098-0149)

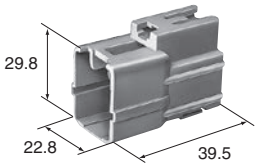


F (6098-0151)

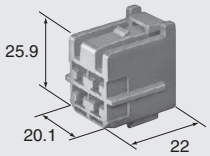
Color 色 相 Natural 自然色

4way

Color 色 相 Natural 自然色



M (6098-1851)

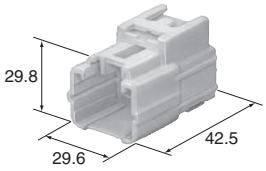


F (6098-1489)

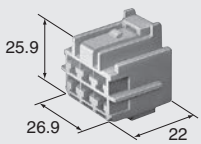
Color 色 相 Natural 自然色

6way

Color 色 相 Natural 自然色



M (6098-2211)

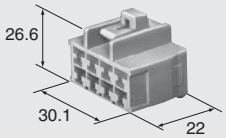


F (6098-1716)

Color 色 相 Natural 自然色

8way

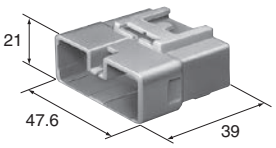
F (6098-0518)



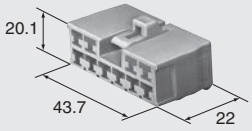
Color 色 相 Natural 自然色

10way

Color 色　相	Natural 自然色



M (6098-0154)



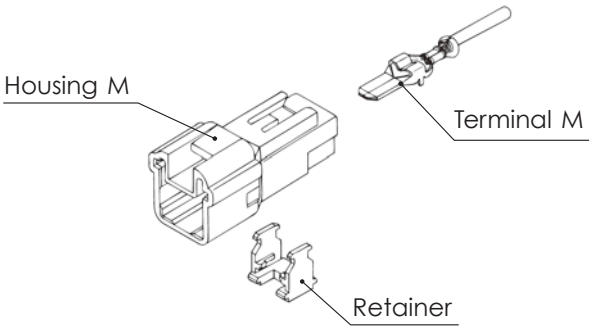
F (6098-0156)

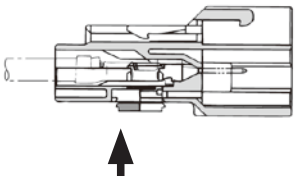
Color 色　相	Natural 自然色

TS SERIES for STANDARD

8.0mm (312)

Structure／構造



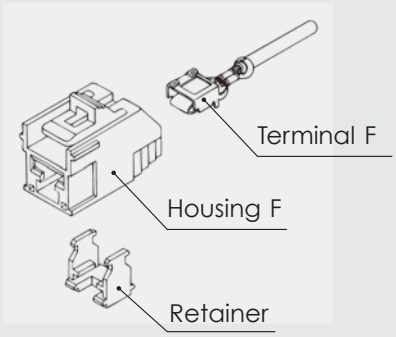


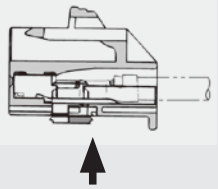
Retainer sliding direction

リテーナを押込むことにより、
端子の半挿入状態を検知できます。

Connector M

Connector F





Retainer sliding direction

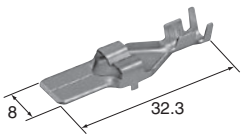
リテーナを押込むことにより、
端子の半挿入状態を検知できます。

8.0mm (312)

Terminal (UNIT : mm)

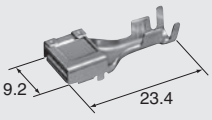
(S)

Cable size (mm²) **適用電線サイズ**	0.5～1.25
Material **材　質**	Brass 黄銅
Surface treatment **表面処理**	Tin-plated Snメッキ



M (8100-0520)

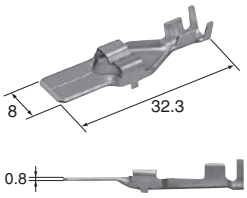
F (8100-0707)



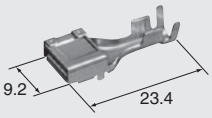
Cable size (mm²) **適用電線サイズ**	0.5～1.25
Material **材　質**	Brass 黄銅
Surface treatment **表面処理**	Tin-plated Snメッキ

(M)

Cable size (mm²) **適用電線サイズ**	2.0～3.0
Material **材　質**	Brass 黄銅
Surface treatment **表面処理**	Tin-plated Snメッキ



M (8100-0521)

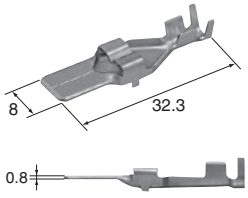


F (8100-2493)

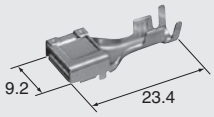
Cable size (mm²) **適用電線サイズ**	2.0～3.0
Material **材　質**	Heat-resistant copper alloy
Surface treatment **表面処理**	Tin-plated Snメッキ

(L)

Cable size (mm²) **適用電線サイズ**	5.0～8.0
Material **材　質**	Brass 黄銅
Surface treatment **表面処理**	Tin-plated Snメッキ



M (8100-0522)



F (8100-1553)

Cable size (mm²) **適用電線サイズ**	5.0～8.0
Material **材　質**	Heat-resistant copper alloy
Surface treatment **表面処理**	Tin-plated Snメッキ

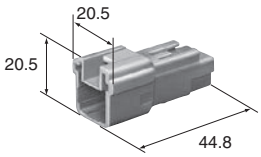
8.0mm (312)

Housing (UNIT : mm)

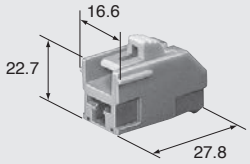
Ref: Terminal part No. **ターミナル参照頁**	A-18
Material **材　質**	PBT

1way

Color **色　相**	Natural 自然色



M (6240-1093)

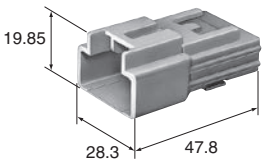


F (6098-0441)

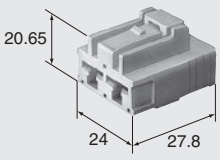
Color **色　相**	Natural 自然色

2way

Color **色　相**	Natural 自然色



M (6098-1278)

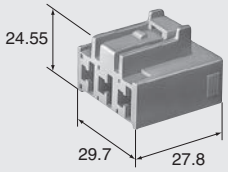


F (6098-1104)

Color **色　相**	Natural 自然色

3way

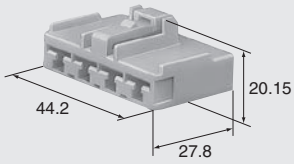
F (6520-1466)



Color **色　相**	Natural 自然色

4way

F (6098-2137)



Color **色　相**	Natural 自然色

TS SERIES
for HYBRID

0.64mm, 1.5mm
(025, 060)

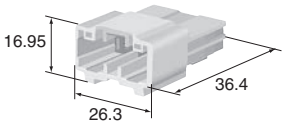
Housing (UNIT : mm)

Ref: Terminal part No. **ターミナル参照頁**	[0.64mm] A-02 [1.5mm] A-08
Material **材　質**	PBT

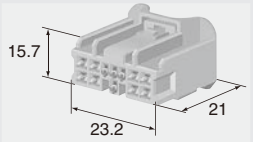
No. of way/ ( ) corresponds to 0.64mm, 1.5mm, in order from left to right.
極数／( ) 内表示：左から0.64mm 極数、1.5mm 極数

12way (4+8)

Color / **色　相**: Natural / 自然色



M (6098-6055)

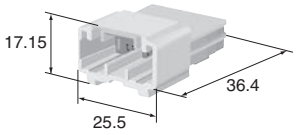


F (6098-6083)

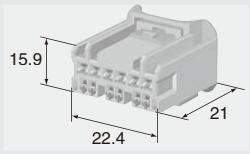
Color / **色　相**: Natural / 自然色

12way (6+6)

Color / **色　相**: Natural / 自然色



M (6098-6104)

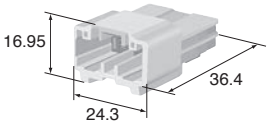


F (6098-6111)

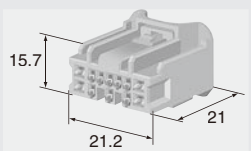
Color / **色　相**: Natural / 自然色

12way (8+4)

Color / **色　相**: Natural / 自然色



M (6098-6090)

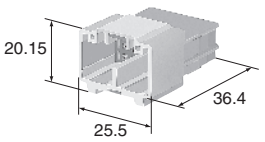


F (6098-6097)

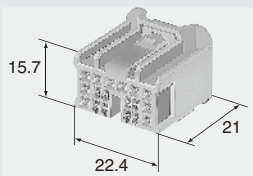
Color / **色　相**: Natural / 自然色

18way (8+10)

Color / **色　相**: Natural / 自然色



M (6098-5650)

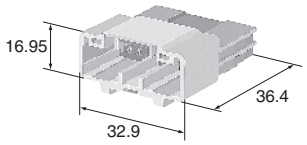


F (6098-5659)

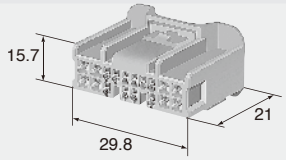
Color / **色　相**: Natural / 自然色

18way (10+8)

Color 色 相	Natural 自然色



M (6098-5594)

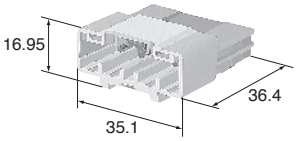


F (6098-5604)

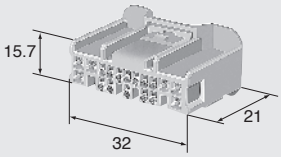
Color 色 相	Natural 自然色

18way (12+6)

Color 色 相	Natural 自然色



M (6098-5631)

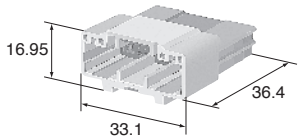


F (6098-5641)

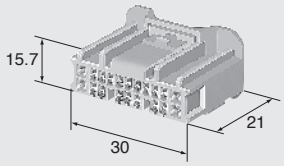
Color 色 相	Natural 自然色

20way (16+4)

Color 色 相	Natural 自然色



M (6098-5613)



F (6098-5622)

Color 色 相	Natural 自然色

0.64mm, 2.3mm (025, 090)

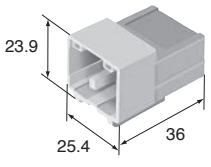
Housing (UNIT : mm)

Ref: Terminal part No. ターミナル参照頁	[0.64mm] A-02 [2.3mm] A-10
Material 材 質	PBT

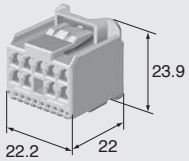
No. of way/ ( ) corresponds to 0.64mm, 2.3mm, in order from left to right.
極数／( ) 内表示：左から0.64mm 極数、2.3mm 極数

17way (8+9)

Color 色 相	Natural 自然色



M (6098-3893)

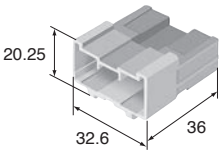


F (6098-3933)

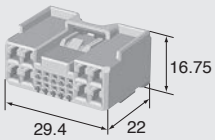
Color 色 相	Natural 自然色

18way (10+8)

Color 色 相	Natural 自然色



M (6098-3901)

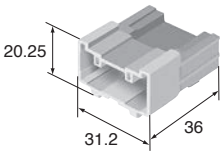


F (6098-3941)

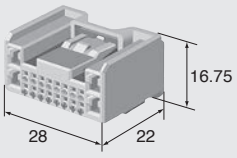
Color 色 相	Natural 自然色

20way (16+4)

Color 色 相	Natural 自然色



M (6098-3818)



F (6098-3826)

Color 色 相	Natural 自然色

0.64mm, 4.8mm (025, 187)

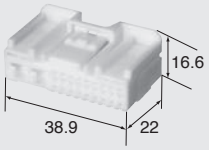
Housing (UNIT : mm)

Ref: Terminal part No. ターミナル参照頁	[0.64mm] A-02 [4.8mm] A-14
Material 材 質	PBT

No. of way/ ( ) corresponds to 0.64mm, 4.8mm, in order from left to right.
極数／( ) 内表示：左から0.64mm 極数、4.8mm 極数

20way (18+2)

F (6098-5903)



Color 色 相	Natural 自然色

2.3mm, 4.8mm (090, 187)

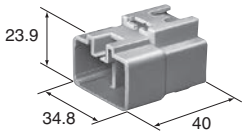
Housing (UNIT : mm)

Ref: Terminal part No. ターミナル参照頁	[2.3mm] A-10 [4.8mm] A-14
Material 材 質	PBT

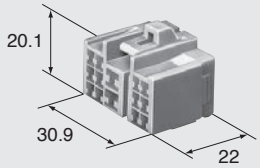
No. of way/ ( ) corresponds to 2.3mm, 4.8mm, in order from left to right.
極数／( ) 内表示：左から2.3mm 極数、4.8mm 極数

14way (12+2)

Color 色 相	Natural 自然色



M (6241-0261)

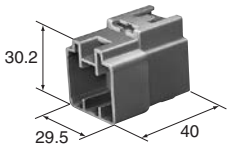


F (6245-0281)

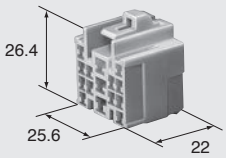
Color 色 相	Natural 自然色

15way (12+3)

Color 色 相	Natural 自然色



M (6241-0241)

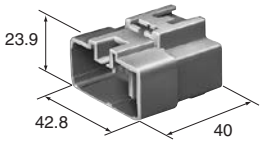


F (6245-0261)

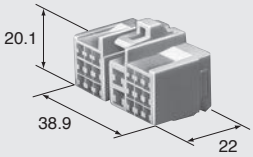
Color 色 相	Natural 自然色

20way (18+2)

Color 色 相	Natural 自然色



M (6241-0281)



F (6245-0301)

Color 色 相	Natural 自然色

TS SERIES
for PCB

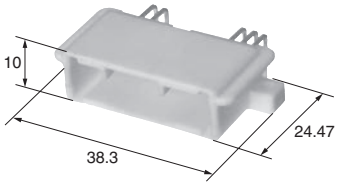
0.64mm (025)

Housing (UNIT : mm)

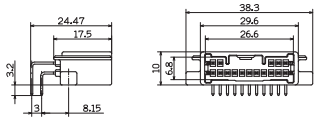
16way

M (6098-6790)

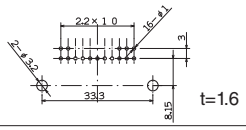
Connector F part No. **Fコネクタ品番**	6098-4008 (A-05)
Material **材　質**	PBT
Color **色　相**	Natural 自然色



●Detailed dimension
寸法詳細



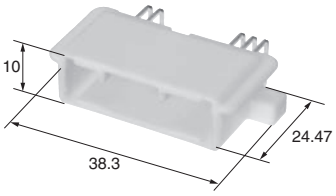
●Recommended demension of Circuit board
基板推奨詳細



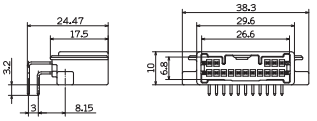
16way

M (6098-6793)

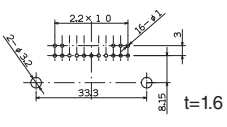
Connector F part No. **Fコネクタ品番**	6098-4008 (A-05)
Material **材　質**	SPS
Color **色　相**	Natural 自然色



●Detailed dimension
寸法詳細



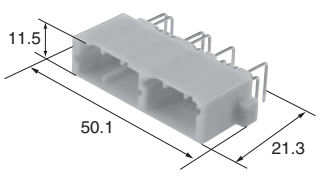
●Recommended demension of Circuit board
基板推奨詳細



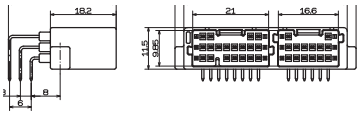
33way

M (6098-7229)

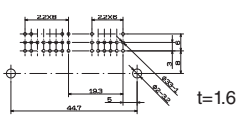
Connector F part No. **Fコネクタ品番**	6098-7231 (A-05) 6098-7241 (A-04)
Material **材　質**	SPS
Color **色　相**	Natural 自然色



●Detailed dimension
寸法詳細



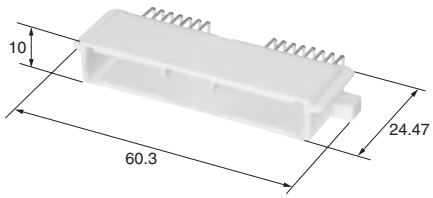
●Recommended demension of Circuit board
基板推奨詳細



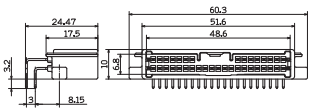
36way

M (6098-6796)

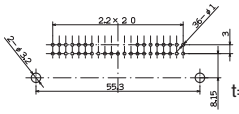
Connector F part No. **Fコネクタ品番**	6098-4740(A-06)
Material **材　質**	PBT
Color **色　相**	Natural 自然色



●Detailed dimension
寸法詳細



●Recommended demension of Circuit board
基板推奨詳細

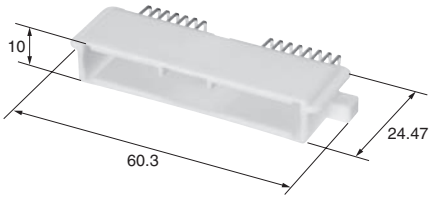


t=1.6

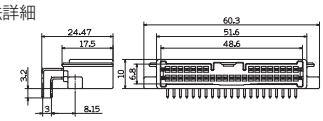
36way

M (6098-6798)

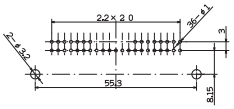
Connector F part No. **Fコネクタ品番**	6098-4740(A-06)
Material **材　質**	SPS
Color **色　相**	Natural 自然色



●Detailed dimension
寸法詳細



●Recommended demension of Circuit board
基板推奨詳細

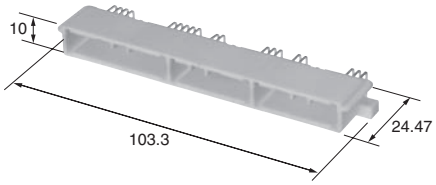


t=1.6

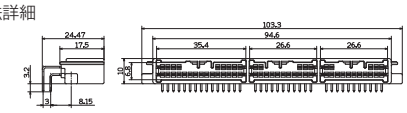
56way (16+16+24)

M (6098-6848)

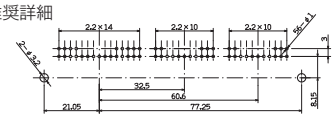
Connector F part No. **Fコネクタ品番**	6098-6688(A-05) 6098-6694(A-05) 6098-6682(A-05)
Material **材　質**	SPS
Color **色　相**	Natural 自然色



●Detailed dimension
寸法詳細



●Recommended demension of Circuit board
基板推奨詳細

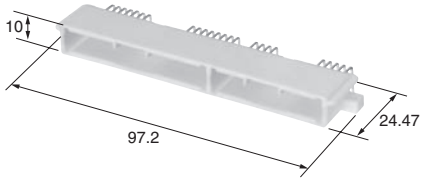


t=1.6

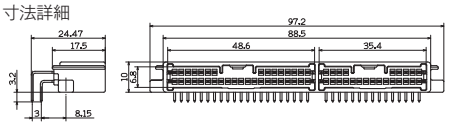
60way (36+24)

M (6098-6803)

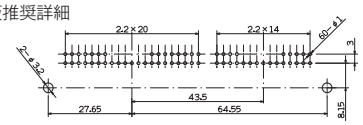
Connector F part No. **Fコネクタ品番**	6098-4010(A-05) 6098-4740(A-06)
Material **材　質**	SPS
Color **色　相**	Natural 自然色



●Detailed dimension
寸法詳細



●Recommended demension of Circuit board
基板推奨詳細

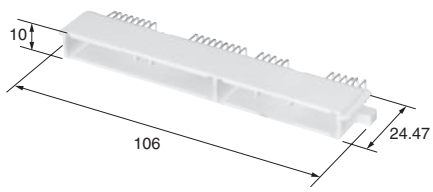


t=1.6

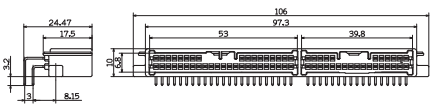
68way (40+28)

M (6098-6805)

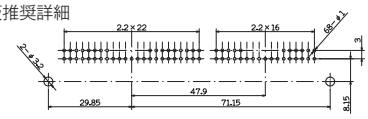
Connector F part No. **Fコネクタ品番**	6098-4756(A-05) 6098-4831(A-06)
Material **材　質**	PBT
Color **色　相**	Natural 自然色



●Detailed dimension
寸法詳細



●Recommended demension of Circuit board
基板推奨詳細

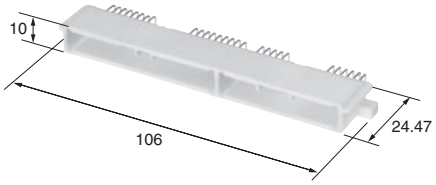


t=1.6

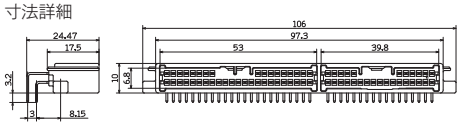
68way (40+28)

M (6098-7102)

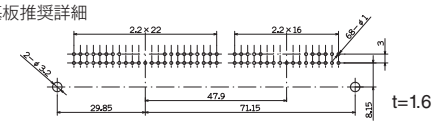
Connector F part No. **Fコネクタ品番**	6098-4756 (A-05) 6098-4831 (A-06)
Material **材　質**	SPS
Color **色　相**	Natural 自然色



●Detailed dimension
寸法詳細



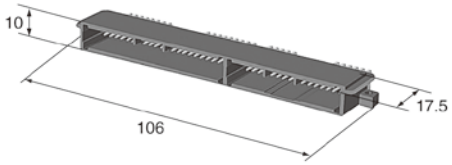
●Recommended demension of Circuit board
基板推奨詳細



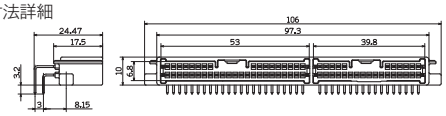
68way (40+28)

M (6098-6810)

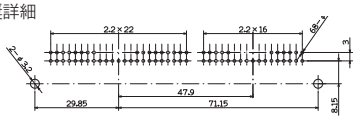
Connector F part No. **Fコネクタ品番**	6098-4756 (A-05) 6098-4015 (A-06)
Material **材　質**	PBT
Color **色　相**	Blue 青



●Detailed dimension
寸法詳細



●Recommended demension of Circuit board
基板推奨詳細



0.64mm, 1.5mm (025, 060)

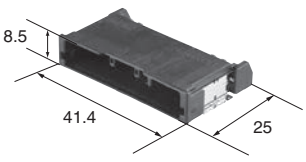
Housing (UNIT : mm)

No. of way/ ( ) corresponds to 0.64mm, 1.5mm, in order from left to right.
極数／( ) 内表示：左から0.64mm 極数、1.5mm 極数

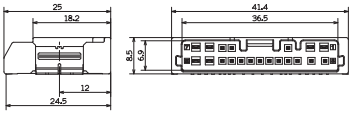
20way (14+6)

M (6098-6869)

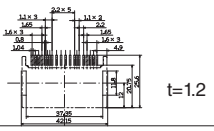
Connector F part No. **Fコネクタ品番**	6098-6876 (A-●)
Material **材　質**	LCP
Color **色　相**	Black 黒



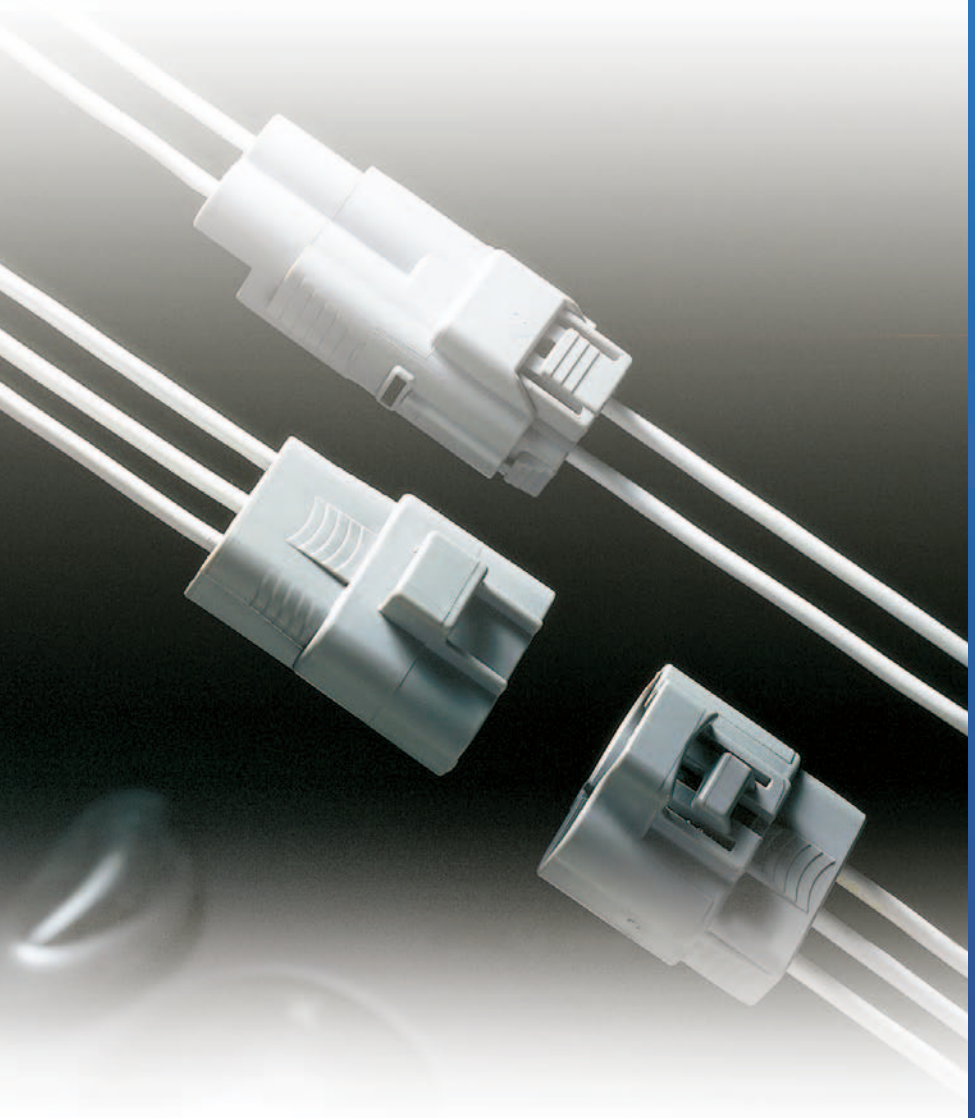
●Detailed dimension
寸法詳細



●Recommended demension of Circuit board
基板推奨詳細



TS SEALED SERIES



Features

The TS sealed connector series has a mechanism of terminal position assurance. This series consists of 0.64mm, 2.3mm, 4.8mm and 8.0mm types classified according to terminal size, covering an extensive array of applications from signal to power circuits.

- Retainers are pre-mounted on the connector housing, and are structured to enable setting by the same simple operation regardless of the number of ways, improving operability.
- These connectors can be directly secured to a bracket on the car body.
- RoHS/ELV Compliant

特　長

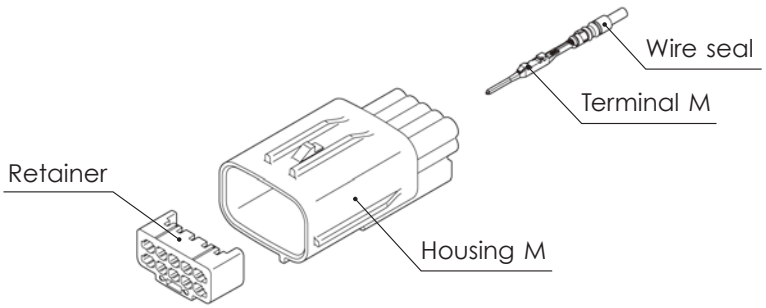
TS 防水シリーズは、挿入不足のターミナルを検知する機構を備えたコネクタシリーズです。
ターミナルサイズにより0.64mm・2.3mm・4.8mm・8.0mmで構成されており、信号回路からパワー回路まで幅広くご利用いただけます。

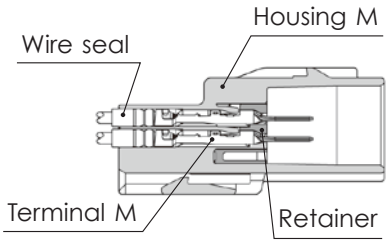
- リテーナは、コネクタハウジングに予め組み付けられており、また極数に関係なく簡単な同一作業でセットすることができる構造になっているので、作業性が向上します。
- コネクタは、ボデー側のブラケットに直接固定することができます。
- RoHS/ELV 対応

TS SEALED SERIES for STANDARD

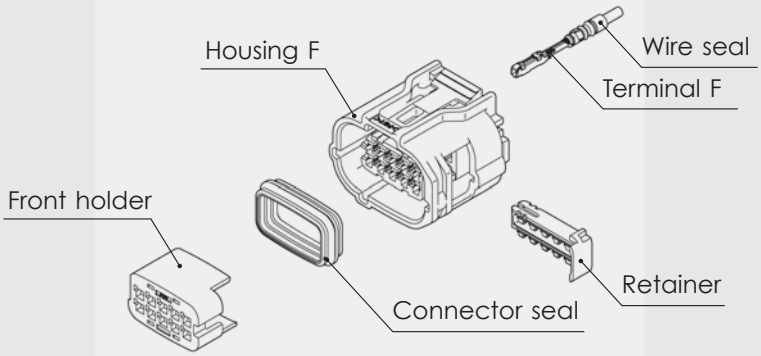
0.64mm (025)

Structure／構造

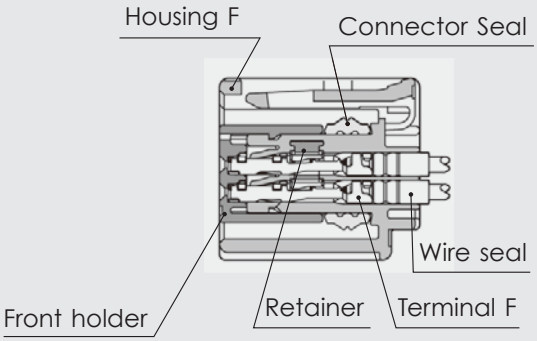




Connector M



Connector F

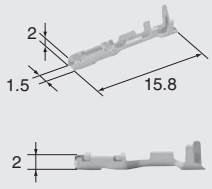


0.64mm (025)

Terminal (UNIT : mm)

(S)

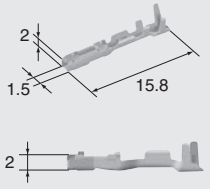
F (8240-0336)



Cable size (mm²) 適用電線サイズ	0.13
Material 材 質	Heat-resistant copper alloy
Surface treatment 表面処理	Tin-plated Snメッキ

(S) Au

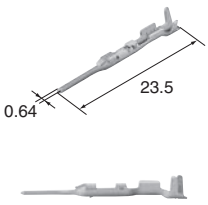
F (8240-0337)



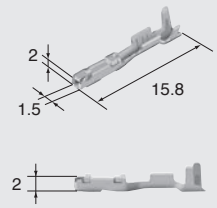
Cable size (mm²) 適用電線サイズ	0.13
Material 材 質	Heat-resistant copper alloy
Surface treatment 表面処理	Gold-plated Auメッキ

(M)

Cable size (mm²) 適用電線サイズ	0.22～0.5
Material 材 質	Brass 黄銅
Surface treatment 表面処理	Tin-plated Snメッキ



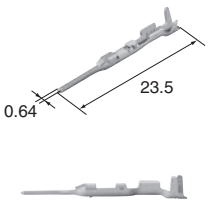
M (8100-3617) **F (8100-3455)**



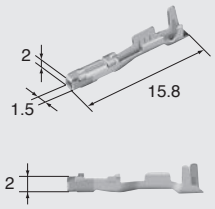
Cable size (mm²) 適用電線サイズ	0.22～0.35
Material 材 質	Heat-resistant copper alloy
Surface treatment 表面処理	Tin-plated Snメッキ

(M) Au

Cable size (mm²) 適用電線サイズ	0.22～0.5
Material 材 質	Brass 黄銅
Surface treatment 表面処理	Gold-plated Auメッキ



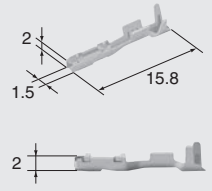
M (8100-3708) **F (8100-3456)**



Cable size (mm²) 適用電線サイズ	0.22～0.35
Material 材 質	Heat-resistant copper alloy
Surface treatment 表面処理	Gold-plated Auメッキ

(L)

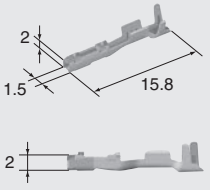
F (8240-0287)



Cable size (mm²) 適用電線サイズ	0.5
Material 材 質	Heat-resistant copper alloy
Surface treatment 表面処理	Tin-plated Snメッキ

(L) Au

F (8240-0288)



Cable size (mm²) 適用電線サイズ	0.5
Material 材 質	Heat-resistant copper alloy
Surface treatment 表面処理	Gold-plated Auメッキ

0.64mm (025)

Wire seals (UNIT : mm)

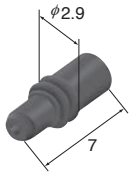
- The wire seals are common to M and F.
  *A wireseal depends on a chosen cable.
- ワイヤシールはM、F共用です。

※使用電線により使用ワイヤシールが異なります。

(3S)

(7165-1423)

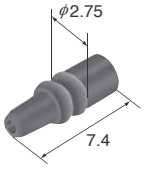
Cable size (mm²) 適用電線サイズ	(CHFUS/0.13)
Cable overall diameter (mm) 電線仕上り外径	0.85～0.95
Material 材　質	Silicon シリコン
Color 色　相	Light Brown 淡茶



(SS)

(7165-1043)

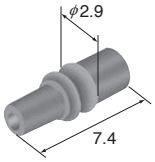
Cable size (mm²) 適用電線サイズ	(CHFUS/0.22)
Cable overall diameter (mm) 電線仕上り外径	0.95～1.05
Material 材　質	Silicon シリコン
Color 色　相	Green 緑



(S)

(7165-1312)

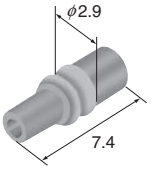
Cable size (mm²) 適用電線サイズ	(CHFUS/0.35～0.5)
Cable overall diameter (mm) 電線仕上り外径	1.1～1.4
Material 材　質	Silicon シリコン
Color 色　相	Violet 紫



(M)

(7165-1198)

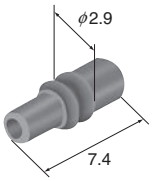
Cable size (mm²) 適用電線サイズ	(AVSS/0.3) (AVSSH/0.3) (AESSX/0.3)
Cable overall diameter (mm) 電線仕上り外径	1.4～1.5
Material 材　質	Silicon シリコン
Color 色　相	Dark Yellow 濃黄



(L)

(7165-1199)

Cable size (mm²) 適用電線サイズ	(AVSS/0.5) (AVSSH/0.5) (AVSSX/0.5) (AESSX/0.5)
Cable overall diameter (mm) 電線仕上り外径	1.6～1.7
Material 材　質	Silicon シリコン
Color 色　相	Red Violet 赤紫



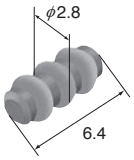
0.64mm (025)

Dummy plugs (UNIT : mm)

- Dummy plugs are common to M and F.
- Dummy plugs are used to blind unused terminal holes.
- ダミー栓はM、F共用です。
- 不必要なターミナル穴を塞ぐために、ダミー栓を使用します。

(7165-0797)

Material 材　質	NBR
Color 色　相	Light Gray 淡灰



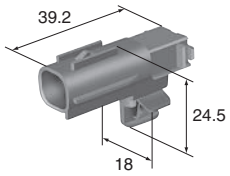
0.64mm (025)

Housing (UNIT : mm)

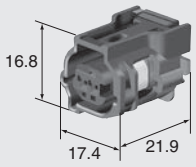
Ref: Terminal part No. **ターミナル参照頁**	B-03
Ref: wire seal No. **ワイヤシール参照頁**	B-04
Ref: Dummy plug No. **ダミー栓参照頁**	B-04
Material **材　質**	PBT

2way

Color **色　相**	Black 黒



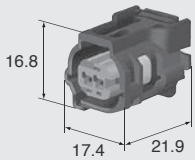
M (6188-4797)　　**F (6189-1161)**



Color **色　相**	Black 黒

2way

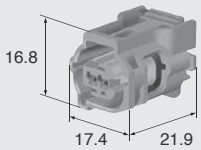
F (6189-7020)



Color **色　相**	Black 黒

2way

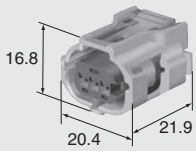
F (6189-7073)



Color **色　相**	Gray 灰

3way

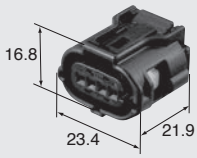
F (6189-1132)



Color **色　相**	Gray 灰

4way

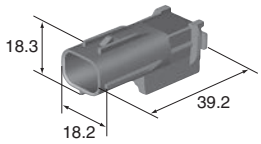
F (6189-7401)



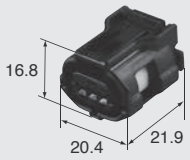
Color **色　相**	Black 黒

3way

Color **色　相**	Black 黒



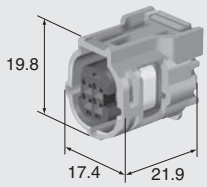
M (6188-4920)　　**F (6189-1129)**



Color **色　相**	Black 黒

4way

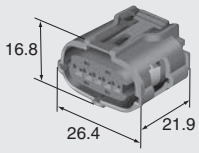
F (6189-1231)



Color **色　相**	Gray 灰

5way

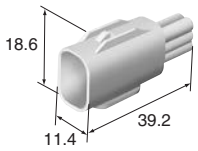
F (6189-1046)



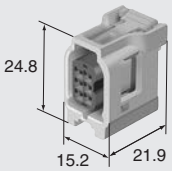
Color **色　相**	Black 黒

6way

Color 色 相	Natural 自然色



M (6188-0706)

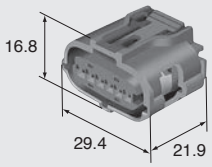


F (6189-1142)

Color 色 相	Natural 自然色

6way

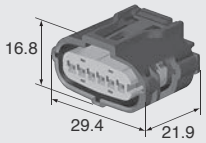
F (6189-1083)



Color 色 相	Black 黒

6way

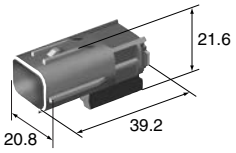
F (6189-7100)



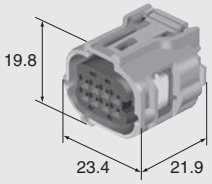
Color 色 相	Black 黒

8way

Color 色 相	Gray 灰



M (6188-0779)

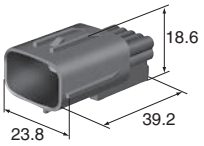


F (6189-1240)

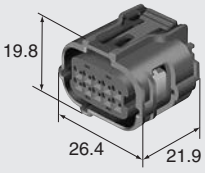
Color 色 相	Gray 灰

10way

Color 色 相	Black 黒



M (6188-0696)

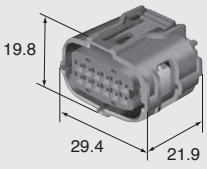


F (6189-1134)

Color 色 相	Black 黒

12way

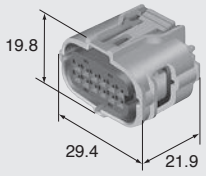
F (6189-1128)



Color 色 相	Black 黒

12way

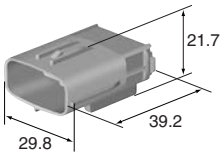
F (6189-1133)



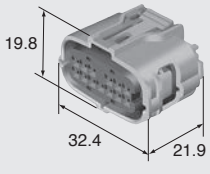
Color 色 相	Gray 灰

13way

Color 色 相	Gray 灰



M (6188-4914)

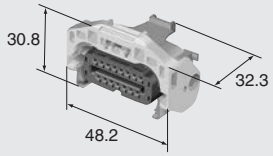


F (6189-1092)

Color 色 相	Gray 灰

15way

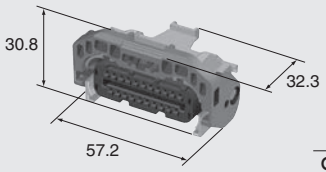
F (6189-1135)



Color **色 相**	Gray 灰

17way

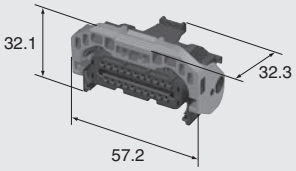
F (6189-7110)



Color **色 相**	Gray 灰

20way

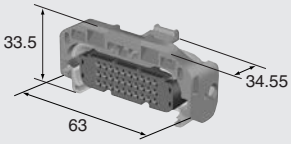
F (6189-7167)



Color **色 相**	Black 黒

30way

F (6189-6987)

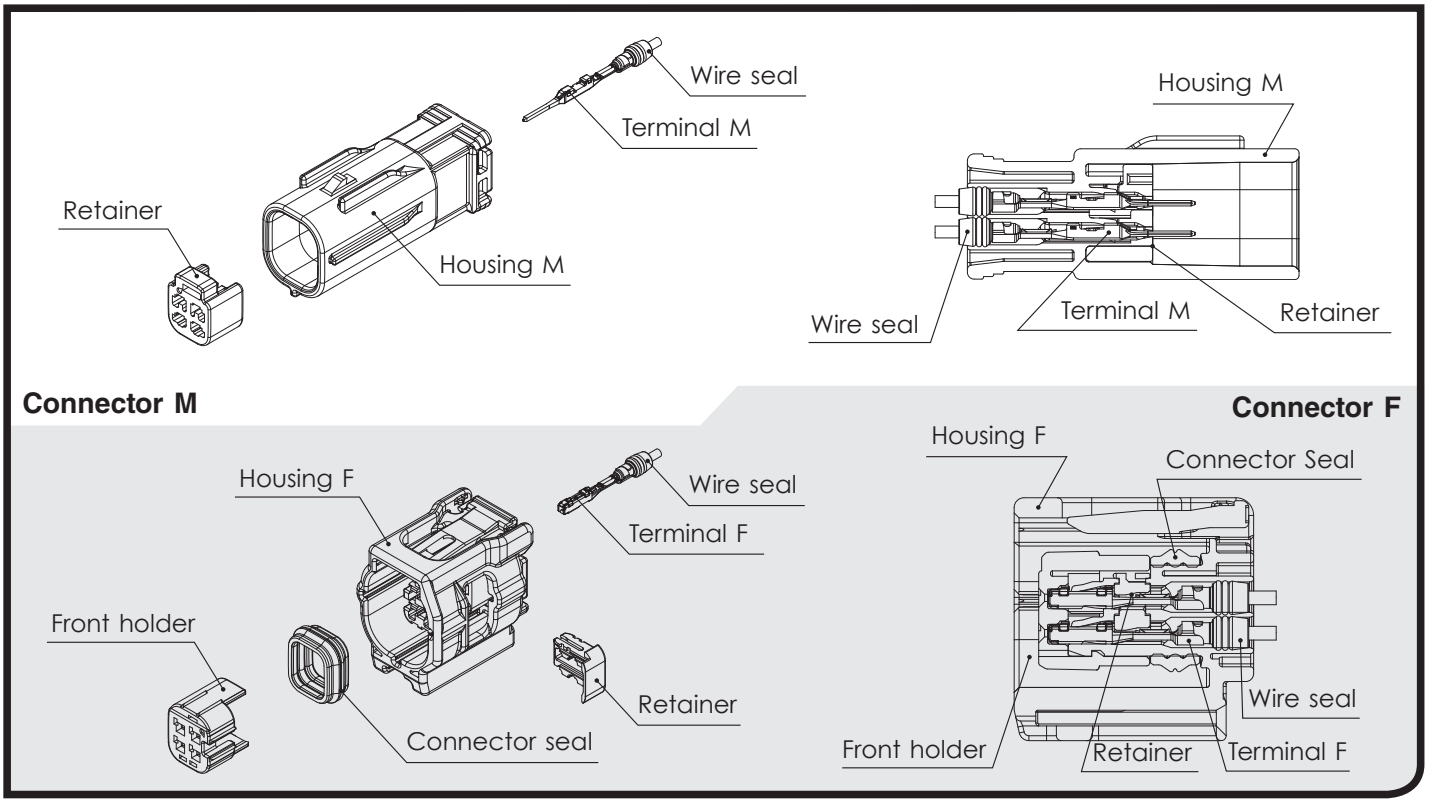


Color **色 相**	Gray 灰

TS SEALED SERIES for STANDARD

0.64W (025W)

Structure／構造



防水0.64W型コネクタは、防水0.64型コネクタから端子間ピッチを拡大しているため互換性はありません。
(既存の防水0.64型コネクタと区別するため、防水0.64W型と呼称)

Since 0.64W has wider terminal pitch, there is no compatibility between 0.64 and 0.64W.
(These connectors are called "0.64W series" to distinguish from existing 0.64 series.)

0.64W (025W)

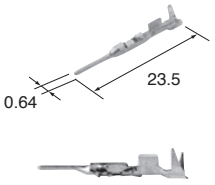
Terminal (UNIT : mm)

Ref; 0.64mm Terminal detail
0.64mmターミナル参照頁

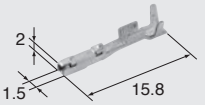
M (Sn)	**M (8100-3617)**	B-03	**F (8100-3455)**	B-03
M (Au)	**M (8100-3708)**	B-03	**F (8100-3456)**	B-03

(LL)

Cable size(mm²) **適用電線サイズ**	FPW/0.6　CIVUS/0.5 AVSS/0.5　AVSSX/0.5 AVSSH/0.5　IVSSH/0.5 AESSX/0.5　CHFUS/0.5 HFSS/0.5
Material **材　質**	Brass 黄銅
Surface treatment **表面処理**	Tin-plated Snメッキ



M (8230-5360)

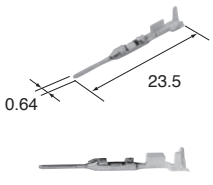


F (8240-0500)

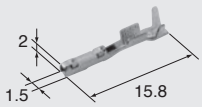
Cable size(mm²) **適用電線サイズ**	FPW/0.6　CIVUS/0.5 AVSS/0.5　AVSSX/0.5 AVSSH/0.5　IVSSH/0.5 AESSX/0.5　CHFUS/0.5 HFSS/0.5
Material **材　質**	Heat resistant copper-alloy 耐熱銅合金
Surface treatment **表面処理**	Tin-plated Snメッキ

(LL) Au

Cable size(mm²) **適用電線サイズ**	CIVUS/0.5　AVSS/0.5 AVSSX/0.5　AVSSH/0.5 IVSSH/0.5　AESSX/0.5 CHFUS/0.5　HFSS/0.5
Material **材　質**	Brass 黄銅
Surface treatment **表面処理**	Gold-plated Auメッキ



M (8230-5361)



F (8240-0501)

Cable size(mm²) **適用電線サイズ**	CIVUS/0.5　AVSS/0.5 AVSSX/0.5　AVSSH/0.5 IVSSH/0.5　AESSX/0.5 CHFUS/0.5　HFSS/0.5
Material **材　質**	Heat resistant copper-alloy 耐熱銅合金
Surface treatment **表面処理**	Gold-plated Auメッキ

0.64W (025W)

Wire seals (UNIT : mm)

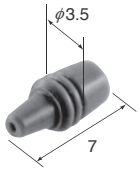
The wire seals are common to M and F.

ワイヤシールはM、F共用です。

(S)

(7165-1608)

Cable size(mm²) **適用電線サイズ**	CIVUS/0.35～0.5 CHFUS/0.35～0.5
Cable overall diameter(mm) **電線仕上り外径**	1.1～1.4
Material **材　質**	Silicon シリコン
Color **色　相**	Dark Gray 濃灰



(M)

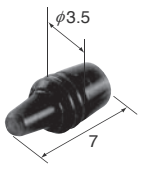
(7165-1607)

Cable size(mm²) **適用電線サイズ**	AVSS/0.3　AVSSH/0.3 IVSSH/0.35　HFSS/0.35
Cable overall diameter(mm) **電線仕上り外径**	1.3～1.5
Material **材　質**	Silicon シリコン
Color **色　相**	Dark Green 濃緑

(L)

(7165-1606)

Cable size(mm²) **適用電線サイズ**	FPW/0.6　AVSS/0.5 AVSSH/0.5　AVSSX/0.5 IVSSH/0.5　HFSS/0.5
Cable overall diameter(mm) **電線仕上り外径**	1.51～1.73
Material **材　質**	Silicon シリコン
Color **色　相**	Dark Brown 濃茶



0.64W (025W)

Dummy plugs (UNIT : mm)

- Dummy plugs are common to M and F.
- Dummy plugs are used to blind unused terminal holes.
- ダミー栓はM、F共用です。
- 不必要なターミナル穴を塞ぐために、ダミー栓を使用します。

(7165-1605)

Material 材 質	Silicon シリコン
Color 色 相	Indian Red ベンガラ

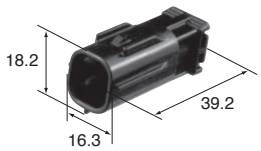
0.64W (025W)

Housing (UNIT : mm)

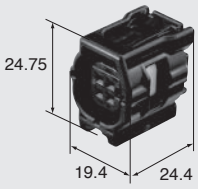
Ref: Terminal part No. ターミナル参照頁	B-08
Ref: wire seal No. ワイヤシール参照頁	B-09
Ref: Dummy plug No. ダミー栓参照頁	B-10
Material 材 質	PA6T

4way

Color 色 相	Black 黒



M (6188-5516)



F (6189-7449)

Color 色 相	Black 黒

TS SEALED SERIES
for HYBRID

0.64W, 2.3mm, 4.8mm (025W, 090, 187)

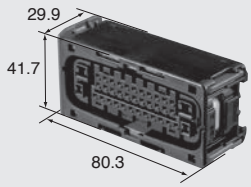
Housing (UNIT : mm)

Ref: Terminal part No. ターミナル参照頁	[0.64W]	B-08
	[2.3mm]	B-13 (for P06)
	[4.8mm]	B-19
Ref: wire seal No. ワイヤシール参照頁	[0.64W]	B-09
	[2.3mm]	B-14 (for P06)
	[4.8mm]	B-20
Ref: Dummy plug No. ダミー栓参照頁	[0.64W]	B-10
	[2.3mm]	B-15 (for P06)
	[4.8mm]	B-21
Material 材 質	PBT	

No. of way/ ( ) corresponds to 0.64W, 2.3mm, 4.8mm in order from left to right.
極数／( ) 内表示：左から0.64W 極数、2.3mm 極数、4.8mm 極数

38way (34+2+2) — Slide Lever

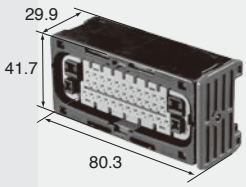
F (6189-7435)



Color 色 相	Black 黒

38way (34+2+2) — Slide Lever

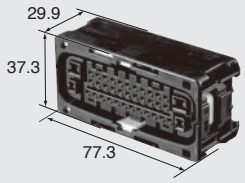
F (6189-7436)



Color 色 相	Black 黒

38way (34+2+2) — Swing + Slide Lever

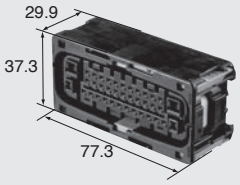
F (6189-7433)



Color 色 相	Black 黒

38way (34+2+2) — Swing + Slide Lever

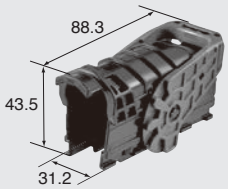
F (6189-7434)



Color 色 相	Black 黒

Lever Assy

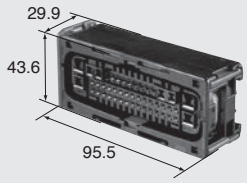
F (6911-5774)



Color 色 相	Black 黒

46way (38+4+4) — Slide Lever

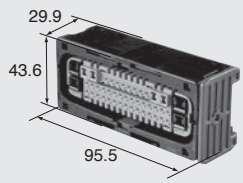
F (6189-7546)



Color 色 相	Black 黒

46way (38+4+4) — Slide Lever

F (6189-7547)

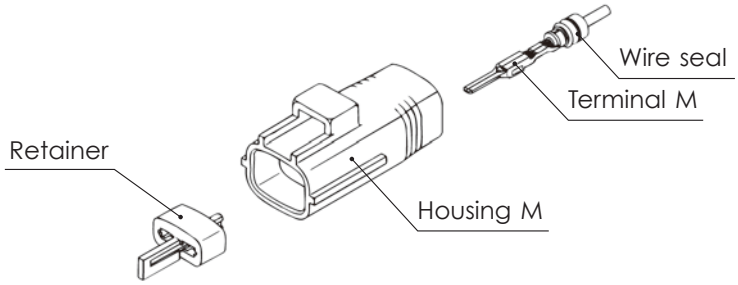


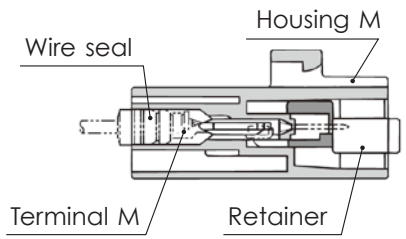
Color 色 相	Black 黒

TS SEALED SERIES for STANDARD

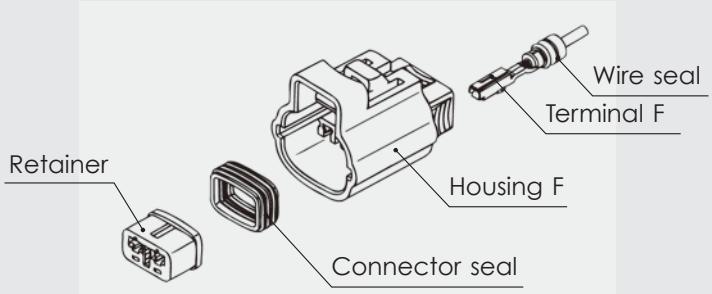
2.3mm (090)

Structure／構造

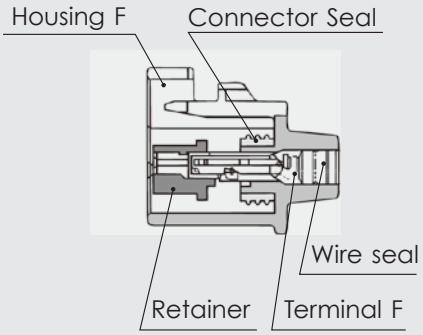




Connector M



Connector F

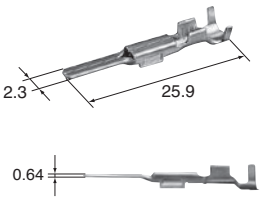


2.3mm (090)

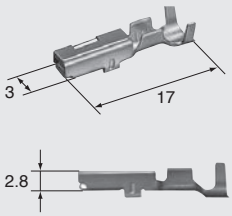
Terminal (UNIT : mm)

(S)

Cable size (mm²) 適用電線サイズ	0.3～0.5
Material 材　質	Brass 黄銅
Surface treatment 表面処理	Tin-plated Snメッキ



M (8100-0457)

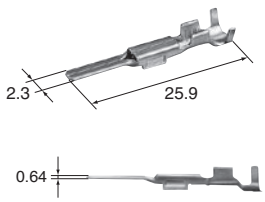


F (8100-0460)

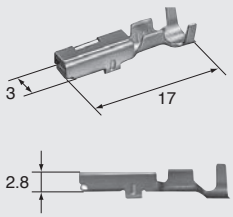
Cable size (mm²) 適用電線サイズ	0.3～0.5
Material 材　質	Heat-resistant copper alloy
Surface treatment 表面処理	Tin-plated Snメッキ

(S) Au

Cable size (mm²) 適用電線サイズ	0.3～0.5
Material 材　質	Brass 黄銅
Surface treatment 表面処理	Gold-plated Auメッキ



M (8100-1340)

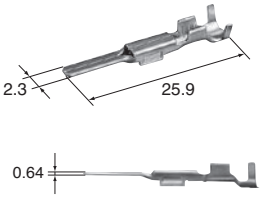


F (8100-1344)

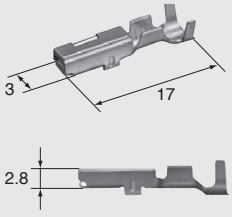
Cable size (mm²) 適用電線サイズ	0.3～0.5
Material 材　質	Heat-resistant copper alloy
Surface treatment 表面処理	Gold-plated Auメッキ

(M)

Cable size (mm²) 適用電線サイズ	0.5～1.25
Material 材　質	Brass 黄銅
Surface treatment 表面処理	Tin-plated Snメッキ



M (8100-0458)

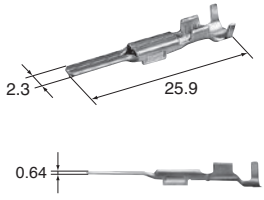


F (8100-0461)

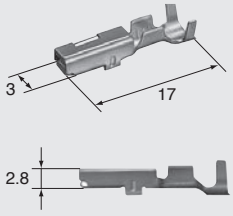
Cable size (mm²) 適用電線サイズ	0.5～1.25
Material 材　質	Heat-resistant copper alloy
Surface treatment 表面処理	Tin-plated Snメッキ

(M) Au

Cable size (mm²) 適用電線サイズ	0.5～1.25
Material 材　質	Brass 黄銅
Surface treatment 表面処理	Gold-plated Auメッキ



M (8100-1007)

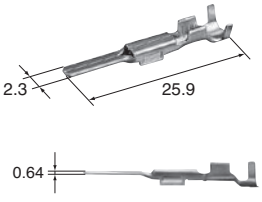


F (8100-0594)

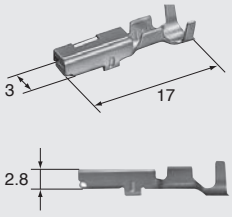
Cable size (mm²) 適用電線サイズ	0.5～1.25
Material 材　質	Heat-resistant copper alloy
Surface treatment 表面処理	Gold-plated Auメッキ

(L)

Cable size (mm²) 適用電線サイズ	2.0
Material 材　質	Brass 黄銅
Surface treatment 表面処理	Tin-plated Snメッキ



M (8100-0459)

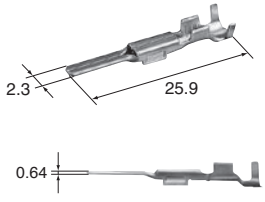


F (8100-0462)

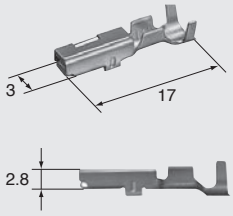
Cable size (mm²) 適用電線サイズ	2.0
Material 材　質	Heat-resistant copper alloy
Surface treatment 表面処理	Tin-plated Snメッキ

(L) Au

Cable size (mm²) 適用電線サイズ	2.0
Material 材　質	Brass 黄銅
Surface treatment 表面処理	Gold-plated Auメッキ



M (8100-1008)



F (8100-0817)

Cable size (mm²) 適用電線サイズ	2.0
Material 材　質	Heat-resistant copper alloy
Surface treatment 表面処理	Gold-plated Auメッキ

Wire seals (UNIT : mm)

The wire seals are common to M and F.

- P5 : For 5mm pitch housing/Please inquire us for the details.
- P6 : For 6mm pitch housing

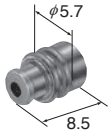
ワイヤシールはM、F共用です。

- P5：5ミリピッチ用／別途お問い合わせください。
- P6：6ミリピッチ用

(SS) (P6)

(7165-0842)

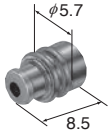
Cable size (mm²) 適用電線サイズ	(CHFUS/0.35～0.5)
Cable overall diameter (mm) 電線仕上り外径	1.1～1.4
Material 材 質	Silicon シリコン
Color 色 相	Blue 青



(S) (P6)

(7165-0349)

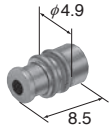
Cable size (mm²) 適用電線サイズ	(AVX・AEX/0.3) (AVS/0.3) (AVSS/0.3～0.85) (AVSSX・AESSX/0.3～0.75) (CAVUS/0.85～1.25)
Cable overall diameter (mm) 電線仕上り外径	1.4～2.0
Material 材 質	Silicon シリコン
Color 色 相	Dark Brown 濃茶



(S) (P5)

(7165-0342)

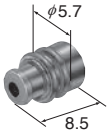
Cable size (mm²) 適用電線サイズ	(AVX・AEX/0.3) (AVS/0.3) (AVSS/0.3～0.85) (AVSSX・AESSX/0.3～0.75) (CAVUS/0.85～1.25)
Cable overall diameter (mm) 電線仕上り外径	1.4～2.0
Material 材 質	Silicon シリコン
Color 色 相	Brown 茶



(M) (P6)

(7165-0395)

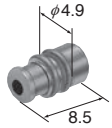
Cable size (mm²) 適用電線サイズ	(AV/0.5) (AVX・AEX/0.5～0.75) (AVS/0.5～0.85) (AVSS/1.25) (AVSSX・AESSX/1.25)
Cable overall diameter (mm) 電線仕上り外径	2.0～2.5
Material 材 質	Silicon シリコン
Color 色 相	Dark Green 濃緑



(M) (P5)

(7165-0343)

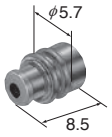
Cable size (mm²) 適用電線サイズ	(AV/0.5) (AVX・AEX/0.5～0.75) (AVS/0.5～0.85) (AVSS/1.25) (AVSSX・AESSX/1.25)
Cable overall diameter (mm) 電線仕上り外径	2.0～2.5
Material 材 質	Silicon シリコン
Color 色 相	Black 黒



(L) (P6)

(7165-0351)

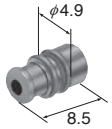
Cable size (mm²) 適用電線サイズ	(AV/1.25) (AVX・AEX/1.25) (AVS/1.25) (AVSS/2.0) (AVSSX・AESSX/2.0)
Cable overall diameter (mm) 電線仕上り外径	2.5～2.9
Material 材 質	Silicon シリコン
Color 色 相	Dark Gray 濃灰



(L) (P5)

(7165-0344)

Cable size (mm²) 適用電線サイズ	(AV/1.25) (AVX・AEX/1.25) (AVS/1.25) (AVSS/2.0) (AVSSX・AESSX/2.0)
Cable overall diameter (mm) 電線仕上り外径	2.5～2.9
Material 材 質	Silicon シリコン
Color 色 相	Dark Blue 紺



2.3mm (090)

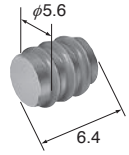
Dummy plugs (UNIT : mm)

- Dummy plugs are common to M and F.
- Dummy plugs are used to blind unused terminal holes.
- P5 : For 5mm pitch housing/Please inquire us for the details.
- P6 : For 6mm pitch housing

- ダミー栓はM、F共用です。
- 不必要なターミナル穴を塞ぐために、ダミー栓を使用します。
- P5：5ミリピッチ用／別途お問い合わせください。
- P6：6ミリピッチ用

(P6)

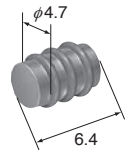
(7160-9465)



Material 材 質	NBR
Color 色 相	Black 黒

(P5)

(7161-9787)



Material 材 質	NBR
Color 色 相	Brown 茶

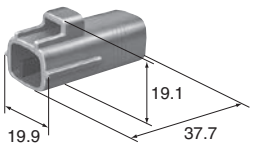
2.3mm (090)

Housing (UNIT : mm)

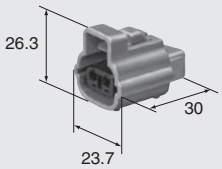
Ref: Terminal part No. ターミナル参照頁	B-13
Ref: wire seal No. ワイヤシール参照頁	B-14
Ref: Dummy plug No. ダミー栓参照頁	B-15
Material 材 質	PBT

2way

Color 色 相	Gray 灰



M (6188-0047)

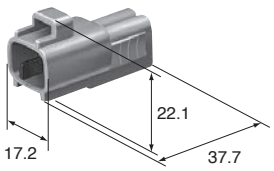


F (6189-0100)

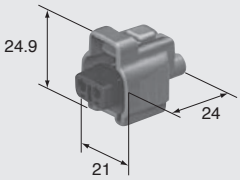
Color 色 相	Gray 灰

2way

Color 色 相	Gray 灰



M (6188-0108)

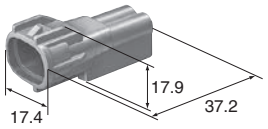


F (6189-0199)

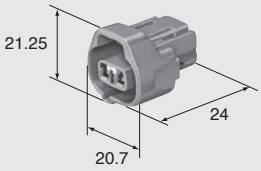
Color 色 相	Gray 灰

2way

Color 色 相	Gray 灰



M (6188-0266)

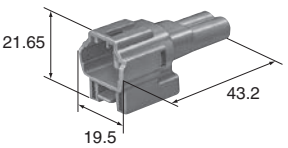


F (6189-0249)

Color 色 相	Gray 灰

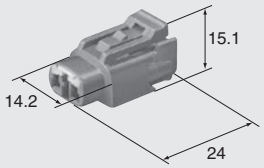
2way

Color 色 相	Gray 灰



M (6188-0229)

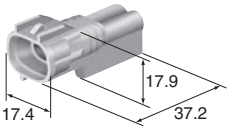
F (6189-0388)



Color 色 相	Gray 灰

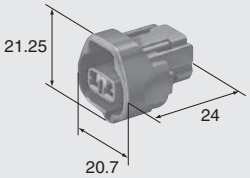
2way

Color 色 相	Natural 自然色



M (6188-0624)

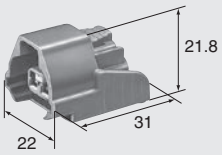
F (6189-0264)



Color 色 相	Gray 灰

2way P5

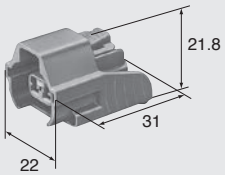
F (6189-0566)



Ref: Wire seal No. ワイヤシール参照頁	B-10 (For P5)
Ref: Dummy plug No. ダミー栓参照頁	B-11 (For P5)
Color 色 相	Gray 灰

2way P5

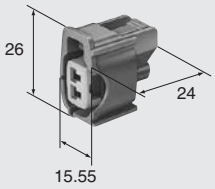
F (6189-0573)



Ref: Wire seal No. ワイヤシール参照頁	B-10 (For P5)
Ref: Dummy plug No. ダミー栓参照頁	B-11 (For P5)
Color 色 相	Gray 灰

2way P5

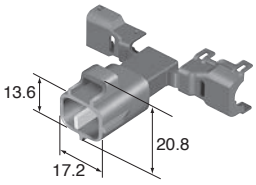
F (6189-0611)



Ref: Wire seal No. ワイヤシール参照頁	B-10 (For P5)
Ref: Dummy plug No. ダミー栓参照頁	B-11 (For P5)
Color 色 相	Gray 灰

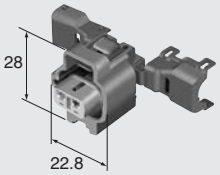
2way

Color 色 相	Gray 灰



M (6188-0470)

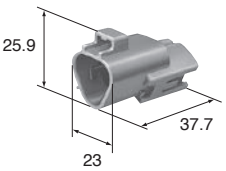
F (6189-0682)



Color 色 相	Gray 灰

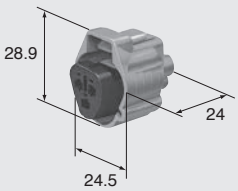
3way (T Type)

Color 色 相	Gray 灰



M (6188-0099)

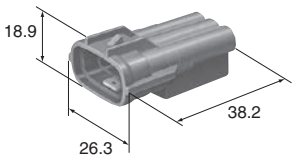
F (6189-0179)



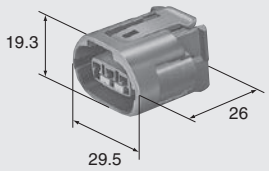
Color 色 相	Gray 灰

3way (E Type)

Color 色 相	Gray 灰



M (6188-0282)

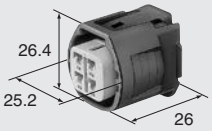


F (6189-0443)

Color 色 相	Gray 灰

4way

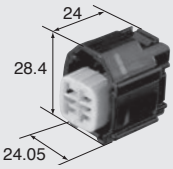
F (6189-0694)



Color 色 相	Black 黒

4way

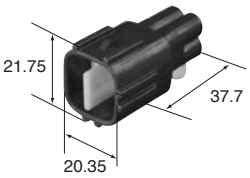
F (6189-7398)



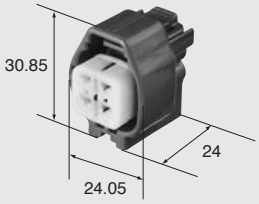
Material 材 質	PA6T
Color 色 相	Black 黒

4way

Color 色 相	Black 黒



M (6188-0517)

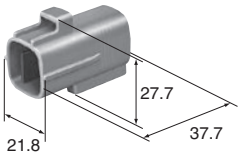


F (6189-0629)

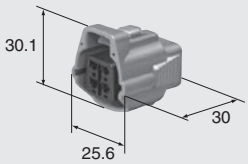
Color 色 相	Gray 灰

4way

Color 色 相	Gray 灰



M (6188-0066)

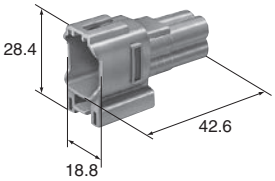


F (6189-0126)

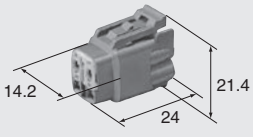
Color 色 相	Gray 灰

4way

Color 色 相	Gray 灰



M (6188-0141)



F (6189-0381)

Color 色 相	Gray 灰

4way

Color 色 相	Gray 灰

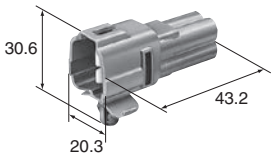
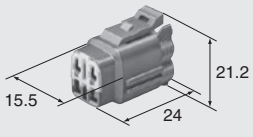


Plate thickness range for clamp:
t=0.7～2.2

M (6188-0217)

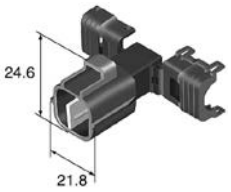


F (6189-0372)

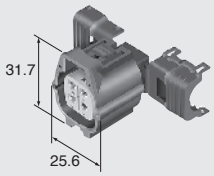
Color 色 相	Gray 灰

4way

Color 色 相 Gray 灰



M (6188-0472)

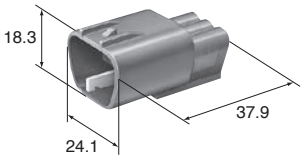


F (6189-0685)

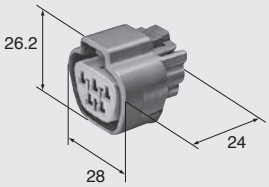
Color 色 相 Gray 灰

5way

Color 色 相 Gray 灰



M (6188-0327)

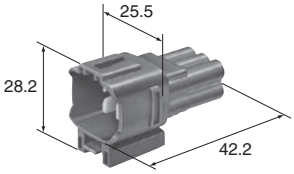


F (6189-0504)

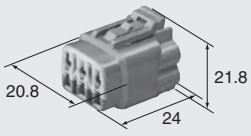
Color 色 相 Gray 灰

6way

Color 色 相 Gray 灰



M (6188-0173)

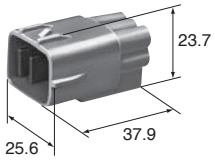


F (6189-0319)

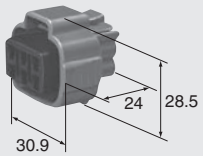
Color 色 相 Gray 灰

6way

Color 色 相 Gray 灰



M (6188-0175)



F (6189-0323)

Color 色 相 Gray 灰

6way

Color 色 相 Gray 灰

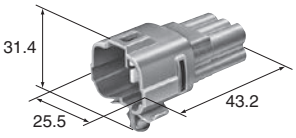
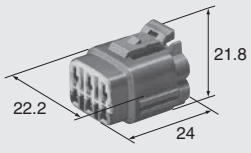


Plate thickness range for clamp:
t=0.7～2.2

M (6188-0209)

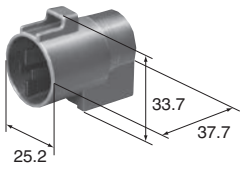


F (6189-0368)

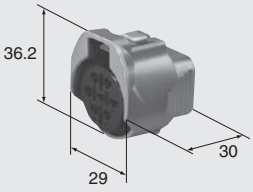
Color 色 相 Gray 灰

7way

Color 色 相 Gray 灰



M (6188-0067)



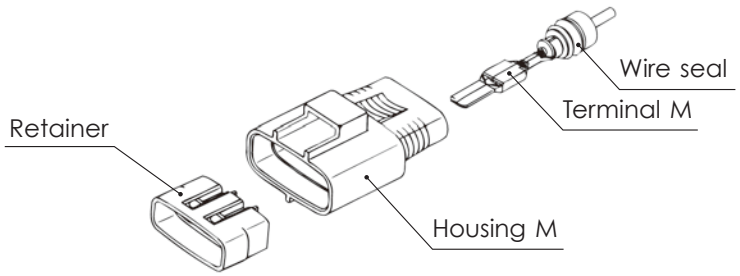
F (6189-0127)

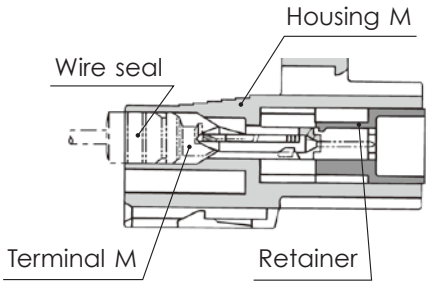
Color 色 相 Gray 灰

TS SEALED SERIES for STANDARD

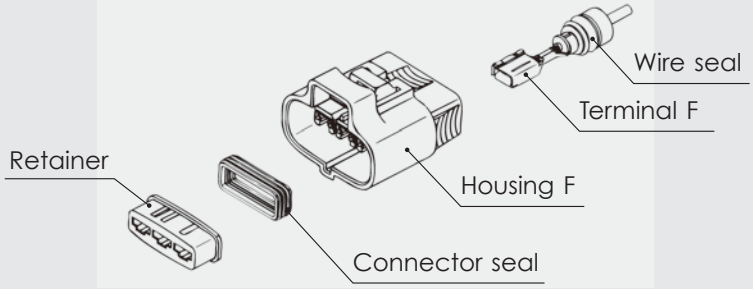
4.8mm (187)

Structure／構造

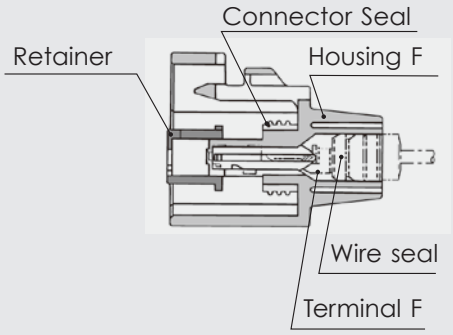




Connector M



Connector F

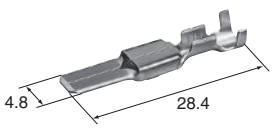


4.8mm (187)

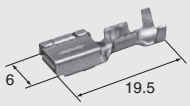
Terminal (UNIT : mm)

(S)

Cable size (mm²) **適用電線サイズ**	0.3～0.5
Material **材　質**	Brass 黄銅
Surface treatment **表面処理**	Tin-plated Snメッキ



M (8100-0463)

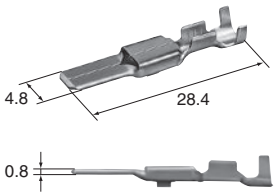


F (8100-0466)

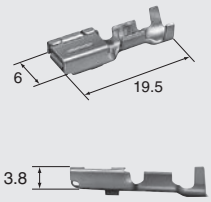
Cable size (mm²) **適用電線サイズ**	0.3～0.5
Material **材　質**	Brass 黄銅
Surface treatment **表面処理**	Tin-plated Snメッキ

(M)

Cable size(mm²) **適用電線サイズ**	0.5～1.25
Material **材　質**	Brass 黄銅
Surface treatment **表面処理**	Tin-plated Snメッキ



M (8100-0464)

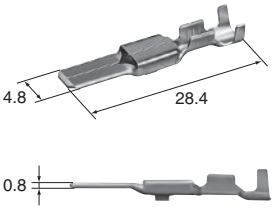


F (8100-0467)

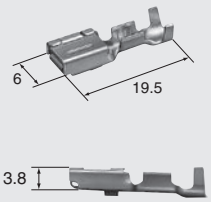
Cable size(mm²) **適用電線サイズ**	0.5～1.25
Material **材　質**	Brass 黄銅
Surface treatment **表面処理**	Tin-plated Snメッキ

(L)

Cable size(mm²) **適用電線サイズ**	2.0～3.0
Material **材　質**	Brass 黄銅
Surface treatment **表面処理**	Tin-plated Snメッキ



M (8100-0465)



F (8100-0468)

Cable size(mm²) **適用電線サイズ**	2.0～3.0
Material **材　質**	Heat-resistant copper alloy
Surface treatment **表面処理**	Tin-plated Snメッキ

4.8mm (187)

Wire seals (UNIT : mm)

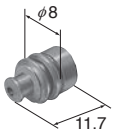
The wire seals are common to M and F.

ワイヤシールはM、F共用です。

(S)

(7165-0346)

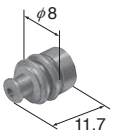
Cable size(mm²) **適用電線サイズ**	(AVS/0.3) (AVSS/0.3～0.85) (AVSSX・AESSX/0.5～0.75) (CAVUS/0.85～1.25)
Cable overall diameter(mm) **電線仕上り外径**	1.4～2.0
Material **材　質**	Silicon シリコン
Color **色　相**	Dark Brown 濃茶



(M)

(7165-0347)

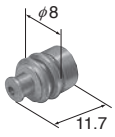
Cable size(mm²) **適用電線サイズ**	(AV/0.5～1.25) (AVX・AEX/0.5～1.25) (AVS/0.5～1.25) (AVSS/1.25～2.0) (AVSSX・AESSX/1.25～2.0)
Cable overall diameter(mm) **電線仕上り外径**	2.0～2.9
Material **材　質**	Silicon シリコン
Color **色　相**	Dark Green 濃緑



(L)

(7165-0348)

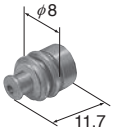
Cable size(mm²) **適用電線サイズ**	(AV/2.0) (AVX・AEX/2.0) (AVS/2.0)
Cable overall diameter(mm) **電線仕上り外径**	2.9～3.5
Material **材　質**	Silicon シリコン
Color **色　相**	Dark Gray 濃灰



(LL)

(7165-0356)

Cable size(mm²) **適用電線サイズ**	(AV/3.0) (AVX・AEX/3.0) (AVS/3.0)
Cable overall diameter(mm) **電線仕上り外径**	3.5～4.1
Material **材　質**	Silicon シリコン
Color **色　相**	Dark Blue 紺

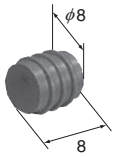


4.8mm (187)

Dummy plugs (UNIT : mm)

- Dummy plugs are common to M and F.
- Dummy plugs are used to blind unused terminal holes.
- ダミー栓はM、F共用です。
- 不必要なターミナル穴を塞ぐために、ダミー栓を使用します。

(7165-0145)



Material 材 質	NBR
Color 色 相	Gray 灰

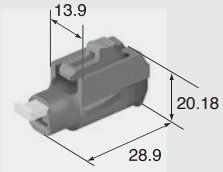
4.8mm (187)

Housing (UNIT : mm)

Ref: Terminal part No. ターミナル参照頁	B-19
Ref: wire seal No. ワイヤシール参照頁	B-20
Ref: Dummy plug No. ダミー栓参照頁	B-21
Material 材 質	PBT

1way

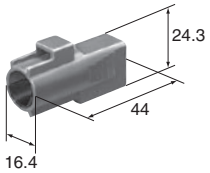
F (6189-0413)



Color 色 相	Black 黒

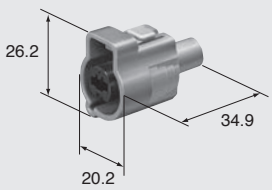
1way

Color 色 相	Gray 灰



M (6188-0083)

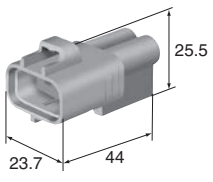
F (6189-0145)



Color 色 相	Gray 灰

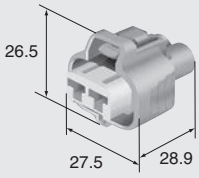
2way

Color 色 相	Gray 灰



M (6188-0259)

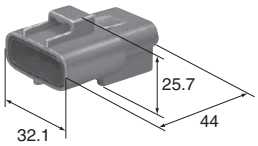
F (6189-0425)



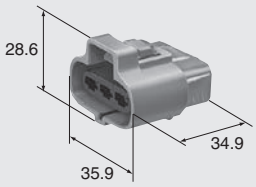
Color 色 相	Gray 灰

3way

Color 色 相	Gray 灰



M (6188-0129)



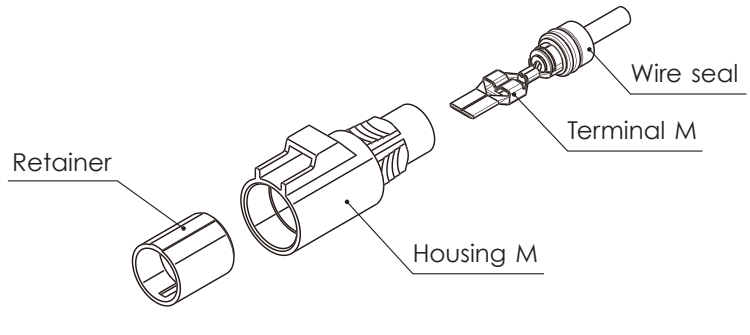
F (6189-0165)

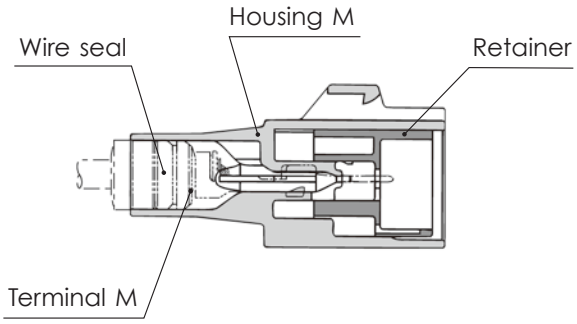
Color 色 相	Gray 灰

TS SEALED SERIES for STANDARD

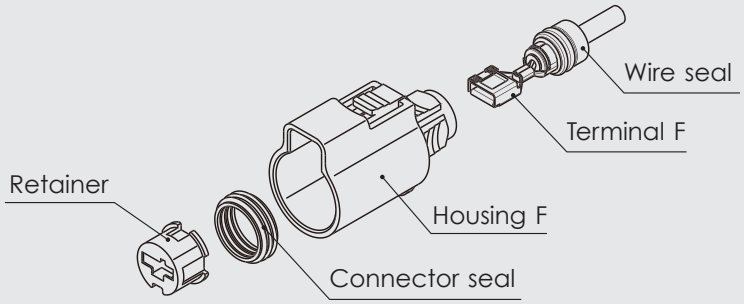
8.0mm (312)

Structure／構造

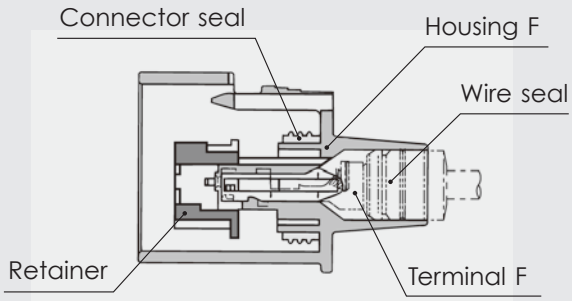




Connector M



Connector F

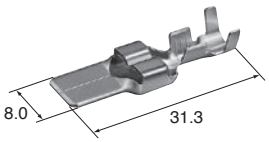


8.0mm (312)

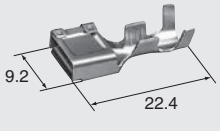
Terminal (UNIT : mm)

(S)

Cable size (mm²) **適用電線サイズ**	0.5～1.25
Cable overall diameter (mm) **電線仕上りサイズ**	2.0～2.7
Material **材　質**	Brass 黄銅
Surface treatment **表面処理**	Tin-plated Snメッキ



M (8100-0506)

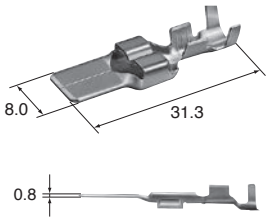


F (8100-0451)

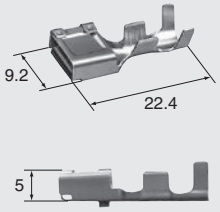
Cable size (mm²) **適用電線サイズ**	0.5～1.25
Cable overall diameter (mm) **電線仕上りサイズ**	2.0～2.7
Material **材　質**	Brass 黄銅
Surface treatment **表面処理**	Tin-plated Snメッキ

(M)

Cable size(mm²) **適用電線サイズ**	2.0～3.0
Cable overall diameter(mm) **電線仕上りサイズ**	2.6～4.1
Material **材　質**	Brass 黄銅
Surface treatment **表面処理**	Tin-plated Snメッキ



M (8100-0507)

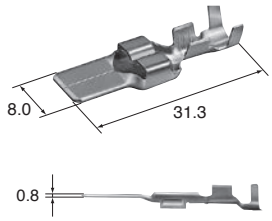


F (8100-0452)

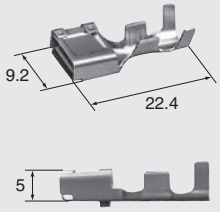
Cable size(mm²) **適用電線サイズ**	2.0～3.0
Cable overall diameter(mm) **電線仕上りサイズ**	2.6～4.1
Material **材　質**	Brass 黄銅
Surface treatment **表面処理**	Tin-plated Snメッキ

(L)

Cable size(mm²) **適用電線サイズ**	5.0～8.0
Cable overall diameter(mm) **電線仕上りサイズ**	4.4～5.8
Material **材　質**	Brass 黄銅
Surface treatment **表面処理**	Tin-plated Snメッキ



M (8100-0508)



F (8100-2980)

Cable size(mm²) **適用電線サイズ**	5.0～8.0
Cable overall diameter(mm) **電線仕上りサイズ**	4.4～5.8
Material **材　質**	Heat-resistant copper alloy
Surface treatment **表面処理**	Tin-plated Snメッキ

8.0mm (312)

Wire seals (UNIT : mm)

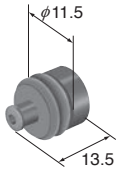
The wire seals are common to M and F.

ワイヤシールはM、F共用です。

(SS)

(7165-0683)

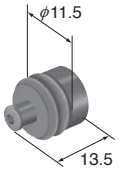
Cable size(mm²) **適用電線サイズ**	(AVS・AVX/0.5～1.25)
Cable overall diameter(mm) **電線仕上り外径**	Over 2.0 mm less than 2.9 mm 2.0 mmを越え2.9 mm以下
Material **材　質**	Silicon シリコン
Color **色　相**	Dark Brown 濃茶



(S)

(7165-0400)

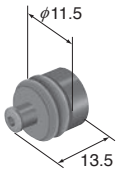
Cable size(mm²) **適用電線サイズ**	(AV/3.0) (AVX・AEX/3.0) (AVS/3.0)
Cable overall diameter(mm) **電線仕上り外径**	3.6～4.1
Material **材　質**	Silicon シリコン
Color **色　相**	Dark Gray 濃灰



(M)

(7165-0392)

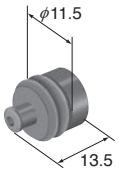
Cable size(mm²) **適用電線サイズ**	(AV/5.0) (AVX・AEX/5.0) (AVS/5.0)
Cable overall diameter(mm) **電線仕上り外径**	4.4～4.9
Material **材　質**	Silicon シリコン
Color **色　相**	Dark Blue 紺



(L)

(7165-0393)

Cable size(mm²) **適用電線サイズ**	(AV/8.0) (AVX・AEX/8.0) (AVS/8.0)
Cable overall diameter(mm) **電線仕上り外径**	5.3～5.8
Material **材　質**	Silicon シリコン
Color **色　相**	Black 黒

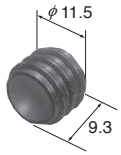


8.0mm (312)

Dummy plugs (UNIT : mm)

- Dummy plugs are common to M and F.
- Dummy plugs are used to blind unused terminal holes.
- ダミー栓はM、F共用です。
- 不必要なターミナル穴を塞ぐために、ダミー栓を使用します。

(7165-0180)



Material 材 質	NBR
Color 色 相	Gray 灰

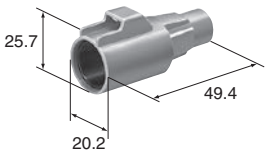
8.0mm (312)

Housing (UNIT : mm)

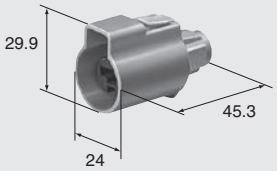
Ref: Terminal part No. ターミナル参照頁	B-23
Ref: wire seal No. ワイヤシール参照頁	B-24
Ref: Dummy plug No. ダミー栓参照頁	B-25
Material 材 質	PBT

1way

Color 色 相	Gray 灰



M (6188-0049)

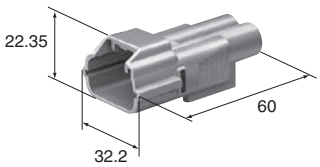


F (6189-0101)

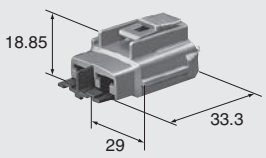
Color 色 相	Gray 灰

2way

Color 色 相	Gray 灰



M (6188-0096)

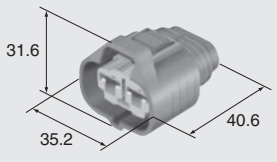


F (6189-0172)

Color 色 相	Gray 灰

2way

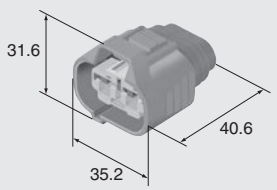
F (6189-0856)



Color 色 相	Gray 灰

2way

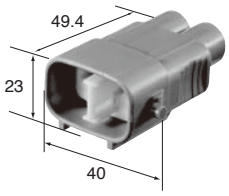
F (6189-6953)



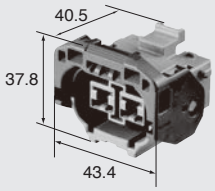
Color 色 相	Gray 灰

2way

Color 色 相	Gray 灰



M (6188-5295)



F (6189-7256)

Color 色 相	Gray 灰

TS SEALED SERIES
for HYBRID

0.64mm, 2.3mm (025, 090)

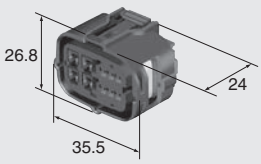
Housing (UNIT : mm)

Ref: Terminal part No. ターミナル参照頁	[0.64mm]	B-03
	[2.3mm]	B-13
Ref: wire seal No. ワイヤシール参照頁	[0.64mm]	B-04
	[2.3mm]	B-14
Ref: Dummy plug No. ダミー栓参照頁	[0.64mm]	B-04
	[2.3mm]	B-15
Material 材 質	PBT	

No. of way/ ( ) corresponds to 0.64mm, 2.3mm, in order from left to right.
極数／( ) 内表示：左から0.64mm 極数、2.3mm 極数

10way (6+4)

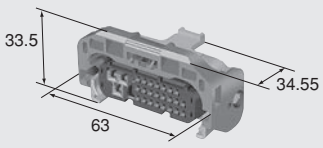
F (6189-7691)



Color 色 相	Black 黒

13way (10+3)

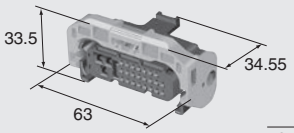
F (6189-7077)



Color 色 相	Gray 灰

26way (23+3)

F (6189-6934)



Color 色 相	Black 黒

0.64mm, 4.8mm (025, 187)

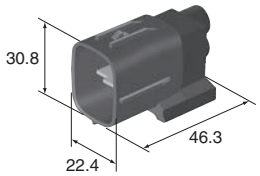
Housing (UNIT : mm)

Ref: Terminal part No. **ターミナル参照頁**	[0.64mm] [4.8mm]	B-03 B-19
Ref: wire seal No. **ワイヤシール参照頁**	[0.64mm] [4.8mm]	B-04 B-20
Ref: Dummy plug No. **ダミー栓参照頁**	[0.64mm] [4.8mm]	B-04 B-21
Material **材　質**	PBT	

No. of way ( ) corresponds to 0.64mm, 4.8mm, in order from left to right.
極数／( ) 内表示：左から0.64mm 極数、4.8mm 極数

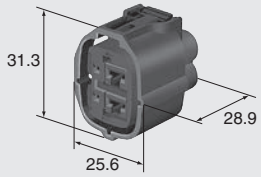
4way (2+2)

Color / **色　相**: Black / 黒



M (6188-5103)

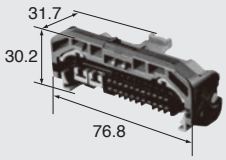
F (6189-1048)



Color / **色　相**: Black / 黒

24way (22+2)

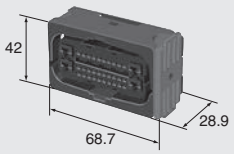
F (6189-7426)



Color / **色　相**: Gray / 灰

34way (30+4)

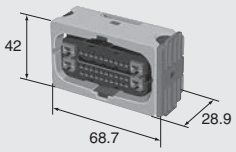
F (6189-6978)



Color / **色　相**: Black / 黒

34way (30+4)

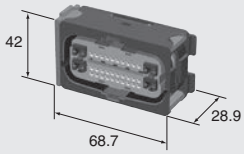
F (6189-6979)



Color / **色　相**: Gray / 灰

34way (30+4)

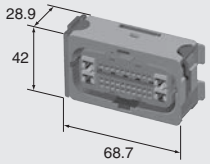
F (6189-6980)



Color / **色　相**: Black / 黒

34way (30+4)

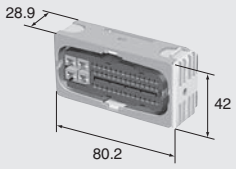
F (6189-6981)



Color / **色　相**: Gray / 灰

40way (36+4)

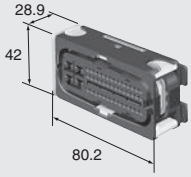
F (6189-1160)



Color / **色　相**: Gray / 灰

46way (42+4)

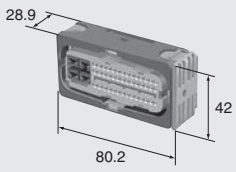
F (6189-1136)



Color / **色　相**: Black / 黒

46way (42+4)

F (6189-6894)



Color / **色　相**: Black / 黒

0.64mm, 2.3mm, 4.8mm (025, 090, 187)

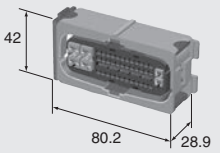
Housing (UNIT : mm)

Ref: Terminal part No. **ターミナル参照頁**	[0.64mm] [2.3mm] [4.8mm]	B-03 B-13 B-19
Ref: wire seal No. **ワイヤシール参照頁**	[0.64mm] [2.3mm] [4.8mm]	B-04 B-14 B-20
Ref: Dummy plug No. **ダミー栓参照頁**	[0.64mm] [2.3mm] [4.8mm]	B-04 B-15 B-21
Material **材　質**	PBT	

No. of way/ ( ) corresponds to 0.64mm, 2.3mm, 4.8mm in order from left to right.
極数／( ) 内表示：左から0.64mm 極数、2.3mm 極数 4.8mm 極数

42way (36+2+4)

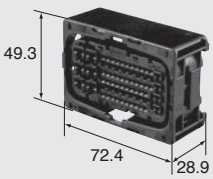
F (6189-7094)



Color **色　相**	Black 黒

52way (42+4+6)

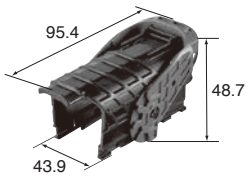
F (6189-7809)



Color **色　相**	Black 黒

Lever Assy

(6911-5948)



Color **色　相**	Black 黒

2.3mm, 4.8mm (090, 187)

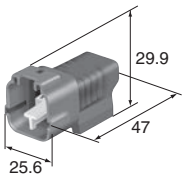
Housing (UNIT : mm)

Ref: Terminal part No. **ターミナル参照頁**	[2.3mm] B-13 [4.8mm] B-19
Ref: wire seal No. **ワイヤシール参照頁**	[2.3mm] B-14 (For P6) [4.8mm] B-20
Ref: Dummy plug No. **ダミー栓参照頁**	[2.3mm] B-15 (For P6) [4.8mm] B-21
Material **材　質**	PBT

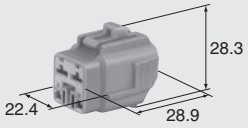
No. of way/ ( ) corresponds to 2.3mm, 4.8mm in order from left to right.
極数／( ) 内表示：左から2.3mm 極数、4.8mm 極数

4way (2+2)

Color / **色　相**: Gray / 灰



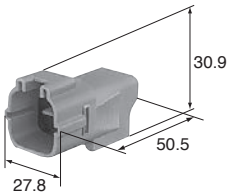
M (6188-0415) **F (6189-0144)**



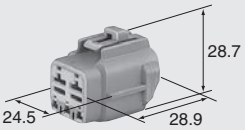
Color / **色　相**: Gray / 灰

5way (3+2)

Color / **色　相**: Gray / 灰



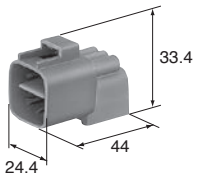
M (6188-0091) **F (6189-0166)**



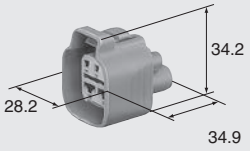
Color / **色　相**: Gray / 灰

5way (3+2)

Color / **色　相**: Gray / 灰



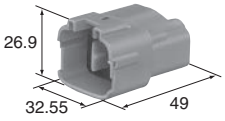
M (6188-0101) **F (6189-0181)**



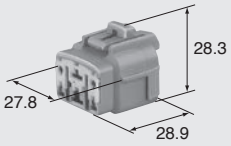
Color / **色　相**: Gray / 灰

6way (4+2)

Color / **色　相**: Gray / 灰



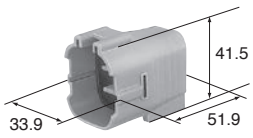
M (6188-0187) **F (6189-0143)**



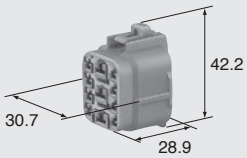
Color / **色　相**: Gray / 灰

11way (8+3)

Color / **色　相**: Gray / 灰



M (6188-0221) **F (6189-0376)**



Color / **色　相**: Gray / 灰

4.8mm, 8.0mm (187, 312)

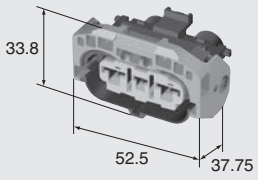
Housing (UNIT : mm)

Ref: Terminal part No. **ターミナル参照頁**	[4.8mm] B-19 [8.0mm] B-23
Ref: wire seal No. **ワイヤシール参照頁**	[4.8mm] B-20 [8.0mm] B-24
Ref: Dummy plug No. **ダミー栓参照頁**	[4.8mm] B-21 [8.0mm] B-25
Material **材　質**	PBT

No. of way/ ( ) corresponds to 4.8mm, 8.0mm in order from left to right.
極数／( ) 内表示：左から4.8mm 極数、8.0mm 極数

3way (1+2)

F (6189-7156)



Color **色　相**	Black 黒

HE SERIES

Features

The HE connector series is the highly reliable improved version of the conventional HD series, with a mechanism that minimizes the possibility of terminal back out and semi-engagement of connectors.
This series consists of 0.64mm, 1.0mm, 2.3mm, 4.8mm and 9.5mm types (0.64mm, 1.0mm, 2.3mm, 4.8mm and 8.0mm types for the hybrid model) classified according to terminal size, supporting use in a variety of control circuits and low power circuits.

- An incompletely inserted terminal is automatically adjusted to the correct position by setting a retainer.
- Retainers are pre-mounted on the connector housing, and are structured to enable setting by the same simple operation regardless of the number of ways, improving operability.
- An extra clip can be attached to the connector housing to secure it to the car body, and multiple connectors can be joined.
- PCB models are also available for connection to printed circuit boards.
- RoHS/ELV Compliant

特　長

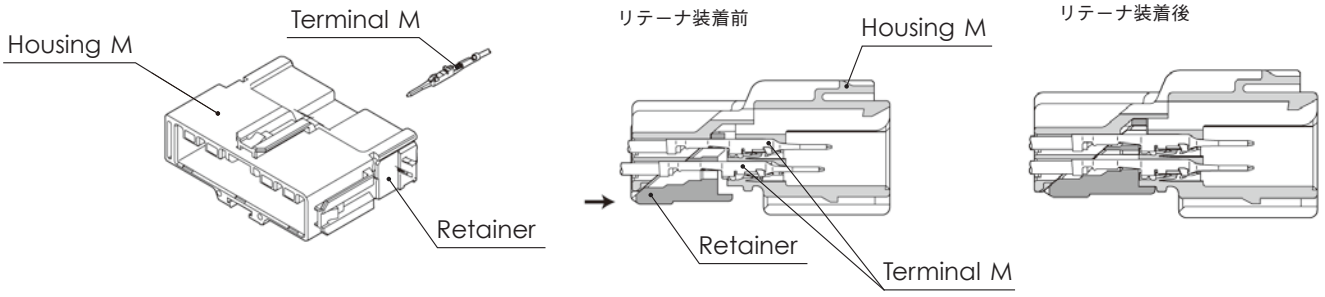
HE シリーズは、従来の HD シリーズを改良し、信頼性を向上させたコネクタです。ターミナル抜けやコネクタの半嵌合が起きにくい機構を備えています。
ターミナルサイズにより0.64mm・1.0mm・2.3mm・4.8mm・9.5mm(ハイブリッドは0.64mm・1.0mm・2.3mm・4.8mm・8.0mm）で構成されており、各種の制御回路並びに低パワー回路に対応することができます。

- 挿入不足のターミナルは、リテーナをセットすることにより正規の位置に固定されます。
- リテーナは、コネクタハウジングに予め組み付けられており、また極数に関係なく簡単な同一作業でセットすることができる構造になっているので、作業性が向上します。
- コネクタハウジングにはボデーに固定するためのクランプ（クリップ）を装着することができ、更にコネクタ同士の連結が可能です。
- プリント基板との接続に適した PCB タイプも設定しました。
- RoHS/ELV 対応

HE SERIES for STANDARD

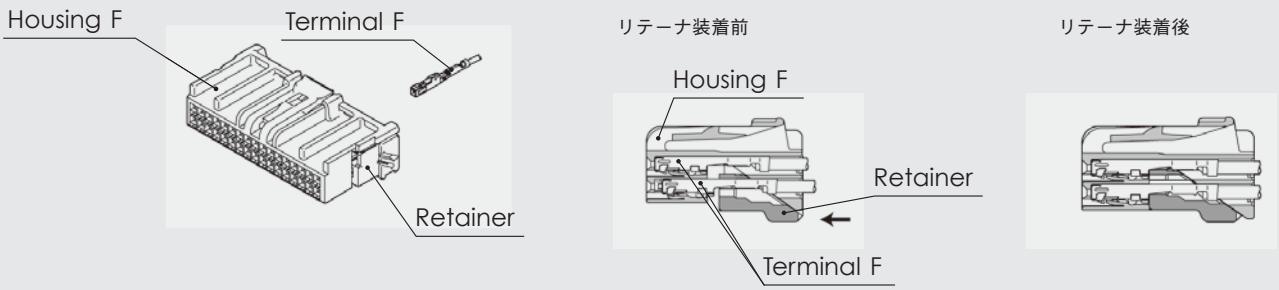
0.64mm (025)

Structure／構造



Connector M

Connector F

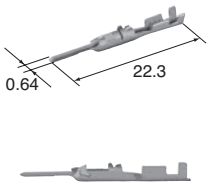


0.64mm (025)

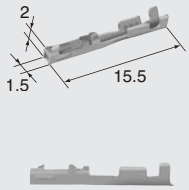
Terminal (UNIT : mm)

(S)

Cable size(mm²) **適用電線サイズ**	0.22～0.35
Cable overall diameter(mm) **電線仕上り外径**	0.95～1.4
Material **材　質**	Brass 黄銅
Surface treatment **表面処理**	Tin-plated Snメッキ



M (8100-4028)

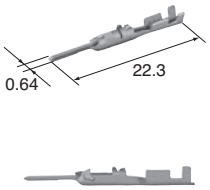


F (8100-4029)

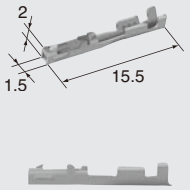
Cable size(mm²) **適用電線サイズ**	0.22～0.35
Cable overall diameter(mm) **電線仕上り外径**	0.95～1.4
Material **材　質**	Heat-resistant copper alloy
Surface treatment **表面処理**	Tin-plated Snメッキ

(M)

Cable size(mm²) **適用電線サイズ**	0.5～0.75
Cable overall diameter(mm) **電線仕上り外径**	1.25～1.6
Material **材　質**	Brass 黄銅
Surface treatment **表面処理**	Tin-plated Snメッキ



M (8100-4027)



F (8100-4030)

Cable size(mm²) **適用電線サイズ**	0.5～0.75
Cable overall diameter(mm) **電線仕上り外径**	1.25～1.6
Material **材　質**	Heat-resistant copper alloy
Surface treatment **表面処理**	Tin-plated Snメッキ

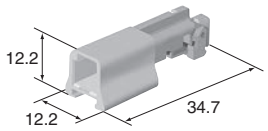
0.64mm (025)

Housing (UNIT : mm)

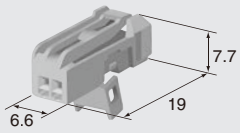
Ref: Terminal part No. **ターミナル参照頁**	C-02
Material **材　質**	PBT

2way

Color **色　相**	Natural 自然色



M (6098-5070)

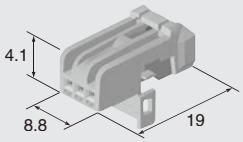


F (6098-5071)

Color **色　相**	Natural 自然色

3way

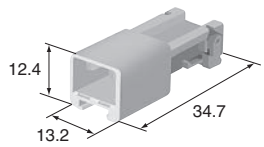
F (6098-5833)



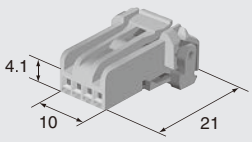
Color **色　相**	Natural 自然色

4way

Color **色　相**	Natural 自然色



M (6098-4944)

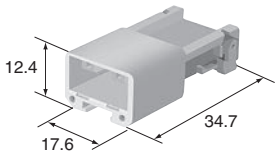


F (6098-4978)

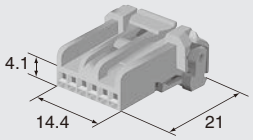
Color **色　相**	Natural 自然色

6way

Color 色 相: Natural 自然色



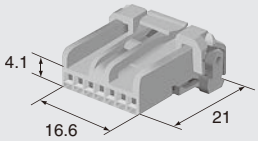
M (6098-4943) **F (6098-4979)**



Color 色 相: Natural 自然色

7way

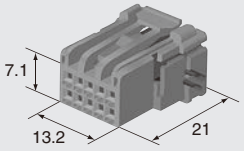
F (6098-5000)



Color 色 相: Natural 自然色

10way

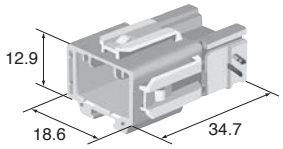
F (6098-4982)



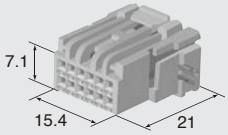
Color 色 相: Green 緑

12way

Color 色 相: Natural 自然色



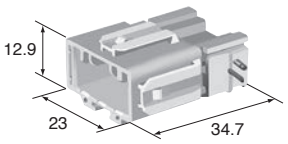
M (6098-4675) **F (6098-4640)**



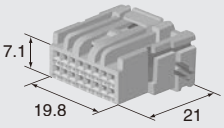
Color 色 相: Natural 自然色

16way

Color 色 相: Natural 自然色



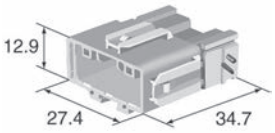
M (6098-4333) **F (6098-4339)**



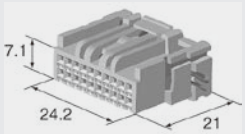
Color 色 相: Natural 自然色

20way

Color 色 相: Natural 自然色



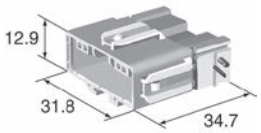
M (6098-4589) **F (6098-4595)**



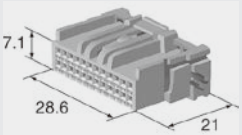
Color 色 相: Natural 自然色

24way

Color 色 相: Natural 自然色



M (6098-4588) **F (6098-4594)**

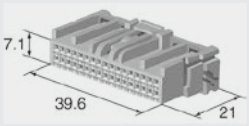


Color 色 相: Natural 自然色

34way

Color 色　相	Natural 自然色

M (6098-4590)



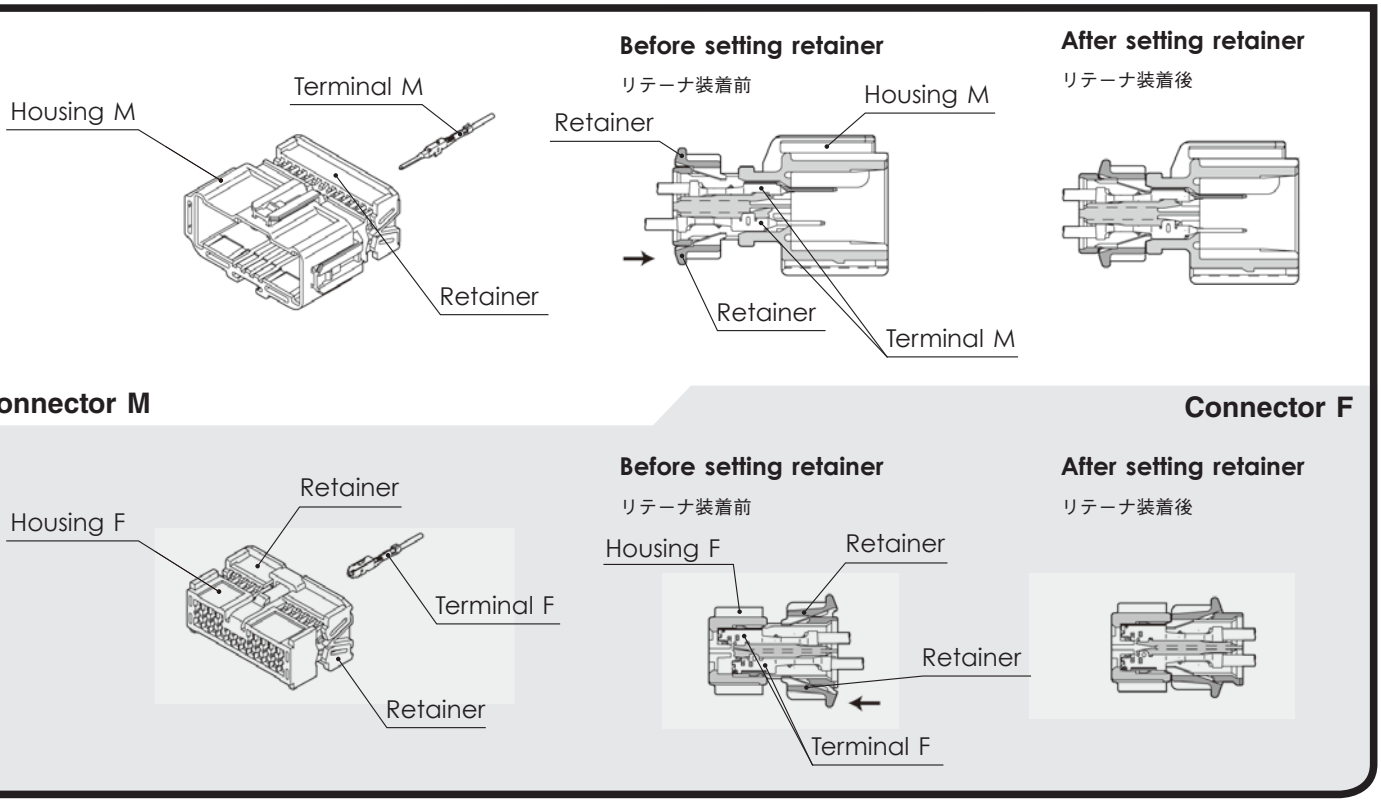
F (6098-4596)

Color 色　相	Natural 自然色

HE SERIES for STANDARD

1.0mm（040）

Structure／構造

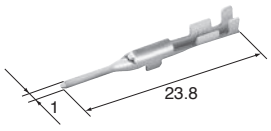


1.0mm（040）

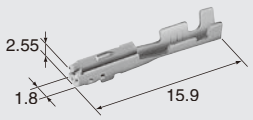
Terminal (UNIT : mm)

(SS)

Cable size(mm²) **適用電線サイズ**	0.22～0.35
Cable overall diameter(mm) **電線仕上り外径**	0.95～1.1
Material **材　質**	Brass 黄銅
Surface treatment **表面処理**	Tin-plated Snメッキ



M (8100-4307)

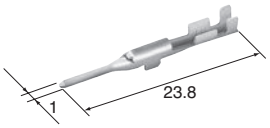


Cable size(mm²) **適用電線サイズ**	0.22～0.35
Cable overall diameter(mm) **電線仕上り外径**	0.95～1.1
Material **材　質**	Heat-resistant copper alloy
Surface treatment **表面処理**	Tin-plated Snメッキ

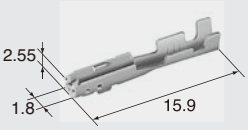
F (8100-4308)

(S)

Cable size(mm²) **適用電線サイズ**	0.3～0.85
Cable overall diameter(mm) **電線仕上り外径**	1.4～1.8
Material **材　質**	Brass 黄銅
Surface treatment **表面処理**	Tin-plated Snメッキ



M (8100-2972)



Cable size(mm²) **適用電線サイズ**	0.3～0.85
Cable overall diameter(mm) **電線仕上り外径**	1.4～1.8
Material **材　質**	Heat-resistant copper alloy
Surface treatment **表面処理**	Tin-plated Snメッキ

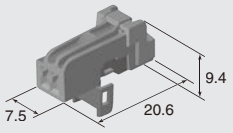
F (8100-2971)

1.0mm (040)

Housing (UNIT : mm)

Ref: Terminal part No. **ターミナル参照頁**	C-06
Material **材　質**	PBT

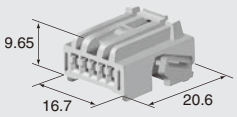
2way



F (6098-5888)

Color **色　相**	Light Gray 淡灰

5way

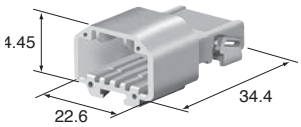


F (6098-2779)

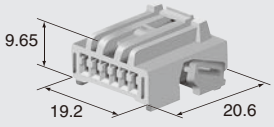
Color **色　相**	Natural 自然色

6way

Color **色　相**	Natural 自然色



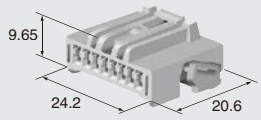
M (6098-2780)



F (6098-2781)

Color **色　相**	Natural 自然色

8way

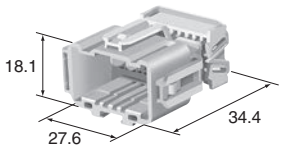


F (6098-2782)

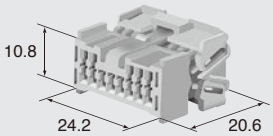
Color **色　相**	Natural 自然色

13way

Color 色 相 — Natural 自然色



M (6098-2788)

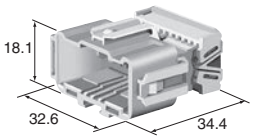


F (6098-2784)

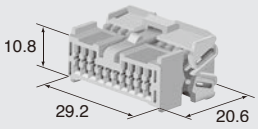
Color 色 相 — Natural 自然色

17way

Color 色 相 — Natural 自然色



M (6098-3369)

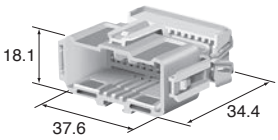


F (6098-2785)

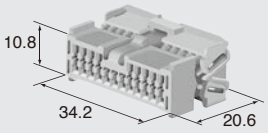
Color 色 相 — Natural 自然色

21way

Color 色 相 — Natural 自然色



M (6098-2789)



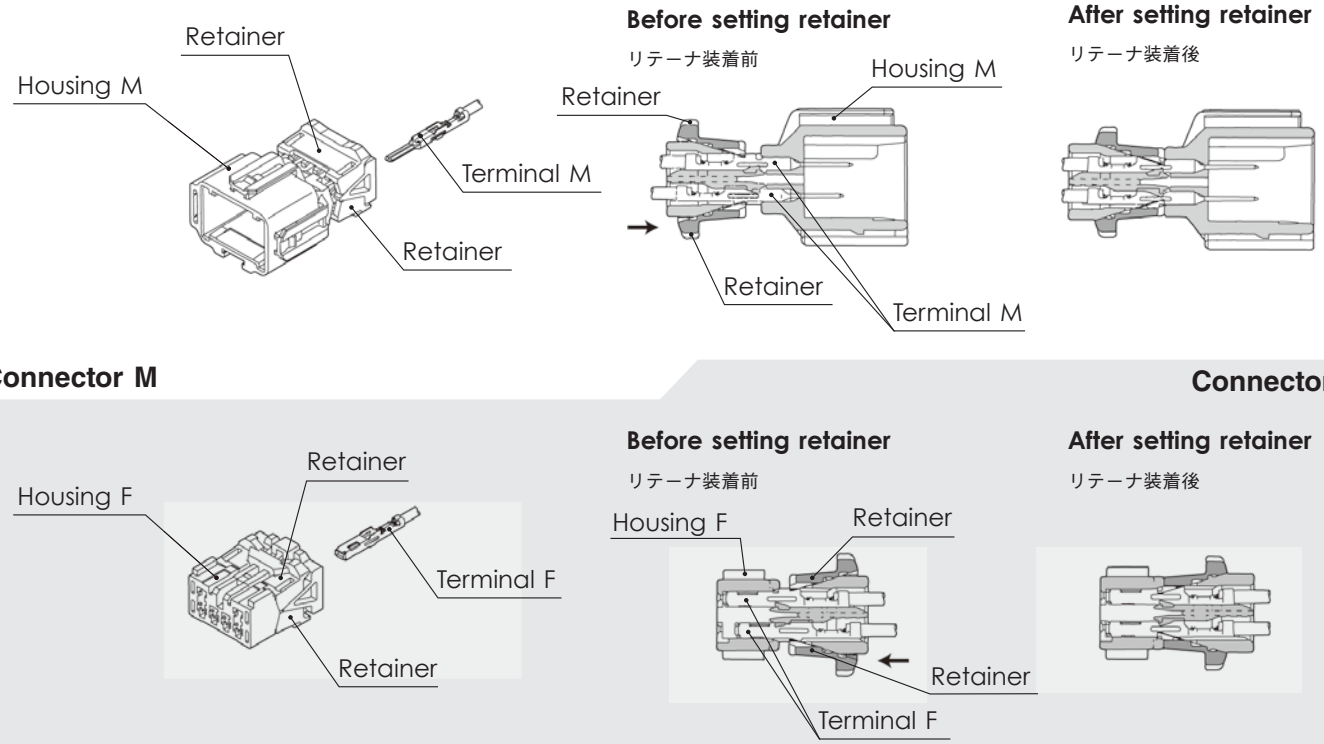
F (6098-2764)

Color 色 相 — Natural 自然色

HE SERIES for STANDARD

2.3mm (090)

Structure／構造

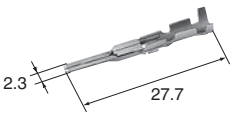


2.3mm (090)

Terminal (UNIT : mm)

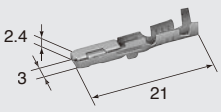
(S)

Cable size (mm²) 適用電線サイズ	0.3～0.5
Cable overall diameter (mm) 電線仕上り外径	1.4～2.1
Material 材　質	Brass 黄銅
Surface treatment 表面処理	Tin-plated Snメッキ



M (8100-1571)

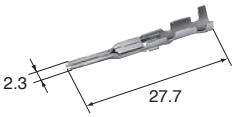
F (8100-1470)



Cable size (mm²) 適用電線サイズ	0.3～0.5
Cable overall diameter (mm) 電線仕上り外径	1.4～2.1
Material 材　質	Brass 黄銅
Surface treatment 表面処理	Tin-plated Snメッキ

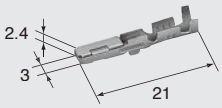
(M)

Cable size(mm²) **適用電線サイズ**	0.5～1.25
Cable overall diameter(mm) **電線仕上り外径**	2.0～2.9
Material **材　質**	Brass 黄銅
Surface treatment **表面処理**	Tin-plated Snメッキ



M(**8100-1573**)

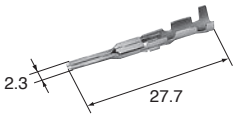
F(**8100-1472**)



Cable size(mm²) **適用電線サイズ**	0.5～1.25
Cable overall diameter(mm) **電線仕上り外径**	2.0～2.9
Material **材　質**	Brass 黄銅
Surface treatment **表面処理**	Tin-plated Snメッキ

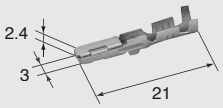
(L)

Cable size(mm²) **適用電線サイズ**	2.0
Cable overall diameter(mm) **電線仕上り外径**	2.6～3.1
Material **材　質**	Brass 黄銅
Surface treatment **表面処理**	Tin-plated Snメッキ



M(**8100-1572**)

F(**8100-1471**)



Cable size(mm²) **適用電線サイズ**	2.0
Cable overall diameter(mm) **電線仕上り外径**	2.6～3.1
Material **材　質**	Heat-resistant copper alloy
Surface treatment **表面処理**	Tin-plated Snメッキ

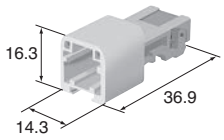
2.3mm(090)

Housing (UNIT : mm)

Ref: Terminal part No. **ターミナル参照頁**	C-09
Material **材　質**	PBT

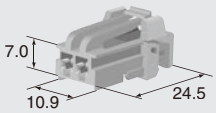
2way

Color **色　相**	Natural 自然色



M(**6098-4901**)

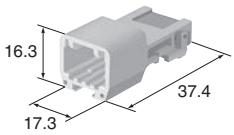
F(**6098-4069**)



Color **色　相**	Natural 自然色

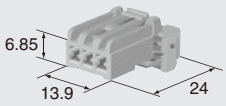
3way

Color **色　相**	Natural 自然色



M(**6098-5049**)

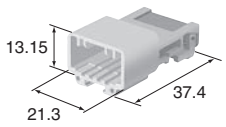
F(**6098-4071**)



Color **色　相**	Natural 自然色

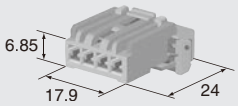
4way

Color **色　相**	Natural 自然色



M(**6098-4902**)

F(**6098-4073**)

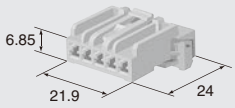


Color **色　相**	Natural 自然色

5way

Color 色 相	Natural 自然色

M (6098-4664)

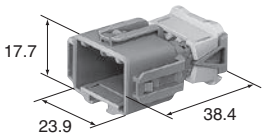


F (6098-4669)

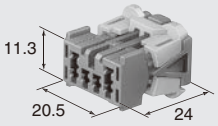
Color 色 相	Natural 自然色

6way

Color 色 相	Sky Blue 空色



M (6098-1373)

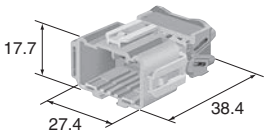


F (6098-1377)

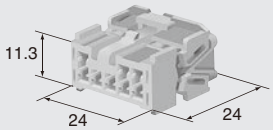
Color 色 相	Sky Blue 空色

8way

Color 色 相	Natural 自然色



M (6098-4661)

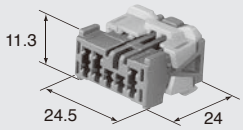


F (6098-4670)

Color 色 相	Natural 自然色

8way

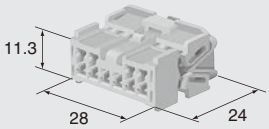
F (6098-1378)



Color 色 相	Green 緑

10way

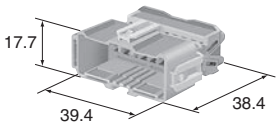
F (6240-5378)



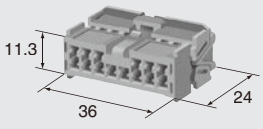
Color 色 相	Natural 自然色

14way

Color 色 相	Natural 自然色



M (6098-4662)

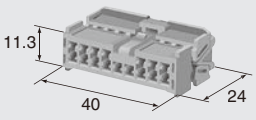


F (6098-4050)

Color 色 相	Natural 自然色

16way

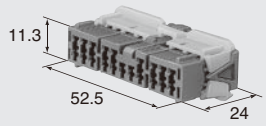
F (6098-3563)



Color 色 相	Natural 自然色

20way

F (6098-1380)



Color 色 相	Green 緑

HE SERIES for STANDARD

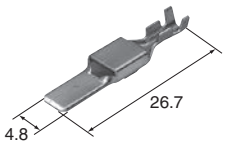
4.8mm（187）

4.8mm（187）

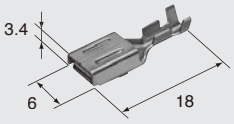
Terminal (UNIT : mm)

(S)

Cable size(mm²) **適用電線サイズ**	0.3
Cable overall diameter(mm) **電線仕上り外径**	1.4～1.9
Material **材　質**	Brass 黄銅
Surface treatment **表面処理**	Tin-plated Snメッキ



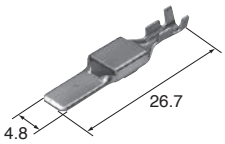
M（8100-1506）　　**F（8100-1507）**



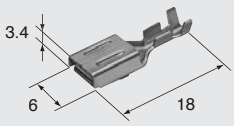
Cable size(mm²) **適用電線サイズ**	0.3
Cable overall diameter(mm) **電線仕上り外径**	1.4～1.9
Material **材　質**	Heat-resistant copper alloy
Surface treatment **表面処理**	Tin-plated Snメッキ

(M)

Cable size(mm²) **適用電線サイズ**	0.5～1.25
Cable overall diameter(mm) **電線仕上り外径**	1.6～2.9
Material **材　質**	Brass 黄銅
Surface treatment **表面処理**	Tin-plated Snメッキ



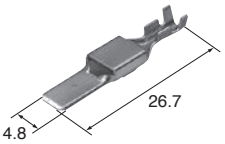
M（8100-0664）　　**F（8100-0606）**



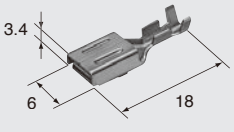
Cable size(mm²) **適用電線サイズ**	0.5～1.25
Cable overall diameter(mm) **電線仕上り外径**	1.6～2.9
Material **材　質**	Heat-resistant copper alloy
Surface treatment **表面処理**	Tin-plated Snメッキ

(L)

Cable size(mm²) **適用電線サイズ**	2.0～3.0
Cable overall diameter(mm) **電線仕上り外径**	2.6～3.8
Material **材　質**	Brass 黄銅
Surface treatment **表面処理**	Tin-plated Snメッキ



M（1500-0166）　　**F（8100-0782）**



Cable size(mm²) **適用電線サイズ**	2.0～3.0
Cable overall diameter(mm) **電線仕上り外径**	2.6～3.8
Material **材　質**	Heat-resistant copper alloy
Surface treatment **表面処理**	Tin-plated Snメッキ

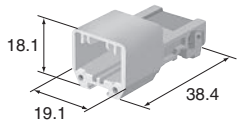
4.8mm (187)

Housing (UNIT : mm)

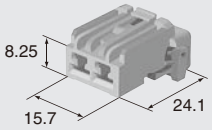
Ref: Terminal part No. **ターミナル参照頁**	C-13
Material **材　質**	PBT

2way

Color **色　相**	Natural 自然色



M (6098-5120)

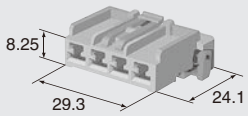


F (6098-5119)

Color **色　相**	Natural 自然色

4way

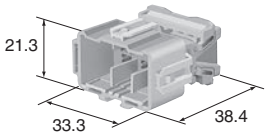
F (6098-4971)



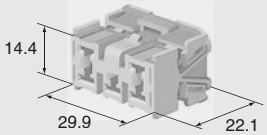
Color **色　相**	Natural 自然色

5way

Color **色　相**	Natural 自然色



M (6098-4663)



F (6098-4667)

Color **色　相**	Natural 自然色

HE SERIES for STANDARD

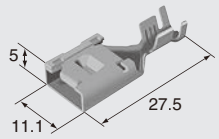
9.5mm (375)

9.5mm (375)

Terminal (UNIT : mm)

(S)

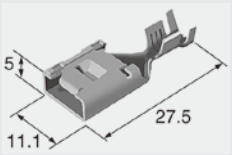
F (8240-0152)



Cable size (mm²) 適用電線サイズ	2.0～3.0
Cable overall diameter (mm) 電線仕上り外径	2.6～4.1
Material 材　質	Copper alloy 銅合金
Surface treatment 表面処理	Tin-plated Snメッキ

(M)

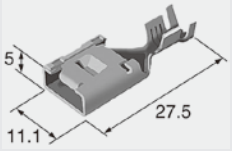
F (8240-0153)



Cable size (mm²) 適用電線サイズ	5.0～8.0
Cable overall diameter (mm) 電線仕上り外径	4.4～5.8
Material 材　質	Heat-resistant copper alloy
Surface treatment 表面処理	Tin-plated Snメッキ

(L)

F (8240-0154)



Cable size (mm²) 適用電線サイズ	10.0
Cable overall diameter (mm) 電線仕上り外径	6.5～6.9
Material 材　質	Heat-resistant copper alloy
Surface treatment 表面処理	Tin-plated Snメッキ

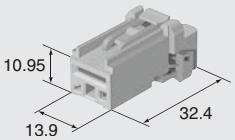
9.5mm (375)

Housing (UNIT : mm)

Ref: Terminal part No. ターミナル参照頁	C-15
Material 材　質	PBT

1way — rib A

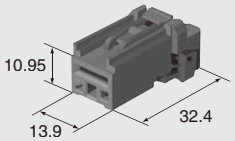
F (6098-4973)



Color 色　相	Natural 自然色

1way — rib B

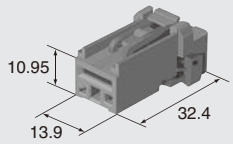
F (6098-4974)



Color 色　相	Black 黒

1way rib C

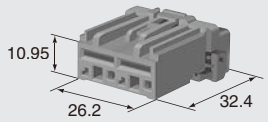
F (6098-4975)



Color **色 相**	Dark Green 濃緑

2way

F (6098-4977)



Color **色 相**	Green 緑

HE SERIES
for HYBRID

0.64mm, 2.3mm
(025, 090)

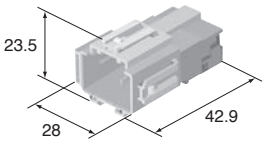
Housing (UNIT : mm)

Ref: Terminal part No. **ターミナル参照頁**	[0.64mm] [2.3mm]	C-02 C-09
Material **材　質**	PBT	

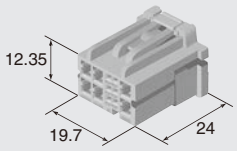
No. of way/ ( ) corresponds to 0.64mm, 2.3mm, in order from left to right.
極数／( ) 内表示：左から0.64mm 極数、2.3mm 極数

12way (6+6)

Color / **色　相**: Natural / 自然色



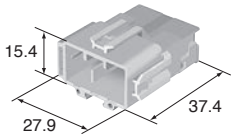
M (6098-6161) **F (6098-6162)**



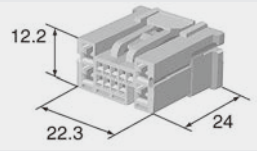
Color / **色　相**: Natural / 自然色

13way (9+4)

Color / **色　相**: Natural / 自然色



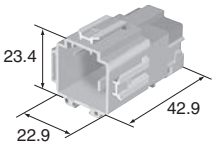
M (6098-5180) **F (6098-6562)**



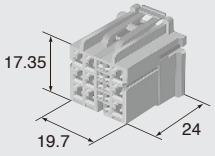
Color / **色　相**: Natural / 自然色

18way (9+9)

Color / **色　相**: Natural / 自然色



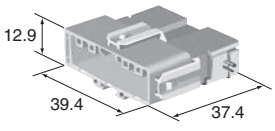
M (6098-4908) **F (6098-6478)**



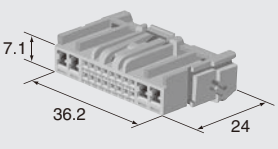
Color / **色　相**: Natural / 自然色

20way (16+4)

Color / **色　相**: Natural / 自然色



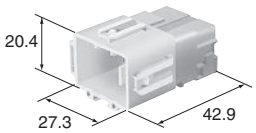
M (6098-4591) **F (6098-4597)**



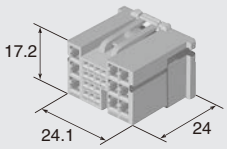
Color / **色　相**: Natural / 自然色

23way (14+9)

Color 色 相 — Natural 自然色



M (6098-4707)

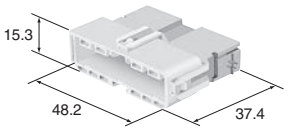


F (6098-6559)

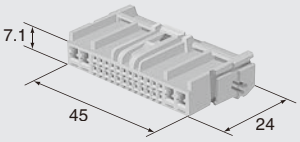
Color 色 相 — Natural 自然色

28way (24+4)

Color 色 相 — Natural 自然色



M (6098-4725)



F (6098-4726)

Color 色 相 — Natural 自然色

1.0mm, 2.3mm (040, 090)

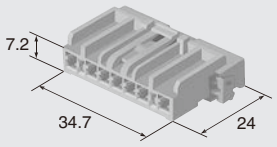
Housing (UNIT : mm)

Ref: Terminal part No. **ターミナル参照頁**	[1.0mm] [2.3mm]	C-06 C-09
Material **材　質**	PBT	

No. of way/ ( ) corresponds to 1.0mm, 2.3mm, in order from left to right.
極数／( ) 内表示：左から1.0mm 極数、2.3mm 極数

9way (2+7)

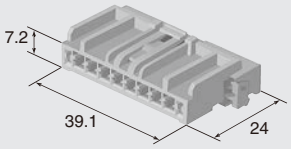
F (6098-4075)



Color **色　相**	Natural 自然色

10way (2+8)

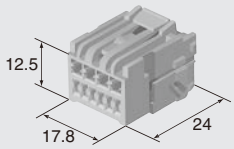
F (6098-4076)



Color **色　相**	Natural 自然色

10way (6+4)

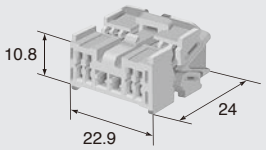
F (6098-4666)



Color **色　相**	Natural 自然色

10way (8+2)

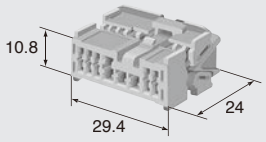
F (6098-3600)



Color **色　相**	Natural 自然色

14way (10+4)

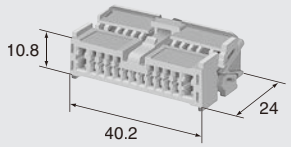
F (6098-3601)



Color **色　相**	Natural 自然色

23way (19+4)

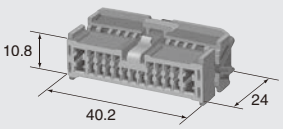
F (6098-3571)



Color **色　相**	Natural 自然色

23way (19+4)

F (6098-4367)



Color **色　相**	Brown 茶

1.0mm, 4.8mm (040, 187)

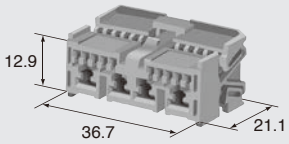
Housing (UNIT : mm)

Ref: Terminal part No. **ターミナル参照頁**	[1.0mm] [4.8mm]	C-06 C-13
Material **材　質**	PBT	

No. of way/ ( ) corresponds to 1.0mm, 4.8mm, in order from left to right.
極数／( ) 内表示：左から1.0mm 極数、4.8mm 極数

14way (10+4)

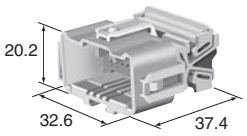
F (6098-4017)



Color **色　相**	Natural 自然色

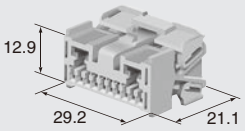
12way (10+2)

Color **色　相**	Natural 自然色



M (6098-3370)

F (6098-2786)



Color **色　相**	Natural 自然色

2.3mm, 4.8mm (090, 187)

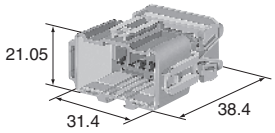
Housing (UNIT : mm)

Ref: Terminal part No. **ターミナル参照頁**	[2.3mm] [4.8mm]	C-09 C-13
Material **材　質**	PBT	

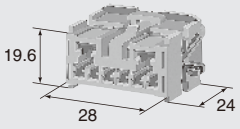
No. of way/ ( ) corresponds to 2.3mm, 4.8mm, in order from left to right.
極数／( ) 内表示：左から2.3mm 極数、4.8mm 極数

8way (6+2)

Color / **色　相**: Natural / 自然色



M (6098-5218)

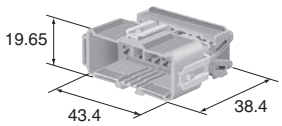


F (6098-5217)

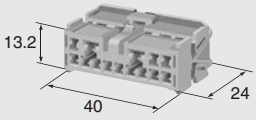
Color / **色　相**: Natural / 自然色

14way (12+2)

Color / **色　相**: Natural / 自然色



M (6098-4660)

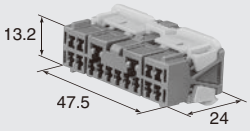


F (6098-3565)

Color / **色　相**: Natural / 自然色

16way (14+2)

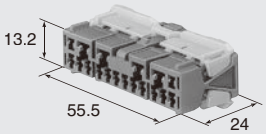
F (6950-1054)



Color / **色　相**: Green / 緑

18way (14+4)

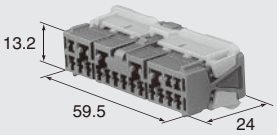
F (6950-1055)



Color / **色　相**: Green / 緑

20way (16+4)

F (6950-1056)



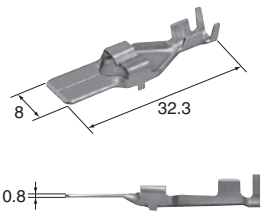
Color / **色　相**: Green / 緑

8.0mm (312)

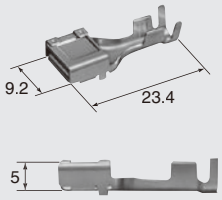
Terminal (UNIT : mm)

(S)

Cable size (mm²) 適用電線サイズ	0.5～1.25
Cable overall diameter (mm) 電線仕上り外径	1.6～2.9
Material 材　質	Brass 黄銅
Surface treatment 表面処理	Tin-plated Snメッキ



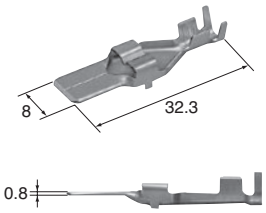
M (8100-0520)　　**F (8100-0707)**



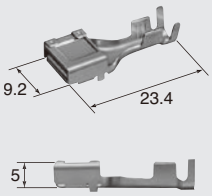
Cable size (mm²) 適用電線サイズ	0.5～1.25
Cable overall diameter (mm) 電線仕上り外径	1.6～2.9
Material 材　質	Brass 黄銅
Surface treatment 表面処理	Tin-plated Snメッキ

(M)

Cable size (mm²) 適用電線サイズ	2.0～3.0
Cable overall diameter (mm) 電線仕上り外径	2.6～4.1
Material 材　質	Brass 黄銅
Surface treatment 表面処理	Tin-plated Snメッキ



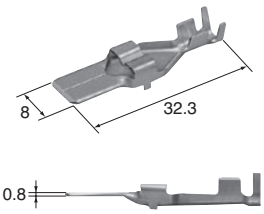
M (8100-0521)　　**F (8100-0706)**



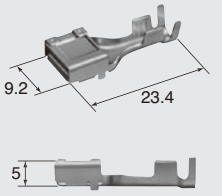
Cable size (mm²) 適用電線サイズ	2.0～3.0
Cable overall diameter (mm) 電線仕上り外径	2.6～4.1
Material 材　質	Brass 黄銅
Surface treatment 表面処理	Tin-plated Snメッキ

(L)

Cable size (mm²) 適用電線サイズ	5.0～8.0
Cable overall diameter (mm) 電線仕上り外径	4.4～5.8
Material 材　質	Brass 黄銅
Surface treatment 表面処理	Tin-plated Snメッキ



M (8100-0522)　　**F (8100-1553)**



Cable size (mm²) 適用電線サイズ	5.0～8.0
Cable overall diameter (mm) 電線仕上り外径	4.4～5.8
Material 材　質	Heat-resistant copper alloy
Surface treatment 表面処理	Tin-plated Snメッキ

4.8mm, 8.0mm (187, 312)

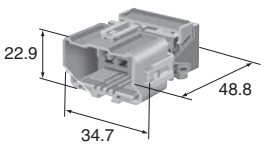
Housing (UNIT : mm)

Ref: Terminal part No. ターミナル参照頁	[4.8mm]	C-13
	[8.0mm]	C-21
Material 材　質	PBT	

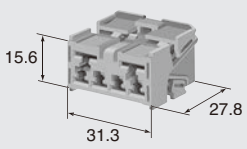
No. of way/ ( ) corresponds to 4.8mm, 8.0mm, in order from left to right.
極数／( ) 内表示：左から4.8mm 極数、8.0mm 極数

6way (4+2)

Color 色　相	Natural 自然色



M (6098-3567)　　**F (6098-3569)**



Color 色　相	Natural 自然色

HE SERIES
for PCB

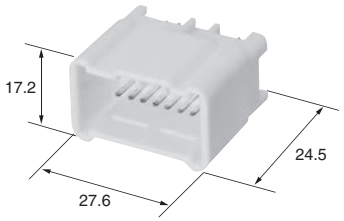
1.0mm (040)

Housing (UNIT : mm)

Material **材　質**	PBT G30

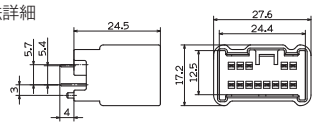
13way (**Vertical type**) (垂直)

M (6098-3239)

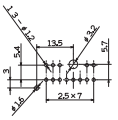


Connector F part No. **Fコネクタ品番**	6098-2784 (C-08)
Color **色　相**	Natural 自然色

●Detailed dimension
寸法詳細



●Recommended demension of Circuit board
基板推奨詳細



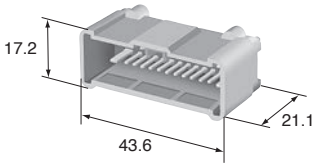
1.0mm, 2.3mm (040, 090)

Housing (UNIT : mm)

Material **材　質**	PBT G30

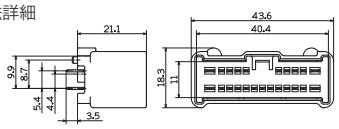
23way (**Vertical type**) (垂直)

M (6098-3572)

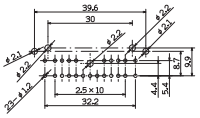


Connector F part No. **Fコネクタ品番**	6098-3571 (C-19)
Color **色　相**	Natural 自然色

●Detailed dimension
寸法詳細



●Recommended demension of Circuit board
基板推奨詳細



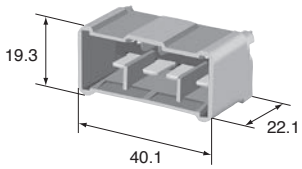
1.0mm, 4.8mm (040, 187)

Housing (UNIT : mm)

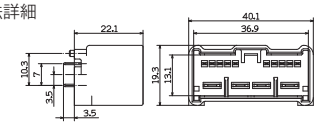
Material 材　質	PBT G30

14way (**Vertical type**) (垂直)

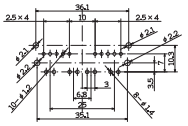
M (6098-4018)



●Detailed dimension
寸法詳細



●Recommended demension of Circuit board
基板推奨詳細



Connector F part No. Fコネクタ品番	6098-4017 (C-20)
Color 色　相	Natural 自然色

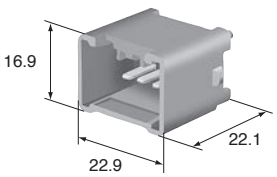
2.3mm (090)

Housing (UNIT : mm)

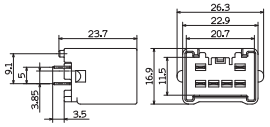
Material 材　質	PBT G30

6way (**Vertical type**) (垂直)

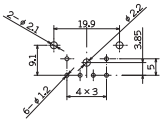
M (6098-3616)



●Detailed dimension
寸法詳細



●Recommended demension of Circuit board
基板推奨詳細



Connector F part No. Fコネクタ品番	6098-1377 (C-11)
Color 色　相	Sky Blue 空色

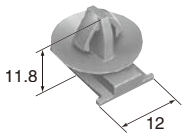
HE SERIES
COMMON USE PARTS

Body fastening clamp (mm)

The clamp can be installed to connector M, if necessary, to fasten into the body side hole.
Mコネクタには、ボデー側の穴に固定するためのクランプを必要に応じて取付けることができます。

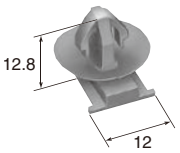
(6810-1203)

Clamp fitting hole size(mm) 適合穴サイズ	φ7
Clamp fitting thickness(mm) クランプ適合板厚	t=0.65～1.6
Material 材　質	6 Nylon
Color 色　相	Red 赤



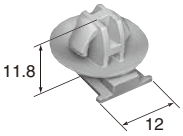
(6810-1217)

Clamp fitting hole size(mm) 適合穴サイズ	φ7
Clamp fitting thickness(mm) クランプ適合板厚	t=1.6～2.6
Material 材　質	6 Nylon
Color 色　相	Brown 茶



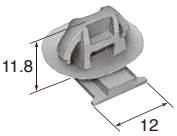
(6810-1204)

Clamp fitting hole size(mm) 適合穴サイズ	φ10
Clamp fitting thickness(mm) クランプ適合板厚	t=0.65～1.6
Material 材　質	6 Nylon
Color 色　相	Natural 自然色



(6810-1462)

Clamp fitting hole size(mm) 適合穴サイズ	6×12 (Square hole)
Clamp fitting thickness(mm) クランプ適合板厚	t=0.65～1.6
Material 材　質	6 Nylon
Color 色　相	Orange 橙

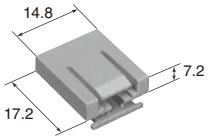


Body fastening clamp (Bracket type) (mm)

Connector M can be accoupled with clamp, if necessary, to fasten to the body side bracket.
Mコネクタには、ボデー側のブラケットに固定するためのクランプを必要に応じて取付けることができます。

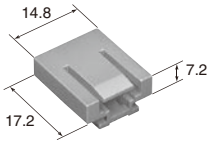
(6910-0119)

Bracket direction ブラケット差込み方向	Connector mating direction コネクタ嵌合方向
Material 材　質	6 Nylon
Color 色　相	Red 赤

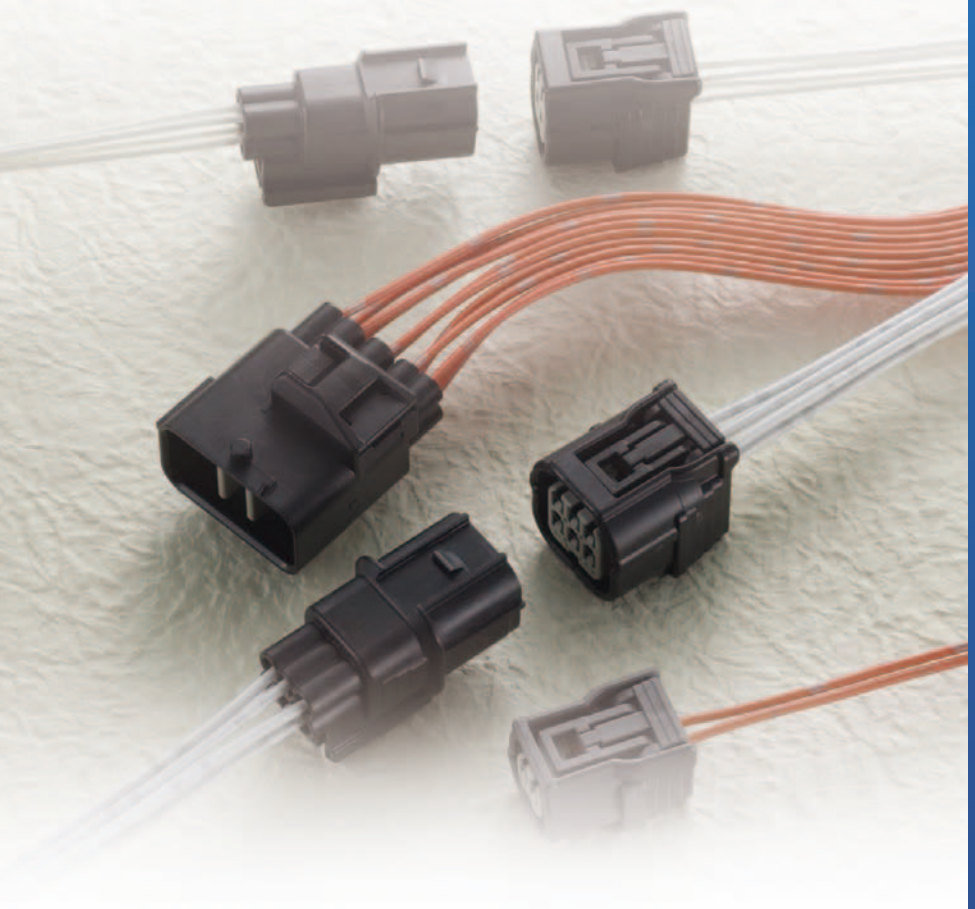


(6910-0120)

Bracket direction ブラケット差込み方向	Anti clock wise コネクタ嵌合の逆方向
Material 材　質	6 Nylon
Color 色　相	Natural 自然色



HV/HVG SEALED SERIES



Features

The HV sealed connector series is an improved version of the existing HX sealed connector series and it is a highly reliable connector series.
Also the HVG sealed series is what is added a finger holding portion to the side wall of the female connector of the HV sealed series so as to improving matting performance. It has a mechanism that detects terminal incomplete insertion.

- The connector mechanism only allows the retainer to be set when the terminal is completely inserted.
- These connectors can be directly secured to a bracket on the car body.
- RoHS/ELV Compliant

特　長

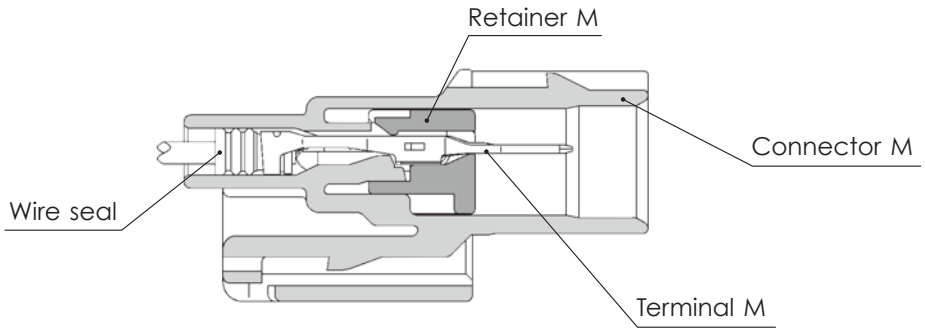
HV 防水シリーズは、従来の HX 防水シリーズを改良し、信頼性を向上させたコネクタシリーズです。
また、HVG 防水シリーズは、HV 防水シリーズの F コネクタの側壁に指掛け部を追加し、コネクタ挿入作業性を向上させたものです。
挿入不足のターミナルを検知する機構を備えています。

- ターミナルが半挿入の状態では、リテーナが装着できない機構になっています。
- コネクタは、ボデー側のブラケットに直接固定することができます。
- RoHS／ELV 対応

HV/HVG SEALED SERIES for STANDARD

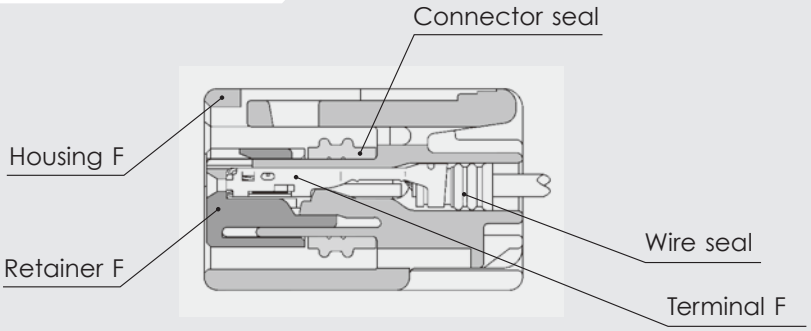
1.0mm（040）

Structure／構造



Connector M

Connector F



1.0mm（040）

Terminal (UNIT : mm)

Ref; 1.0mm Terminal detail
1.0mmターミナル参照頁

S	**M（8100-3177）**	E-02	**F（8100-3067）**	E-02
M	**M（8100-3178）**	E-02	**F（8100-3068）**	E-02

1.0mm（040）

Wire seals (UNIT : mm)

Ref; 1.0mm Wire Seals detail
1.0mmワイヤシール掲載頁

SS（7165-1075）	E-03
S（7165-0621）	E-03
M（7165-0622）	E-03

The wire seals are common to M and F.
ワイヤシールはM、F共用です。

1.0mm (040)

Dummy plugs (UNIT : mm)

Ref; 1.0mm Dummy plug detail
1.0mmダミー栓掲載頁

(**7165-0432**) E-04

- Dummy plugs are common to M and F.
- Dummy plugs are used to blind unused terminal holes.

- ダミー栓はM、F共用です。
- 不必要なターミナル穴を塞ぐために、ダミー栓を使用します。

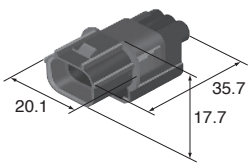
1.0mm (040)

Housing (UNIT : mm)

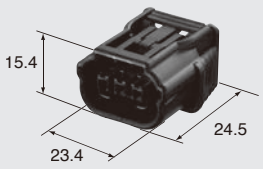
Ref: Terminal part No. **ターミナル参照頁**	E-02
Ref: wire seal No. **ワイヤシール参照頁**	E-03
Ref: Dummy plug No. **ダミー栓参照頁**	E-04
Material **材　質**	PBT

3way

Color **色　相**	Black 黒



M (6188-4775)



F (6189-7037)

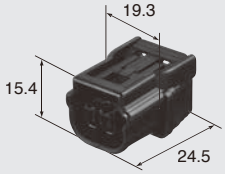
Retainer No. (6918-1833)

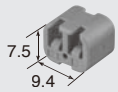
NOTE1)

Color **色　相**	Black 黒

2way

F (6189-7036)



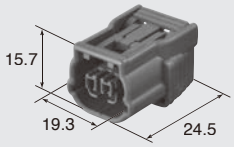


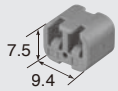
Retainer No. (6918-1835)

Color **色　相**	Black 黒

2way (Rib difference) (リブ違)

F (6189-7052)



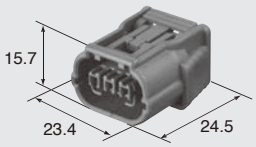


Retainer No. (6918-1835)

Color **色　相**	Dark Gray 濃灰

3way (Rib difference) (リブ違)

F (6189-7058)

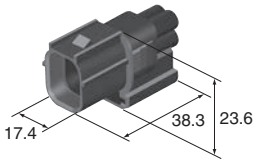


Retainer No. (6918-1833)

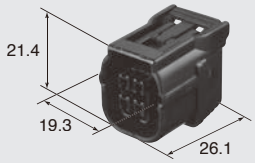
Color **色　相**	Dark Gray 濃灰

4way

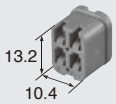
Color 色 相	Black 黒



M (6188-4776)



F (6189-7039)



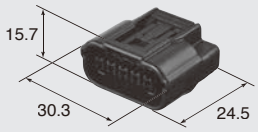
NOTE1)

Retainer No. (6918-2810)

Color 色 相	Black 黒

5way

F (6189-6909)



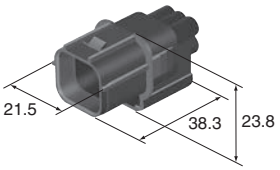
NOTE1)

Retainer No. (6918-2128)

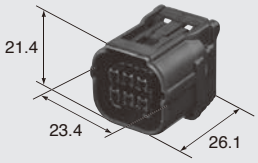
Color 色 相	Black 黒

6way

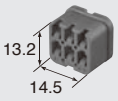
Color 色 相	Black 黒



M (6188-4908)



F (6189-7040)



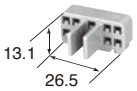
NOTE1)

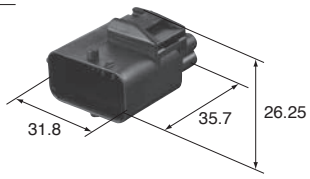
Retainer No. (6918-2913)

Color 色 相	Black 黒

10way

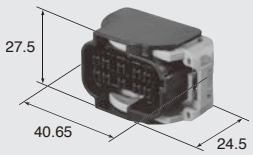
Color 色 相	Black 黒



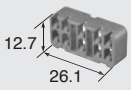


Retainer No. (6918-2804)

M (6181-6481)



F (6189-6906)

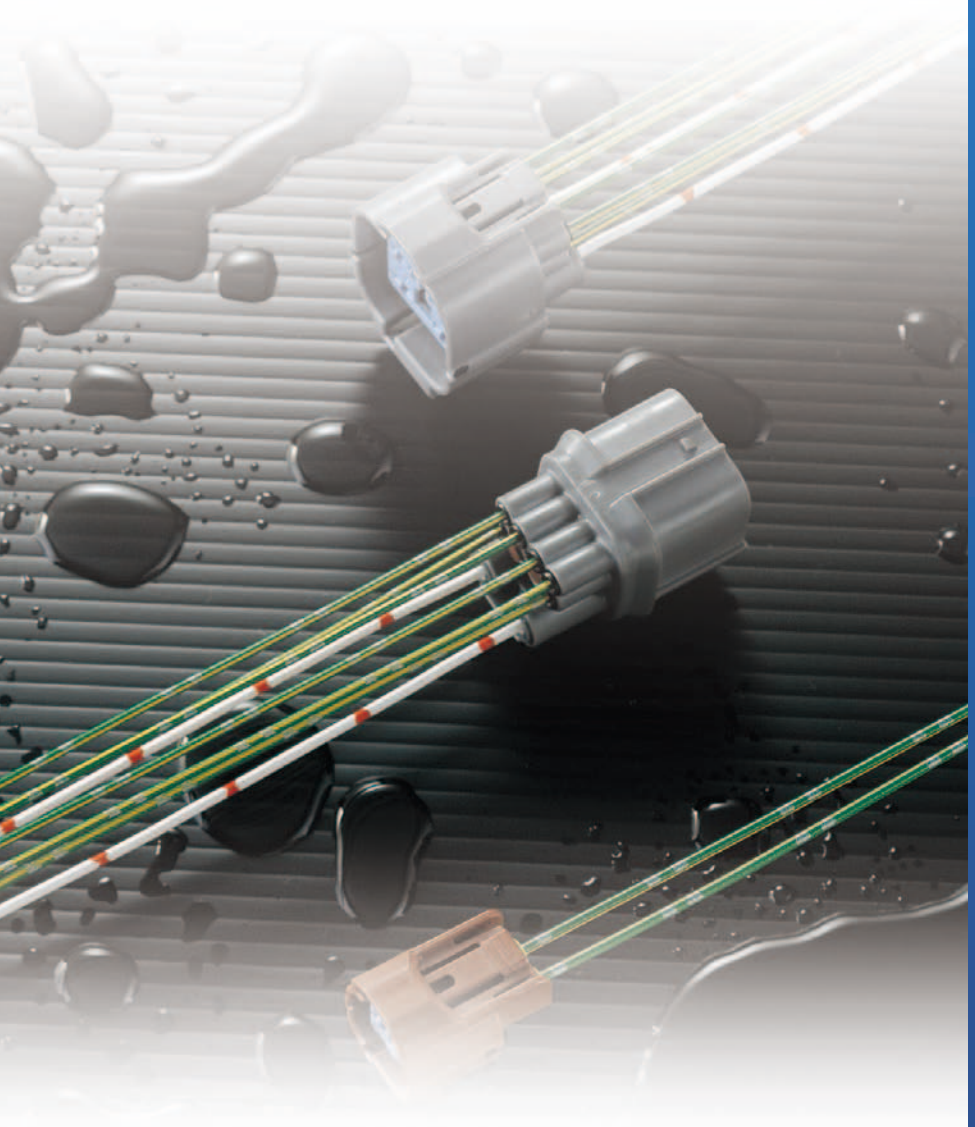


Retainer No. (6918-2806)

Color 色 相	Black 黒

NOTE1) HV SEALED SERIES

HX SEALED SERIES



Features

The HX sealed connector series is the highly reliable improved version of the conventional HW sealed series, with a mechanism that detects when terminals are not inserted completely.
This series consists of 1.0mm・1.5mm・2.3mm types (0.64mm•1.0mm•1.5mm•2.3mm•4.8mm types for the hybrid model) classified according to terminal size, supporting use in a variety of control circuits and low power circuits.

- The connector mechanism only allows the retainer to be set when the terminal is completely inserted.
- The hybrid model can be directly secured to a bracket on the car body, but this is only possible when the locking mechanism ensures the connectors are completely engaged, preventing semi-engagement.
- RoHS/ELV Compliant

特　長

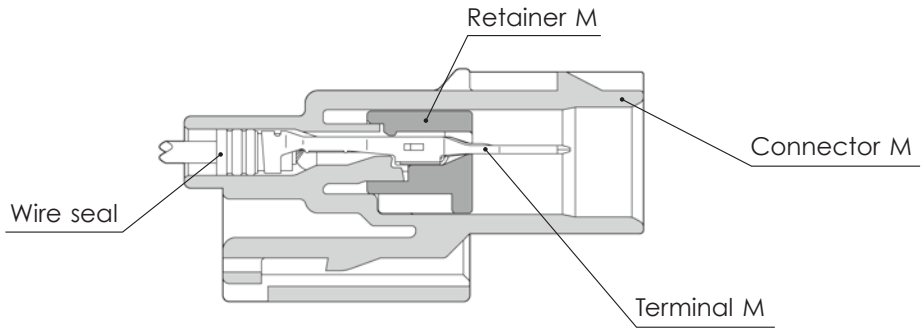
HX 防水シリーズは、従来の HW 防水シリーズを改良し、信頼性を向上させたコネクタシリーズです。挿入不足のターミナルを検知する機構を備えています。
ターミナルサイズにより1.0mm・1.5mm・2.3mm（ハイブリッドは 0.64mm・1.0mm・1.5mm・2.3mm・4.8mm）で構成されており、各種の制御回路並びに低パワー回路に対応することができます。

- ターミナルが半挿入の状態では、リテーナが装着できない機構になっています。
- ハイブリッドタイプのコネクタは、完全に嵌合した状態でないと、ボデー側のブラケットに固定することができないロック構造になっています。
- ハイブリッドタイプのコネクタは、ボデー側のブラケットに直接固定することができます。
- RoHS／ELV 対応

HX SEALED SERIES for STANDARD

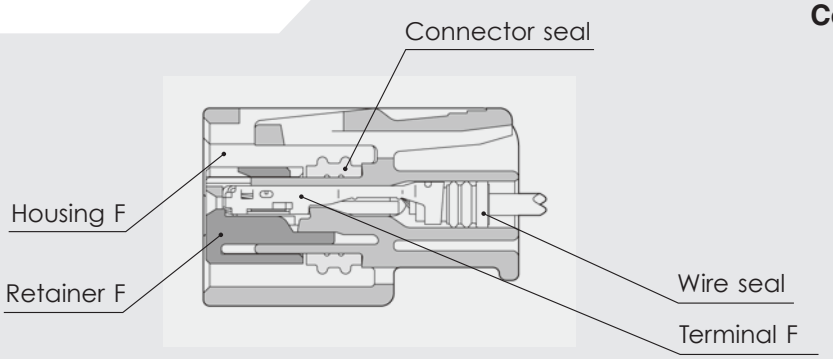
1.0mm（040）

Structure／構造



Connector M

Connector F

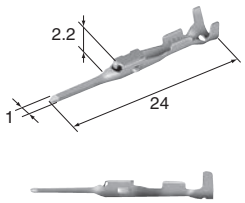


1.0mm（040）

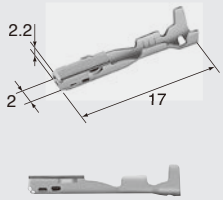
Terminal (UNIT : mm)

(S)

Cable size(mm²) **適用電線サイズ**	0.3～0.5
Cable overall diameter(mm) **電線仕上り外径**	1.4～2.0
Material **材　質**	Brass 黄銅
Surface treatment **表面処理**	Tin-plated Snメッキ



M (8100-3177)

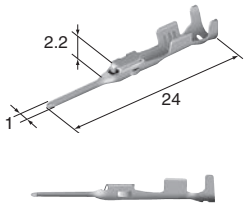


F (8100-3067)

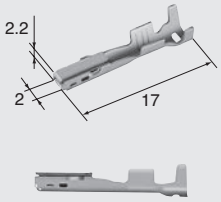
Cable size(mm²) **適用電線サイズ**	0.3～0.5
Cable overall diameter(mm) **電線仕上り外径**	1.4～2.0
Material **材　質**	Heat-resistant copper alloy
Surface treatment **表面処理**	Tin-plated Snメッキ

(M)

Cable size(mm²) **適用電線サイズ**	0.75～1.25
Cable overall diameter(mm) **電線仕上り外径**	1.8～2.2
Material **材　質**	Heat-resistant copper alloy
Surface treatment **表面処理**	Tin-plated Snメッキ



M (8100-3178)



F (8100-3068)

Cable size(mm²) **適用電線サイズ**	0.75～1.25
Cable overall diameter(mm) **電線仕上り外径**	1.8～2.2
Material **材　質**	Heat-resistant copper alloy
Surface treatment **表面処理**	Tin-plated Snメッキ

1.0mm (040)

Wire seals (UNIT : mm)

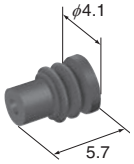
The wire seals are common to M and F.

ワイヤシールはM、F共用です。

(SS)

(7165-1075)

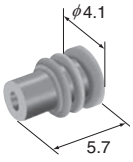
Cable size(mm²) **適用電線サイズ**	(AVSS/0.3) (AVSSX/0.3) (AVSSH/0.3) (CHFUS/0.35) (CHFS/0.5)
Cable overall diameter(mm) **電線仕上り外径**	1.1～1.6
Material **材　質**	Silicon シリコン
Color **色　相**	Orange 橙



(S)

(7165-0621)

Cable size(mm²) **適用電線サイズ**	(AVS/0.3) (AVSS/0.5) (AVSSX/0.5) (AVSSH/0.5) (CHFS/0.75)
Cable overall diameter(mm) **電線仕上り外径**	1.6～1.9
Material **材　質**	Silicon シリコン
Color **色　相**	Light Green 淡緑



(M)

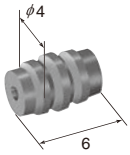
(7165-0622)

Cable size(mm²) **適用電線サイズ**	(AVS/0.5) (AVS/0.85) (AVSS/0.75～1.25) (AVSSX/0.75～1.25) (AVSSH/0.75～1.25) (AVX/0.5) (AVX/0.75) (CHFS/1.0)
Cable overall diameter(mm) **電線仕上り外径**	1.8～2.2
Material **材　質**	Silicon シリコン
Color **色　相**	Violet 紫

Dummy plugs (UNIT : mm)

- Dummy plugs are common to M and F.
- Dummy plugs are used to blind unused terminal holes.
- ダミー栓はM、F共用です。
- 不必要なターミナル穴を塞ぐために、ダミー栓を使用します。

(7165-0432)



Material 材 質	NBR
Color 色 相	Black 黒

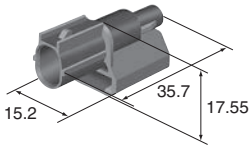
1.0mm (040)

Housing (UNIT : mm)

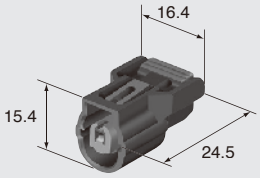
Ref: Terminal part No. ターミナル参照頁	E-02
Ref: wire seal No. ワイヤシール参照頁	E-03
Ref: Dummy plug No. ダミー栓参照頁	E-04
Material 材 質	PBT

1way

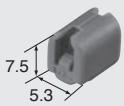
Color 色 相	Black 黒



M (6188-0657)



F (6189-0940)

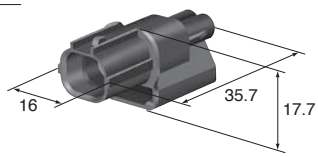


Retainer No.(6918-1979)

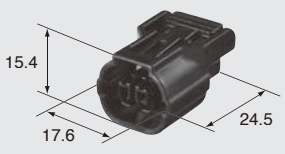
Color 色 相	Black 黒

2way

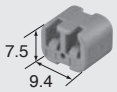
Color 色 相	Black 黒



M (6188-0589)



F (6189-0890)

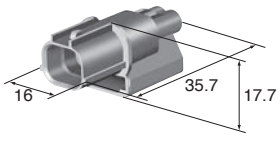


Retainer No.(6918-1835)

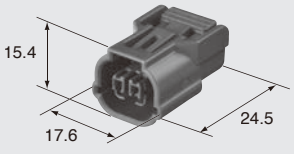
Color 色 相	Black 黒

2way (Rib difference) (リブ違)

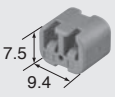
Color 色 相	Dark Gray 濃灰



M (6188-0590)



F (6189-0891)

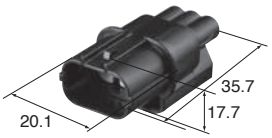


Retainer No.(6918-1835)

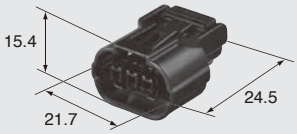
Color 色 相	Dark Gray 濃灰

3way

Color 色 相	Black 黒



M (6188-4739)



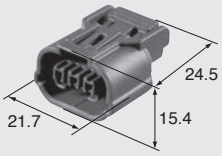
F (6189-0887)

Retainer No. (6918-1833)

Color 色 相	Black 黒

3way (Rib difference) (リブ違)

F (6189-0968)

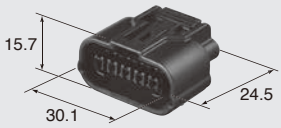


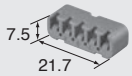
Retainer No. (6918-1833)

Color 色 相	Black 黒

5way

F (6189-1081)



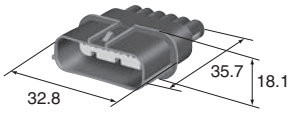


Retainer No. (6918-2128)

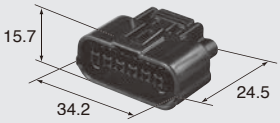
Color 色 相	Black 黒

6way

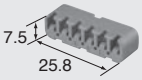
Color 色 相	Black 黒



M (6188-0658)



F (6189-1012)

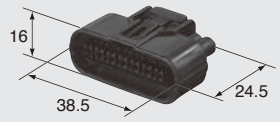


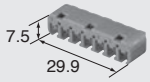
Retainer No. (6918-2056)

Color 色 相	Black 黒

7way

F (6189-0855)





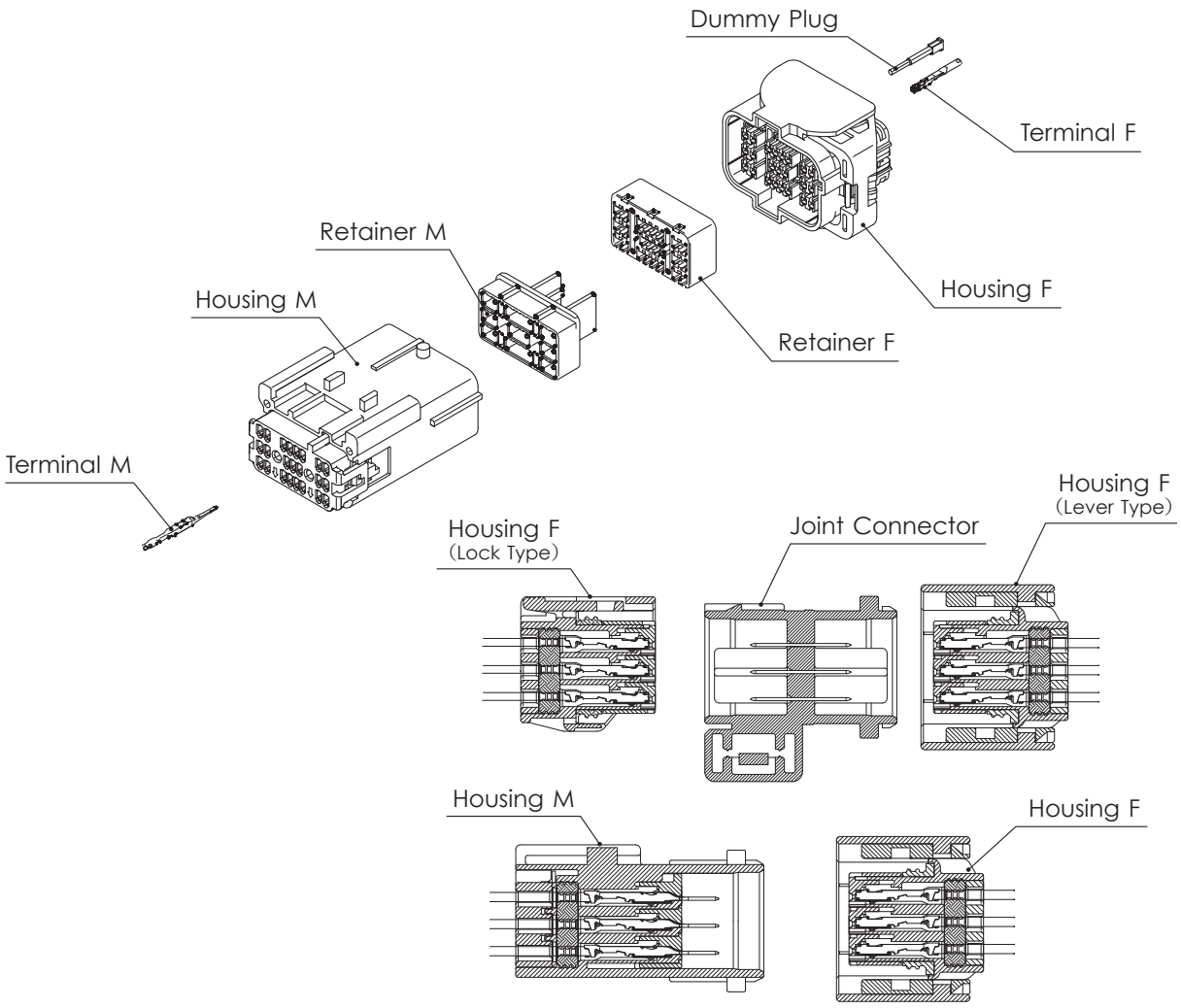
Retainer No. (6918-1762)

Color 色 相	Black 黒

HX SEALED SERIES for 23way and 33way

1.0mm（040）

Structure／構造

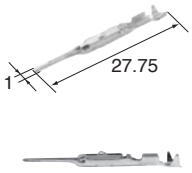


1.0mm（040）

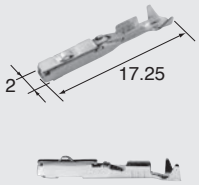
Terminal (UNIT : mm)

(S)

Cable size (mm²) **適用電線サイズ**	0.3～0.5
Material **材　質**	Brass 黄銅
Surface treatment **表面処理**	Tin-plated Snメッキ



M (8100-3508)

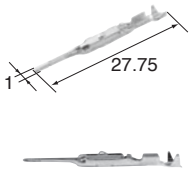


F (8100-3082)

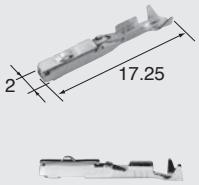
Cable size (mm²) **適用電線サイズ**	0.3～0.5
Material **材　質**	Heat-resistant copper alloy
Surface treatment **表面処理**	Tin-plated Snメッキ

(M)

Cable size (mm²) **適用電線サイズ**	0.75～1.25
Material **材　質**	Heat-resistant copper alloy
Surface treatment **表面処理**	Tin-plated Snメッキ



M (8100-3507)



F (8100-3083)

Cable size (mm²) **適用電線サイズ**	0.75～1.25
Material **材　質**	Heat-resistant copper alloy
Surface treatment **表面処理**	Tin-plated Snメッキ

1.0mm (040)

Dummy plugs (UNIT : mm)

- Dummy plugs are common to M and F.
- Dummy plugs are used to blind unused terminal holes.

- ダミー栓はM、F共用です。
- 不必要なターミナル穴を塞ぐために、ダミー栓を使用します。

(6914-0050)

Material **材　質**	PP
Color **色　相**	Brown 茶

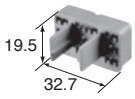
1.0mm (040)

Housing (UNIT : mm)

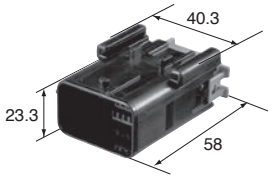
Ref: Terminal part No. **ターミナル参照頁**	E-07
Ref: Dummy plug No. **ダミー栓参照頁**	E-07
Material **材　質**	PBT

23way

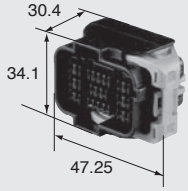
Color **色　相**	Black 黒



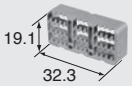
Retainer No. (6918-2131)



M (6188-0660)



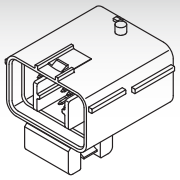
F (6189-1082)



Retainer No. (6918-2132)

Color **色　相**	Black 黒

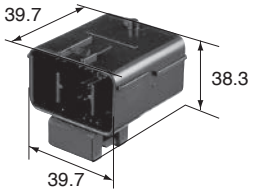
Joint Connector

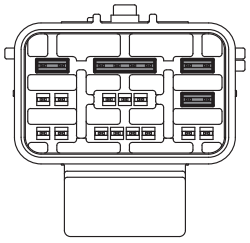


Coupling circuit is connected with busbers as shown gray hatched cavities.

M (6188-4787)

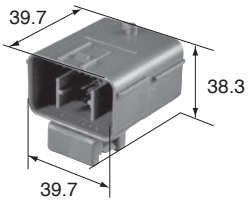
Color 色 相	Black 黒

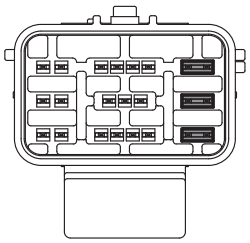




M (6188-4789)

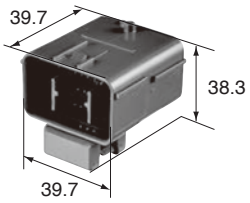
Color 色 相	Dark Gray 濃灰

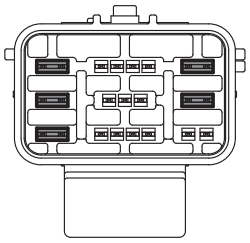




M (5010-8627)

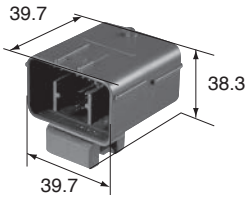
Color 色 相	Dark Blue 濃青

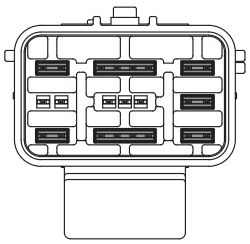




M (5011-1590)

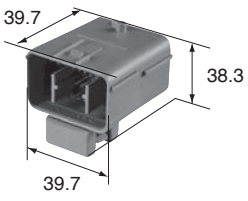
Color 色 相	Brown 茶

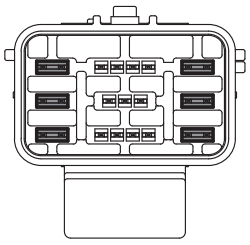




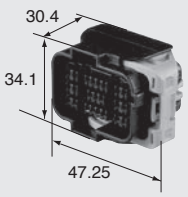
M (5011-6687)

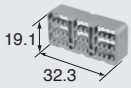
Color 色 相	Blue 青





F (6189-1082) Lever

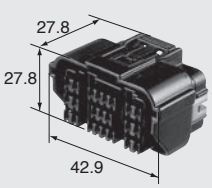


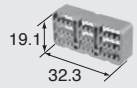


Retainer No. (6918-2132)

Color 色 相	Black 黒

Lock F (6189-6914)



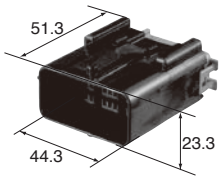


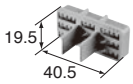
Retainer No. (6918-2132)

Color 色 相	Black 黒

33way

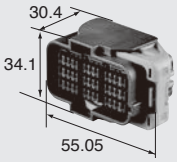
Color 色 相	Black 黒



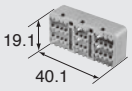


Retainer No.(6918-2103)

M(6188-0697)



F(6189-1050)

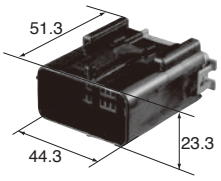


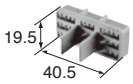
Retainer No.(6918-2104)

Color 色 相	Black 黒

33way (Rib difference)(リブ違)

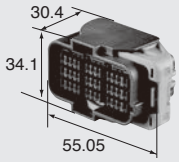
Color 色 相	Dark Gray 濃灰



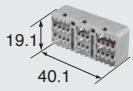


Retainer No.(6918-2103)

M(6188-0698)



F(6189-1051)

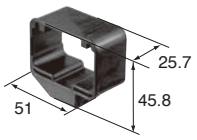


Retainer No.(6918-2104)

Color 色 相	Dark Gray 濃灰

Bracket Holder

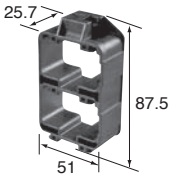
(6920-0886)



Color 色 相	Black 黒

Bracket Holder

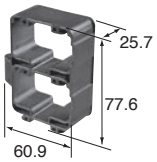
(6920-0861)



Color 色 相	Black 黒

Bracket Holder

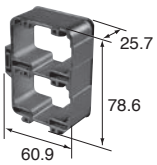
(6920-2376)



Color 色 相	Dark Blue 濃青

Bracket Holder

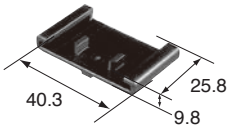
(6920-2377)



Color 色 相	Black 黒

Bracket Holder

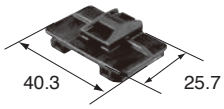
(6920-0884)



Color 色 相	Black 黒

Bracket Holder

(6920-2466)

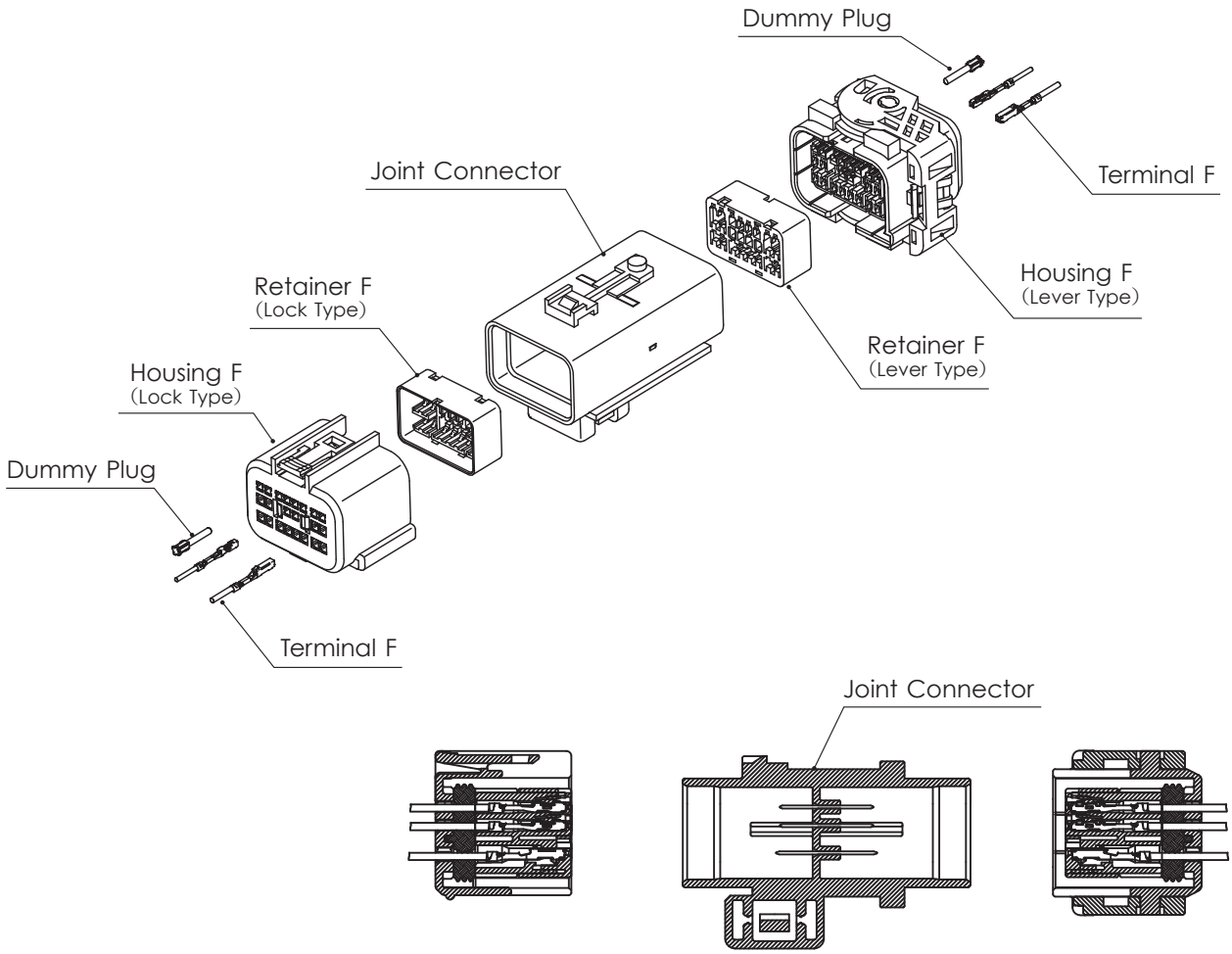


Color 色 相	Black 黒

HX SEALED SERIES 22way Joint Connector

HYBRID 0.64mm,1.0mm（025, 040）

Structure／構造



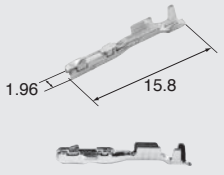
0.64mm（025）

Terminal (UNIT : mm)

（SS）

F（8240-0408）

Cable size (mm²) **適用電線サイズ**	AVSSH0.22
Material **材　質**	Heat-resistant copper alloy
Surface treatment **表面処理**	Tin-plated Snメッキ



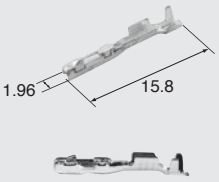
1.0mm (040)

Terminal (UNIT : mm)

(S)

F (8240-0409)

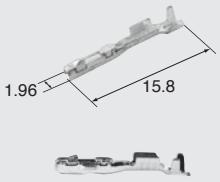
Cable size (mm²) 適用電線サイズ	AVSSH0.3～0.5
Material 材　質	Heat-resistant copper alloy
Surface treatment 表面処理	Tin-plated Snメッキ



(M)

F (8240-0410)

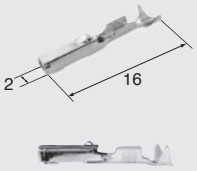
Cable size (mm²) 適用電線サイズ	AVSSH0.75
Material 材　質	Heat-resistant copper alloy
Surface treatment 表面処理	Tin-plated Snメッキ



(S)

F (8240-0411)

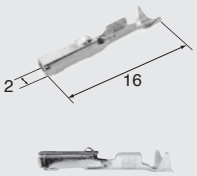
Cable size (mm²) 適用電線サイズ	AVSSH0.3 ～AVSSH0.5
Material 材　質	Heat-resistant copper alloy
Surface treatment 表面処理	Tin-plated Snメッキ



(M)

F (8240-0412)

Cable size (mm²) 適用電線サイズ	AVSSH0.75 ～AVSSH1.25
Material 材　質	Heat-resistant copper alloy
Surface treatment 表面処理	Tin-plated Snメッキ



0.64mm,1.0mm (025,040)

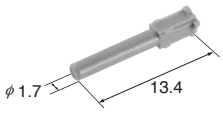
Dummy plugs (UNIT : mm)

- Dummy plugs are common to M and F.
- Dummy plugs are used to blind unused terminal holes.

- ダミー栓はM、F共用です。
- 不必要なターミナル穴を塞ぐために、ダミー栓を使用します。

(6914-0127)

Material 材　質	PBT
Color 色　相	Blue 青



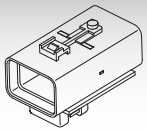
0.64mm,1.0mm (025,040)

Housing (UNIT : mm)

Ref: Terminal part No. **ターミナル参照頁**	[0.64mm] [1.0mm]	E-10 E-11
Ref: Dummy plug No. **ダミー栓参照頁**	[0.64mm] [1.0mm]	E-11 E-11
Material **材　質**	PBT	

22way (10+12)

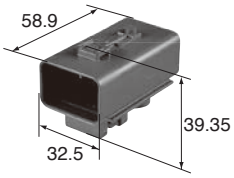
Joint Connector

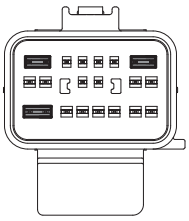


Coupling circuit is connected with busbers as shown gray hatched cavities.

M (5011-6818)

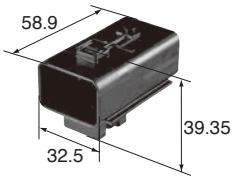
Color **色　相**	Brown 茶

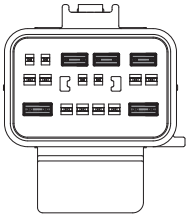




M (5011-7740)

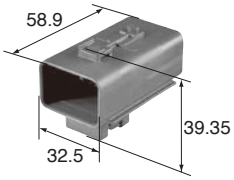
Color **色　相**	Black 黒

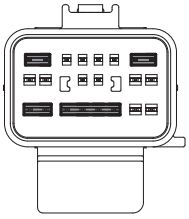




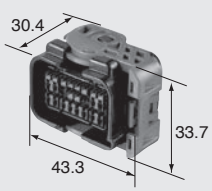
M (5011-7860)

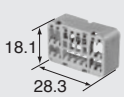
Color **色　相**	Dark Gray 濃灰





F (6189-7264) Lever

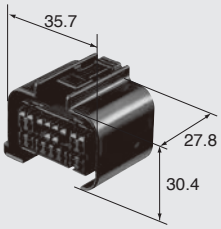


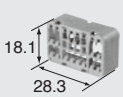


Retainer No. (6918-3166)

Color **色　相**	Black 黒

Lock F (6189-7263)





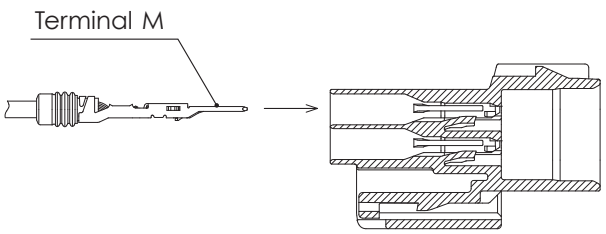
Retainer No. (6918-3166)

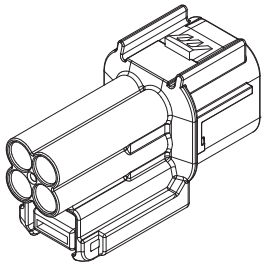
Color **色　相**	Black 黒

HX SEALED SERIES for STANDARD

1.5mm (060)

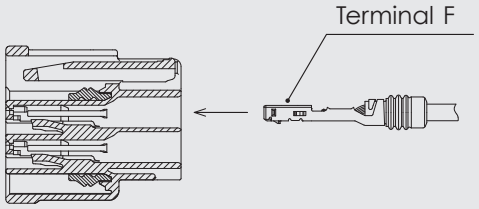
Structure／構造

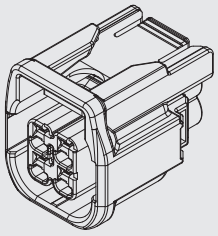




Housing M

Housing F



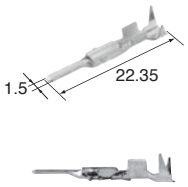


1.5mm (060)

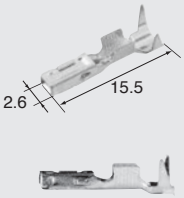
Terminal (UNIT : mm)

(SS)

Cable size(mm²) **適用電線サイズ**	0.13～0.22
Material **材　質**	Brass 黄銅
Surface treatment **表面処理**	Tin-plated Snメッキ



M (8230-5306)

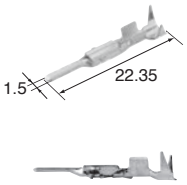


F (8240-0489)

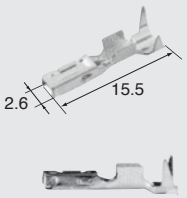
Cable size(mm²) **適用電線サイズ**	0.13～0.22
Material **材　質**	Heat-resistant copper alloy
Surface treatment **表面処理**	Tin-plated Snメッキ

(S)

Cable size(mm²) **適用電線サイズ**	0.3～0.5
Material **材　質**	Brass 黄銅
Surface treatment **表面処理**	Tin-plated Snメッキ



M (8230-5307)

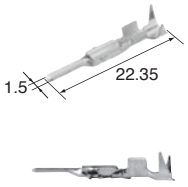


F (8240-0490)

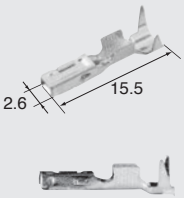
Cable size(mm²) **適用電線サイズ**	0.3～0.5
Material **材　質**	Heat-resistant copper alloy
Surface treatment **表面処理**	Tin-plated Snメッキ

(M)

Cable size(mm²) **適用電線サイズ**	0.75～1.25
Material **材　質**	Brass 黄銅
Surface treatment **表面処理**	Tin-plated Snメッキ



M (8230-5308)

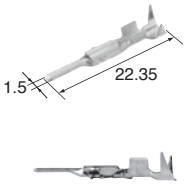


F (8240-0491)

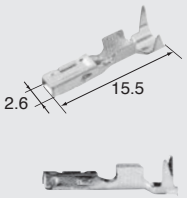
Cable size(mm²) **適用電線サイズ**	0.75～1.25
Material **材　質**	Heat-resistant copper alloy
Surface treatment **表面処理**	Tin-plated Snメッキ

(L)

Cable size(mm²) **適用電線サイズ**	2.0
Material **材　質**	Brass 黄銅
Surface treatment **表面処理**	Tin-plated Snメッキ



M (8230-5309)



F (8240-0492)

Cable size(mm²) **適用電線サイズ**	2.0
Material **材　質**	Heat-resistant copper alloy
Surface treatment **表面処理**	Tin-plated Snメッキ

1.5mm (060)

Wire seals (UNIT : mm)

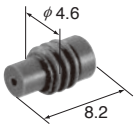
The wire seals are common to M and F.

ワイヤシールはM、F共用です。

(SS)

(7165-1562)

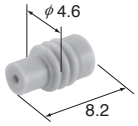
Cable overall diameter(mm) **電線仕上り外径**	0.85～1.2
Material **材　質**	Silicon シリコン
Color **色　相**	Violet 紫



(S)

(**7165-1563**)

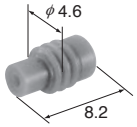
Cable overall diameter(mm) **電線仕上り外径**	1.05～1.5
Material **材　質**	Silicon シリコン
Color **色　相**	Sky Blue 空色



(M)

(**7165-1564**)

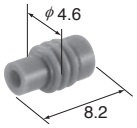
Cable overall diameter(mm) **電線仕上り外径**	1.35～1.9
Material **材　質**	Silicon シリコン
Color **色　相**	Light Green 淡緑



(L)

(**7165-1565**)

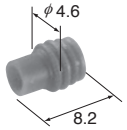
Cable overall diameter(mm) **電線仕上り外径**	1.75～2.4
Material **材　質**	Silicon シリコン
Color **色　相**	Blue 青



(LL)

(**7165-1566**)

Cable overall diameter(mm) **電線仕上り外径**	2.4～3
Material **材　質**	Silicon シリコン
Color **色　相**	Dark Yellow 濃黄



1.5mm(060)

Dummy plugs (UNIT : mm)

Ref; 1.5mm Dummy plug detail
1.5mmダミー栓掲載頁

(**7165-0193**)　J-07

- Dummy plugs are common to M and F.
- Dummy plugs are used to blind unused terminal holes.

- ダミー栓はM、F共用です。
- 不必要なターミナル穴を塞ぐために、ダミー栓を使用します。

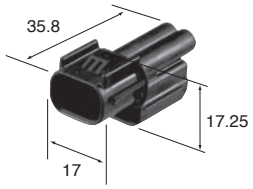
1.5mm(060)

Housing (UNIT : mm)

Ref: Terminal part No. **ターミナル参照頁**	E-14
Ref: wire seal No. **ワイヤシール参照頁**	E-14
Ref: Dummy plug No. **ダミー栓参照頁**	J-07
Material **材　質**	PBT

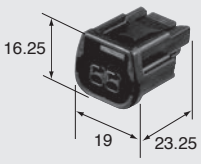
2way

Color **色　相**	Black 黒



M(6181-6851)

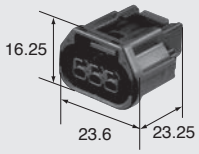
F(6189-7408)



Color **色　相**	Black 黒

3way

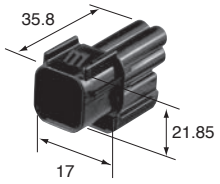
F (6189-7494)



Color 色 相	Black 黒

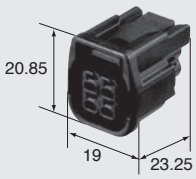
4way

Color 色 相	Black 黒



M (6181-6783)

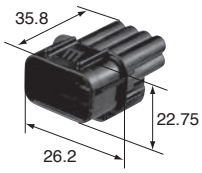
F (6189-7409)



Color 色 相	Black 黒

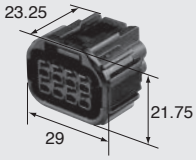
8way

Color 色 相	Black 黒



M (6181-6850)

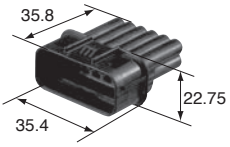
F (6189-7423)



Color 色 相	Black 黒

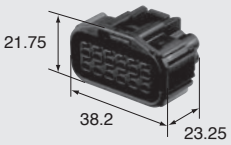
12way

Color 色 相	Black 黒



M (6181-6784)

F (6189-7410)

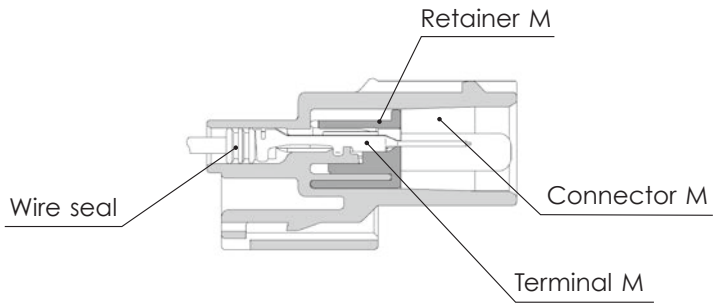


Color 色 相	Black 黒

HX SEALED SERIES for STANDARD

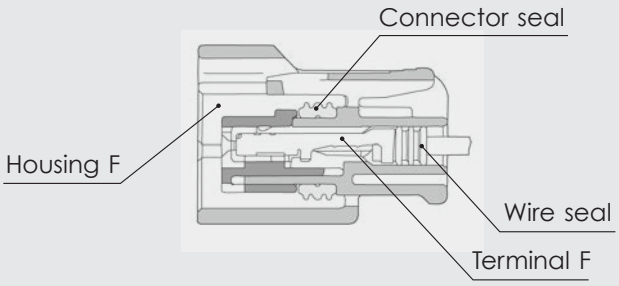
2.3mm (090)

Structure／構造



Connector M

Connector F



2.3mm (090)

Terminal (UNIT : mm)

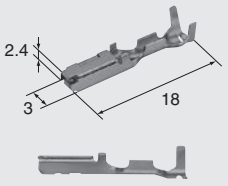
Ref; 2.3mm Terminal detail
2.3mmターミナル参照頁

S	**M (8230-4472)**	L-02
M	**M (8230-4562)**	L-02
L	**M (8230-4552)**	L-02

(S)

F (8240-4862)

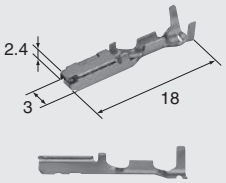
Cable size (mm²) 適用電線サイズ	0.3～0.5
Cable overall diameter (mm) 電線仕上り外径	1.4～2.4
Material 材　質	Heat-resistant copper alloy
Surface treatment 表面処理	Tin-plated Snメッキ



(M)

F (8240-4992)

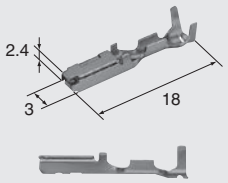
Cable size (mm²) **適用電線サイズ**	0.75～0.85
Cable overall diameter (mm) **電線仕上り外径**	1.8～2.6
Material **材　質**	Heat-resistant copper alloy
Surface treatment **表面処理**	Tin-plated Snメッキ



(L)

F (8240-4952)

Cable size (mm²) **適用電線サイズ**	1.25～2.0
Cable overall diameter (mm) **電線仕上り外径**	2.1～2.9
Material **材　質**	Heat-resistant copper alloy
Surface treatment **表面処理**	Tin-plated Snメッキ



2.3mm (090)

Wire seals (UNIT : mm)

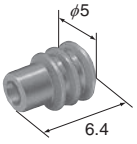
The wire seals are common to M and F.

ワイヤシールはM、F共用です。

(SS)

(7165-0385)

Cable size (mm²) **適用電線サイズ**	(AVSS/0.3～0.5) (AVSSX/0.5)
Cable overall diameter (mm) **電線仕上り外径**	1.2～1.7
Material **材　質**	Silicon シリコン
Color **色　相**	Gray 灰



(S)

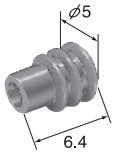
(7165-0194)

Cable size (mm²) **適用電線サイズ**	(AV/0.5) (AVX・AEX/0.5～0.75) (AVS/0.3～0.85) (AVSS/0.85～1.25) (AVSSX/0.75～1.25)
Cable overall diameter (mm) **電線仕上り外径**	1.7～2.4
Material **材　質**	Silicon シリコン
Color **色　相**	Green 緑

(M)

(7165-0198)

Cable size (mm²) **適用電線サイズ**	(AV/0.5～1.25) (AVX・AEX/0.75～1.25) (AVS/0.85～1.25) (AVSS/1.25～2.0) (AVSSX/1.25～2.0)
Cable overall diameter (mm) **電線仕上り外径**	2.1～2.9
Material **材　質**	Silicon シリコン
Color **色　相**	Yellow 黄



2.3mm (090)

Dummy plugs (UNIT : mm)

Ref; 2.3mm Dummy plug detail
2.3mmダミー栓掲載頁

(**7165-0193**) J-07

- Dummy plugs are common to M and F.
- Dummy plugs are used to blind unused terminal holes.

- ダミー栓はM、F共用です。
- 不必要なターミナル穴を塞ぐために、ダミー栓を使用します。

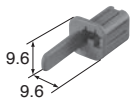
2.3mm (090)

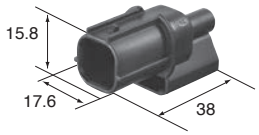
Housing (UNIT : mm)

Ref: Terminal part No. **ターミナル参照頁**	E-17
Ref: wire seal No. **ワイヤシール参照頁**	E-18
Ref: Dummy plug No. **ダミー栓参照頁**	J-07
Material **材　質**	PBT

1way

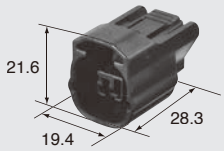
Color / **色　相**: Black / 黒



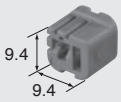


Retainer No.(6918-2665)

M (6181-0803)



F (6189-0591)

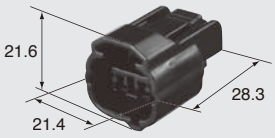


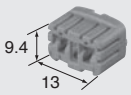
Retainer No.(6918-1370)

Color / **色　相**: Black / 黒

2way

F (6189-0552)





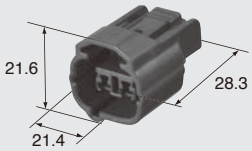
Retainer No.(6918-1260)

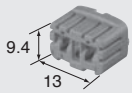
Note)

Color / **色　相**: Black / 黒

2way (Rib difference) (リブ違)

F (6189-0593)





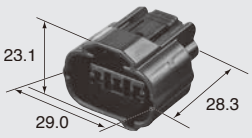
Retainer No.(6918-1260)

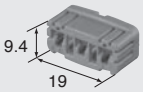
Note)

Color / **色　相**: Brown / 茶

3way

F (6189-0596)





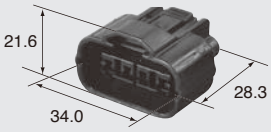
Retainer No.(6918-1371)

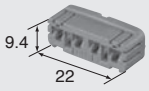
Note)

Color / **色　相**: Black / 黒

4way

F (6189-0617)





Retainer No.(6918-1469)

Note)

Color / **色　相**: Black / 黒

HX SEALED SERIES
for HYBRID

4.8mm (187)

Terminal (UNIT : mm)

Ref; 4.8mm Terminal detail
4.8mmターミナル参照頁

S	**M (8100-0463)**	B-19		
M	**M (8100-0464)**	B-19		
L	**M (8100-0465)**	B-19	**F (8100-0468)**	B-19

4.8mm (187)

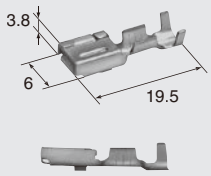
Wire seals (UNIT : mm)

The wire seals are common to M and F.
ワイヤシールはM、F共用です。

(S)

F (8100-0661)

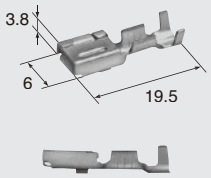
Cable size (mm²) 適用電線サイズ	0.3～0.5
Cable overall diameter (mm) 電線仕上り外径	1.4～2.4
Material 材　質	Heat-resistant copper alloy
Surface treatment 表面処理	Tin-plated Snメッキ



(M)

F (8100-0660)

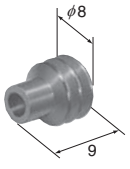
Cable size (mm²) 適用電線サイズ	0.5～1.25
Cable overall diameter (mm) 電線仕上り外径	1.6～2.6
Material 材　質	Heat-resistant copper alloy
Surface treatment 表面処理	Tin-plated Snメッキ



(S) for 2.3mm, 4.8mm 10way

(7165-0172)

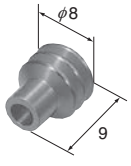
Cable size (mm²) 適用電線サイズ	(AVS/0.3) (AVSS/0.3～0.85) (AVSSX/0.5～0.75)
Cable overall diameter (mm) 電線仕上り外径	1.4～1.9
Material 材　質	NBR
Color 色　相	Brown 茶



(M) for 2.3mm, 4.8mm 10way

(7165-0130)

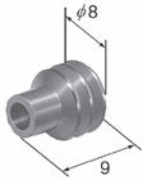
Cable size (mm²) 適用電線サイズ	(AV/0.5～1.25) (AVX/0.5～1.25) (AVS/0.3～1.25) (AVSS/0.85～2.0) (AVSSX/0.75～2.0)
Cable overall diameter (mm) 電線仕上り外径	1.8～2.9
Material 材　質	NBR
Color 色　相	Gray 灰



(L) for 2.3mm, 4.8mm 10way

(7165-0131)

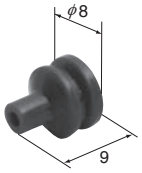
Cable size (mm²) **適用電線サイズ**	(AV/2.0～3.0) (AVX/2.0～3.0) (AVS/2.0～3.0)
Cable overall diameter (mm) **電線仕上り外径**	3.0～4.1
Material **材　質**	NBR
Color **色　相**	Black 黒



(M) for 1.0mm, 4.8mm 13way

(7165-0147)

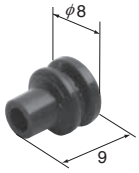
Cable size (mm²) **適用電線サイズ**	(AVS/0.3～1.25)
Cable overall diameter (mm) **電線仕上り外径**	1.8～2.9
Material **材　質**	Silicon シリコン
Color **色　相**	Dark Green 濃緑



(L) for 1.0mm, 4.8mm 13way

(7165-0148)

Cable size (mm²) **適用電線サイズ**	(AVS/2.0～3.0)
Cable overall diameter (mm) **電線仕上り外径**	3.0～4.1
Material **材　質**	Silicon シリコン
Color **色　相**	Dark Blue 濃青



1.0mm, 4.8mm (040, 187)

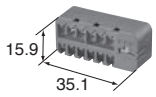
Housing (UNIT : mm)

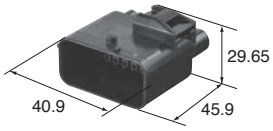
Ref: Terminal part No. **ターミナル参照頁**	[1.0mm] [4.8mm]	E-02 E-20
Ref: wire seal No. **ワイヤシール参照頁**	[1.0mm] [4.8mm]	E-03 E-21
Ref: Dummy plug No. **ダミー栓参照頁**	[1.0mm] [4.8mm]	E-04 B-21
Material **材　質**	PBT	

No. of way/ ( ) corresponds to 1.0mm, 4.8mm, in order from left to right.
極数／( ) 内表示：左から1.0mm 極数、4.8mm 極数

13way (12+1)

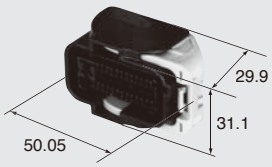
Color **色　相**	Black 黒



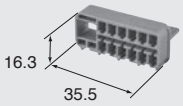


Retainer No. (6181-6465)

M (6181-6464)



F (6189-6863)



Retainer No. (6185-4596)

Color **色　相**	Black 黒

1.5mm, 4.8mm (060, 187)

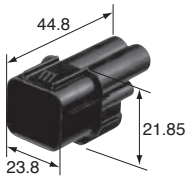
Housing (UNIT : mm)

Ref: Terminal part No. **ターミナル参照頁**	[1.5mm] [4.8mm]	E-14 E-20
Ref: wire seal No. **ワイヤシール参照頁**	[1.5mm] [4.8mm]	E-15 E-20
Ref: Dummy plug No. **ダミー栓参照頁**	[1.5mm] [4.8mm]	J-07 B-21
Material **材　質**	PBT	

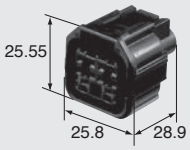
No. of way/ ( ) corresponds to 1.5mm, 4.8mm, in order from left to right.
極数／( ) 内表示：左から1.5mm 極数、4.8mm 極数

4way (2+2)

Color **色　相**	Black 黒



M (6181-6785)

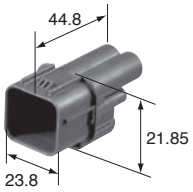


F (6189-7411)

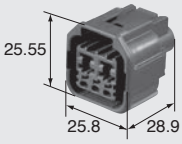
Color **色　相**	Black 黒

5way (3+2)

Color 色　相	Dark gray 濃灰



M (6181-6921)



F (6189-7567)

Color 色　相	Dark gray 濃灰

2.3mm, 4.8mm (090, 187)

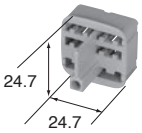
Housing (UNIT : mm)

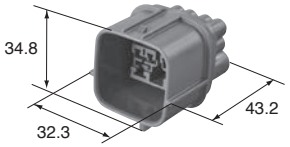
Ref: Terminal part No. **ターミナル参照頁**	[2.3mm] [4.8mm]	E-17 E-20
Ref: wire seal No. **ワイヤシール参照頁**	[2.3mm] [4.8mm]	E-18 E-21
Ref: Dummy plug No. **ダミー栓参照頁**	[2.3mm] [4.8mm]	J-07 B-21
Material **材　質**	PBT	

No. of way/ ( ) corresponds to 2.3mm, 4.8mm, in order from left to right.
極数／( ) 内表示：左から2.3mm 極数、4.8mm 極数

10way (8+2)

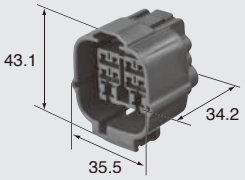
Color 色　相	Dark gray 濃灰



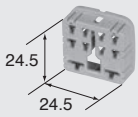


Retainer No. (6918-1263)

M (6181-0381)



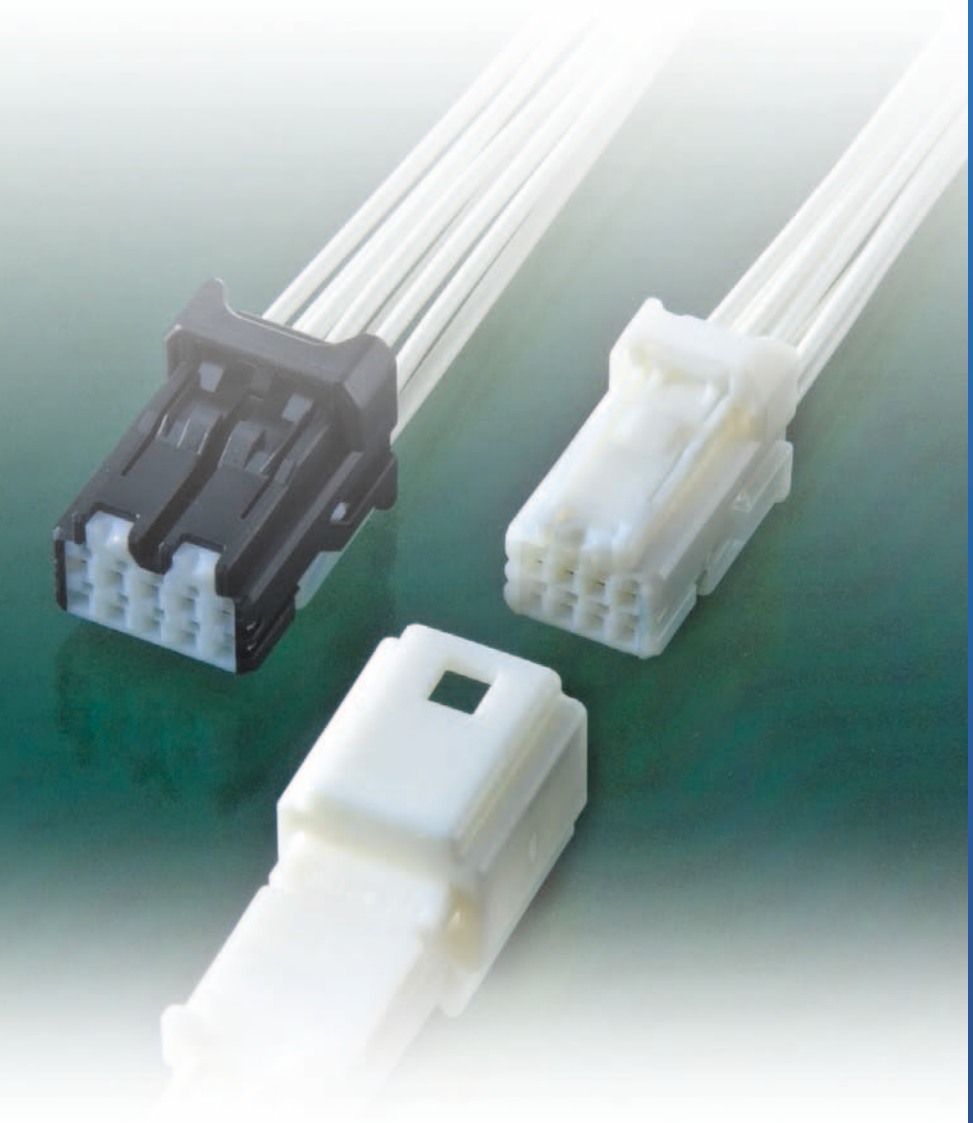
F (6189-0555)



Retainer No. (6918-1267)

Color 色　相	Dark gray 濃灰

NH SERIES



Features

The NH series connector is a highly reliable for connector mating and terminal insertion. This series consist of 0.64mm and hybrid type(0.64mm+2.3mm) terminal usable for control circuit and low power circuit.

- The front mask of Female connector assists allure male terminal.
- By setting TPA (Terminal Position Assurrance) adjust the incomplete inserted terminal to the correct position.
- An extra clip can be attached to the connector housing to secure it to the body.
- RoHS/ELV Compliant

特　長

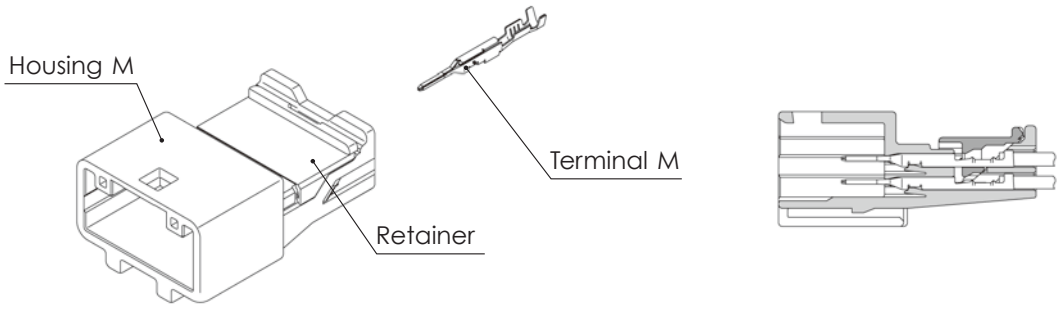
NH シリーズは、コネクタ嵌合、ターミナル抜け等において信頼性を向上させたコネクタです。
ターミナルサイズが0.64mm とハイブリッドタイプ（0.64mm+2.3mm）で構成されており、信号回路と低パワー回路にご利用いただけます。

- メスコネクタは、フロントマスクの採用により、コネクタ嵌合時のオス端子誘い込み性が向上しております。
- 挿入不足のターミナルは、リテーナをセットすることにより正規の位置に固定されます。
- コネクタハウジングにはボデーに固定するためのクランプ（クリップ）を装着することができます。
- RoHS／ELV 対応

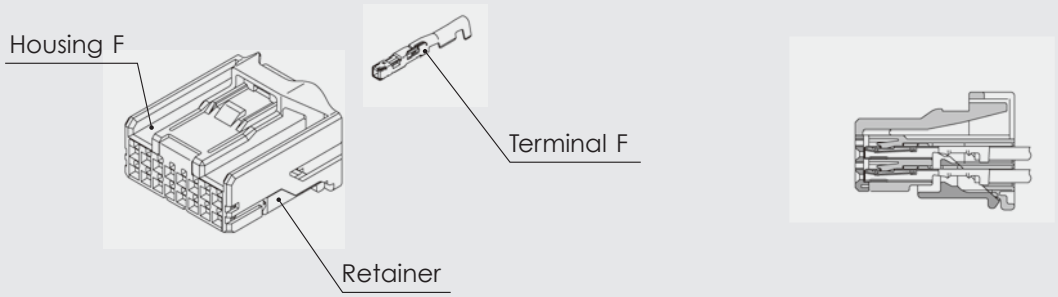
NH SERIES for STANDARD

0.64mm (025)

Structure／構造



Connector M **Connector F**

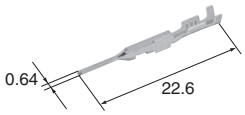


0.64mm (025)

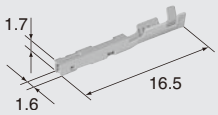
Terminal (UNIT : mm)

(S)

Cable size (mm²) **適用電線サイズ**	0.22～0.5
Material **材　質**	Brass 黄銅
Surface treatment **表面処理**	Tin-plated Snメッキ



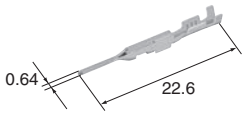
M (8230-5379) **F (8240-0552)**



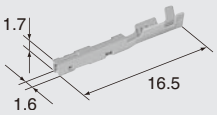
Cable size (mm²) **適用電線サイズ**	0.22～0.5
Material **材　質**	Heat-resistant copper alloy
Surface treatment **表面処理**	Tin-plated Snメッキ

(M)

Cable size (mm²) **適用電線サイズ**	0.75
Material **材　質**	Brass 黄銅
Surface treatment **表面処理**	Tin-plated Snメッキ



M (8230-5380) **F (8240-0523)**



Cable size (mm²) **適用電線サイズ**	0.75
Material **材　質**	Heat-resistant copper alloy
Surface treatment **表面処理**	Tin-plated Snメッキ

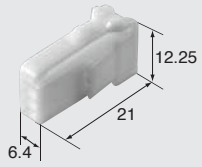
0.64mm (025)

Housing (UNIT : mm)

Ref: Terminal part No. **ターミナル参照頁**	F-02
Material **材　質**	PBT

3way

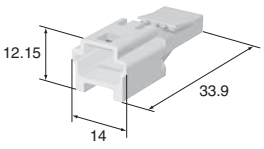
F (6098-7063)



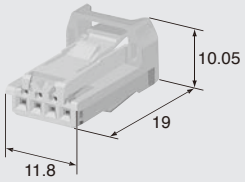
Color **色　相**	Natural 自然色

4way

Color **色　相**	Natural 自然色



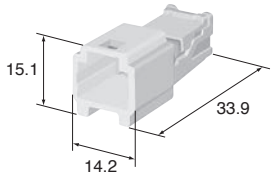
M (6098-5310) TH 04 MW-NH　　TH 04 FW-NH **F (6098-5267)**



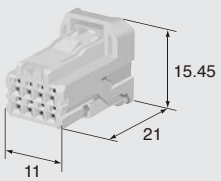
Color **色　相**	Natural 自然色

8way

Color **色　相**	Natural 自然色



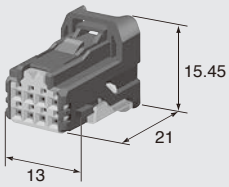
M (6098-5271) TH 08 MW-NH　　TH 08 FW-NH **F (6098-5269)**



Color **色　相**	Natural 自然色

8way

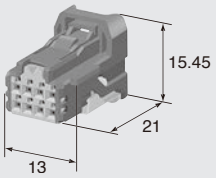
TH 08 FB-NH **F (6098-6451)**



Color 色 相	Black 黒

8way

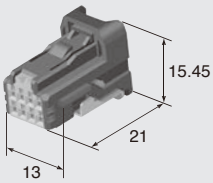
TH 08 FGY-NH **F (6098-6452)**



Color 色 相	Gray 灰

8way

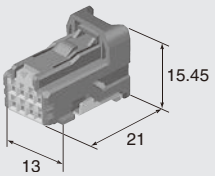
TH 08 FL-NH **F (6098-6522)**



Color 色 相	Blue 青

8way

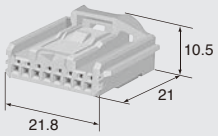
TH 08 FG-NH **F (6098-6523)**



Color 色 相	Green 緑

8way

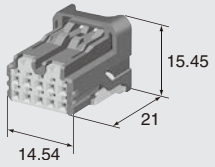
TH 08 FW-1V-NH **F (6098-5312)**



Color 色 相	Natural 自然色

10way

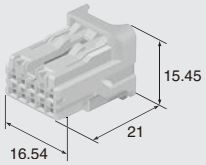
TH 10 FB-NH **F (6098-5273)**



Color 色 相	Black 黒

10way

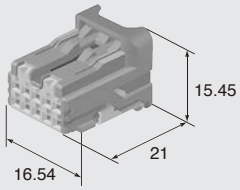
TH 10 FW-NH **F (6098-7066)**



Color 色 相	Natural 自然色

10way

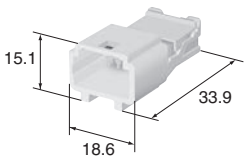
TH 10 FGY-NH **F (6098-7067)**



Color 色 相	Gray 灰

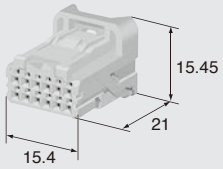
12way

Color 色 相	Natural 自然色



M (6098-5277) TH 12 MW-NH

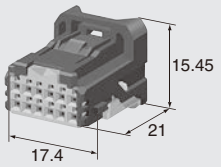
TH 12 FW-NH **F (6098-5275)**



Color 色 相	Natural 自然色

12way

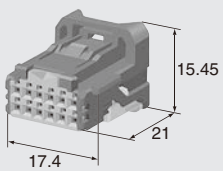
TH 12 FB-NH **F (6098-6455)**



Color 色 相	Black 黒

12way

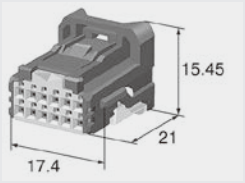
TH 12 FGY-NH **F (6098-6456)**



Color 色 相	Gray 灰

12way

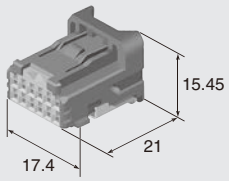
TH 12 FL-NH **F (6098-6457)**



Color 色 相	Blue 青

12way

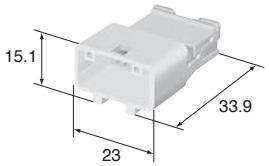
TH 12 FG-NH **F (6098-6524)**



Color 色 相	Green 緑

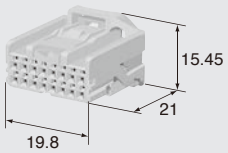
16way

Color 色 相	Natural 自然色



M (6098-5281) TH 16 MW-NH

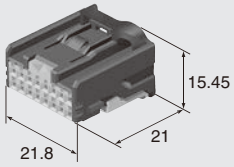
TH 16 FW-NH **F (6098-5279)**



Color 色 相	Natural 自然色

16way

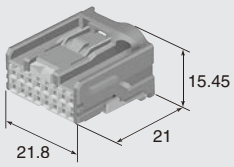
TH 16 FB-NH ASSY **F (6098-7099)**



Color 色 相	Black 黒

16way

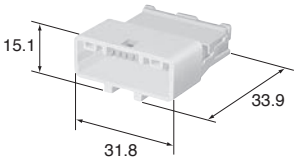
TH 16 FGY-NH ASSY **F (6098-7100)**



Color 色 相	Gray 灰

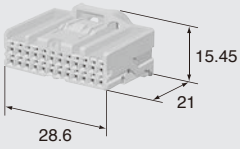
24way

Color 色 相	Natural 自然色



M (6098-5285) TH 24 MW-NH

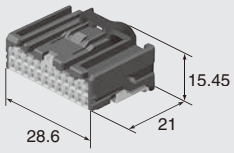
TH 24 FW-NH **F (6098-5283)**



Color 色 相	Natural 自然色

24way

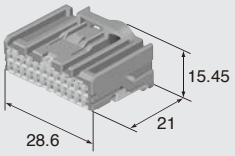
TH 24 FB-NH **F (6098-7060)**



Color 色 相	Black 黒

24way

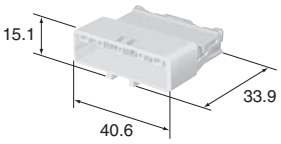
TH 24 FGY-NH **F (6098-7061)**



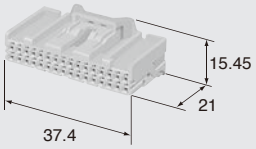
Color 色 相	Gray 灰

32way

Color 色 相	Natural 自然色



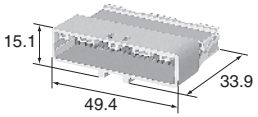
M(**6098-5289**) TH 32 MW-NH　　TH 32 FW-NH **F**(**6098-5287**)



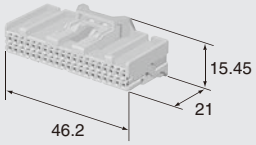
Color 色 相	Natural 自然色

40way

Color 色 相	Natural 自然色



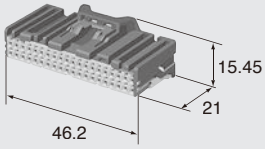
M(**6098-5585**) TH 40 MW-NH　　TH 40 FW-NH **F**(**6098-5291**)



Color 色 相	Natural 自然色

40way

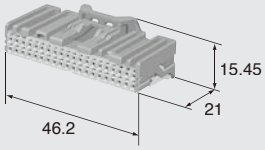
TH 40 FB-NH **F**(**6098-5293**)



Color 色 相	Black 黒

40way

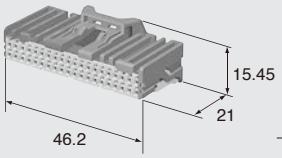
TH 40 FGY-NH **F**(**6098-5295**)



Color 色 相	Gray 灰

40way

TH 40 FG-NH **F**(**6098-5297**)



Color 色 相	Green 緑

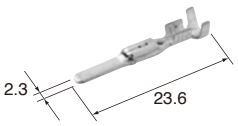
NH SERIES
for HYBRID

2.3mm (090)

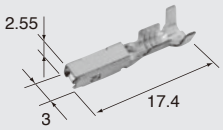
Terminal (UNIT : mm)

(SS)

Cable size (mm²) **適用電線サイズ**	0.22
Material **材　質**	Brass 黄銅
Surface treatment **表面処理**	Tin-plated Snメッキ



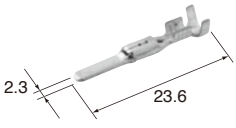
M (8230-5168)　　**F (8240-0367)**



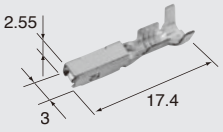
Cable size (mm²) **適用電線サイズ**	0.22
Material **材　質**	Heat-resistant copper alloy
Surface treatment **表面処理**	Tin-plated Snメッキ

(S)

Cable size (mm²) **適用電線サイズ**	0.3～0.5
Material **材　質**	Brass 黄銅
Surface treatment **表面処理**	Tin-plated Snメッキ



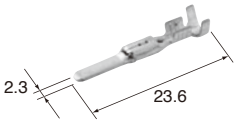
M (8230-5169)　　**F (8240-0368)**



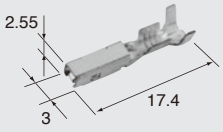
Cable size (mm²) **適用電線サイズ**	0.3～0.5
Material **材　質**	Heat-resistant copper alloy
Surface treatment **表面処理**	Tin-plated Snメッキ

(M)

Cable size (mm²) **適用電線サイズ**	0.75～1.0
Material **材　質**	Brass 黄銅
Surface treatment **表面処理**	Tin-plated Snメッキ



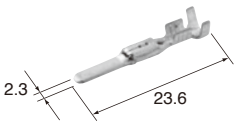
M (8230-5170)　　**F (8240-0369)**



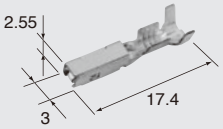
Cable size (mm²) **適用電線サイズ**	0.75～1.0
Material **材　質**	Heat-resistant copper alloy
Surface treatment **表面処理**	Tin-plated Snメッキ

(L)

Cable size (mm²) **適用電線サイズ**	1.25
Material **材　質**	Brass 黄銅
Surface treatment **表面処理**	Tin-plated Snメッキ



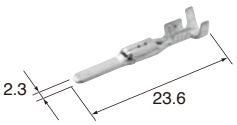
M (8230-5171)　　F (8240-0370)



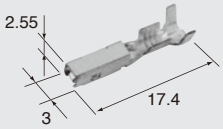
Cable size (mm²) **適用電線サイズ**	1.25
Material **材　質**	Heat-resistant copper alloy
Surface treatment **表面処理**	Tin-plated Snメッキ

(LL)

Cable size (mm²) **適用電線サイズ**	2.0～2.5
Material **材　質**	Brass 黄銅
Surface treatment **表面処理**	Tin-plated Snメッキ



M (8230-5172)　　F (8240-0371)



Cable size (mm²) **適用電線サイズ**	2.0～2.5
Material **材　質**	Heat-resistant copper alloy
Surface treatment **表面処理**	Tin-plated Snメッキ

0.64mm, 2.3mm (025, 090)

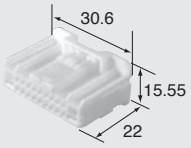
Housing (UNIT : mm)

Ref: Terminal part No. **ターミナル参照頁**	[0.64mm] [2.3mm]	F-03 F-07
Material **材　質**	PBT	

No. of way/ ( ) corresponds to 0.64mm, 2.3mm, in order from left to right.
極数／( ) 内表示：左から0.64mm 極数、2.3mm 極数

20way (18+2)

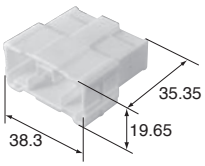
NH 18 FW-CS2 **F (6098-7261)**



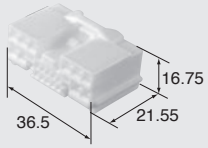
Color **色　相**	Natural 自然色

20way (10+10)

Color **色　相**	Natural 自然色



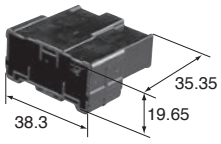
M (6098-5989) NH 10 MW-CS10　　NH 10 FW-CS10 F (6098-5988)



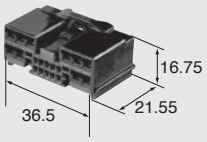
Color **色　相**	Natural 自然色

20way (10+10)

Color **色　相**	Black 黒

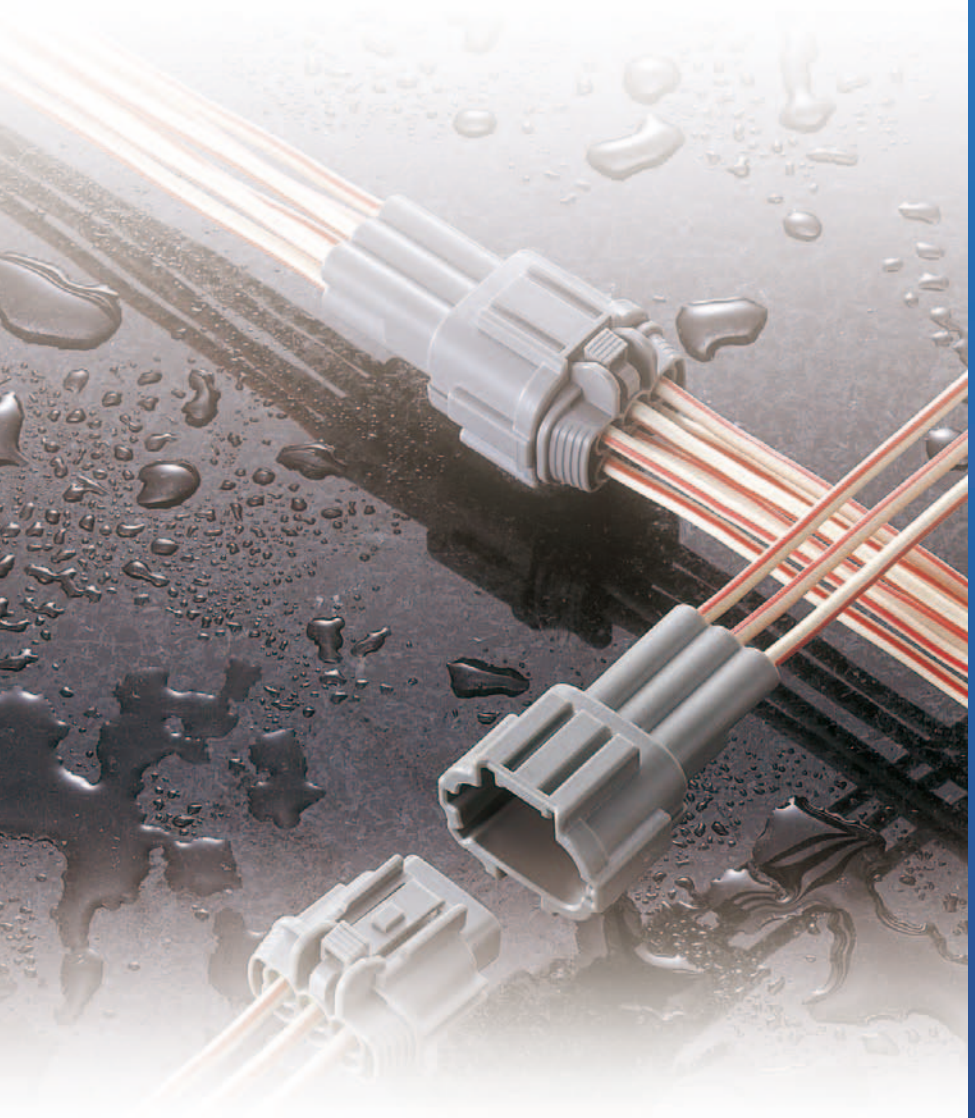


M (6098-7254) NH 10 MW-CS10-B　　NH 10 FW-CS10-B F (6098-7253)



Color **色　相**	Black 黒

RS SERIES



Features

RS series consists of a 2.3mm type classified according to terminal size, supporting use in a variety of control circuits and low power circuits.

- The RS-standard type connectors adopt an inertia locking system to prevent semi-engagement (this system is not incorporated in some connectors).
  *Please contact our sales representative for product numbers.
- RoHS/ELV Compliant

特　長

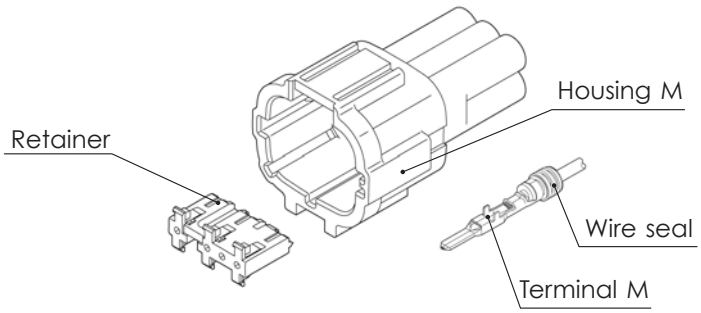
RS シリーズは、ターミナルサイズが2.3mm で構成されており、各種の制御回路並びに低パワー回路に対応することができます。

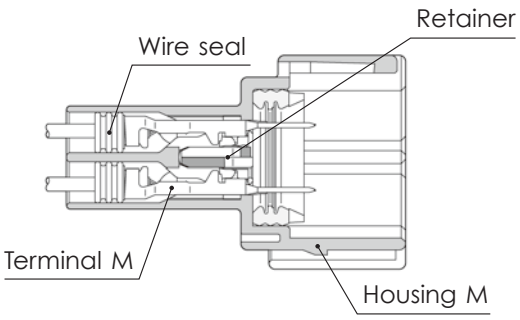
- RS- 標準タイプコネクタは、コネクタの半嵌合が起きにくい慣性ロック方式です。（慣性ロック方式でないコネクタが一部あります。）
- RoHS ／ ELV 対応

RS SERIES for STANDARD Type1

2.3mm (090)

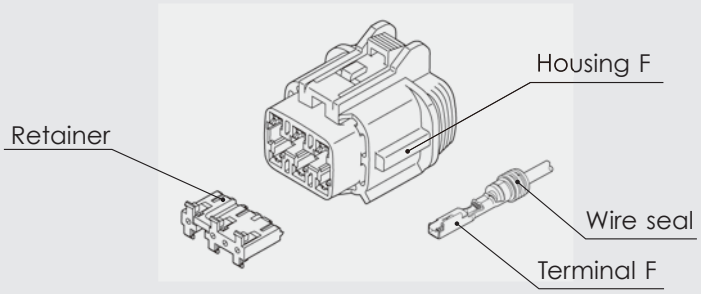
Structure／構造

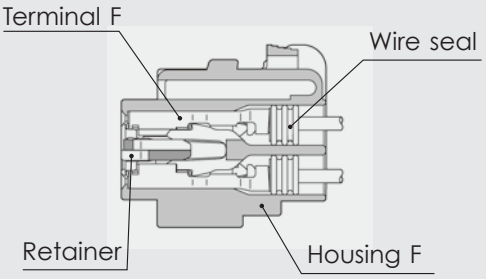




Connector M

Connector F



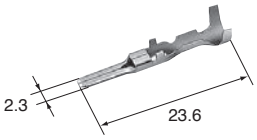


2.3mm (090)

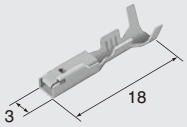
Terminal (UNIT : mm)

(S)

Cable size (mm²) **適用電線サイズ**	0.3～0.5
Material **材　質**	Brass 黄銅
Surface treatment **表面処理**	Tin-plated Snメッキ



M (8100-3803)

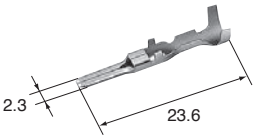


F (8240-0263)

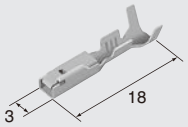
Cable size (mm²) **適用電線サイズ**	0.3～0.5
Material **材　質**	Heat-resistant copper alloy
Surface treatment **表面処理**	Tin-plated Snメッキ

(S) Au

Cable size (mm²) **適用電線サイズ**	0.3～0.5
Material **材　質**	Brass 黄銅
Surface treatment **表面処理**	Gold-plated Auメッキ



M (8100-3805)

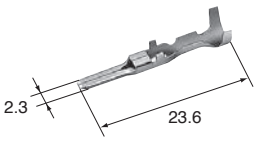


F (8240-0266)

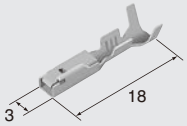
Cable size (mm²) **適用電線サイズ**	0.3～0.5
Material **材　質**	Heat-resistant copper alloy
Surface treatment **表面処理**	Gold-plated Auメッキ

(M)

Cable size (mm²) **適用電線サイズ**	0.85～1.25
Material **材　質**	Brass 黄銅
Surface treatment **表面処理**	Tin-plated Snメッキ



M (8100-3804)

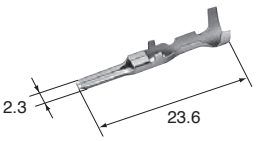


F (8240-0264)

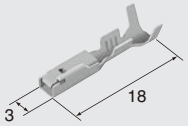
Cable size (mm²) **適用電線サイズ**	0.85～1.25
Material **材　質**	Heat-resistant copper alloy
Surface treatment **表面処理**	Tin-plated Snメッキ

(M) Au

Cable size (mm²) **適用電線サイズ**	0.85～1.25
Material **材　質**	Brass 黄銅
Surface treatment **表面処理**	Gold-plated Auメッキ



M (8100-3806)

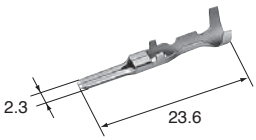


F (8240-0267)

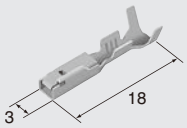
Cable size (mm²) **適用電線サイズ**	0.85～1.25
Material **材　質**	Heat-resistant copper alloy
Surface treatment **表面処理**	Gold-plated Auメッキ

(L)

Cable size (mm²) **適用電線サイズ**	2.0
Material **材　質**	Brass 黄銅
Surface treatment **表面処理**	Tin-plated Snメッキ



M (8100-4172)

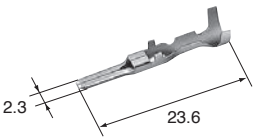


F (8240-0265)

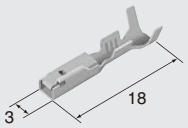
Cable size (mm²) **適用電線サイズ**	2.0
Material **材　質**	Heat-resistant copper alloy
Surface treatment **表面処理**	Tin-plated Snメッキ

(L) Au

Cable size (mm²) **適用電線サイズ**	2.0
Material **材　質**	Brass 黄銅
Surface treatment **表面処理**	Gold-plated Auメッキ



M (8100-4173)



F (8240-0268)

Cable size (mm²) **適用電線サイズ**	2.0
Material **材　質**	Heat-resistant copper alloy
Surface treatment **表面処理**	Gold-plated Auメッキ

2.3mm (090)

Wire seals (UNIT : mm)

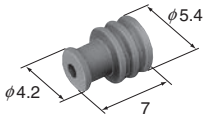
The wire seals are common to M and F.

ワイヤシールは M、F 共用です。

(US)

(**7165-0474**)

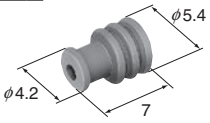
Cable size (mm²) **適用電線サイズ**	(AVSS/0.3) (CAVUS/0.3～0.5)
Cable overall diameter (mm) **電線仕上り外径**	1.0～1.4
Material **材　質**	Silicon シリコン
Color **色　相**	Orange 橙



(S)

(**7165-0473**)

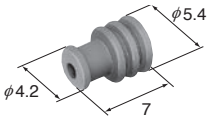
Cable size (mm²) **適用電線サイズ**	(AVSS/0.5～0.85) (CAVUS/0.85～1.25)
Cable overall diameter (mm) **電線仕上り外径**	1.5～1.9
Material **材　質**	Silicon シリコン
Color **色　相**	Light Blue 淡青



(M)

(**7165-0472**)

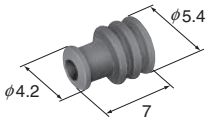
Cable size (mm²) **適用電線サイズ**	(AVSS/1.25)
Cable overall diameter (mm) **電線仕上り外径**	2.0～2.4
Material **材　質**	Silicon シリコン
Color **色　相**	Violet 紫



(L)

(**7165-0471**)

Cable size (mm²) **適用電線サイズ**	(AVSS/2.0)
Cable overall diameter (mm) **電線仕上り外径**	2.5～2.9
Material **材　質**	Silicon シリコン
Color **色　相**	Light Green 淡緑



2.3mm (090)

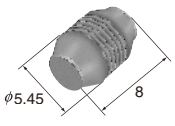
Dummy plugs (UNIT : mm)

- Dummy plugs are common to M and F.
- Dummy plugs are used to blind unused terminal holes.

- ダミー栓は M、F 共用です。
- 不必要なターミナル穴を塞ぐために、ダミー栓を使用します。

(**7165-1131**)

Material **材　質**	Silicon シリコン
Color **色　相**	Blue 青



2.3mm (090)

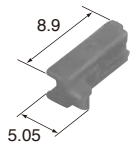
Housing (UNIT : mm)

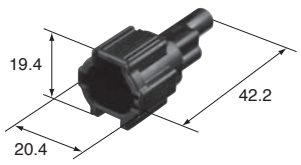
Ref: Terminal part No. **ターミナル参照頁**	G-02
Ref: wire seal No. **ワイヤシール参照頁**	G-04
Ref: Dummy plug No. **ダミー栓参照頁**	G-04
Material **材　質**	PBT

※ Detail dimensions for mounting portion of the bracket are specifi ed in the offi cial drawing. Please contact our sales staff.

※固定用ブラケットに関しては、弊社営業担当にお問い合わせください。

1way

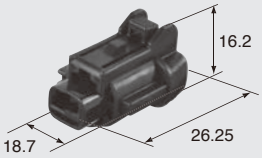


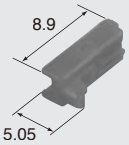


Retainer No.(6918-1773)

M (6188-0551) RS 01 MB

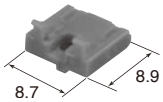
RS 01 FB **F (6185-0862)**

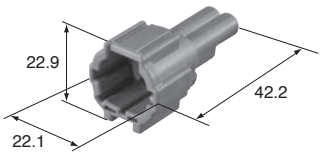




Retainer No.(6918-1773)

2way

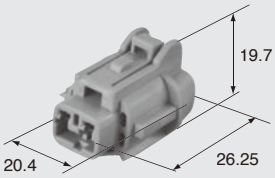


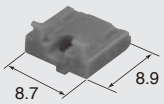


Retainer No.(6918-1774)

M (6188-0554) RS 02 MGY

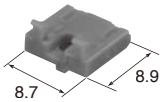
RS 02 FGY **F (6185-0867)**

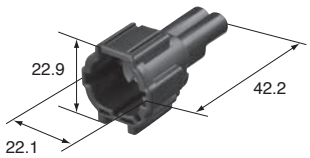




Retainer No.(6918-1774)

2way

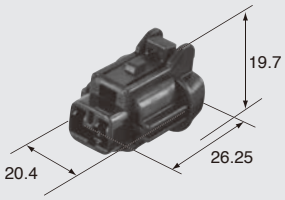


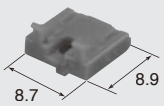


Retainer No.(6918-1774)

M (6188-0552) RS 02 MB

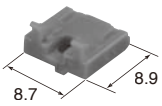
RS 02 FB **F (6185-0865)**

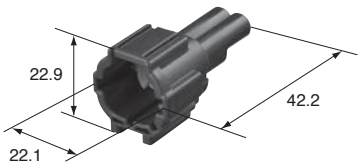




Retainer No.(6918-1774)

2way





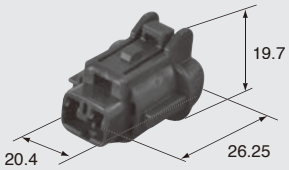
Retainer No.(6918-1774)

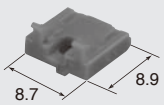
M (6188-0553) RS 02 MBR

M (6188-0663) RS 02 MBR-DGY

RS 02 FBR **F (6185-0866)**

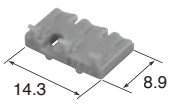
RS 02 FBR-DGY **F (6185-1101)**

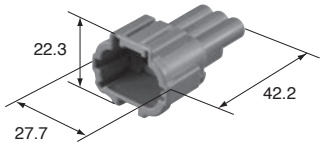




Retainer No.(6918-1774)

3way

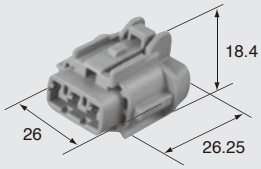


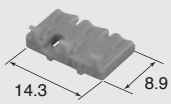


Retainer No.(6918-1775)

M (6188-0556) RS 03 MGY

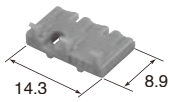
RS 03 FGY **F (6185-0869)**

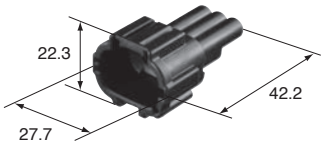




Retainer No.(6918-1775)

3way

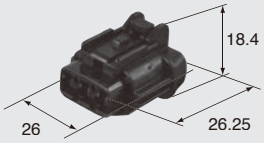


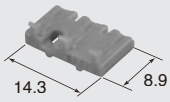


Retainer No.(6918-1775)

M(6188-0555) RS 03 MB

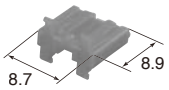
RS 03 FB **F(6185-0868)**

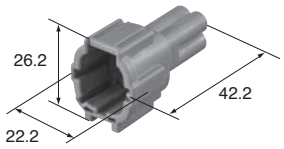




Retainer No.(6918-1775)

4way

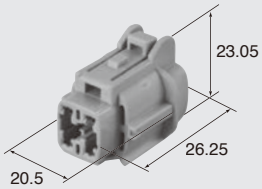


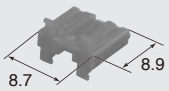


Retainer No.(6918-1776)

M(6188-0558) RS 04 MGY

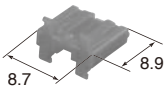
RS 04 FGY-PR **F(6185-1171)**

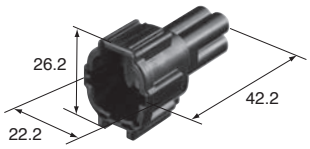




Retainer No.(6918-1776)

4way

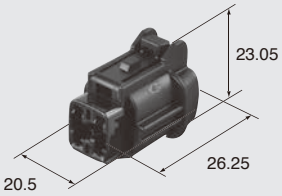


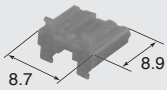


Retainer No.(6918-1776)

M(6188-0557) RS 04 MB

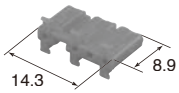
RS 04 FB-PR **F(6185-1169)**

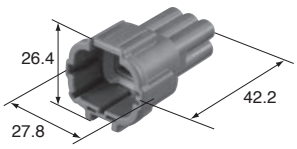




Retainer No.(6918-1776)

6way

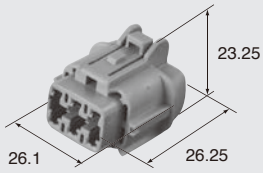


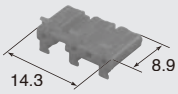


Retainer No.(6918-1779)

M(6188-5540) RS 06 MGY

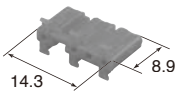
RS 06 FGY-PR **F(6185-5177)**

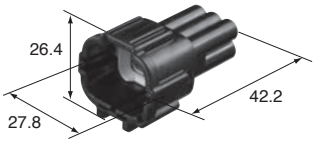




Retainer No.(6918-1779)

6way

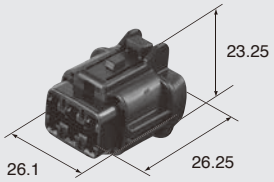


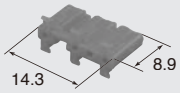


Retainer No.(6918-1779)

M(6188-5539) RS 06 MB

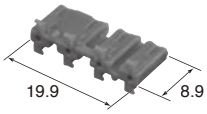
RS 06 FB-PR **F(6185-5175)**

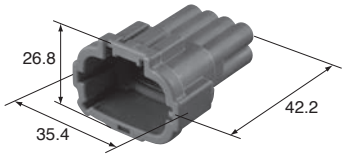




Retainer No.(6918-1779)

8way

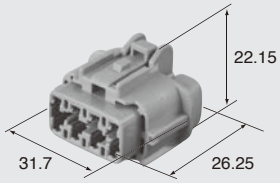


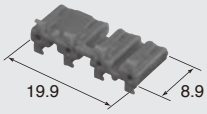


Retainer No.(6918-1780)

M(6188-5544) RS 08 MGY-PR

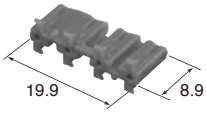
RS 08 FGY-PR **F(6185-5181)**

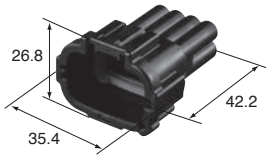




Retainer No.(6918-1780)

8way

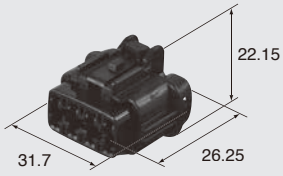


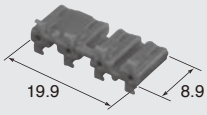


Retainer No.(6918-1780)

M(**6188-5542**) RS 08 MB-PR

RS 08 FB-PR **F**(**6185-5179**)



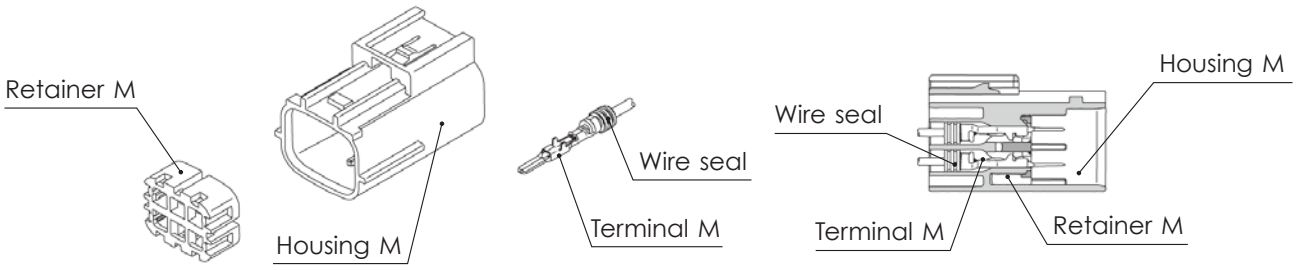


Retainer No.(6918-1780)

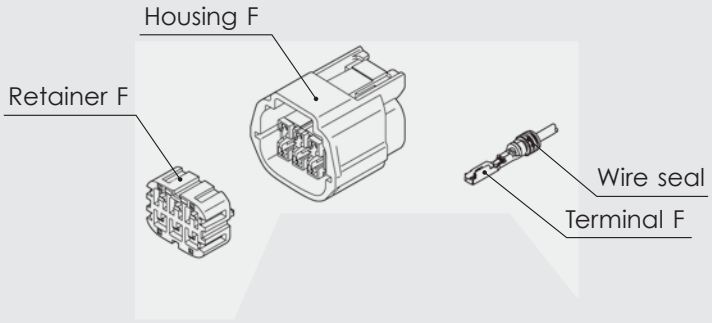
RS SERIES for STANDARD Type2

2.3mm (090)

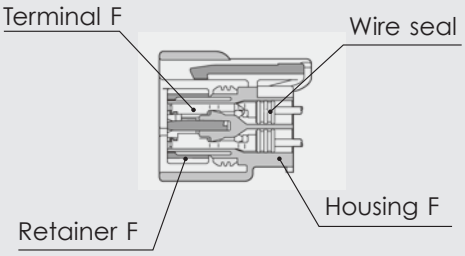
Structure／構造



Connector M



Connector F

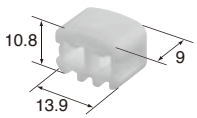


2.3mm (090)

Housing (UNIT : mm)

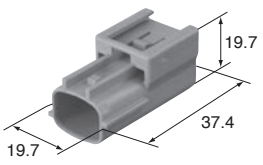
Ref: Terminal part No. **ターミナル参照頁**	G-02
Ref: wire seal No. **ワイヤシール参照頁**	G-04
Ref: Dummy plug No. **ダミー栓参照頁**	G-04
Material **材　質**	PBT

2way

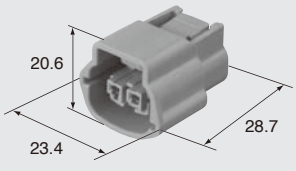


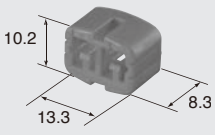
Retainer No.(6918-1653)

M (6181-0515) RS 02 MSB
M (6181-0670) RS 02 MSB-B



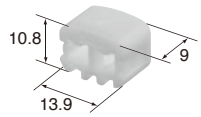
RS 02 FSB **F (6189-0951)**
RS 02 FSB-B **F (6189-1107)**

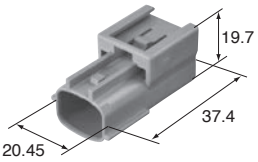




Retainer No.(6918-1651)

2way

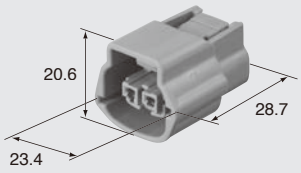


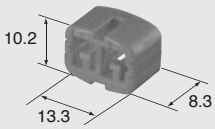


Retainer No.(6918-1653)

M(6181-0532) RS 02 MLGY

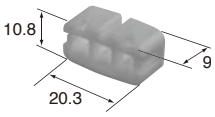
RS 02 FLGY **F(6189-0950)**

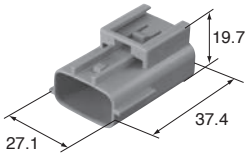




Retainer No.(6918-1651)

3way





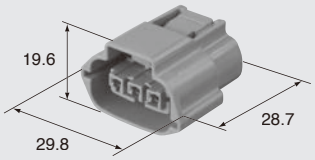
Retainer No.(6918-1654)

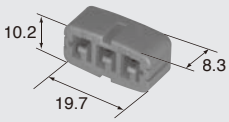
M(6181-0516) RS 03 MSB

M(6181-0671) RS 03 MSB-GY

RS 03 FSB **F(6189-0928)**

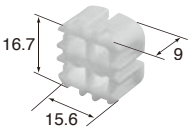
RS 03 FSB-GY **F(6189-1104)**

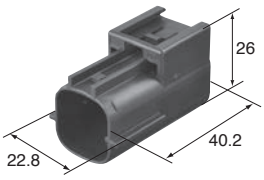




Retainer No.(6918-1652)

4way





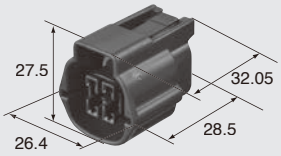
Retainer No.(6918-1598)

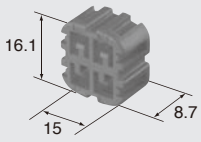
M(6181-0513) RS 04 MG

M(6181-0668) RS 04 MG-GY

RS 04 FG **F(6189-7756)**

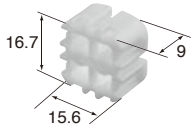
RS 04 FG-GY **F(6189-7757)**

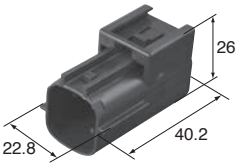




Retainer No.(6918-1599)

4way





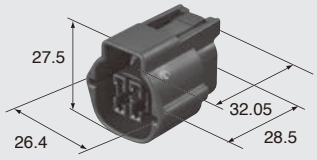
Retainer No.(6918-1598)

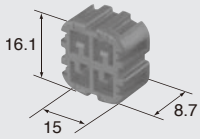
M(6181-0514) RS 04 ML

M(6181-0669) RS 04 ML-B

RS 04 FL **F(6189-7758)**

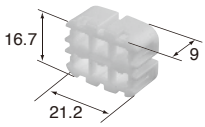
RS 04 FL-B **F(6189-7759)**

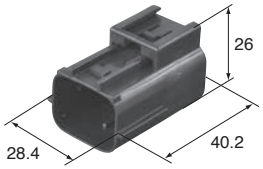




Retainer No.(6918-1599)

6way





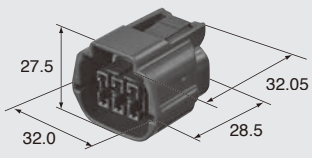
Retainer No.(6918-1600)

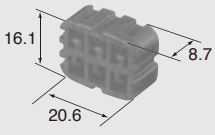
M(6181-0511) RS 06 MG

M(6181-0665) RS 06 MG-DGY

RS 06 FG **F(6189-7760)**

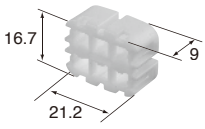
RS 06 FG-DGY **F(6189-7761)**

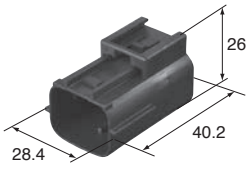




Retainer No.(6918-1601)

6way





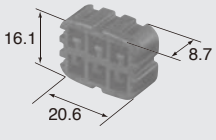
Retainer No.(6918-1600)

M(6181-0536) RS 06 ML

M(6181-0664) RS 06 ML-B

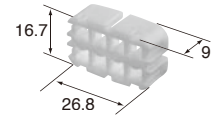
RS 06 FL **F(6189-7762)**

RS 06 FL-B **F(6189-7763)**

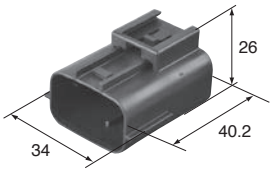


Retainer No.(6918-1601)

8way

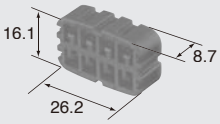


Retainer No.(6918-1602)



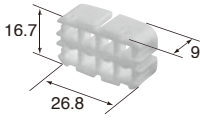
M(**6181-0512**) RS 08 MG
M(**6181-0667**) RS 08 MG-GY

RS 08 FG **F**(**6189-0954**)
RS 08 FG-GY **F**(**6189-1108**)

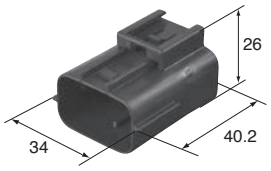


Retainer No.(6918-1603)

8way

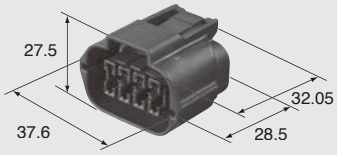


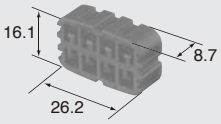
Retainer No.(6918-1602)



M(**6181-0522**) RS 08 ML
M(**6181-0666**) RS 08 ML-B

RS 08 FL **F**(**6189-0955**)
RS 08 FL-B **F**(**6189-1109**)



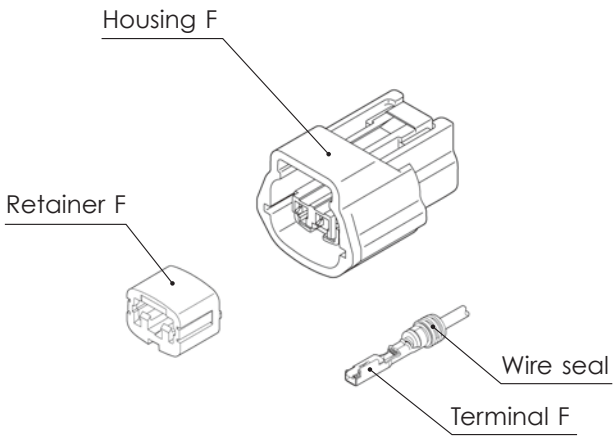


Retainer No.(6918-1603)

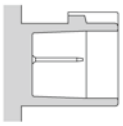
RS SERIES for E-RS

2.3mm (090)

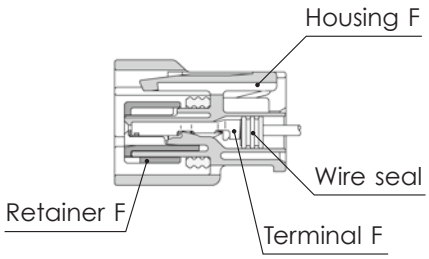
Structure／構造



Mating portion (Connector M)



Connector F (After setting retainer)



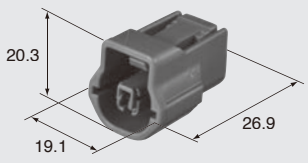
2.3mm (090)

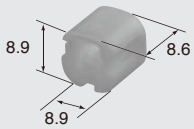
Housing (UNIT : mm)

Ref: Terminal part No. **ターミナル参照頁**	G-02
Ref: wire seal No. **ワイヤシール参照頁**	G-04
Ref: Dummy plug No. **ダミー栓参照頁**	G-04
Material **材　質**	PBT

1way

E 01 FGY-RS **F (6098-2329)**

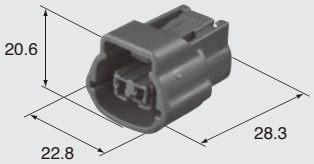


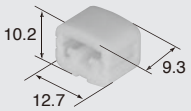


Retainer No. (6918-1636)

2way

E 02 FGY-RS **F (6189-0772)**

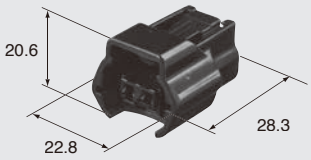


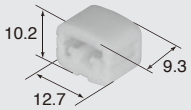


Retainer No. (6918-1594)

2way

E 02 FB-RS **F (6189-0773)**



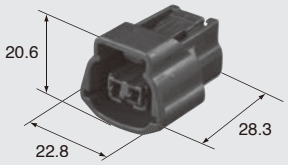


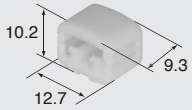
Retainer No.(6918-1594)

2way

E 02 FBR-RS **F (6189-0774)**

E 02 FBR-RS-GY **F (6189-1093)**



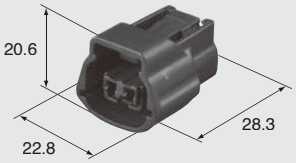


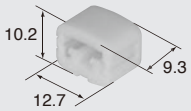
Retainer No.(6918-1594)

2way

E 02 FG-RS **F (6189-0775)**

E 02 FG-RS-LGY **F (6189-1094)**



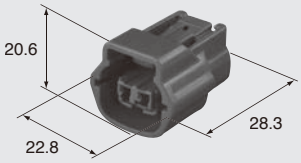


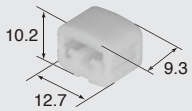
Retainer No.(6918-1594)

2way

E 02 FR-RS **F (6189-0776)**

E 02 FR-RS-GY **F (6189-1095)**



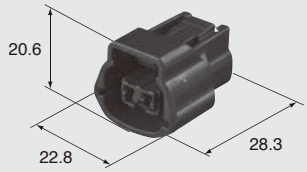


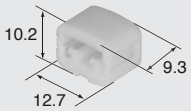
Retainer No.(6918-1594)

2way

E 02 FL-RS **F (6189-0777)**

E 02 FL-RS-LGY **F (6189-1096)**



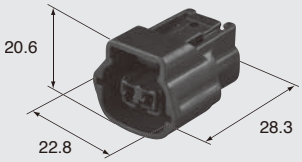


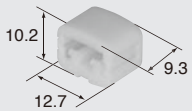
Retainer No.(6918-1594)

2way

E 02 FPU-RS **F (6189-0778)**

E 02 FPU-RS-B **F (6189-1097)**

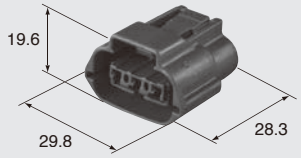


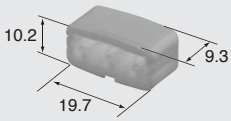


Retainer No.(6918-1594)

3way

E 03 FGY-RS **F (6189-7471)**



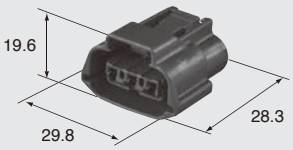


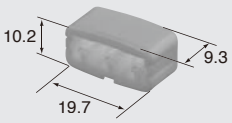
Retainer No.(6918-1595)

3way

E 03 FBR-RS **F (6189-7710)**

E 03 FBR-RS-B **F (6189-7711)**

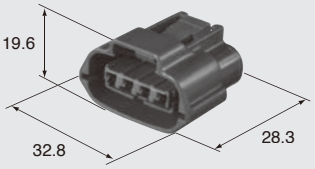


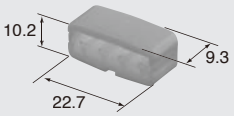


Retainer No.(6918-1595)

4way

E 04 FGY-RS **F (6189-7469)**



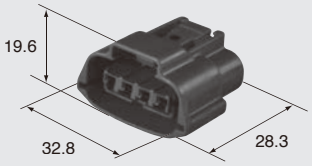


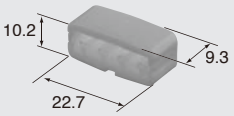
Retainer No.(6918-1596)

4way

E 04 FBR-RS **F (6189-7713)**

E 04 FBR-RS-LGY **F (6189-7714)**

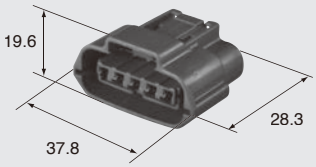


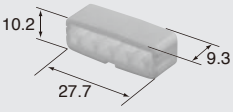


Retainer No.(6918-1596)

5way

E 05 FGY-RS **F (6189-7470)**



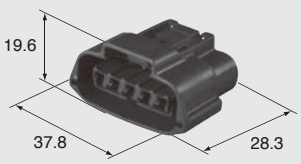


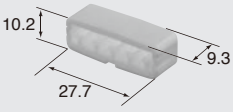
Retainer No.(6918-1604)

5way

E 05 FBR-RS **F (6189-7716)**

E 05 FBR-RS-B **F (6189-7717)**

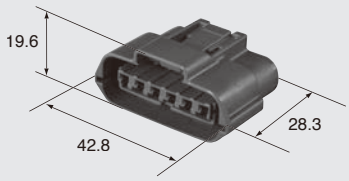


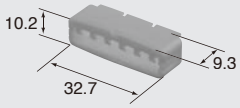


Retainer No.(6918-1604)

6way

E 06 FGY-RS **F (6189-7393)**





Retainer No. (6918-1597)

TL SEALED SERIES

Features

The TL sealed connector series has a mechanism that detects terminal incomplete insertion by using a dedicated jig.
This series consists of 2.3mm type supporting use in a variety of control circuits and low power circuits.

- To restrain from incomplete engagement, this series is adopted a lock mechanism with effective clear sound.
- These male connectors can be directly secured to a bracket on the car body. (Note: Please contact our sales staff, if you have any questions regarding the dedicated jig.)
- RoHS/ELV Compliant

特　長

TL 防水シリーズは、専用治具にて端子半挿入を検出する構造を採用しております。
ターミナルサイズは2.3mm 型で構成されており、各種の制御回路並びに低パワー回路に対応することができます。

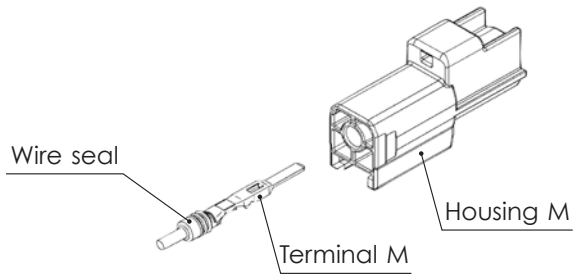
- コネクタ半嵌合抑制として、ロック音を向上させたロック構造を採用しております。
- オスコネクタは、ボデー側のブラケットに直接固定することができます。

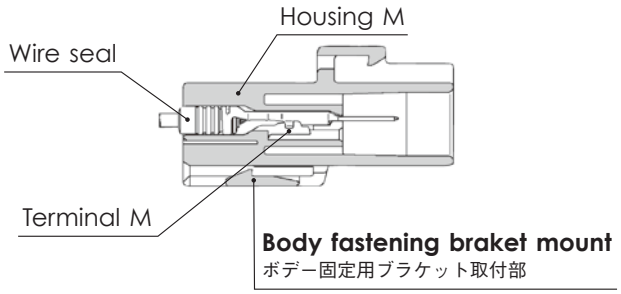
  注意：専用の導通治具に関しては弊社営業担当にご確認下さい。
- RoHS／ELV 対応

TL SEALED SERIES for STANDARD

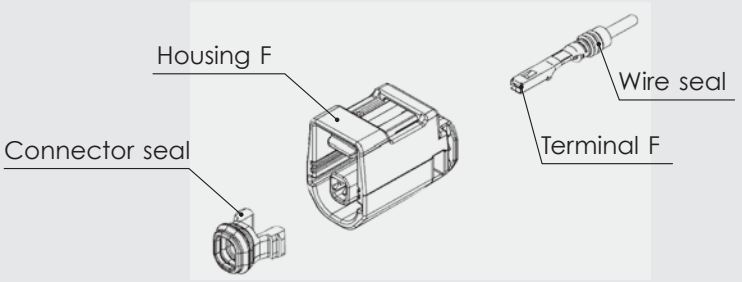
2.3mm (090)

Structure／構造

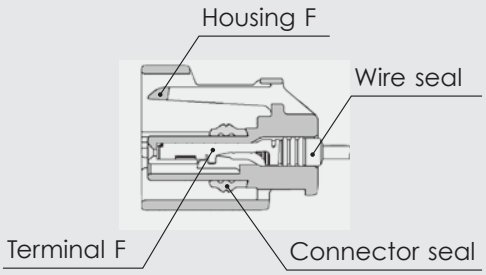




Connector M



Connector F



2.3mm (090)

Terminal (UNIT : mm)

Ref; 2.3mm Terminal detail
2.3mmターミナル参照頁

S	**M (8230-4472)**	L-02	**F (8100-1427)**	L-02
M	**M (8230-4562)**	L-02	**F (8100-1429)**	L-02
L	**M (8230-4552)**	L-02	**F (8100-1428)**	L-02

2.3mm (090)

Wire seals (UNIT : mm)

Ref; 2.3mm Wire Seals detail
2.3mmワイヤシール掲載頁

S (7165-0516)	J-06
M (7165-0515)	J-06
L (7165-0514)	J-06

2.3mm (090)

Dummy plugs (UNIT : mm)

Ref; 2.3mm Dummy plug detail
2.3mmダミー栓掲載頁

(**7165-0193**) J-07

- Dummy plugs are common to M and F.
- Dummy plugs are used to blind unused terminal holes.

- ダミー栓はM、F共用です。
- 不必要なターミナル穴を塞ぐために、ダミー栓を使用します。

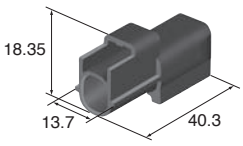
2.3mm (090)

Housing (UNIT : mm)

Ref: Terminal part No. **ターミナル参照頁**	L-02
Ref: wire seal No. **ワイヤシール参照頁**	J-06
Ref: Dummy plug No. **ダミー栓参照頁**	J-07
Material **材　質**	PBT

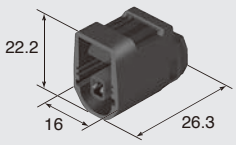
1way

Color **色　相**	Black 黒



M (6181-6658)

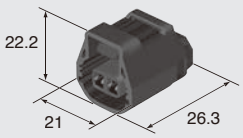
F (6189-7214)



Color **色　相**	Black 黒

2way

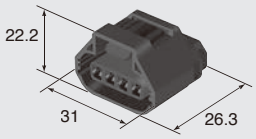
F (6189-7189)



Color **色　相**	Black 黒

4way

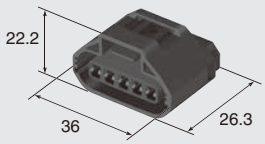
F (6189-7188)



Color **色　相**	Black 黒

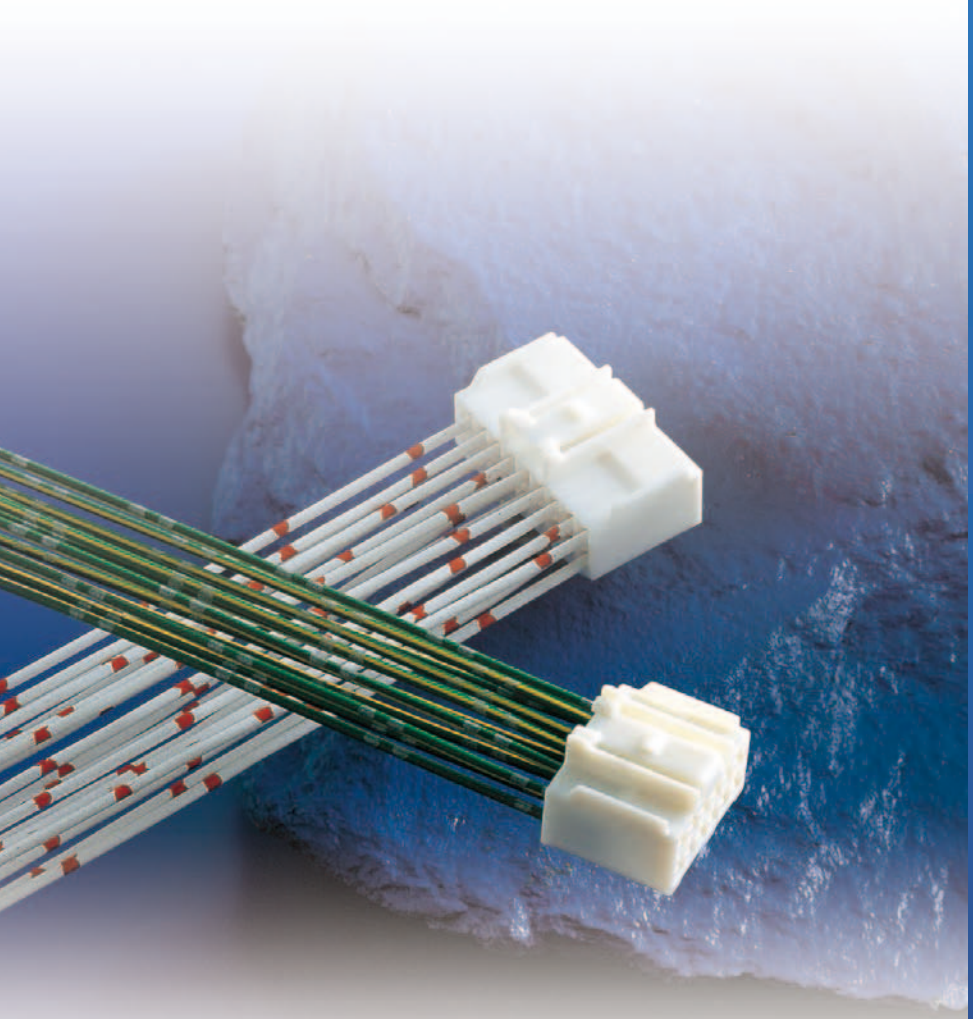
5way

F (6189-7190)



Color **色　相**	Black 黒

SL SERIES



Features

The SL connector series is adopted a mechanism that detects terminal incomplete insertion by using a dedicated jig.
This series consists of 1.5mm, 2.3mm and 2.8mm types classified according to the terminal size, covering an extensive array of applications from signal circuits to low power circuits.

- These connectors can be directly secured to a bracket on the car body. In addition, an extra clip can be attached to the connector to secure it to the car body.
  (Note: Please contact our sales staff, if you have any questions regarding the dedicated jig.)
- RoHS/ELV Compliant

特　長

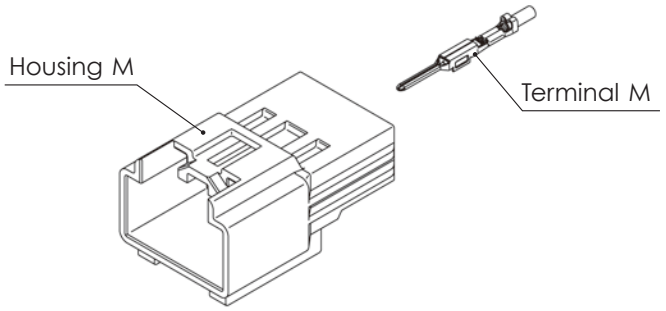
SL シリーズコネクタは、専用治具にて端子半挿入を検出する構造を採用しております。
ターミナルサイズにより1.5mm・2.3mm・2.8mm型で構成されており、信号回路からパワー回路まで幅広くご利用いただけます。

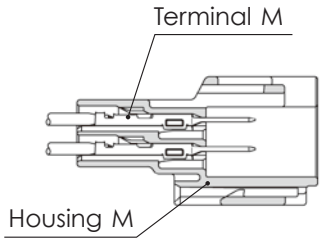
- コネクタは、ボデー側のブラケットに直接固定することができます。
  またコネクタにはボデーに固定するためのクランプ（クリップ）を装着することができます。
  注意：専用の導通治具に関しては弊社営業担当にご確認下さい。
- RoHS／ELV 対応

SL SERIES for STANDARD

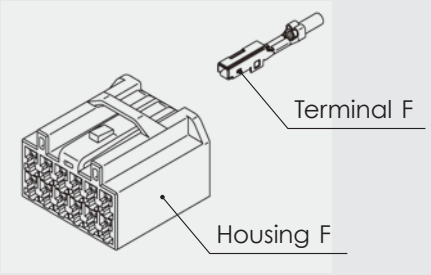
1.5mm（060）

Structure／構造

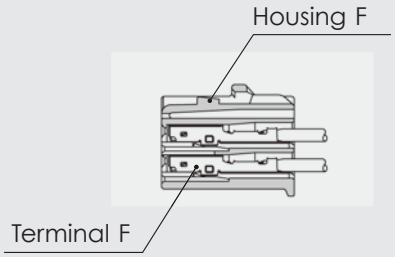




Connector M



Connector F



1.5mm（060）

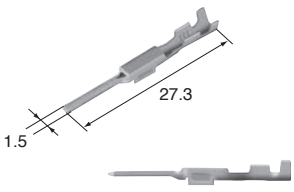
Terminal（UNIT : mm）

Note) L size terminal can be used for 14 poled connectors with insertion cavity specified.
For details please contact our sales staff.

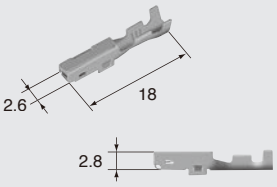
※Lサイズターミナルの使用できるコネクタは限定されます。
必ず弊社営業担当にお問い合わせください。

(S)

Cable size (mm²) **適用電線サイズ**	0.3～0.5
Material **材　質**	Heat-resistant copper alloy
Surface treatment **表面処理**	Tin-plated Snメッキ



M (8100-3382)

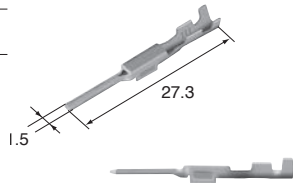


F (8100-3391)

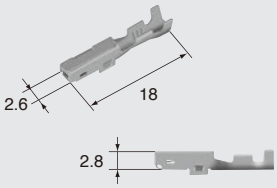
Cable size (mm²) **適用電線サイズ**	0.3～0.5
Material **材　質**	Heat-resistant copper alloy
Surface treatment **表面処理**	Tin-plated Snメッキ

(S) Au

Cable size (mm²) **適用電線サイズ**	0.3～0.5
Material **材　質**	Heat-resistant copper alloy
Surface treatment **表面処理**	Gold-plated Auメッキ



M (8230-4883)

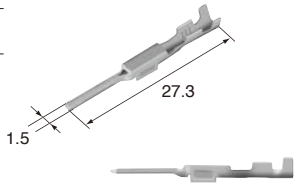


F (8240-0135)

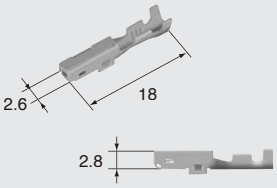
Cable size (mm²) **適用電線サイズ**	0.3～0.5
Material **材　質**	Heat-resistant copper alloy
Surface treatment **表面処理**	Gold-plated Auメッキ

(M)

Cable size (mm²) **適用電線サイズ**	0.75, 0.85～1.25
Material **材　質**	Heat-resistant copper alloy
Surface treatment **表面処理**	Tin-plated Snメッキ



M (8100-3383)

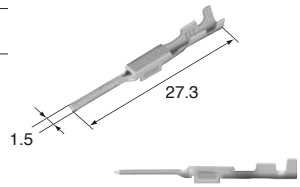


F (8100-3392)

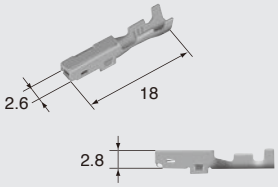
Cable size (mm²) **適用電線サイズ**	0.75, 0.85～1.25
Material **材　質**	Heat-resistant copper alloy
Surface treatment **表面処理**	Tin-plated Snメッキ

(L)

Cable size (mm²) **適用電線サイズ**	2.0
Material **材　質**	Heat-resistant copper alloy
Surface treatment **表面処理**	Tin-plated Snメッキ



M (8100-3384)



F (8100-3393)

Cable size (mm²) **適用電線サイズ**	2.0
Material **材　質**	Heat-resistant copper alloy
Surface treatment **表面処理**	Tin-plated Snメッキ

1.5mm (060)

Housing (UNIT : mm)

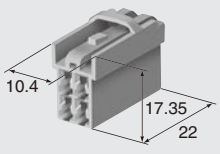
Ref: Terminal part No. **ターミナル参照頁**	I-02
Material **材　質**	PBT

Note) Connector can be used together with 2mm² wire are 14 poled connectors.
For details of each product, please contact our sales staff.

※Lサイズターミナルの使用できるコネクタは限定されます。
　必ず弊社営業担当にお問い合わせください。

4way

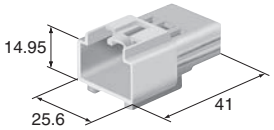
F (6098-3456)



Color **色　相**	Natural 自然色

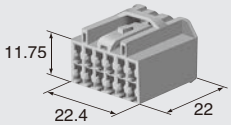
12way

Color 色 相	Natural 自然色



M (6098-3449)

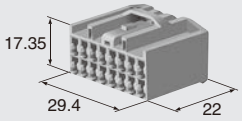
F (6098-8482)



Color 色 相	Natural 自然色

16way

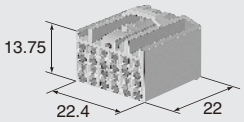
F (6098-3453)



Color 色 相	Natural 自然色

12way

F (6098-4876)

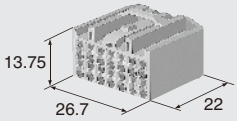


Color 色 相	Natural 自然色

14way

F (6098-4877)

Note)



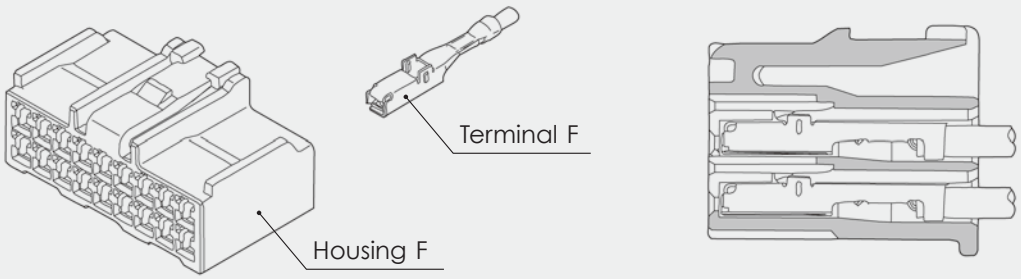
Color 色 相	Natural 自然色

SL SERIES for STANDARD

2.3mm (090)

Structure／構造

Connector F



2.3mm (090)

Terminal (UNIT : mm)

Ref; 2.3mm Terminal detail
2.3mmターミナル参照頁

S	**M (8230-4492)**	A-10	**F (8240-4882)**	A-10
M	**M (8230-4502)**	A-10	**F (8240-4892)**	A-10
L	**M (8230-4512)**	A-10	**F (8240-4942)**	A-10

Regarding "Gold-plated Terminal", please refer "A-10".
Auメッキターミナル はA-10ご参照

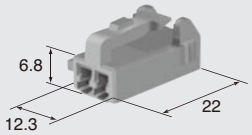
2.3mm (090)

Housing (UNIT : mm)

Ref: Terminal part No. **ターミナル参照頁**	A-10
Material **材　質**	PBT

2way

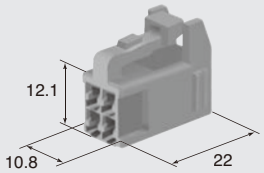
F (6240-5337)



Color **色　相**	Natural 自然色

4way

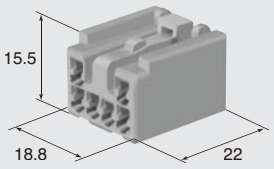
F (6098-8478)



Color **色　相**	Natural 自然色

6way

F (6240-5339)



Color **色　相**	Natural 自然色

6way

Color **色　相**	Natural 自然色
Note **備　考**	With body fastening clamp 回り止めクランプ付

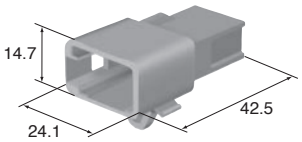
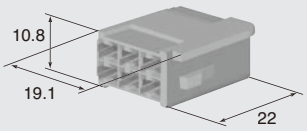


Plate thickness range for clamp :
t=0.6～2.0mm
Hole=7.2mm×12mm

M (6098-2679)

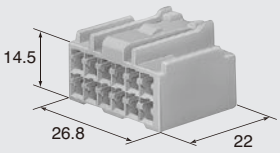
F (6098-2680)



Color **色　相**	Natural 自然色

12way

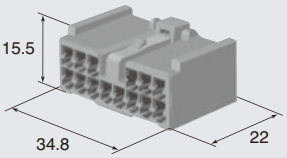
F (6098-1714)



Color **色　相**	Natural 自然色

14way

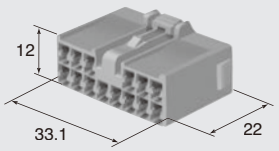
F (6098-1747)



Color **色　相**	Natural 自然色

14way

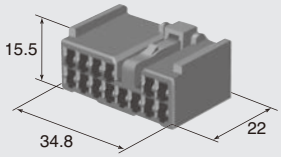
F (6098-2101)



Color **色　相**	Natural 自然色

14way

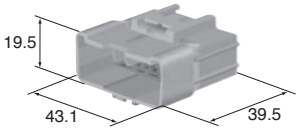
F (6098-1774)



Color **色　相**	Black 黒

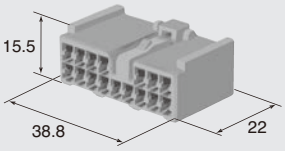
16way

Color 色 相	Natural 自然色



M (6098-1744)

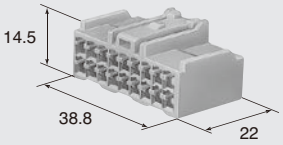
F (6098-1746)



Color 色 相	Natural 自然色

18way

F (6098-1627)

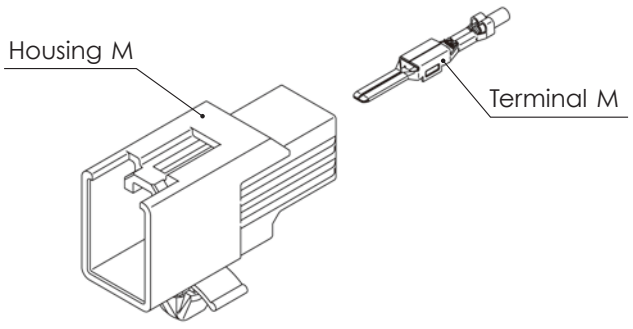


Color 色 相	Natural 自然色

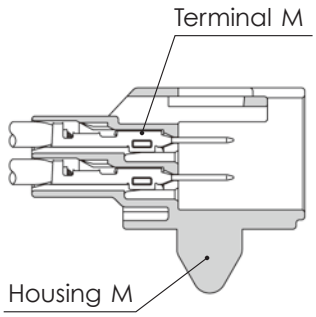
SL SERIES for STANDARD

2.8mm（110）

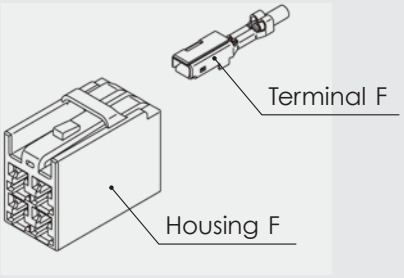
Structure／構造

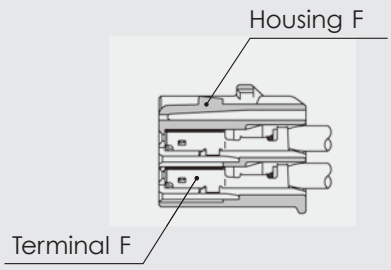


Connector M



Connector F



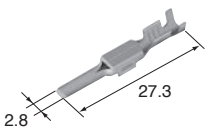


2.8mm（110）

Terminal (UNIT : mm)

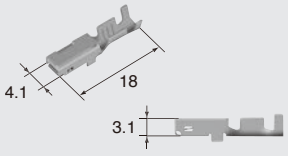
（S）

Cable size（mm²） **適用電線サイズ**	0.3～0.5
Material **材　質**	Heat-resistant copper alloy
Surface treatment **表面処理**	Tin-plated Snメッキ



M（8100-3385）

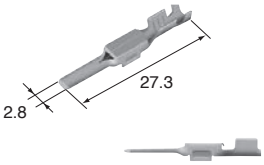
F（8100-3394）



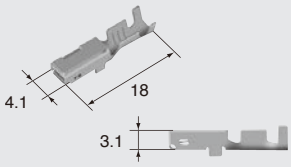
Cable size（mm²） **適用電線サイズ**	0.3～0.5
Material **材　質**	Heat-resistant copper alloy
Surface treatment **表面処理**	Tin-plated Snメッキ

(M)

Cable size (mm²) **適用電線サイズ**	0.85～1.25
Material **材　質**	Heat-resistant copper alloy
Surface treatment **表面処理**	Tin-plated Snメッキ



M (8100-3386)

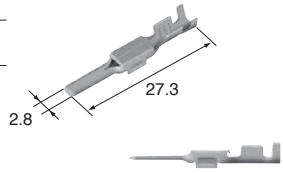


Cable size (mm²) **適用電線サイズ**	0.85～1.25
Material **材　質**	Heat-resistant copper alloy
Surface treatment **表面処理**	Tin-plated Snメッキ

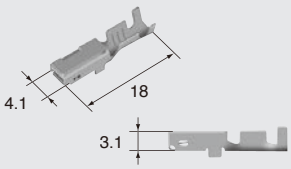
F (8100-3395)

(L)

Cable size (mm²) **適用電線サイズ**	2.0～3.0
Material **材　質**	Heat-resistant copper alloy
Surface treatment **表面処理**	Tin-plated Snメッキ



M (8100-3387)



Cable size (mm²) **適用電線サイズ**	2.0～3.0
Material **材　質**	Heat-resistant copper alloy
Surface treatment **表面処理**	Tin-plated Snメッキ

F (8100-3396)

2.8mm (110)

Housing (UNIT : mm)

Ref: Terminal part No. **ターミナル参照頁**	I-08
Material **材　質**	PBT

4way

Color **色　相**	Natural 自然色
Note **備　考**	With body fastening clamp 回り止めクランプ付

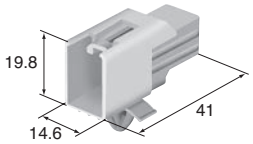
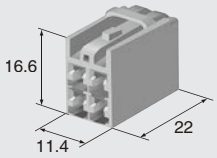


Plate thickness range for clamp:
t=0.6～2.0mm
Hole=7.2mm×10.2mm

M (6098-3452)



F (6098-8480)

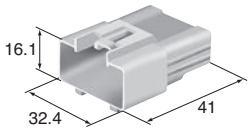
Color **色　相**	Natural 自然色

SL SERIES
for HYBRID

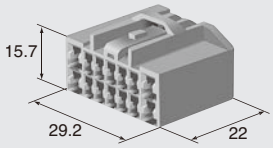
14way（10+4）

Color **色　相**	Natural 自然色

Note)



M（6098-3450）



F（6098-3458）

Note)

Color **色　相**	Natural 自然色

1.5mm, 2.8mm（060, 110）

Housing (UNIT : mm)

Ref: Terminal part No. **ターミナル参照頁**	［1.5mm］ I-02 ［2.8mm］ I-08
Material **材　質**	PBT

No. of way/ ( ) corresponds to 1.5mm, 2.8mm, in order from left to right.
Note) Connector can be used together with 2mm² wire are 14 poled connectors.
For details of each product, please contact our sales staff.

極数／（　）内表示：左から1.5mm 極数、2.8mm 極数
※Lサイズターミナルの使用できるコネクタは限定されます。
　必ず弊社営業担当にお問い合わせください。

SL SEALED SERIES

Features

The SL sealed connector series is adopted a mechanism that detects terminal incomplete insertion by using a dedicated jig.
This series consists of 1.5mm, 2.3mm and 8.0mm types classified according to the terminal size, covering an extensive array of applications from signal circuits to low power circuits.

- These connectors can be directly secured to a bracket on the car body. In addition, an extra clip can be attached to the connector to secure it to the car body.
  (Note: Please contact our sales staff, if you have any questions regarding the dedicated jig.)
- RoHS/ELV Compliant

特　長

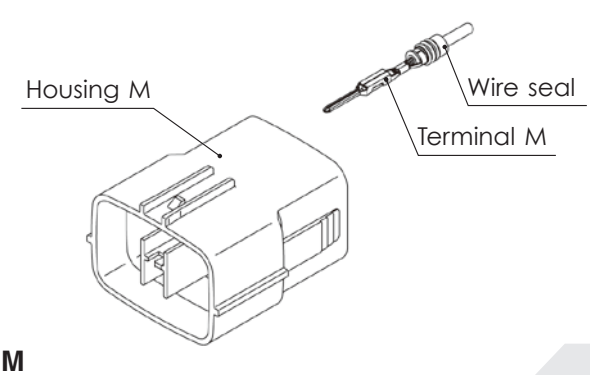
SL 防水シリーズは、専用治具にて端子半挿入を検出する構造を採用しております。
ターミナルサイズにより1.5mm・2.3mm・8.0mm型で構成されており、信号回路からパワー回路まで幅広くご利用いただけます。

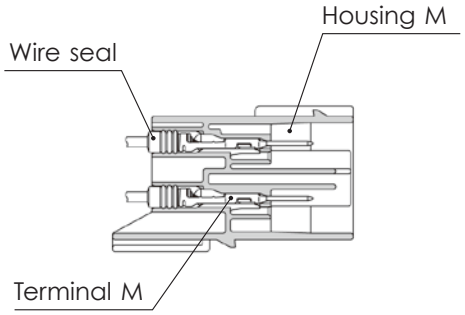
- コネクタは、ボデー側のブラケットに直接固定することができます。
  またコネクタにはボデーに固定するためのクランプ（クリップ）を装着することができます。
  注意：専用の導通治具に関しては弊社営業担当にご確認下さい。
- RoHS／ELV 対応

SL SEALED SERIES for STANDARD

1.5mm (060)

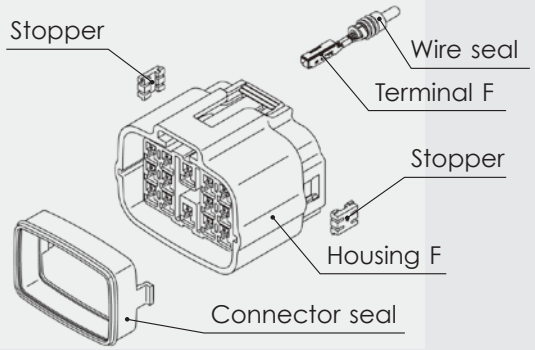
Structure／構造

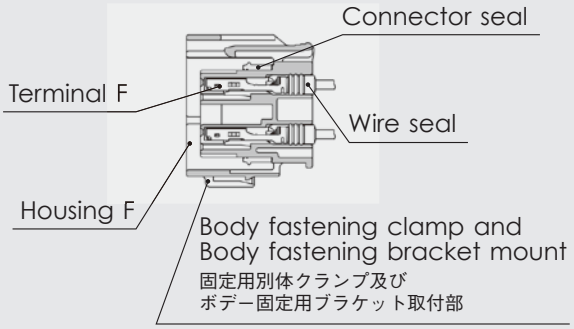




Connector M

Connector F





J-02

1.5mm (060)

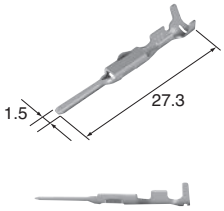
Terminal (UNIT : mm)

※For terminal selection, please contact our sales staff.

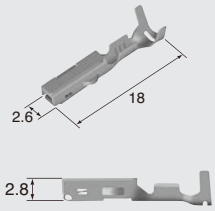
※ターミナル選定にあたっては、必ず弊社営業担当にお問い合わせください。

(S)

Cable size (mm²) **適用電線サイズ**	0.3～0.5
Material **材　質**	Heat-resistant copper alloy
Surface treatment **表面処理**	Tin-plated Snメッキ



M (8100-3388)

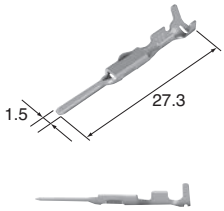


F (8100-3397)

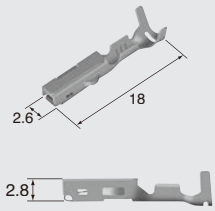
Cable size (mm²) **適用電線サイズ**	0.3～0.5
Material **材　質**	Heat-resistant copper alloy
Surface treatment **表面処理**	Tin-plated Snメッキ

(S) Au

Cable size (mm²) **適用電線サイズ**	0.3～0.5
Material **材　質**	Heat-resistant copper alloy
Surface treatment **表面処理**	Gold-plated Auメッキ



M (8100-3504)

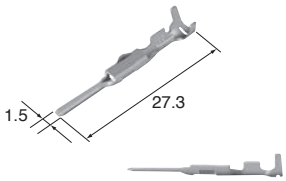


F (8100-3402)

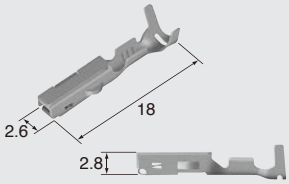
Cable size (mm²) **適用電線サイズ**	0.3～0.5
Material **材　質**	Heat-resistant copper alloy
Surface treatment **表面処理**	Gold-plated Auメッキ

(M)

Cable size (mm²) **適用電線サイズ**	0.75～0.85
Material **材　質**	Heat-resistant copper alloy
Surface treatment **表面処理**	Tin-plated Snメッキ



M (8100-3389)



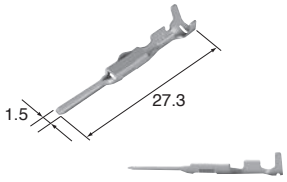
F (8100-3398)

Cable size (mm²) **適用電線サイズ**	0.75～0.85
Material **材　質**	Heat-resistant copper alloy
Surface treatment **表面処理**	Tin-plated Snメッキ

(M) Au

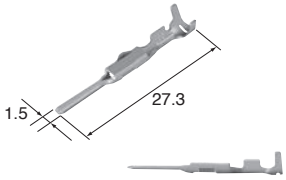
M (8100-3403)

Cable size (mm²) **適用電線サイズ**	0.75～0.85
Material **材　質**	Heat-resistant copper alloy
Surface treatment **表面処理**	Gold-plated Auメッキ

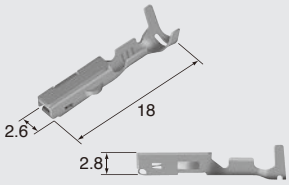


(L)

Cable size (mm²) **適用電線サイズ**	1.25～2.0
Material **材　質**	Heat-resistant copper alloy
Surface treatment **表面処理**	Tin-plated Snメッキ



M (8100-3390)



F (8100-3399)

Cable size (mm²) **適用電線サイズ**	1.25～2.0
Material **材　質**	Heat-resistant copper alloy
Surface treatment **表面処理**	Tin-plated Snメッキ

Wire seals (UNIT : mm)

Ref; 1.5mm Terminal detail 1.5mmターミナル参照頁	
S (7165-0516)	J-07
M (7165-0515)	J-07
L (7165-0514)	J-07

Dummy plugs (UNIT : mm)

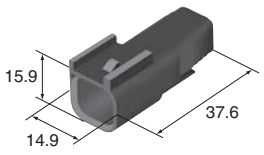
Ref; 1.5mm Dummy plug detail 1.5mmダミー栓掲載頁	
(7161-9787)	B-15
(7165-0193)	J-07

Housing (UNIT : mm)

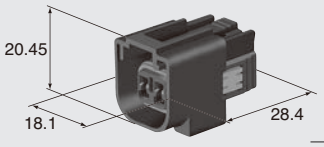
Ref: Terminal part No. **ターミナル参照頁**	J-02
Ref: wire seal No. **ワイヤシール参照頁**	J-06
Ref: Dummy plug No. **ダミー栓参照頁**	B-15 J-07
Material **材　質**	PBT

2way

Color **色　相**	Black 黒
Note **備　考**	J-11 Clamp:TYPE2



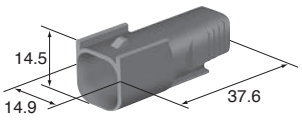
M (6181-6614)　　**F (6189-1076)**



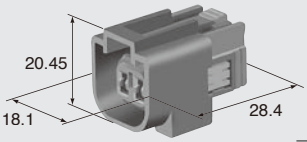
Color **色　相**	Black 黒

2way

Color **色　相**	Dark Gray 濃灰
Note **備　考**	J-11 Clamp:TYPE2



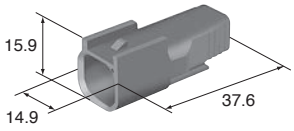
M (6181-6509)　　**F (6189-1073)**



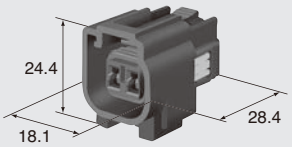
Color **色　相**	Dark Gray 濃灰

2way

Color **色　相**	Black 黒
Note **備　考**	J-11 Clamp:TYPE2



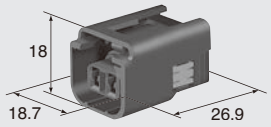
M (6181-6492)　　**F (6189-1115)**



Color **色　相**	Black 黒
Note **備　考**	J-11 Clamp:TYPE1

2way

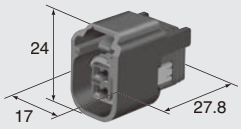
F (6189-1147)



Color **色 相**	Black 黒

2way

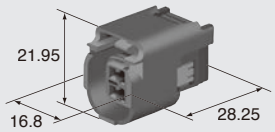
F (6189-1144)



Color **色 相**	Black 黒

2way

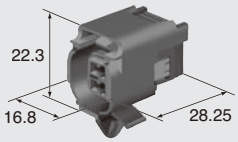
F (6189-1150)



Color **色 相**	Dark Gray 濃灰

2way

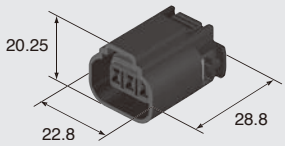
F (6189-1149)



Color **色 相**	Dark Gray 濃灰

3way

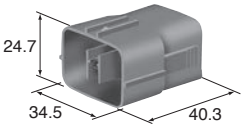
F (6189-7115)



Color **色 相**	Black 黒

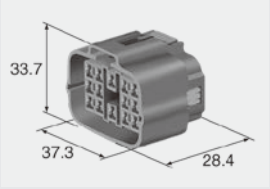
14way

Color **色 相**	Dark Gray 濃灰



M (6181-0629)

F (6189-7262)

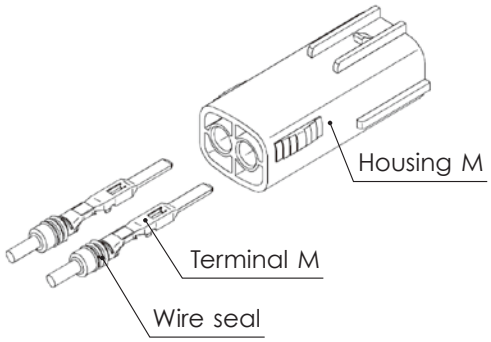


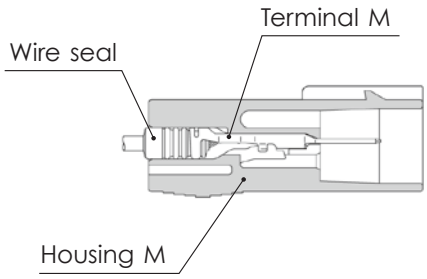
Color **色 相**	Dark Gray 濃灰
Note **備 考**	J-11 Clamp:TYPE1

SL SEALED SERIES for STANDARD

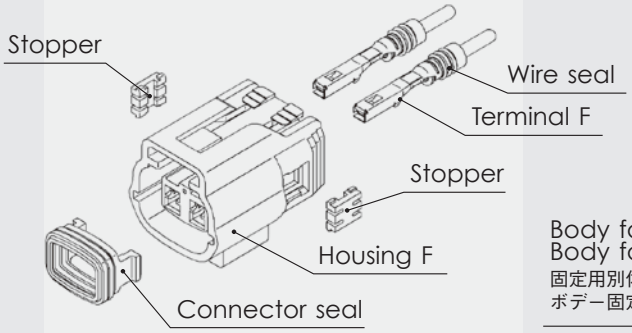
2.3mm (090)

Structure／構造

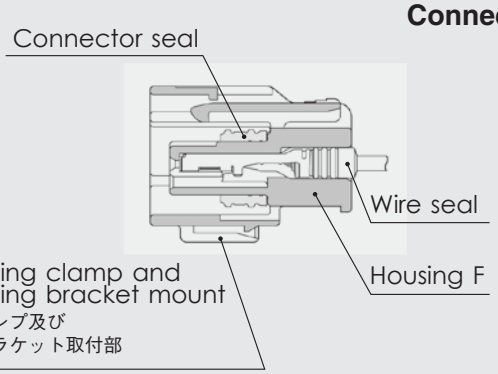




Connector M



Connector F



2.3mm (090)

Terminal (UNIT : mm)

Ref; 2.3mm Terminal detail
2.3mmターミナル参照頁

S (8230-4472)	L-02	**F (8100-1427)**	L-02
M (8230-4562)	L-02	**F (8100-1429)**	L-02
L (8230-4552)	L-02	**F (8100-1428)**	L-02

Regarding "Gold-plated Terminal", please refer "L-02".
Auメッキターミナルは L-02ご参照

2.3mm (090)

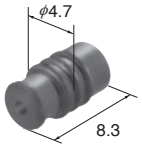
Wire seals (UNIT : mm)

The wire seals are common to M and F.
ワイヤシールは M、F 共用です。

(S)

(**7165-0516**)

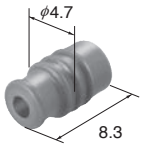
Cable overall diameter(mm) **電線仕上り外径**	Over than 1.4 mm below 1.6 mm 1.4 mmを越え1.6 mm以下
Material **材　質**	Silicon シリコン
Color **色　相**	Black 黒



(M)

(**7165-0515**)

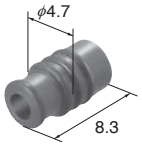
Cable overall diameter(mm) **電線仕上り外径**	Over than 1.6 mm below 2.4 mm 1.6 mmを越え2.4 mm以下
Material **材　質**	Silicon シリコン
Color **色　相**	Gray 灰



(L)

(**7165-0514**)

Cable overall diameter(mm) **電線仕上り外径**	Over than 2.4 mm below 2.7 mm 2.4 mmを越え2.7 mm以下
Material **材　質**	Silicon シリコン
Color **色　相**	Dark Green 濃緑



2.3mm (090)

Dummy plugs (UNIT : mm)

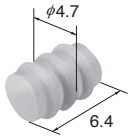
Ref; 2.3mm Dummy plug detail
2.3mmダミー栓掲載頁

(**7161-9787**)　B-15

- Dummy plugs are common to M and F.
- Dummy plugs are used to blind unused terminal holes.
- ダミー栓はM、F共用です。
- 不必要なターミナル穴を塞ぐために、ダミー栓を使用します。

(**7165-0193**)

Material **材　質**	Silicon シリコン
Color **色　相**	Green 緑



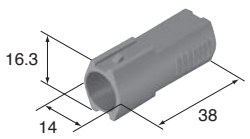
2.3mm (090)

Housing (UNIT : mm)

Ref: Terminal part No. **ターミナル参照頁**	L-02
Ref: wire seal No. **ワイヤシール参照頁**	J-06
Ref: Dummy plug No. **ダミー栓参照頁**	B-15 J-07
Material **材　質**	PBT

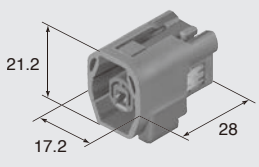
1way

Color **色　相**	Dark Gray 濃灰



M (6181-0436)

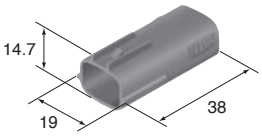
F (6189-0639)



Color **色　相**	Dark Gray 濃灰
Note **備　考**	J-11 Clamp:TYPE1

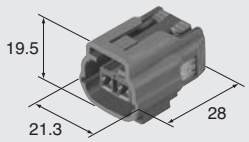
2way

Color 色 相	Dark Gray 濃灰



M (6181-0437)

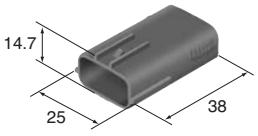
F (6189-0640)



Color 色 相	Dark Gray 濃灰
Note 備 考	J-11 Clamp:TYPE1

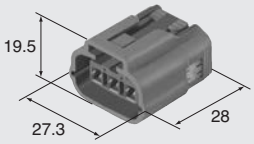
3way

Color 色 相	Dark Gray 濃灰



M (6181-0438)

F (6189-7784)

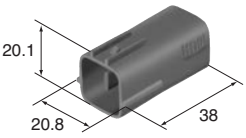


Color 色 相	Dark Gray 濃灰
Note 備 考	J-11 Clamp:TYPE1

J-08

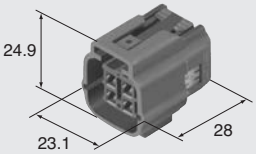
4way

Color 色 相	Dark Gray 濃灰



M (6181-0439)

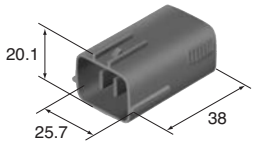
F (6189-0643)



Color 色 相	Dark Gray 濃灰
Note 備 考	J-11 Clamp:TYPE1

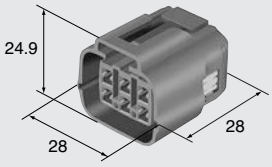
6way

Color 色 相	Dark Gray 濃灰



M (6181-0440)

F (6189-0648)

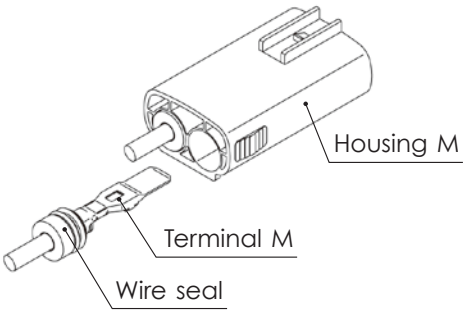


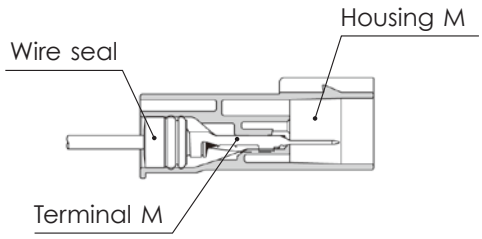
Color 色 相	Dark Gray 濃灰
Note 備 考	J-11 Clamp:TYPE1

SL SEALED SERIES for STANDARD

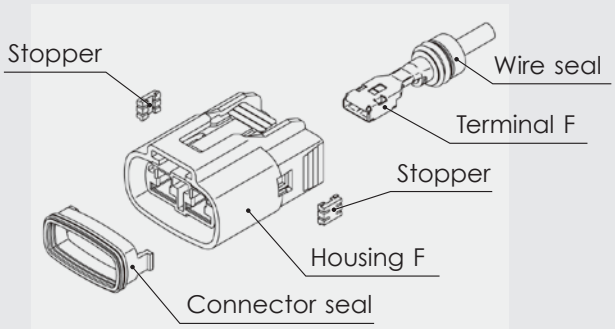
8.0mm (312)

Structure／構造

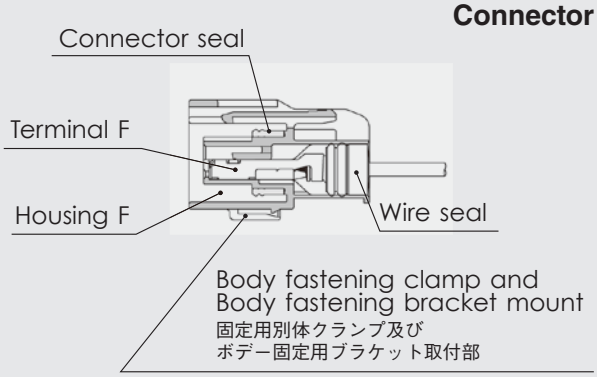




Connector M



Connector F



8.0mm (312)

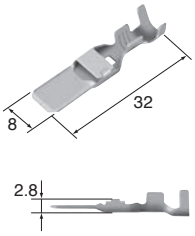
Terminal (UNIT : mm)

※For terminal selection, please contact our sales staff.

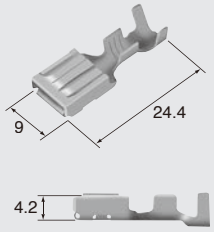
※ターミナル選定にあたっては、必ず弊社営業担当にお問い合わせください。

(M)

Cable size (mm²) **適用電線サイズ**	2.0～3.0
Material **材　質**	Brass 黄銅
Surface treatment **表面処理**	Tin-plated Snメッキ



M (8100-3259)

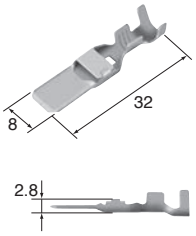


F (8100-3257)

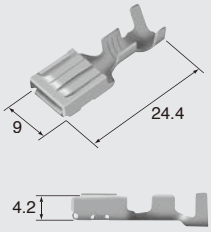
Cable size (mm²) **適用電線サイズ**	2.0～3.0
Material **材　質**	Heat-resistant copper alloy
Surface treatment **表面処理**	Tin-plated Snメッキ

(L)

Cable size (mm²) **適用電線サイズ**	5.0～8.0
Material **材　質**	Brass 黄銅
Surface treatment **表面処理**	Tin-plated Snメッキ



M (8100-3260)



F (8100-3258)

Cable size (mm²) **適用電線サイズ**	5.0～8.0
Material **材　質**	Heat-resistant copper alloy
Surface treatment **表面処理**	Tin-plated Snメッキ

8.0mm (312)

Wire seals (UNIT : mm)

Ref; 8.0mm Wire Seals detail
8.0mmワイヤシール掲載頁

SS (7165-0683)	B-24
S (7165-0400)	B-24
M (7165-0392)	B-24
L (7165-0393)	B-24

The wire seals are common to M and F.

ワイヤシールはM、F共用です。

8.0mm (312)

Dummy plugs (UNIT : mm)

Ref; 8.0mm Dummy plug detail
8.0mmダミー栓掲載頁

(7165-0180)	B-25

- Dummy plugs are common to M and F.
- Dummy plugs are used to blind unused terminal holes.

- ダミー栓はM、F共用です。
- 不必要なターミナル穴を塞ぐために、ダミー栓を使用します。

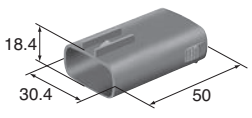
8.0mm (312)

Housing (UNIT : mm)

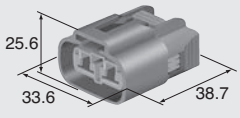
Ref: Terminal part No. **ターミナル参照頁**	J-09
Ref: wire seal No. **ワイヤシール参照頁**	B-24
Ref: Dummy plug No. **ダミー栓参照頁**	B-25
Material **材　質**	PBT

2way

Color **色　相**	Dark Gray 濃灰



M (6181-0613)



F (6189-0915)

Color **色　相**	Dark Gray 濃灰
Note **備　考**	J-11 Clamp:TYPE1

SL SEALED SERIES
COMMON USE PARTS

Body fastening clamp (mm)

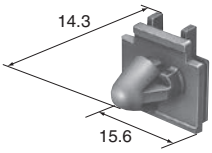
1.5mm standard type, 2.3mm standard type and 8.0mm standard type connectors, the clamp can be installed.
※The detail dimensions for the mounting portion are specifi ed in drawing

1.5mm 標準・2.3mm 標準・8.0mm 標準のコネクタには、ボデー固定用クランプを必要に応じて取付けることができます。
※取付部詳細寸法は、別途図面により規定します。

Type 1

(**6810-1584**)

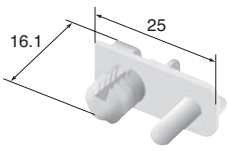
Material **材　質**	PBT
Color **色　相**	Brown 茶
hole size **穴　径**	7.2×10.2
Plate thickness range for clamp **クランプ適合板厚**	t=0.7～2.0



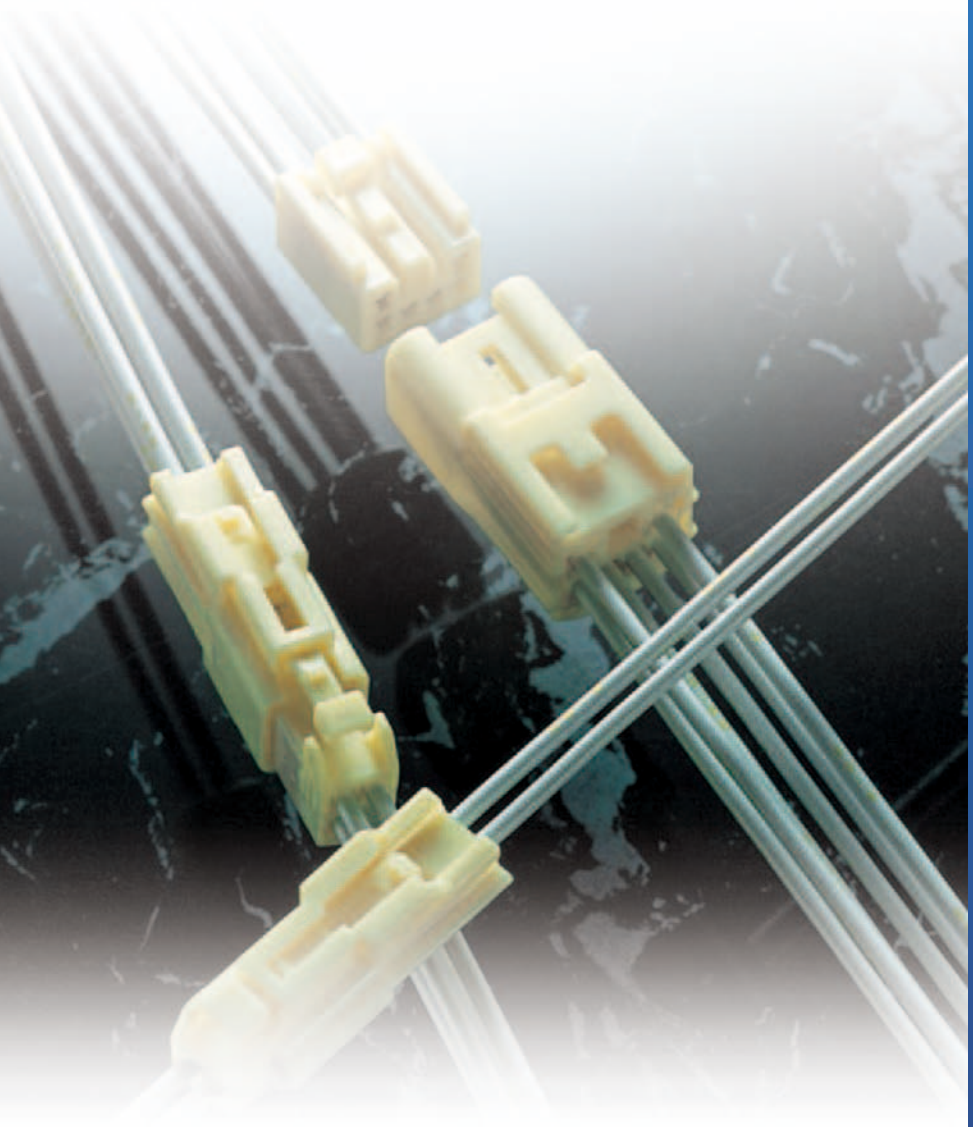
Type 2

(**6810-4982**)

Material **材　質**	PA66
Color **色　相**	Natural 自然色
Plate thickness range for clamp **クランプ適合板厚**	t=2.0



DL SERIES



Features

The DL connector series has a mechanism that detects when terminals are not inserted completely.
This series consists of 0.64mm, 1.0mm and 2.3mm types classified according to the terminal size, supporting use in a variety of control circuits and low power circuits.

- The connector mechanism only allows the retainer to be set when the terminal is completely inserted.
- These connectors can be directly secured to a bracket on the car body.
- RoHS/ELV Compliant

特　長

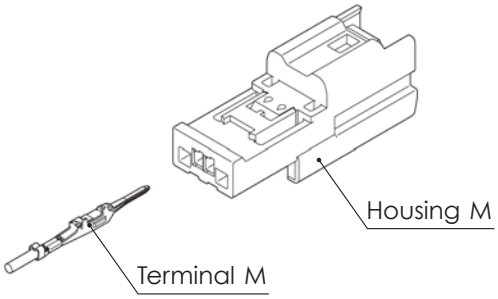
DL シリーズは、挿入不足のターミナルを検知する機構を備えたコネクタシリーズです。
ターミナルサイズにより 0.64mm・1.0mm・2.3mm 型で構成されており、各種の制御回路並びに低パワー回路に対応することができます。

- ターミナルが半挿入の状態では、リテーナが装着できない機構になっています。
- コネクタはボデー側のブラケットに直接固定することができます。
- RoHS／ELV 対応

DL SERIES for STANDARD

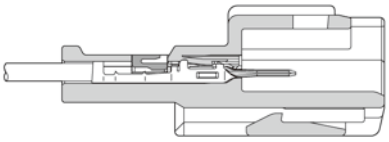
0.64mm (025)

Structure／構造



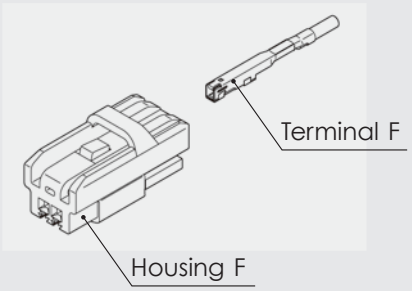
After setting retainer

リテーナ装着後



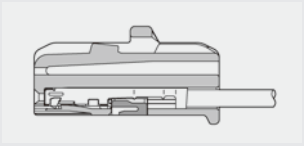
Connector M

Connector F



After setting retainer

リテーナ装着後



0.64mm (025)

Terminal (UNIT : mm)

Ref; 0.64mm Terminal detail
0.64mmターミナル参照頁

S	**M (8100-4028)**	C-02	**F (8100-4029)**	C-02
M	**M (8100-4027)**	C-02	**F (8100-4030)**	C-02

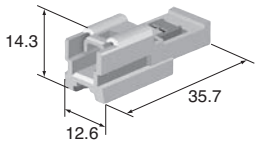
0.64mm (025)

Housing (UNIT : mm)

Ref: Terminal part No. ターミナル参照頁	C-02
Material 材　質	PBT

2way

Color 色 相 — Natural 自然色



M (6098-4569)

Color 色 相 — Natural 自然色

Note 備 考 — With body fastening clamp. 回り止めクランプ付

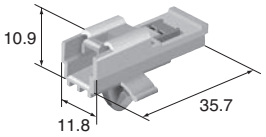
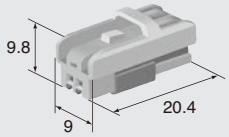


Plate thickness range for clamp;
t=0.6～2.0mm
Hole=7.2mm×10.2mm

M (6098-4567)

F (6098-4565)



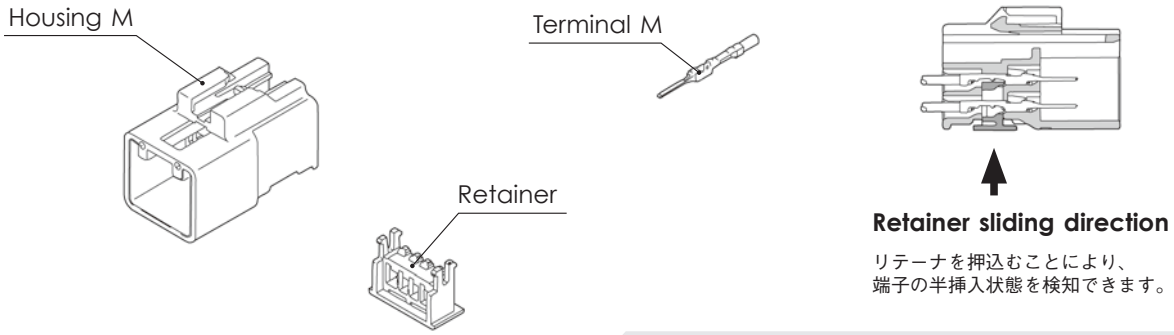
Color 色 相 — Natural 自然色

DL SERIES for STANDARD

1.0mm（040）

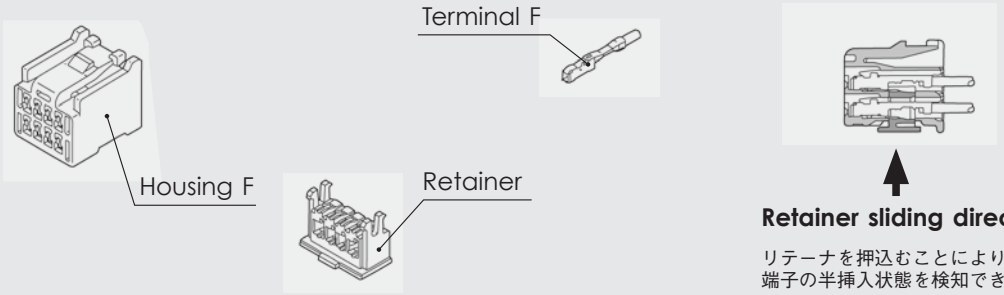
This connector has a terminal pitch of 2.5 mm.
端子間ピッチ2.5㎜のコネクタです。

Structure／構造



Connector M

Connector F



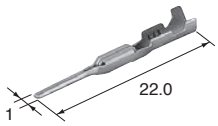
1.0mm（040）

Terminal (UNIT : mm)

※For terminal selection, please contact our sales staff.
Note)M size terminal can be used connector with insertion cavity specified. For details please contact our sales staff.
※Surface treatment of gold-plated is available to meet your needs.
Thick size is for the time being now.
※ターミナル選定にあたっては、必ず弊社営業担当にお問い合わせください。
注）Mサイズターミナルの使用出来るコネクタは限定されます。必ず弊社営業担当にお問い合わせください。
※Auメッキ仕様については、必要に応じ設定は可能です。尚、太物サイズについては、現在の所、暫定とさせて頂きます。

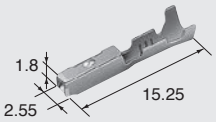
(S)

Cable size (mm²) **適用電線サイズ**	0.3～0.5
Material **材　質**	Brass 黄銅
Surface treatment **表面処理**	Tin-plated Snメッキ



M (8100-2512)

F (8100-1710)

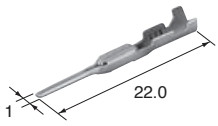


Cable size (mm²) **適用電線サイズ**	0.3～0.5
Material **材　質**	Heat-resistant copper alloy
Surface treatment **表面処理**	Tin-plated Snメッキ

(M)

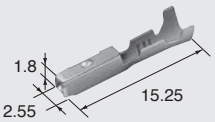
Cable size (mm²) **適用電線サイズ**	0.75, 0.85～1.25
Material **材　質**	Brass 黄銅
Surface treatment **表面処理**	Tin-plated Snメッキ

Note)



M (8100-2513)

F (8100-2514)

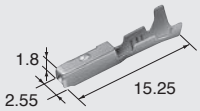


Note)

Cable size (mm²) **適用電線サイズ**	0.75, 0.85～1.25
Material **材　質**	Heat-resistant copper alloy
Surface treatment **表面処理**	Tin-plated Snメッキ

(S) Au

F (8240-0300)



Cable size (mm²) **適用電線サイズ**	0.3～0.5
Material **材　質**	Heat-resistant copper alloy
Surface treatment **表面処理**	Gold-plated Auメッキ

1.0mm (040)

Housing (UNIT : mm)

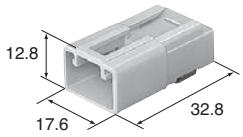
Ref: Terminal part No. **ターミナル参照頁**	K-04
Material **材　質**	PBT

Note)M size terminal can be used connector with insertion cavity specifi ed. For details please contact our sales staff.

注) Mサイズターミナルの使用出来るコネクタは限定されます。

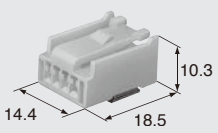
4way

Color **色　相**	Natural 自然色



M (6098-2158)

F (6098-2013)

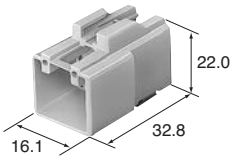


Color **色　相**	Natural 自然色

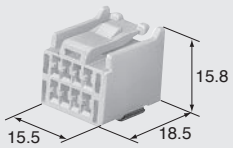
8way

Color 色　相	Natural 自然色

Note)



M (6098-2206)



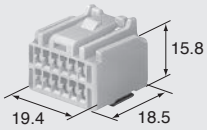
F (6098-2208)

Note)

Color 色　相	Natural 自然色

12way

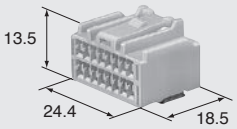
F (6098-2289)



Color 色　相	Natural 自然色

16way

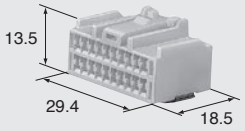
F (6098-1624)



Color 色　相	Natural 自然色

20way

F (6098-1626)

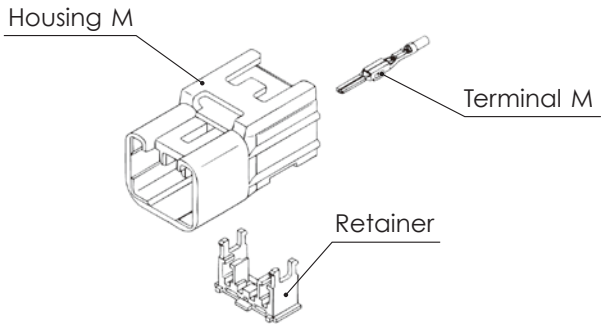


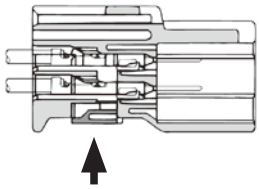
Color 色　相	Natural 自然色

DL SERIES for STANDARD

2.3mm (090)

Structure／構造



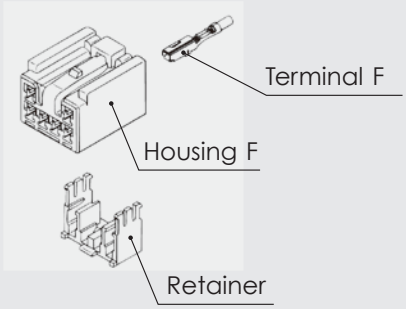


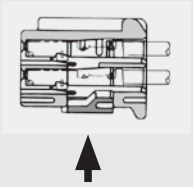
Retainer sliding direction

リテーナを押込むことにより、
端子の半挿入状態を検知できます。

Connector M

Connector F





Retainer sliding direction

リテーナを押込むことにより、
端子の半挿入状態を検知できます。

2.3mm (090)

Terminal (UNIT : mm)

Ref; 2.3mm Terminal detail
2.3mmターミナル参照頁

S	**M (8230-4492)**	A-10	**F (8240-4882)**	A-10
M	**M (8230-4502)**	A-10	**F (8240-4892)**	A-10
L	**M (8230-4512)**	A-10	**F (8240-4942)**	A-10

Regarding "Gold-plated Terminal", please refer "A-10".
AuメッキターミナルはA-10ご参照

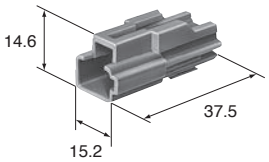
2.3mm (090)

Housing (UNIT : mm)

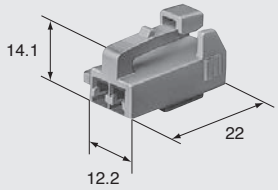
Ref: Terminal part No. **ターミナル参照頁**	A-10
Material **材　質**	Low water absorption Nylon

2way

Color 色 相 — Natural 自然色



M (6249-1248)

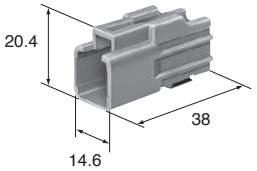


F (6249-1251)

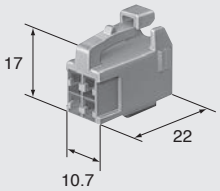
Color 色 相 — Natural 自然色

4way

Color 色 相 — Natural 自然色



M (6249-1249)

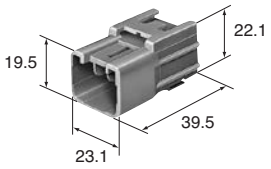


F (6249-1252)

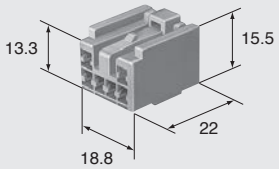
Color 色 相 — Natural 自然色

6way

Color 色 相 — Natural 自然色



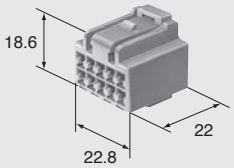
M (6249-1250)



F (6249-1253)

Color 色 相 — Natural 自然色

10way

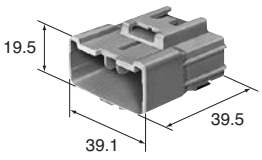


F (6248-5311)

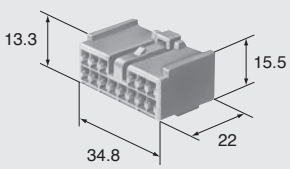
Color 色 相 — Natural 自然色

14way

Color 色 相 — Natural 自然色



M (6249-1265)

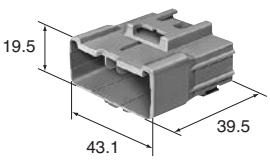


F (6248-5309)

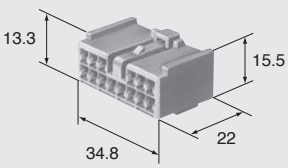
Color 色 相 — Natural 自然色

16way

Color 色 相 — Natural 自然色



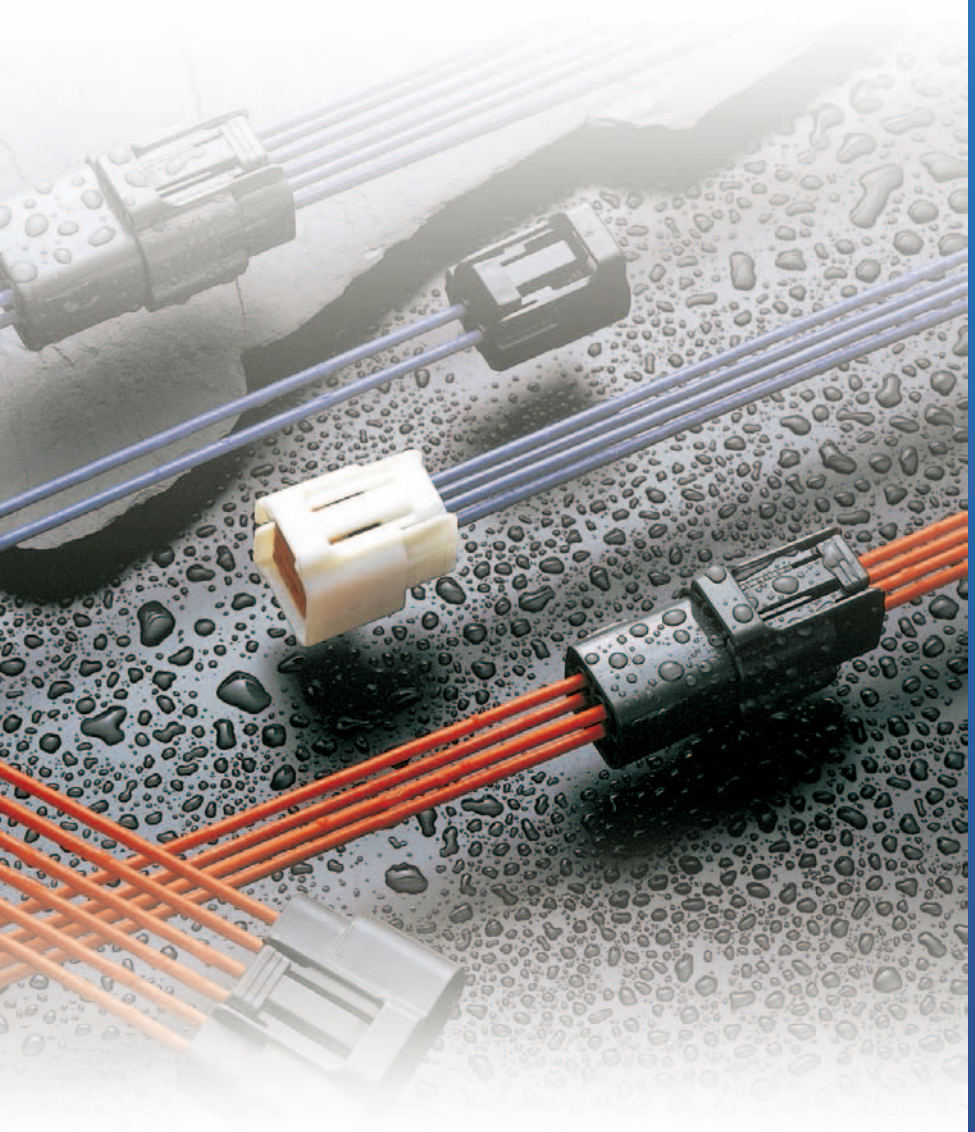
M (6249-1266)



F (6248-5310)

Color 色 相 — Natural 自然色

DL SEALED SERIES



Features

The DL sealed connector series has a mechanism that detects when terminals are not inserted completely.
The series consists of 2.3mm type covering an extensive array of applications from signal circuits to power circuits.

- The connector mechanism only allows the retainer to be set when the terminal is completely inserted.
- These connectors can be directly secured to a bracket on the car body.
- In addition, an extra clip can be attached to the connector to secure it to the car body.
- RoHS/ELV Compliant

特　長

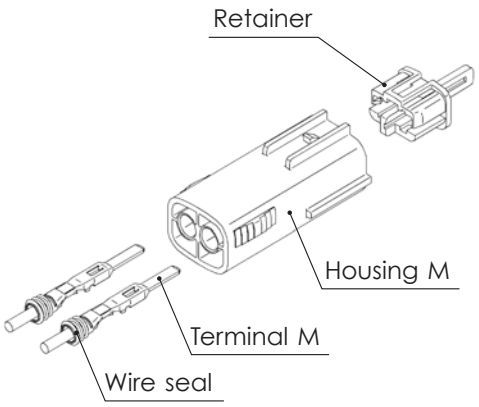
DL 防水シリーズは、挿入不足のターミナルを検知する機構を備えたコネクタシリーズです。
ターミナルサイズが2.3mm 型で構成されており、信号回路からパワー回路まで幅広くご利用いただけます。

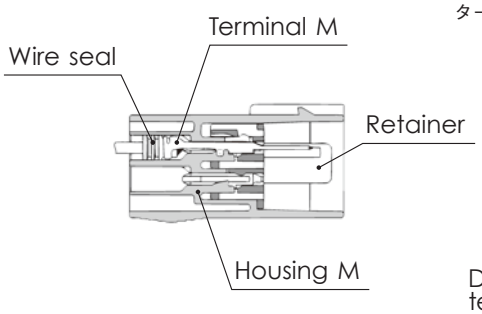
- ターミナルが半挿入の状態では、リテーナが装着できない機構になっています。
- コネクタは、ボデー側のブラケットに直接固定することができます。
- またコネクタにはボデーに固定するためのクランプ（クリップ）を装着することができます。
- RoHS／ELV 対応

DL SEALED SERIES for STANDARD

2.3mm（090）

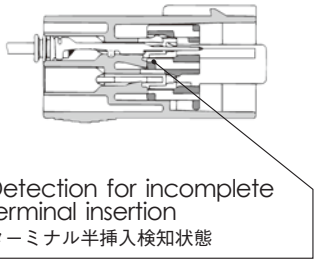
Structure／構造



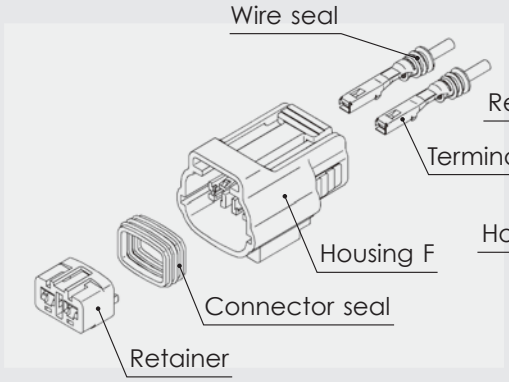


Detecting structure for incomplete terminal insertion

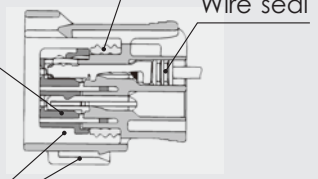
ターミナル半挿入検知構造



Connector M

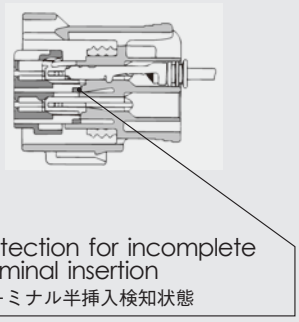


Connector F



Detecting structure for incomplete terminal insertion

ターミナル半挿入検知構造



2.3mm（090）

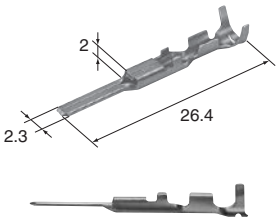
Terminal (UNIT : mm)

※For terminal selection, please contact our sales staff.

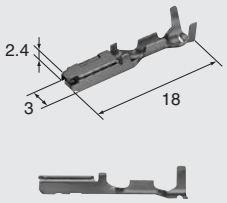
※ターミナル選定にあたっては、必ず弊社営業担当にお問い合わせください。

(S)

Cable size (mm²) **適用電線サイズ**	0.3～0.5
Material **材　質**	Brass 黄銅
Surface treatment **表面処理**	Tin-plated Snメッキ



M (8230-4472)

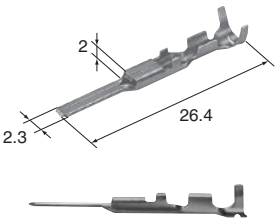


F (8100-1427)

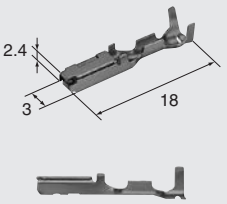
Cable size (mm²) **適用電線サイズ**	0.3～0.5
Material **材　質**	Heat-resistant copper alloy
Surface treatment **表面処理**	Tin-plated Snメッキ

(S) Au

Cable size (mm²) **適用電線サイズ**	0.3～0.5
Material **材　質**	Brass 黄銅
Surface treatment **表面処理**	Gold-plated Auメッキ



M (1500-0159)

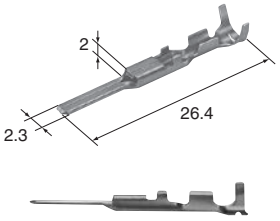


F (8100-1458)

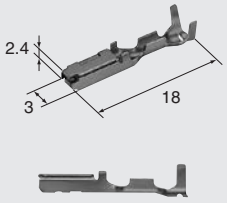
Cable size (mm²) **適用電線サイズ**	0.3～0.5
Material **材　質**	Heat-resistant copper alloy
Surface treatment **表面処理**	Gold-plated Auメッキ

(M)

Cable size (mm²) **適用電線サイズ**	0.75～0.85
Material **材　質**	Brass 黄銅
Surface treatment **表面処理**	Tin-plated Snメッキ



M (8230-4562)

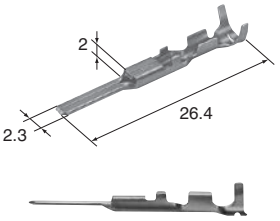


F (8100-1429)

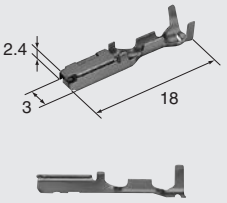
Cable size (mm²) **適用電線サイズ**	0.75～0.85
Material **材　質**	Heat-resistant copper alloy
Surface treatment **表面処理**	Tin-plated Snメッキ

(M) Au

Cable size (mm²) **適用電線サイズ**	0.75～0.85
Material **材　質**	Brass 黄銅
Surface treatment **表面処理**	Gold-plated Auメッキ



M (1500-0169)

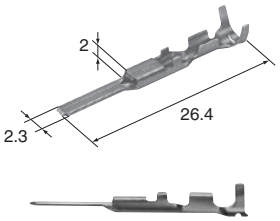


F (8100-1460)

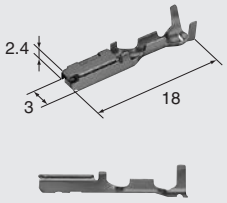
Cable size (mm²) **適用電線サイズ**	0.75～0.85
Material **材　質**	Heat-resistant copper alloy
Surface treatment **表面処理**	Gold-plated Auメッキ

(L)

Cable size (mm²) **適用電線サイズ**	1.25～2.0
Material **材　質**	Brass 黄銅
Surface treatment **表面処理**	Tin-plated Snメッキ



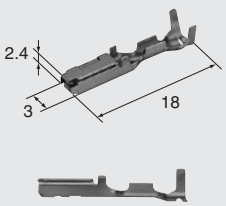
M (8230-4552)



F (8100-1428)

Cable size (mm²) **適用電線サイズ**	1.25～2.0
Material **材　質**	Heat-resistant copper alloy
Surface treatment **表面処理**	Tin-plated Snメッキ

(L) Au



F (8100-1459)

Cable size (mm²) **適用電線サイズ**	1.25～2.0
Material **材　質**	Heat-resistant copper alloy
Surface treatment **表面処理**	Gold-plated Auメッキ

2.3mm (090)

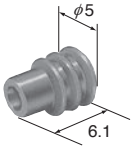
Wire seals (UNIT : mm)

- The wire seals are common to M and F.
- ワイヤシールはM、F共用です。

(SS)

(**7165-0210**)

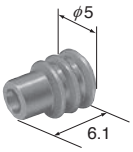
Cable overall diameter(mm) **電線仕上り外径**	Over than 1.1 mm below 1.5 mm 1.1 mmを越え1.5 mm以下
Material **材　質**	NBR
Color **色　相**	Red 赤



(S)

(**7165-0118**)

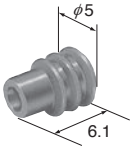
Cable overall diameter(mm) **電線仕上り外径**	Over than 1.5 mm below 2.0 mm 1.5 mmを越え2.0 mm以下
Material **材　質**	NBR
Color **色　相**	Blue 青



(M)

(**7165-0119**)

Cable overall diameter(mm) **電線仕上り外径**	Over than 2.0 mm below 2.9 mm 2.0 mmを越え2.9 mm以下
Material **材　質**	NBR
Color **色　相**	Brown 茶



2.3mm (090)

Dummy plugs (UNIT : mm)

Ref; 2.3mm Dummy plug detail
2.3mmダミー栓掲載頁

(**7161-9787**)	B-15
(**7165-0193**)	J-07

- Dummy plugs are common to M and F.
- Dummy plugs are used to blind unused terminal holes.
- ダミー栓はM、F共用です。
- 不必要なターミナル穴を塞ぐために、ダミー栓を使用します。

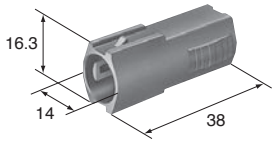
2.3mm (090)

Housing (UNIT : mm)

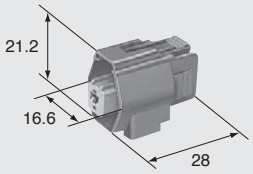
Ref: Terminal part No. **ターミナル参照頁**	L-02
Ref: wire seal No. **ワイヤシール参照頁**	L-04
Ref: Dummy plug No. **ダミー栓参照頁**	B-11 J-07
Material **材　質**	PBT or Low water absorption Nylon

1way

Color / **色　相**: Dark Gray / 濃灰



M (6195-0240)

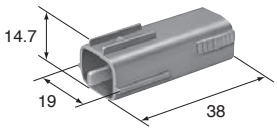


F (6195-0066)

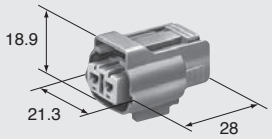
Color **色　相**	Dark Gray 濃灰
Note **備　考**	L-07 Bracket Clamp : TYPE2

2way

Color / **色　相**: Dark Gray / 濃灰



M (6195-0006)

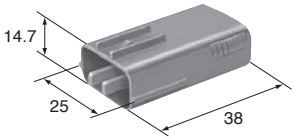


F (6195-0003)

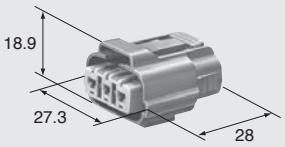
Color **色　相**	Dark Gray 濃灰
Note **備　考**	L-07 Bracket Clamp : TYPE2

3way

Color / **色　相**: Dark Gray / 濃灰



M (6195-0012)

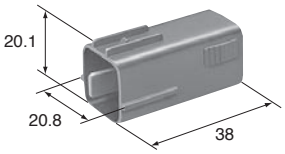


F (6195-0009)

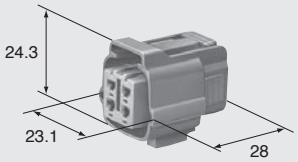
Color **色　相**	Dark Gray 濃灰
Note **備　考**	L-07 Bracket Clamp : TYPE2

4way

Color / **色　相**: Dark Gray / 濃灰



M (6195-0018)

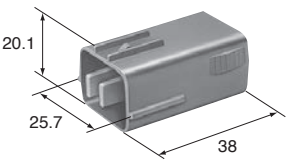


F (6195-0015)

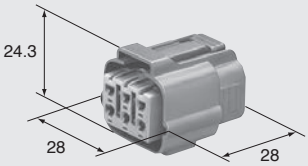
Color **色　相**	Dark Gray 濃灰
Note **備　考**	L-07 Bracket Clamp : TYPE2

6way

Color / **色　相**: Dark Gray / 濃灰



M (6195-0024)

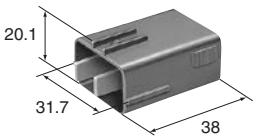


F (6195-0021)

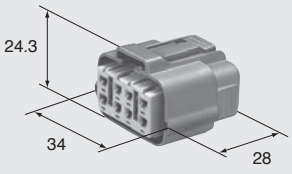
Color **色　相**	Dark Gray 濃灰
Note **備　考**	L-07 Bracket Clamp : TYPE2

8way

Color **色 相**	Dark Gray 濃灰



M (6195-0054)

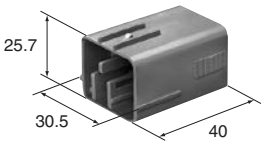


F (6195-0051)

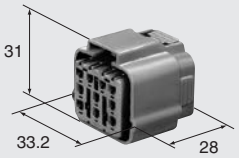
Color **色 相**	Dark Gray 濃灰
Note **備 考**	L-07 Bracket Clamp : TYPE2

10way

Color **色 相**	Light Gray 薄灰



M (6195-0167)

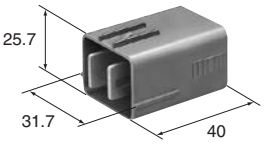


F (6195-0164)

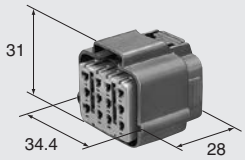
Color **色 相**	Light Gray 薄灰
Note **備 考**	L-07 Bracket Clamp : TYPE2

12way

Color **色 相**	Dark Gray 濃灰



M (6195-0152)

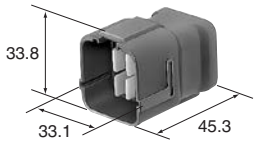


F (6195-0149)

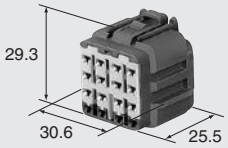
Color **色 相**	Dark Gray 濃灰
Note **備 考**	L-07 Bracket Clamp : TYPE2

16way

Color **色 相**	Dark Gray 濃灰
Note **備 考**	L-07 Bracket Clamp : TYPE1



M (6188-0495)



F (6189-0715)

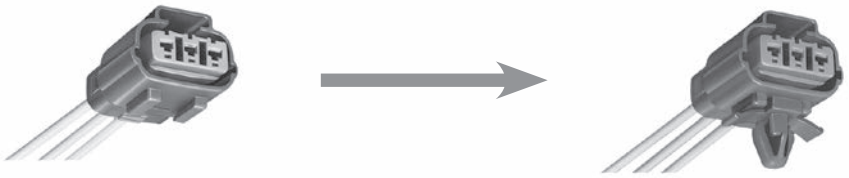
Color **色 相**	Dark Gray 濃灰

DL SEALED SERIES
COMMON USE PARTS

Body fastening clamp (mm)

2.3mm standard type connectors, the clamp can be installed.
※The detail dimensions for the mounting portion are specified in drawing
2.3mm 標準のコネクタには、ボデー固定用クランプを必要に応じて取付けることができます。

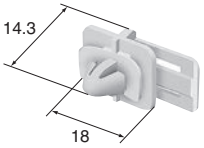
※取付部詳細寸法は、別途図面により規定します。



Type 1

(**6810-2653**)

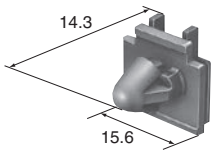
Material 材 質	PA6T
Color 色 相	Natural 自然色
hole size 穴 径	φ7.0
Plate thickness range for clamp クランプ適合板厚	t=0.6～1.6



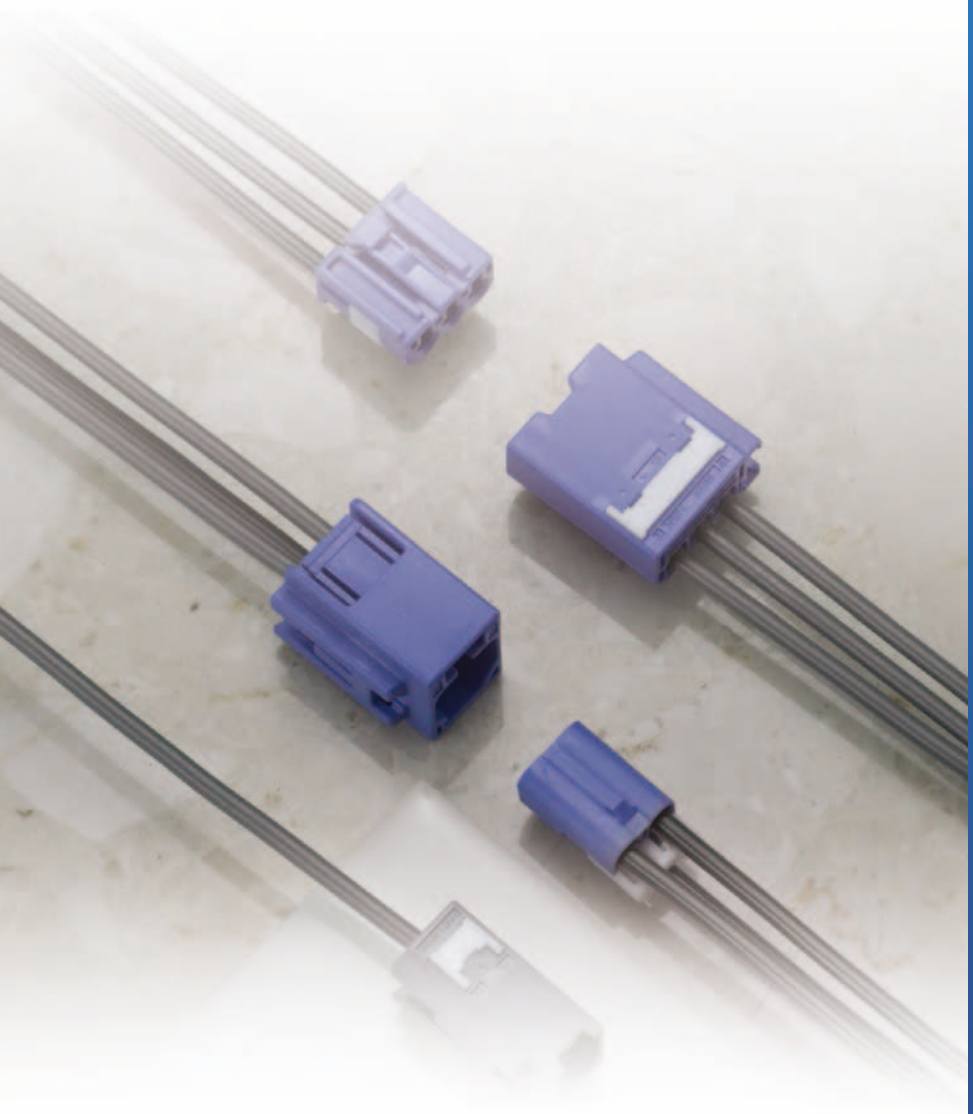
Type 2

(**6810-1584**)

Material 材 質	PBT
Color 色 相	Brown 茶
hole size 穴 径	7.2×10.2
Plate thickness range for clamp クランプ適合板厚	t=0.7～2.0



HFCⅢ SERIES



Features

HFCⅢ (High Frequency Connector) series are connectors that connect on-board multimedia devices, such as GPS, TV, VICS and etc., and coaxial wires. These are also suitable for mobile telephone and sensor circuit.

- It reduces reflection/transmission loss and restraints noise radiation. It achieved smaller size with higher performance.
- Hybrid types for high frequency coaxial wire and automobile wire (AV) are estabished. (It supports diversity receiving system).
- Retainer for secondary lock is preloaded and the strucrure allows the high frequency coaxial wire and AV wire to be set by one operation. Therefore improvement of assembling operation can be planned.
- RoHS/ELV Compliant

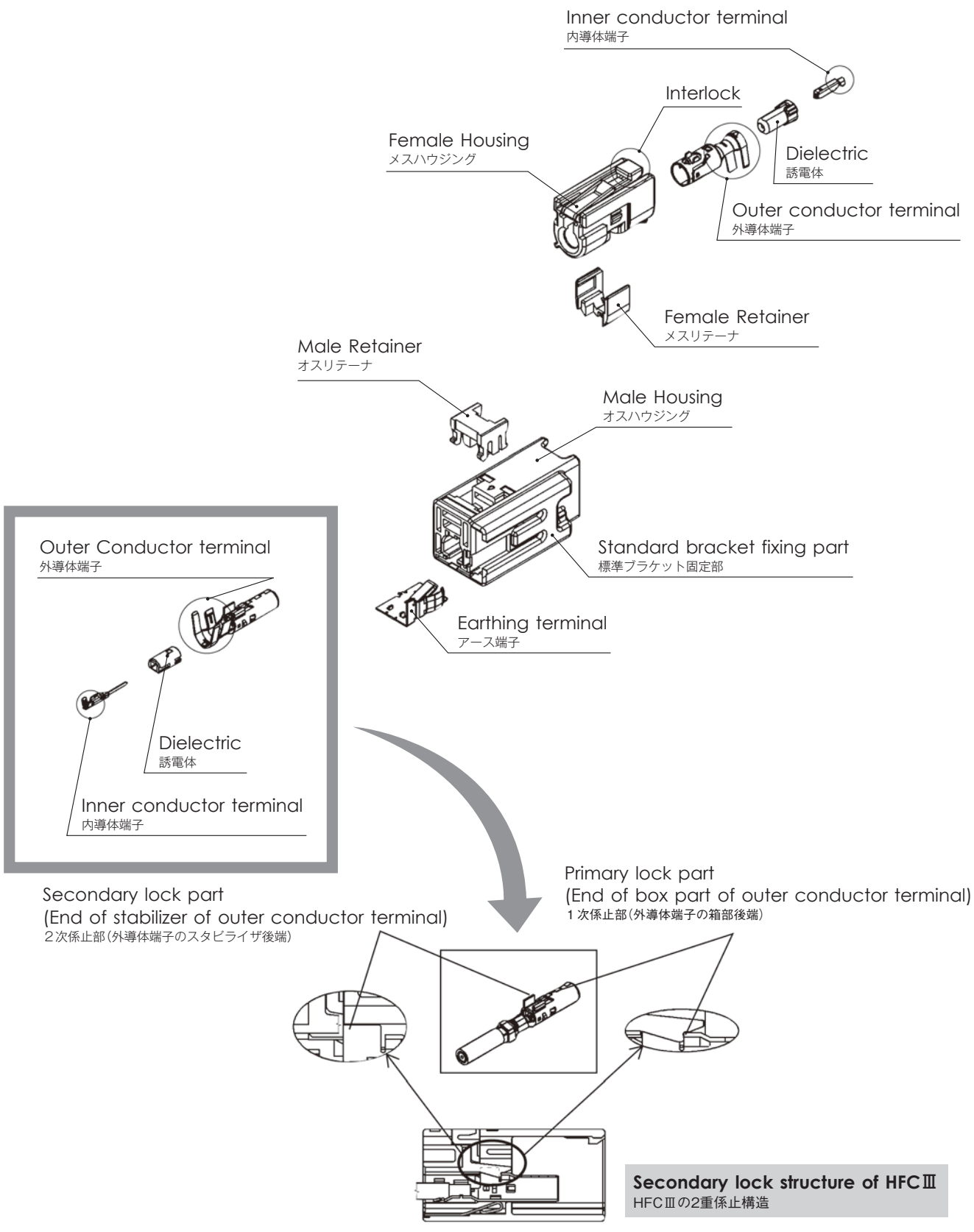
特　長

HFC Ⅲシリーズ（高周波コネクタ）は GPS・TV・VICS などの車載マルチメディア機器と同じ同軸線の接続用コネクタで車載電話・センサ回路にも適したコネクタです。

- 伝送損失、反射、ノイズ放射を抑制し、小型高性能化を実現しています。
- 高周波同軸線と自動車用電線（AV）のハイブリッドタイプを設定しています。（ダイバシティ受信方式に対応しています。）
- 二重係止用リテーナは予め組み付けられており、高周波同軸線と AV 線が同一作業でセットできる構造により、組み付け作業の向上が図れます。
- RoHS／ELV 対応

HFCⅢ SERIES for STANDARD

Structure／構造



Secondary lock structure of HFCⅢ
HFCⅢの2重係止構造

Basic specification／基本仕様

Type				1 way coaxial wire 2 way coaxial wire + 1way AV wire 2 way coaxial wire + 2way AV wire 3 way coaxial wire 4 way coaxial wire + 2way AV wire
Contact resistance 接触抵抗	Coaxial wire 同軸線			Max. 20mΩ(Initial／初期)
	AV wire AV線			Max. 8mΩ(Initial／初期)
Insulation resistance 絶縁抵抗				Min. 100MΩ
Working temperature 使用温度				−40℃～+105℃
VSWR	75Ω系	～180MHz	Wire to Wire	Max. 1.2
			PCB to Wire	
		～770MHz	Wire to Wire	Max. 1.4
			PCB to Wire	
	50Ω系	～3GHz	Wire to Wire	Max. 1.4
			PCB to Wire	Max. 1.3

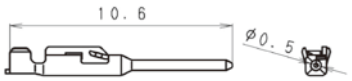
Material 材質	M Terminal	Inner conductor 内導体	Brass (Sn plating) 黄銅(Snメッキ)
		Outer conductor 外導体	
	F Terminal	Inner conductor 内導体	Heat resistant cooper-alloy (Au plating) 耐熱銅合金(Auメッキ)
		Outer conductor 外導体	Brass (Sn plating) 黄銅(Snメッキ)

(Note) AV wire = MAX. AVSS 0.5mm^2 (Terminal is TS 0.64 type: Ref. A-02).
注) AV線＝最大AVSS 0.5mm^2(ターミナルはTS 0.64：A-02参照)

Inner conductor terminal (mm)

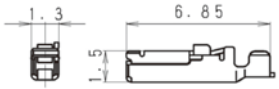
(M)

S(8230-5015) M(8230-5016) L(8230-5017)



(F)

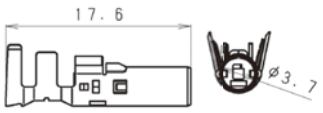
S(8240-0276) M(8240-0277) L(8240-0278)



Outer conductor terminal (mm)

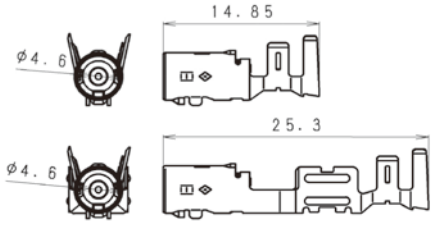
(M)

S(8230-5481) M(8230-5482) L(8230-5484)



(F)

中 継 用：S(8240-0382) M(8240-0383) F(8240-0619)
ラジオ用：S(8240-0387) M(8240-0388)



(Note) The terminal for radio can connecta condenser inside. On this occasion, a common crimping terminal is necessary.
注) ラジオ用端子は、内部にコンデンサを接続することが可能です。
その際、共圧着端子(8110-4493)が必要となります。

Applicable coaxial wire／適用同軸線

Applicable coaxial wire (Note 1) 適用同軸線　注1)	1.5C-2V	1.5C-2W	1.5D-2V	1.5D-2W	2.5D
Inner conductor terminal 内導体端子	S	S	M	M	L
Outer conductor terminal 外導体端子	S	M	S	S	F

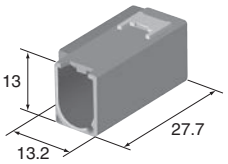
(Note 1) For some coaxial wire and wire makers, it might be inapplicable. Please contact our sales representative for more details.
注1) 同軸線、電線メーカーによっては適用できないことがありますので弊社営業担当にお問い合わせ下さい
(Note 2) When crimping the forming coaxial wire, need the sleeve.
注2) 発泡同軸線を圧着する場合は、スリーブが必要となります。

Housing (UNIT : mm)

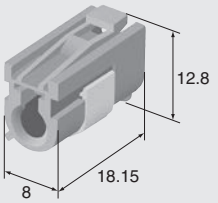
Ref: Terminal part No. ターミナル参照頁	
coaxial wire **同軸線**	M-03
AV wire **AV線**	A-02

1way coaxial wire — Rib R1

Color / **色 相**: Blue / 青



M (6098-7143)

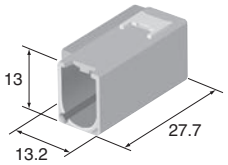


F (6098-6321)

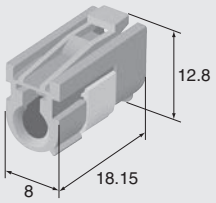
Color / **色 相**: Blue / 青

1way coaxial wire — Rib L1

Color / **色 相**: Gray / 灰



M (6098-6835)

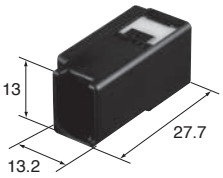


F (6098-6323)

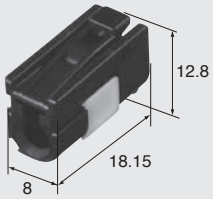
Color / **色 相**: Gray / 灰

1way coaxial wire — Rib R2

Color / **色 相**: Black / 黒



M (6098-7544)

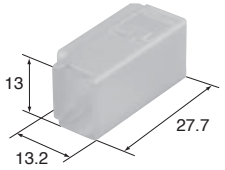


F (6098-7445)

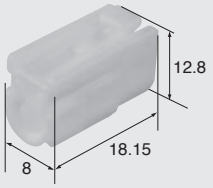
Color / **色 相**: Black / 黒

1way coaxial wire — Rib L2

Color / **色 相**: Natural / 自然色



M (6098-7546)

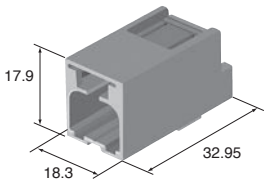


F (6098-7446)

Color / **色 相**: Natural / 自然色

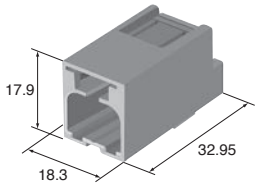
2 way coaxial wire + 1 way AV wire — Rib R

Color 色 相: Gray 灰



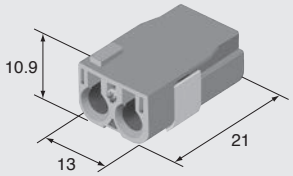
M (6098-6331)

Color 色 相: Gray 灰



M (6098-6373)

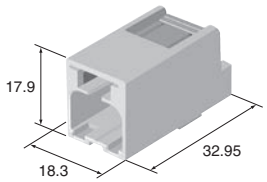
F (6098-6336)



Color 色 相: Gray 灰

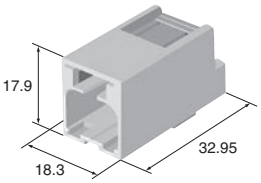
2 way coaxial wire + 1 way AV wire — Rib L

Color 色 相: Natural 自然色



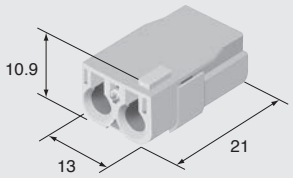
M (6098-6328)

Color 色 相: Natural 自然色



M (6098-6370)

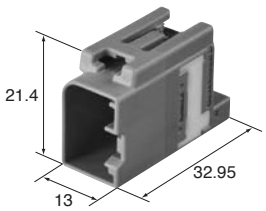
F (6098-6333)



Color 色 相: Natural 自然色

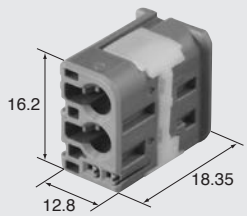
2 way coaxial wire + 2 way AV wire — Rib R

Color 色 相: Gray 灰



M (6098-7151)

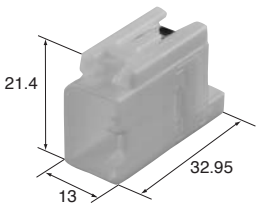
F (6098-7153)



Color 色 相: Gray 灰

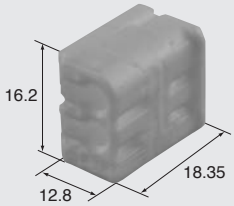
2 way coaxial wire + 2 way AV wire — Rib L

Color 色 相: Natural 自然色



M (6098-7145)

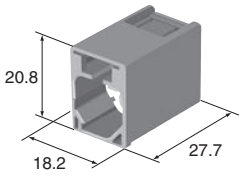
F (6098-7148)



Color 色 相: Natural 自然色

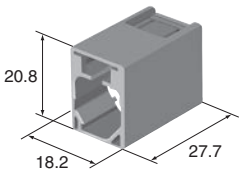
3 way coaxial wire

Color 色 相 Blue 青



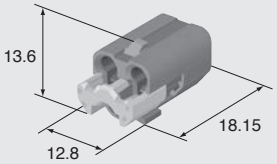
M(**6098-6340**)

Color 色 相 Blue 青



M(**6098-6369**)

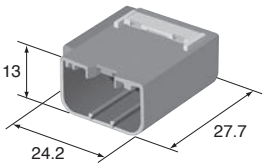
F(**6098-6343**)



Color 色 相 Blue 青

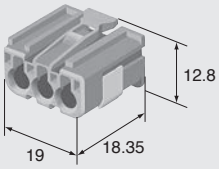
3 way coaxial wire

Color 色 相 Blue 青



M(**6098-6838**)

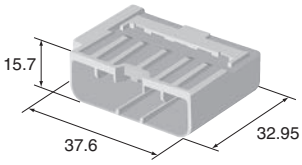
F(**6098-6841**)



Color 色 相 Blue 青

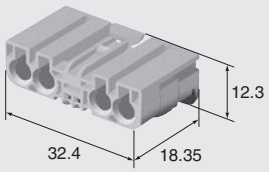
4 way coaxial wire + 2 way AV wire

Color 色 相 Natural 自然色



M(**6098-6844**)

F(**6098-6702**)



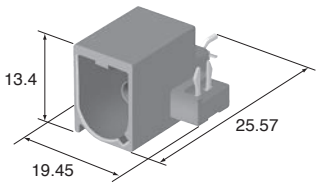
Color 色 相 Natural 自然色

HFC Ⅲ SERIES
for PCB

Housing (UNIT : mm)

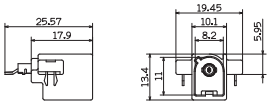
1 way coaxial wire — Through Hall Type（Rib R）

M (6098-6157)

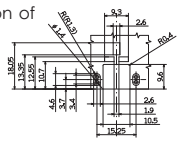


Connector F part No. **Fコネクタ品番**	6098-6321 (M-04)
Color **色　相**	Blue 青

●Detailed dimension
寸法詳細

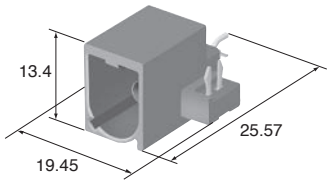


●Recommended demension of Circuit board
基板推奨詳細



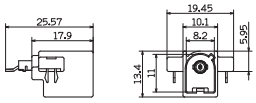
1 way coaxial wire — Through Hall Type（Rib L）

M (6098-6159)

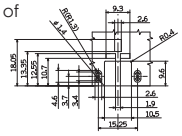


Connector F part No. **Fコネクタ品番**	6098-6323 (M-04)
Color **色　相**	Gray 灰

●Detailed dimension
寸法詳細

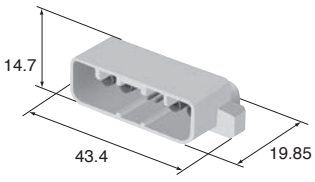


●Recommended demension of Circuit board
基板推奨詳細



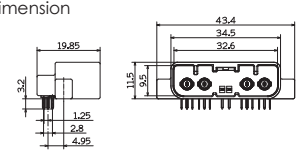
4 way coaxial wire + 2 way AV wire — Through Hall Type

M (6098-6700)

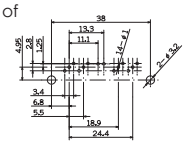


Connector F part No. **Fコネクタ品番**	6098-6702 (M-06)
Color **色　相**	Natural 自然色

●Detailed dimension
寸法詳細

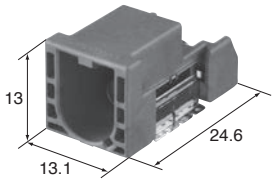


●Recommended demension of Circuit board
基板推奨詳細



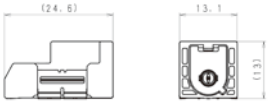
1 way coaxial wire — SMT Type（Rib R1）

M（6098-7132）

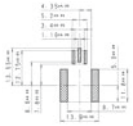


Connector F part No. **Fコネクタ品番**	6098-6321（M-04）
Color **色　相**	Blue 青

●Detailed dimension
寸法詳細

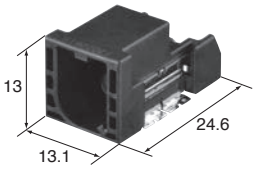


●Recommended demension of Circuit board
基板推奨詳細



1 way coaxial wire — SMT Type（Rib R2）

M（6098-7449）



Connector F part No. **Fコネクタ品番**	6098-7445（M-04）
Color **色　相**	Black 黒

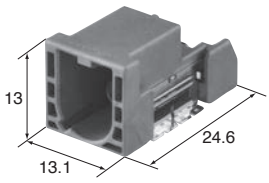
●Detailed dimension
寸法詳細

●Recommended demension of Circuit board
基板推奨詳細

M-08

1 way coaxial wire — SMT Type（Rib L1）

M（6098-7134）



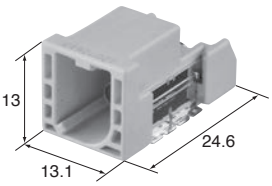
Connector F part No. **Fコネクタ品番**	6098-6323（M-04）
Color **色　相**	Gray 灰

●Detailed dimension
寸法詳細

●Recommended demension of Circuit board
基板推奨詳細

1 way coaxial wire — SMT Type（Rib L2）

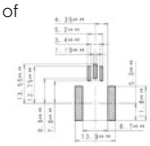
M（6098-7450）



Connector F part No. **Fコネクタ品番**	6098-7446（M-04）
Color **色　相**	Natural 自然色

●Detailed dimension
寸法詳細

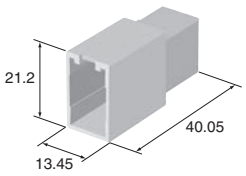
●Recommended demension of Circuit board
基板推奨詳細



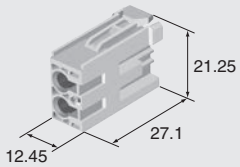
HFC Ⅲ SERIES
for RADIO

2 way coaxial wire + 1 way AV wire

Color **色　相**	Natural 自然色



M（6098-6861）

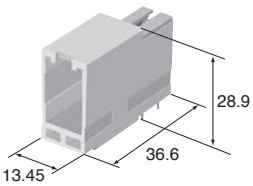


F（6098-6037）

Color **色　相**	Natural 自然色

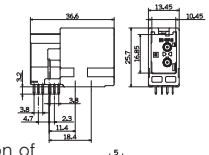
2 way coaxial wire + 1 way AV wire　　Through Hall Type

M（6098-5761）

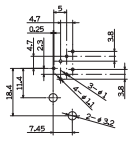


Connector F part No. **Fコネクタ品番**	6098-6037（M-09）
Color **色　相**	Natural 自然色

●Detailed dimension
寸法詳細



●Recommended demension of Circuit board
基板推奨詳細



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⚠ WARNING

Which may result in overheating or fire.
発熱・発火の恐れがあります！

Do not exceed prescribed current to the connectors.
Do not use a broken or cracked housing.
Do not use a deformed or rusty terminal.

●規定の電流値を超えて使用しないでください。
●割れたりヒビが入ったハウジングは使用しないでください。
●変形したり、錆びたターミナルは使用しないでください。

⚠ CAUTION

Precautions for Selection and Use of Connectors
コネクタ選定・ご使用に際しての注意事項

●To select a suitable connector, please consult with our sales staff about operating environment, mounting conditions, and other information (e.g. unsealed type for indoor compartment use, sealed type for engine compartment use).

●The performance of a connector may significantly vary depending on changes in variable elements in the operating environment, such as the number of ways, wire size, ambient temperature, etc.
For detailed electrical characteristics of each product, see the "Specifications" of the relevant series.

●We have "Specifications" for connector performance and "Instruction Manuals" for connector usage, handling, and precautions, which are available for each connector series. Please be sure to read these in advance to select the appropriate connector and to use it correctly.

●Some connector series require special attention during circuit checks, etc.

●Although some connector specifications include drawings showing mating support, these drawings are provided only for reference. The manufacture of mating parts is not possible without consideration to dimensional tolerances, etc.

●This catalogue include the parts that was designed and developed jointly with a customer and require prior approval before sales. Please contact our sales staff for details.

●コネクタ選定にあたっては、使用環境、組み付け条件等を弊社営業担当にご相談頂き、用途に適合した製品（例：室内は非防水用、エンジンルーム内は防水用、等）をお選びください。

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*Product specifications may be subject to change without notice.
Before using the product, please obtain a "customer drawing" "Specifications" "Instruction Manuals" from our sales staff.
Please contact our sales staff for details.

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