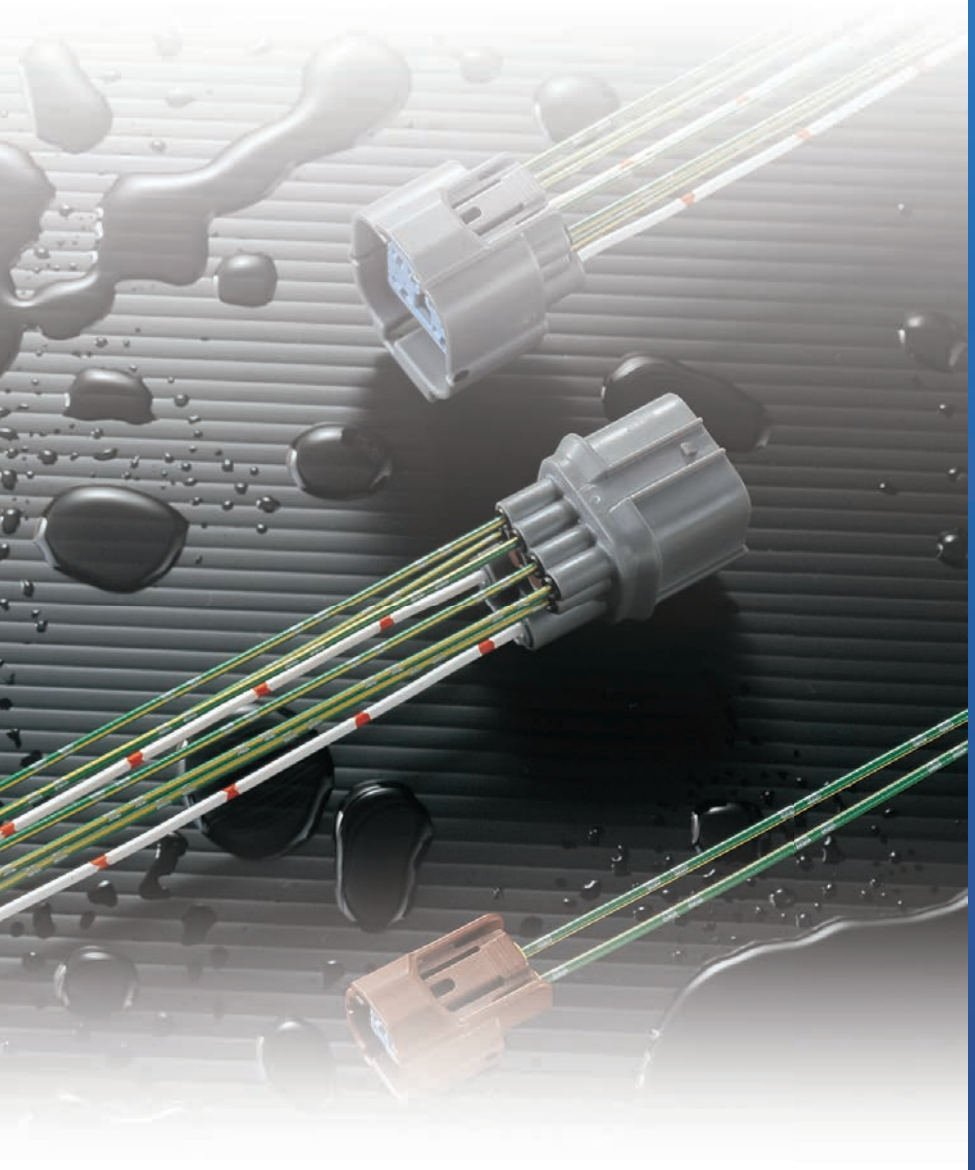
HX SEALED SERIES



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

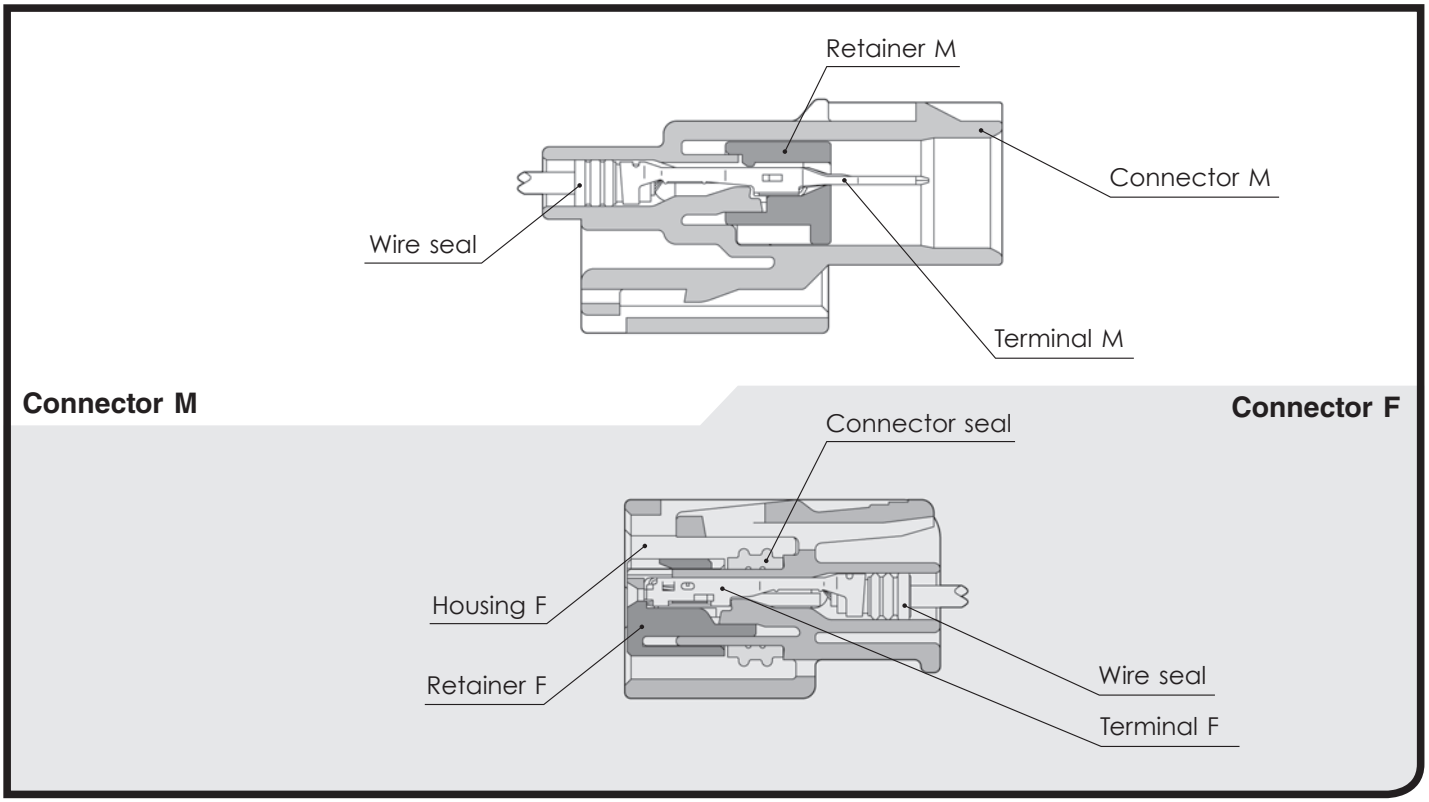
HX 防水シリーズは、従来の HW 防水シリーズを改良し、信頼性を向上させたコネクタシリーズです。挿入不足のターミナルを検知する機構を備えています。
ターミナルサイズにより1.0mm・1.5mm・2.3mm（ハイブリッドは 0.64mm・1.0mm・1.5mm・2.3mm・4.8mm）で構成されており、各種の制御回路並びに低パワー回路に対応することができます。

- 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

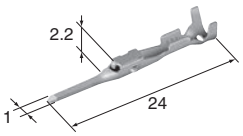


1.0mm（040）

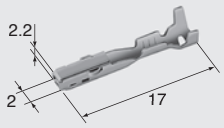
Terminal（UNIT : mm）

(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



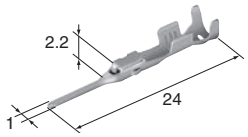
M (8100-3177)　　**F (8100-3067)**



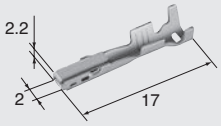
Cable size (mm²) 適用電線サイズ	0.3～0.5
Cable overall diameter (mm) 電線仕上り外径	1.4～2.0
Material 材　質	Heat-resistant copper alloy
Surface treatment 表面処理	Tin-plated Snメッキ

(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)

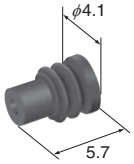
The wire seals are common to M and F.

ワイヤシールはM、F共用です。

(SS)

(7165-1075)

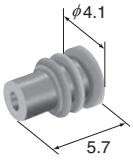
Cable size (mm²) 適用電線サイズ	(AVSS/0.3) (AVSSX/0.3) (AVSSH/0.3) (CHFUS/0.35) (CHFS/0.5)
Cable overall diameter (mm) 電線仕上り外径	1.1～1.6
Material 材　質	Silicon シリコン
Color 色　相	Orange 橙



(S)

(7165-0621)

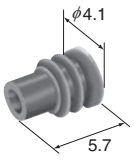
Cable size (mm²) 適用電線サイズ	(AVS/0.3) (AVSS/0.5) (AVSSX/0.5) (AVSSH/0.5) (CHFS/0.75)
Cable overall diameter (mm) 電線仕上り外径	1.6～1.9
Material 材　質	Silicon シリコン
Color 色　相	Light Green 淡緑



(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



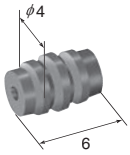
1.0mm (040)

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。

(7165-0432)



Material 材 質	NBR
Color 色 相	Black 黒

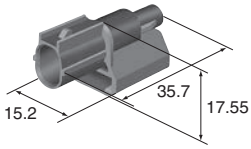
1.0mm (040)

Housing (UNIT : mm)

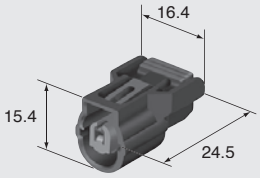
Ref: Terminal part No. ターミナル参照頁	E-02
Ref: wire seal No. ワイヤシール参照頁	E-03
Ref: Dummy plug No. ダミー栓参照頁	E-04
Material 材 質	PBT

1way

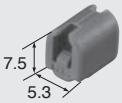
Color 色 相	Black 黒



M (6188-0657)



F (6189-0940)

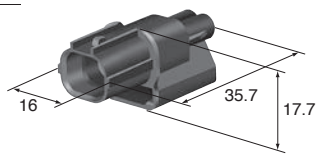


Retainer No. (6918-1979)

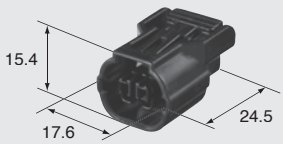
Color 色 相	Black 黒

2way

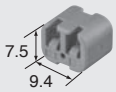
Color 色 相	Black 黒



M (6188-0589)



F (6189-0890)

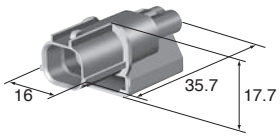


Retainer No. (6918-1835)

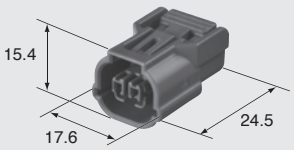
Color 色 相	Black 黒

2way (Rib difference) (リブ違)

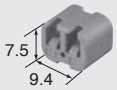
Color 色 相	Dark Gray 濃灰



M (6188-0590)



F (6189-0891)

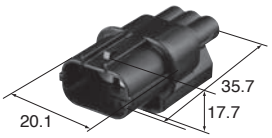


Retainer No. (6918-1835)

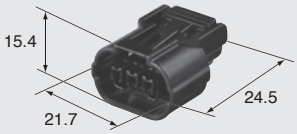
Color 色 相	Dark Gray 濃灰

3way

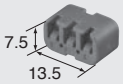
Color 色 相	Black 黒



M (6188-4739)



F (6189-0887)

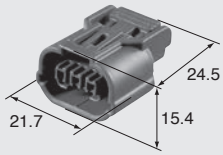


Retainer No. (6918-1833)

Color 色 相	Black 黒

3way (Rib difference) (リブ違)

F (6189-0968)

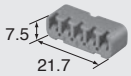


Retainer No. (6918-1833)

Color 色 相	Black 黒

5way

F (6189-1081)

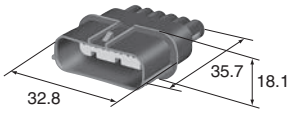


Retainer No. (6918-2128)

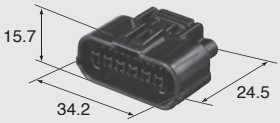
Color 色 相	Black 黒

6way

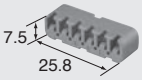
Color 色 相	Black 黒



M (6188-0658)



F (6189-1012)

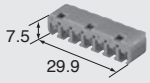


Retainer No. (6918-2056)

Color 色 相	Black 黒

7way

F (6189-0855)



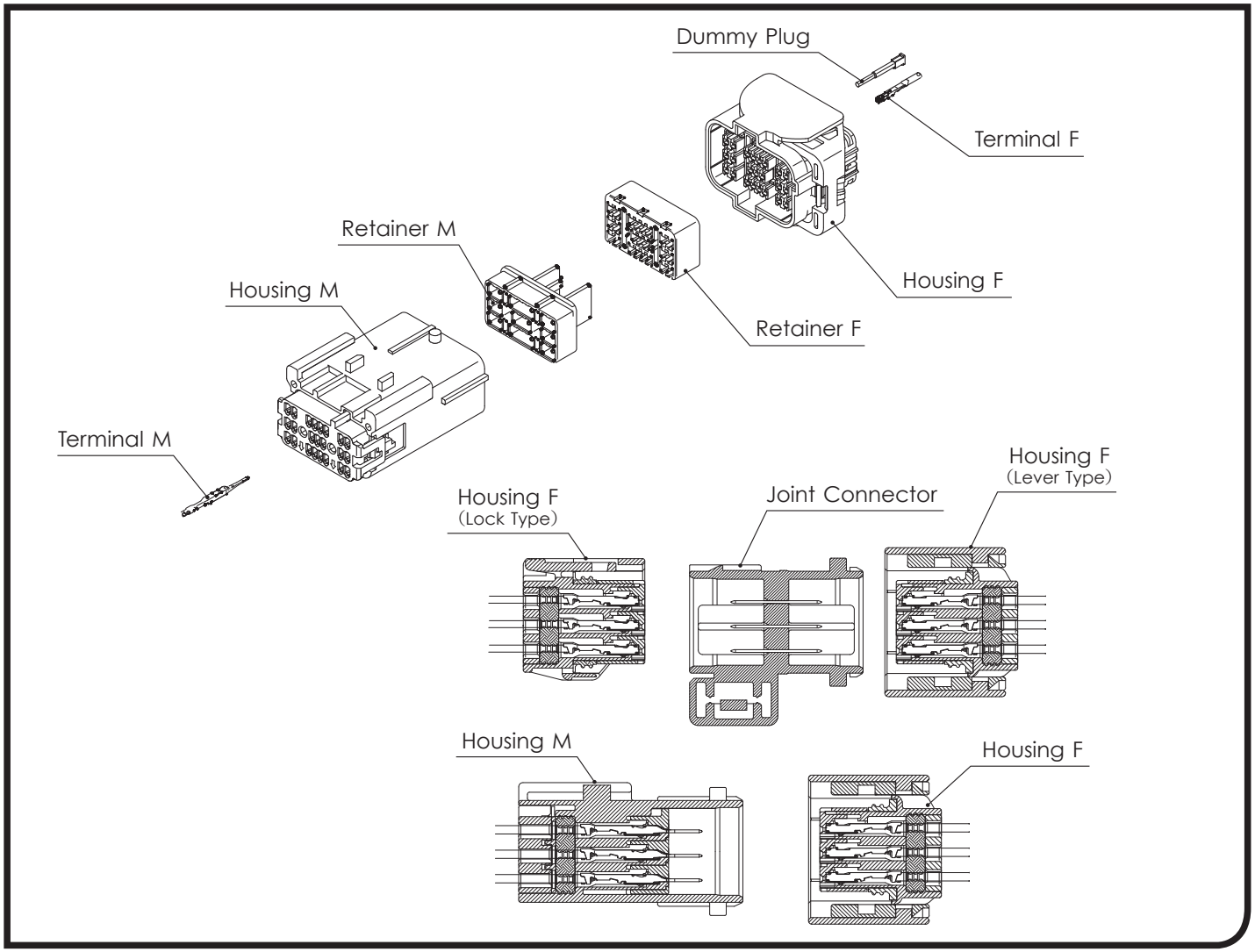
Retainer No. (6918-1762)

Color 色 相	Black 黒

HX SEALED SERIES for 23way and 33way

1.0mm（040）

Structure／構造



1.0mm（040）

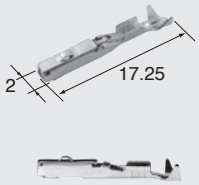
Terminal（UNIT : mm）

(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)



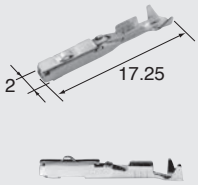
Cable size (mm²) 適用電線サイズ	0.3～0.5
Material 材　質	Heat-resistant copper alloy
Surface treatment 表面処理	Tin-plated Snメッキ

(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

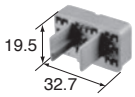
1.0mm (040)

Housing (UNIT : mm)

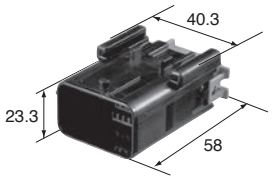
Ref: Terminal part No. ターミナル参照頁	E-07
Ref: Dummy plug No. ダミー栓参照頁	E-07
Material 材　質	PBT

23way

Color 色　相	Black 黒

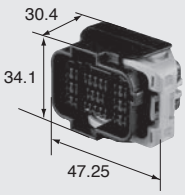


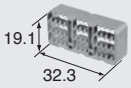
Retainer No. (6918-2131)



M (6188-0660)

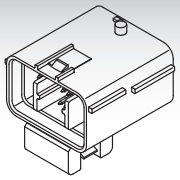
F (6189-1082)





Retainer No. (6918-2132)

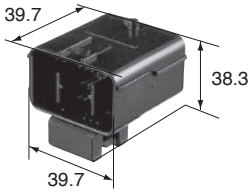
Color 色　相	Black 黒

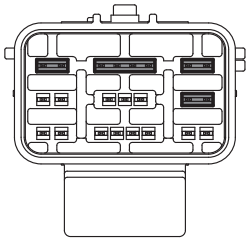


Coupling circuit is connected with busbers as shown gray hatched cavities.

M (6188-4787)

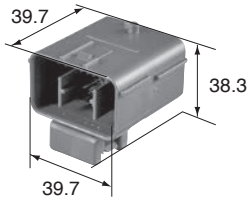
Color 色 相	Black 黒

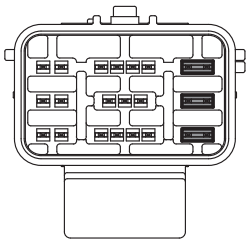




M (6188-4789)

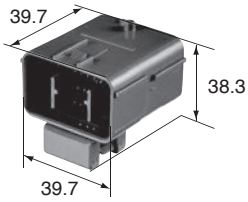
Color 色 相	Dark Gray 濃灰

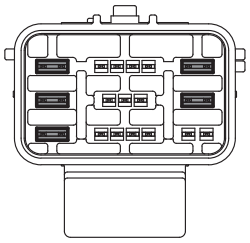




M (5010-8627)

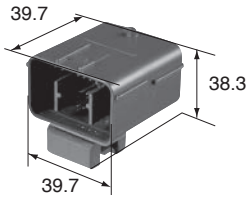
Color 色 相	Dark Blue 濃青

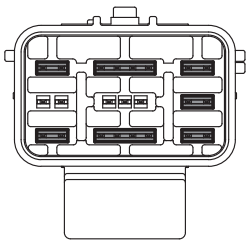




M (5011-1590)

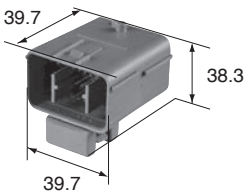
Color 色 相	Brown 茶

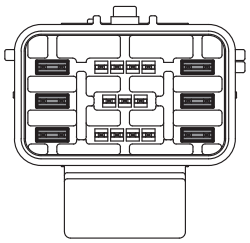




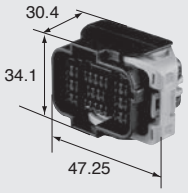
M (5011-6687)

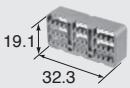
Color 色 相	Blue 青





F (6189-1082) Lever

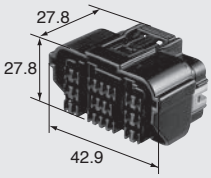


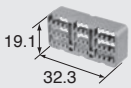


Retainer No. (6918-2132)

Color 色 相	Black 黒

Lock F (6189-6914)



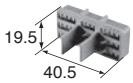


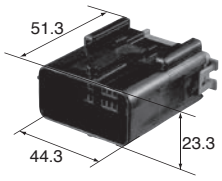
Retainer No. (6918-2132)

Color 色 相	Black 黒

33way

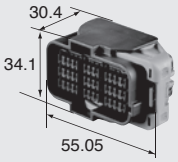
Color 色 相	Black 黒



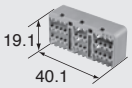


Retainer No.(6918-2103)

M (6188-0697)



F (6189-1050)

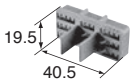


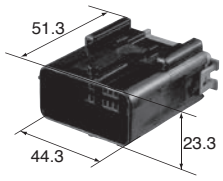
Retainer No.(6918-2104)

Color 色 相	Black 黒

33way (Rib difference) (リブ違)

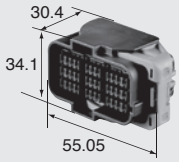
Color 色 相	Dark Gray 濃灰



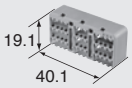


Retainer No.(6918-2103)

M (6188-0698)



F (6189-1051)

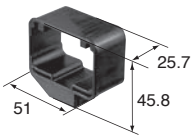


Retainer No.(6918-2104)

Color 色 相	Dark Gray 濃灰

Bracket Holder

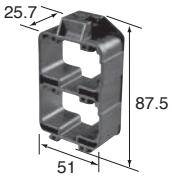
(6920-0886)



Color 色 相	Black 黒

Bracket Holder

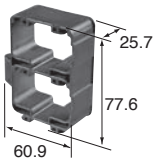
(6920-0861)



Color 色 相	Black 黒

Bracket Holder

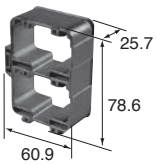
(6920-2376)



Color 色 相	Dark Blue 濃青

Bracket Holder

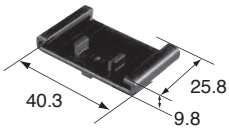
(6920-2377)



Color 色 相	Black 黒

Bracket Holder

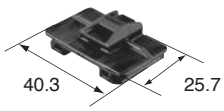
(6920-0884)



Color 色 相	Black 黒

Bracket Holder

(6920-2466)

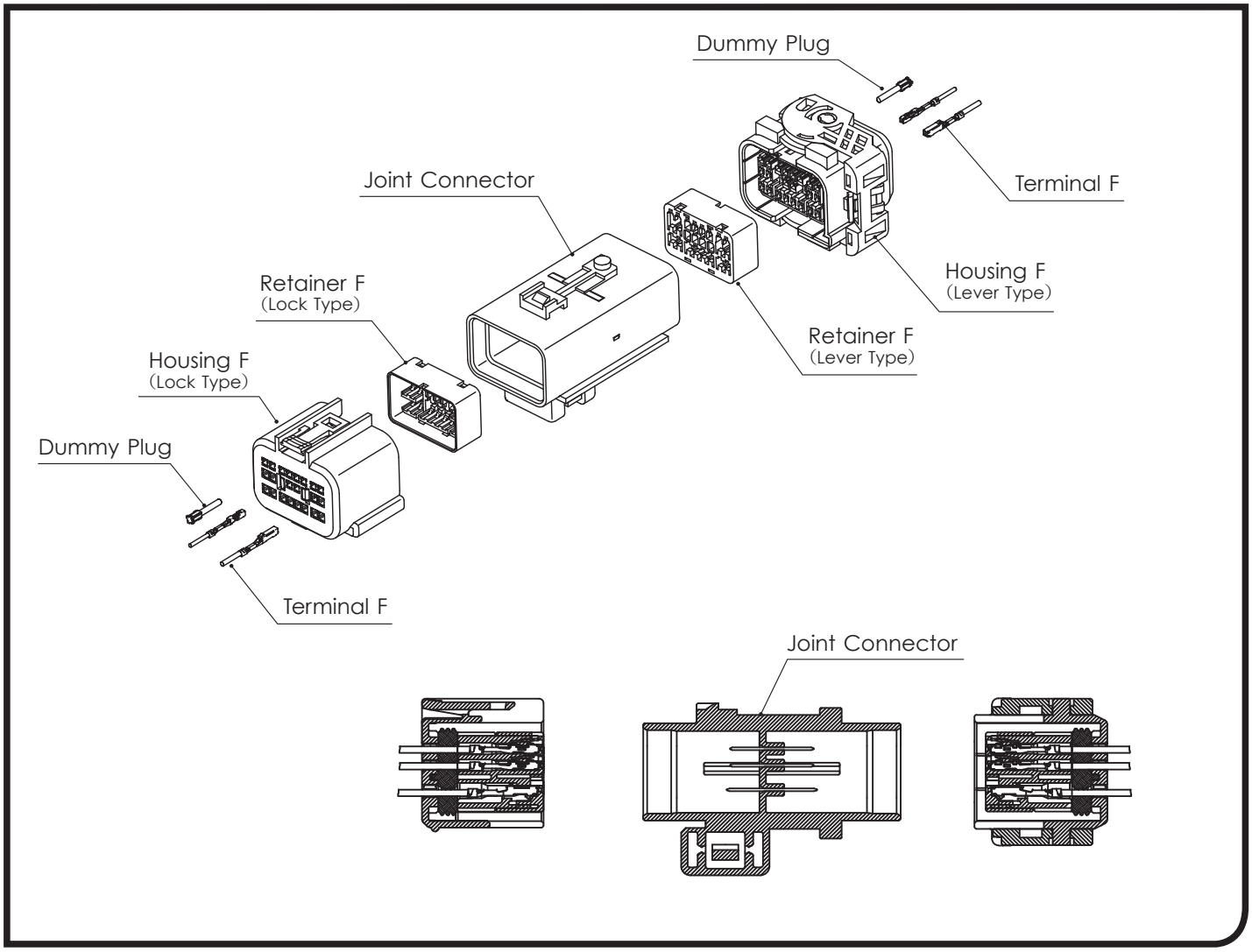


Color 色 相	Black 黒

HX SEALED SERIES 22way Joint Connector

HYBRID 0.64mm,1.0mm（025, 040）

Structure／構造

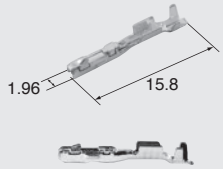


0.64mm（025）

（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

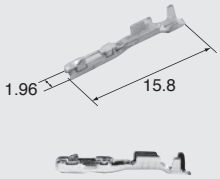


Terminal（UNIT : mm）

(S)

F (8240-0409)

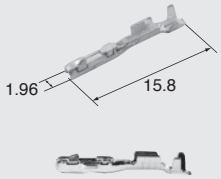
Cable size (mm²) 適用電線サイズ	AVSSH0.3～0.5
Material 材　質	Heat-resistant copper alloy
Surface treatment 表面処理	Tin-plated Snメッキ



(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

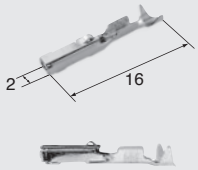


1.0mm (040)

(S)

F (8240-0411)

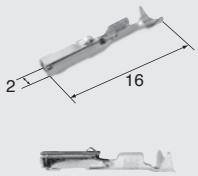
Cable size (mm²) 適用電線サイズ	AVSSH0.3 ～AVSSH0.5
Material 材　質	Heat-resistant copper alloy
Surface treatment 表面処理	Tin-plated Snメッキ



(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

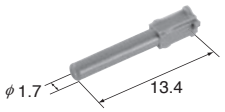


Terminal (UNIT : mm)

0.64mm,1.0mm (025,040)

(6914-0127)

Material 材　質	PBT
Color 色　相	Blue 青



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。

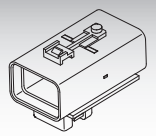
0.64mm,1.0mm
(025,040)

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)

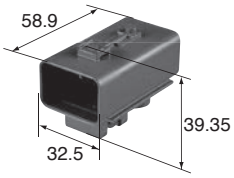
Joint Connector

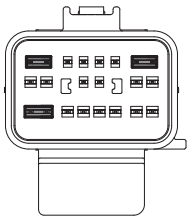


Coupling circuit is connected with busbers as shown gray hatched cavities.

M (5011-6818)

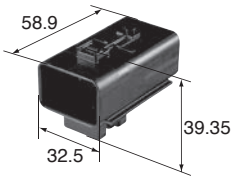
Color **色　相**	Brown 茶

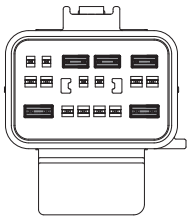




M (5011-7740)

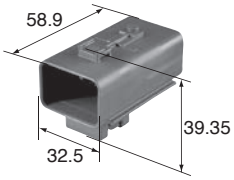
Color **色　相**	Black 黒

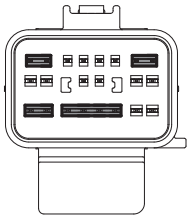




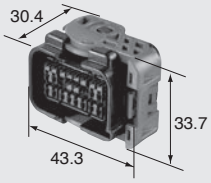
M (5011-7860)

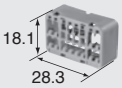
Color **色　相**	Dark Gray 濃灰





F (6189-7264) Lever

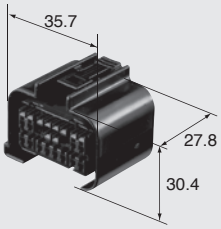


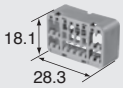


Retainer No. (6918-3166)

Color **色　相**	Black 黒

Lock F (6189-7263)





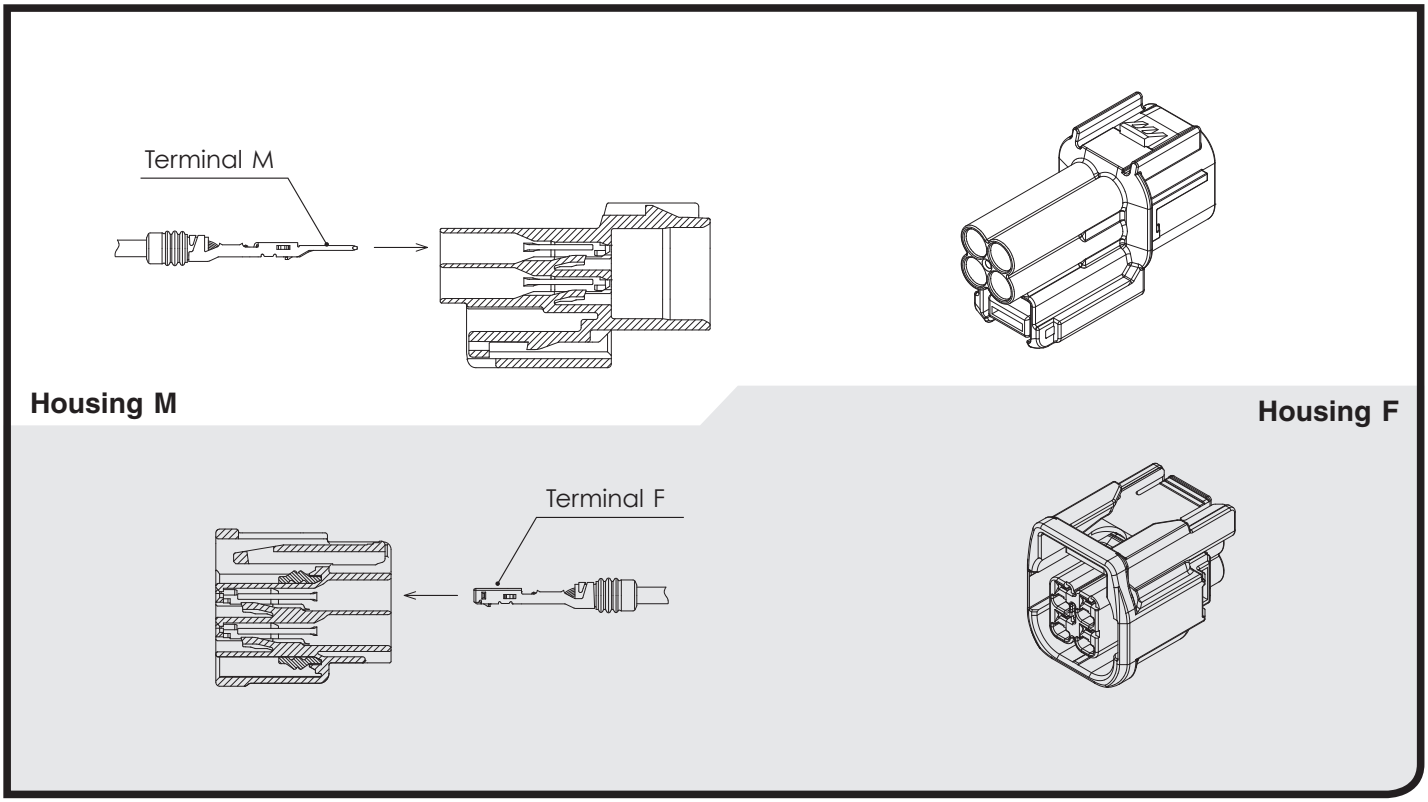
Retainer No. (6918-3166)

Color **色　相**	Black 黒

HX SEALED SERIES for STANDARD

1.5mm（060）

Structure／構造

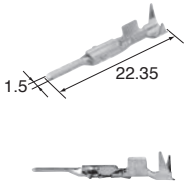


1.5mm（060）

Terminal（UNIT : mm）

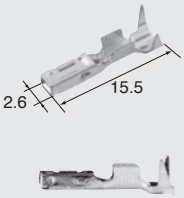
(SS)

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)

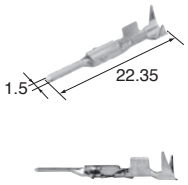
F (8240-0489)



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

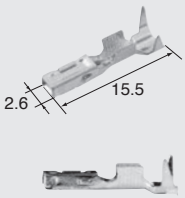
(S)

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)

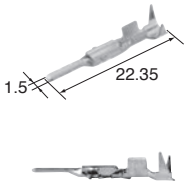
F (8240-0490)



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

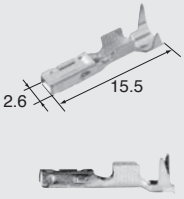
(M)

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)

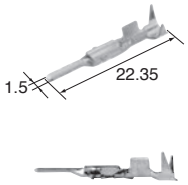
F (8240-0491)



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

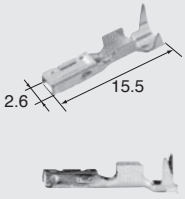
(L)

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)

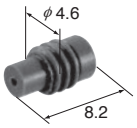
The wire seals are common to M and F.

ワイヤシールはM、F共用です。

(SS)

(7165-1562)

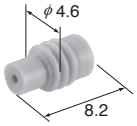
Cable overall diameter (mm) 電線仕上り外径	0.85～1.2
Material 材　質	Silicon シリコン
Color 色　相	Violet 紫



(S)

(7165-1563)

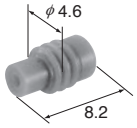
Cable overall diameter(mm) 電線仕上り外径	1.05～1.5
Material 材　質	Silicon シリコン
Color 色　相	Sky Blue 空色



(M)

(7165-1564)

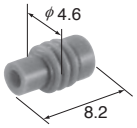
Cable overall diameter(mm) 電線仕上り外径	1.35～1.9
Material 材　質	Silicon シリコン
Color 色　相	Light Green 淡緑



(L)

(7165-1565)

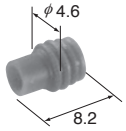
Cable overall diameter(mm) 電線仕上り外径	1.75～2.4
Material 材　質	Silicon シリコン
Color 色　相	Blue 青



(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。

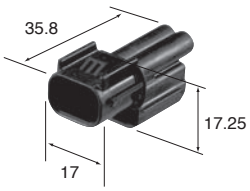
1.5mm (060)

Housing (UNIT : mm)

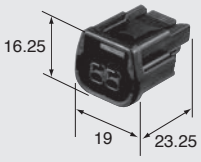
Ref: Terminal part No. ターミナル参照頁	E-14
Ref: wire seal No. ワイヤシール参照頁	E-14
Ref: Dummy plug No. ダミー栓参照頁	J-07
Material 材　質	PBT

2way

Color 色　相	Black 黒



M (6181-6851)

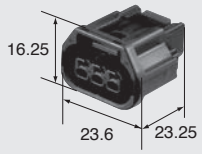


F (6189-7408)

Color 色　相	Black 黒

3way

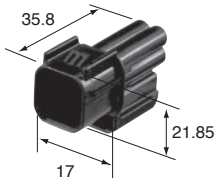
F (6189-7494)



Color 色 相	Black 黒

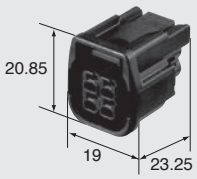
4way

Color 色 相	Black 黒



M (6181-6783)

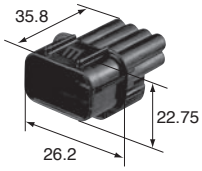
F (6189-7409)



Color 色 相	Black 黒

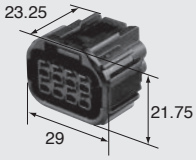
8way

Color 色 相	Black 黒



M (6181-6850)

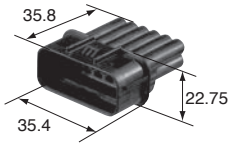
F (6189-7423)



Color 色 相	Black 黒

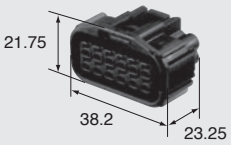
12way

Color 色 相	Black 黒



M (6181-6784)

F (6189-7410)

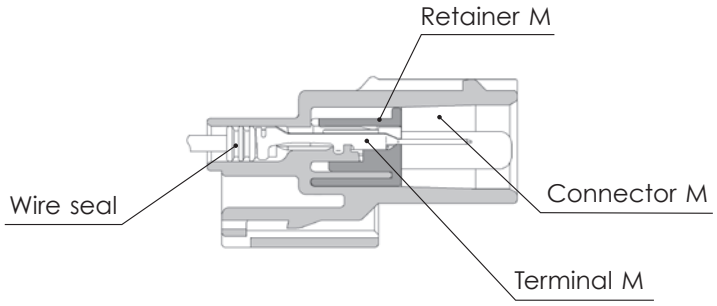


Color 色 相	Black 黒

HX SEALED SERIES for STANDARD

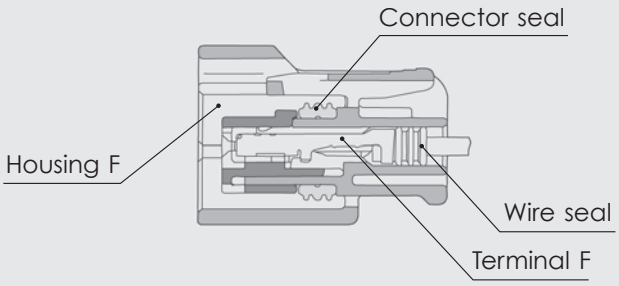
2.3mm（090）

Structure／構造



Connector M

Connector F



2.3mm（090）

Terminal（UNIT : mm）

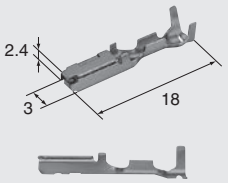
Ref; 2.3mm Terminal detail
2.3mmターミナル参照頁

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

（S）

F（8240-4862）

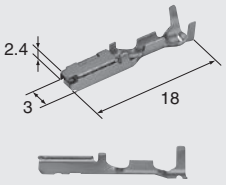
Cable size（mm²） 適用電線サイズ	0.3～0.5
Cable overall diameter（mm） 電線仕上り外径	1.4～2.4
Material 材　質	Heat-resistant copper alloy
Surface treatment 表面処理	Tin-plated Snメッキ



(M)

F (8240-4992)

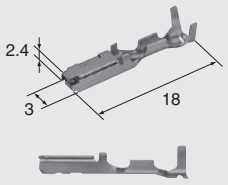
Cable size (mm²) 適用電線サイズ	0.75～0.85
Cable overall diameter (mm) 電線仕上り外径	1.8～2.6
Material 材　質	Heat-resistant copper alloy
Surface treatment 表面処理	Tin-plated Snメッキ



(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)

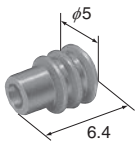
The wire seals are common to M and F.

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。

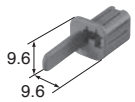
2.3mm (090)

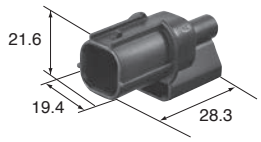
Housing (UNIT : mm)

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

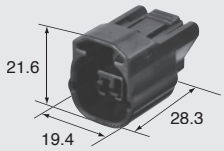
Color 色　相	Black 黒



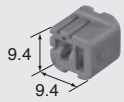


Retainer No. (6918-2665)

M (6181-0803)



F (6189-0591)

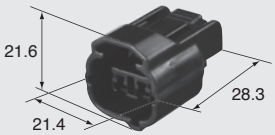


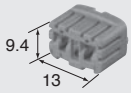
Retainer No. (6918-1370)

Color 色　相	Black 黒

2way

F (6189-0552)





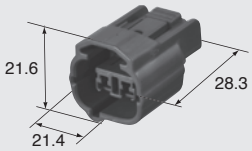
Retainer No. (6918-1260)

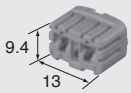
Note)

Color 色　相	Black 黒

2way (Rib difference) (リブ違)

F (6189-0593)





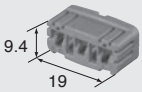
Retainer No. (6918-1260)

Note)

Color 色　相	Brown 茶

3way

F (6189-0596)



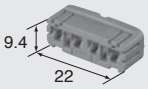
Retainer No. (6918-1371)

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）

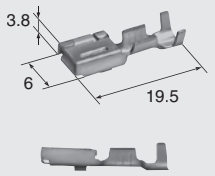
Ref; 4.8mm Terminal detail
4.8mmターミナル参照頁

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

（S）

F（8100-0661）

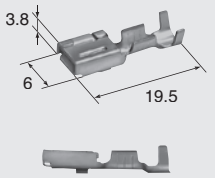
Cable size（mm²） **適用電線サイズ**	0.3～0.5
Cable overall diameter（mm） **電線仕上り外径**	1.4～2.4
Material **材　質**	Heat-resistant copper alloy
Surface treatment **表面処理**	Tin-plated Snメッキ



（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



4.8mm（187）

Wire seals（UNIT : mm）

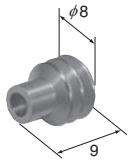
The wire seals are common to M and F.

ワイヤシールはM、F共用です。

（S）　for 2.3mm, 4.8mm 10way

（7165-0172）

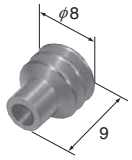
Cable size（mm²） **適用電線サイズ**	(AVS/0.3) (AVSS/0.3～0.85) (AVSSX/0.5～0.75)
Cable overall diameter（mm） **電線仕上り外径**	1.4～1.9
Material **材　質**	NBR
Color **色　相**	Brown 茶



（M）　for 2.3mm, 4.8mm 10way

（7165-0130）

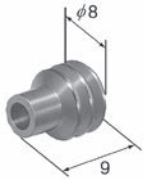
Cable size（mm²） **適用電線サイズ**	(AV/0.5～1.25) (AVX/0.5～1.25) (AVS/0.3～1.25) (AVSS/0.85～2.0) (AVSSX/0.75～2.0)
Cable overall diameter（mm） **電線仕上り外径**	1.8～2.9
Material **材　質**	NBR
Color **色　相**	Gray 灰



(L) for 2.3mm, 4.8mm 10way

(7165-0131)

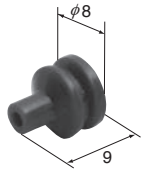
Cable size (mm²) **適用電線サイズ**	(AV/2.0～3.0) (AVX/2.0～3.0) (AVS/2.0～3.0)
Cable overall diameter (mm) **電線仕上り外径**	3.0～4.1
Material **材　質**	NBR
Color **色　相**	Black 黒



(M) for 1.0mm, 4.8mm 13way

(7165-0147)

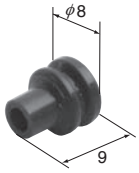
Cable size (mm²) **適用電線サイズ**	(AVS/0.3～1.25)
Cable overall diameter (mm) **電線仕上り外径**	1.8～2.9
Material **材　質**	Silicon シリコン
Color **色　相**	Dark Green 濃緑



(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)

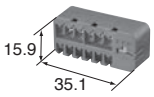
Housing (UNIT : mm)

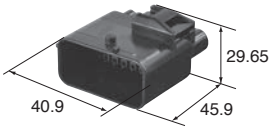
Ref: Terminal part No. **ターミナル参照頁**	[1.0mm] [4.8mm]	E-02 E-20
Ref: wire seal No. **ワイヤシール参照頁**	[1.0mm] [4.8mm]	E-03 E-21
Ref: Dummy plug No. **ダミー栓参照頁**	[1.0mm] [4.8mm]	E-04 B-21
Material **材　質**	PBT	

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)

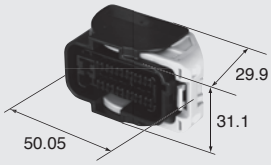
Color **色　相**	Black 黒



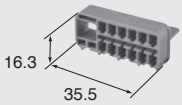


Retainer No. (6181-6465)

M (6181-6464)



F (6189-6863)



Retainer No. (6185-4596)

Color **色　相**	Black 黒

1.5mm, 4.8mm (060, 187)

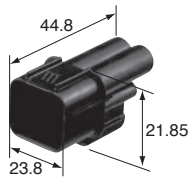
Housing (UNIT : mm)

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	

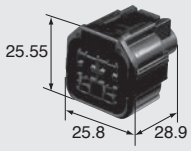
No. of way/ ( ) corresponds to 1.5mm, 4.8mm, in order from left to right.
極数／( ) 内表示：左から1.5mm 極数、4.8mm 極数

4way (2+2)

Color **色　相**	Black 黒



M (6181-6785)

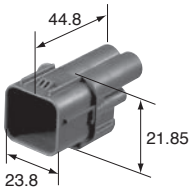


F (6189-7411)

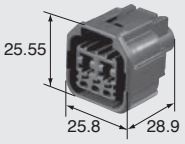
Color **色　相**	Black 黒

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)

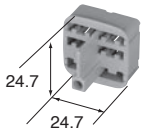
Housing (UNIT : mm)

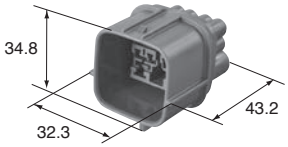
Ref: Terminal part No. **ターミナル参照頁**	[2.3mm] [4.8mm]	E-17 E-20
Ref: wire seal No. **ワイヤシール参照頁**	[2.3mm] [4.8mm]	E-18 E-21
Ref: Dummy plug No. **ダミー栓参照頁**	[2.3mm] [4.8mm]	J-07 B-21
Material **材　質**	PBT	

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)

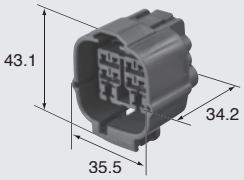
Color **色　相**	Dark gray 濃灰



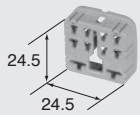


Retainer No. (6918-1263)

M (6181-0381)



F (6189-0555)



Retainer No. (6918-1267)

Color **色　相**	Dark gray 濃灰