

Introduction



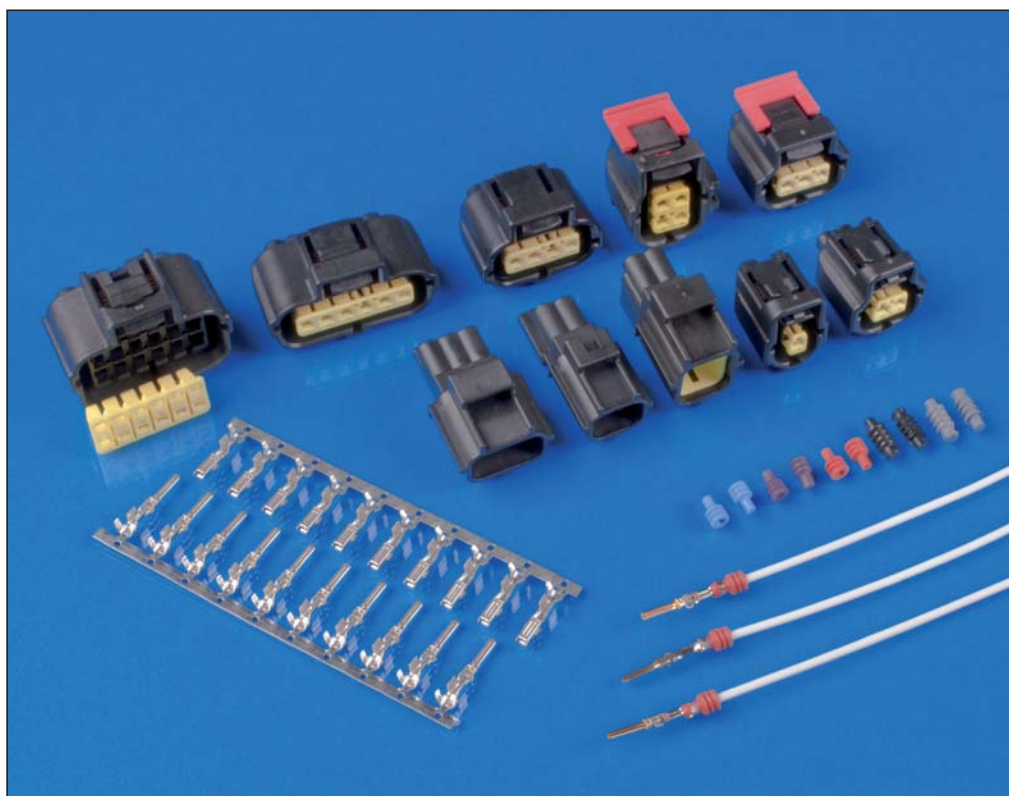
Product Features

- Robust housing, glass filled PBT for high temperature applications
- Terminal Position Assurance (TPA) to assure proper position of contact in housing
- Damage protected internal silicone seal interface
- Industry common .070 series receptacle and tab available in gold or tin plate
- High density 5 mm centerline spacing
- Audible “Click” during mating
- Multiple positions available
- Multiple keying and housing colors available

Technical Documents

Product Specification:
108-1790

Application Specification:
114-8004



The Sealed Sensor Connector (SSC) System has been developed to meet the severe requirements of the automotive under hood environment.

Additionally, the system’s waterproof and high temperature capabilities make it ideal for many different severe environmental applications.

Both the wire seal and the connector seal ring are made of high temperature silicone and have 3 sealing ridges on their external circumferences for effective sealing and ease of assembly and connector mating.

Wire sealing is achieved by means of an individual wire seal which is inserted on the wire and crimped in the insulation support of the contact simultaneously with the wire. Interfacial sealing is achieved with a pre-assembled seal ring located in the plug assembly.

Another important feature of the plug assembly is the yellow double-lock plate. This pre-assembled plate is shipped in the “open” position and once closed provides additional retention of the contact in the housing as well as helping to detect contacts which are not fully seated.

Also, when mating, the SSC Housing provides an audible “click” to indicate proper connector mating. For applications where more than one connector is required, various keying and colors are available.

The contact used in the system is an industry standard .070 tab and receptacle and comes in tin or gold platings.

Performance Specifications:

Resistance:
3 mΩ max. (initial)
10 mΩ max. (final)

Insulation Resistance:
100 mΩ max. (initial)

Dielectric Strength:
1.0 K Vac

Sealing:
7 Psi initial
4 Psi after heat age
Conforms to IEC 529 I.P. 65/67 standard

Temperature Range:
Nylon Housings: –40 °C to +150 °C
PBT Housings: –40 °C to +125 °C

| Current Rating: | Size (AWG) | Rated Current |
|-----------------|------------|---------------|
| | 20 | 10 Amps |
| | 18 | 11 Amps |
| | 16 | 13 Amps |
| | 14 | 17 Amps |

Receptacle Contact

Technical Features

Insertion Force:

USCAR 5.3.2 (8/97)

Vibration (per USCAR):

USCAR 5.4.5 (Rev. 4/01)
Random Vibration Profile

Dry Circuit Resistance:

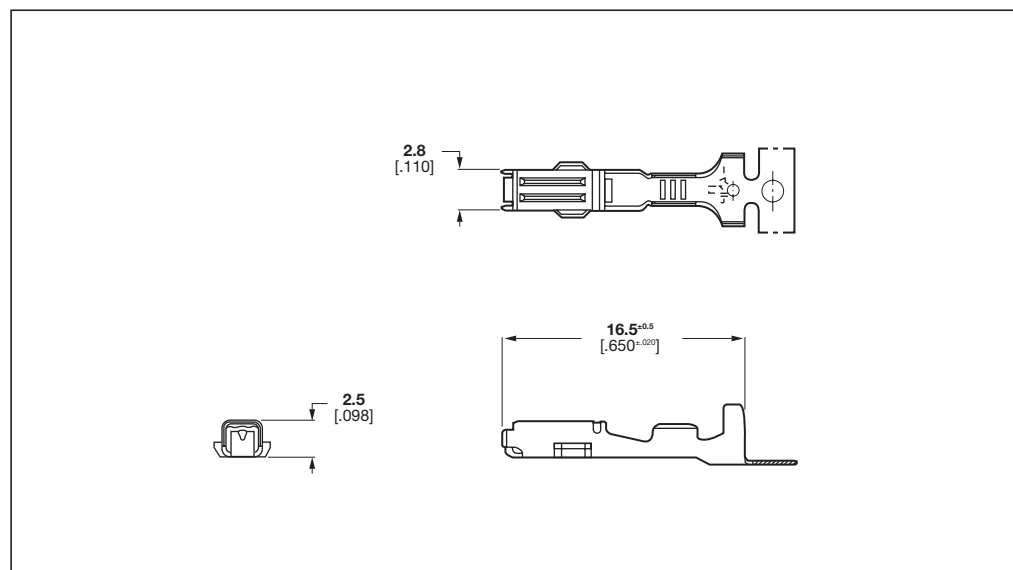
≤ 20 milliohms final for crimp
and interface per USCAR 5.3.1
(Rev. 4/01)

Isolation Resistance:

> 20 Mega-ohms @ 500 V DC
per USCAR 5.3.2 (Rev. 8/97)

Extraction Tool:

Ref. application specification:
114-8004



Receptacle Contacts

| Wire Size Range | | Wire Insulation Diameter (mm) | Material and Finish | Part Numbers | | | | Applicator | Hand Tool |
|--------------------|---------|----------------------------------|--|--------------|------------------|-------------|------------------|------------|-----------|
| (mm ²) | (AWG) | | | Strip Form | Package Quantity | Loose-Piece | Package Quantity | | |
| 0.5–2.0 | (20–14) | 1.2–2.7 | Phosphor bronze, pre-tin plated | 184030-3 | – | – | – | 680114-2 | 755262-1 |
| | | | Phosphor bronze, selective gold plated | 184030-1 | – | – | – | – | – |
| 0.5–1.0 | (22–18) | 1.2–2.1 | Phosphor bronze, selective gold plated | 184095-1 | – | – | – | 680143-2 | – |
| | | | Phosphor bronze, pre-tin plated | 184095-2 | – | – | – | – | – |

Note: All Part Numbers are RoHS and ELV compliant.

Due to part number availability, please contact Tyco Electronics before ordering.

Tab Contact and Wire Seal Crimp

Technical Features

Insertion Force:

USCAR 5.3.2 (8/97)

Vibration (per USCAR):

USCAR 5.4.5 (Rev. 4/01)
Random Vibration Profile

Dry Circuit Resistance:

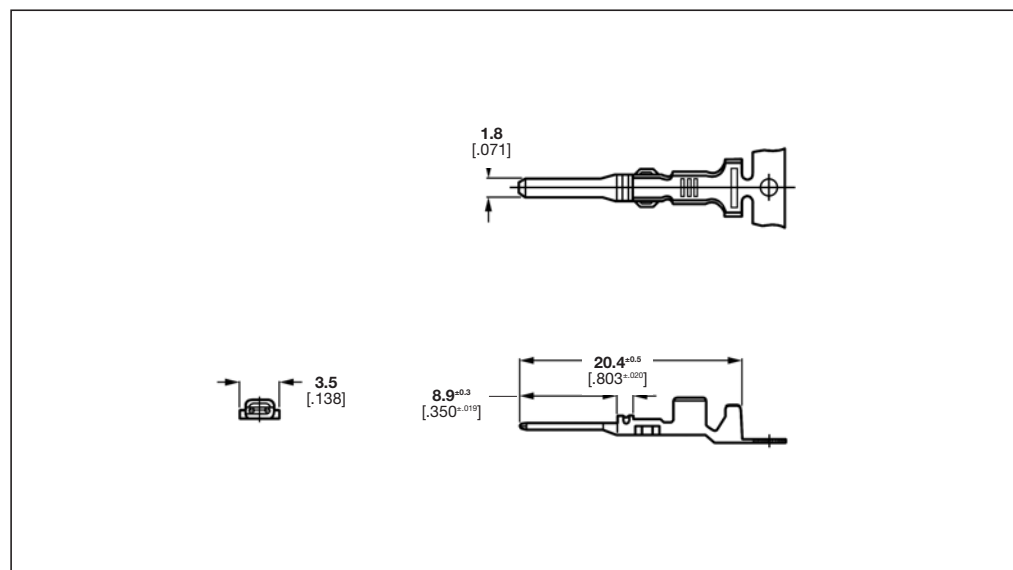
≤ 20 milliohms final for crimp
and interface per USCAR 5.3.1
(Rev. 4/01)

Isolation Resistance:

> 20 Mega-ohms @ 500 V DC
per USCAR 5.3.2 (Rev. 8/97)

Extraction Tool:

Ref. application specification:
114-8004

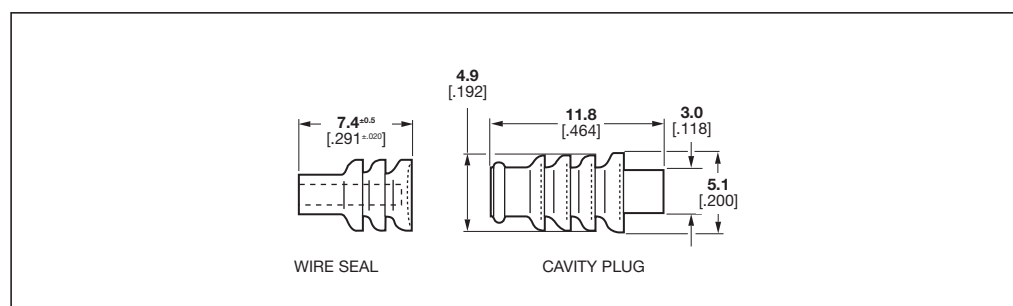


Tab Contacts

| Wire Size Range | | Wire Insulation Diameter | Material and Finish | Part Numbers | | | | Applicator | Hand Tool |
|--------------------|---------|--------------------------|------------------------------|--------------|------------------|-------------|------------------|------------|-----------|
| (mm ²) | (AWG) | (mm) | | Strip Form | Package Quantity | Loose-Piece | Package Quantity | | |
| 0.5–1.0 | (20–16) | 1.20–2.70 | Brass, pre-tin plated | 171661-1 | – | – | – | 567266-2 | 755241-1 |
| | | | Brass, selective gold plated | 171661-2 | – | – | – | – | – |
| 0.2–0.6 | (24–20) | 1.40–2.41 | Brass, pre-tin plated | 171631-1 | – | – | – | – | – |
| | | | Brass, selective gold plated | 171631-2 | – | – | – | – | – |

Note: All Part Numbers are RoHS and ELV compliant.

Wire Seal Crimp with Contact



| Description | Insulation Diameter (mm) | Material and Color | Part Number | Package Quantity |
|---------------------------------|--------------------------|--------------------|-------------|------------------|
| Wire Seal Crimp with Contact | 1.2–1.7 | Silicone (Blue) | 184139-1 | – |
| | 1.6–2.1 | Silicone (Orange) | 184140-1 | – |
| | 2.2–2.7 | Silicone (Purple) | 184141-1 | – |
| Cavity Plug for Unloaded Cavity | – | NBR (Black) | 172748-1 | – |
| | | NBR (Gray) | 172748-2 | – |

Note: All Part Numbers are RoHS and ELV compliant.

Due to part number availability, please contact Tyco Electronics before ordering.

Sealed Sensor Connector (SSC) System

Technical Features

No. of Positions:

1 Position

Housing Material:

Glass-filled PBT

Wire Size Range:

0.30–2.0 mm² (22–14 AWG)

Product Specification:

108-1790

Reduction Coefficient:

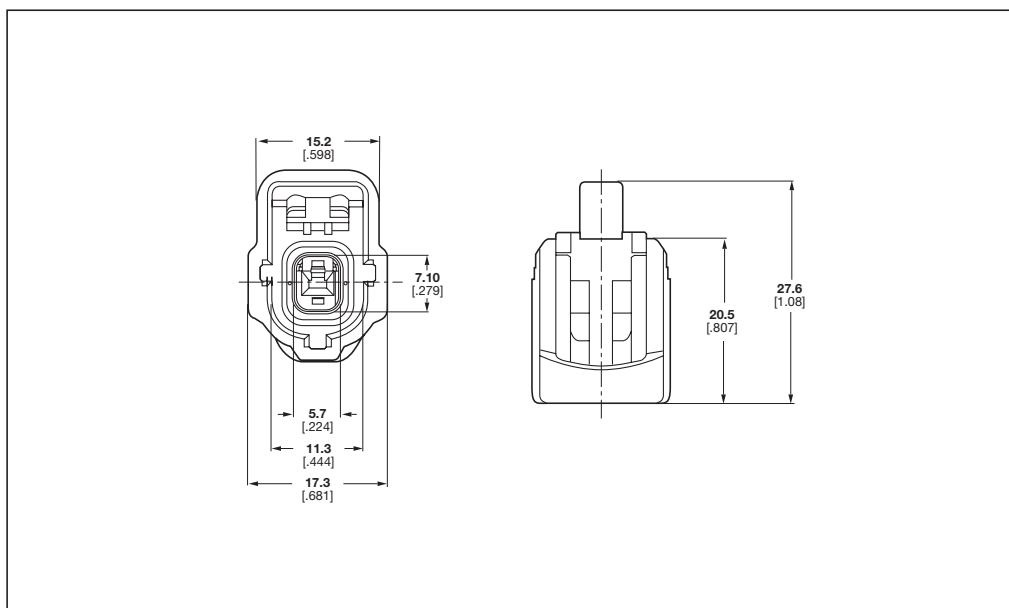
1

Application Specification:

114-8004

Keying Options:

See page 18-6



| No. of Positions | Keying Options | Housing Color | Part Numbers | | | | | |
|------------------|----------------|----------------|---------------|-------------|----------------|-----------------|-------------------------------|----------|
| | | | Plug Assembly | Cap Housing | Locking Device | Cover and Lever | Mating PCB Header Right-Angle | Vertical |
| 1 | A | Black | 184042-1 | | | | | |
| | | Black, Natural | 184042-2 | | | | | |
| | B | Black | 184240-1 | | | | | |
| | C | Gray | 184294-1 | | | | | |

Note: All Part Numbers are RoHS and ELV compliant. Assembly includes: Housing, Housing Seal and Double Lock Plate.

Due to part number availability, please contact Tyco Electronics before ordering.

Sealed Sensor Connector (SSC) System

Technical Features

No. of Positions:

2 Positions

Housing Material:

Glass-filled PBT

Wire Size Range:

0.30–2.0 mm² (22–14 AWG)

Product Specification:

108-1790

Reduction Coefficient:

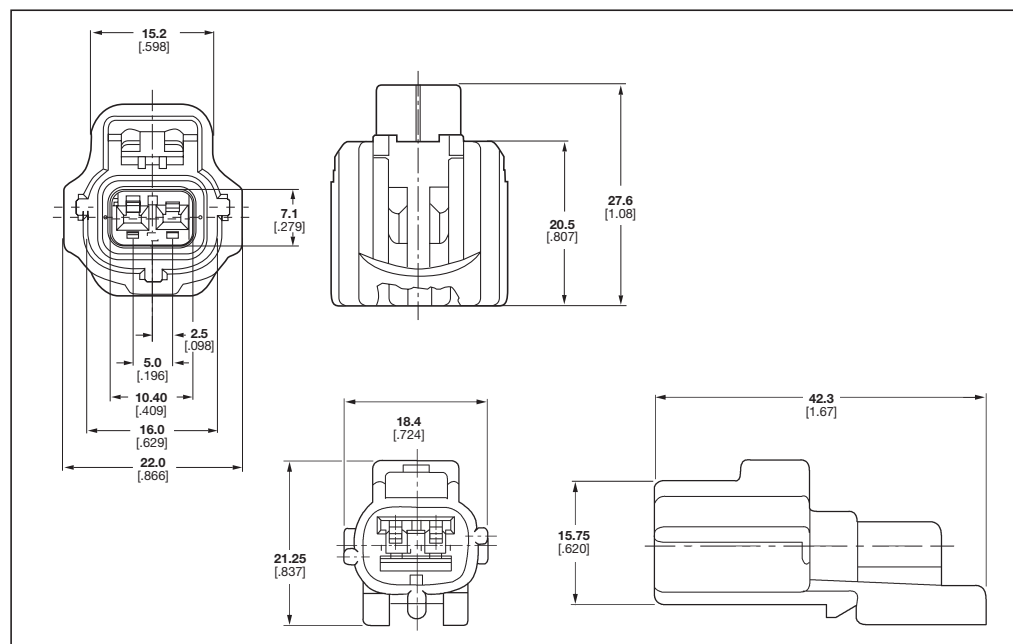
0.75

Application Specification:

114-8004

Keying Options:

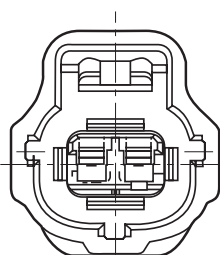
See page 18-6



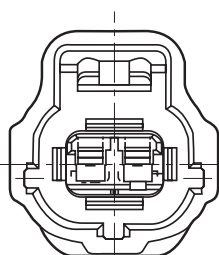
| No. of Positions | Keying Options | Housing Color | Part Numbers | | | | | |
|--|----------------|----------------------------|----------------------------------|-------------|----------------|-----------------|-------------------------------|----------|
| | | | Plug Assembly | Cap Housing | Locking Device | Cover and Lever | Mating PCB Header Right-Angle | Vertical |
| 2 | A | Black | 184000-1 184212-1 | 184163-1 | – | – | – | – |
| | A | Natural | 184000-3 | | – | – | – | – |
| | B | Black | 184214-1 | 184164-1 | | | | |
| | B | Gray | 184002-1 | | – | – | – | – |
| | C | Black | 184004-1 184216-1 | 184165-1 | – | – | – | – |
| | D | Black | 184218-1 | 184166-1 | | | | |
| | D | Green | 184006-1 | | – | – | – | – |
| | D | Gray | 184006-2 | | – | – | – | – |
| | E | Black | 184008-1 184220-1 | 184167-1 | – | – | – | – |
| | E | Gray | 184008-2 | | | | | |
| | F | Black | 184010-1 184222-1 | 184168-1 | – | – | – | – |
| | G | Black | 184224-1 | | | | | |
| | G | Gray | 184012-1 | 184169-1 | – | – | – | – |
| | H | Black | 184014-1 184116-2 184226-1 | 184170-1 | | | | |
| | H | Green | 184014-2 | | | | | |
| | H | Brown | 184014-3 184116-1 | | | | | |
| | J | Black | 184016-1 184207-1 | 184171-1 | | | | |
| | K | Black | 184018-1 184228-1 | 184172-1 | | | | |
| | L | Black | 184230-1 | | | | | |
| | L | Natural | 184020-1 | 184173-1 | | | | |
| | M | Black | 184022-1 184232-1 | 184174-1 | | | | |
| | H | Brown – Circuit #2 Blocked | 184116-1 | | | | | |
| Yellow – Required for all 2 pos. receptacle housings | | | | | 184175-1 | | | |

Note: All Part Numbers are RoHS and ELV compliant. Assembly includes: Housing, Housing Seal and Double Lock Plate. Due to part number availability, please contact Tyco Electronics before ordering.

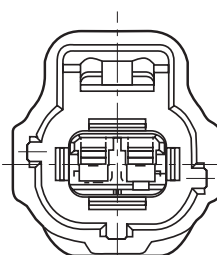
Keying Options



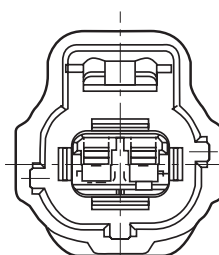
184000-1
BLACK, KEY A



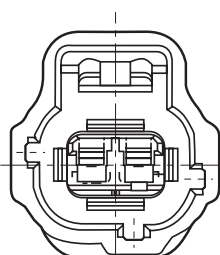
184002-1
GRAY, KEY B



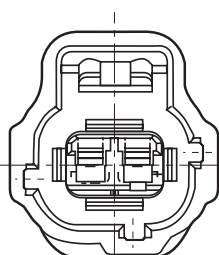
184004-1
BLACK, KEY C



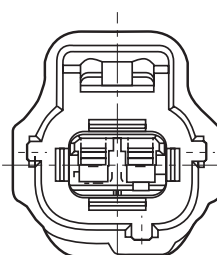
184006-1
GREEN, KEY D



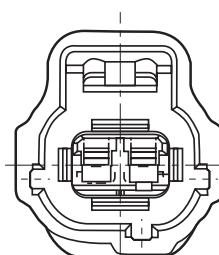
184008-1
BLACK, KEY E



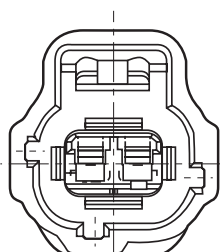
184010-1
BLACK, KEY F



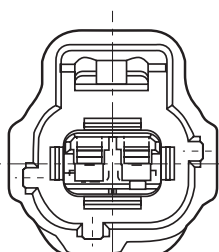
184012-1
GRAY, KEY G



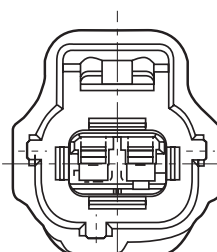
184014-1
BLACK, KEY H
184014-2
GREEN, KEY H
184014-3
BROWN, KEY H



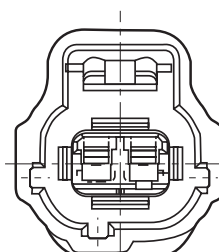
184016-1
BLACK, KEY J



184018-1
BLACK, KEY K



184020-1
NATURAL, KEY L



184022-1
BLACK, KEY M

Due to part number availability, please contact Tyco Electronics before ordering.

Sealed Sensor Connector (SSC) System

Technical Features

No. of Positions:

3 Positions

Housing Material:

Glass-filled PBT

Wire Size Range:

0.30–2.0 mm² (22–14 AWG)

Product Specification:

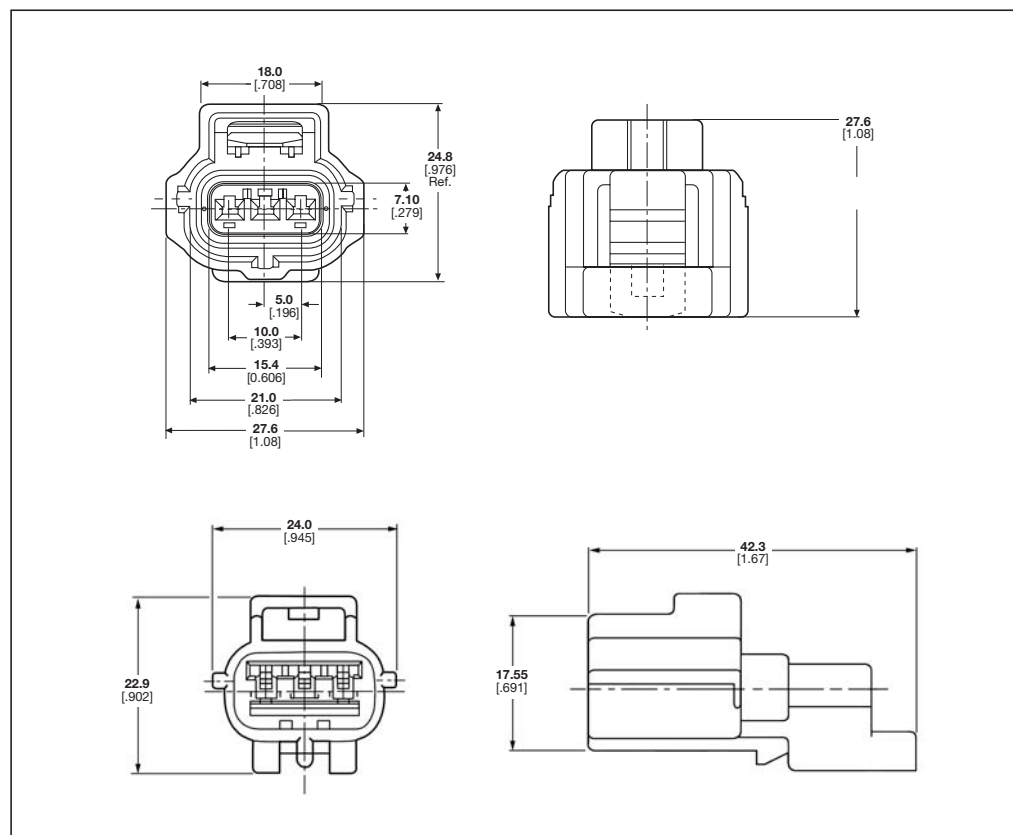
108-1790

Reduction Coefficient:

0.75

Application Specification:

114-8004



| No. of Positions | Keying Options | Housing Color | Part Numbers | | | | | |
|------------------|----------------|--|----------------------------------|-------------|----------------|-----------------|-------------------------------|----------|
| | | | Plug Assembly | Cap Housing | Locking Device | Cover and Lever | Mating PCB Header Right-Angle | Vertical |
| 3 | A | Black | 184032-1 184270-1 | 184192-1 | – | – | – | – |
| 3 | A | Black Circuit #2 Blocked | 184292-1 | | – | – | – | – |
| 3 | A | Black Circuit #3 Blocked | 184311-1 | | – | – | – | – |
| 3 | A | Gray | 184292-2 184435-1 | | | | | |
| 3 | B | Black | 184034-1 184271-1 184315-1 | 184193-1 | – | – | – | – |
| 3 | C | Black | 184036-1 184272-1 | 184194-1 | – | – | – | – |
| 3 | D | Black | 184038-1 184273-1 | 184195-1 | – | – | – | – |
| 3 | | Yellow Required for all 3 pos. receptacle housings | | | 184196-1 | | | |

Note: All Part Numbers are RoHS and ELV compliant.

Due to part number availability, please contact Tyco Electronics before ordering.

Sealed Sensor Connector (SSC) System

Technical Features

No. of Positions:

4 Positions

Housing Material:

Glass-filled PBT

Wire Size Range:

0.30–2.0 mm² (22–14 AWG)

Product Specification:

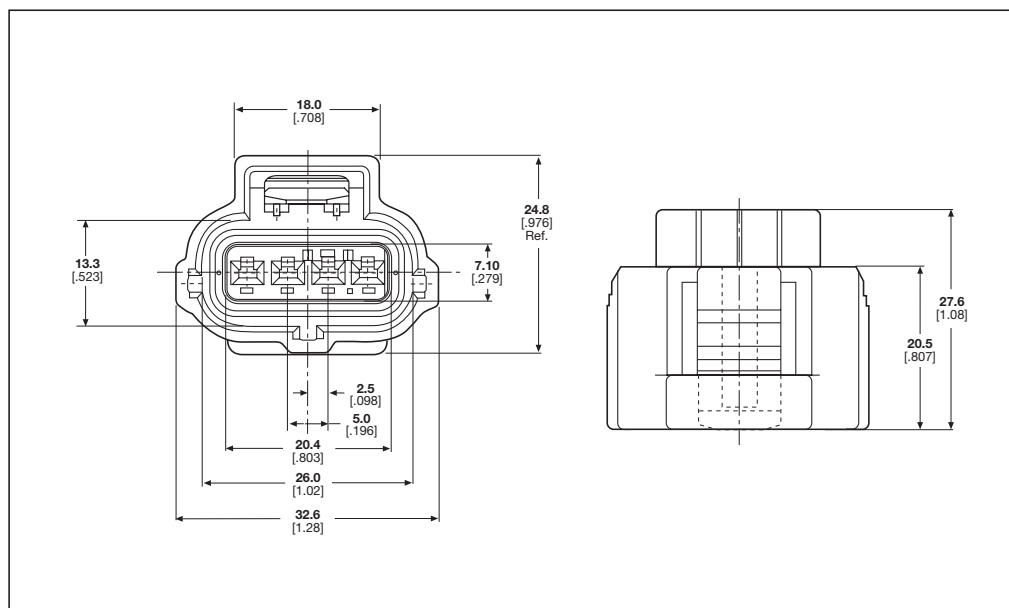
108-1790

Reduction Coefficient:

0.6

Application Specification:

114-8004



| No. of Positions | Keying Options | Housing Color | Part Numbers | | | | | |
|------------------|----------------|---------------|---------------|-------------|----------------|-----------------|-------------------------------|----------|
| | | | Plug Assembly | Cap Housing | Locking Device | Cover and Lever | Mating PCB Header Right-Angle | Vertical |
| 4 | A | Black | 184046-1 | – | – | – | – | – |
| | | | 184149-1 | – | – | – | – | – |
| | B | Black | 184048-1 | – | – | – | – | – |
| | | | 184274-1 | – | – | – | – | – |
| | C | Black | 184050-1 | – | – | – | – | – |
| | | | 184275-1 | – | – | – | – | – |
| | | Gray | 184050-2 | – | – | – | – | – |
| | | | 184275-2 | – | – | – | – | – |
| | D | Black | 184052-1 | – | – | – | – | – |
| | | | 184276-1 | – | – | – | – | – |

Note: All Part Numbers are RoHS and ELV compliant.

Due to part number availability, please contact Tyco Electronics before ordering.

Sealed Sensor Connector (SSC) System

Technical Features

No. of Positions:

4 Positions (2 x 2)

Housing Material:

Glass-filled PBT

Wire Size Range:

0.30–2.0 mm² (22–14 AWG)

Product Specification:

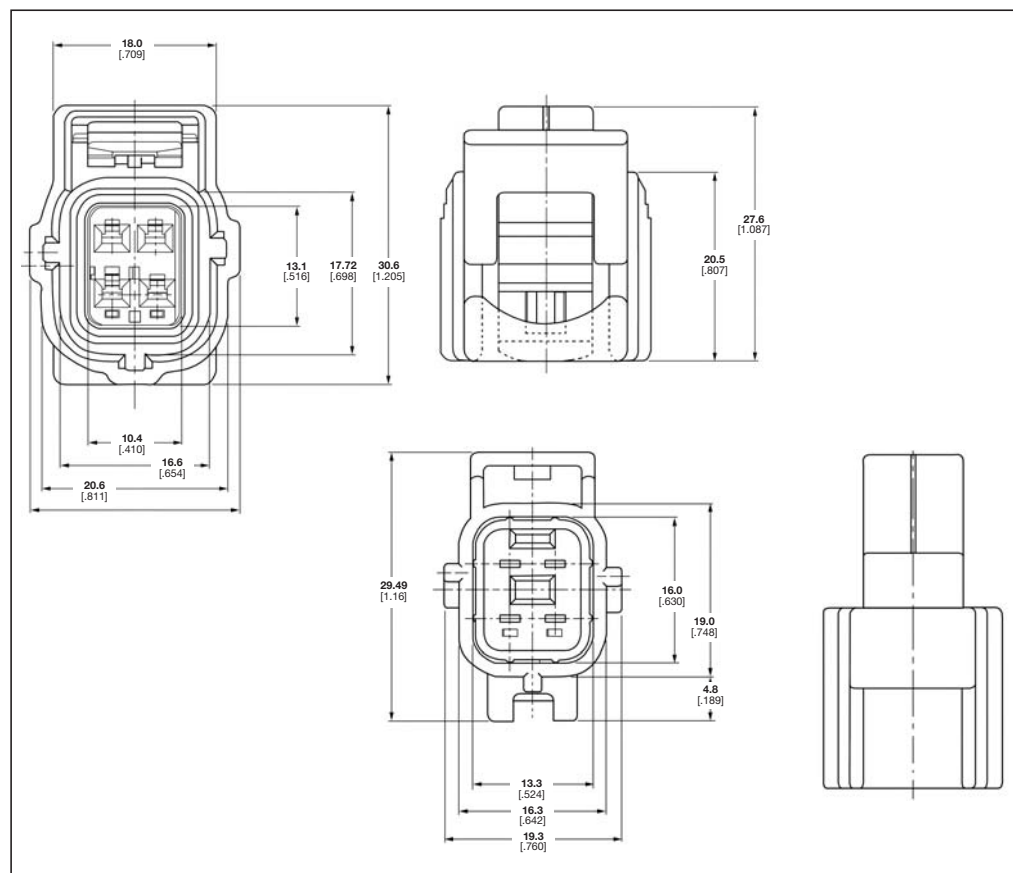
108-1790

Reduction Coefficient:

0.6

Application Specification:

114-8004



| No. of Positions | Keying Options | Housing Color | Part Numbers | | | | | |
|------------------|----------------|----------------------------|---------------|-------------|----------------|-----------------|-------------------------------|----------|
| | | | Plug Assembly | Cap Housing | Locking Device | Cover and Lever | Mating PCB Header Right-Angle | Vertical |
| 2 x 2 | A | Black | 184244-1 | | | | | |
| | | | 184386-1 | | | | | |
| | | | 184248-1 | 184246-1 | | | | |
| | | | 184378-1 | | | | | |
| | | | 184366-1 | | | | | |
| | | | 184394-1 | | | | | |
| | | | 184344-1 | | | | | |
| | | | 184392-1 | | | | | |
| | | | 184370-1 | | | | | |
| | | | 184391-1 | | | | | |
| 2 x 2 | A | Black – Circuit #4 Blocked | 184340-1 | | | | | |
| | | | 184389-1 | | | | | |
| | | | 184443-1 | | | | | |
| 2 x 2 | B | Black | 184252-1 | | | | | |
| | | | 184387-1 | | | | | |
| | | | 184250-1 | | | | | |
| | | | 184379-1 | | | | | |
| | | | 184368-1 | | | | | |
| | | | 184395-1 | | | | | |
| | | | 184349-1 | | | | | |
| | | | 184393-1 | | | | | |
| 2 x 2 | B | Gray | 184393-2 | | | | | |
| 2 x 2 | B | Black – Circuit #4 Blocked | 184284-1 | | | | | |

Note: All Part Numbers are RoHS and ELV compliant.

Due to part number availability, please contact Tyco Electronics before ordering.

Sealed Sensor Connector (SSC) System (continued)

| No. of Positions | Keying Options | Housing Color | Part Numbers | | | | |
|------------------|----------------|---------------|--|-------------|----------------|-----------------|---|
| | | | Plug Assembly | Cap Housing | Locking Device | Cover and Lever | Mating PCB Header Right-Angle Vertical |
| 2 x 2 | C | Black | 184297-1 184388-1 184301-1 184380-1 184351-1 184396-1 | | | | |
| 2 x 2 | C | Natural | 184301-2 184380-2 184396-2 | | | | |
| 2 x 2 | D | Black | 184299-1 184390-1 184303-1 184381-1 184353-1 184397-1 | | | | |
| 2 x 2 | D | Natural | 184303-2 184381-2 184396-2 | | | | |
| 2 x 2 | E | Black | 184320-1 184382-1 184398-1 | | | | |
| 2 x 2 | F | Black | 184322-1 184383-1 184399-1 | | | | |
| 2 x 2 | G | Gray | 184324-2 184384-2 184400-2 | | | | |
| 2 x 2 | G | Natural | 184324-1 184384-1 184400-1 | | | | |
| 2 x 2 | H | Gray | 184326-2 184385-2 184401-2 | | | | |
| 2 x 2 | H | Natural | 184326-1 184385-1 184401-1 | | | | |

Note: All Part Numbers are RoHS and ELV compliant.

Due to part number availability, please contact Tyco Electronics before ordering.

Sealed Sensor Connector (SSC) System

Technical Features

No. of Positions:

6 Positions

Housing Material:

Glass-filled PBT

Wire Size Range:

0.30–2.0 mm² (22–14 AWG)

Product Specification:

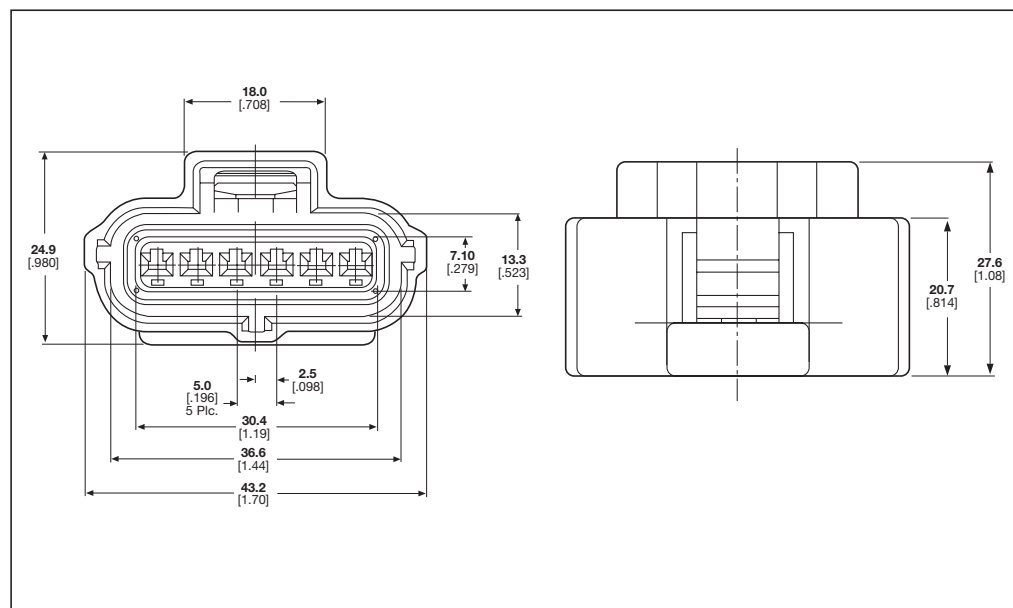
108-1790

Reduction Coefficient:

0.55

Application Specification:

114-8004



| No. of Positions | Keying Options | Housing Color | Part Numbers | | | | | |
|------------------|----------------|---------------------------------|----------------------|-------------|----------------|-----------------|-------------------------------|----------|
| | | | Plug Assembly | Cap Housing | Locking Device | Cover and Lever | Mating PCB Header Right-Angle | Vertical |
| 6 | A | Black | 184060-1 | – | – | – | – | – |
| | A | Black – Circuits #1 & 6 Blocked | 184026-1 | – | – | – | – | – |
| | A | Black – Circuit #6 Blocked | 184313-1 | – | – | – | – | – |
| | A | Black – Circuit #4 Blocked | 184318-1 (obs) | – | – | – | – | – |
| | A | Black – Circuits #3 & 6 Blocked | 184452-1 | – | – | – | – | – |
| | A | Black – Circuit #3 Blocked | 184372-1 184341-1 | – | – | – | – | – |
| | B | Black | 184124-1 | – | – | – | – | – |
| | B | Black – Circuits #1 & 6 Blocked | 184132-1 | – | – | – | – | – |
| | C | Black | 184126-1 | – | – | – | – | – |
| | C | Black – Circuits #1 & 6 Blocked | 184134-1 | – | – | – | – | – |
| | D | Black | 184128-1 | – | – | – | – | – |
| | D | Black – Circuits #1 & 6 Blocked | 184136-1 | – | – | – | – | – |

Note: All Part Numbers are RoHS and ELV compliant.

Due to part number availability, please contact Tyco Electronics before ordering.

Sealed Sensor Connector (SSC) System

Technical Features

No. of Positions:

12 Positions

Housing Material:

Glass-filled PBT

Wire Size Range:

0.30–2.0 mm² (22–14 AWG)

Product Specification:

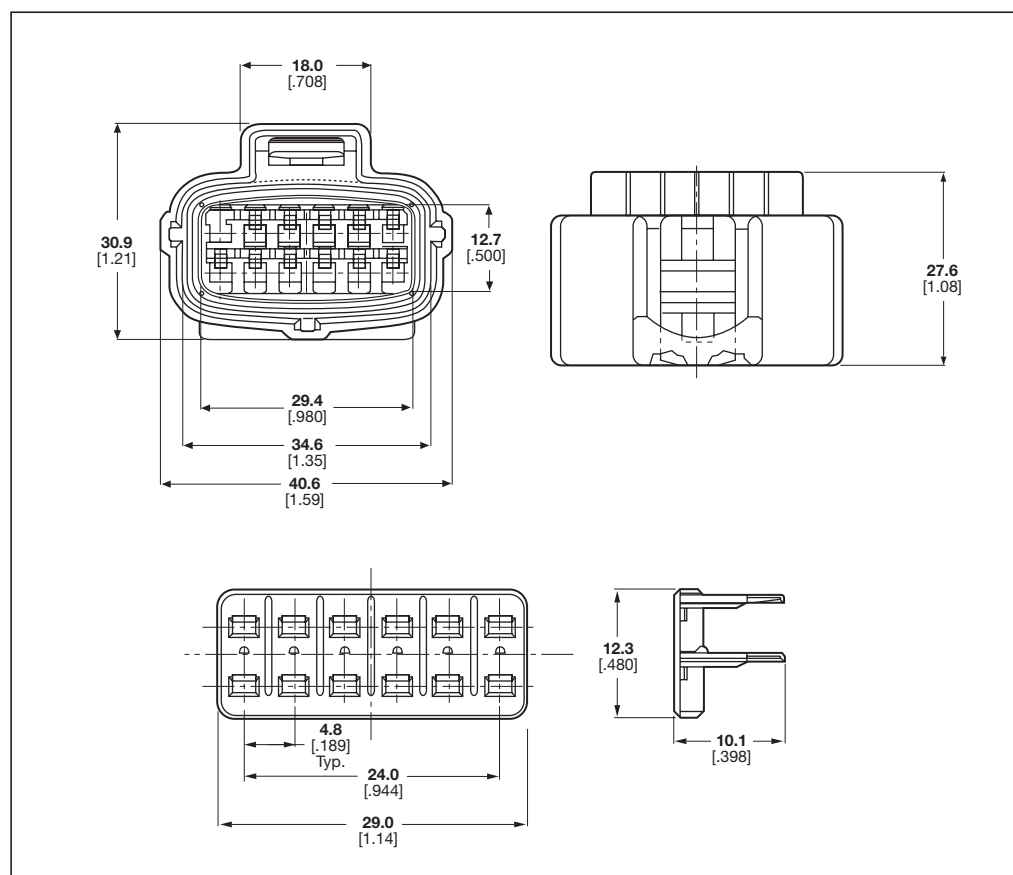
108-1790

Reduction Coefficient:

0.5

Application Specification:

114-8004



| No. of Positions | Keying Options | Housing Color | Part Numbers | | | | | |
|------------------|----------------|--|---------------|-------------|----------------|-----------------|-------------------------------|----------------------------|
| | | | Plug Assembly | Cap Housing | Locking Device | Cover and Lever | Mating PCB Header Right-Angle | Mating PCB Header Vertical |
| 12 | A | Black | 184115-1 | | – | – | | |
| 12 | A | Black – Circuit #6 Blocked | 184056-1 | | – | – | – | |
| 12 | A | Black – Circuit #1 Blocked | 184097-1 | | | – | – | – |
| 12 | A | Black – Circuits #1, #7 and #8 Blocked | 184099-1 | – | – | – | | |
| 12 | A | Black – Circuits #1, #2, #3, #6, #7 and #8 Blocked | 184286-1 | | | – | – | – |
| 12 | A | Black – Circuits #1, #7, #8, #9, and #11 Blocked | 184291-1 | | | – | – | – |
| 12 | A | Black – Circuits #3, #5, #8, #9, and #11 Blocked | 184414-1 | | | – | – | – |
| 12 | A | Black – Circuits #1, #9, and #11 Blocked | 184455-1 | | | – | – | – |
| 12 | | Yellow | | | | 184058-1 | – | – |

Note: All Part Numbers are RoHS and ELV compliant.

Due to part number availability, please contact Tyco Electronics before ordering.