

Quick Mating

Range overview

SMS...PDH1/SMS...PDH3
Cable plug with strain relief hood



SMS...P1/SMS...PD3
Cable plug without strain relief hood



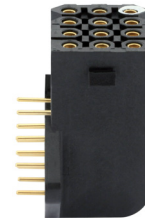
SMS...RDH1/SMS...RDH3
Cable receptacle with strain relief hood



SMS...GE3-GE4/SMS...SE3-SE4
SMS...GE33/SMS...GE43
Straight board mount



SMS...GE5-SE5/SMS...GE6-SE6
SMS...GE53/SMS...GE63
Right angle board mount



SMS...R1/ SMS...R3
Panel mount receptacle

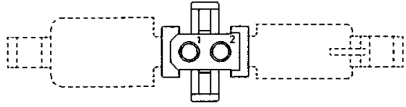


SMS...RD3
Cable receptacle without strain relief hood

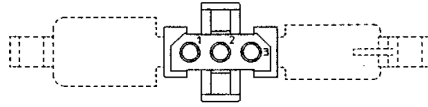


Contacts layout

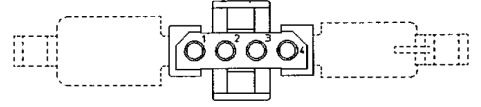
SMS 2



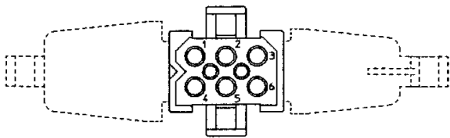
SMS 3



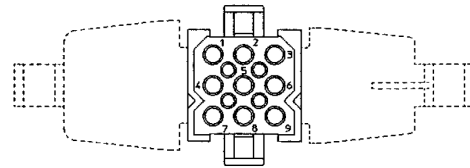
SMS 4



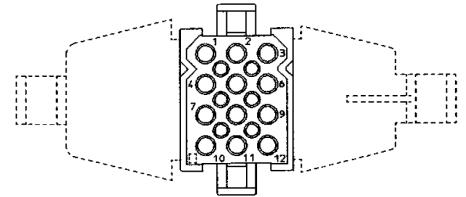
SMS 6



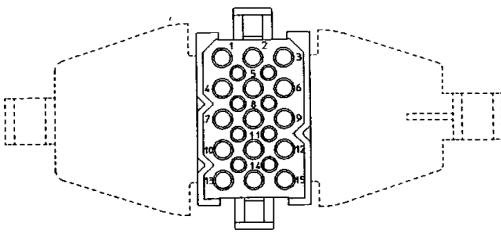
SMS 9



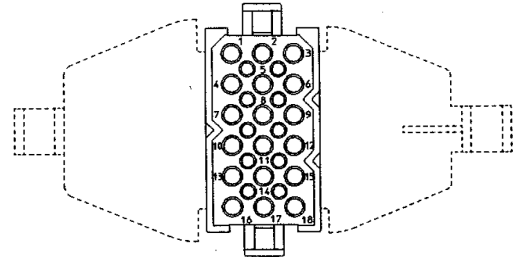
SMS 12



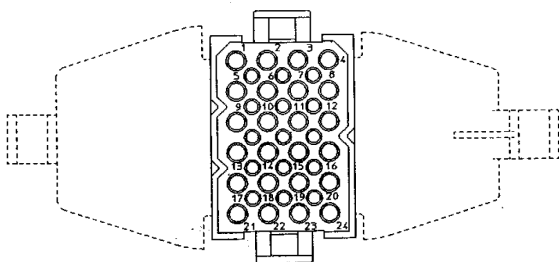
SMS 15



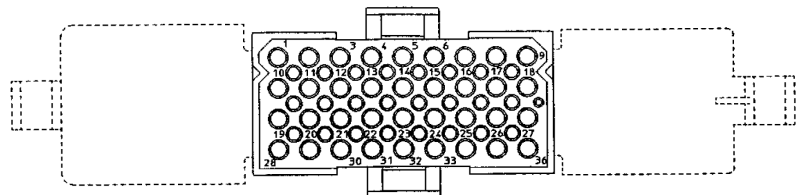
SMS 18



SMS 24



SMS 36



Contact identifications shown are for mating face. Contact identifications of wiring face are identical as shown on the receptacle arrangements

Quick Mating panel and cable connectors

Description

The versatile and easy to use “SMS” Quick Mating panel and cable connectors are a highly cost-effective system approach to solving the constant demand for more interconnection solutions and techniques.

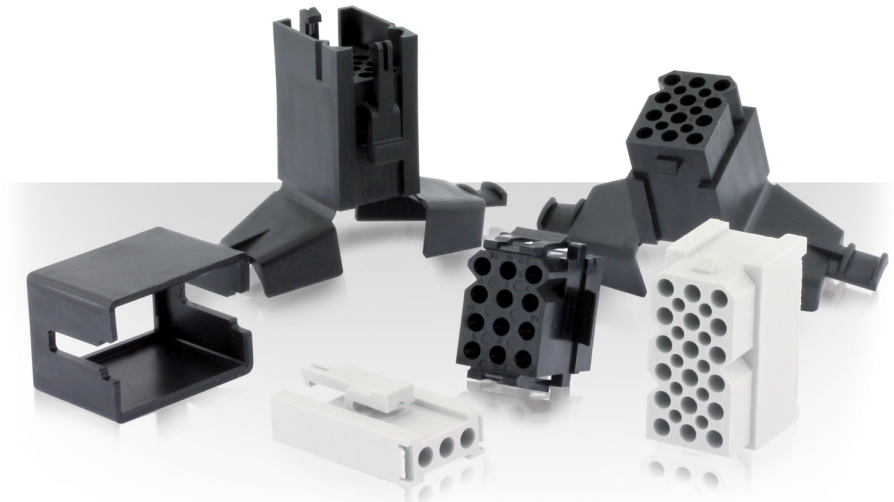
A full plastic solution offered in either Wire attachment or PCB mounting options to provide rapid assembly/installation without requiring additional mounting hardware. Panel receptacle connectors simply snap and lock into panel cut-outs and cable plugs quickly connect and disconnect with positive retention locks. Just push to mate then press and release to un-mate.

In addition, cable plug connectors also feature pin-protection skirts, positive polarization and are offered with or without integrated strain relief hoods. Cable receptacle connectors (with integrated strain relief hoods) are available to mate with the cable plug connectors for cable-to-cable solutions when needed.

These multi-way connectors accept the Size 16 TRIM TRIO (1.6mm) diameter contacts and are available with 10 contact arrangements from 2 to 36 positions.

Features and benefits

- Available in 10 contact arrangements
- Self mountable panel receptacle with positive housing retention
- Cable plugs with retaining latches for positive locking
- Cable plug has pin protection skirt to prevent damage of male contacts
- Positive polarization keys prevent mismatching
- Cable plug and receptacle have integrated strain relief hood which can accept a wide range of cables
- Cable plug and receptacle have discrimination cavities in between contact cavities, thus offering discrimination without contact loss. See instruction page 21.
- UL recognized File Nr.: E238675
- CSA certified File Nr.: LR44961-21



Environmental

- Operating temperature: -55°C to +105°C
- Insulation resistance: 5000 MΩ min.
- Test potential: 2000 VAC
- Durability: 500 matings and unmatings
- Sealing performances: IP40
- Electrical performances:
UL: 250V - 10A
CSA: 250V - 15A

Wire insulation acceptance

- SMS PDH1, RDH1, PD3, PDH3, RD3, RDH3 max: 3.2mm
- SMS R1, P1, R3 max: 4.19mm

Material

- Connector: Polyamide 6.6
- Flammability rating: UL94 V2 (Black) or UL94 V0 (White).
The white version is also I3F2/I2F3 according to the NFF 16101 /16102 (Fire & fume standard for French rail market) and R23/HL3 following EN 45 545

Contact

- “SMS” Quick Mating connectors accept TRIM TRIO size 16 removable snap-lock contacts (see contact section)
- Contacts to be ordered separately.

Ordering information

Connector family

Layout: see next page

Body variation:

- R1: (UL94 V2) Panel mount receptacle - Black
- R3: (UL94 V0) Panel mount receptacle - White
- P1: (UL94 V2) Cable plug without strain relief hood - Black
- PD3: (UL94 V0) Cable plug without strain relief hood - White
- PDH1: (UL94 V2) Cable plug with integrated strain relief hood - Black
- PDH3: (UL94 V0) Cable plug with integrated strain relief hood - White
- RD3: (UL94 V0) Cable receptacle without integrated strain relief hood - White
- RDH1: (UL94 V2) Cable receptacle with integrated strain relief hood - Black
- RDH3: (UL94 V0) Cable receptacle with integrated strain relief hood - White

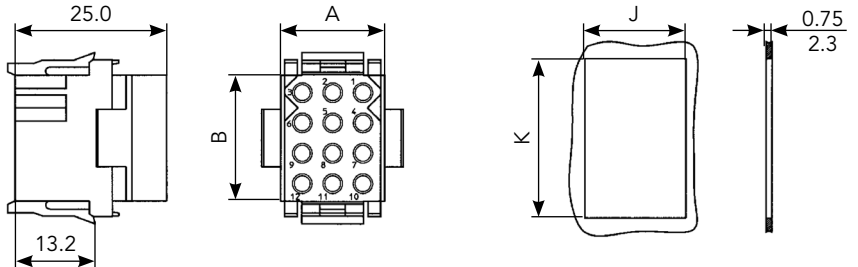
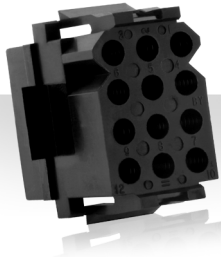
SMS

12

PDH3

Connectors

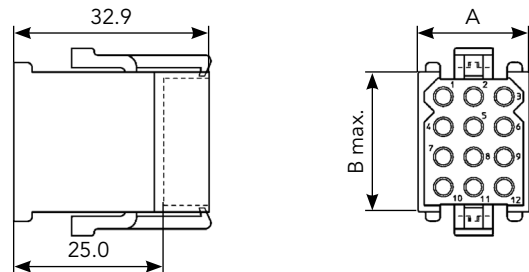
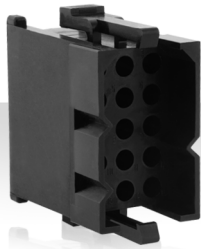
Panel mount receptacle without discrimination cavities (wire acceptance: 4.19mm)



| Part number | | Nbr. of contact* | A | B | C max. | J | K |
|---------------|---------------|------------------|------|------|--------|------|------|
| Black UL94 V2 | White UL94 V0 | | | | | | |
| SMS2R1 | SMS2R3 | 2 | 11.0 | 5.8 | 15.2 | 11.4 | 11.6 |
| SMS3R1 | SMS3R3 | 3 | 16.2 | | | 16.5 | |
| SMS4R1 | SMS4R3 | 4 | 21.1 | | | 21.7 | |
| SMS6R1 | SMS6R3 | 6 | 16.2 | 10.9 | 20.3 | 16.5 | 16.7 |
| SMS9R1 | SMS9R3 | 9 | | 16.0 | 25.4 | | 21.6 |
| SMS12R1 | SMS12R3 | 12 | | 21.1 | 30.5 | 16.7 | 26.7 |
| SMS15R1 | SMS15R3 | 15 | | 26.2 | 35.6 | | 31.8 |
| SMS18R1 | SMS18R3 | 18 | 21.2 | 31.2 | 40.6 | 21.7 | 36.9 |
| SMS24R1 | SMS24R3 | 24 | | 21.1 | 30.5 | | 26.7 |
| SMS36R1 | SMS36R3 | 36 | 46.6 | 21.1 | 30.5 | 47.1 | 26.7 |

*Contacts supplied separately

Cable plug without strain relief hood & without discrimination cavities (wire acceptance: 4.19mm)

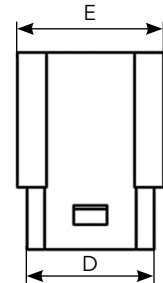
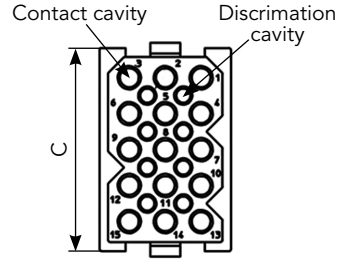
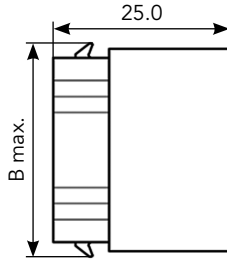


| Part number | Nbr. of contact* | A | C max. |
|---------------|------------------|------|--------|
| Black UL94 V2 | | | |
| SMS2P1 | 2 | 15.0 | 17.8 |
| SMS3P1 | 3 | 18.6 | |
| SMS4P1 | 4 | 23.7 | |
| SMS6P1 | 6 | 18.6 | 22.9 |
| SMS9P1 | 9 | | 27.9 |
| SMS12P1 | 12 | | 33.0 |
| SMS15P1 | 15 | | 38.1 |
| SMS18P1 | 18 | 23.7 | 43.2 |
| SMS24P1 | 24 | | 23.7 |
| SMS36P1 | 36 | 49.1 | 33.0 |

*Contacts supplied separately

Note: all dimensions are in mm

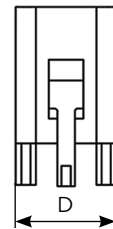
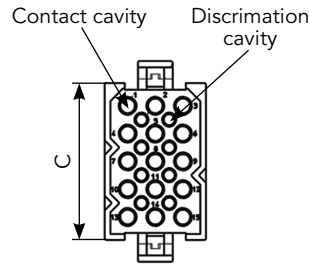
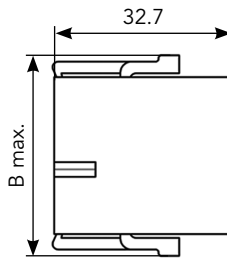
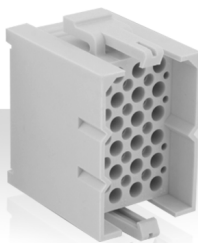
Cable receptacle without strain relief hood & with discrimination cavities



| Part number | Nbr. of contact* | Nbr. of discrimination cavities | B max | C | D | E | | |
|---------------|------------------|---------------------------------|-------|------|------|------|------|------|
| White UL94 V0 | | | | | | | | |
| SMS2RD3 | 2 | 0 | 9.9 | 8.4 | 11.1 | 14.1 | | |
| SMS3RD3 | 3 | 0 | | | 16.2 | 18.6 | | |
| SMS4RD3 | 4 | 0 | | | 21.2 | 23.7 | | |
| SMS6RD3 | 6 | 2 | 15.0 | 13.4 | 16.2 | 18.6 | | |
| SMS9RD3 | 9 | 4 | 20.0 | 18.5 | | | | |
| SMS12RD3 | 12 | 6 | 25.1 | 23.6 | | | | |
| SMS15RD3 | 15 | 8 | 30.2 | 28.7 | | | | |
| SMS18RD3 | 18 | 10 | 35.3 | 33.8 | | | 21.2 | 23.7 |
| SMS24RD3 | 24 | 15 | | | | | | |
| SMS36RD3 | 36 | 24 | 25.1 | 23.6 | 46.6 | 49.1 | | |

*Contacts supplied separately

Cable plug without strain relief hood & with discrimination cavities



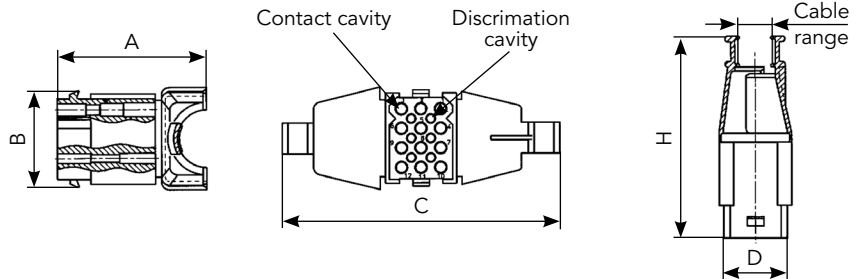
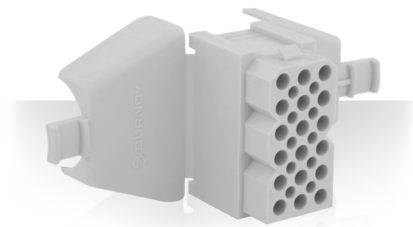
| Part number | Nbr. of contact* | Nbr. of discrimination cavities | B max. | C | D | |
|---------------|------------------|---------------------------------|--------|------|------|------|
| White UL94 V0 | | | | | | |
| SMS2PD3 | 2 | 0 | 16.4 | 8.4 | 14.1 | |
| SMS3PD3 | 3 | 0 | | | 18.6 | |
| SMS4PD3 | 4 | 0 | | | 23.7 | |
| SMS6PD3 | 6 | 2 | 21.5 | 13.4 | 18.6 | |
| SMS9PD3 | 9 | 4 | 26.7 | 18.5 | | |
| SMS12PD3 | 12 | 6 | 31.7 | 23.6 | | |
| SMS15PD3 | 15 | 8 | 36.7 | 28.7 | | |
| SMS18PD3 | 18 | 10 | 41.8 | 33.8 | | 23.7 |
| SMS24PD3 | 24 | 15 | | | | |
| SMS36PD3 | 36 | 24 | 31.7 | 23.6 | 49.1 | |

*Contacts supplied separately

Note: all dimensions are in mm

Connectors (Continued)

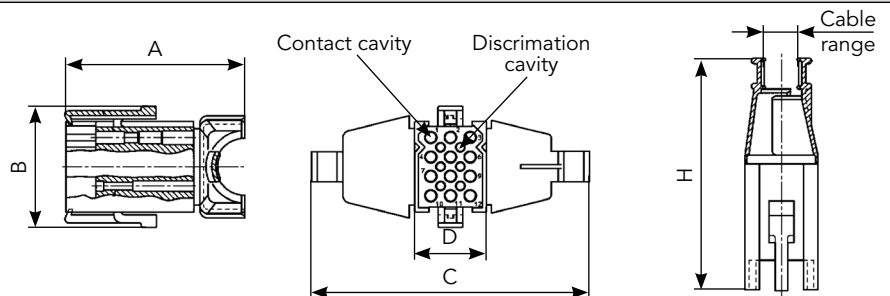
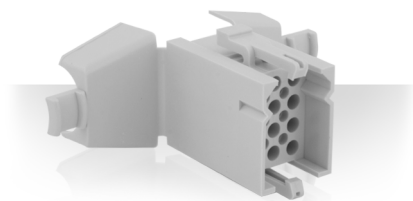
Cable receptacle with integrated strain relief hood



| Part number | | Nbr. of contact* | Nbr. of discrimination cavities | A | B | C | D | H | Cable range (mm) | Cable tie ⁽¹⁾ | |
|---------------|---------------|------------------|---------------------------------|------|------|-------|------|----------|------------------|--------------------------|----------|
| Black UL94 V2 | White UL94 V0 | | | | | | | | | | |
| SMS2RDH1 | SMS2RDH3 | 2 | 0 | 31.6 | 9.9 | 11.1 | 0.5 | 49.2 | 0.5-8.4 | TF4D | |
| SMS3RDH1 | SMS3RDH3 | 3 | 0 | 35.1 | | 69.0 | 16.2 | | 0.8-7.3 | | |
| SMS4RDH1 | SMS4RDH3 | 4 | 0 | 38.2 | | 74.4 | 21.2 | | 1.5-10 | | |
| SMS6RDH1 | SMS6RDH3 | 6 | 2 | 34.6 | 15.0 | 72.6 | 16.2 | 50.9 | 1.7-9.2 | TF5D | |
| SMS9RDH1 | SMS9RDH3 | 9 | 4 | 35.8 | 20.0 | 75.3 | | 52.2 | 3.9-14.2 | | |
| SMS12RDH1 | SMS12RDH3 | 12 | 6 | 38.1 | 25.1 | 72.0 | | 52.7 | 4.0-15.0 | | |
| SMS15RDH1 | SMS15RDH3 | 15 | 8 | 35.9 | 30.2 | 81.3 | 55.2 | 5.0-16.2 | TF5D | | |
| SMS18RDH1 | SMS18RDH3 | 18 | 10 | 36.1 | 35.3 | | | 90.4 | | 21.2 | 5.8-20.3 |
| SMS24RDH1 | SMS24RDH3 | 24 | 15 | 39.7 | | | | 90.4 | | 21.2 | 57.2 |
| SMS36RDH1 | SMS36RDH3 | 36 | 24 | 54.6 | 25.1 | 128.0 | 46.6 | 63.3 | 8.8-24.5 | | |

*Contacts supplied separately (1) Cable tie not included

Cable plug with integrated strain relief hood



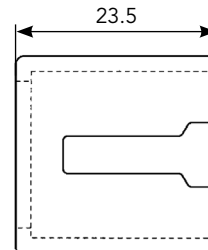
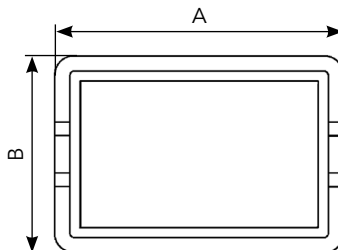
| Part number | | Nbr. of contact* | Nbr. of discrimination cavities | A | B | C | D | H | Cable range (mm) | Cable tie ⁽¹⁾ | |
|---------------|---------------|------------------|---------------------------------|------|------|-------|------|----------|------------------|--------------------------|----------|
| Black UL94 V2 | White UL94 V0 | | | | | | | | | | |
| SMS2PDH1 | SMS2PDH3 | 2 | 0 | 39.5 | 16.4 | 64.8 | 14.1 | 57.1 | 0.5-8.4 | TF4D | |
| SMS3PDH1 | SMS3PDH3 | 3 | 0 | 43.0 | | 69.0 | 18.6 | | 0.8-7.3 | | |
| SMS4PDH1 | SMS4PDH3 | 4 | 0 | 46.1 | | 74.4 | 23.7 | | 1.5-10 | | |
| SMS6PDH1 | SMS6PDH3 | 6 | 2 | 42.5 | 21.5 | 72.6 | 18.6 | 58.8 | 1.7-9.2 | TF5D | |
| SMS9PDH1 | SMS9PDH3 | 9 | 4 | 43.7 | 26.7 | 75.3 | | 60.1 | 3.9-14.2 | | |
| SMS12PDH1 | SMS12PDH3 | 12 | 6 | 46.0 | 31.7 | 72.0 | | 60.6 | 4.0-15.0 | | |
| SMS15PRDH1 | SMS15PDH3 | 15 | 8 | 43.8 | 36.7 | 81.3 | 63.1 | 5.0-16.2 | TF5D | | |
| SMS18PDH1 | SMS18PDH3 | 18 | 10 | 44.0 | 41.8 | | | 90.4 | | 23.7 | 5.8-20.3 |
| SMS24PDH1 | SMS24PDH3 | 24 | 15 | 47.6 | | | | 90.4 | | 23.7 | 65.1 |
| SMS36PDH1 | SMS36PDH3 | 36 | 24 | 62.5 | 31.7 | 128.0 | 49.1 | 71.2 | 8.8-24.5 | | |

*Contacts supplied separately (1) Cable tie not included

Note: all dimensions are in mm

Accessories for standard Quick Mating connectors

Pin protection shroud for panel mount receptacle



When pins are inserted into the panel mount receptacle half (SMS...R1) of the Quick Mating connector, an optional pin protection shroud can be installed.

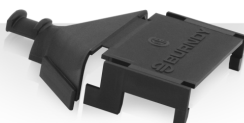
The shroud is mounted at the same time as the receptacle by holding the shroud against the mating side of the panel with both cut-outs lined up. The receptacle is then inserted in place, trapping the shroud between the receptacle and panel. The use of the pin protection shroud reduces the allowable thickness of the panel from 2.3 to 1.6 mm max.

| Part number | Nbr. of contact position | A | B |
|----------------------|--------------------------|------|------|
| Black UL94 V2 | | | |
| SMS2CSB1 | 2 | 19.8 | 18.8 |
| SMS3CSB1 | 3 | 23.4 | |
| SMS4CSB1 | 4 | 28.4 | |
| SMS6CSB1 | 6 | 23.4 | 23.9 |
| SMS9CSB1 | 9 | | 29.0 |
| SMS12CSB1 | 12 | | 34.0 |
| SMS15CSB1 | 15 | | 39.1 |
| SMS18CSB1 | 18 | 28.4 | 44.2 |
| SMS24CSB1 | 24 | | |
| SMS36CSB1 | 36 | 54.1 | 34.0 |

Strain relief hoods



For SMS2H1, SMS3H1, SMS4H1 & SMS6H1



2 pieces are needed for a complete hood for SMS9H1 to SMS36H1

Separate strain relief hoods are available for all standard plugs SMS...P1. The hoods consist of identical halves that snap into position on the plug and are secured in place with the cable tie drawn tightly around the cable entry collar.

The cable tie is not included (TF4D – TF5D).

Two, three and four position hoods are single piece units.

| Part number | Nbr. of contact position |
|----------------------|--------------------------|
| Black UL94 V2 | |
| SMS2H1 | 2 |
| SMS3H1 | 3 |
| SMS4H1 | 4 |
| SMS6H1 | 6 |
| SMS9H1 | 9 |
| SMS12H1 | 12 |
| SMS15H1 | 15 |
| SMS18H1 | 18 |
| SMS24H1 | 24 |
| SMS36H1 | 36 |

Discrimination pins

For discrimination pins on both standard Quick Mating and Quick Mating Pin Headers cable and board mount:
See accessories section.

Contact Selector Guide

Contact supplied separately

| Electrical characteristics: contact resistance | | |
|--|------------------|-------|
| #16 Ø1.6mm | Machined | < 3mΩ |
| | Stamped & Formed | < 6mΩ |

| Available platings (contact supplied separately) | |
|---|---|
| J | Gold flash over 2µ Ni |
| K | Min 0.4µ gold over 2µ Ni |
| S31 | Active part: Gold flash over Ni Crimp area: Nickel |
| S18 | Active part: 0.75µ gold min over 2µ Ni Crimp area: 1.3µ tin over Ni Other: Nickel |
| TK6 | 2-5µ Sn pre-plated |
| D70 | Superseded by S31 |
| S6 | Superseded by S18 |
| Other platings on request (contact supplied separately) | |
| T | T: 2µm Ni mini all over + 3 to 5 µm Sn all over |
| D28 | 0.75µ gold over Ni |

Packaging

Due to the wide variety of applications, contact packaging is offered for small series (bulk package) and high volume production (reeled contacts):

Size contacts #16 (Ø1.6mm)



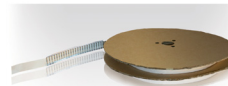
- 25 pieces loose package (Stamped & Formed contacts)



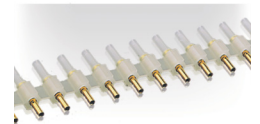
- 50 pieces bulk package (Machined contacts)



- 1,000 pieces bulk package (Machined contacts)



- 3,000 pieces reeled (Stamped & Formed contacts)



- 2,000 pieces reeled (Machined contacts)

Crimp Contacts

Standard Version



| Contact size | Type | Wire size | | Part number | | Max wire Ø | Max insulator Ø | Available plating |
|------------------|------------------|-----------|---|---|---|--------------------|--------------------|-------------------|
| | | AWG | mm ² | Male | Female | | | |
| #16 Ø1.6 mm | Machined | 30-28 | 0.05-0.08 | RM28M1- | RC28M1- | 0.55 | 1.1 | K, J |
| | Machined | 26-24 | 0.13-0.2 | RM24M9- | RC24M9- | 0.8 | 1.6 | K, J |
| | Stamped & Formed | 26-24 | 0.13-0.25 | SM24M1- ⁽¹⁾ SM24ML1- ⁽²⁾ | SC24M1- ⁽¹⁾ SC24ML1- ⁽²⁾ | 0.89-1.28 | Insulation grip | S31, S18, TK6 |
| | Machined | 22-20 | 0.32-0.52 | RM20M13- | RC20M13- | 1.18 | 1.8 | K, J |
| | | | | RM20M12- | RC20M12- | | 2.2 | |
| | Stamped & Formed | 22-20 | 0.35-0.5 | SM20M1- ⁽¹⁾ SM20ML1- ⁽²⁾ | SC20M1- ⁽¹⁾ SC20ML1- ⁽²⁾ | 1.17-2.08 | Insulation grip | S31, S18, TK6 |
| | Machined | 20-16 | 0.52-1.5 | RM16M23- | RC16M23- | 1.8 | 3.2 | K, J |
| | Stamped & Formed | 18-16 | 0.8-1.5 | SM16M1- ⁽¹⁾ SM16ML1- ⁽²⁾ | SC16M1- ⁽¹⁾ SC16ML1- ⁽²⁾ | 3.0 | No insulation grip | S31, S18, TK6 |
| | Stamped & Formed | 18-16 | 0.8-1.5 | SM16M11- ⁽¹⁾ SM16ML11- ⁽²⁾ | SC16M11- ⁽¹⁾ SC16ML11- ⁽²⁾ | 2.0-3.0 | Insulation grip | S31, S18, TK6 |
| | Machined | 16-14 | 1.5-2.5 | RM14M30- | RC14M30- | 2.28 | 3.2 | K, J |
| Stamped & Formed | 14 | 2.0-2.5 | SM14M1- ⁽¹⁾ SM14ML1- ⁽²⁾ | SC14M1- ⁽¹⁾ SC14ML1- ⁽²⁾ | 3.2 | No insulation grip | S31, S18, TK6 | |

(1) contact reeled (2) loose contact
Example: RM20M13K - Size #16, Machined, AWG20 wire.

Note: all dimensions are in mm

Tooling

Crimp Tool Table

Standard contacts

| Contact size | Part number | Head* | Handles* | Extraction tools |
|------------------------------|-----------------------------|-----------|----------|------------------|
| #16 Ø1.6 mm | RM/RC 28M1* | S16RCM20 | SHANDLES | RX2025GE1 |
| | RM/RC 24M9* | | | |
| | RM/RC 20M13* | | | |
| | RM/RC 20M12* | | | |
| | RM/RC 16M23* | S16RCM16 | | |
| | RM/RC 14M30* | S16RCM14 | | |
| | SM/SC 24ML1* ⁽¹⁾ | S16SCM20 | | |
| | SM/SC 20ML1* ⁽¹⁾ | | | |
| | SM/SC 16ML1* ⁽¹⁾ | S16SCML1 | | |
| | SM/SC 14ML1* ⁽¹⁾ | S16SCML11 | | |
| SM/SC 16ML11* ⁽¹⁾ | | | | |

(1) loose contact * endurance of SHANDLES & Head tools = 50,000 cycles

Quick Mating PC board mount connectors

Description

These PC board mount connectors enable Quick Mating and preassembled TRIM TRIO contacts to be PC board mounted, using conventional solder production techniques.

They will then mate and latch with the standard Quick Mating plugs.

Straight board mount connectors is available in 10 insert arrangements from 2 to 36 positions. Right angled board mount Quick Mating is available in 3, 6, 12 and 18 positions.

All board mount connectors are supplied fully loaded with pin or socket contacts, either in solid machined or stamped and formed contacts.

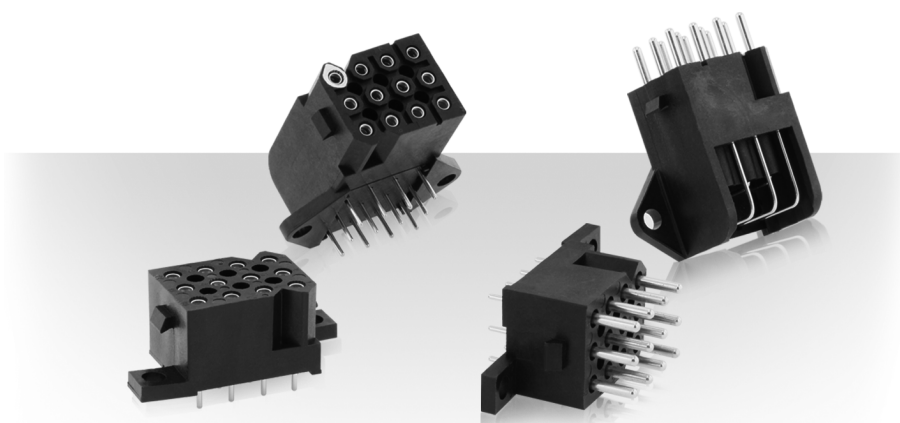
Stamped and formed contact have selective tin plating on the solder tails, thus eliminating flux operations.

Features and benefits

- Straight versions available in 10 contact arrangements from 2 to 36 positions
- Right angled versions available in 3, 6, 12 and 18 positions.
- All versions are available with:
 - Pin or socket contacts
 - Stamped and formed or solid machined contacts.
- Board mount connectors have discrimination cavities in between contact cavities, unless other wise noted. See instruction page 21.
- UL recognized File Nr.: E238675
- CSA certified File Nr.: LR44961-21

Environmental

- Operating temperature: -55°C to +105°C
- Insulation resistance: 5000 MΩ min.



- Test potential: 2000 VAC
- Current rating for SMS PCB version:
 - 5 Amp for stamped and formed contacts
 - 7.5 Amp for machined contacts
- Electrical performances for crimped versions:
 - UL: 250V - 15A
 - CSA: 250V - 15A
- Durability: 500 matings and unmatings
- Sealing performances: IP40

Material

- Connector body:
 - Glass filled thermoplast UL94 V0
- Railway version :
 - I2 F3 according to NF F 16-101
 - HL2/R23 according to EN 45 545
- Contacts:
 - High conductive copper alloy
- Soldering information:
 - compatible with wave soldering up to 245°C.
 - Not compatible with reflow soldering.

Plating table

- **Plating for solid machined contacts:**
 - Made for 2.4mm or 3.2mm PCB thickness (straight contacts) and for 3.2mm PCB

thickness (right contacts)

K9 (std) = Min. 0.4µ Gold in contact area,
Tin on solder tail, over Nickel

J9 = Gold flash in contact area,
Tin on solder tail, over Nickel

T = 3 - 5µ Tin all over

- **Plating for Stamped and formed contacts:**

- Made for 2.4mm PCB thickness (straight contacts) and for 3.2mm PCB thickness (right contacts)

K9 = Min. 0.4µ Gold in contact area,
3- 5µ Tin on solder tail, over Nickel

T = 3 - 5µ Tin all over

- Made for 3.2mm PCB thickness (straight contacts)

S6 = Min. 0.75µ Gold in contact area
Gold flash on solder tail, over Nickel

D70 = Gold flash all over
TR29 = 3 - 5µ Tin all over

Intermateability

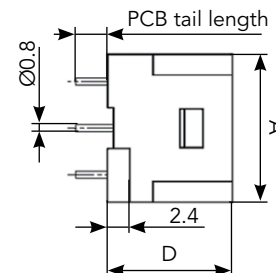
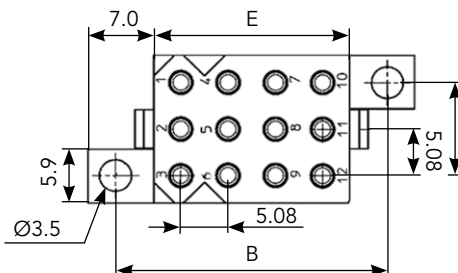
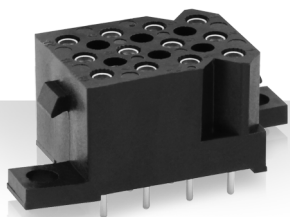
- "SMS" Quick Mating board mount connectors with preassembled TRIM TRIO size 16 board mount contacts are intermateable only with the "SMS" Quick Mating cable plug connectors equipped with TRIM TRIO crimp type removable snap-lock contacts (see contact section).

Ordering information

| Connector family | SMS | 12 | GE | 3 | 0 | K9 |
|---|-----|----|----|---|---|----|
| Layout: see page 14 | | | | | | |
| Body variation: | | | | | | |
| GE: Solid machined contacts (2.4mm or 3.2mm, see option below) | | | | | | |
| SE: Stamped and formed contacts for 2.4mm PCB | | | | | | |
| RE: Stamped and formed contacts for 3.2mm PCB | | | | | | |
| Design variation: | | | | | | |
| 3: Straight board mount with female contact | | | | | | |
| 4: Straight board mount with male contacts | | | | | | |
| 5: Right angle board mount with female contacts | | | | | | |
| 6: Right angle board mount with male contacts | | | | | | |
| Option: | | | | | | |
| -: 2.4mm for GE3, GE4 and SE variation | | | | | | |
| 0: 3.2mm for GE variation | | | | | | |
| 3: Railway version: I2 F3 according to NF F 16-101 and HL2/R23 according to EN 45 545 | | | | | | |
| Plating indication | | | | | | |

Connectors

Straight board mount with female contacts



Dimensions

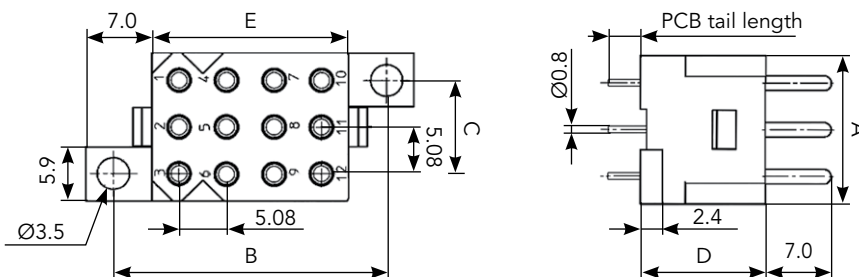
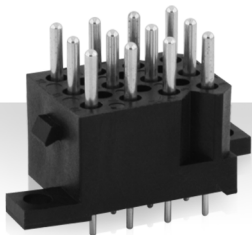
| Nbr. of contact | Nbr. of discrimination cavities | A | B | C | D | E |
|-----------------|---------------------------------|------|------|------|------|------|
| 2 | 0 | 11.0 | - | 19.1 | 13.4 | 5.9 |
| 3 | 0 | 16.2 | 14.0 | 10.2 | | |
| 4 | 0 | 21.3 | | 15.2 | | |
| 6 | 0 | 16.2 | 19.2 | 10.2 | | 10.9 |
| 9 | 4 | | 24.2 | | | 16.0 |
| 12 | 0 | | 29.2 | | | 21.1 |
| 15 | 8 | | 34.3 | | | 26.1 |
| 18 | 10 | 21.2 | 39.4 | 15.2 | | 31.2 |
| 24 | 0 | | | 15.2 | | 20.9 |
| 36 | 0 | 46.5 | 15.2 | 54.6 | | |

Contacts type

| Part number | | | | |
|--|--|--|--|--|
| Standard version | | | | NFF certified version |
| Solid machined contacts | | Stamped & formed contacts | | Solid machined contacts |
| PCB thickness 2.4mm PCB tail length 3.4mm | PCB thickness 3.2mm PCB tail length 4.2mm | PCB thickness 2.4mm PCB tail length 3.4mm | PCB thickness 3.2mm PCB tail length 4.4mm | PCB thickness 2.4mm PCB tail length 3.4mm |
| SMS2GE3* | SMS2GE30* | SMS2SE3* | SMS2RE3* | - |
| SMS3GE3* | SMS3GE30* | SMS3SE3* | SMS3RE3* | SMS3GE33* |
| SMS4GE3* | SMS4GE30* | SMS4SE3* | SMS4RE3* | - |
| SMS6GE3* | SMS6GE30* | SMS6SE3* | SMS6RE3* | SMS6GE33* |
| SMS9GE3* | SMS9GE30* | SMS9SE3* | SMS9RE3* | SMS9GE33* |
| SMS12GE3* | SMS12GE30* | SMS12SE3* | SMS12RE3* | SMS12GE33* |
| SMS15GE3* | SMS15GE30* | SMS15SE3* | SMS15RE3* | SMS15GE33* |
| SMS18GE3* | SMS18GE30* | SMS18SE3* | SMS18RE3* | SMS18GE33* |
| SMS24GE3* | SMS24GE30* | SMS24SE3* | SMS24RE3* | SMS24GE33* |
| SMS36GE3* | SMS36GE30* | SMS36SE3* | SMS36RE3* | SMS36GE33* |

* for coding see page 11
 Example: SMS12GE3J9 - SMS with 12 solid machined contacts, plating J9

Straight board mount with male contacts



Dimensions

| Nbr. of contact | Nbr. of discrimination cavities | A | B | C | D | E |
|-----------------|---------------------------------|------|------|------|------|------|
| 2 | 0 | 11.1 | - | 19.1 | 13.4 | 5.9 |
| 3 | 0 | 16.2 | 14.0 | 10.2 | | |
| 4 | 0 | 21.3 | | 15.2 | | |
| 6 | 0 | 16.2 | 19.2 | 10.2 | | 10.9 |
| 9 | 4 | | 24.2 | | | 16.0 |
| 12 | 0 | | 29.2 | | | 21.1 |
| 15 | 8 | | 34.3 | | | 26.1 |
| 18 | 10 | 21.2 | 39.4 | 15.2 | | 31.2 |
| 24 | 0 | | | | | |
| 36 | 0 | 46.5 | 15.2 | 54.6 | | 20.9 |

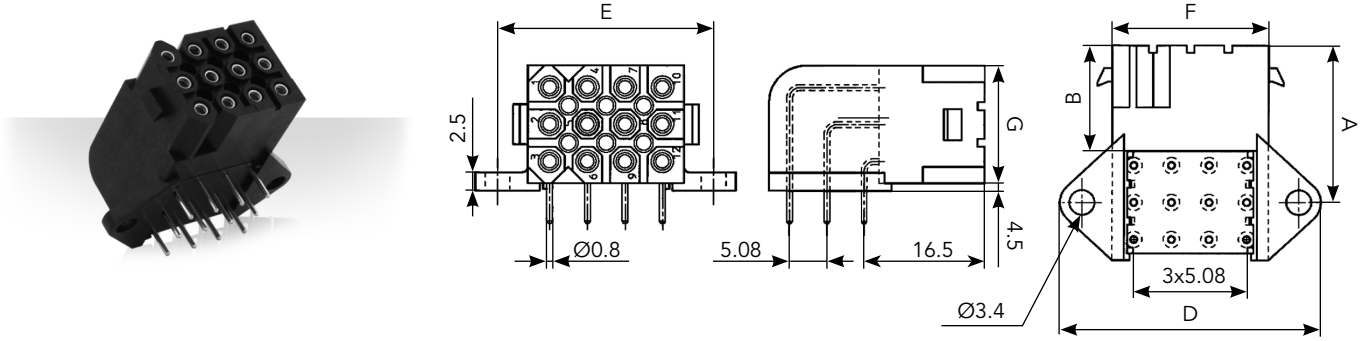
Contacts type

| Part number | | | | |
|--|--|--|--|--|
| Standard version | | | | NFF certified version |
| Solid machined contacts | | Stamped & formed contacts | | Solid machined contacts |
| PCB thickness 2.4mm PCB tail length 3.4mm | PCB thickness 3.2mm PCB tail length 4.2mm | PCB thickness 2.4mm PCB tail length 3.4mm | PCB thickness 3.2mm PCB tail length 4.4mm | PCB thickness 2.4mm PCB tail length 3.4mm |
| SMS2GE4* | SMS2GE40* | SMS2SE4* | SMS2RE4* | - |
| SMS3GE4* | SMS3GE40* | SMS3SE4* | SMS3RE4* | SMS3GE43* |
| SMS4GE4* | SMS4GE40* | SMS4SE4* | SMS4RE4* | - |
| SMS6GE4* | SMS6GE40* | SMS6SE4* | SMS6RE4* | SMS6GE43* |
| SMS9GE4* | SMS9GE40* | SMS9SE4* | SMS9RE4* | SMS9GE43* |
| SMS12GE4* | SMS12GE40* | SMS12SE4* | SMS12RE4* | SMS12GE43* |
| SMS15GE4* | SMS15GE40* | SMS15SE4* | SMS15RE4* | SMS15GE43* |
| SMS18GE4* | SMS18GE40* | SMS18SE4* | SMS18RE4* | SMS18GE43* |
| SMS24GE4* | SMS24GE40* | SMS24SE4* | SMS24RE4* | SMS24GE43* |
| SMS36GE4* | SMS36GE40* | SMS36SE4* | SMS36RE4* | SMS36GE43* |

* for coding see page 11
 Example: SMS12GE4J9 - SMS with 12 solid machined contacts, plating J9

Connectors (Continued)

Right angle board mount with female contacts



Dimensions

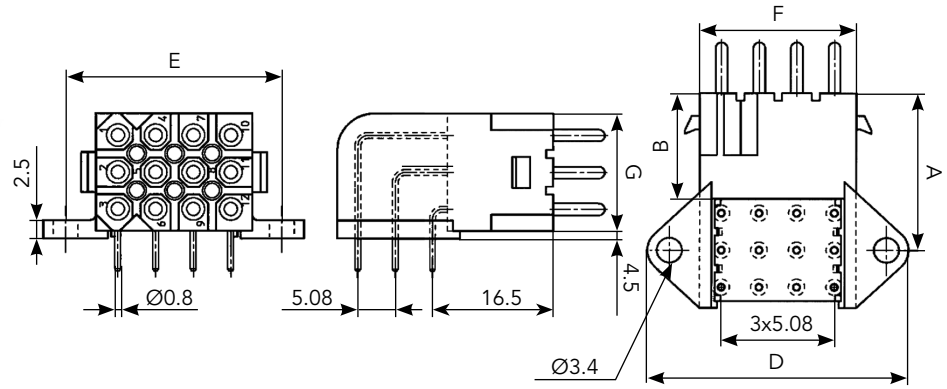
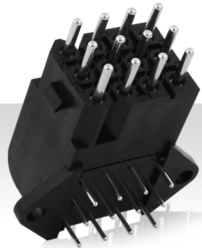
| Nbr. of contact | Nbr. of discrimination cavities | A | B | C | D | E | F | G |
|-----------------|---------------------------------|------|------|------|------|------|------|------|
| 3 | 0 | 16.5 | 14.4 | 20.5 | 30.2 | 24.2 | 16.2 | 6.8 |
| 6 | 0 | 19.0 | | 24.5 | | | | 11.9 |
| 12 | 6 | 21.6 | | 29.5 | | | | 35.2 |
| 18 | 10 | | 45.4 | 39.4 | 31.2 | | | |

Contacts type

| Part number | | |
|--|--|--|
| Standard version | | NFF certified version |
| Solid machined contacts | Stamped & formed contacts | Solid machined contacts |
| PCB thickness 3.2mm PCB tail length 4.5mm | PCB thickness 3.2mm PCB tail length 4.5mm | PCB thickness 3.2mm PCB tail length 4.5mm |
| SMS3GE5* | SMS3SE5* | SMS3GE53* |
| SMS6GE5* | SMS6SE5* | SMS6GE53* |
| SMS12GE5* | SMS12SE5* | SMS12GE53* |
| SMS18GE5* | SMS18SE5* | SMS18GE53* |

* for coding see page 11
 Example: SMS12GE5J9 - SMS with 12 solid machined contacts, plating J9

Right angle board mount with male contacts



Dimensions

| Nbr. of contact | Nbr. of discrimination cavities | A | B | C | D | E | F | G |
|-----------------|---------------------------------|------|------|------|------|------|------|------|
| 3 | 0 | 16.5 | 14.4 | 20.5 | 30.2 | 24.2 | 16.2 | 6.8 |
| 6 | 0 | 19.0 | | 24.5 | | | | 11.9 |
| 12 | 6 | 21.6 | | 29.5 | | | | 35.2 |
| 18 | 10 | | 45.4 | 39.4 | 31.2 | | | |

Contacts type

| Part number | | |
|--|--|--|
| Standard version | | NFF certified version |
| Solid machined contacts | Stamped & formed contacts | Solid machined contacts |
| PCB thickness 3.2mm PCB tail length 4.5mm | PCB thickness 3.2mm PCB tail length 4.5mm | PCB thickness 3.2mm PCB tail length 4.5mm |
| SMS3GE6* | SMS3SE6* | SMS3GE63* |
| SMS6GE6* | SMS6SE6* | SMS6GE63* |
| SMS12GE6* | SMS12SE6* | SMS12GE63* |
| SMS18GE6* | SMS18SE6* | SMS18GE63* |

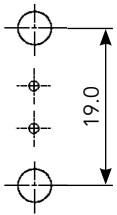
* for coding see page 11
Example: SMS12GE6J9 - SMS with 12 solid machined contacts, plating J9

Drilling Pattern

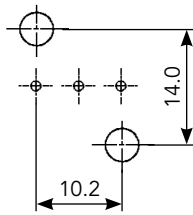
Dimensions

Straight angle board mount

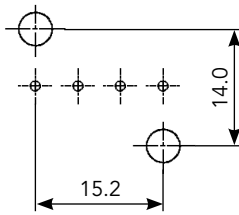
2 contacts



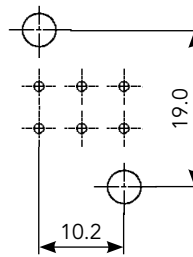
3 contacts



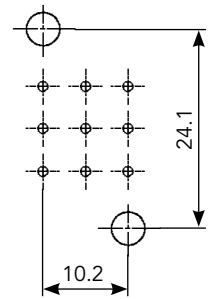
4 contacts



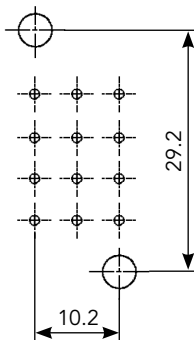
6 contacts



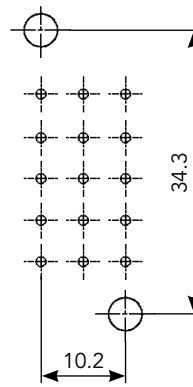
9 contacts



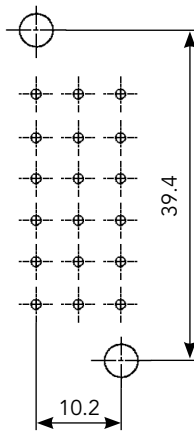
12 contacts



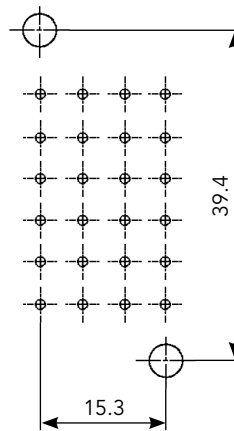
15 contacts



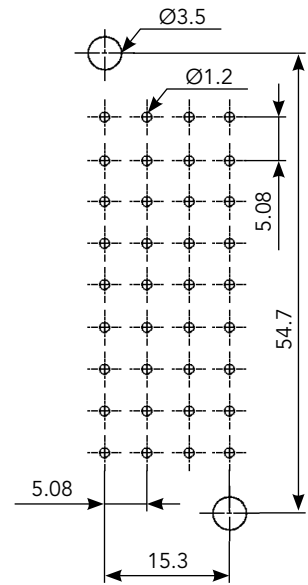
18 contacts



24 contacts

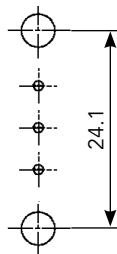


36 contacts

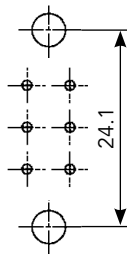


Right angle board mount

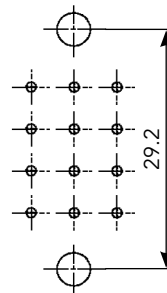
3 contacts



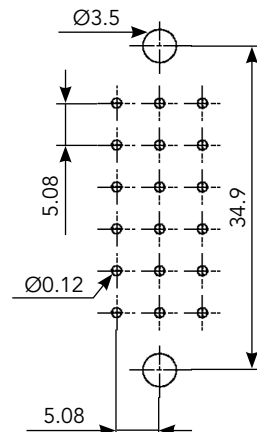
6 contacts



12 contacts



18 contacts



Note: all dimensions are in mm

Secure connector with screws (not supplied), recommended torque 0.3 N.m

Quick Mating PC board mount Pin Headers and plugs

Description

Quick Mating Pin Header, available in 3, 4, 6, 9 and 10 positions, provides the additional versatility of straight and right angle board mounting.

Offered as an alternative to stacked connectors, the in-line contact design of the pin header provides the user with significant PC board space savings.

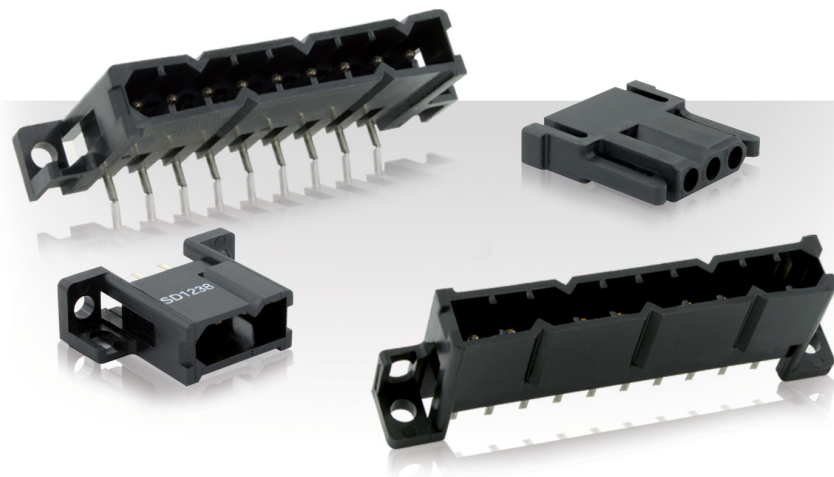
The board mount receptacle features positive polarization and a moulded on pin protection skirt and is supplied preassembled with straight or right angled:

- Solid machined or stamped and formed PC board pin contacts.
- Coax PC board pin contacts.

The socket cable plug features positive quick connect / disconnect latches and is designed to accept N° 16 TRIM TRIO 1.6mm diameter socket contacts for maximum contact protection.

Features and benefits

- Available in 3, 4, 6, 9 and 10 positions.
- In-line contact design, offering significant PC board space savings.
- Board mount connectors available in straight and right angled version preassembled with:
 - Solid machined or stamped and formed pin contacts.
 - Coax pin contacts.
- UL recognized File Nr.: E238675
- CSA metter certified File Nr.: LR44961-21



Environmental

- Operating temperature: -55°C to +125°C
- Insulation resistance: 5000 MΩ min.
- Test potential: 2000 VAC
- Current rating:
 - 5 Amp for stamped and formed contacts
 - 7.5 Amps for machined contacts
- Durability: 500 matings and unmatings.

Material

- Connector body:
 - Glass filled thermoplast UL94 V0
 - Color: Black
- Contacts: High conductive copper alloy

Plating table

- **Plating for solid machined contacts:**
 - No digit (std) = Min. 0.4μ Gold all over, over Nickel.

J = Gold flash over 2μ Ni

T = 3 - 5μ Tin all over

- **Plating for Stamped and formed contacts:**

D28 = Min. 0.75μ Au over nickel.

D70 = Active part: Gold flash over Ni
Crimp area: Ni

TR29 = 3 - 5μ Tin all over

- **Plating for coax contacts:**

Z17 = Min. 0.75μ Au in contact area,
Flash on solder tail (inner)
Min 0.75μ Au in contact area,
Tin on solder tail (outer)

Intermateability

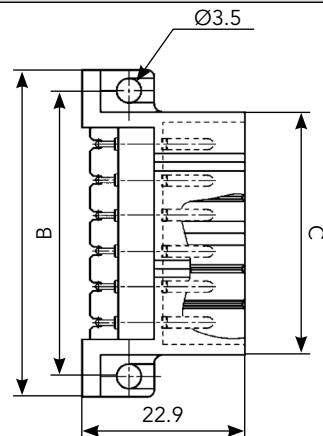
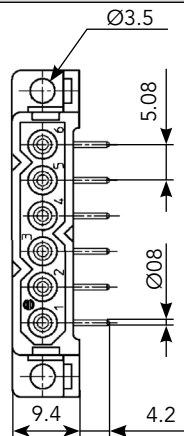
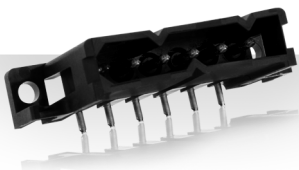
- "SMS" Socket plugs accept TRIM TRIO size 16 removable snap-lock contacts (see contact section)
- Contacts to be ordered separately.

Ordering information

| | | | | | | |
|---|-----|----|----|---|---|------|
| Connector family | SMS | 12 | PH | 3 | 0 | TR29 |
| Layout: see page 14 | | | | | | |
| Body variation: | | | | | | |
| PH: Pin header board mount | | | | | | |
| CH: Coax header board mount | | | | | | |
| P3: Socket cable plug for pin and coax header board mount | | | | | | |
| Design variation: | | | | | | |
| 2: Straight coax header board mount with male contacts | | | | | | |
| 3: Right angle pin header board mount with stamped male contacts | | | | | | |
| 4: Straight pin header board mount with stamped male contacts | | | | | | |
| GE6: Right angle pin header board mount with machined male contacts | | | | | | |
| GE4: Straight pin header board mount with machined male contacts | | | | | | |
| Plating indication | | | | | | |

Connectors (Continued)

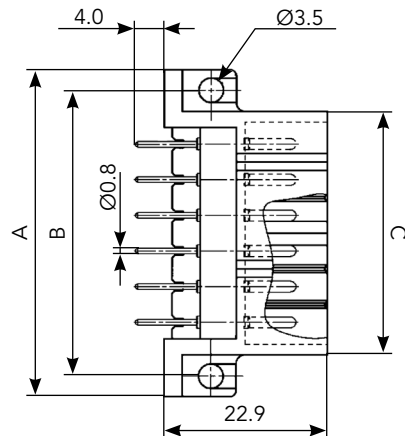
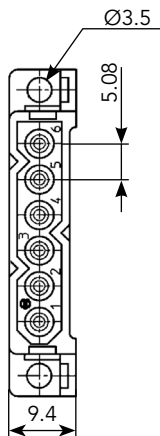
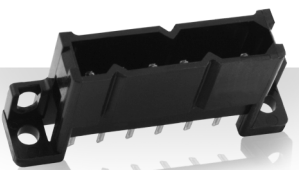
Right angle pin header board mount with male contacts



| Part number | | Nbr. of contact | A | B | C |
|-------------------------|---------------------------|-----------------|------|------|------|
| Solid machined contacts | Stamped & formed contacts | | | | |
| SMS3PH3* | SMS3PHGE6 | 3 | 31.2 | 25.4 | 19.3 |
| SMS4PH3* | SMS4PHGE6 | 4 | 36.3 | 30.4 | 24.4 |
| SMS6PH3* | SMS6PHGE6 | 6 | 46.5 | 40.6 | 34.5 |
| SMS9PH3* | SMS9PHGE6 | 9 | 61.7 | 55.9 | 49.8 |
| SMS10PH3* | SMS10PHGE6 | 10 | 66.8 | 61.0 | 54.9 |

* for coding see page 17
 Example: SMS9PH3J9 - SMS with 9 solid machined contacts, plating J9

Straight pin header board mount with male contacts

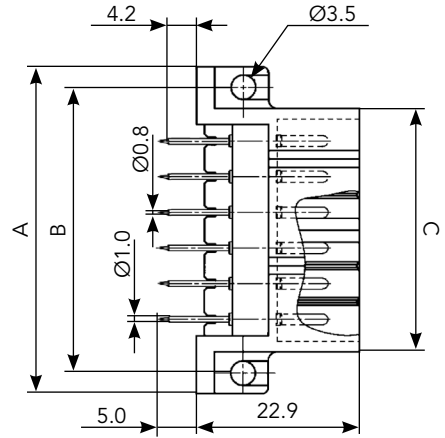
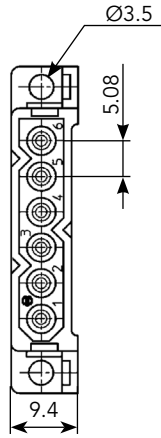
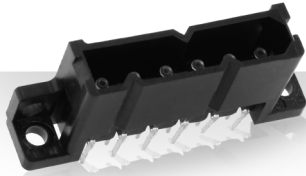


| Part number | | Nbr. of contact | A | B | C |
|-------------------------|---------------------------|-----------------|------|------|------|
| Solid machined contacts | Stamped & formed contacts | | | | |
| SMS3PH4* | SMS3PHGE4 | 3 | 31.2 | 25.4 | 19.3 |
| SMS4PH4* | SMS4PHGE4 | 4 | 36.3 | 30.4 | 24.4 |
| SMS6PH4* | SMS6PHGE4 | 6 | 46.5 | 40.6 | 34.5 |
| SMS9PH4* | SMS9PHGE4 | 9 | 61.7 | 55.9 | 49.8 |
| SMS10PH4* | SMS10PHGE4 | 10 | 66.8 | 61.0 | 54.9 |

* for coding see page 17
 Example: SMS9PH4J9 - SMS with 9 solid machined contacts, plating J9

Note: all dimensions are in mm

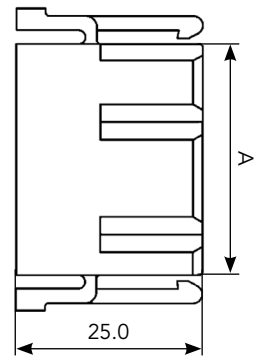
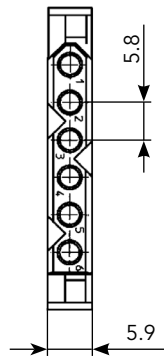
Straight coax header board mount with male contacts



| Part number | Nbr. of contact | A | B | C |
|-------------|-----------------|------|------|------|
| SMS3CH2Z17 | 3 | 31.2 | 25.4 | 19.3 |
| SMS4CH2Z17 | 4 | 36.3 | 30.4 | 24.4 |
| SMS6CH2Z17 | 6 | 46.5 | 40.6 | 34.5 |
| SMS9CH2Z17 | 9 | 61.7 | 55.9 | 49.8 |
| SMS10CH2Z17 | 10 | 66.8 | 61.0 | 54.9 |

* for coding see page 17

Socket cable plug for pin and coax board mount header

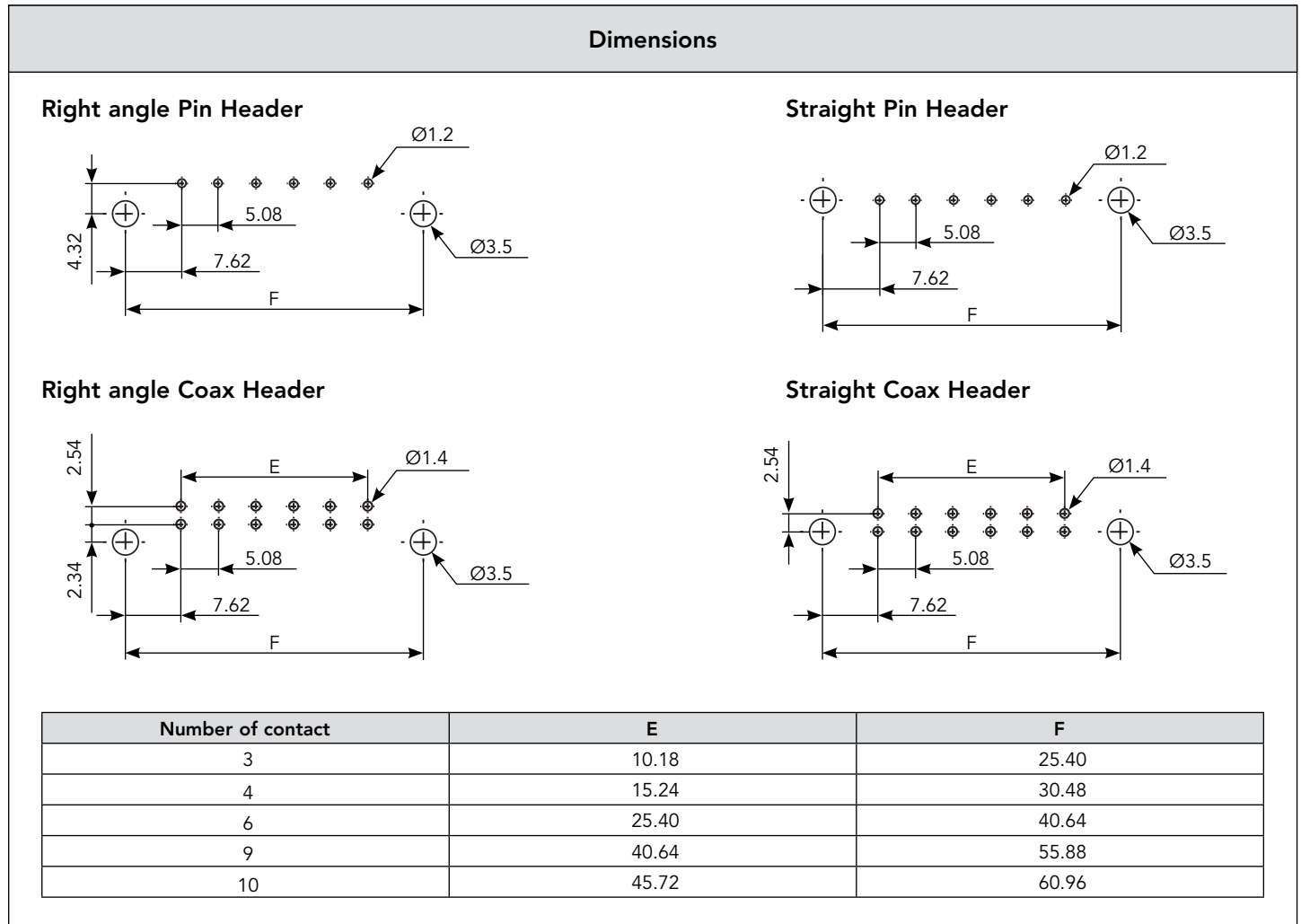


| Part number | Number of contact* | A |
|-------------|--------------------|------|
| SMS3P3 | 3 | 16.0 |
| SMS4P3 | 4 | 21.1 |
| SMS6P3 | 6 | 31.2 |
| SMS9P3 | 9 | 46.5 |
| SMS10P3 | 10 | 51.6 |

*Contacts supplied separately

Note: all dimensions are in mm

Drilling Pattern



Discrimination keys for SMS connectors

In applications where similar connectors are used next to each other, mismatching can be a reason for disturbances, system failure or even danger to operator.

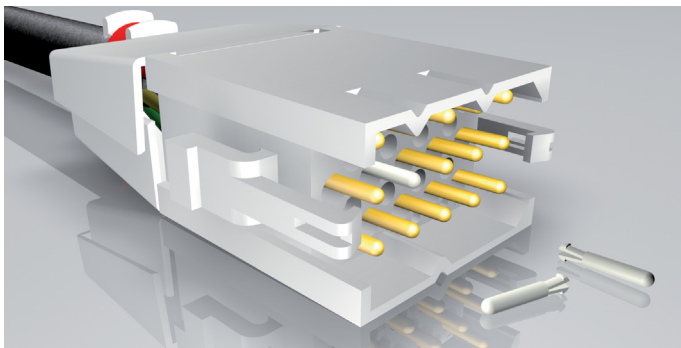
To eliminate mismatching, all SMS can be equipped with discrimination solutions, which offer unlimited possibilities for a "fool-proof" interconnection system.

When one of these discrimination keys is used, the SMS will only mate with a connector which has a vacant contact or discrimination cavity at the corresponding position.

This system offers boundless opportunities for all applications.

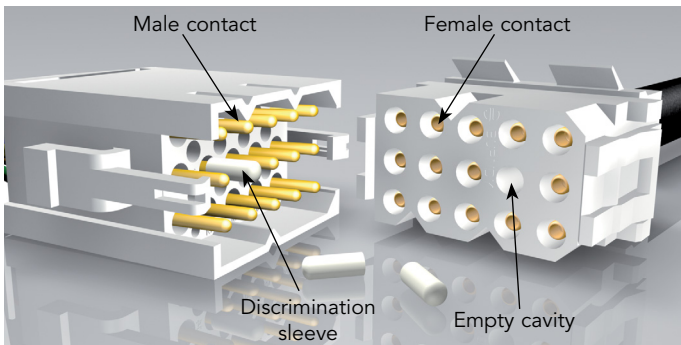
The material used is polyamide 6.6.

Both connectors have removable contacts: SMSPE0



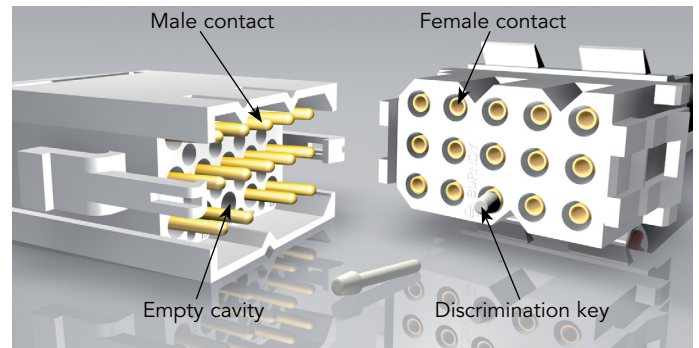
A dummy contact, which can be inserted into an empty contact cavity in any of SMS connectors.

Specially for connectors without discrimination cavities and without removable pin contact: SMSPE2



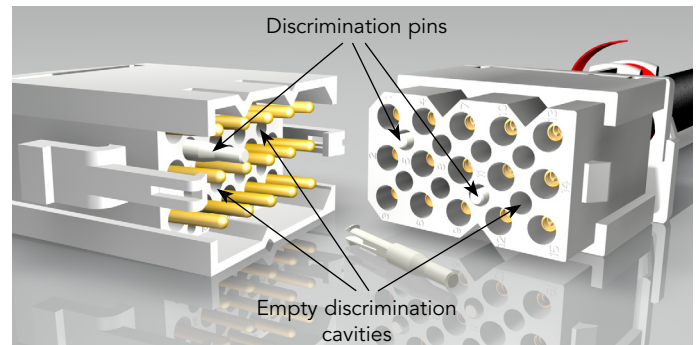
A tube, which can be fitted over a preassembled male contact in all industrial male boardmount connectors SMS.

For fixe female contacts and without discrimination cavities: SMSPE2V1



A pin, which can be inserted into a preassembled female contact in all female boardmount connectors SMS.

Both connectors have discrimination cavities: SMSPE3



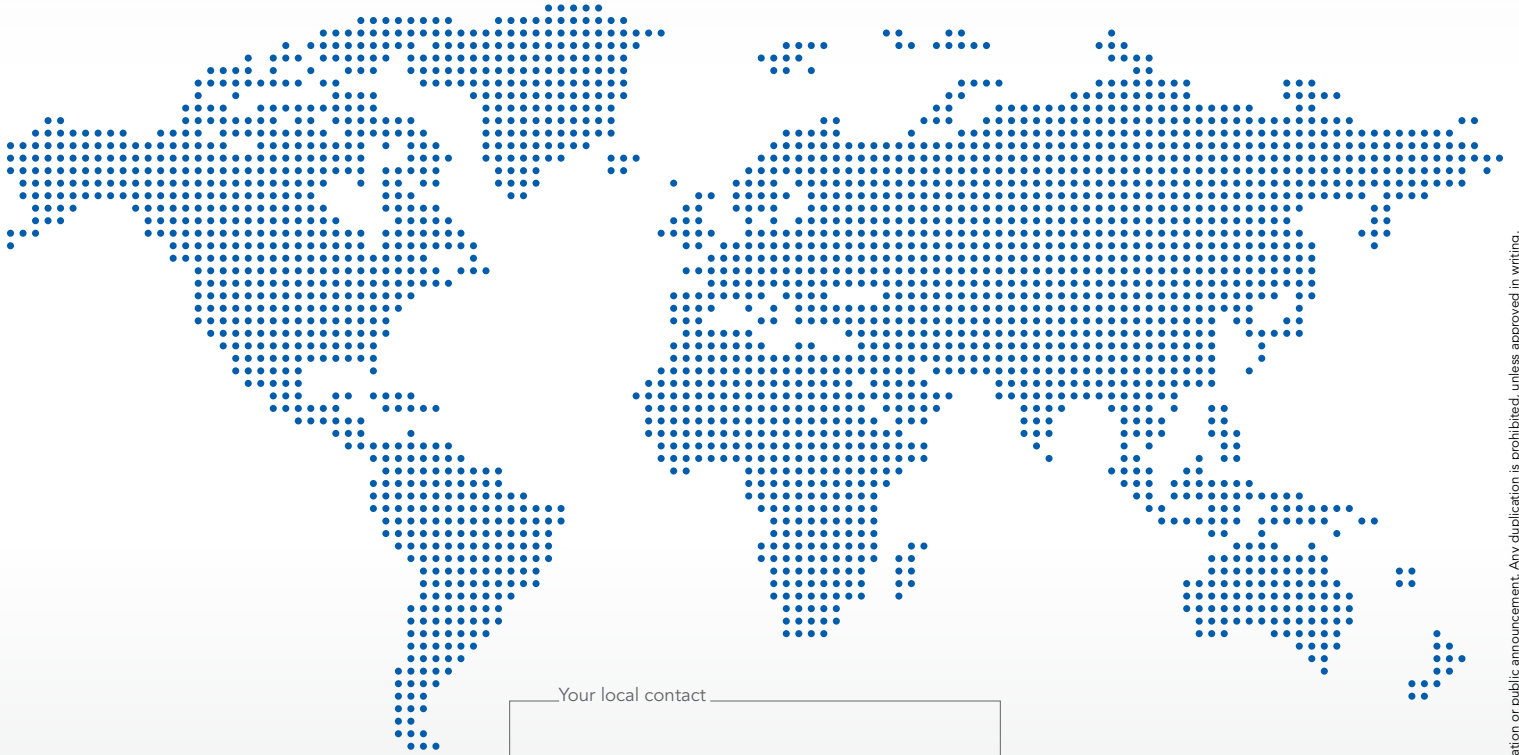
A pin, which can be inserted in the discrimination cavities of the SMS Quick mating cable and boardmount connectors. The discrimination cavities are in between of the contact cavities and offer the advantage that no contact cavities are lost due to discrimination.

As extraction tool, the RX2025GE1 without the "extraction tool tip" can be used.



RX2025GE1

Reliable People, Reliable Solutions



Your local contact



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