

Fire & Smoke Resistant Connector

The plastic rectangular solution for Railway indoor applications.

- Compliant to railway standards** ■ Tested according to EN 50467
- Compact design & up to 36 contacts** ■ Ideal for tight space integration & high density contact applications
- Excellent durability** ■ 500 mating / unmating
- Standardization oriented** ■ Compatible with standard AWG16 contacts
- A wide range available** ■ Plug & receptacle with or without hood
Panel mount receptacle
PCB receptacle



Technical features

Mechanical

- **Durability:** 500 mating/unmating
- **Vibrations & shocks:** EN 61-373 Cat.2
- **Keying system:** up to 3 different positions

Electrical

- **Current rating per contact:** 13 Amps
- **Operating voltage:** 220 V (according to EN 50-124)
- **Clearance distances (unmated):** > ? mm
- **Withstanding voltage:** 2550 Vac
- **Insulation resistance:** ≥ 5000 MΩ
- **Contacts resistance:** ≤ 2.5 mΩ

Material

- **Plug & receptacle:** Polyamid, grey Quick Mating versions and black for Boardmount versions

Environmental

- **Fire resistance, toxicity & smoke opacity:**
 - . PCB version: I2F3 according to NFF16101/16102 standards
 - . HL3/R23 & HL3/R22 - EN 45545 NFPA 130 compliant
 - . Tested according to EN 50467
- **RoHS:** compliant
- **Operating temperature:** -40°C to +105°C
- **Fluids:** according to NF F 61-030

Sealing (mated conditions) IP40

Ordering information

| Connector family | SMS | 4 | PDH3 |
|---|-----|----|------|
| | SMS | 36 | RD3 |
| Number of contacts: 2, 3, 4, 6, 9, 12, 15, 18, 24, 36 | | | |

- PDH3 Flame Retardant plug with integrated strain relief hood
- RDH3 Flame Retardant receptacle with integrated strain relief hood
- PD3 Flame Retardant plug without strain relief hood
- RD3 Flame Retardant receptacle without strain relief hood
- R3 Flame Retardant panel mount receptacle

Contacts to be ordered separately

- GE33 Straight boardmount with female PCB contacts
- GE43 Straight boardmount with male PCB contacts
- GE53 Right angle boardmount with female PCB contacts
- GE63 Right angle boardmount with male PCB contacts

PCB contacts included

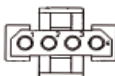
Contact layouts



2 contacts AWG 16



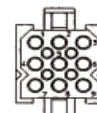
3 contacts AWG 16



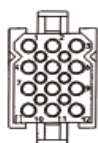
4 contacts AWG 16



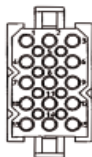
6 contacts AWG 16



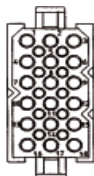
9 contacts AWG 16



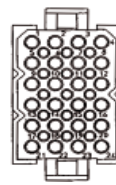
12 contacts AWG 16



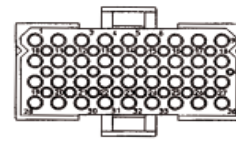
15 contacts AWG 16



18 contacts AWG 16



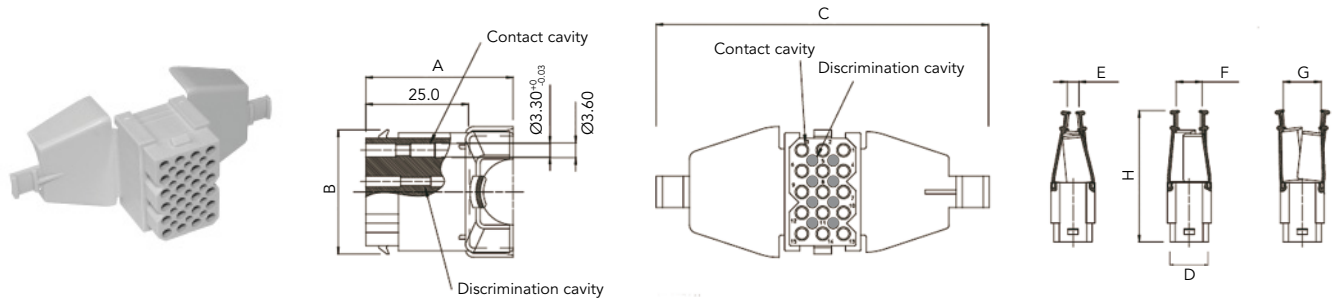
24 contacts AWG 16



36 contacts AWG 16

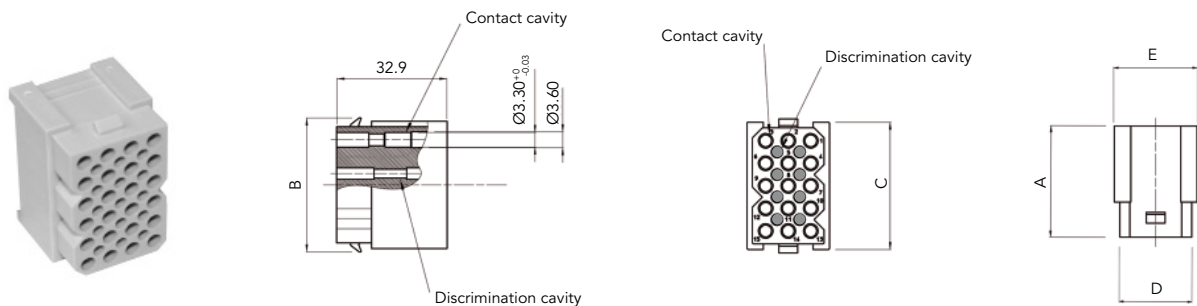
Receptacle

Receptacle Quick Mating with integrated strain relief hood (Delivered without contacts)



| Part numbers | Number of contact cavities | Number of discrimination cavities | A | B | C | D | E | F | G | H | Cable range |
|--------------|----------------------------|-----------------------------------|------|------|-------|------|-----|------|------|------|-------------|
| SMS2RDH3 | 2 | 0 | 31.6 | 9.9 | 64.8 | 11.1 | 0.5 | 7.4 | 8.4 | 49.2 | 0.5 - 8.4 |
| SMS3RDH3 | 3 | 0 | 35.1 | | 69.0 | 16.2 | 0.8 | 4.1 | 7.3 | | 0.8 - 7.3 |
| SMS4RDH3 | 4 | 0 | 38.2 | | 74.4 | 21.2 | 1.5 | 5.4 | 10.0 | | 1.5 - 10.0 |
| SMS6RDH3 | 6 | 2 | 34.6 | 15.0 | 72.6 | 16.2 | 1.7 | 6.8 | 9.2 | 50.9 | 1.7 - 9.2 |
| SMS9RDH3 | 9 | 4 | 35.8 | 20.0 | 75.3 | | 3.9 | 9.3 | 12.3 | 52.2 | 3.9 - 14.3 |
| SMS12RDH3 | 12 | 6 | 38.1 | 25.1 | 72.0 | | 4.0 | 10.0 | 15.0 | 52.7 | 4.0 - 15.0 |
| SMS15RDH3 | 15 | 8 | 35.9 | 30.2 | 81.3 | 16.2 | 5.0 | 11.0 | 16.2 | 55.2 | 5.0 - 16.2 |
| SMS18RDH3 | 18 | 10 | 36.1 | 35.3 | | | 5.8 | 12.5 | 20.3 | | 5.8 - 20.3 |
| SMS24RDH3 | 24 | 15 | 39.7 | 25.1 | 90.4 | 21.2 | 7.1 | 12.4 | 20.4 | 57.2 | 7.1 - 20.4 |
| SMS36RDH3 | 36 | 24 | 54.6 | | 128.0 | 46.6 | 8.8 | 13.0 | 24.5 | 63.3 | 8.8 - 24.5 |

Receptacle Quick Mating without strain relief hood (Delivered without contacts)



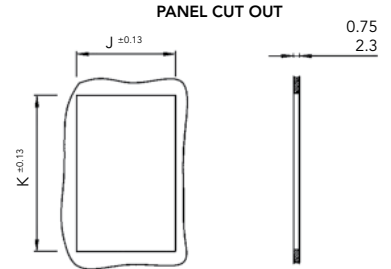
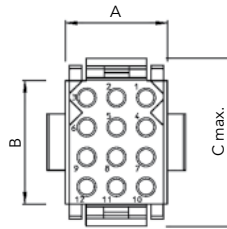
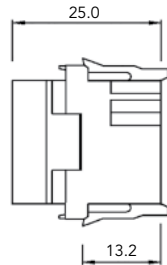
| Part numbers | Number of contact cavities | Number of discrimination cavities | A | B | C | D | E |
|--------------|----------------------------|-----------------------------------|------|------|------|------|------|
| SMS2RD3 | 2 | 0 | 25.0 | 9.9 | 8.4 | 11.1 | 14.1 |
| SMS3RD3 | 3 | 0 | | 9.9 | 8.4 | 16.2 | 18.6 |
| SMS4RD3 | 4 | 0 | | 9.9 | 8.4 | 21.2 | 23.7 |
| SMS6RD3 | 6 | 2 | | 15.0 | 13.4 | 16.2 | 18.6 |
| SMS9RD3 | 9 | 4 | | 20.0 | 18.5 | 16.2 | 18.6 |
| SMS12RD3 | 12 | 6 | | 25.1 | 23.6 | 16.2 | 18.6 |
| SMS15RD3 | 15 | 8 | | 30.2 | 28.7 | 16.2 | 18.6 |
| SMS18RD3 | 18 | 10 | | 35.3 | 33.8 | 16.2 | 18.6 |
| SMS24RD3 | 24 | 15 | | 35.3 | 33.8 | 21.2 | 23.7 |
| SMS36RD3 | 36 | 24 | | 25.1 | 23.6 | 46.6 | 49.1 |

It is recommended to use unirap cable tie (not delivered by SOURIAU)

Note : all dimensions are in mm

Receptacle

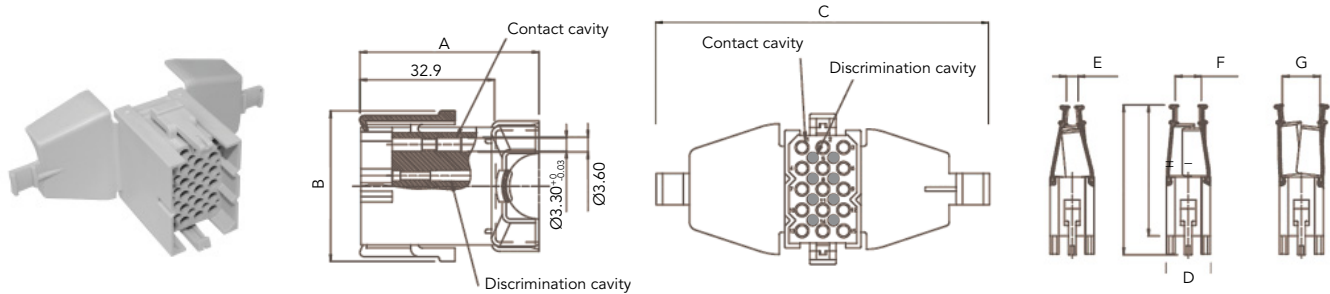
Panel Quick Mating mount receptacle (Delivered without contacts)



| Part numbers | Number of contact cavities | Number of discrimination cavities | A | B | C max. | J ^{±0.13} | K ^{±0.13} |
|--------------|----------------------------|-----------------------------------|------|------|--------|--------------------|--------------------|
| SMS2R3 | 2 | 0 | 11.0 | 5.8 | 15.2 | 11.4 | 11.6 |
| SMS3R3 | 3 | 0 | 16.2 | | | 16.5 | |
| SMS4R3 | 4 | 0 | 21.2 | | | 21.7 | |
| SMS6R3 | 6 | 0 | 16.2 | 10.9 | 20.3 | 16.5 | 16.7 |
| SMS9R3 | 9 | 0 | | 16.0 | 25.4 | | 21.6 |
| SMS12R3 | 12 | 0 | | 21.1 | 30.5 | 16.7 | 26.7 |
| SMS15R3 | 15 | 0 | | 26.2 | 35.6 | | 31.8 |
| SMS18R3 | 18 | 0 | | 31.2 | 40.6 | 21.7 | 36.9 |
| SMS24R3 | 24 | 0 | | | | | |
| SMS36R3 | 36 | 0 | 46.6 | 21.1 | 30.5 | 47.1 | 26.7 |

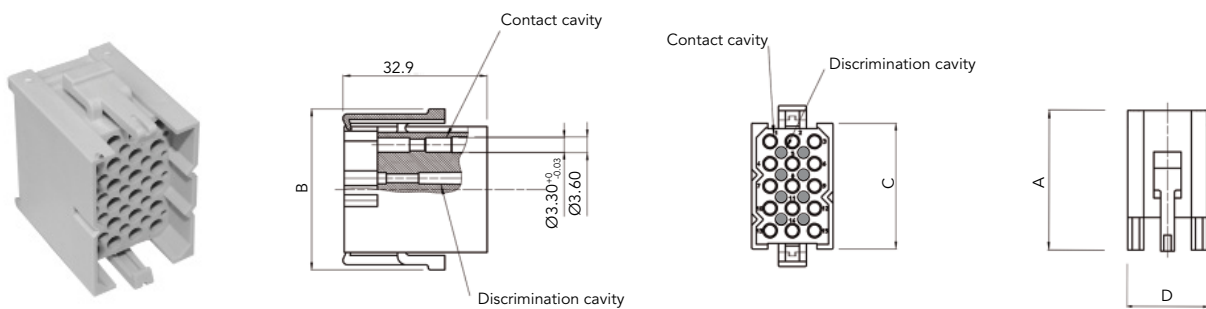
Plug

Plug Quick Mating with integrated strain relief hood (Delivered without contacts)



| Part numbers | Number of contact cavities | Number of discrimination cavities | A | B | C | D | E | F | G | H | I | Cable range |
|--------------|----------------------------|-----------------------------------|------|------|------|-------|------|------|------|------|------|-------------|
| SMS2PDH3 | 2 | 0 | 39.5 | 16.4 | 64.8 | 14.1 | 0.5 | 7.4 | 8.4 | 57.1 | 49.2 | 0.5 - 8.4 |
| SMS3PDH3 | 3 | 0 | 43.0 | | 69.0 | 18.6 | 0.8 | 4.1 | 7.3 | | | 0.8 - 7.3 |
| SMS4PDH3 | 4 | 0 | 46.1 | | 74.4 | 23.7 | 1.5 | 5.4 | 10.0 | | | 1.5 - 10.0 |
| SMS6PDH3 | 6 | 2 | 42.5 | 21.5 | 72.6 | 18.6 | 1.7 | 6.8 | 9.2 | 58.8 | 50.9 | 1.7 - 9.2 |
| SMS9PDH3 | 9 | 4 | 43.7 | 26.7 | 75.3 | | 3.9 | 9.3 | 12.3 | 60.1 | 52.2 | 3.9 - 14.3 |
| SMS12PDH3 | 12 | 6 | 46.0 | 31.7 | 72.0 | | 4.0 | 10.0 | 15.0 | 60.6 | 52.7 | 4.0 - 15.0 |
| SMS15PDH3 | 15 | 8 | 43.8 | 36.7 | 81.3 | | 5.0 | 11.0 | 16.2 | 63.1 | 55.2 | 5.0 - 16.2 |
| SMS18PDH3 | 18 | 10 | 44.0 | 41.8 | | | 5.8 | 12.5 | 20.3 | | | 5.8 - 20.3 |
| SMS24PDH3 | 24 | 15 | 47.6 | 41.8 | 90.4 | | 23.7 | 7.1 | 12.4 | 20.4 | 65.1 | 57.2 |
| SMS36PDH3 | 36 | 24 | 62.5 | | 31.7 | 128.0 | 49.1 | 8.8 | 13.0 | 24.5 | 71.2 | 63.3 |

Plug Quick Mating without strain relief hood (Delivered without contacts)



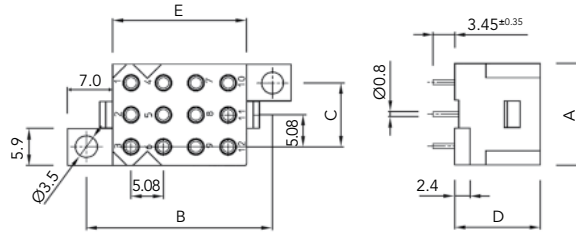
| Part numbers | Number of contact cavities | Number of discrimination cavities | A | B | C | D |
|--------------|----------------------------|-----------------------------------|------|------|------|------|
| SMS2PD3 | 2 | 0 | 32.7 | 16.4 | 8.4 | 14.1 |
| SMS3PD3 | 3 | 0 | | 16.4 | 8.4 | 18.6 |
| SMS4PD3 | 4 | 0 | | 16.4 | 8.4 | 23.7 |
| SMS6PD3 | 6 | 2 | | 21.5 | 13.4 | 18.6 |
| SMS9PD3 | 9 | 4 | | 26.7 | 18.5 | 18.6 |
| SMS12PD3 | 12 | 6 | | 31.7 | 23.6 | 18.6 |
| SMS15PD3 | 15 | 8 | | 36.7 | 28.7 | 18.6 |
| SMS18PD3 | 18 | 10 | | 41.8 | 33.8 | 18.6 |
| SMS24PD3 | 24 | 15 | | 41.8 | 33.8 | 23.7 |
| SMS36PD3 | 36 | 24 | | 31.7 | 23.6 | 49.1 |

It is recommended to use unirap cable tie (not delivered by SOURIAU)

Note : all dimensions are in mm

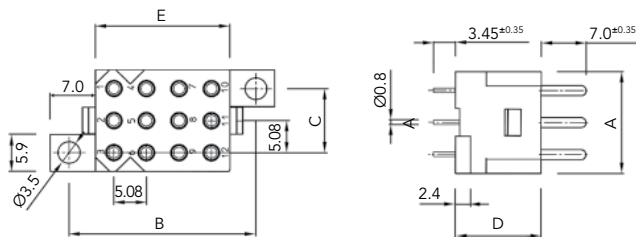
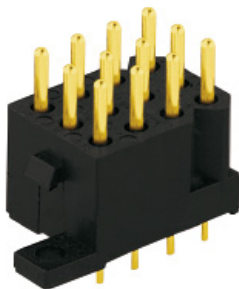
PCB receptacle

Straight boardmount receptacle delivered with female PCB contacts (SMS GE33)



| Contacts (included) | Part numbers | Number of contact cavities | Number of discrimination cavities | A | B | C | D | E |
|---------------------|--------------|----------------------------|-----------------------------------|------|------|------|------|------|
| Female contacts | SMS3GE33 | 3 | 0 | 16.2 | 14 | 10.2 | 13.4 | 5.9 |
| | SMS6GE33 | 6 | 0 | | 19.2 | | | 10.9 |
| | SMS9GE33 | 9 | 4 | | 24.2 | | | 16 |
| | SMS12GE33 | 12 | 0 | | 29.2 | | | 21.1 |
| | SMS15GE33 | 15 | 8 | | 34.3 | | | 26.1 |
| | SMS18GE33 | 18 | 10 | | 39.4 | | | 31.2 |
| | SMS24GE33 | 24 | 0 | 21.2 | 39.4 | 15.2 | 31.2 | |
| | SMS36GE33 | 36 | 0 | 46.5 | 15.2 | 54.6 | 20.9 | |

Straight boardmount receptacle delivered with male PCB contacts (SMS GE43)

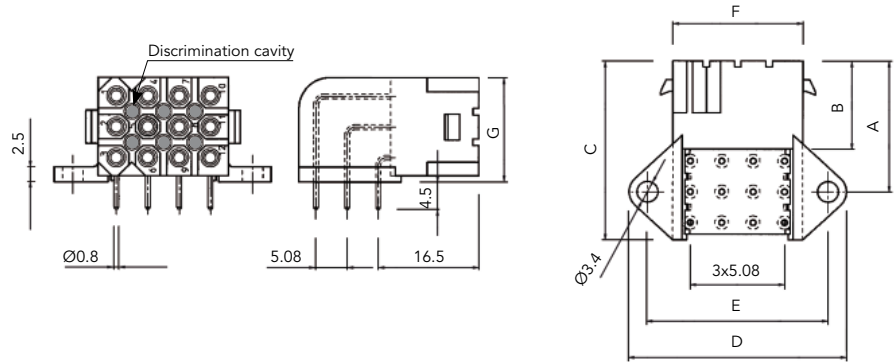


| Contacts (included) | Part numbers | Number of contact cavities | Number of discrimination cavities | A | B | C | D | E |
|---------------------|--------------|----------------------------|-----------------------------------|------|------|------|------|------|
| Male contacts | SMS3GE43 | 3 | 0 | 16.2 | 14 | 10.2 | 13.4 | 5.9 |
| | SMS6GE43 | 6 | 2 | | 19.2 | | | 10.9 |
| | SMS9GE43 | 9 | 4 | | 24.2 | | | 16 |
| | SMS12GE43 | 12 | 0 | | 29.2 | | | 21.1 |
| | SMS15GE43 | 15 | 8 | | 34.3 | | | 26.1 |
| | SMS18GE43 | 18 | 10 | | 39.4 | | | 31.2 |
| | SMS24GE43 | 24 | 0 | 21.2 | 39.4 | 15.2 | 31.2 | |
| | SMS36GE43 | 36 | 0 | 46.5 | 15.2 | 54.6 | 20.9 | |

Note : all dimensions are in mm

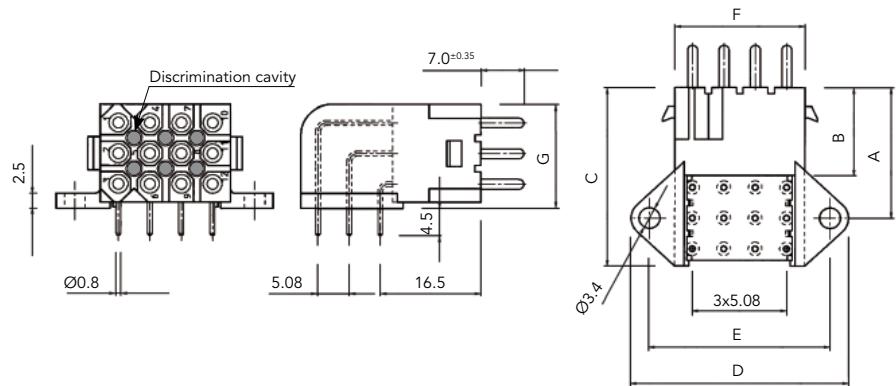
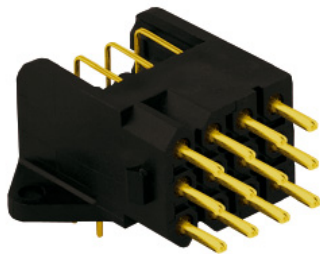
PCB receptacle

Right angle boardmount receptacle delivered with female PCB contacts (SMS GE53)



| Contacts (included) | Part numbers | Number of contact cavities | Number of discrimination cavities | A | B | C | D | E | F | G |
|---------------------|--------------|----------------------------|-----------------------------------|------|------|------|------|------|------|------|
| Female contacts | SMS3GE53 | 3 | 0 | 16.5 | 14.4 | 20.5 | 30.2 | 24.2 | 16.2 | 6.8 |
| | SMS6GE53 | 6 | 0 | 19 | | 24.5 | | | | 11.9 |
| | SMS12GE53 | 12 | 6 | 21.6 | | 29.5 | 35.2 | 29.2 | 21.2 | 17.2 |
| | SMS18GE53 | 18 | 10 | | | | 45.4 | 39.4 | 31.2 | |

Right angle boardmount receptacle delivered with male PCB contacts (SMS GE63)



| Contacts (included) | Part numbers | Number of contact cavities | Number of discrimination cavities | A | B | C | D | E | F | G |
|---------------------|--------------|----------------------------|-----------------------------------|------|------|------|------|------|------|------|
| Male contacts | SMS3GE63 | 3 | 0 | 16.5 | 14.4 | 20.5 | 30.2 | 24.2 | 16.2 | 6.8 |
| | SMS6GE63 | 6 | 0 | 19 | | 24.5 | | | | 11.9 |
| | SMS12GE63 | 12 | 6 | 21.6 | | 29.5 | 35.2 | 29.2 | 21.2 | 17.2 |
| | SMS18GE63 | 18 | 10 | | | | 45.4 | 39.4 | 31.2 | |

Note : all dimensions are in mm

Machined contacts #16

| Part numbers | | | | | | Wire size | | Max. wire Ø | Max. insul. Ø | Wire strip length |
|-------------------|----------|-----------------|-------------|------------------|-------------|-----------|-----------------|-------------|---------------|-------------------|
| Standard contacts | | Longer contacts | | Shorter contacts | | AWG | mm ² | | | |
| Male | Female | Male | Female | Male | Female | | | | | |
| RM20M12K | RC20M12K | RM20M12GE1K | RC20M12GE1K | RM20M12GE3K | RC20M12GE7K | 22-20 | 0.32-0.52 | 1.18 | 2.2 | 4.8 |
| RM16M23K | RC16M23K | RM16M23GE1K | RC16M23GE1K | RM16M23GE3K | RC16M23GE7K | 20-16 | 0.50-1.50 | 1.80 | 3.2 | 7.1 |
| RM14M50K | RC14M50K | - | - | - | - | 16-14 | 1.5-2.5 | 2.05 | | |
| RM14M30K | RC14M30K | RM14M30GE1K | - | - | RC14M30GE7K | 16-14 | 1.5-2.5 | 2.28 | | |

Note : all dimensions are in mm

Tooling for machined contacts #16



| Manual crimp pliers | Locator | Selector set-up - Wire section | | | | | | Extraction tool |
|---------------------|--------------------|--------------------------------|---------------------------|------------------------|--------------------------|--------------------------|-----------|-----------------|
| MH860 (M22520/7-01) | MH86164G or TP1142 | 6 0.5 mm ² | 7 0.75 mm ² | 7 1 mm ² | 8 1.5 mm ² | - | RX2025GE1 | |
| FT8 | - | 4 0.5 mm ² | 4 0.75 mm ² | 5 1 mm ² | 5 1.5 mm ² | - | | |
| AF8 (M22520/1-01) | TP1142 | - | - | - | - | 8 2.5 mm ² | | |

Following standard: EN 50306-2

Following standard: EN 50264-3-1

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