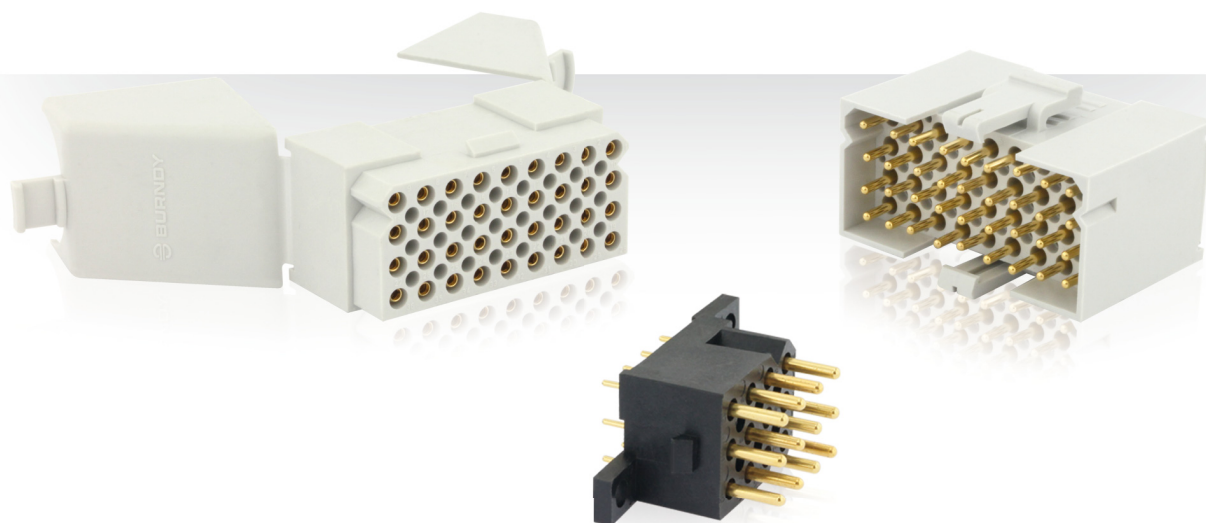


SMS Flame Retardant

**SOURIAU**



## 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



**Esterline**  
Connection Technologies

# SMS / Flame Retardant

## 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

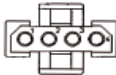
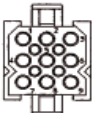
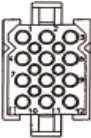
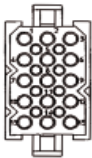
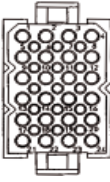
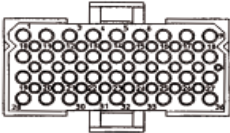
### Sealing (mated conditions) IP40

## Ordering information

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

|      |                                                               |                                     |
|------|---------------------------------------------------------------|-------------------------------------|
| PDH3 | Flame Retardant plug with integrated strain relief hood       | ] Contacts to be ordered separately |
| 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                        |                                     |
| GE33 | Straight boardmount with female PCB contacts                  | ] PCB contacts included             |
| GE43 | Straight boardmount with male PCB contacts                    |                                     |
| GE53 | Right angle boardmount with female PCB contacts               |                                     |
| GE63 | Right angle boardmount with male PCB contacts                 |                                     |

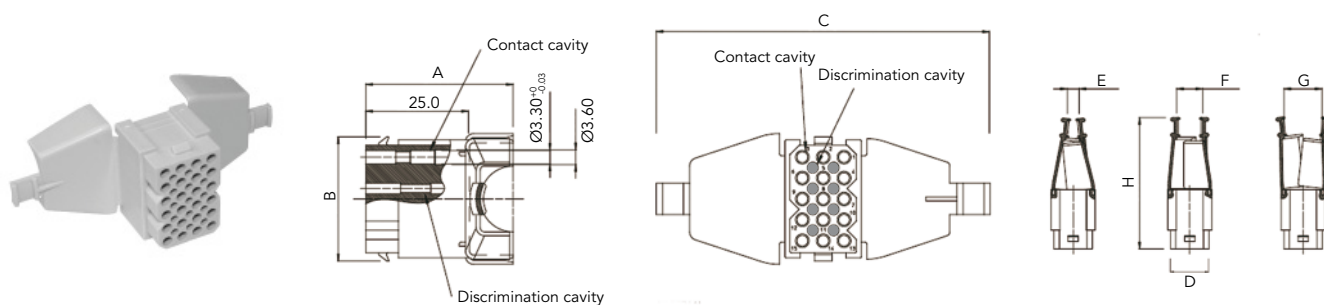
## Contact layouts

|                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|  |  |  |  |  |
| 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                                                                    |

# SMS / Flame Retardant

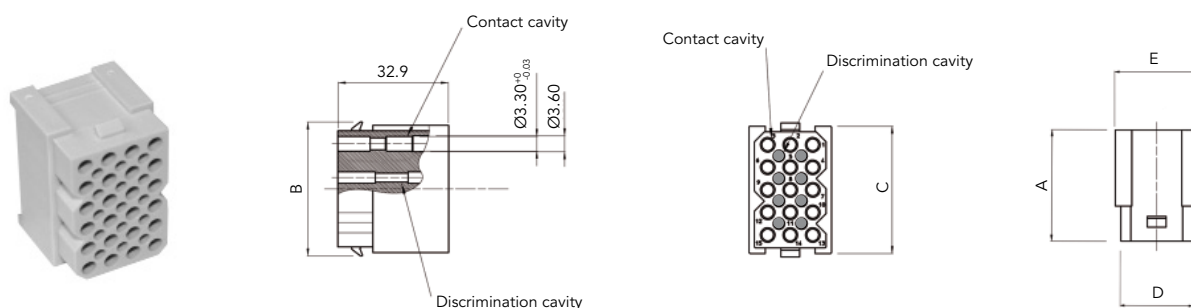
## Receptacle

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



| Part numbers | Number of<br>contact cavities | Number of<br>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  |      | 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 |      |       |      | 90.4 | 21.2 | 7.1  | 12.4 | 20.4        |
| SMS36RDH3    | 36                            | 24                                   | 54.6 | 25.1 | 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 |

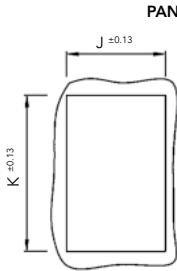
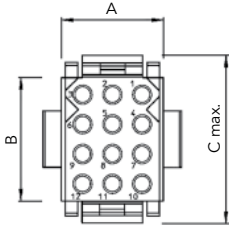
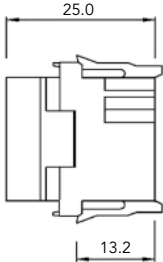
It is recommended to use unirap cable tie (not delivered by SOURIAU)

Note : all dimensions are in mm

**SOURIAU**

Receptacle

**Panel Quick Mating mount receptacle** (Delivered without contacts)

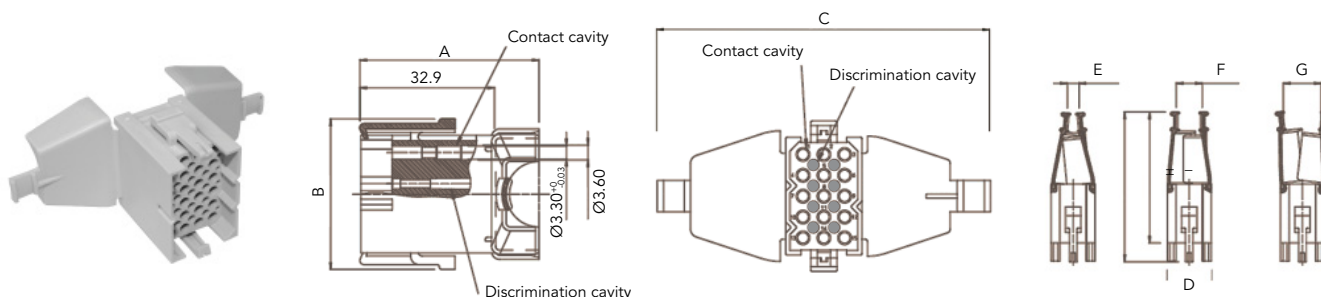


| Part numbers | Number of contact cavities | Number of discrimination cavities | A    | B    | C max. | J±0.13 | K±0.13 |
|--------------|----------------------------|-----------------------------------|------|------|--------|--------|--------|
| SMS2R3       | 2                          | 0                                 | 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                                 | 21.2 | 31.2 | 40.6   | 21.7   | 36.9   |
| SMS24R3      | 24                         | 0                                 |      |      |        |        |        |
| SMS36R3      | 36                         | 0                                 | 46.6 | 21.1 | 30.5   | 47.1   | 26.7   |

# SMS / Flame Retardant

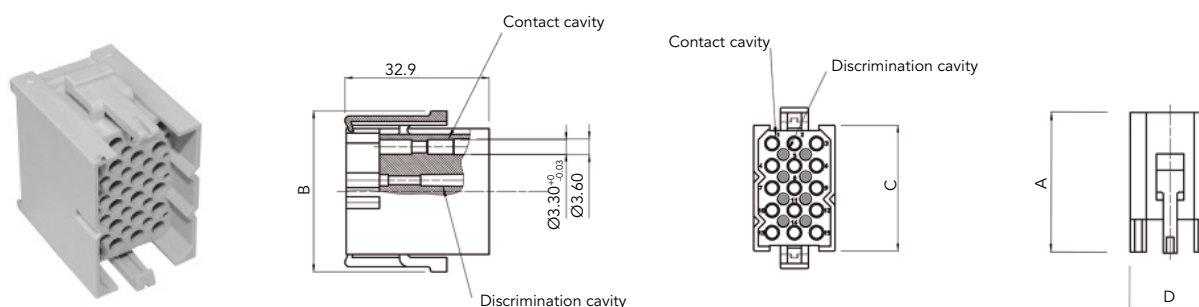
## Plug

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



| Part numbers | Number of<br>contact cavities | Number of<br>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 |      | 90.4  | 23.7 | 7.1 | 12.4 | 20.4 | 65.1 | 57.2 | 7.1 - 20.4  |
| SMS36PDH3    | 36                            | 24                                   | 62.5 | 31.7 | 128.0 | 49.1 | 8.8 | 13.0 | 24.5 | 71.2 | 63.3 | 8.8 - 24.5  |

### 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

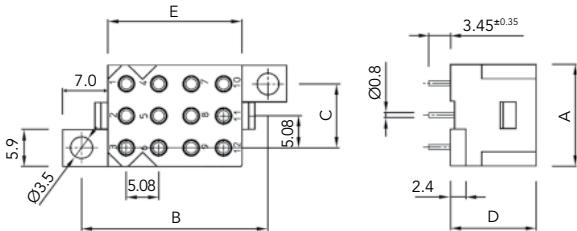
**SOURIAU**

SMS / Flame Retardant

PCB receptacle

Straight boardmount receptacle

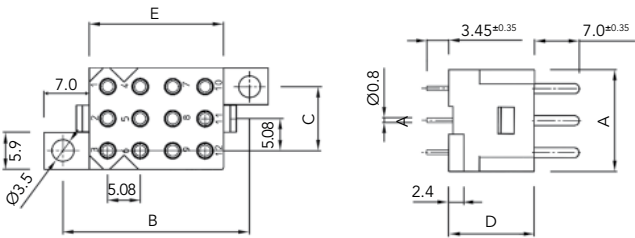
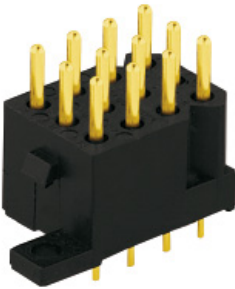
delivered with female PCB contacts (SMS GE33)



| 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)

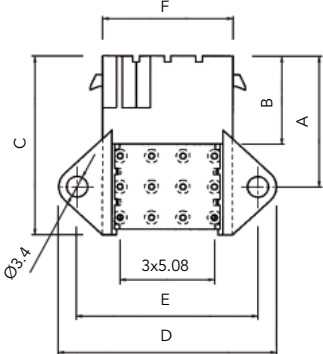
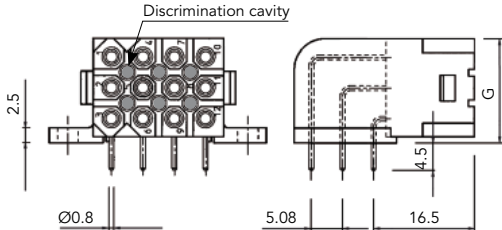


| Contacts (included) | Part numbers | Number of contact cavities | Number of discrimination cavities | A    | B    | C    | D    | E    |
|---------------------|--------------|----------------------------|-----------------------------------|------|------|------|------|------|
| Male contacts       | 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

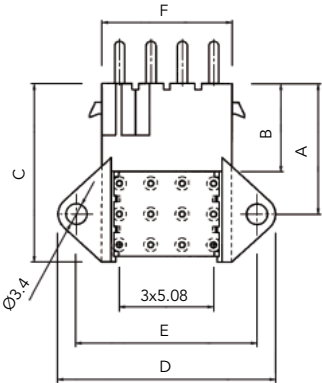
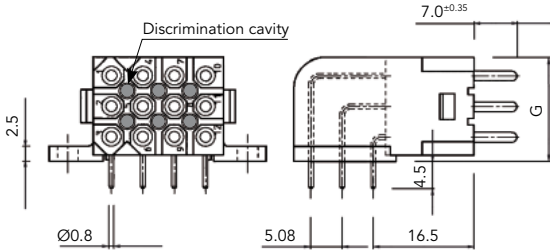
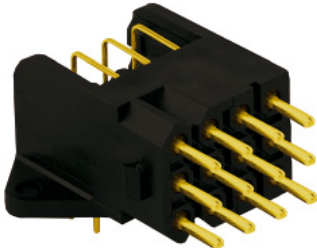
PCB receptacle

**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

## SMS / Flame Retardant

### Machined contacts #16

| Part numbers      |          |                 |             |                  |             | Wire size |           | Max. wire Ø | Max. insul. Ø | Wire strip length |
|-------------------|----------|-----------------|-------------|------------------|-------------|-----------|-----------|-------------|---------------|-------------------|
| Standard contacts |          | Longer contacts |             | Shorter contacts |             |           |           |             |               |                   |
| Male              | Female   | Male            | Female      | Male             | Female      | AWG       | mm²       |             |               |                   |
| 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<br>0.5 mm²                   | 7<br>0.75 mm² | 7<br>1 mm² | 8<br>1.5 mm² | -            | RX2025GE1       |
| FT8                 | -                  | 4<br>0.5 mm²                   | 4<br>0.75 mm² | 5<br>1 mm² | 5<br>1.5 mm² | -            |                 |
| AF8 (M22520/1-01)   | TP1142             | -                              | -             | -          | -            | 8<br>2.5 mm² |                 |

Following standard: EN 50306-2

Following standard: EN 50264-3-1

# SOURIAU

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contactindustry@souriau.com

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Connection Technologies