

MSG 3U SERIES

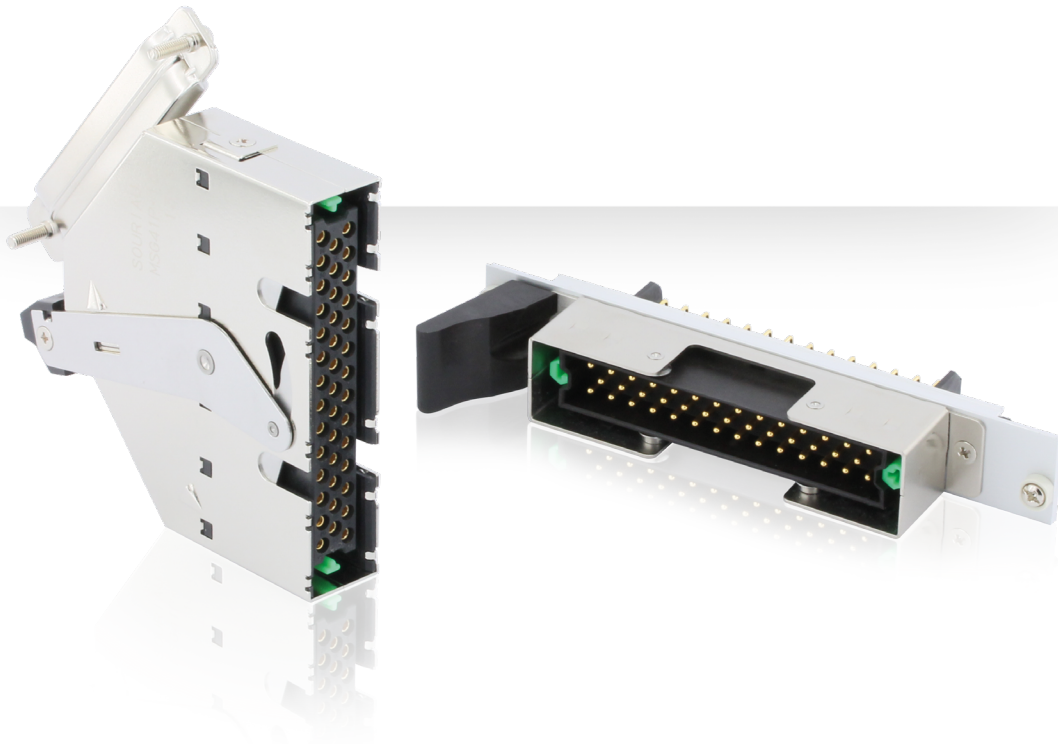


Easy & Secure Connectors for Rack Systems  
Front I/O solutions for railway



**SOURIAU**  
Connection Technologies





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### Similar product range

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# MSG 3U SERIES

# Overview

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## SOURIAU's railway connector range overview

### For outdoor equipments

#### VGE1 / FER1



Up to 60 contacts  
Signal, Quadrax and Fiber Optics layouts  
Reverse bayonet or screw system  
Tested following EN 50 467 and NF F 61-030  
HL3/R22 & HL3/R23 - EN 45545-2

#### 838



Up to 61 contacts  
Signal, Quadrax and Fiber optic layouts  
Inter-vehicle applications (Jumper)  
Tested following EN 50 467 and NF F 61-030  
HL2/R22 & HL3/R23 - EN 45545-2

#### 8525



Up to 61 contacts  
Signal, Quadrax and hermetic versions  
-65°C to +200°C  
HL3/R22 & HL3/R23 - EN 45545-2

#### 8D (38999)



Up to 128 contacts  
Signal, Quadrax and Fiber Optics layouts  
High density solution  
HL3/R22 & HL3/R23 - EN 45545-2

### For indoor equipments

#### SMS flame retardant



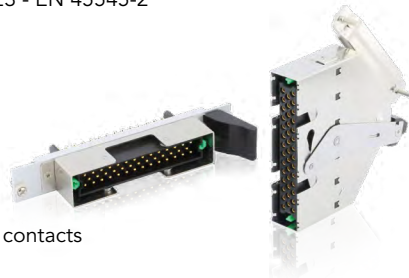
Up to 36 contacts #16  
Quick Mating plastic rectangular solution  
Tested following EN 50 467 and NF F 61-030  
HL3/R22 & HL3/R23 - EN 45545-2

#### SMS IP



3 or 6 contacts  
Latch locking system up to 500V  
Tested following EN 50 467 and NF F 61-030  
HL3/R22 & HL3/R23 - EN 45545-2

#### MSG 3U



29 / 41 / 51 signal contacts  
5 Quadrax layout  
Low profile I/O connector  
HL3/R22 & HL3/R23 - EN 45545-2

#### UTO



Up to 61 contacts  
Shielded bayonet solution  
HL2/R22 & HL2/R23 - EN 45545-2

#### UTS



Up to 32 contacts  
Plastic bayonet solution  
HL2/R22 & HL2/R23 - EN 45545-2

#### UTS LC / UTS MPO



Fiber optic solution  
Compatible with standard LC & MPO types  
HL2/R22 & HL2/R23 - EN 45545-2

## SOURIAU on the railway market

SOURIAU is a recognized worldwide market leader in the design and manufacture of connectors and interconnect systems for severe environments. SOURIAU has developed a dedicated range of ruggedized and reliable connectors for the railway market, fully compliant with railway standards, RoHS and fire smoke certified.

For more than 50 years, SOURIAU has become a trusted name by major railway equipment manufacturers, their subcontractors, also signalling and infrastructure companies.

SOURIAU connectors are designed to integrate new functions such as Ethernet network, weight reduction, mixed signal-power in compliance with environmental protection. This offer is the best compromise between technology, safety, reliability and cost.

### STANDARD

- ✓ Standard contacts for 8 railway ranges
- +
- ✓ Same crimping tools
- +
- ✓ Simplified process
- =
- Best compromise between technology and cost

### HIGH SPEED

- ✓ Fiber optic
- +
- ✓ Quadrax technology
- =
- High speed solutions for real-time information

### ENVIRONMENT & SAFETY

- ✓ Eco-conception & process
- +
- ✓ Safety international standards
- +
- ✓ Lightweight material
- =
- Safe railway equipments

## Typical applications



Signaling room



ERTMS systems



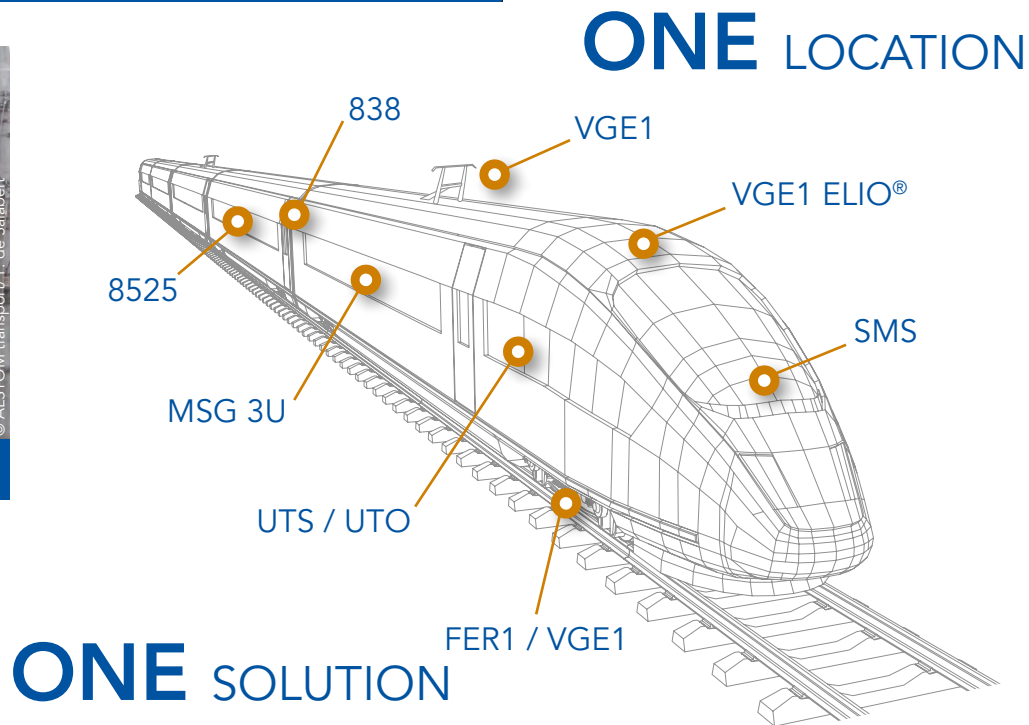
Cabin systems



CBTC systems



TRU systems



## Features & Benefits

### EASY & SECURE MATING

#### Quick lever with safe locking

Mating / Unmating operation is performed by a lever with safe locking. Mechanism was designed to guide the mating and to protect the contacts.

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### SIGNAL INTEGRITY

#### 360° metal housing

Shielding is improved with a metal cover at 360° offering a full signal integrity and a good continuity to the PCB board.

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### FLEXIBLE GROUNDING

#### Multiport Ethernet

Different multiple grounding structures are possible by each port for the 5 Quadrax layout .

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### QUALIFIED

#### Fire & smoke certified

Insert material is certified HL3/R22 & HL3/R23 following EN 45545-2 for all and is NFPA 130 compliant (except 51 pos).

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### COST SAVINGS

#### One unique contact design

A standardized electrical contact interchangeable with SOURIAU railway connector ranges: MB, VGE1, SMS, UTS, UTO, except MSG 3U 51 pos and 5 Quadrax.

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Receptacle 29 Pos.  
Straight



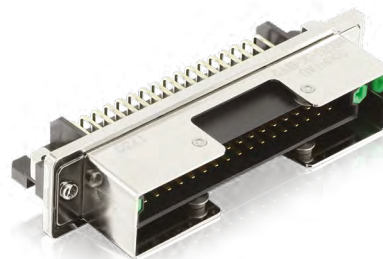
Receptacle 29 Pos.  
Right-angle



Receptacle 41 Pos.  
Wire to wire



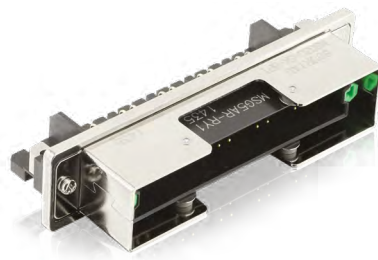
Receptacle 41 Pos.  
Right-angle



Receptacle 51 Pos.  
Right-angle



Receptacle 5 Quadrax  
Straight



Receptacle 5 Quadrax  
Right-angle

overview



Plug 29 Pos.



Plug 41 Pos.



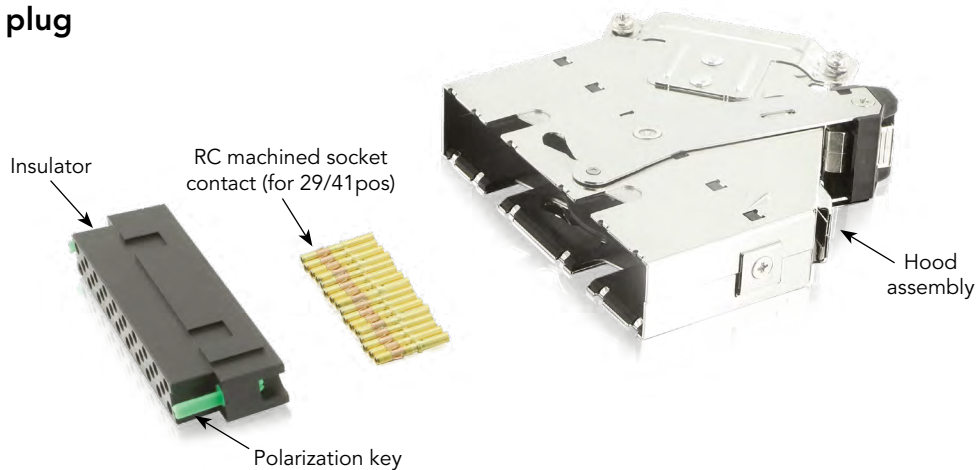
Plug 51 Pos.



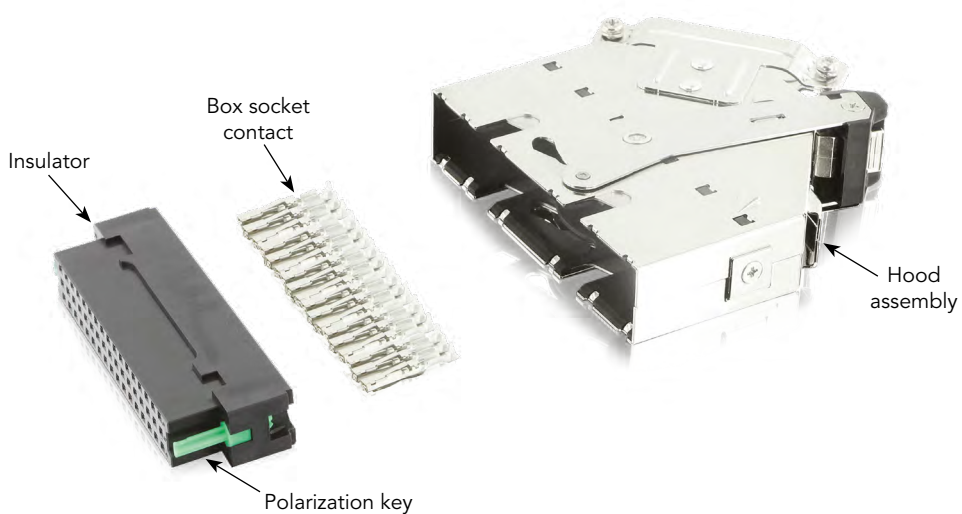
Plug 5 Quadrax

## Product description

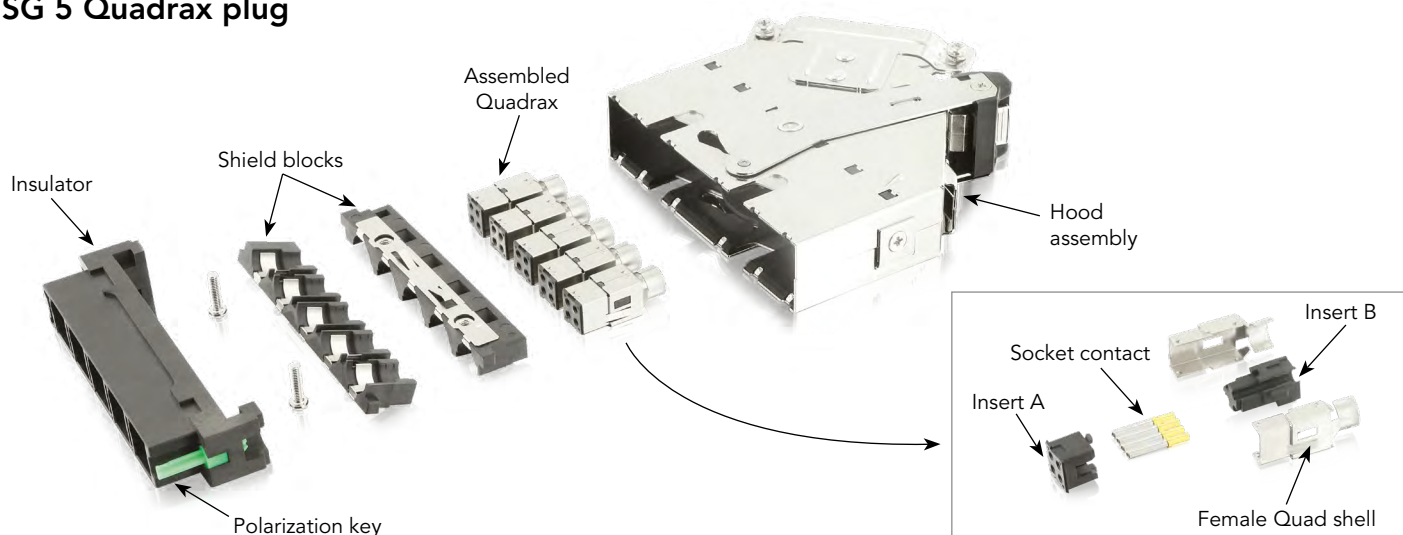
### MSG 29 / 41 pos plug



### MSG 51 pos plug

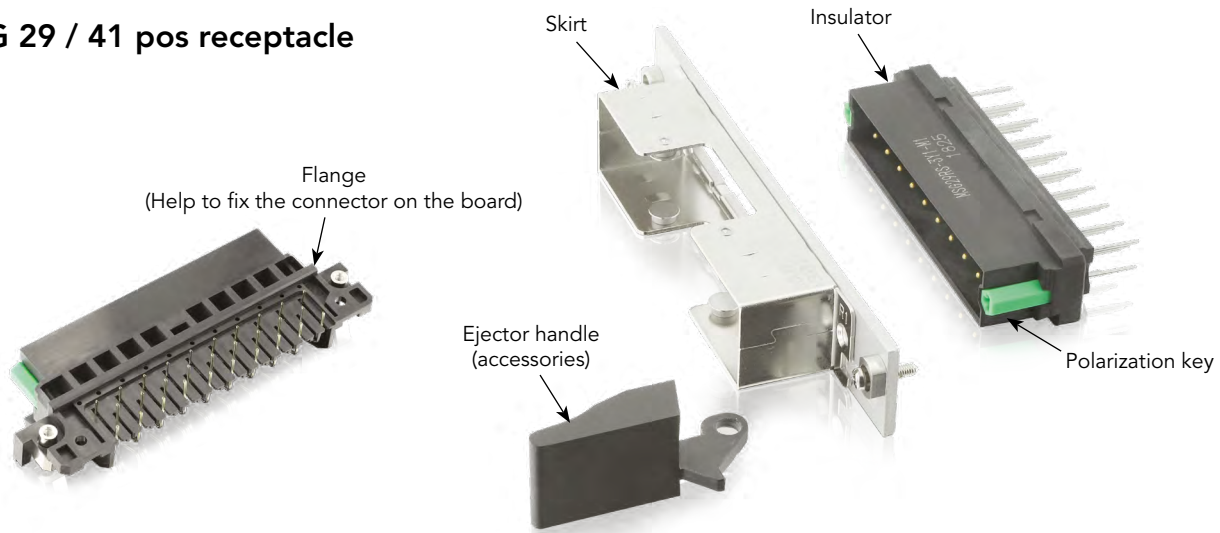


### MSG 5 Quadrax plug

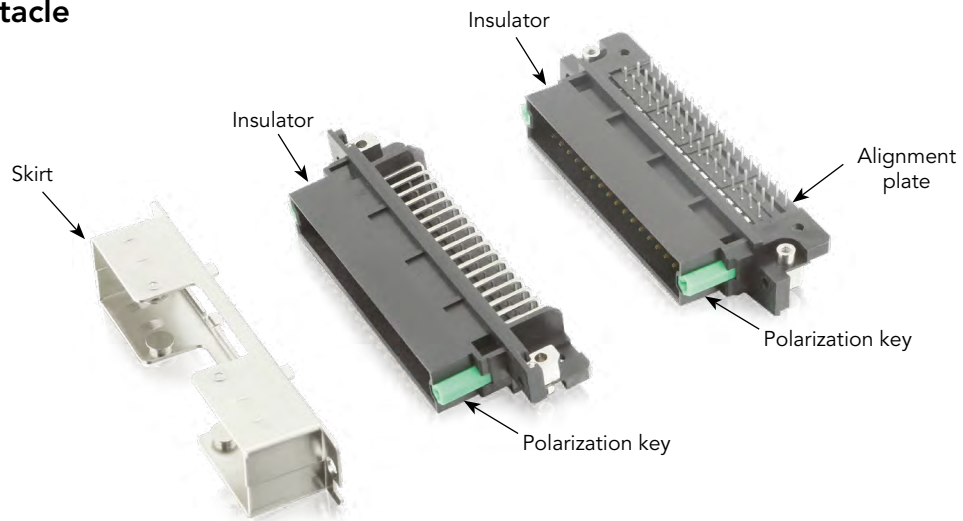


### Product description (example)

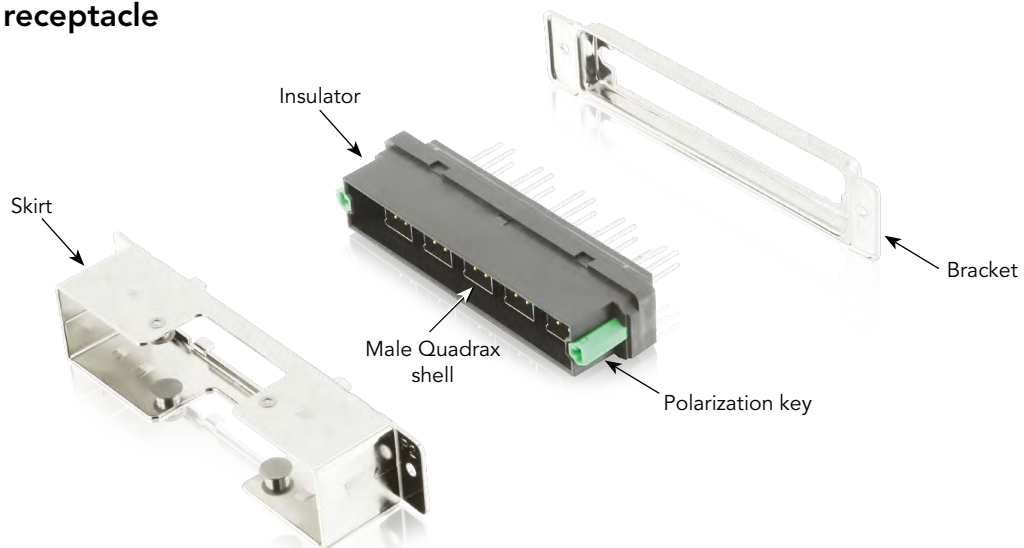
#### MSG 29 / 41 pos receptacle



#### MSG 51 pos receptacle

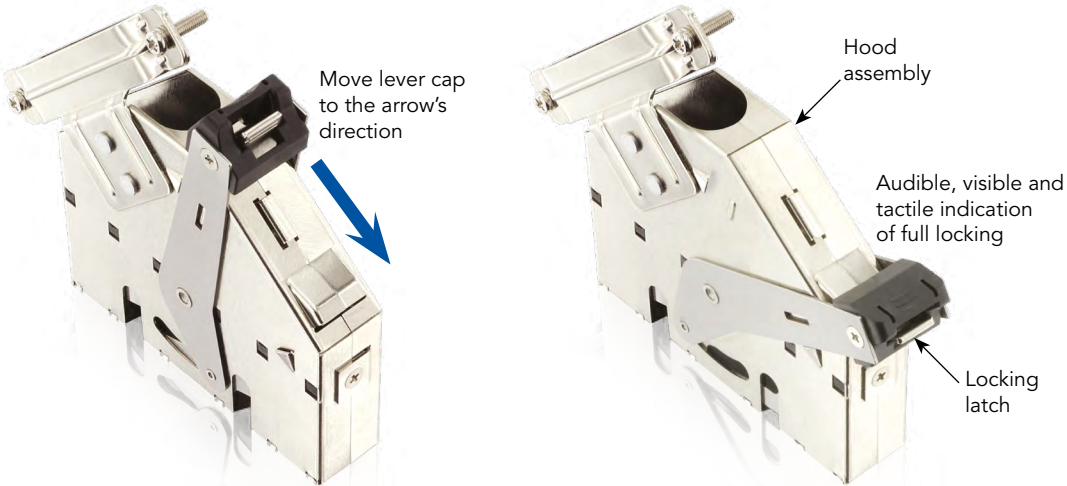


#### MSG 5 Quadrax receptacle

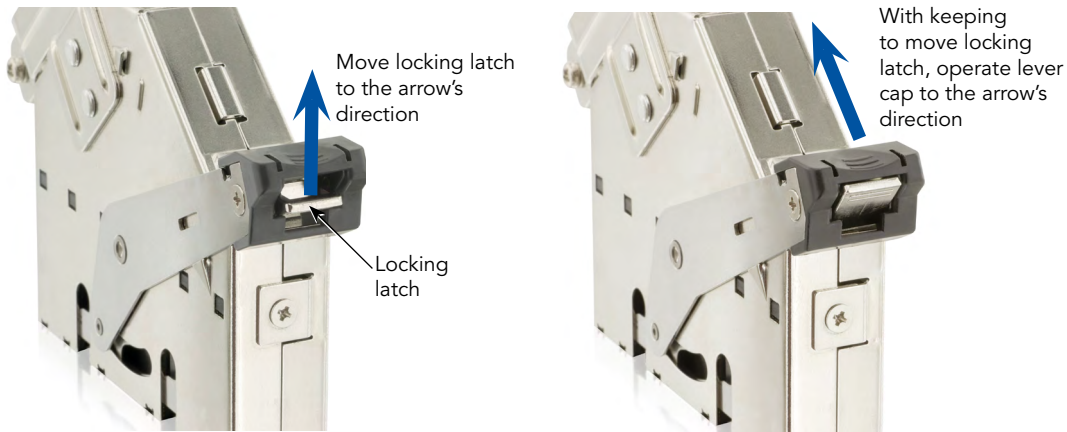


## Product features

### Connector mating: 1 simple action to lock

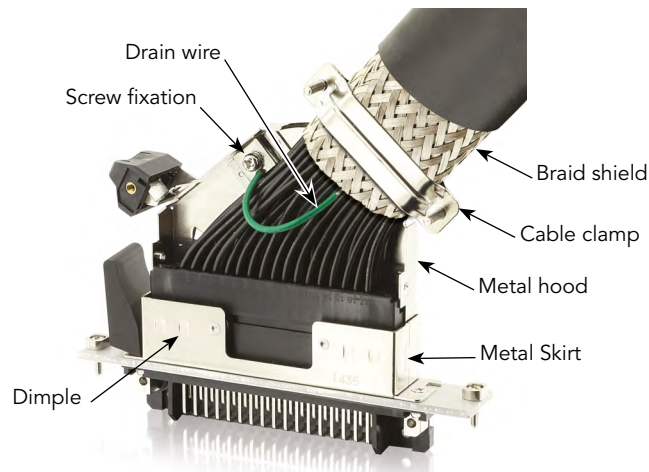


### Connector un-mating: 2 actions to un-mate



### EMI shielding to PCB

Connector is enclosed by a 360° ensuring an improved shielding. MSG 3U series is designed to performed a good continuity with the PCB board.




## General technical characteristics



### Mechanical

- Locking system: Lever with lock
- Durability: 500 mating cycles
- Vibration: According to EN 61373 Cat1b
- Shock: According to EN 61373 Cat1b
- Coding: 72 combinations by polarization keys

### Environmental

- Temperature range: -40°C to +120°C
- Salt spray resistance: 48 hours
- Sealing: IP40
- Humidity cycle test: according to IEC 60068-2-38
- RoHS compliance 

### Material

- Skirt & Hood: Steel, nickel plated
- Insulator: Hard thermoplastic
  - HL3/R22 and HL3/R23 following EN45545
  - NFPA 130 compliant (except 51pos)
- Contacts:
  - Plug side:
    - 29 pos / 41 pos / 5 Quadrax : machined crimp contacts, copper alloy, gold plated
    - 51 pos : Box stamped and formed contacts, Copper alloy, gold plated
  - PCB receptacle side: 29 pos / 41 pos / 51 pos : stamped and formed male contacts, gold plated (0.3 µm)
  - 5 Quadrax layout: machined male contacts, gold plated (0.4 µm)

### Electrical

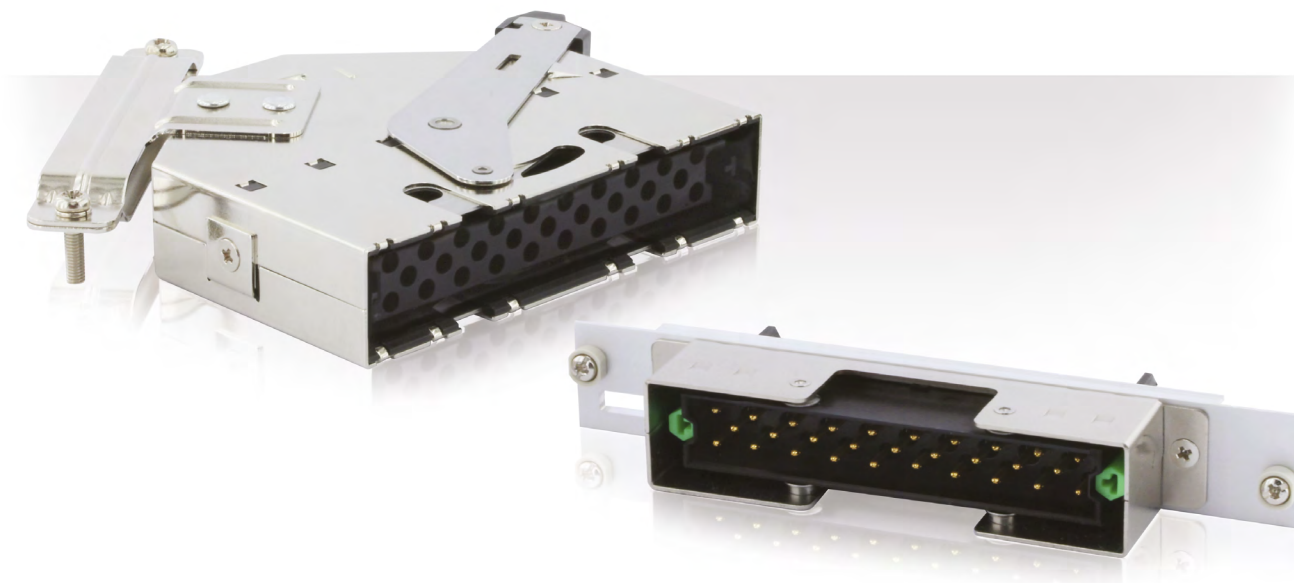
- Contact resistance (including wire resistance):
  - 29 pos / 41 pos < 15 mΩ
  - 51 pos < 15 mΩ
- Withstanding voltage:
  - 29 pos / 41 pos: 2000 V DC
  - 51 pos: 2000 V DC
  - 5 Quadrax:
    - Between each contact: 1000 V DC
    - Between contact and shell: 1500 V DC
- Insulation resistance:
  - 29 pos / 41 pos > 5000 MΩ (under 500 V DC)
  - 51 pos > 2000 MΩ (under 500 V DC)
  - 5 Quadrax > 2000 MΩ (under 500 V DC)
- Wire range:
  - 29 pos / 41 pos : Contact #16: 0.13 to 2 mm<sup>2</sup>
  - 51 pos: 0.3 to 1.5 mm<sup>2</sup>
- Creepage and clearance:
  - 29 pos: 3.075 mm
  - 41 pos: 2.32 mm
  - 51 pos : 2.3 mm
- Operating voltage:
  - 300V max following EN 50-124-1 / OV2PD2
- Skirt continuity: < 5 mΩ
- High Speed data Transmission performances:
  - 5 Quadrax: Cat. 5 following IEC 11-801

# MSG 3U SERIES

# Connectors

|                         |    |
|-------------------------|----|
| ■ MSG 29 pos. ....      | 18 |
| ■ MSG 41 pos. ....      | 22 |
| ■ MSG 51 pos. ....      | 26 |
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| ■ Panel mounting . .... | 34 |

## MSG 29 pos.



### Plug

Delivered without contacts, equipped with polarization keys.

| Contact type       | Wire size mm <sup>2</sup> | Description                                       | Cable direction  | Part number*      |
|--------------------|---------------------------|---|------------------|-------------------|
| Machined crimp #16 | 0.13 - 2.0                | With standard cable clamp, hood with ground plate | Upward cabling   | <b>MSG29P1Y1</b>  |
|                    |                           | With large cable clamp, hood with ground plate    | Upward cabling   | <b>MSG29P1Y1L</b> |
|                    |                           | With standard cable clamp, hood with ground plate | Downward cabling | <b>MSG29P2Y1</b>  |

\*Please consult us for the other combination of above components.

### Receptacle

Delivered with mounted contacts, equipped with polarization keys.

| Terminal type | Description  | Part number*        |
|---------------|--|---------------------|
| Right angle   | Fully loaded with right-angle stamped & formed male contacts, flange & fixing blocks mounted | <b>MSG29RR1Y1M1</b> |
| Straight      | Fully loaded with press-in, straight-dip, machined male contacts, bracket mounted            | <b>MSG29RS3Y1M1</b> |

\*Please consult us for the other combination of above components.

### Skirt

Delivered without screws. Screws to be defined by the customer according to the application.

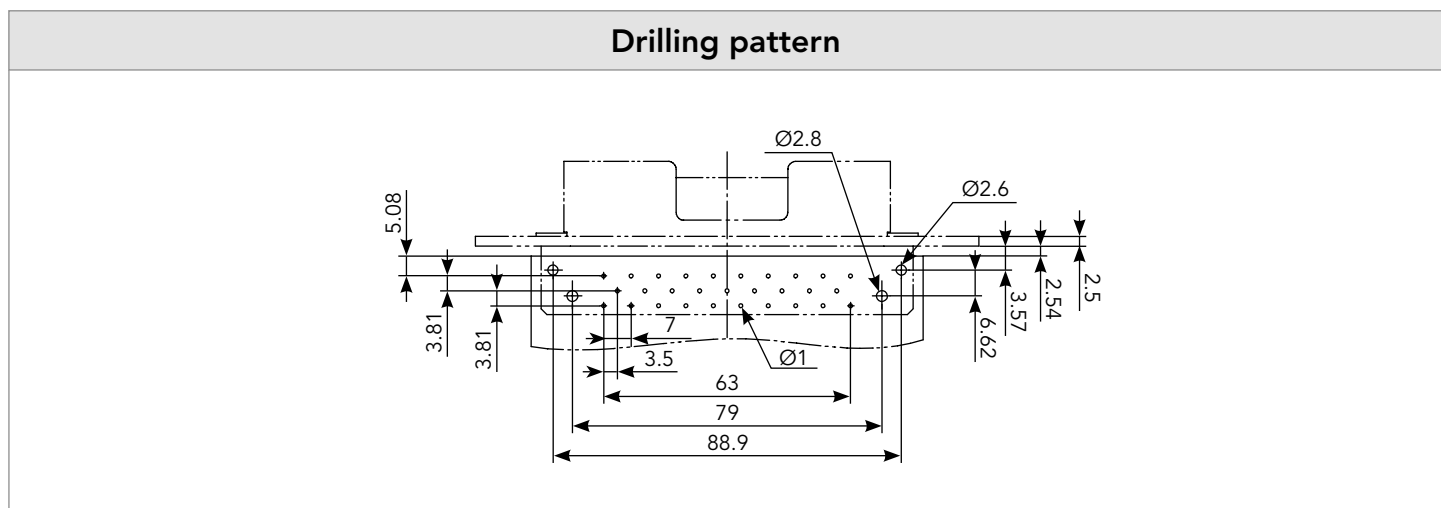
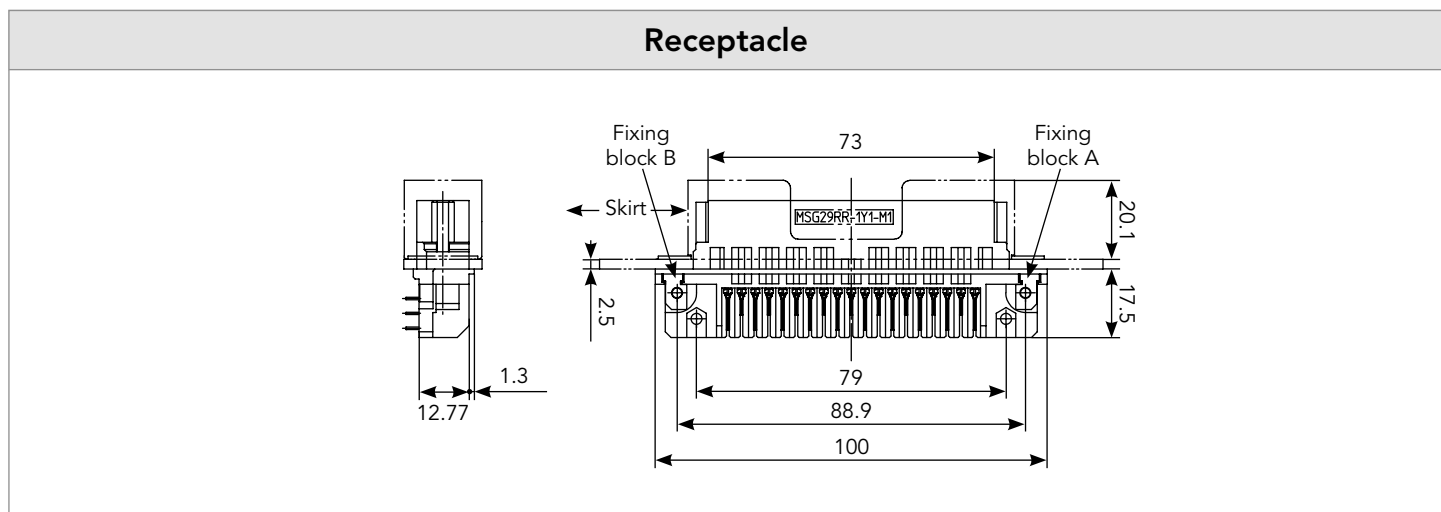
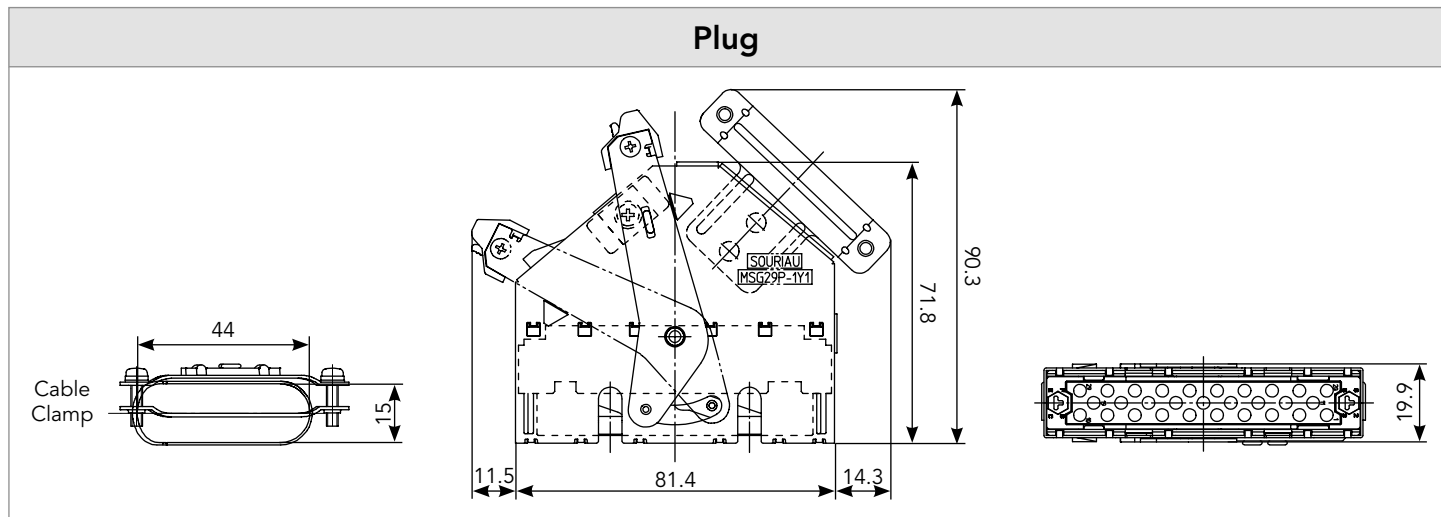
| Panel type and size <sup>(1)</sup>    | Cable direction  | Description  | Part number*        |
|---------------------------------------|------------------|--|---------------------|
| Rack panel system 3U-4HP size         | Upward cabling   | With 3U-4HP front panel, lower ejector handle position | <b>MSG3USKFPF12</b> |
| Rack panel system 3U-4HP size         | Downward cabling | With 3U-4HP front panel, lower ejector handle position | <b>MSG3USKFPF22</b> |
| Rack panel system 6U-4HP, 9U-4HP size | Upward cabling   | With ejector handle hole for right-angle type          | <b>MSG3USKFP1</b>   |
| Rack panel system 6U-4HP, 9U-4HP size | Downward cabling | With ejector handle hole for right-angle type          | <b>MSG3USKFP2</b>   |
| Panel system                          | Upward cabling   | With bracket for right-angle type                      | <b>MSG3USKBPF1</b>  |
| Panel system                          | Downward cabling | With bracket for right-angle type                      | <b>MSG3USKBPF2</b>  |
| Panel system                          | Upward cabling   | For straight type, without ejector handle hole         | <b>MSG3USKBP1</b>   |
| Panel system                          | Downward cabling | For straight type, without ejector handle hole         | <b>MSG3USKBP2</b>   |

1: See panel mounting page 34

\*Please consult us for the other combination of above components.

MSG 29 pos.

Dimensions



Note: all dimensions are in mm.  
Dimensions are not contractual and may be subject to modifications

## MSG 29 pos.

### Accessories

**Receptacle ejector handle**



| Part number           |
|-----------------------|
| MSG3UEJ1 (Upper side) |
| MSG3UEJ2 (Lower side) |

**Receptacle dust cap**



| Part number |
|-------------|
| MSG3UFC1    |

### Tooling

| Contact  | Crimp tool  |              |                 | PG check-gauge for Die | Extraction tool |
|----------|---|--------------|-----------------|------------------------|-----------------|
|          | Die   | Stop bushing | Hand crimp tool |                        |                 |
| RC24M9K  | S-9K (insulator <math>< \varnothing 1.4 \text{ mm}</math>)  | SL-40K       | M20S-1J         | PG-246-1K              | RX20-31J        |
| RC24M9K  | S-10K (insulator >math>> \varnothing 1.4 \text{ mm}</math>) |              |                 | PG-246K                |                 |
| RC20M14K | S-10JK  |              |                 | PG-246K                |                 |
| RC20M13K | S-10K   |              |                 | PG-214K                |                 |
| RC20M12K | S-10K   | PG-246-2K    |                 |                        |                 |
| RC16M23K | S-3D1K  | SL-39K       |                 |                        |                 |
| RC14M50K | S-3-14K   |              |                 |                        |                 |

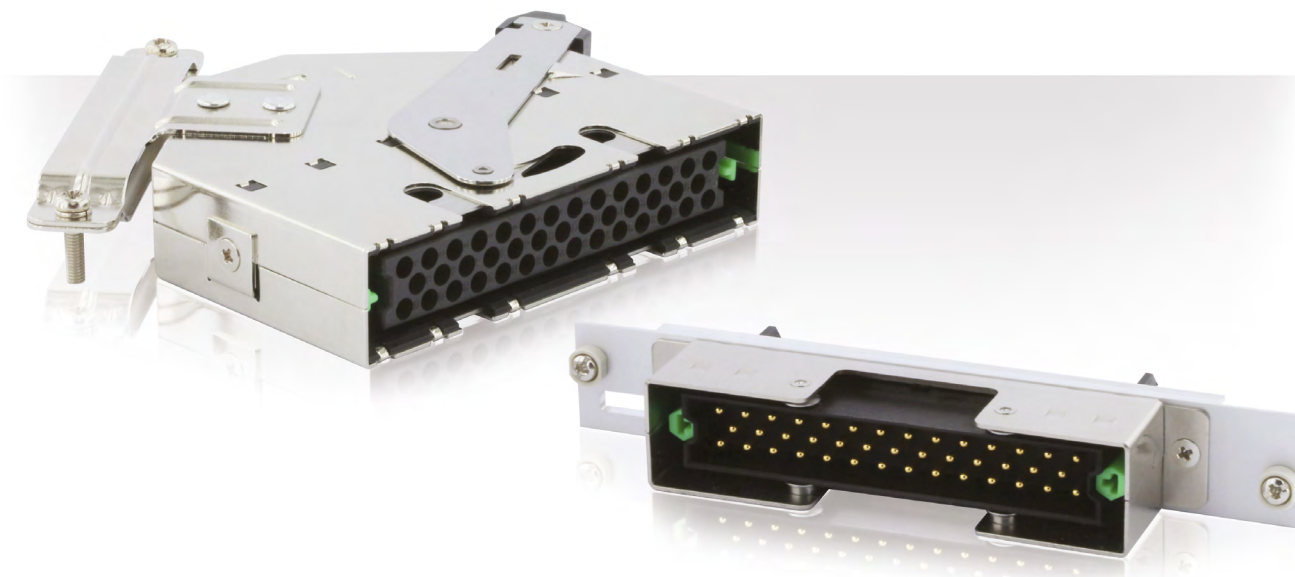


**MSG 29 pos.****Contacts for plug**

| Contact type                     | Plating    | AWG   | mm <sup>2</sup> | Max wire Ø | Max insulator Ø | Part number female contact |
|----------------------------------|------------|-------|-----------------|------------|-----------------|----------------------------|
| Machined crimp<br>#16 - Ø 1.6 mm | Gold 0.4µm | 26-24 | 0.13 - 0.2      | 0.80       | 1.60            | <b>RC24M9K</b>             |
|                                  |            | 22-20 | 0.32 - 0.52     | 1.18       | 2.60            | <b>RC20M14K</b>            |
|                                  |            | 22-20 | 0.32 - 0.52     | 1.18       | 1.80            | <b>RC20M13K</b>            |
|                                  |            | 22-20 | 0.32 - 0.52     | 1.18       | 2.20            | <b>RC20M12K</b>            |
|                                  |            | 20-16 | 0.5 - 1.5       | 1.80       | 3.00            | <b>RC16M23K</b>            |
|                                  |            | 16-14 | 1.5 - 2.0       | 2.30       | 3.20            | <b>RC14M50K</b>            |

Note: all dimensions are in mm

## MSG 41 pos.



### Plug

Delivered without contacts, equipped with polarization keys.

| Contact type       | Wire size mm <sup>2</sup> | Description  | Cable direction  | Part number*      |
|--------------------|---------------------------|--|------------------|-------------------|
| Machined crimp #16 | 0.13 - 2.0                | With standard cable clamp, hood with ground plate    | Upward cabling   | <b>MSG41P1Y1</b>  |
|                    |                           | With large cable clamp, hood with ground plate       | Upward cabling   | <b>MSG41P1Y1L</b> |
|                    |                           | With standard cable clamp, hood without ground plate | Downward cabling | <b>MSG41P2Y0</b>  |
|                    |                           | With standard cable clamp, hood with ground plate    | Downward cabling | <b>MSG41P2Y1</b>  |
|                    |                           | With large cable clamp, hood with ground plate       | Downward cabling | <b>MSG41P2Y1L</b> |

\*Please consult us for the other combination of above components.

### Receptacle

Equipped with polarization keys.

| Terminal type | Description  | Part number*        |
|---------------|--|---------------------|
| Right angle   | Fully loaded with right-angle stamped & formed male contacts, flange and fixing blocks mounted | <b>MSG41RR1Y1M1</b> |
| Wire to wire  | No contacts loaded and bracket mounted   | <b>MSG41RW1Y0M2</b> |
| Wire to wire  | Fully loaded with straight-dip, machined male contacts and bracket mounted                     | <b>MSG41RW1Y1M2</b> |

\*Please consult us for the other combination of above components.

### Skirt

Delivered without screws. Screws to be defined by the customer according to the application.

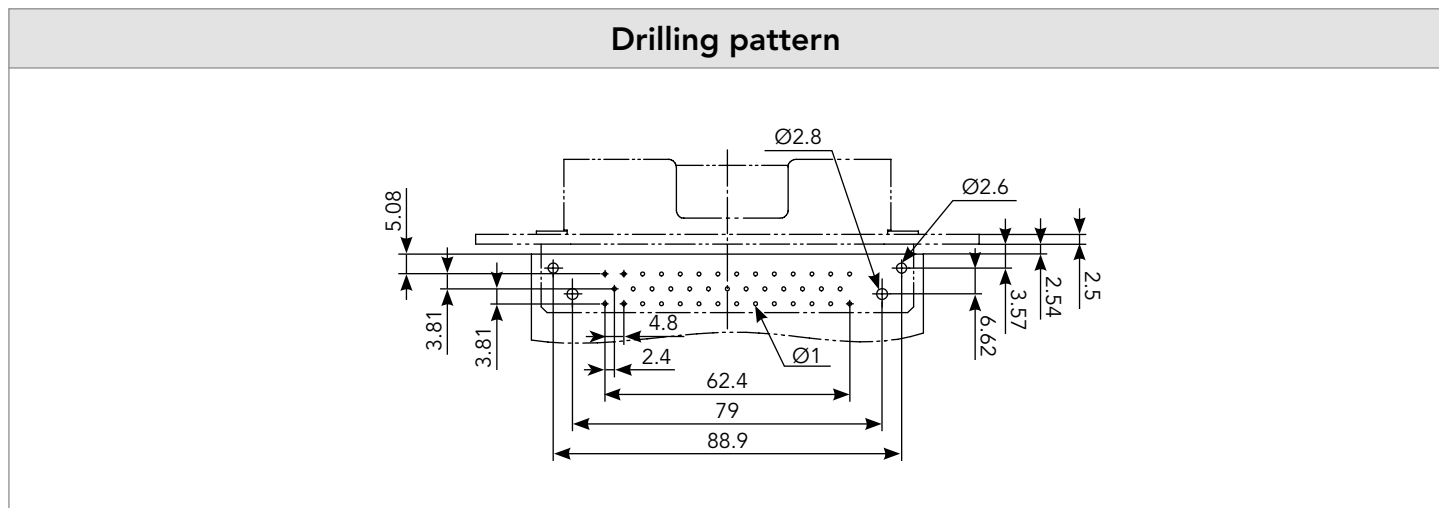
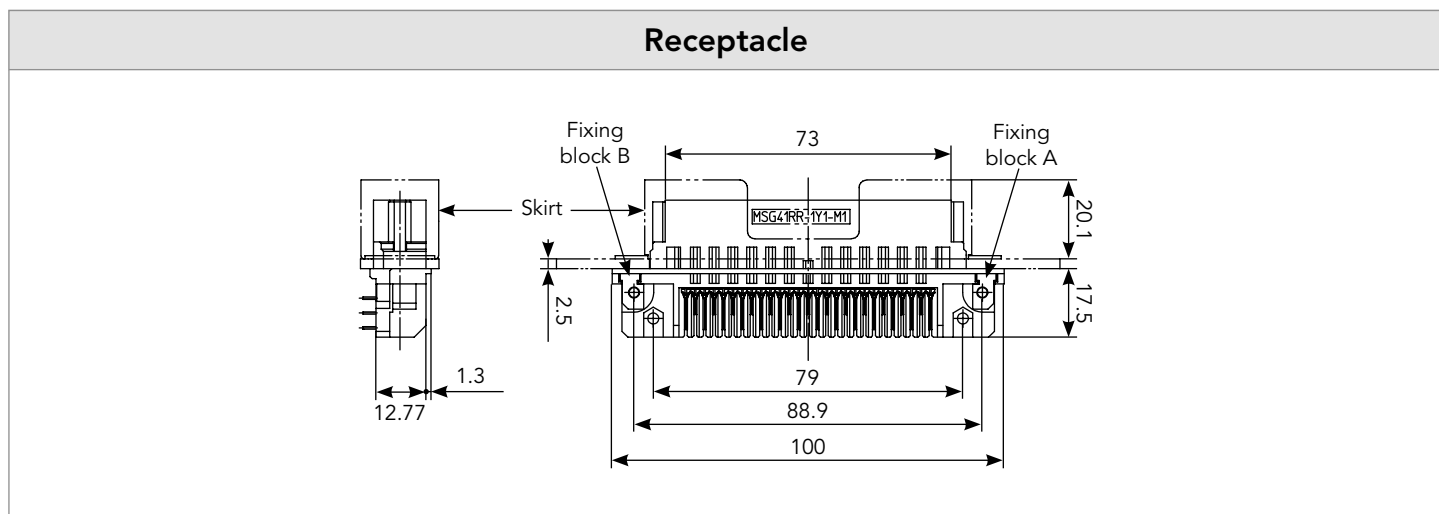
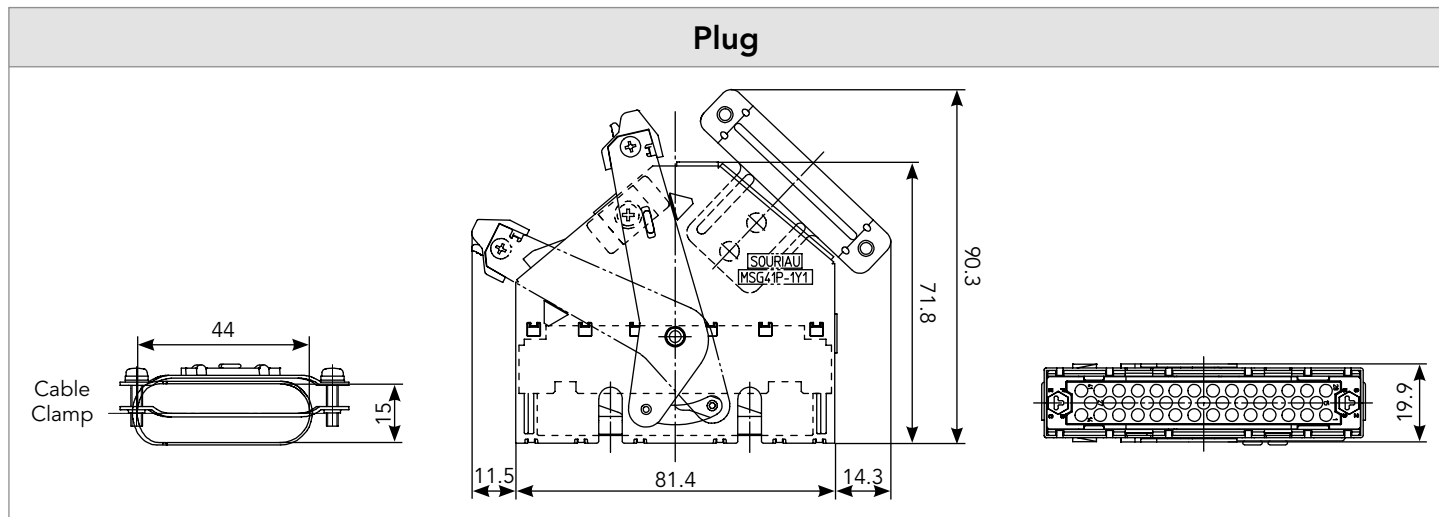
| Panel type and size <sup>(1)</sup>    | Cable direction  | Description  | Part number*        |
|---------------------------------------|------------------|--|---------------------|
| Wire-to Wire                          | Upward cabling   | Without ejector handle hole for wire-to-wire type      | <b>MSG3USKBP1</b>   |
| Wire-to Wire                          | Downward cabling | Without ejector handle hole for wire-to-wire type      | <b>MSG3USKBP2</b>   |
| Rack panel system 3U-4HP size         | Upward cabling   | With 3U-4HP front panel, lower ejector handle position | <b>MSG3USKFPF12</b> |
| Rack panel system 3U-4HP size         | Downward cabling | With 3U-4HP front panel, lower ejector handle position | <b>MSG3USKFPF22</b> |
| Rack panel system 6U-4HP, 9U-4HP size | Upward cabling   | With ejector handle hole for right-angle type          | <b>MSG3USKFP1</b>   |
| Rack panel system 6U-4HP, 9U-4HP size | Downward cabling | With ejector handle hole for right-angle type          | <b>MSG3USKFP2</b>   |
| Panel system                          | Upward cabling   | With bracket for right-angle type                      | <b>MSG3USKBPF1</b>  |
| Panel system                          | Downward cabling | With bracket for right-angle type                      | <b>MSG3USKBPF2</b>  |

1: See panel mounting page 34

\*Please consult us for the other combination of above components.

MSG 41 pos.

Dimensions



Note: all dimensions are in mm.  
Dimensions are not contractual and may be subject to modifications

## MSG 41 pos.

### Accessories

**Receptacle ejector handle**



| Part number           |
|-----------------------|
| MSG3UEJ1 (Upper side) |
| MSG3UEJ2 (Lower side) |

**Receptacle dust cap**



| Part number |
|-------------|
| MSG3UFC1    |

### Tooling

| Contact  | Crimp tool  |              |                 | PG check-gauge for Die | Extraction tool |
|----------|---|--------------|-----------------|------------------------|-----------------|
|          | Die   | Stop bushing | Hand crimp tool |                        |                 |
| RC24M9K  | S-9K (insulator <math>< \varnothing 1.4 \text{ mm}</math>)  | SL-40K       | M20S-1J         | PG-246-1K              | RX20-31J        |
| RC24M9K  | S-10K (insulator >math>> \varnothing 1.4 \text{ mm}</math>) |              |                 | PG-246K                |                 |
| RC20M14K | S-10JK  |              |                 | PG-246K                |                 |
| RC20M13K | S-10K   |              |                 | PG-214K                |                 |
| RC20M12K | S-10K   | PG-246-2K    |                 |                        |                 |
| RC16M23K | S-3D1K  | SL-39K       |                 |                        |                 |
| RC14M50K | S-3-14K   |              |                 |                        |                 |



## MSG 41 pos.

## Contacts for plug

| Contact type                     | Plating    | AWG   | mm <sup>2</sup> | Max wire Ø | Max insulator Ø | Part number female contact |
|----------------------------------|------------|-------|-----------------|------------|-----------------|----------------------------|
| Machined crimp<br>#16 - Ø 1.6 mm | Gold 0.4µm | 26-24 | 0.13 - 0.2      | 0.80       | 1.60            | <b>RC24M9K</b>             |
|                                  |            | 22-20 | 0.32 - 0.52     | 1.18       | 2.60            | <b>RC20M14K</b>            |
|                                  |            | 22-20 | 0.32 - 0.52     | 1.18       | 1.80            | <b>RC20M13K</b>            |
|                                  |            | 22-20 | 0.32 - 0.52     | 1.18       | 2.20            | <b>RC20M12K</b>            |
|                                  |            | 20-16 | 0.5 - 1.5       | 1.80       | 3.00            | <b>RC16M23K</b>            |
|                                  |            | 16-14 | 1.5 - 2.0       | 2.30       | 3.20            | <b>RC14M50K</b>            |

Note: all dimensions are in mm

## Contacts for wire-to-wire type of receptacle

| Contact type                     | Plating    | AWG   | mm <sup>2</sup> | Max wire Ø | Max insulator Ø | Part number male contact |
|----------------------------------|------------|-------|-----------------|------------|-----------------|--------------------------|
| Machined crimp<br>#16 - Ø 1.6 mm | Gold 0.4µm | 26-24 | 0.13 - 0.2      | 0.80       | 1.60            | <b>RM24M9K</b>           |
|                                  |            | 22-20 | 0.32 - 0.52     | 1.18       | 2.60            | <b>RM20M14K</b>          |
|                                  |            | 22-20 | 0.32 - 0.52     | 1.18       | 1.80            | <b>RM20M13K</b>          |
|                                  |            | 22-20 | 0.32 - 0.52     | 1.18       | 2.20            | <b>RM20M12K</b>          |
|                                  |            | 20-16 | 0.5 - 1.5       | 1.80       | 3.00            | <b>RM16M23K</b>          |
|                                  |            | 16-14 | 1.5 - 2.0       | 2.30       | 3.20            | <b>RM14M50K</b>          |

Note: all dimensions are in mm

## MSG 51 pos.



### Plug

Delivered without contacts, equipped with polarization keys.

| Contact type     | Wire size mm <sup>2</sup> | Description                                       | Cable direction  | Part number*     |
|------------------|---------------------------|---|------------------|------------------|
| Stamped & formed | 0.3 - 1.5                 | With standard cable clamp, hood with ground plate | Upward cabling   | <b>MSG51P1T1</b> |
|                  |                           | With standard cable clamp, hood with ground plate | Downward cabling | <b>MSG51P2T1</b> |

\*Please consult us for the other combination of above components.

### Receptacle

Delivered with mounted contacts, equipped with polarization keys.

| Terminal type | Description  | Part number*      |
|---------------|--|-------------------|
| Right angle   | Fully loaded with blade contacts, flange and fixing blocks mounted | <b>MSG51RR1T1</b> |

\*Please consult us for the other combination of above components.

### Skirt

Delivered without screws. Screws to be defined by the customer according to the application.

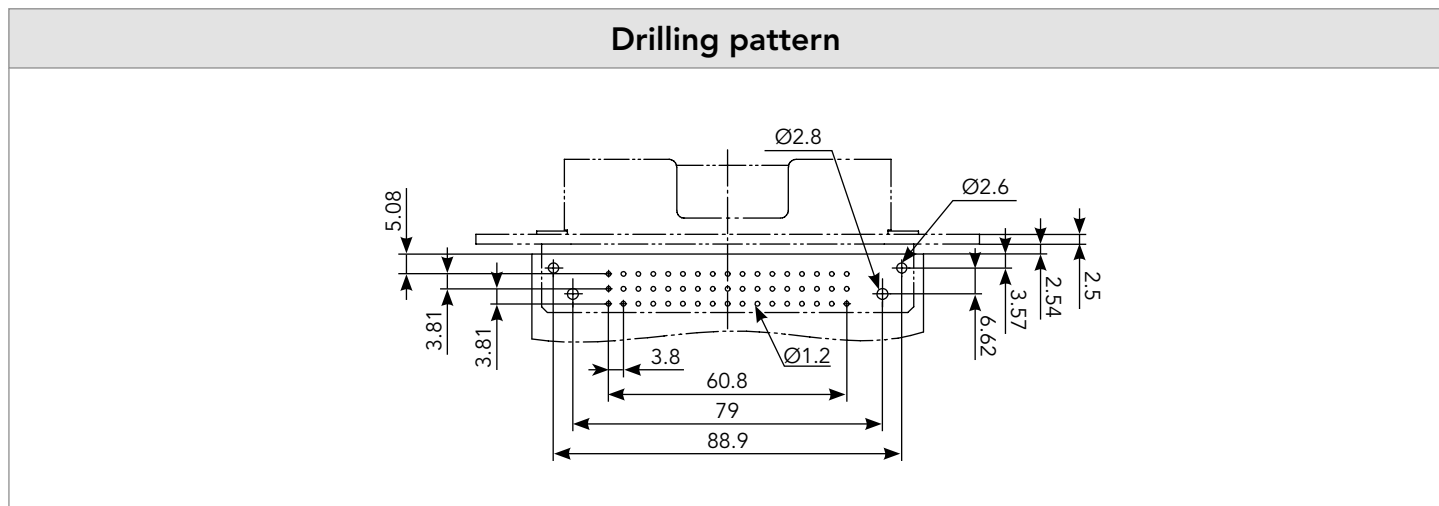
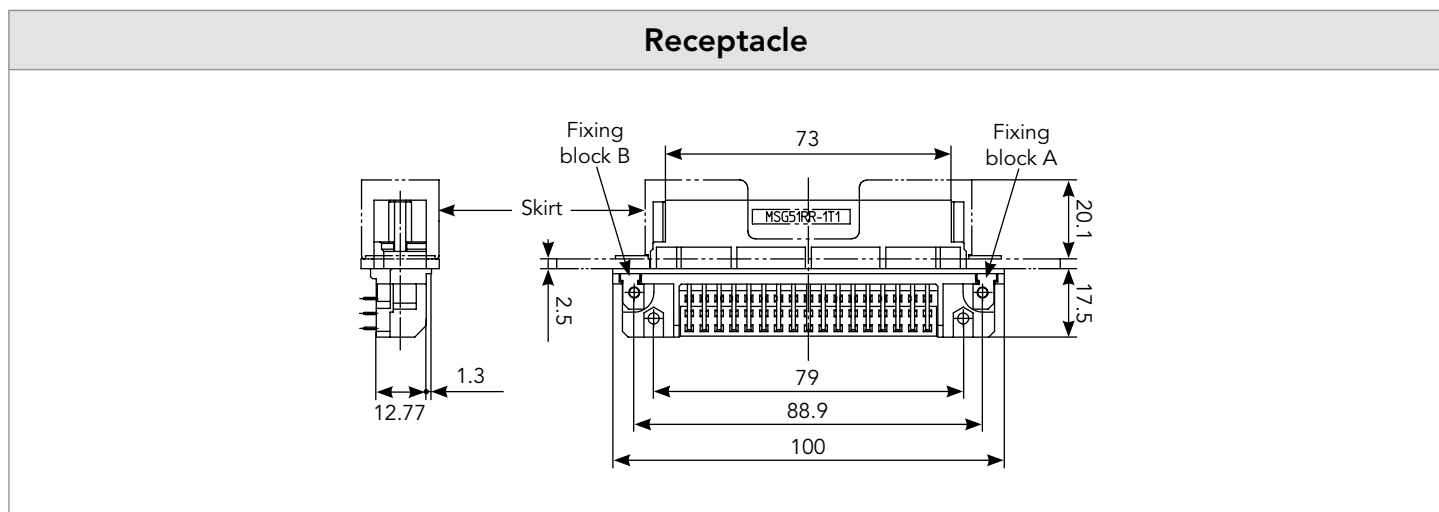
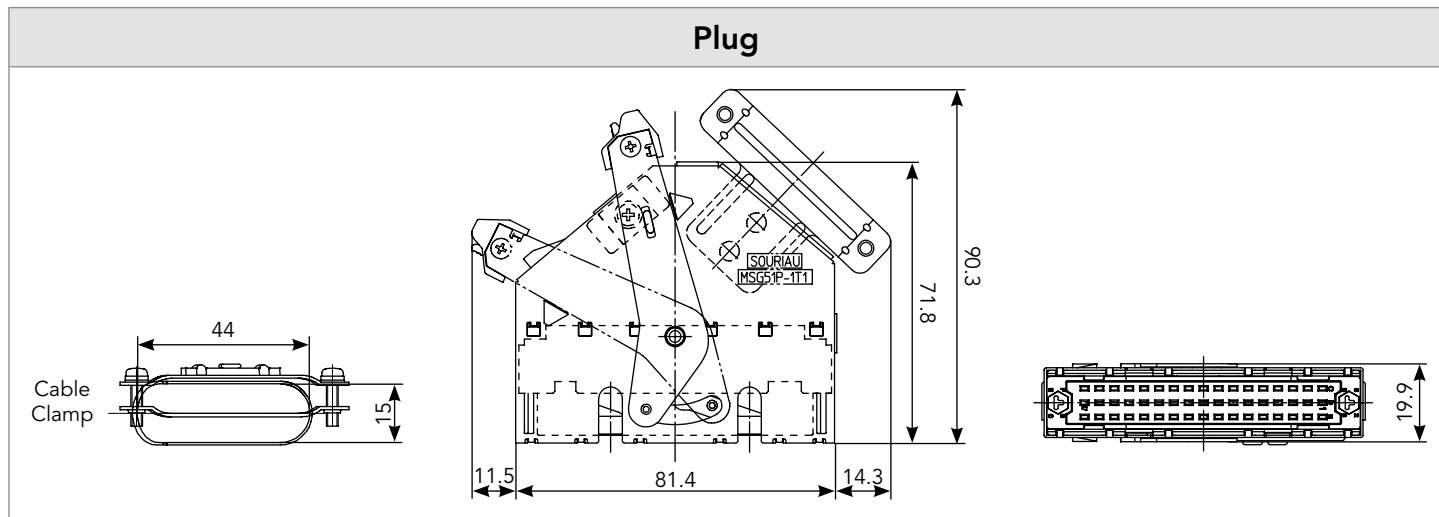
| Panel type and size <sup>(1)</sup>    | Cable direction  | Description  | Part number*        |
|---------------------------------------|------------------|--|---------------------|
| Rack panel system 3U-4HP size         | Upward cabling   | With 3U-4HP front panel, lower ejector handle position | <b>MSG3USKFPF12</b> |
| Rack panel system 3U-4HP size         | Downward cabling | With 3U-4HP front panel, lower ejector handle position | <b>MSG3USKFPF22</b> |
| Rack panel system 6U-4HP, 9U-4HP size | Upward cabling   | With ejector handle hole for right-angle type          | <b>MSG3USKFP1</b>   |
| Rack panel system 6U-4HP, 9U-4HP size | Downward cabling | With ejector handle hole for right-angle type          | <b>MSG3USKFP2</b>   |
| Panel system                          | Upward cabling   | With bracket for right-angle type                      | <b>MSG3USKBPF1</b>  |
| Panel system                          | Downward cabling | With bracket for right-angle type                      | <b>MSG3USKBPF2</b>  |

1: See panel mounting page 34

\*Please consult us for the other combination of above components.

MSG 51 pos.

Dimensions



Note: all dimensions are in mm.  
Dimensions are not contractual and may be subject to modifications

## MSG 51 pos.

### Accessories

#### Receptacle ejector handle



**Part number**

**MSG3UEJ1** (Upper side)

**MSG3UEJ2** (Lower side)

#### Receptacle dust cap



**Part number**

**MSG3UFC1**

### Crimping and extraction tool

| Contact type           | Part number       |
|------------------------|-------------------|
| Box stamped and formed | <b>AF-1402KIT</b> |



**MSG 51 pos.****Contacts for plug**

| Contact type                        | Plating    | AWG | mm <sup>2</sup> | Insulator Ø | Part number for loose piece | Part number for reel |
|-------------------------------------|------------|-----|-----------------|-------------|-----------------------------|----------------------|
| Box stamped & formed socket contact | Gold 0.3µm | 22  | 0.3             | 1.4 - 1.8   | <b>MBF2022LYN</b>           | <b>MBF2022YN</b>     |
|                                     |            | 20  | 0.5             | 1.6 - 2.0   |                             |                      |
|                                     |            | 18  | 0.75            | 1.9 - 2.3   | <b>MBF1618LYN</b>           | <b>MBF1618YN</b>     |
|                                     |            | 16  | 1.25 - 1.5      | 2.2 - 2.6   |                             |                      |

Note: all dimensions are in mm

## MSG 5 Quadrax



### Plug

Equipped with polarization keys and small cable clamp.

| Contact type              | Cable direction  | Cable sheath diameter | Ground clip <sup>(2)</sup> | Part number <sup>(1)</sup> |
|---------------------------|------------------|-----------------------|----------------------------|----------------------------|
| 5 female Quadrax included | Upward cabling   | 7.0 to 9.3 mm         | All position mounted       | <b>MSG5AP1Y1LABCDE</b>     |
| 5 female Quadrax included | Upward cabling   | 6.3 to 6.9 mm         | No ground clip             | <b>MSG5AP1Y1S</b>          |
| 5 female Quadrax included | Upward cabling   | 6.3 to 6.9 mm         | All position mounted       | <b>MSG5AP1Y1SABCDE</b>     |
| 5 female Quadrax included | Downward cabling | 6.3 to 6.9 mm         | All position mounted       | <b>MSG5AP2Y1SABCDE</b>     |

1: Please consult us for the other combination of above components.

2: Ground clip position can be chosen. Please consult us.

### Receptacle

Equipped with polarization keys and fixing block.

| Contact type            | Mount type  | Quadrax Skirt <sup>(2)</sup> | Bracket      | Part number <sup>(1)</sup> |
|-------------------------|-------------|------------------------------|--------------|----------------------------|
| 5 male Quadrax included | Right angle | None                         | With flange  | <b>MSG5ARRY1</b>           |
| 5 male Quadrax included | Straight    | None                         | With bracket | <b>MSG5ARSY1</b>           |
| 5 male Quadrax included | Straight    | All position mounted         | With bracket | <b>MSG5ARSY1ABCDE</b>      |

1: Please consult us for the other combination of above components.

2: Quadrax Skirt position can be chosen. Please consult us.

### Skirt

Delivered without screws. Screws to be defined by the customer according to the application.

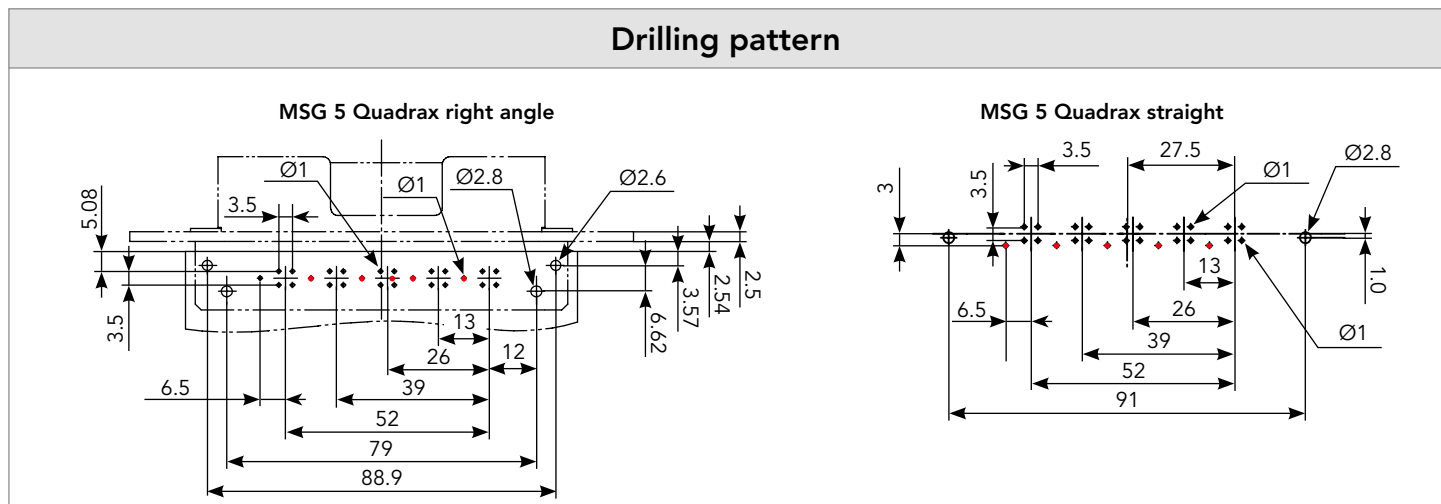
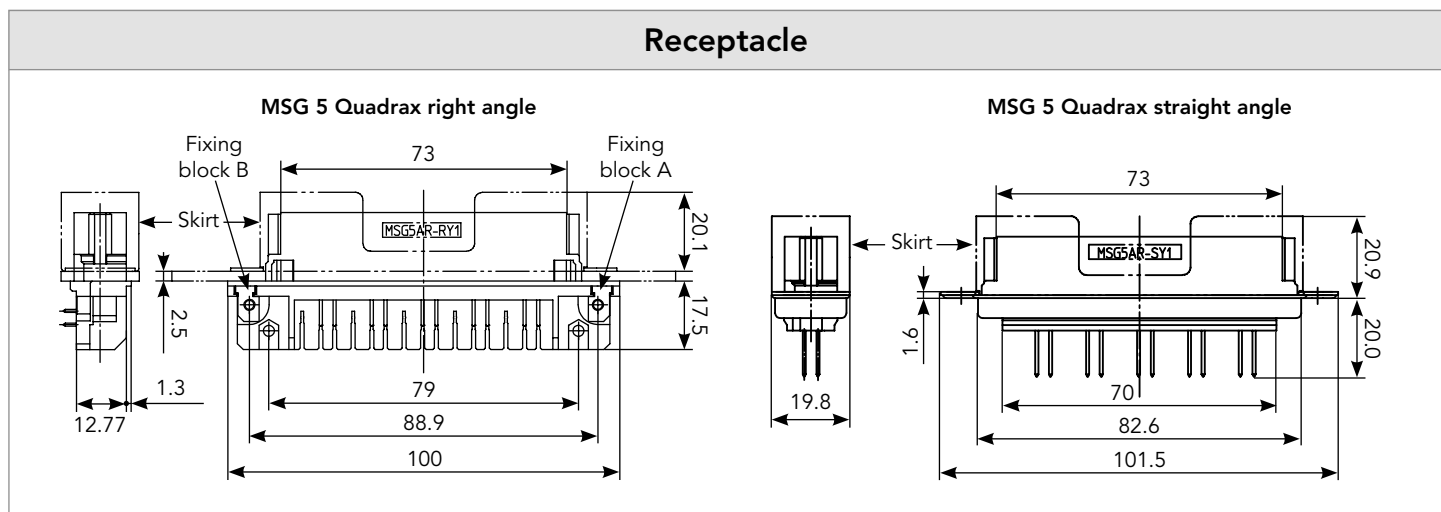
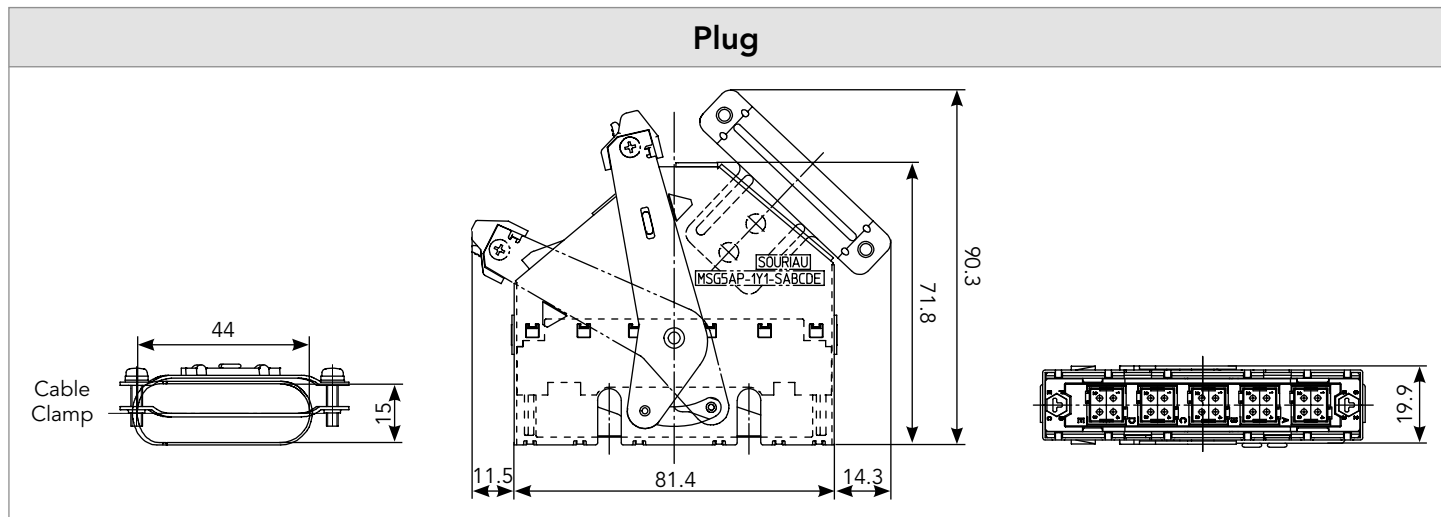
| Panel type and size <sup>(1)</sup>    | Cable direction  | Description  | Part number*        |
|---------------------------------------|------------------|--|---------------------|
| Rack panel system 3U-4HP size         | Upward cabling   | With 3U-4HP front panel, lower ejector handle position | <b>MSG3USKFPF12</b> |
| Rack panel system 3U-4HP size         | Downward cabling | With 3U-4HP front panel, lower ejector handle position | <b>MSG3USKFPF22</b> |
| Rack panel system 6U-4HP, 9U-4HP size | Upward cabling   | With ejector handle hole for right-angle type          | <b>MSG3USKFP1</b>   |
| Rack panel system 6U-4HP, 9U-4HP size | Downward cabling | With ejector handle hole for right-angle type          | <b>MSG3USKFP2</b>   |
| Panel system                          | Upward cabling   | With bracket for right-angle type                      | <b>MSG3USKBPF1</b>  |
| Panel system                          | Downward cabling | With bracket for right-angle type                      | <b>MSG3USKBPF2</b>  |
| Panel system                          | Upward cabling   | For straight type, without ejector handle hole         | <b>MSG3USKBP1</b>   |
| Panel system                          | Downward cabling | For straight type, without ejector handle hole         | <b>MSG3USKBP2</b>   |

1: See panel mounting page 34

\*Please consult us for the other combination of above components.

# MSG 5 Quadrax

## Dimensions



• For GND-pin (shole)

Note: all dimensions are in mm. Dimensions are not contractual and may be subject to modifications

## MSG 5 Quadrax

### Accessories

**Receptacle ejector handle**



| Part number                  |
|------------------------------|
| <b>MSG3UEJ1</b> (Upper side) |
| <b>MSG3UEJ2</b> (Lower side) |

**Receptacle dust cap**



| Part number     |
|-----------------|
| <b>MSG3UFC1</b> |

### Tooling

| Extraction tool for assembled Quadrax |
|---------------------------------------|
| <b>TMSG3UH01</b>                      |



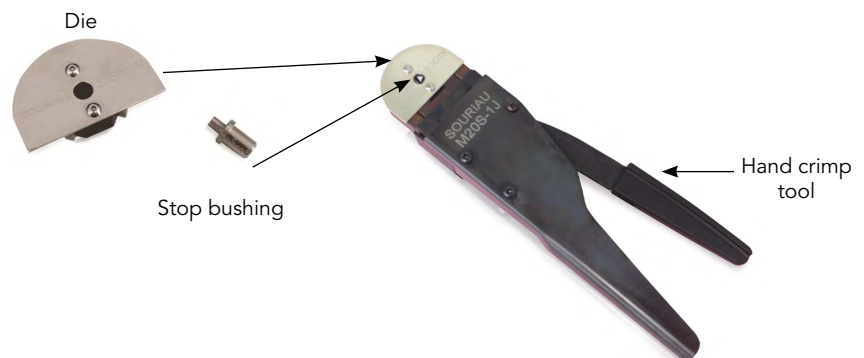
| Contact type           | Hand crimp tool    | Locator            |
|------------------------|--------------------|--------------------|
| Socket<br>#20 - Ø 1 mm | <b>M22520/2-01</b> | <b>M22520/2-08</b> |

or

| Contact type           | Hand crimp tool | Die           | Stop bushing   |
|------------------------|-----------------|---------------|----------------|
| Socket<br>#20 - Ø 1 mm | <b>M20S-1J</b>  | <b>S-5APK</b> | <b>SL-5APK</b> |



Socket contact



## MSG 5 Quadrax

### Contacts can not be sold separately

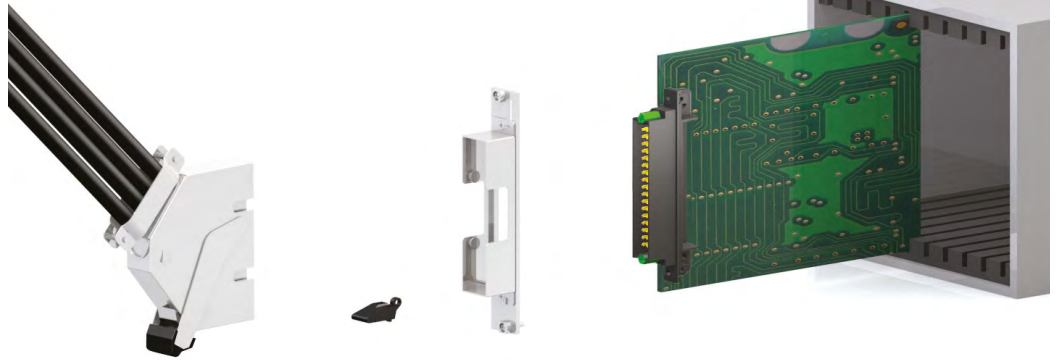
| Contact type           | Plating    | AWG   | mm <sup>2</sup> | Max wire Ø | Max insulator Ø |
|------------------------|------------|-------|-----------------|------------|-----------------|
| Socket<br>#20 - Ø 1 mm | Gold 0.4µm | 24-18 | 0.2 - 0.75      | 1.2        | 2.5             |

Note: all dimensions are in mm

# Panel mounting

Rack panel system for right-angle type (3U-4HP size)

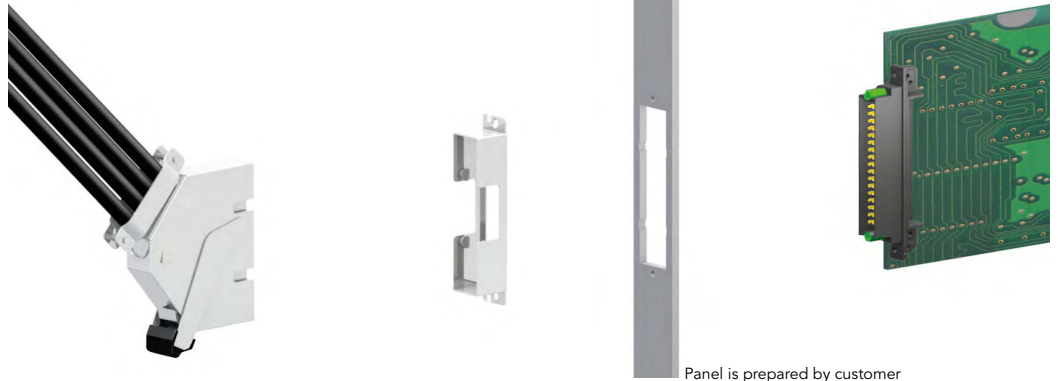
| Cabling  | For part numbers: |
|----------|-------------------|
| Upward   | MSG3USKFPF12      |
| Downward | MSG3USKFPF22      |



Handle is not included the PN of kit. Ex: Handle is shown on lower position, the cabling direction is upward.

Rack panel system for right-angle type (3U-4HP, 6U-4HP, 9U-4HP size)

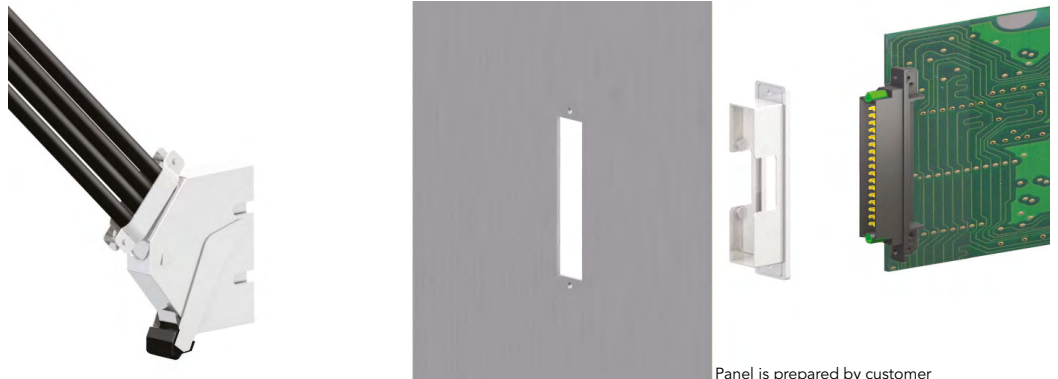
| Cabling  | For part numbers: |
|----------|-------------------|
| Upward   | MSG3USKFP1        |
| Downward | MSG3USKFP2        |



Panel is prepared by customer

Panel System for right-angle type

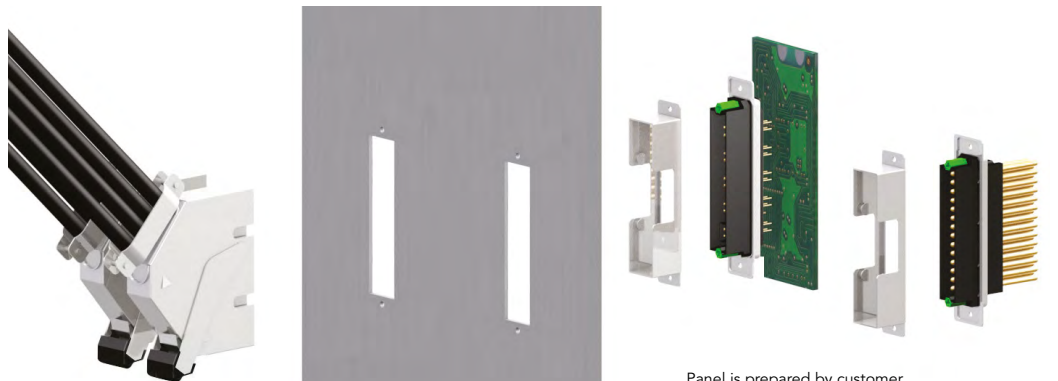
| Cabling  | For part numbers: |
|----------|-------------------|
| Upward   | MSG3USKBPF1       |
| Downward | MSG3USKBPF2       |



Panel is prepared by customer

Panel System for straight and wire-to-wire type

| Cabling  | For part numbers: |
|----------|-------------------|
| Upward   | MSG3USKBP1        |
| Downward | MSG3USKBP2        |



Panel is prepared by customer

## Notes

A large grid area for taking notes, consisting of 20 columns and 30 rows of small squares.

# MSG 3U SERIES

# Similar product range

|                                 |    |
|---------------------------------|----|
| ■ VGE1 & FER1 Series .....      | 38 |
| ■ SMS Series.....               | 38 |
| ■ 838 Series .....              | 39 |
| ■ 8525 Series.....              | 39 |
| ■ UTS Series .....              | 40 |
| ■ UTO Series .....              | 40 |
| ■ 8D Series (38999) Series..... | 41 |
| ■ MSM & MSO Series.....         | 41 |
| ■ MB Series .....               | 42 |
| ■ JBX Series.....               | 42 |

## Similar product range

### VGE1 & FER1 Series

**A reverse bayonet coupling system adapted for high vibration applications.**

**Fire smoke:**

- . HL3/R22 - HL3/R23 according to EN 45545-2.
- . NFPA 130 compliant.
- . JRMA Class 3.

**Ruggedized solution:**

- . High vibration Cat 2 according EN 61373.
- . 500h salt spray.
- . IP67.
- . -40°C to 100°C.
- . Compact solution with the size 14 (32 mm diameter up to 10 contacts).

**High speed data transmission:**

- . Signal up to 60 contacts (Trim Trio contacts).
- . Quadrax.
- . Fiber optic.



See «VGE1 & FER1 Series» catalog on [www.souriau.com](http://www.souriau.com)

### SMS Series

**Quick mating plastic solution.**

**Fire smoke:**

- . Flame retardant version : HL3/R22 - HL3/R23 according to EN 45545-2.
- . PCB board version : HL2/R22 - HL2/R23 according to EN 45545-2.
- . UL94 V-0.

**Easy and quick mating:**

- . Push to mate.
- . Press and release to unmate.

**Cost saving solution:**

- . Trim trio contacts : machined or stamp contacts for a secure solution with optimized costs.
- . Full plastic solution.
- . Integrated strain relief.



See «SMS Series» catalog on [www.souriau.com](http://www.souriau.com)

## Similar product range

### 838 Series

#### Intercoach solution with screw coupling system.

**Fire smoke:**

- . HL2/R22 - HL3/R23 according to EN 45545-2.

**Ruggedized solution:**

- . High vibration Cat. 2 (Cat 3 for size E) according to EN 61373.
- . IP 67.
- . -40°C to 100°C.
- . Current up to 180 A.

**High speed data transmission:**

- . Signal up to 61 contacts.
- . Quadrax.
- . Fiber optic.



### 8525 Series

#### Metal high density solution with bayonet coupling system.

**Fire smoke:**

- . HL3/R22 - HL3/R23 according to EN 45545-2.

**High Performances:**

- . High density up to 61 contacts #20.
- . High sealing performances: possibility of hermetic solutions.
- . Improved shielding and signal integrity.
- . Up to 200°C.



## Similar product range

### UTS Series

**Plastic waterproof solution with bayonet coupling system.**

**Fire smoke:**

- . HL2/R22 - HL2/R23 according to EN 45545-2.
- . UL94 V-0.

**Indoor and outdoor use:**

- . Waterproof: IP68/69K Dynamic Mated & Unmated.
- . UV resistant: F1 rated per UL 746C. No mechanical deterioration after 5 years of exposure in natural environment.

**High speed data transmission:**

- . Signal (Trim Trio contacts).
- . LC and MPO contacts.



See «UTS Series» catalog on [www.souriau.com](http://www.souriau.com)

### UTO Series

**Metal waterproof solution with bayonet coupling system.**

**Fire smoke:**

- . HL2/R22 - HL2/R23 according to EN 45545-2.
- . UL94 V-0.

**Indoor and outdoor use:**

- . High vibration Cat. 2 (Cat 3 for size E) according EN 61373.
- . Waterproof: IP68/69K Dynamic Mated & Unmated.
- . EMI shielded: 65 dB at 100 Mhz.
- . 500 mating cycles.

**Cost saving:**

- . Trim trio contacts : Machined or stamp contacts for a secure solution with optimized costs.
- . Mixed Power & Signal contacts layouts.



See «UTO Series» catalog on [www.souriau.com](http://www.souriau.com)

## Similar product range

### 8D Series (38999)

#### Metal high density solution with screw system.

##### Fire smoke:

- . HL3/R22 - HL3/R23 according to EN 45545-2.

##### High Performances:

- . High sealing performances: possibility of hermetic solutions.
- . Improved shielding and signal integrity.
- . Up to 200°C.

##### High speed data transmission:

- . Signal up to 128 contacts #22.
- . Quadrax.
- . Fiber optic.



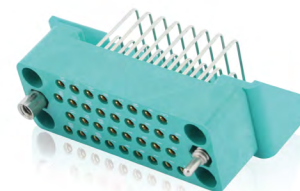
See «D 38999 Series» catalog on [www.souriau.com](http://www.souriau.com)

### MSM & MSO Series

#### High Performance Boardmount Connector.

##### High Performances:

- . From 9 to 75 positions.
- . -55°C to +125°C.
- . Up to 500 mating cycles.
- . UL 94V0.
- . Trim Trio contacts.



See «MSM & MSO Series» [www.souriau.com](http://www.souriau.com)

## Similar product range

### MB Series

#### High Density Rectangular connector.

##### Easy and secure solution:

- . Quick lever with safe locking system.
- . 360° metal housing for an improved shielding.
- . High density solution up to 52 contacts.
- . -55°C to +125°C.
- . Trim Trio contacts.



### JBX Series

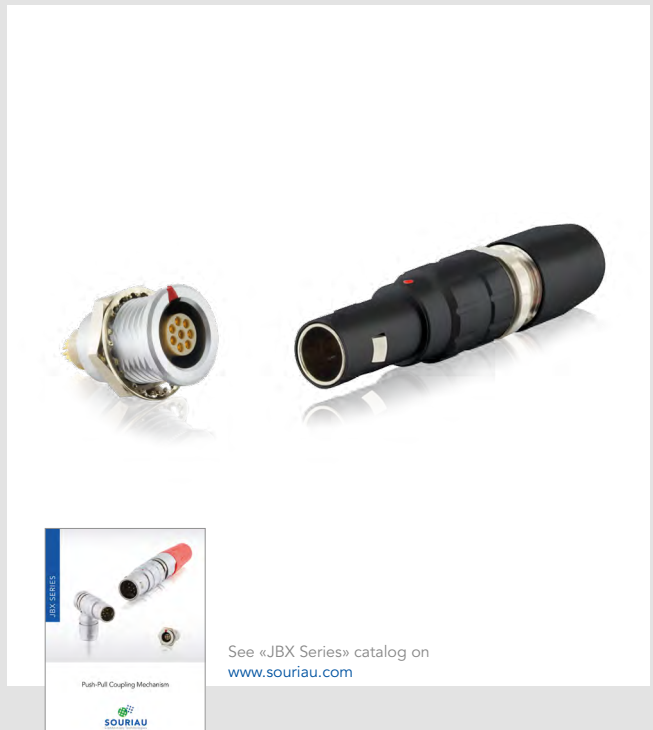
#### Metal Push-Pull connector.

##### Easy to use:

- . Mate and unmate the connector with only two finger.

##### High performances:

- . From 2 to 30 contacts in small diameter connector (from 7 to 16 mm diameter).
- . Up to 5,000 mating cycles.
- . 360° shielding.





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