



**SOURIAU**  
Connection Technologies



## Easy & Secure Connectors for Rack Systems

### Front I/O solutions for railway

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Россия +7(495)268-04-70

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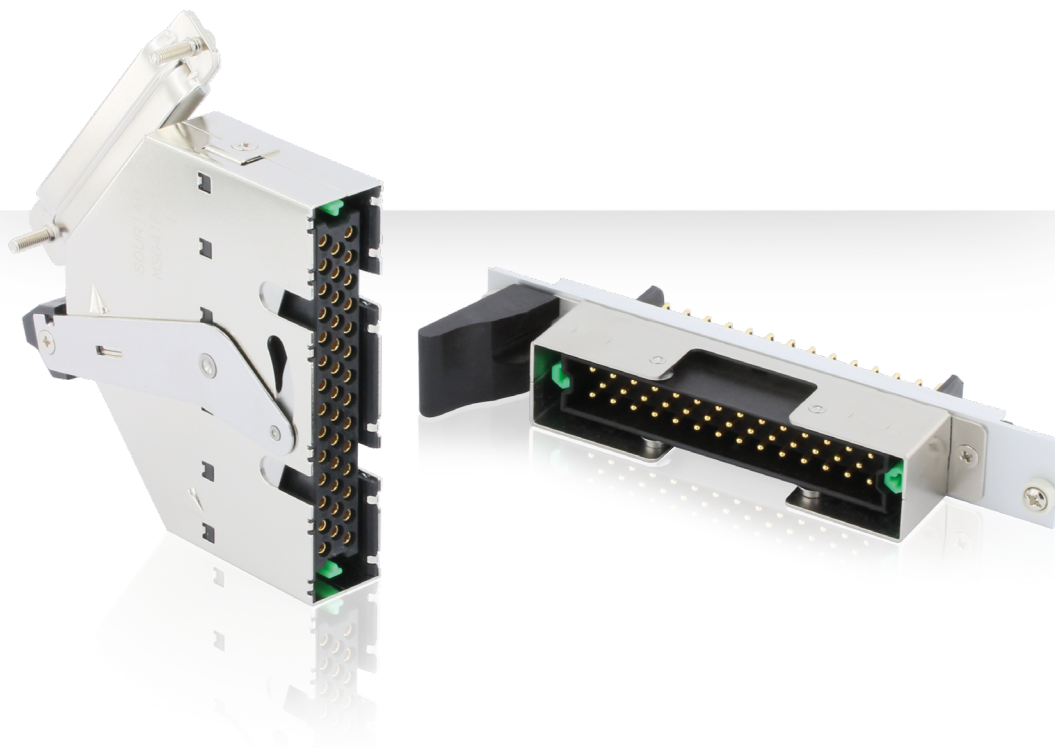
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<https://souriau.nt-rt.ru/> || [sur@nt-rt.ru](mailto:sur@nt-rt.ru)



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# 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



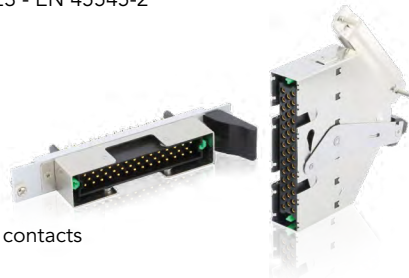
Up to 36 contacts #16  
Quick Mating plastic rectangular solution  
Tested following EN 50 467 and NF F 61-030  
HL3/R22 & HL3/R23 - EN 45545-2

#### 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

### ENVIRON- MENT & SAFETY

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

## Typical applications



Signaling room



ERTMS systems



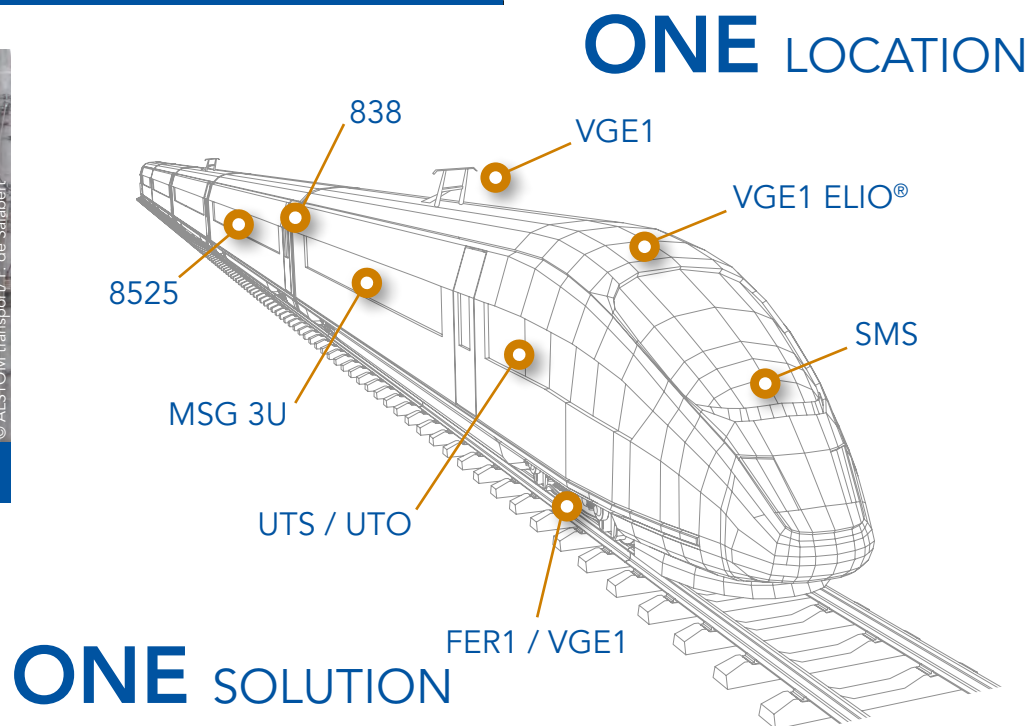
Cabin systems



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.

### 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.

### FLEXIBLE GROUNDING

#### Multiport Ethernet

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

### 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).

### 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.



Receptacle 29 Pos.  
Straight



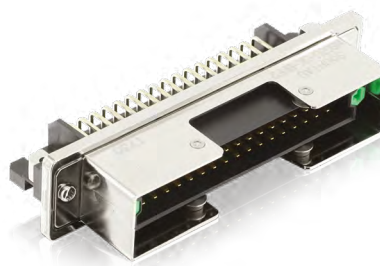
Receptacle 29 Pos.  
Right-angle



Receptacle 41 Pos.  
Wire to wire



Receptacle 41 Pos.  
Right-angle



Receptacle 51 Pos.  
Right-angle

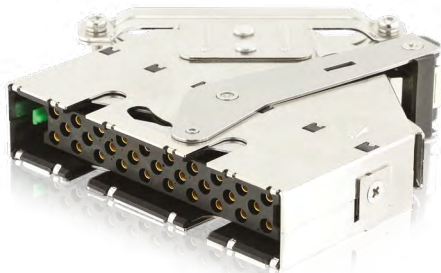


Receptacle 5 Quadrax  
Straight



Receptacle 5 Quadrax  
Right-angle

overview



Plug 29 Pos.



Plug 41 Pos.



Plug 51 Pos.

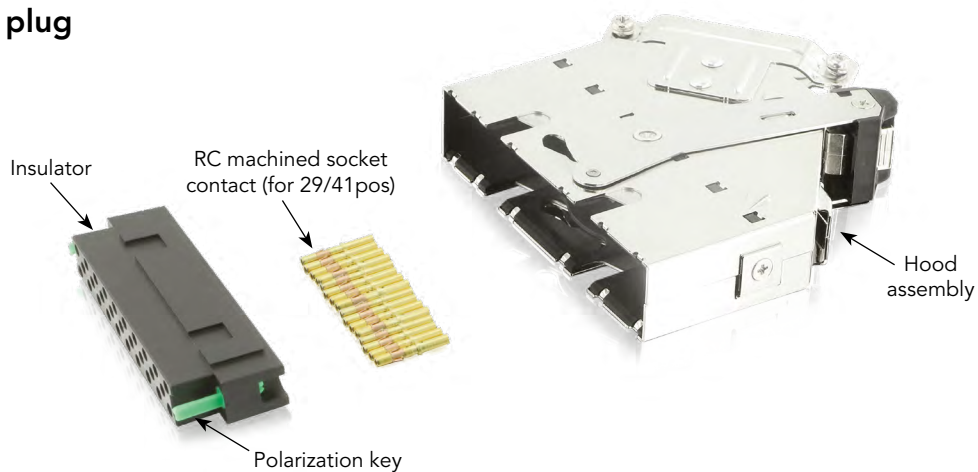


Plug 5 Quadrax

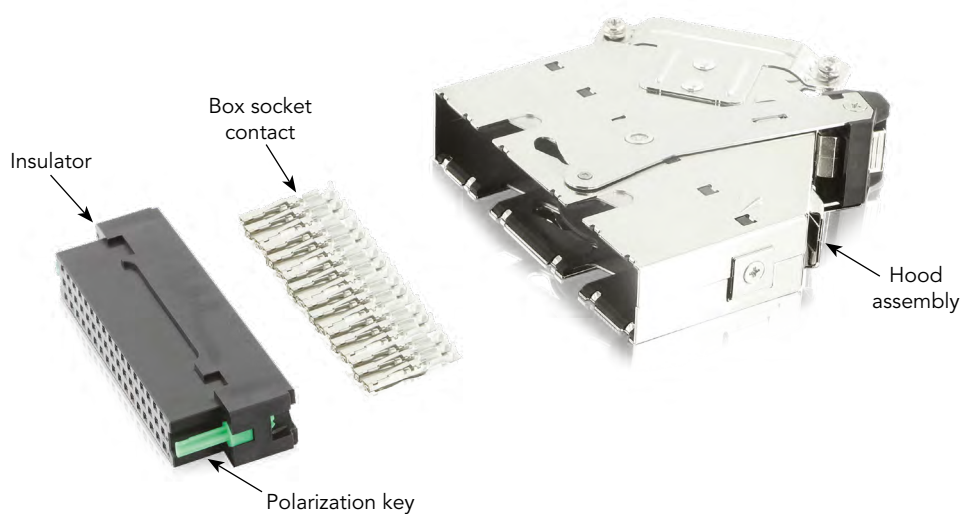


## Product description

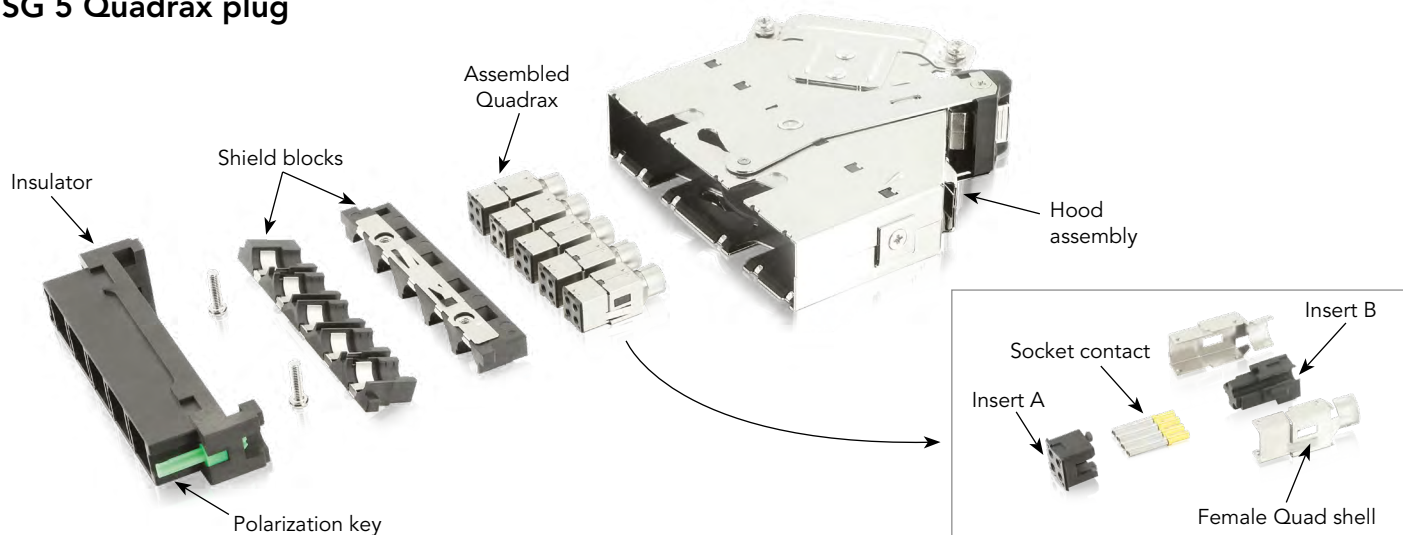
### MSG 29 / 41 pos plug



### MSG 51 pos plug

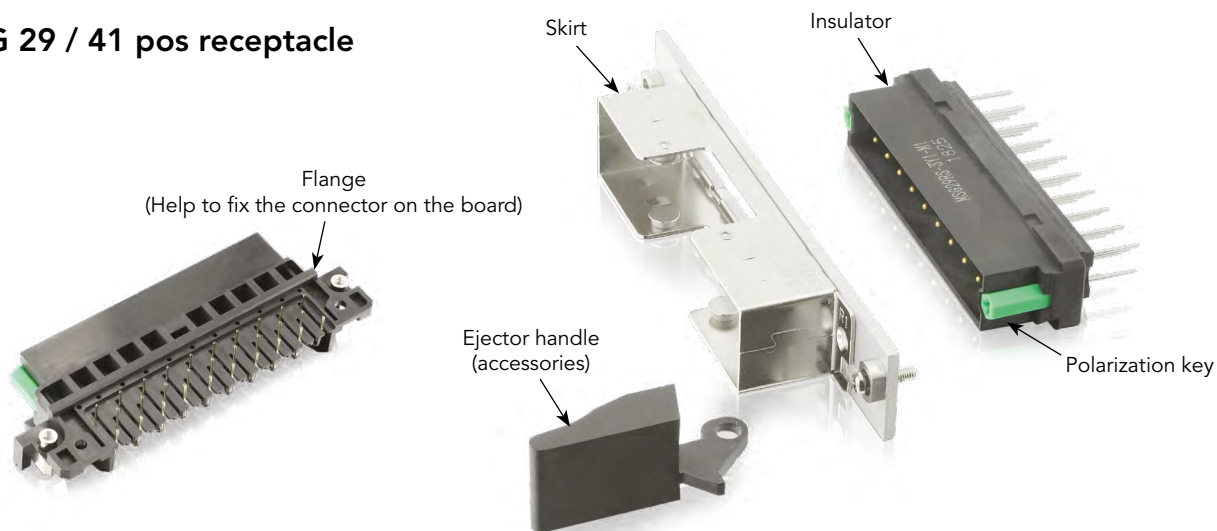


### MSG 5 Quadrax plug

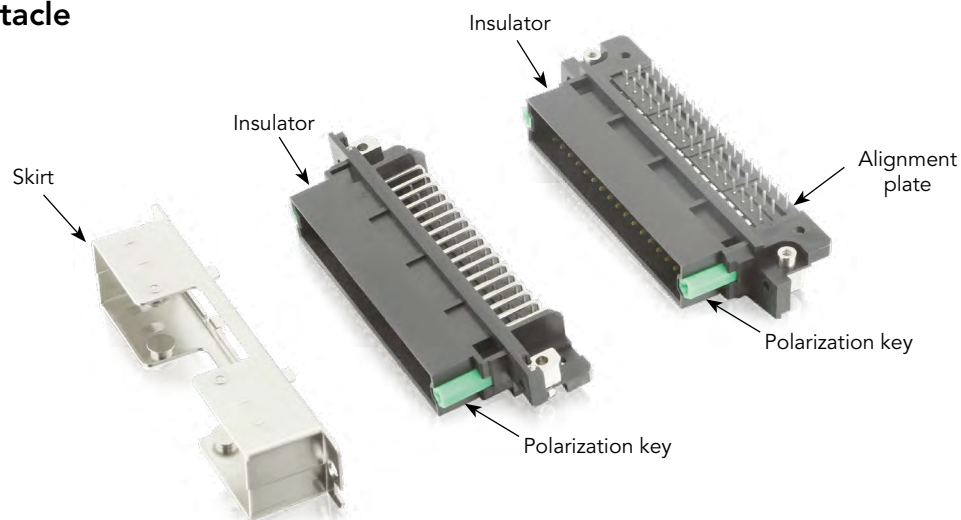


## Product description (example)

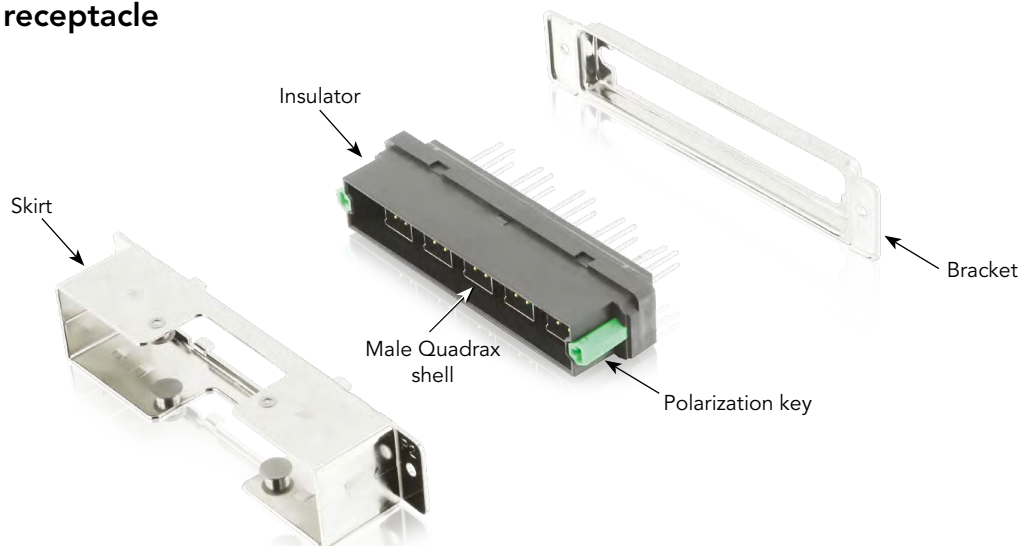
### MSG 29 / 41 pos receptacle



### MSG 51 pos receptacle

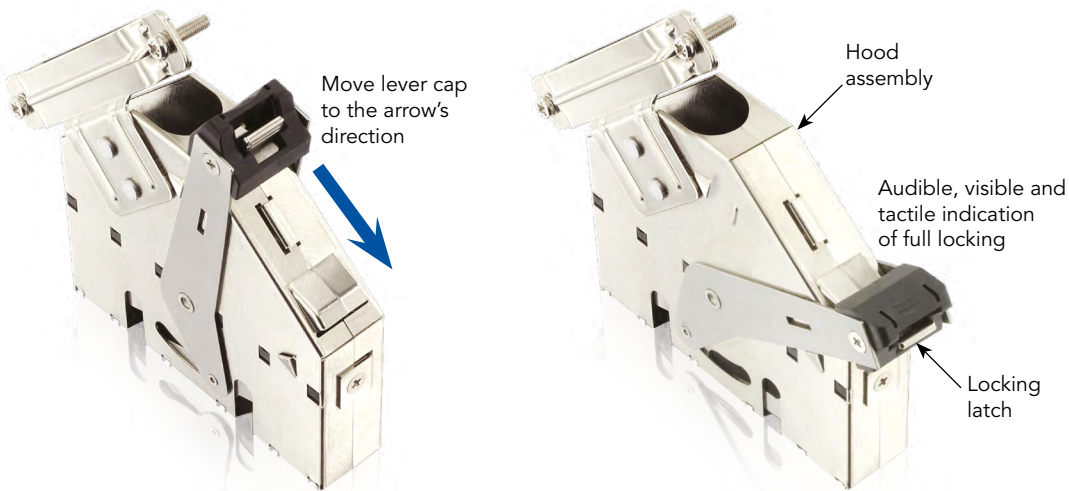


### MSG 5 Quadrax receptacle

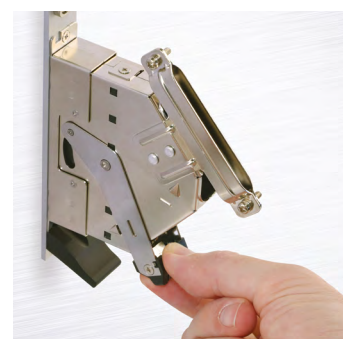
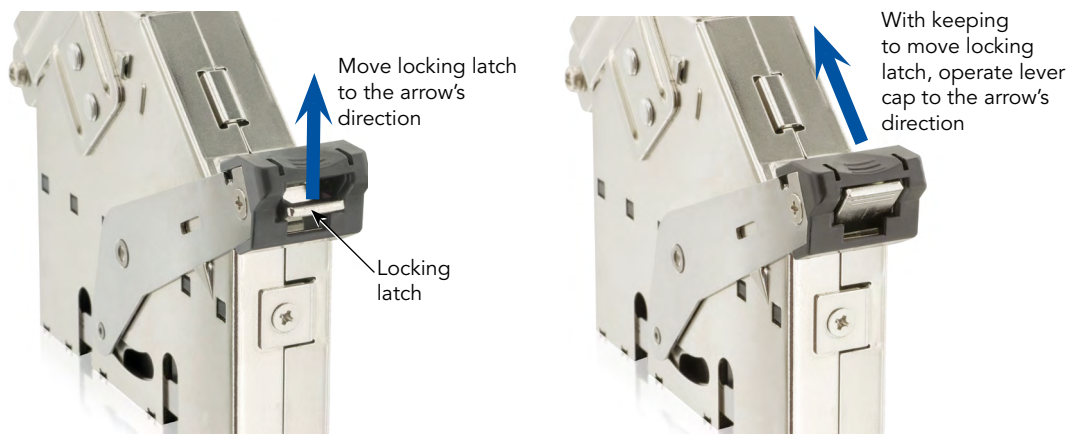


## Product features

### Connector mating: 1 simple action to lock

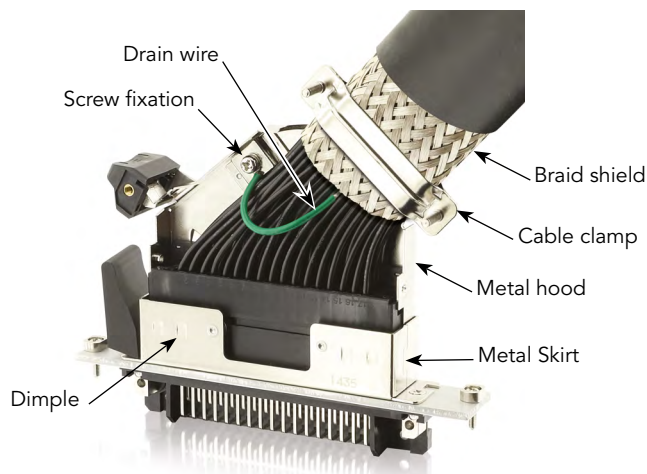


### Connector un-mating: 2 actions to un-mate



### 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

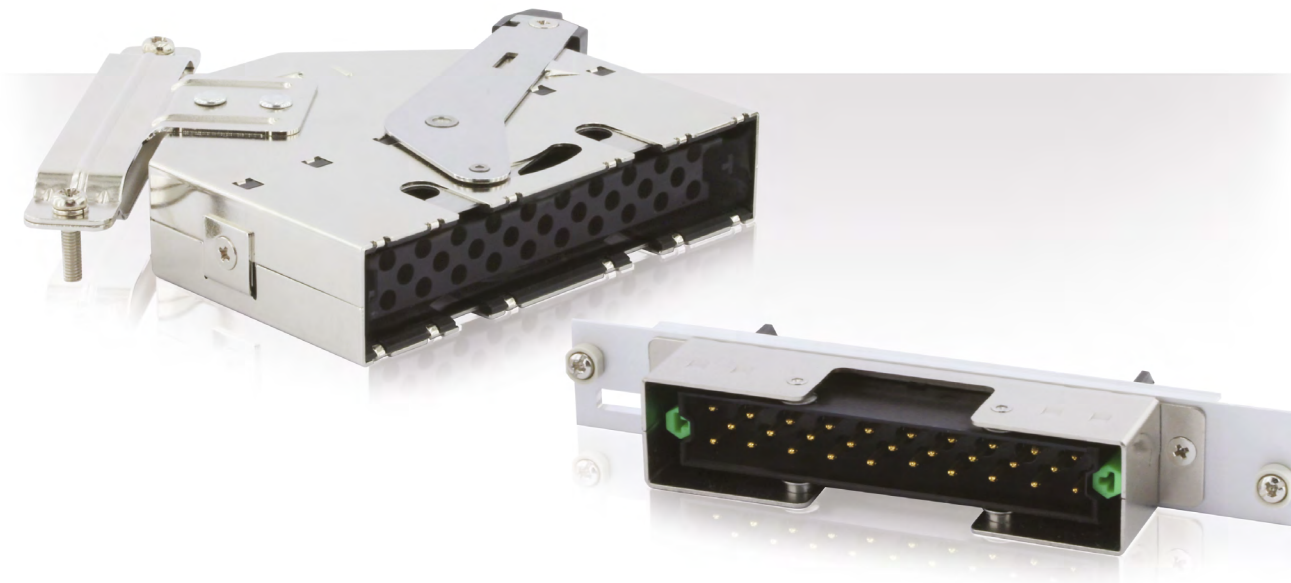
- Contact resistance (including wire resistance):
  - 29 pos / 41 pos < 15 mΩ
  - 51 pos < 15 mΩ
- Withstanding voltage:
  - 29 pos / 41 pos: 2000 V DC
  - 51 pos: 2000 V DC
  - 5 Quadrax:
    - Between each contact: 1000 V DC
    - Between contact and shell: 1500 V DC
- Insulation resistance:
  - 29 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

# Connectors

■ MSG 29 pos. ....	18
■ MSG 41 pos. ....	22
■ MSG 51 pos. ....	26
■ MSG 5 Quadrax .....	30
■ 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.

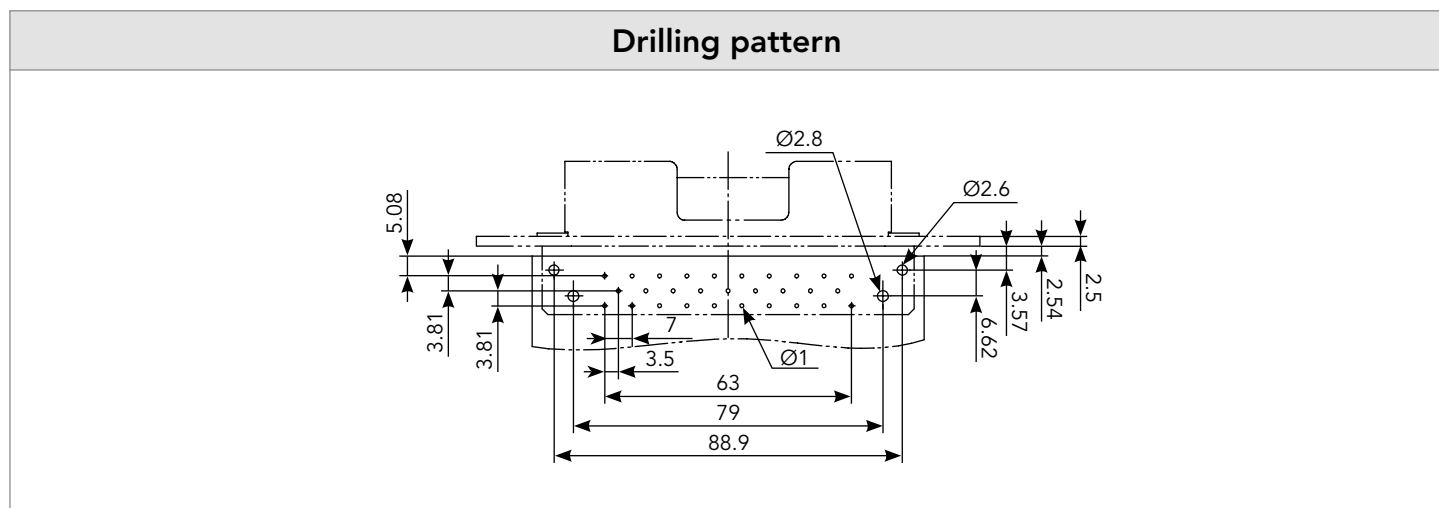
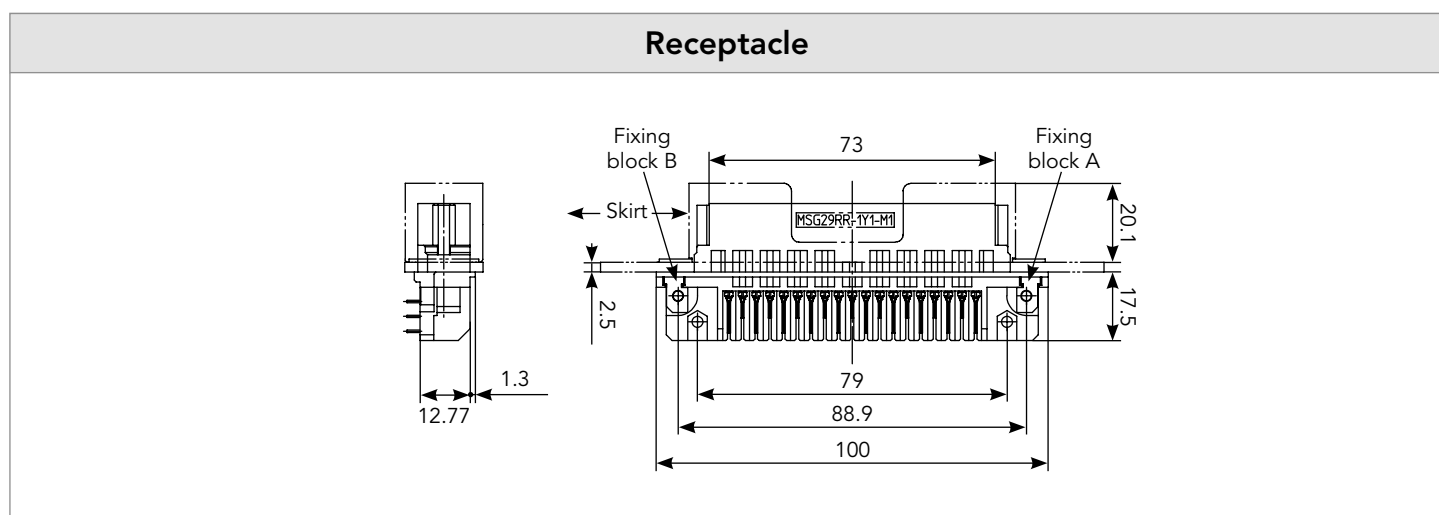
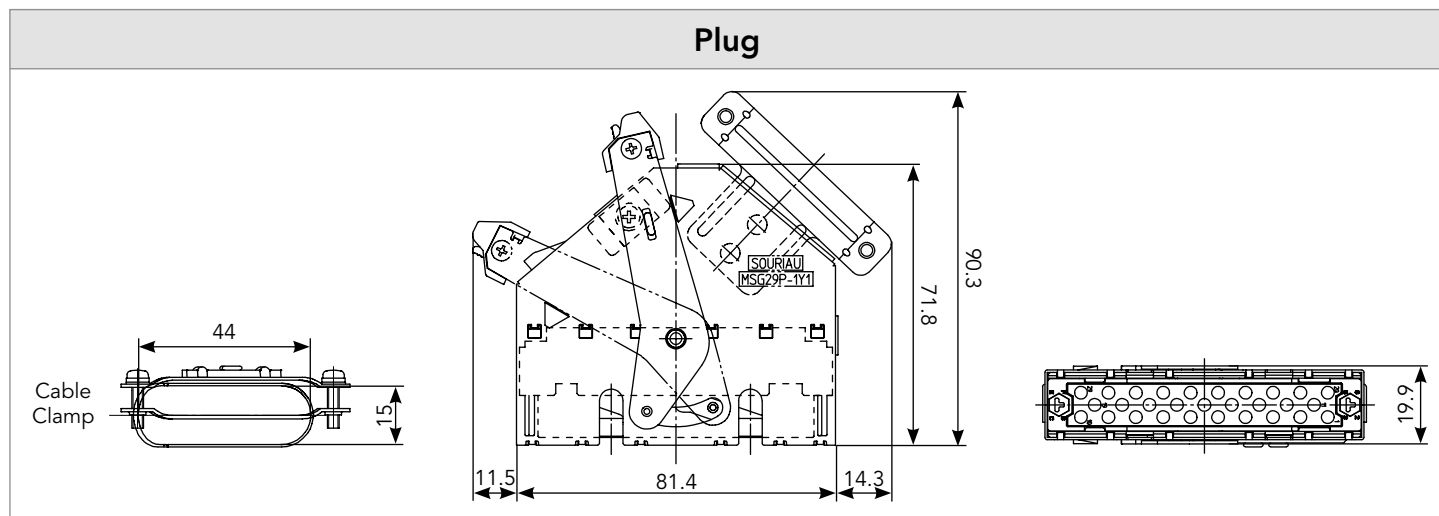
Panel type and size <sup>(1)</sup>	Cable direction	Description	Part number*
Rack panel system 3U-4HP size	Upward cabling	With 3U-4HP front panel, lower ejector handle position	<b>MSG3USKFPF12</b>
Rack panel system 3U-4HP size	Downward cabling	With 3U-4HP front panel, lower ejector handle position	<b>MSG3USKFPF22</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 <Ø1.4 mm)	SL-40K	M20S-1J	PG-246-1K	RX20-31J
RC24M9K	S-10K (insulator >Ø1.4 mm)			PG-246K	
RC20M14K	S-10JK			PG-246K	
RC20M13K	S-10K				
RC20M12K	S-10K	SL-39K		PG-214K	
RC16M23K	S-3D1K			PG-246-2K	
RC14M50K	S-3-14K				

Die



Stop bushing



Hand crimp tool



PG check-gauge



Extraction tool

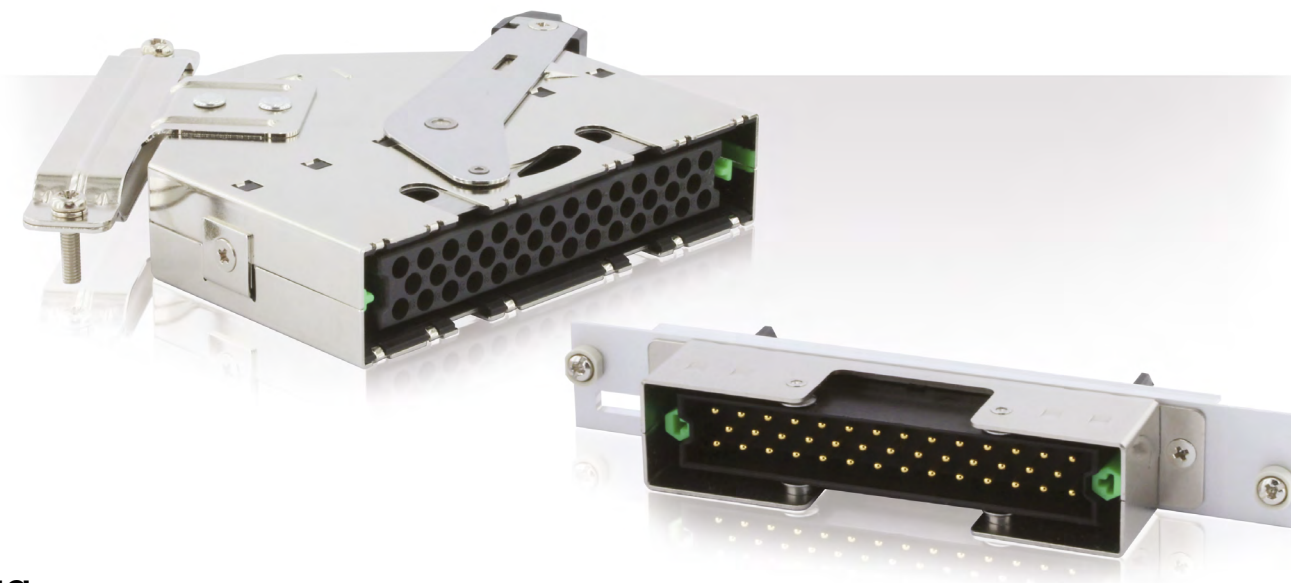


**MSG 29 pos.****Contacts for plug**

Contact type	Plating	AWG	mm <sup>2</sup>	Max wire Ø	Max insulator Ø	Part number female contact
Machined crimp #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 mm²	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>

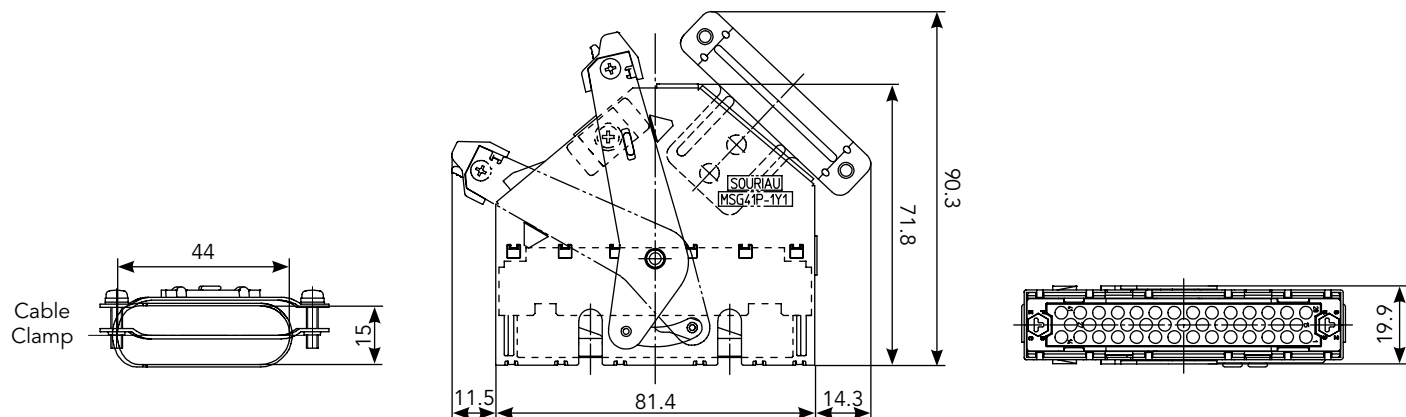
1: See panel mounting page 34

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

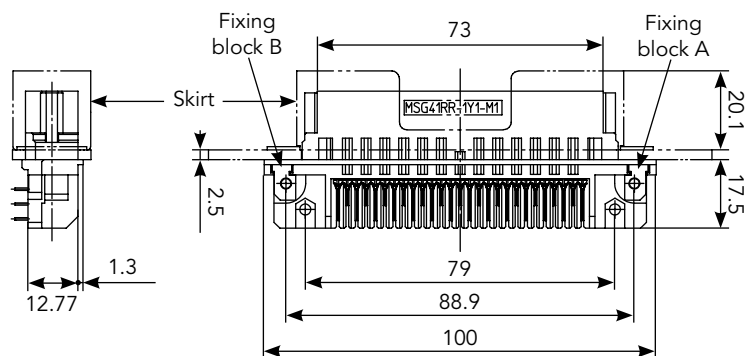


## Dimensions

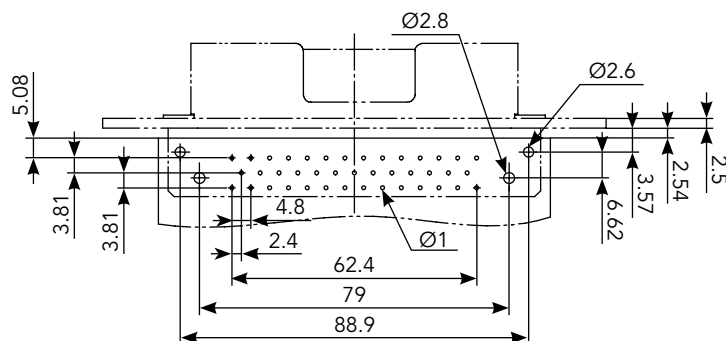
## Plug



## Receptacle



## Drilling pattern



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 <Ø1.4 mm)	SL-40K	M20S-1J	PG-246-1K	RX20-31J
RC24M9K	S-10K (insulator >Ø1.4 mm)			PG-246K	
RC20M14K	S-10JK			PG-246K	
RC20M13K	S-10K				
RC20M12K	S-10K	SL-39K		PG-214K	
RC16M23K	S-3D1K			PG-246-2K	
RC14M50K	S-3-14K				

Die



Stop bushing



Hand crimp tool



PG check-gauge



Extraction tool



**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 #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 #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>

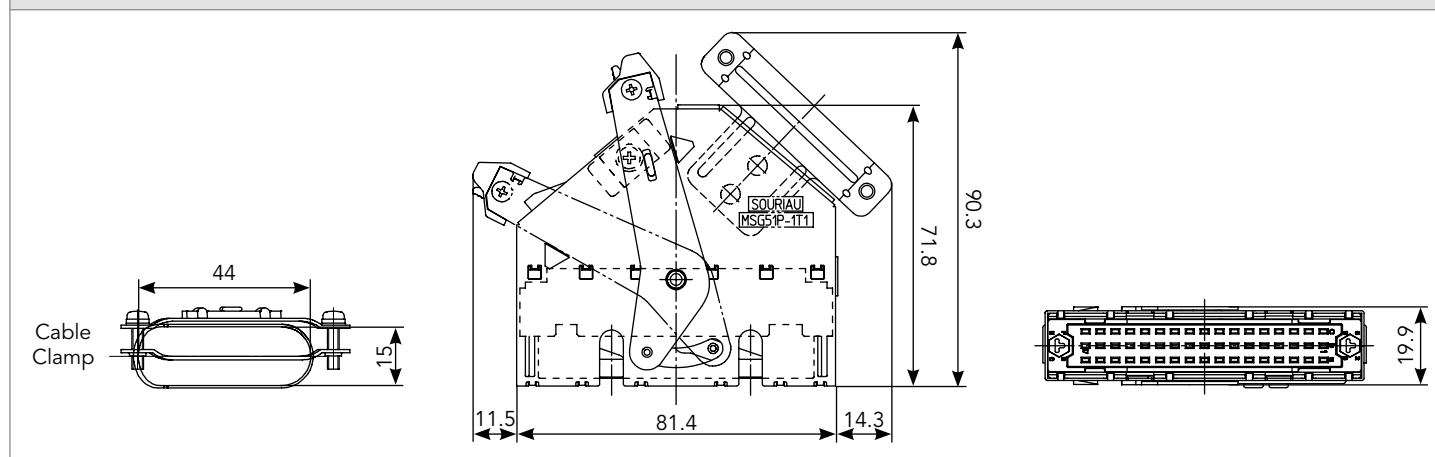
1: See panel mounting page 34

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

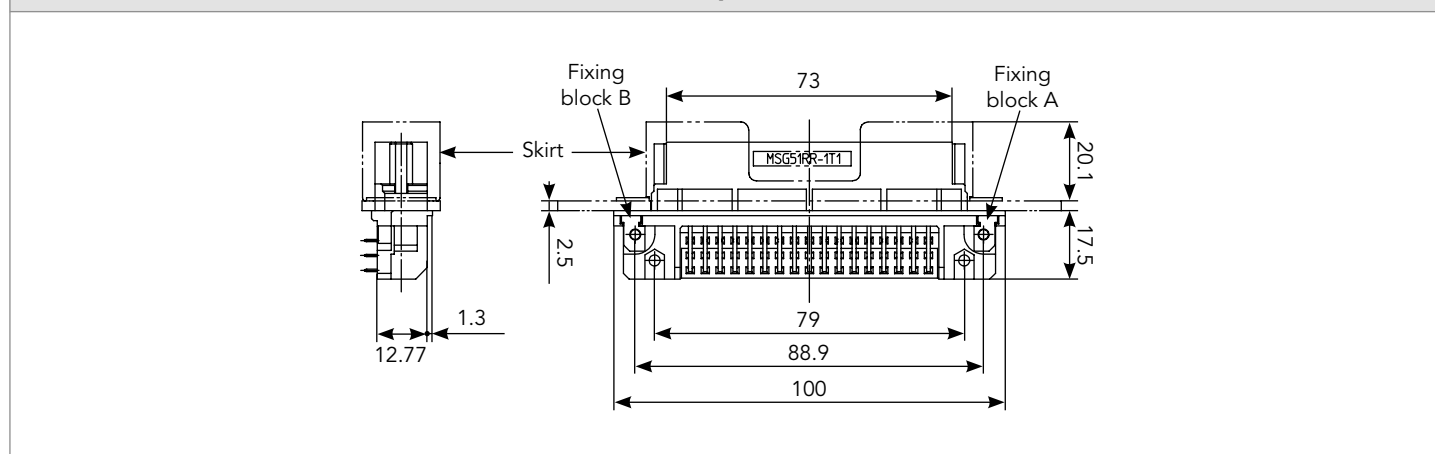
## MSG 51 pos.

## Dimensions

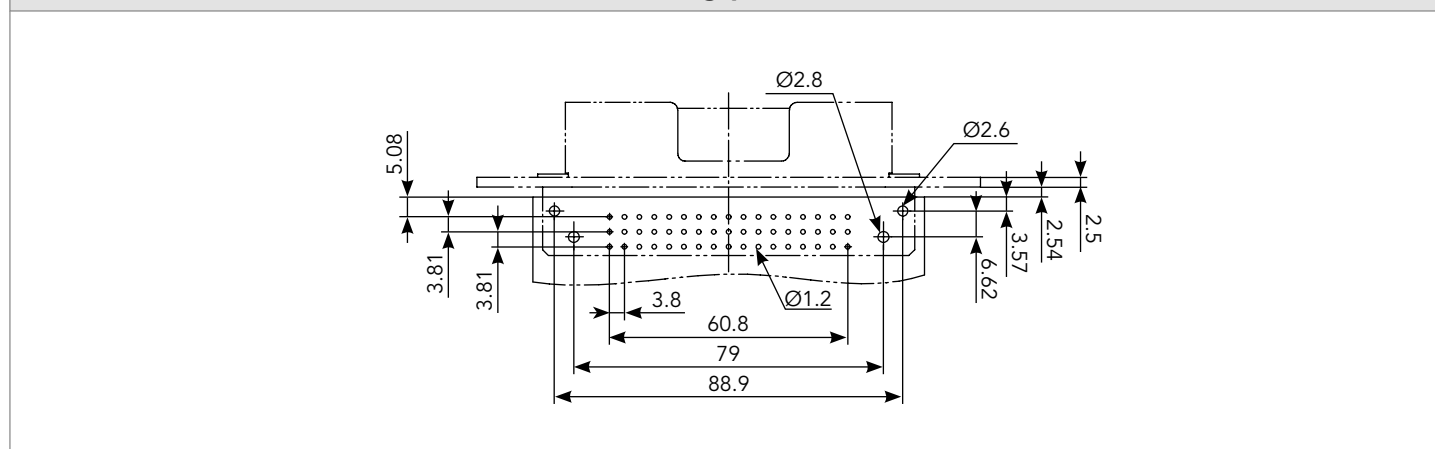
## Plug



## Receptacle



## Drilling pattern



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>

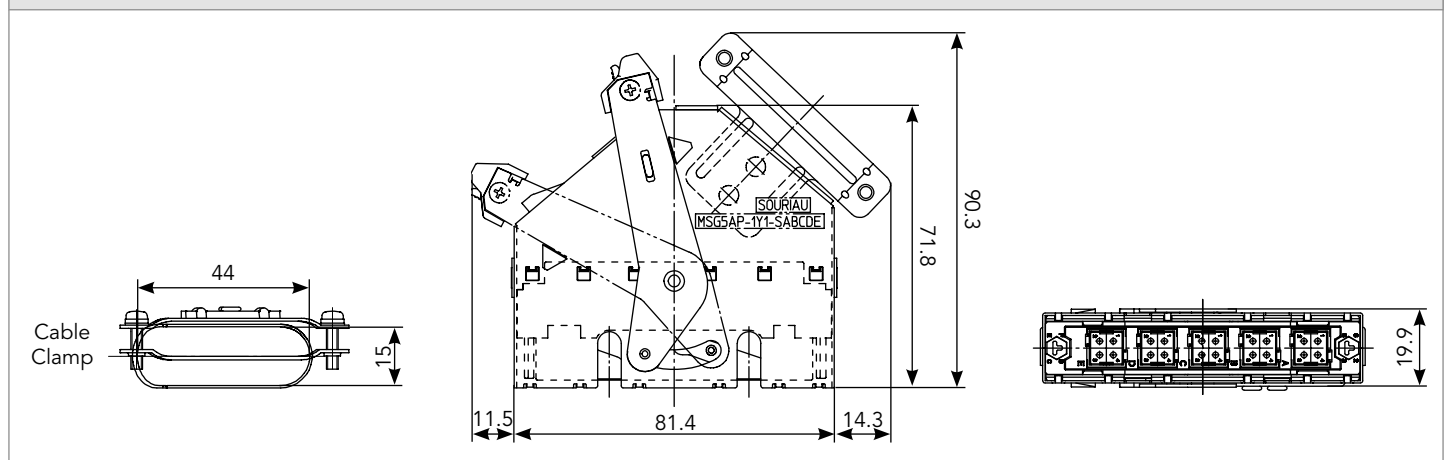
1: See panel mounting page 34

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

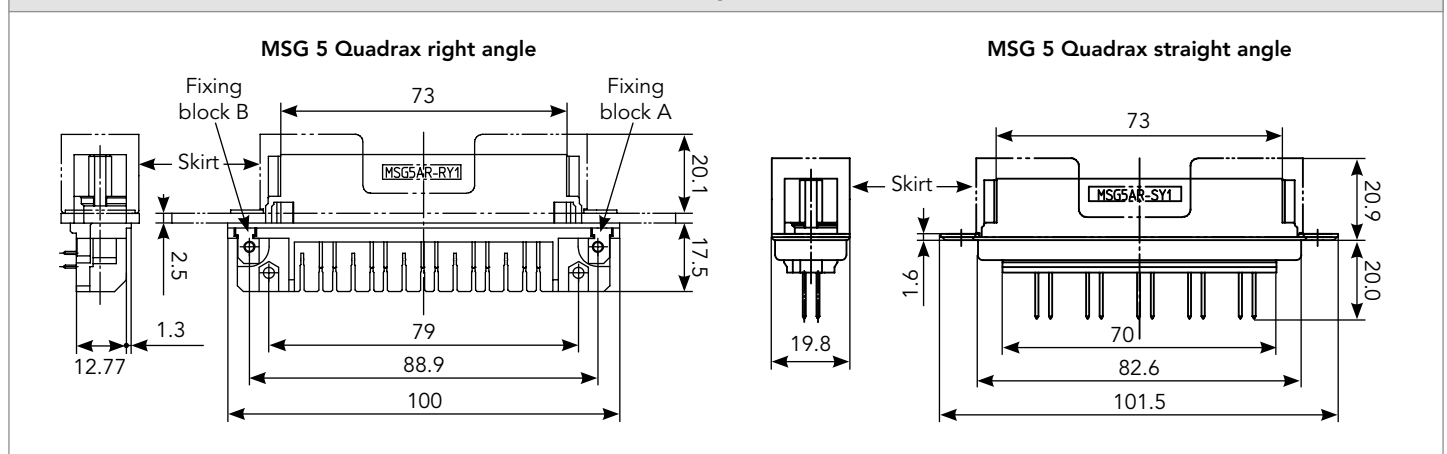
# MSG 5 Quadrax

## Dimensions

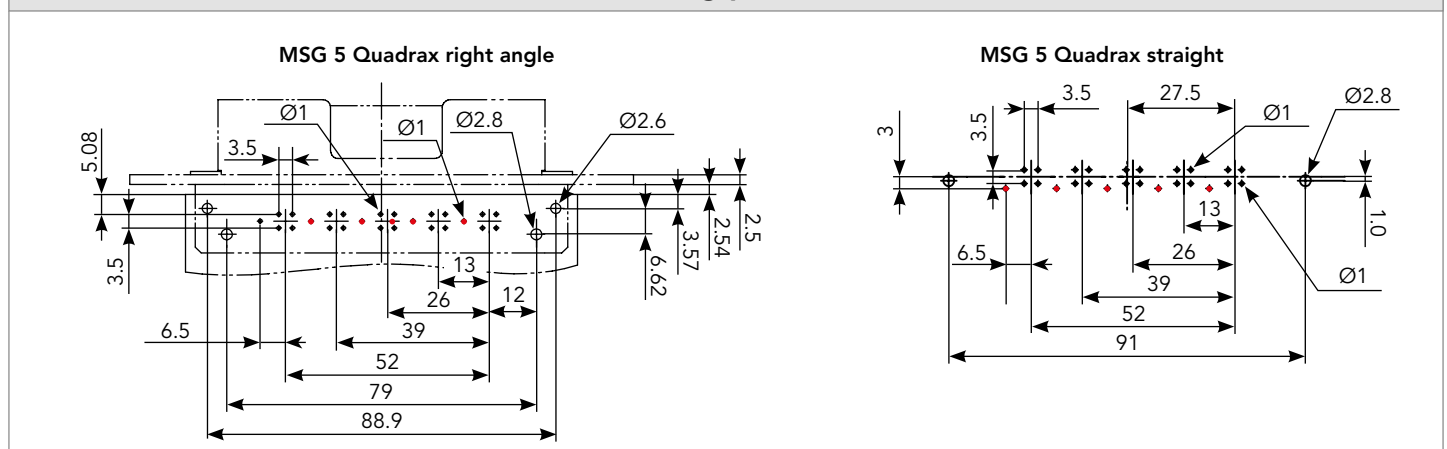
### Plug



### Receptacle



### Drilling pattern




● 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

MSG3UEJ1 (Upper side)

MSG3UEJ2 (Lower side)

Receptacle dust cap



Part number

MSG3UFC1

Tooling

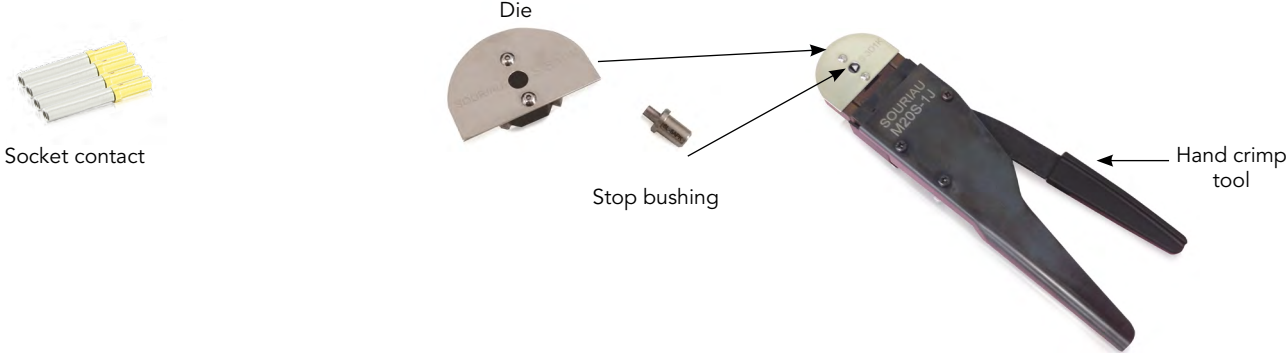
Extraction tool for assembled Quadrax
TMSG3UH01



Contact type	Hand crimp tool	Locator
Socket #20 - Ø 1 mm	M22520/2-01	M22520/2-08

or

Contact type	Hand crimp tool	Die	Stop bushing
Socket #20 - Ø 1 mm	M20S-1J	S-5APK	SL-5APK



## MSG 5 Quadrax

### Contacts can not be sold separately

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

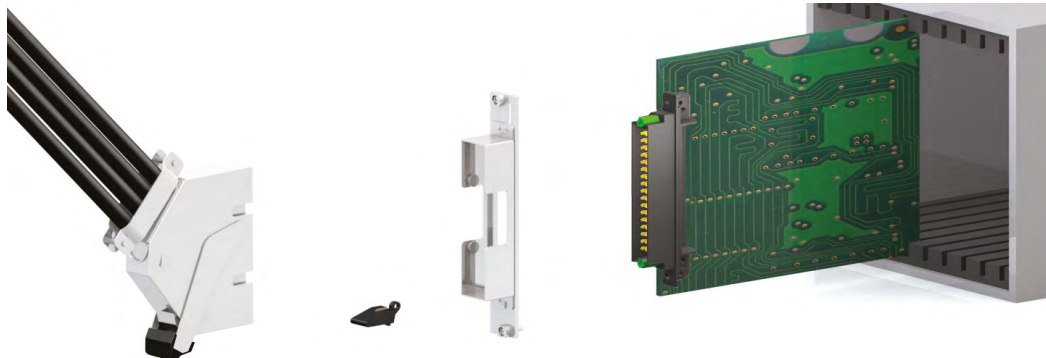
Note: all dimensions are in mm



## Panel mounting

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

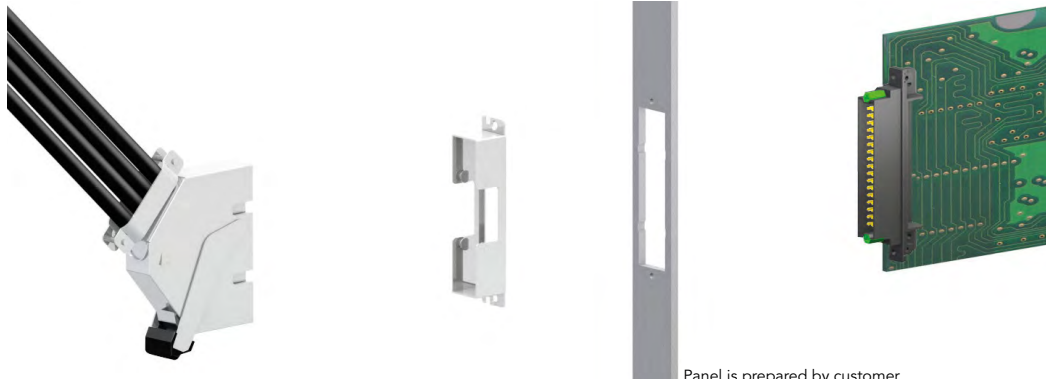
Cabling	For part numbers:
Upward	<b>MSG3USKFPF12</b>
Downward	<b>MSG3USKFPF22</b>



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)

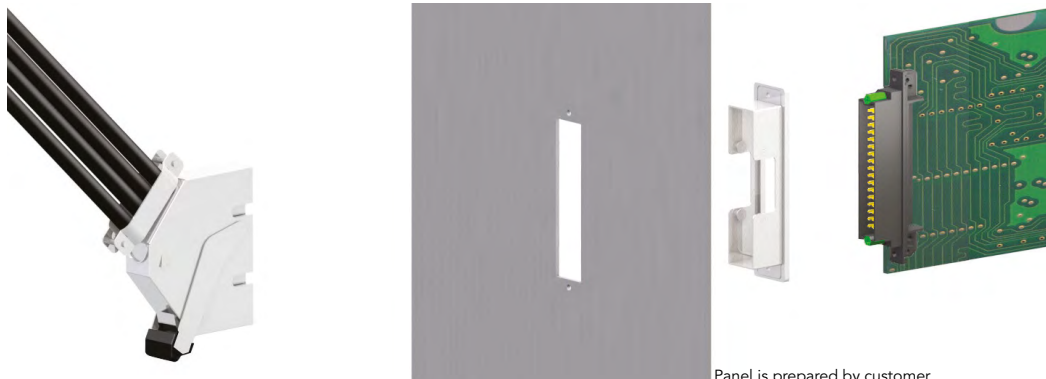
Cabling	For part numbers:
Upward	<b>MSG3USKFP1</b>
Downward	<b>MSG3USKFP2</b>



Panel is prepared by customer

Panel System for right-angle type

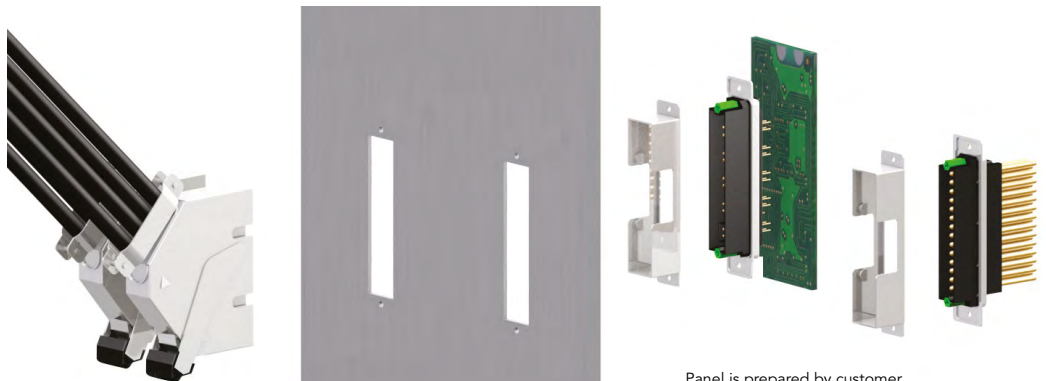
Cabling	For part numbers:
Upward	<b>MSG3USKBPF1</b>
Downward	<b>MSG3USKBPF2</b>



Panel is prepared by customer

Panel System for straight and wire-to-wire type

Cabling	For part numbers:
Upward	<b>MSG3USKBP1</b>
Downward	<b>MSG3USKBP2</b>



Panel is prepared by customer

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**Ярославль** (4852)69-52-93

**Россия** +7(495)268-04-70

**Казахстан** +7(7172)727-132

**Киргизия** +996(312)96-26-47

<https://souriau.nt-rt.ru/> || [sur@nt-rt.ru](mailto:sur@nt-rt.ru)