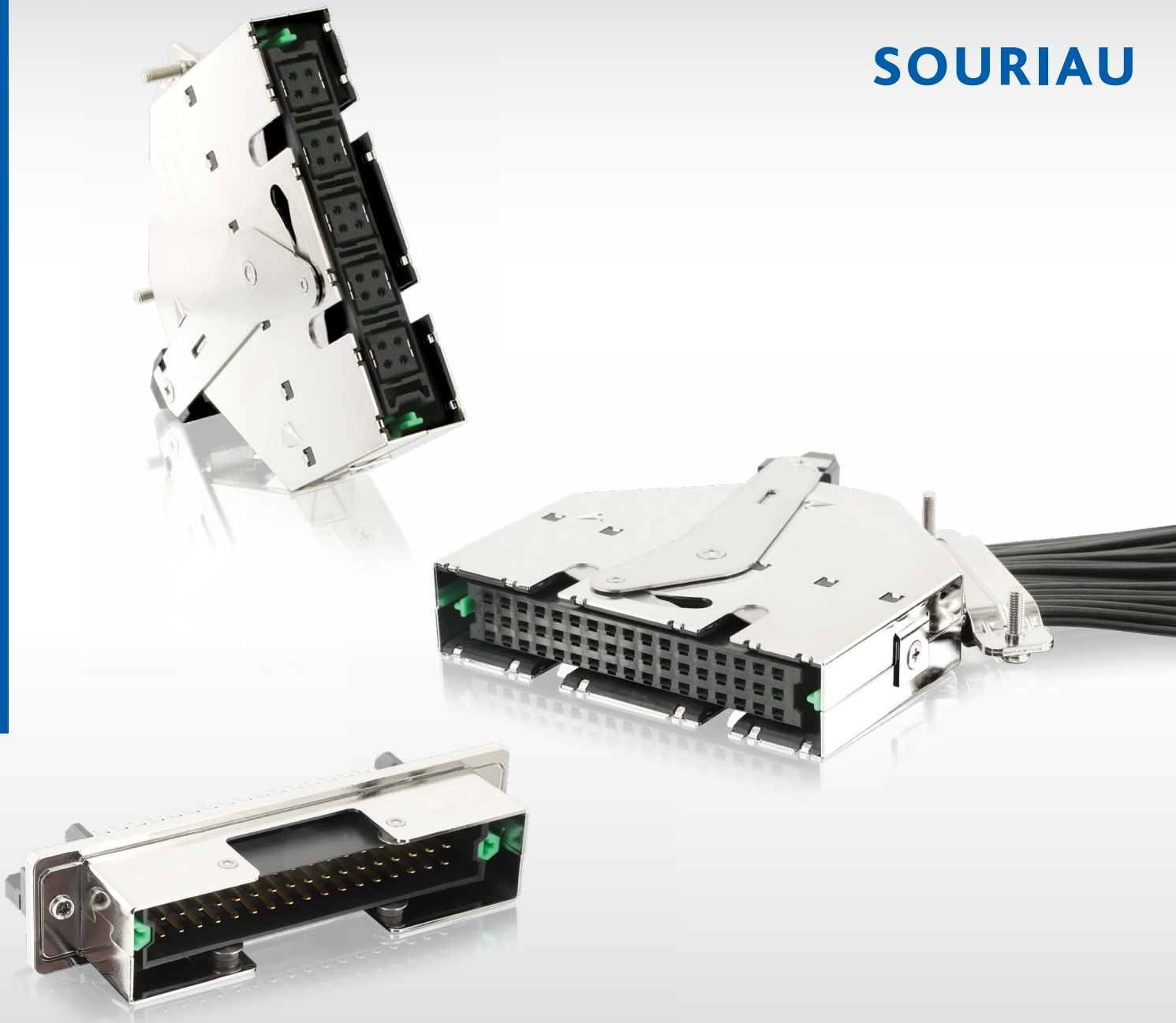


MSG 3U SERIES

SOURIAU

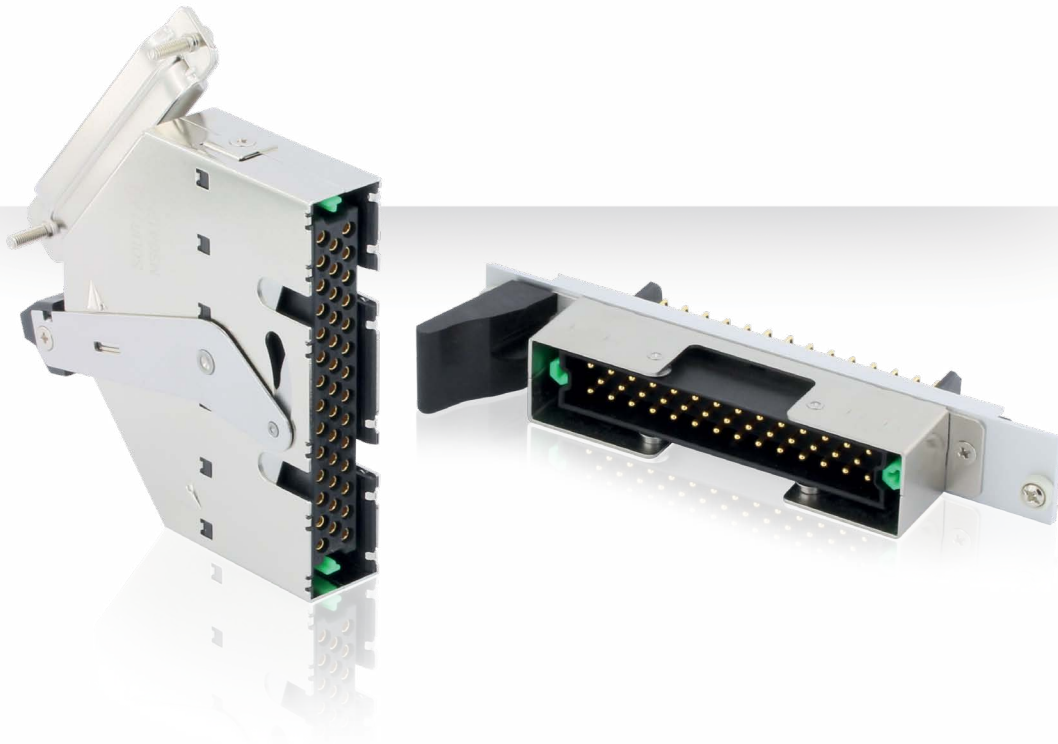


## Easy & Secure Connectors for Rack Systems

Front I/O solutions for railway

**Esterline**  
Connection Technologies





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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



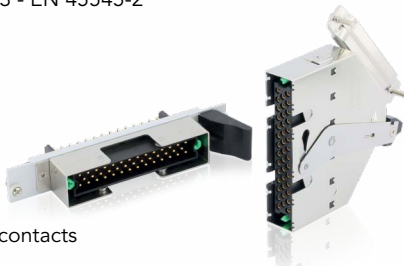
Up to 36 contacts #16  
Quick Mating plastic rectangular solution  
Tested following EN 50 467 and NF F 61-030  
HL3/R22 & HL3/R23 - EN 45545-2

#### 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

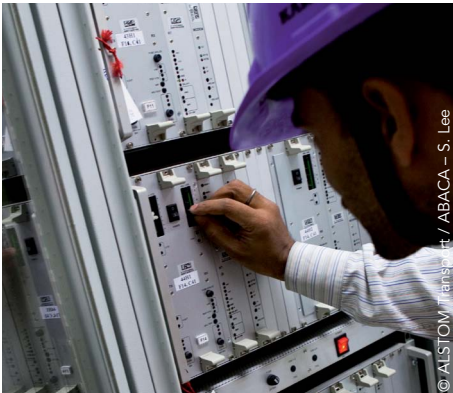
### HIGH SPEED

- ✓ 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



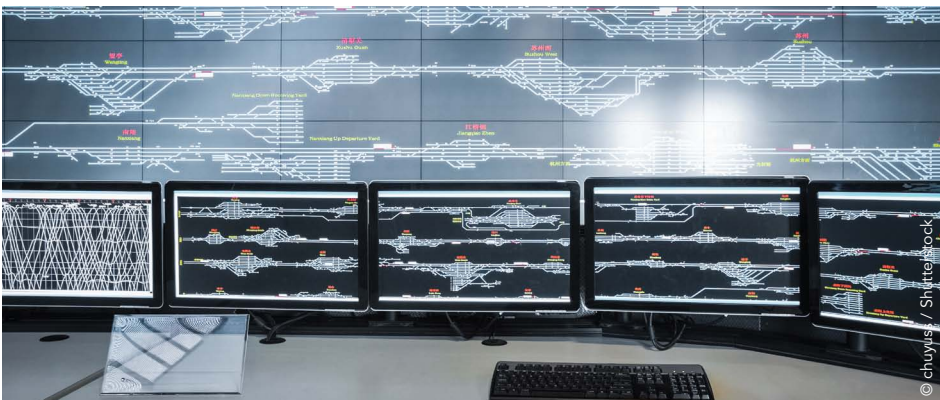
Signaling room



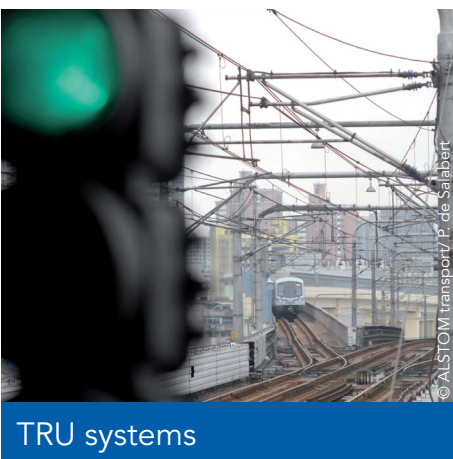
ERTMS systems



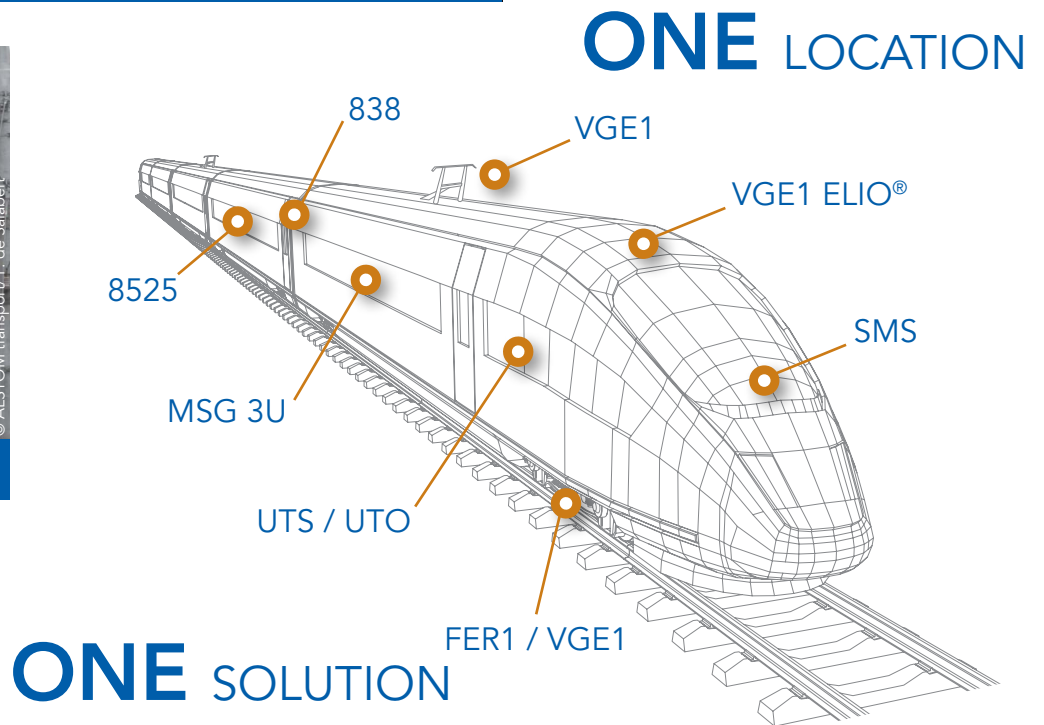
Cabin systems



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.

---

### 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).

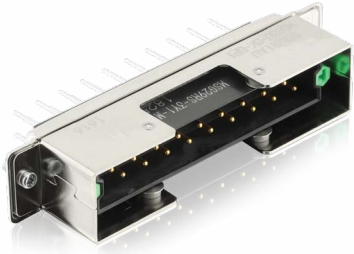
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### COST SAVINGS

#### 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.

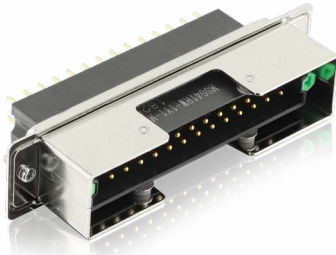
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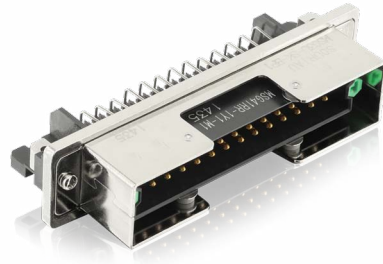
Receptacle 29 Pos.  
Straight



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.



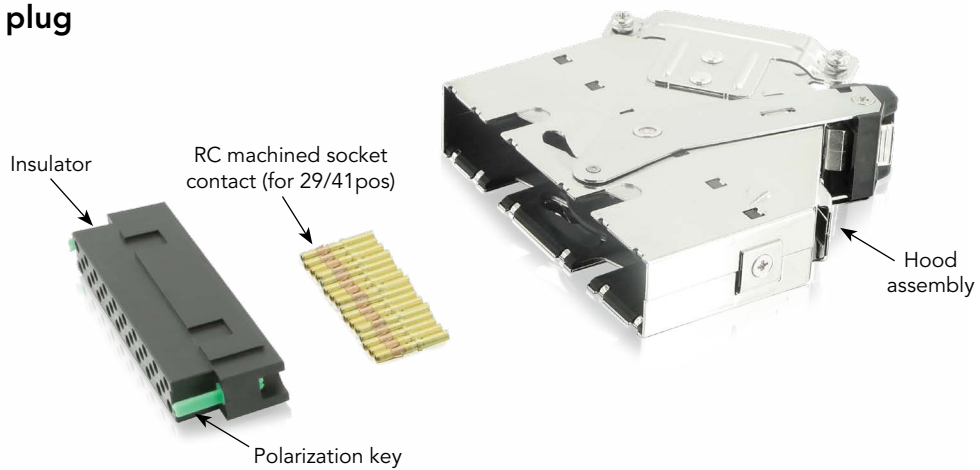
Plug 51 Pos.



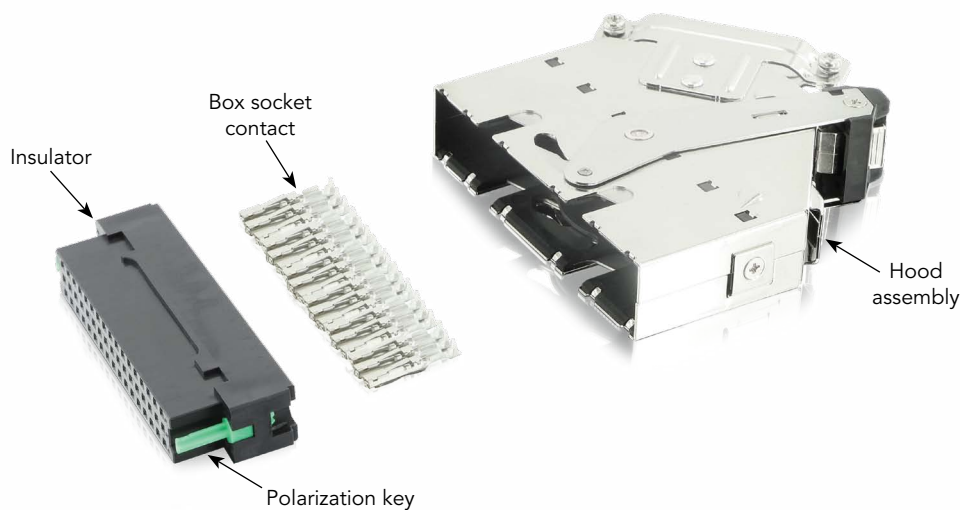
Plug 5 Quadrax

## Product description

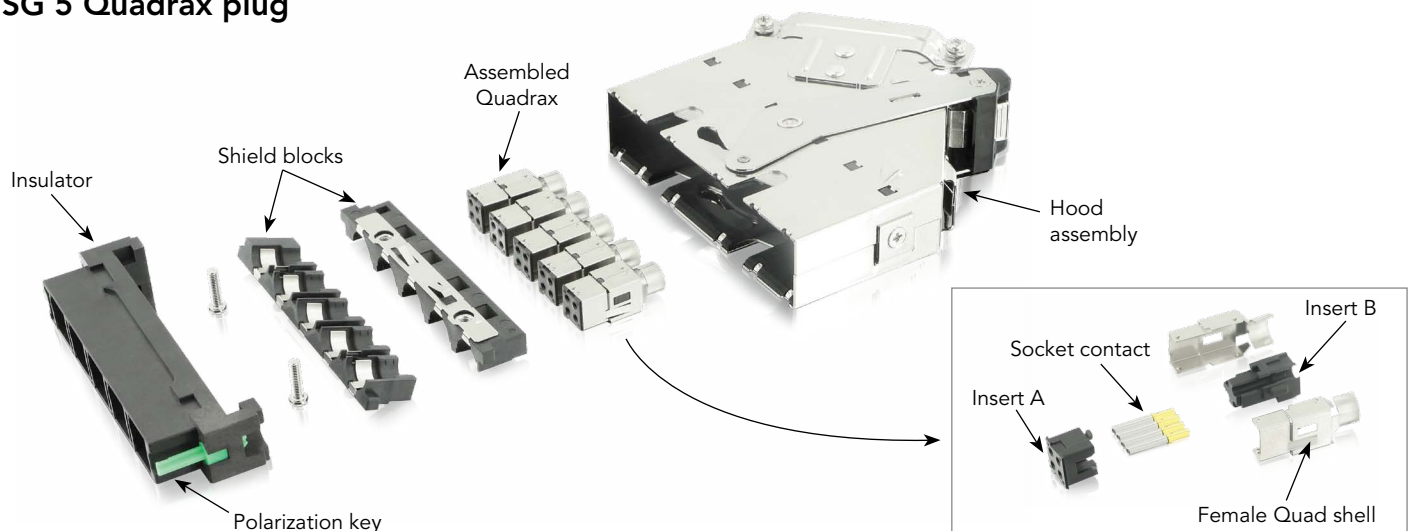
### MSG 29 / 41 pos plug



### MSG 51 pos plug

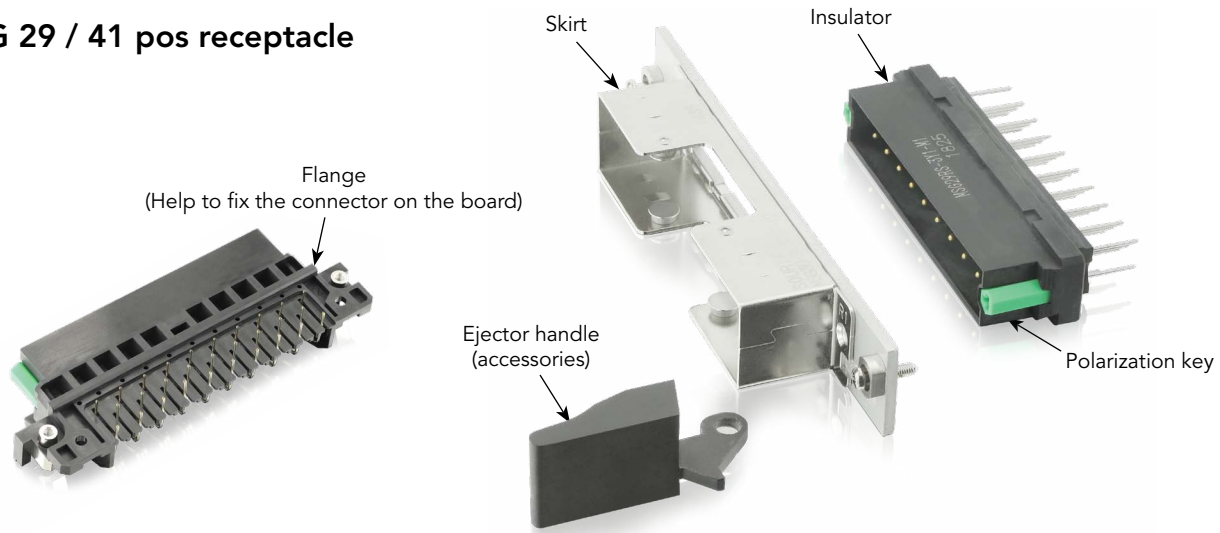


### MSG 5 Quadrax plug

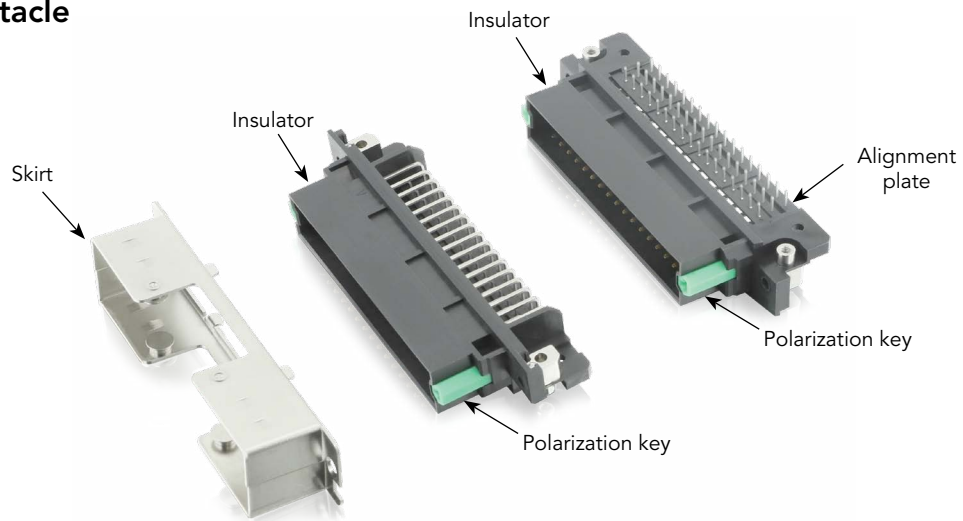


### Product description (example)

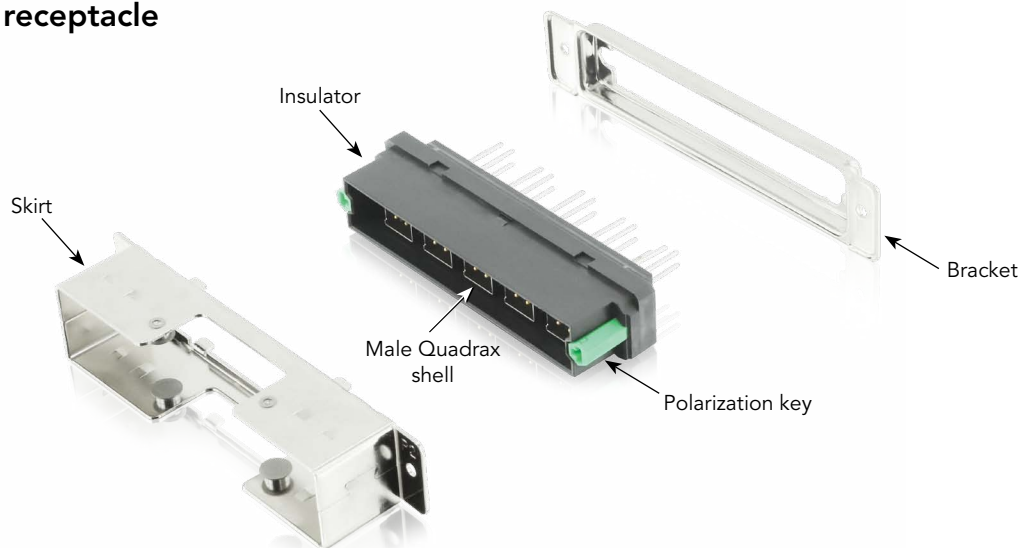
#### MSG 29 / 41 pos receptacle



#### MSG 51 pos receptacle

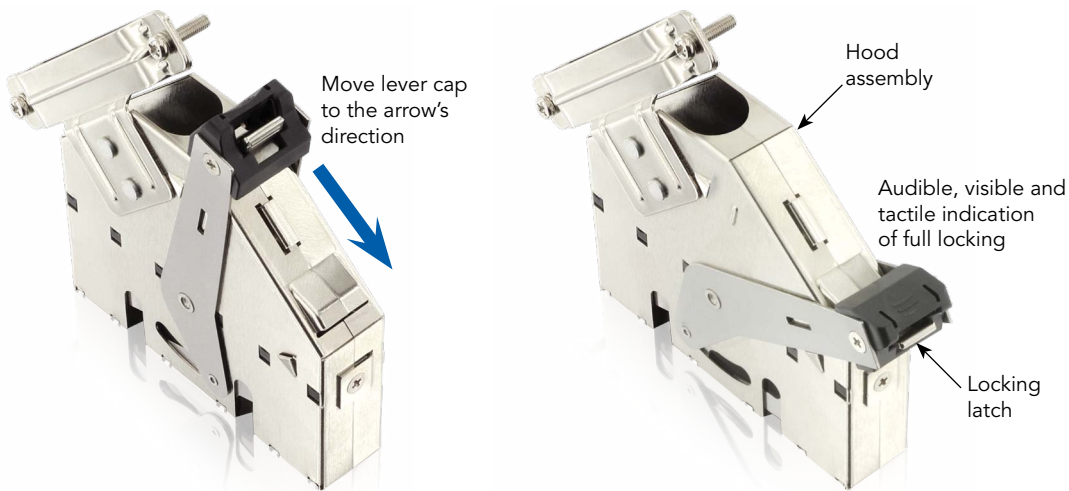


#### MSG 5 Quadrax receptacle

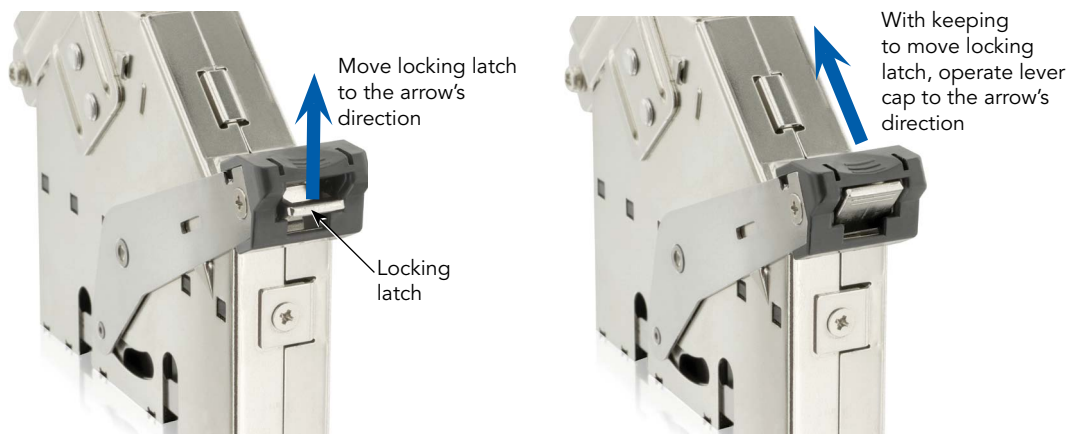


## Product features

### Connector mating: 1 simple action to lock

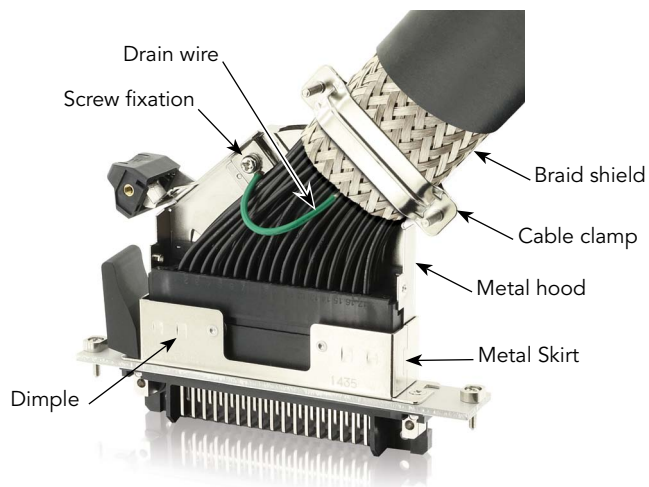


### Connector un-mating: 2 actions to un-mate



### 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

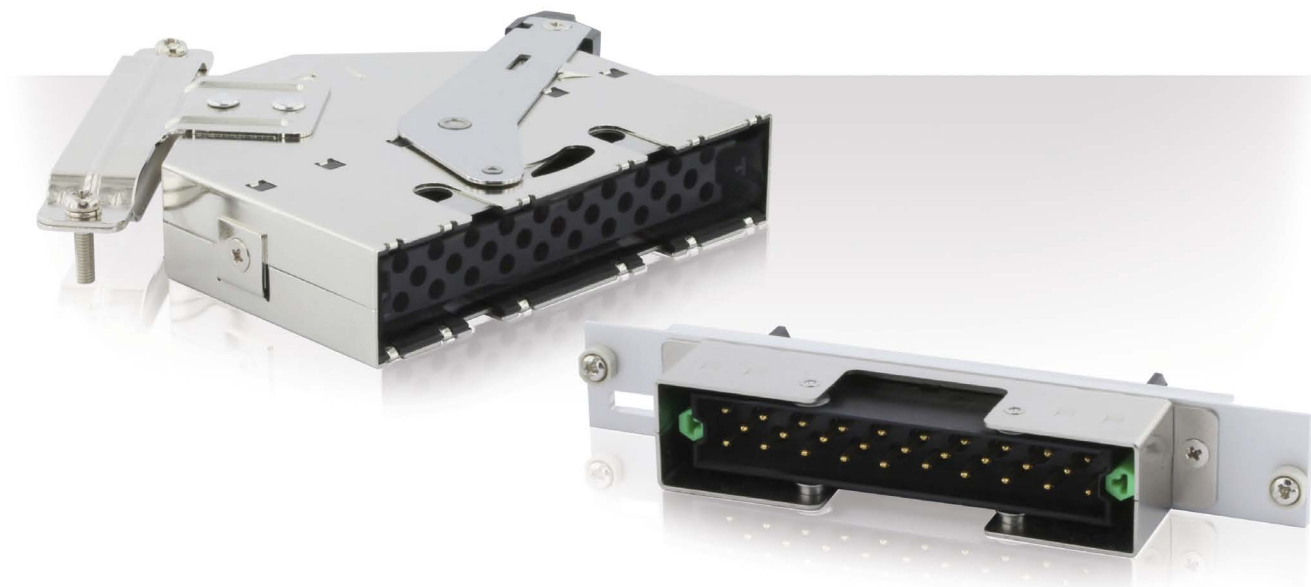
# MSG 3U SERIES



# Connectors

■ MSG 29 pos. ....	18
■ MSG 41 pos. ....	22
■ MSG 51 pos. ....	26
■ 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.

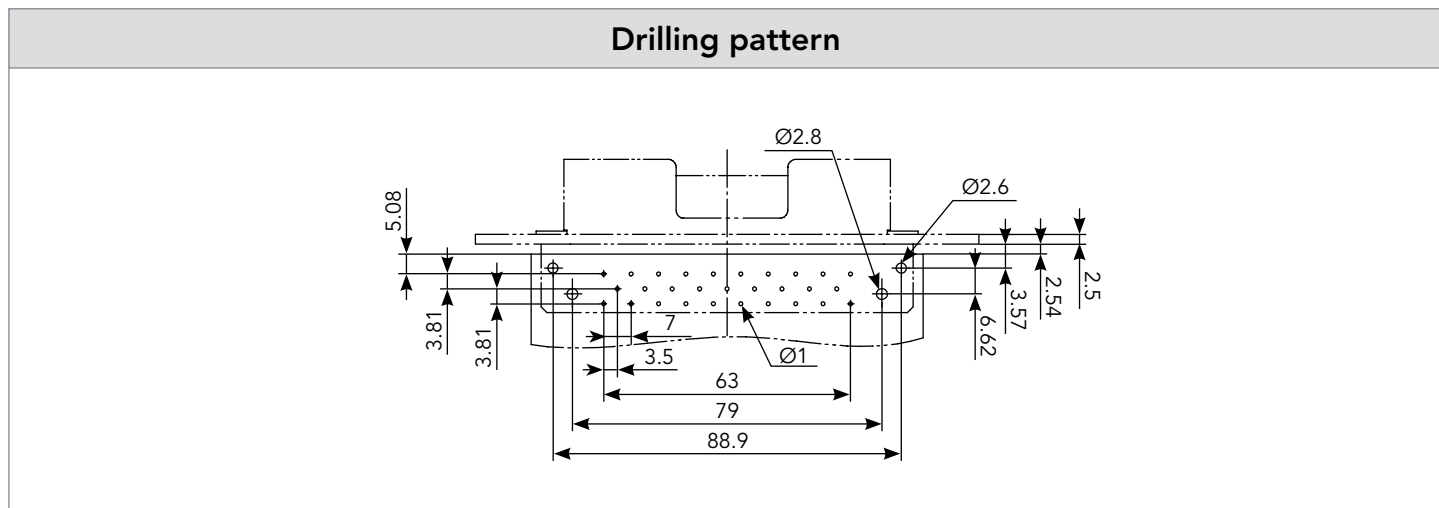
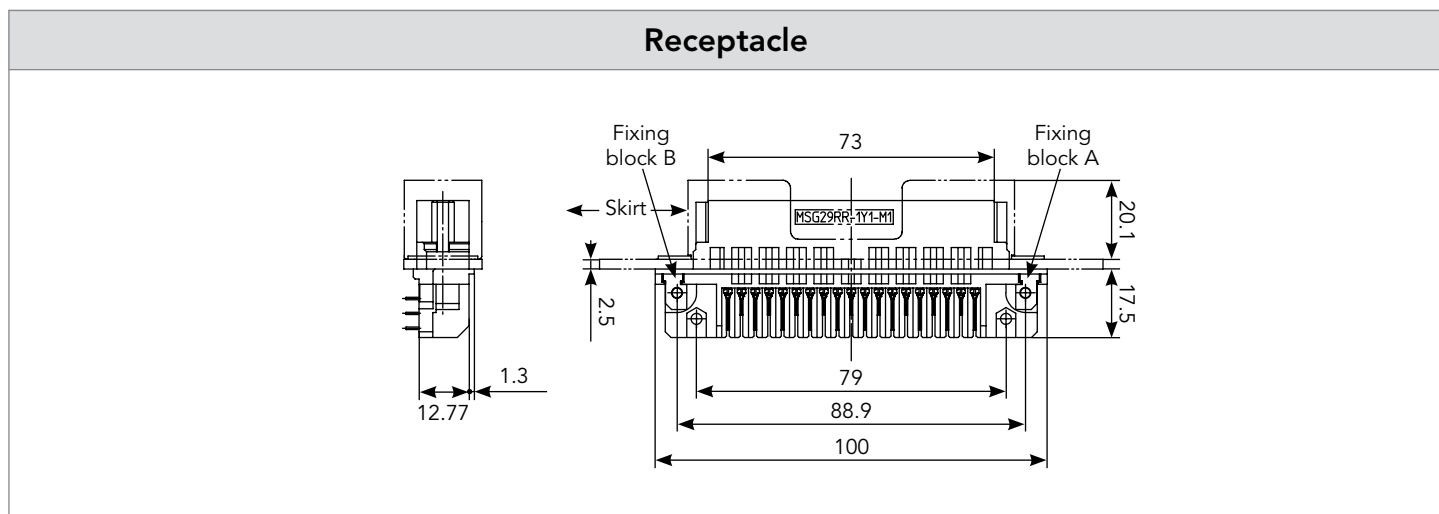
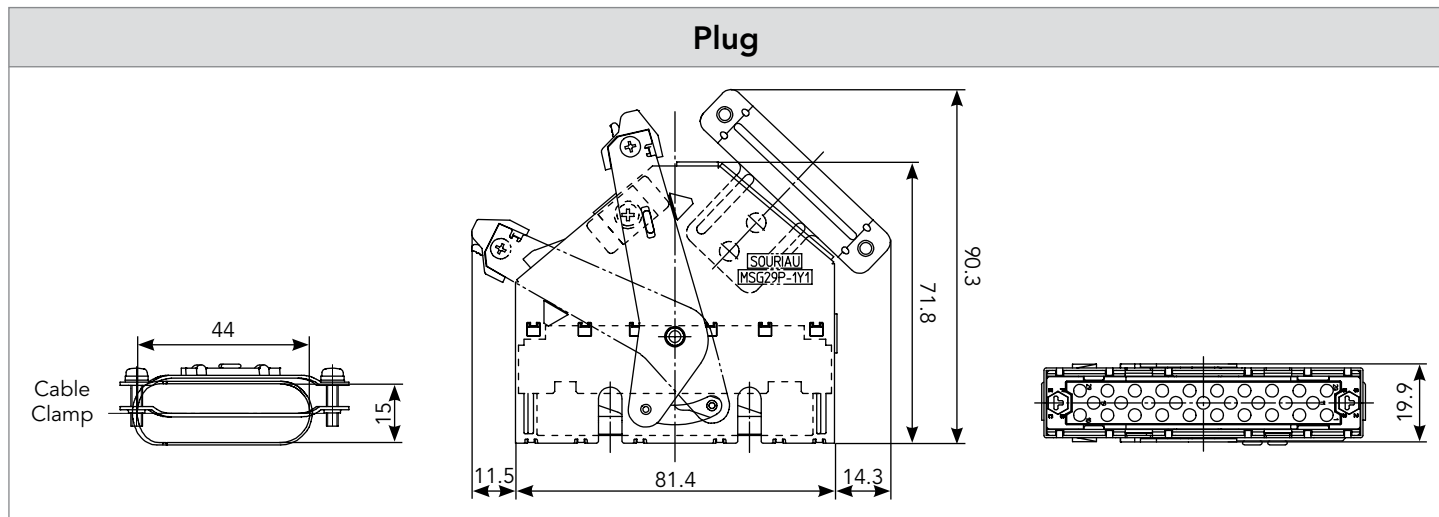
Panel type and size <sup>(1)</sup>	Cable direction	Description	Part number*
Rack panel system 3U-4HP size	Upward cabling	With 3U-4HP front panel, lower ejector handle position	<b>MSG3USKFPF12</b>
Rack panel system 3U-4HP size	Downward cabling	With 3U-4HP front panel, lower ejector handle position	<b>MSG3USKFPF22</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 <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 #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.

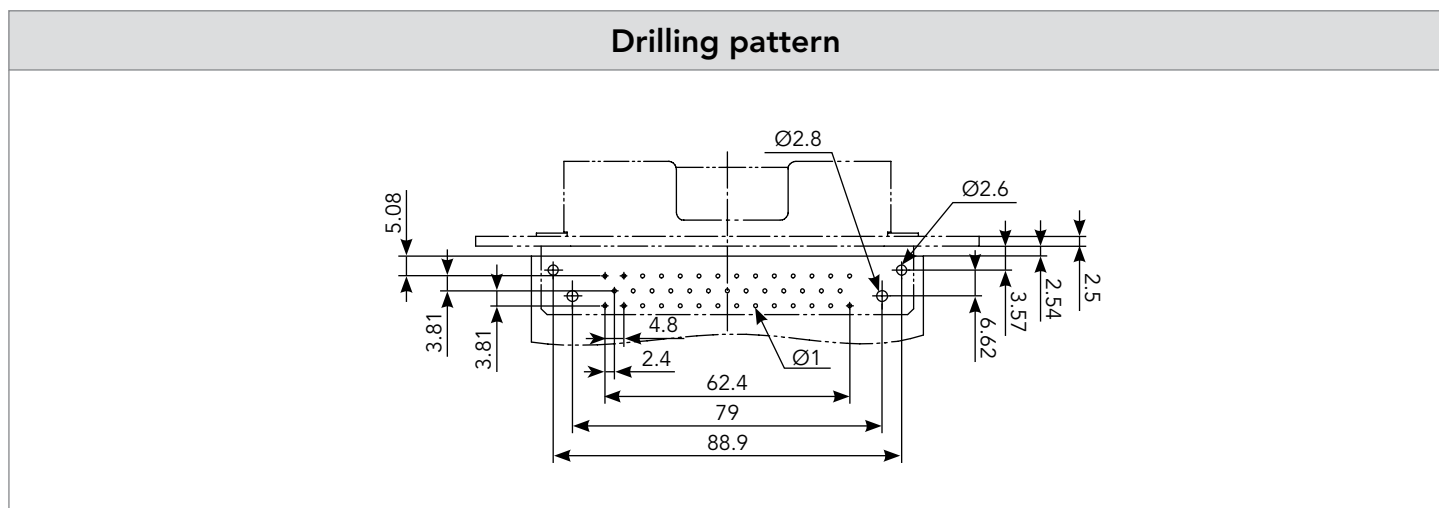
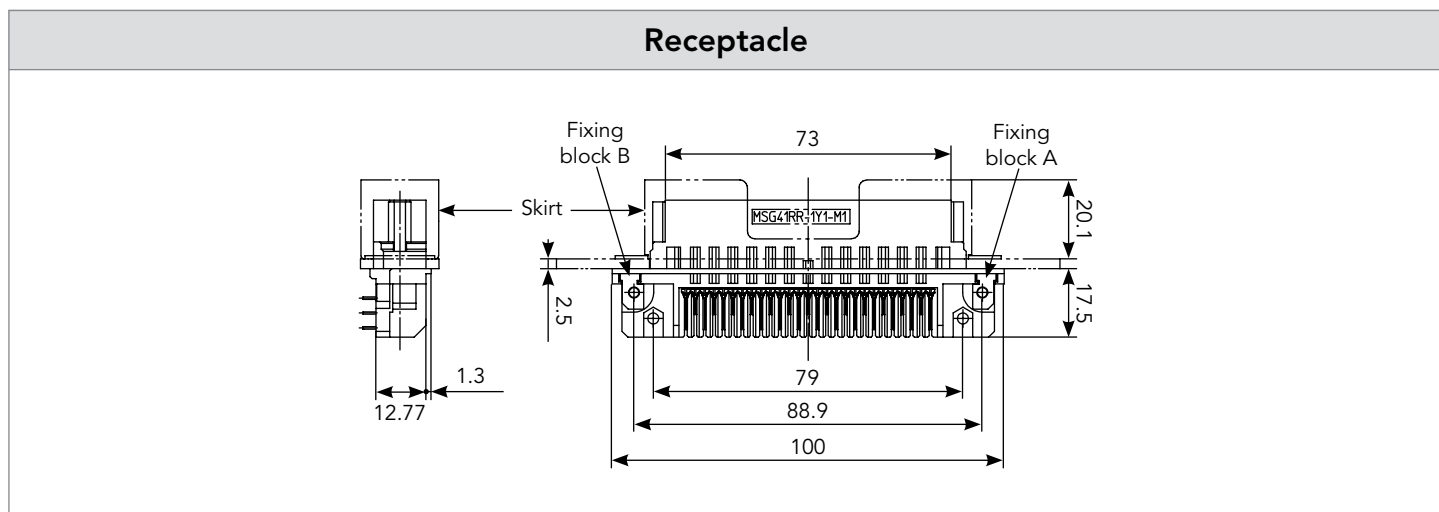
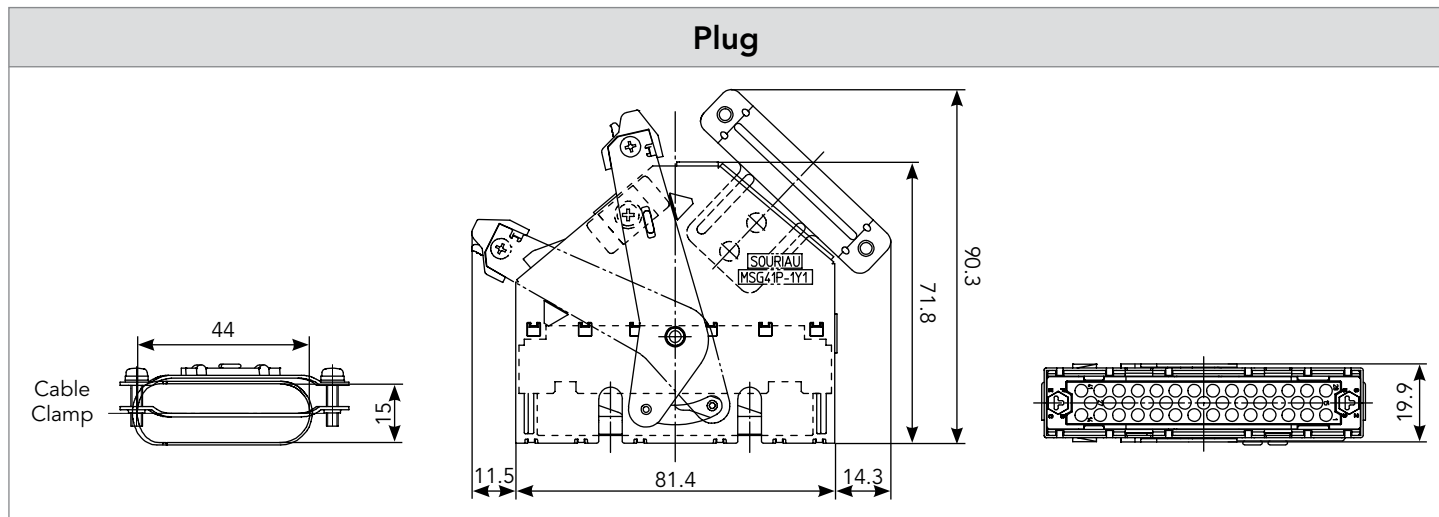
Panel type and size <sup>(1)</sup>	Cable direction	Description	Part number*
Wire-to Wire	Upward cabling	Without ejector handle hole for wire-to-wire type	<b>MSG3USKBP1</b>
Wire-to Wire	Downward cabling	Without ejector handle hole for wire-to-wire type	<b>MSG3USKBP2</b>
Rack panel system 3U-4HP size	Upward 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 #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.

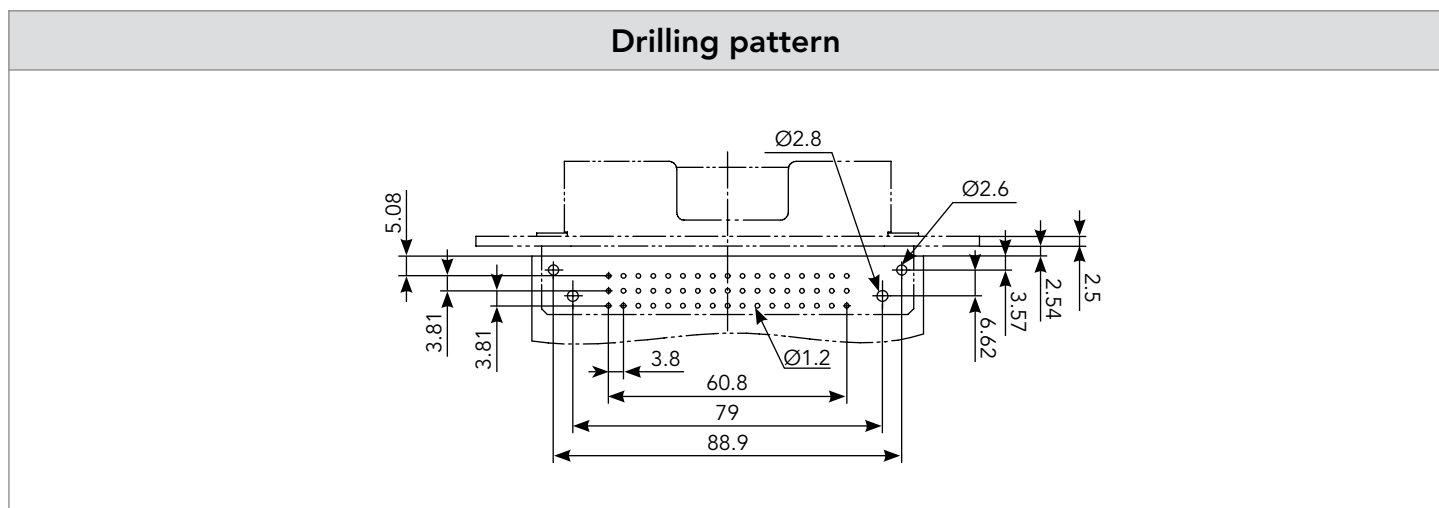
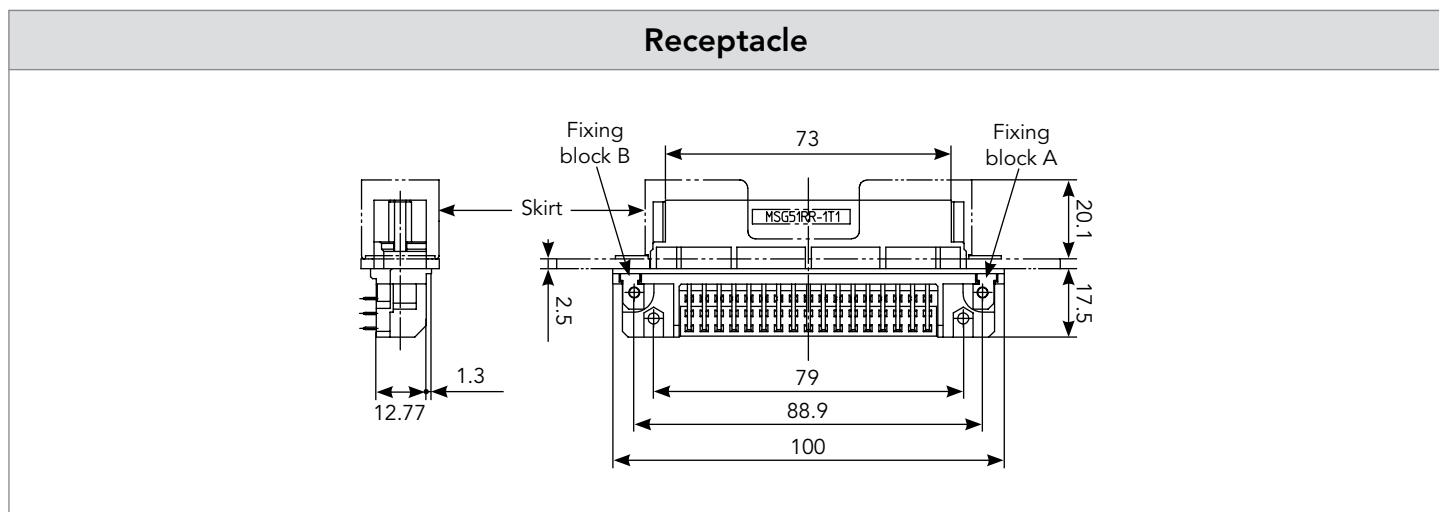
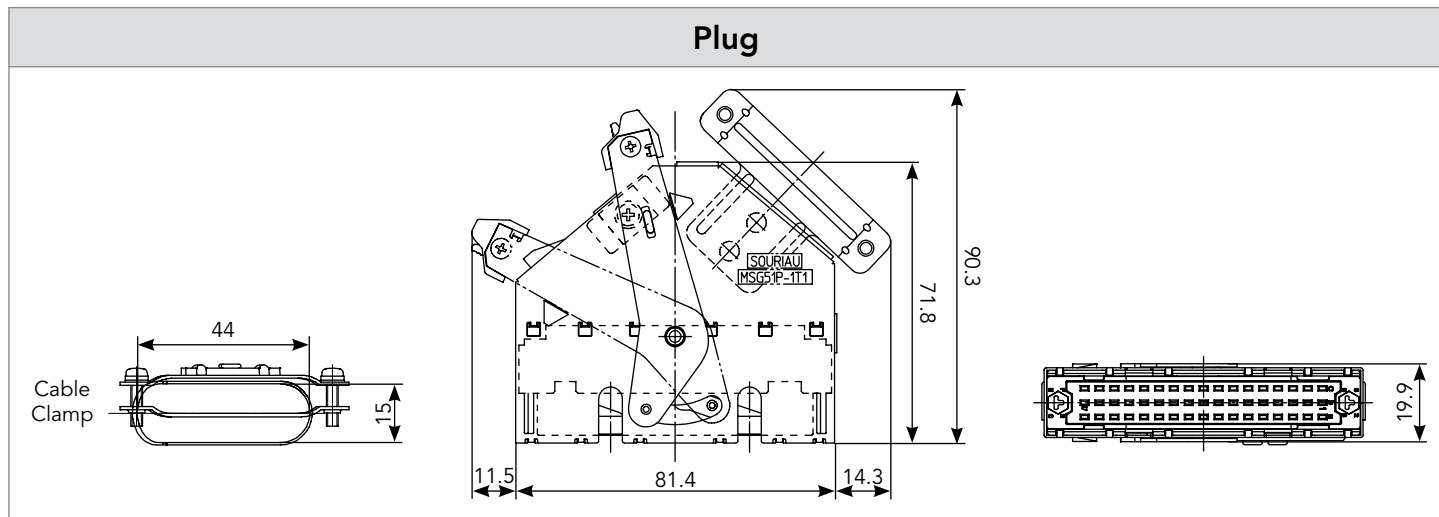
Panel type and size <sup>(1)</sup>	Cable direction	Description	Part number*
Rack panel system 3U-4HP size	Upward cabling	With 3U-4HP front panel, lower ejector handle position	<b>MSG3USKFPF12</b>
Rack panel system 3U-4HP size	Downward cabling	With 3U-4HP front panel, lower ejector handle position	<b>MSG3USKFPF22</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



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.

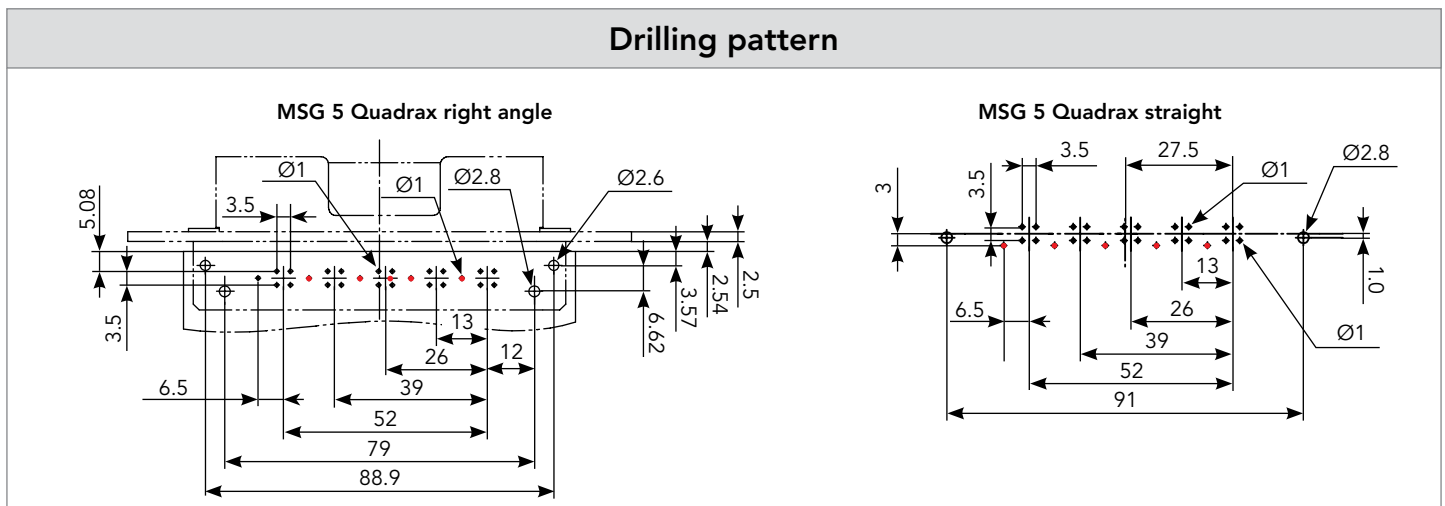
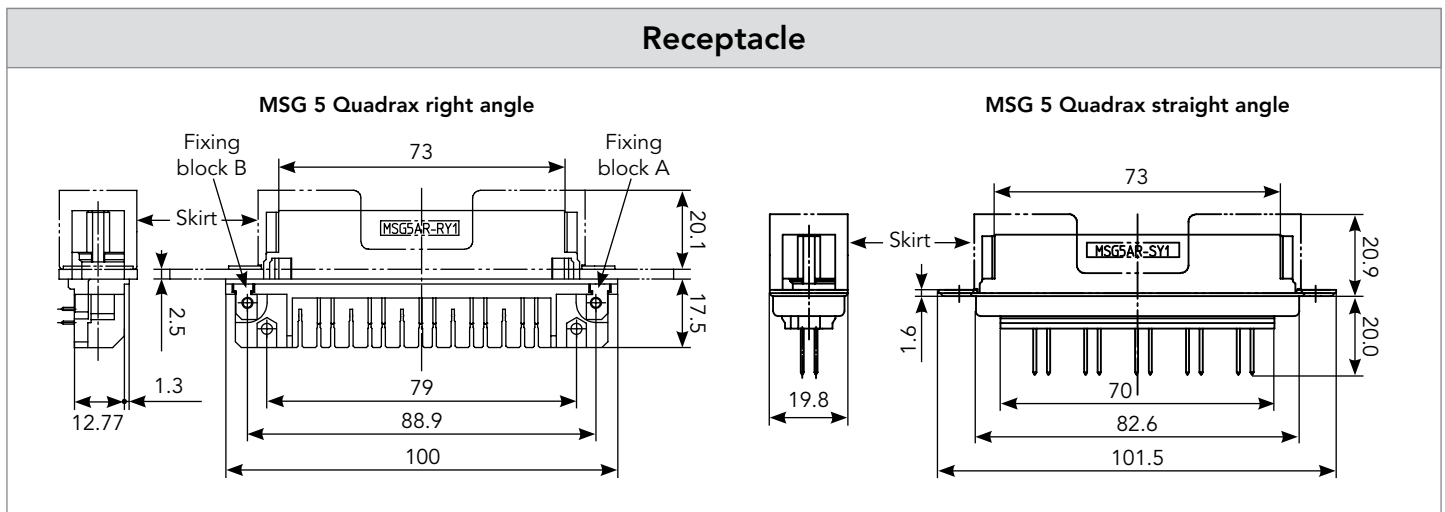
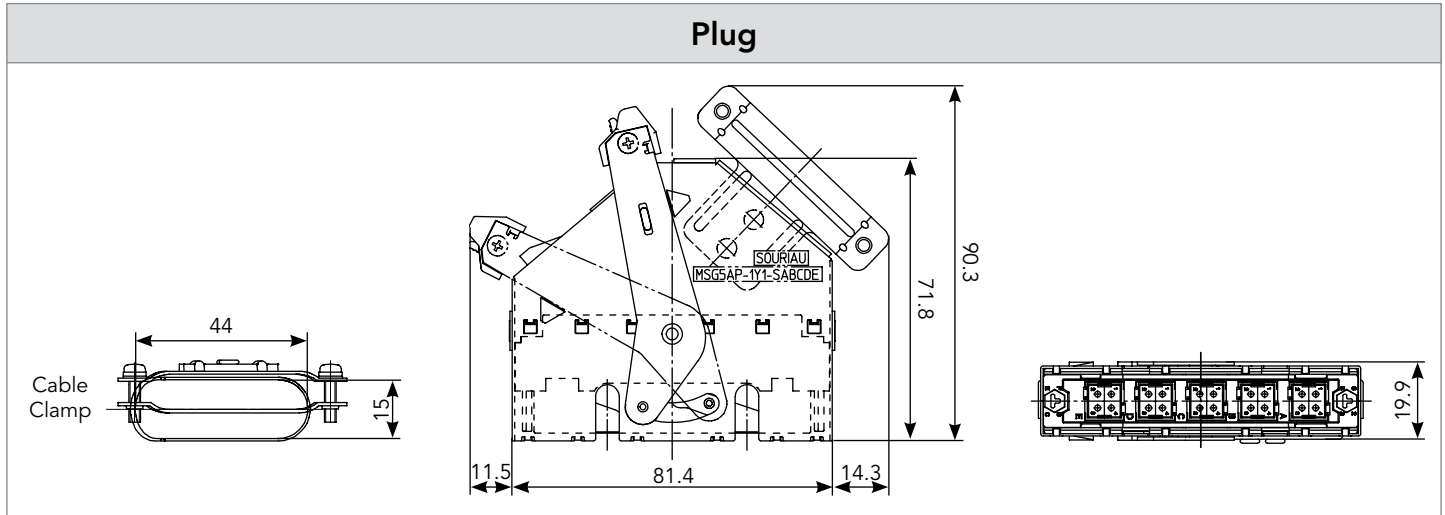
Panel type and size <sup>(1)</sup>	Cable direction	Description	Part number*
Rack panel system 3U-4HP size	Upward cabling	With 3U-4HP front panel, lower ejector handle position	<b>MSG3USKFPF12</b>
Rack panel system 3U-4HP size	Downward cabling	With 3U-4HP front panel, lower ejector handle position	<b>MSG3USKFPF22</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>



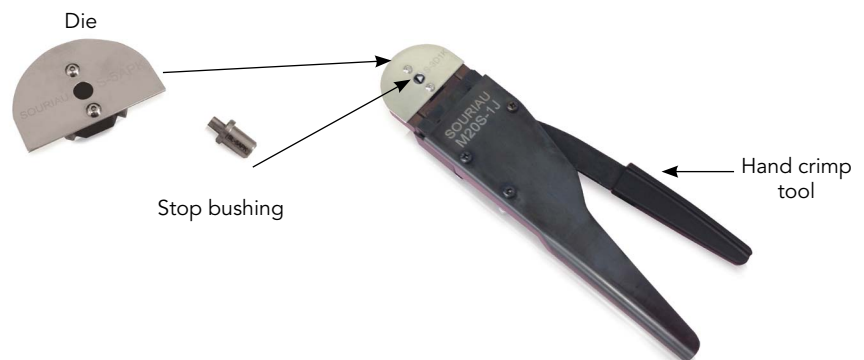
Contact type	Hand crimp tool	Locator
Socket #20 - Ø 1 mm	<b>M22520/2-01</b>	<b>M22520/2-08</b>

or

Contact type	Hand crimp tool	Die	Stop bushing
Socket #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

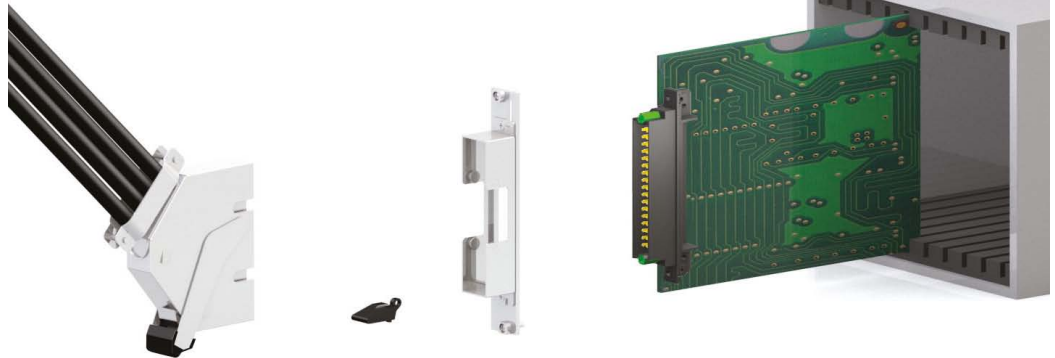
Contact type	Plating	AWG	mm <sup>2</sup>	Max wire Ø	Max insulator Ø
Socket #20 - Ø 1 mm	Gold 0.4µm	24-18	0.2 - 0.75	1.2	2.5

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)

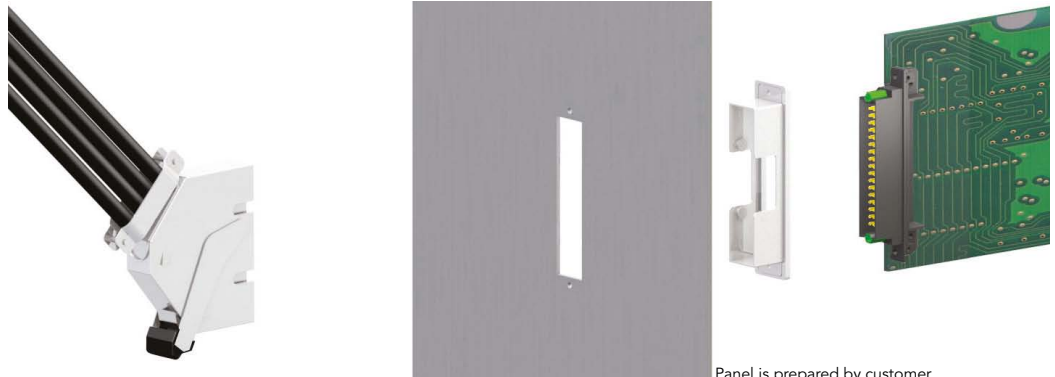
Cabling	For part numbers:
Upward	MSG3USKFP1
Downward	MSG3USKFP2



Panel is prepared by customer

Panel System for right-angle type

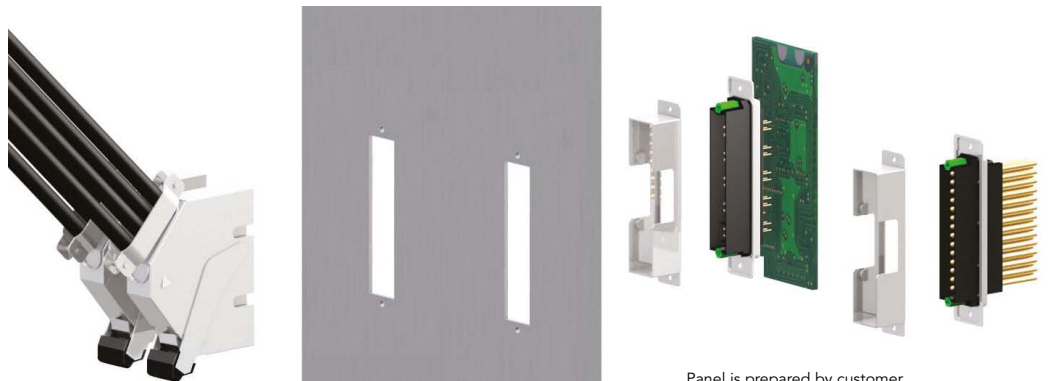
Cabling	For part numbers:
Upward	MSG3USKBPF1
Downward	MSG3USKBPF2



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:**

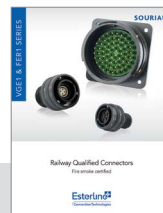
- . HL3/R22 - HL3/R23 according to EN 45545-2.
- . NFPA 130 compliant.
- . JRMA Class 3.

**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.esterline-connection-technologies.com](http://www.esterline-connection-technologies.com)

### SMS Series

**Quick mating plastic solution.**

**Fire smoke:**

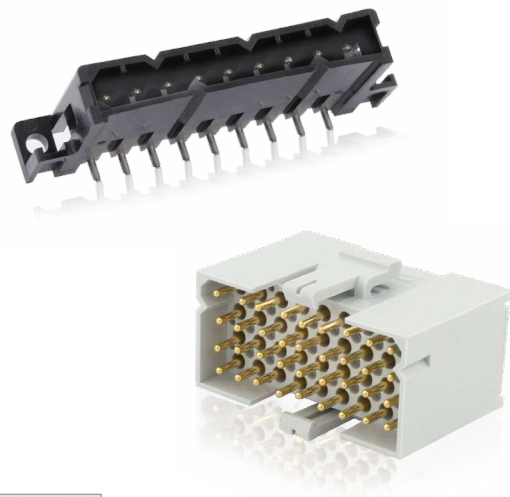
- . Flame retardant version : HL3/R22 - HL3/R23 according to EN 45545-2.
- . PCB board version : HL2/R22 - HL2/R23 according to EN 45545-2.
- . UL94 V-0.

**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.esterline-connection-technologies.com](http://www.esterline-connection-technologies.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.esterline-connection-technologies.com](http://www.esterline-connection-technologies.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.esterline-connection-technologies.com](http://www.esterline-connection-technologies.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.esterline-connection-technologies.com](http://www.esterline-connection-technologies.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.esterline-connection-technologies.com](http://www.esterline-connection-technologies.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

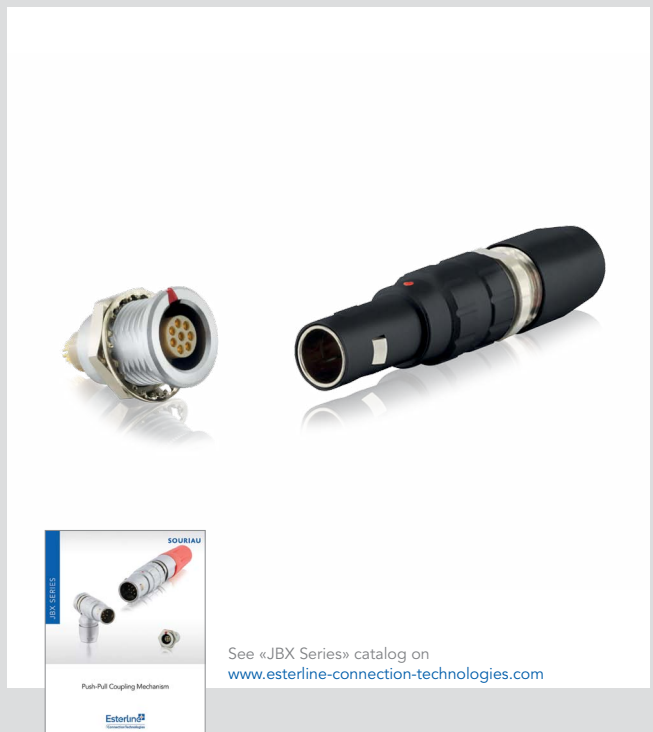
#### Metal Push-Pull connector.

##### 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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