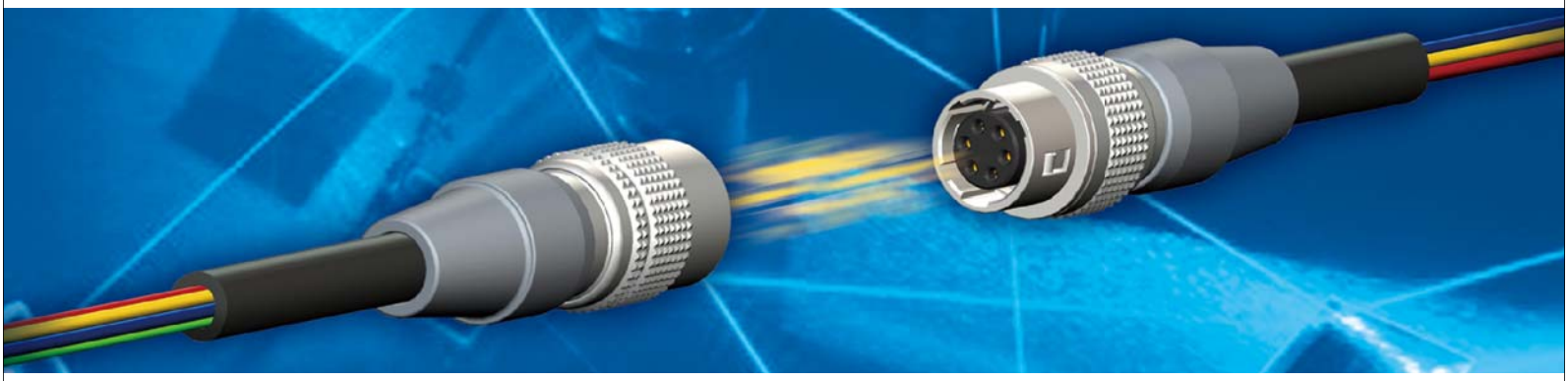
S4 Series Metal Push-pull Circular Connectors



◎S4 series push-pull connectors are oriented by 5 key-keyways. 360° EMC is guaranteed by two layers of metal shells after mating. These connectors are small, light, aesthetically pleasing and user-friendly.

◎S4 series connectors are suitable for applications requiring space-saving, frequent operation and absolute signal integrity. These connectors are widely used in opto-electronics, medical equipment, precise instruments and audio-video devices.

◎S4's popularity also comes from its high benefit-to-cost ratio. They are equal or even better in quality, but sell at lower prices than other brands.

Prominent Features

Linreix has redesigned and redeveloped this connector familiy with following outstanding characteristics.

◎Longer life expectancy. Our standard female socket contacts are machined instead of being pressed. Machined contacts have thicker walls. Contact place is strongly supported by solid body, and it is especially resilient against relaxation and deformation during manufacturing and assembly. Therefore, machined female socket contacts get more constant retain force with male pin contacts, even after many cycles of mating and demating. Electrical continuity of machined contacts is much better than pressed ones, especially under stronger vibration and shock.

◎Higher contact density. With no less and but actually better reliability, machined female contacts can be made smaller, and therefore more contacts can be fitted within the same size insulator. For example, M8 connectors can have up to 8 contacts, and M11 connectors can install up to 21 contacts.

◎Larger solder cups. Wires of maximum 22AWG (0.4mm^2) can be soldered onto contacts.

◎Better electrical performance. Contacts are plated gold instead of silver as standard. Gold plating is more corrosion resistant and enviromentally robust, and brings about clearer and safer data transmission.

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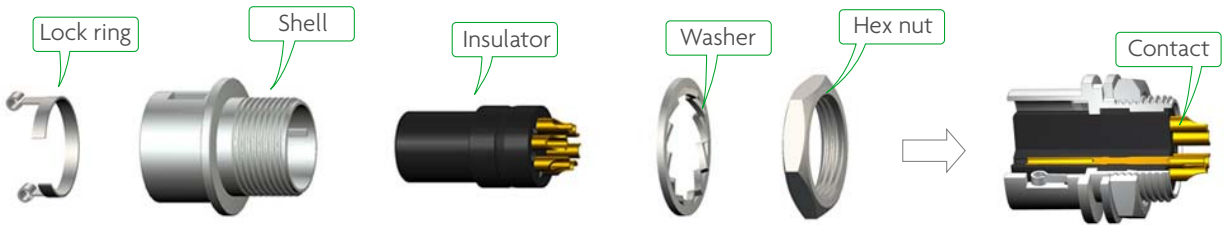
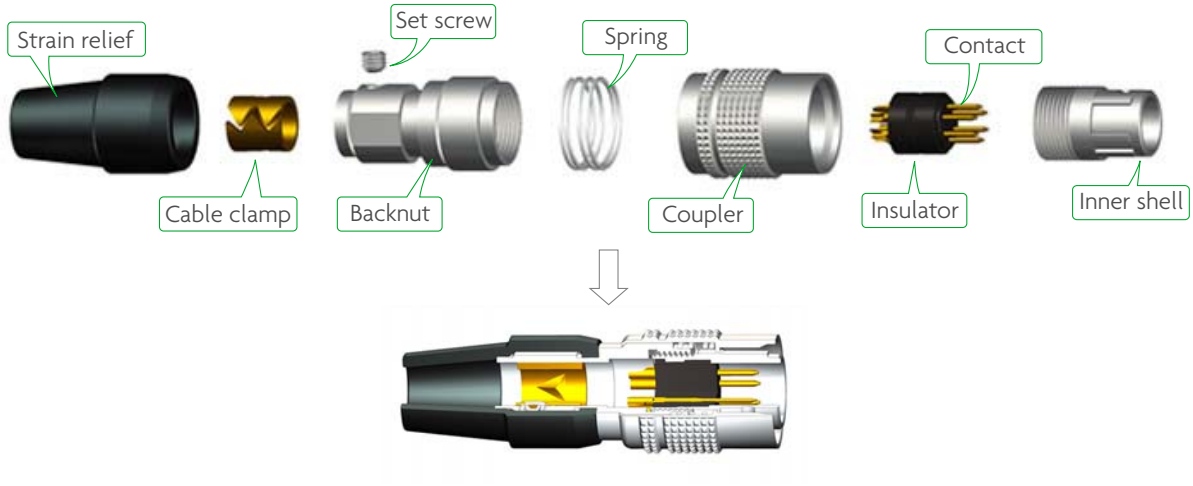
Parts and Materials



Receptacle Part	Material	Remarks
Lock ring	Beryllium copper	Nickel plating
Shell	Zinc alloy	Nickel plating
Insulator	PA66/PPS	Black/Beige
Pin/socket contact	Brass/bronze	Gold plating
Washer	Brass	Nickel plating
Hex nut	Brass	Nickel plating



Plug Part	Material	Remarks
Strain relief	Silicone rubber	Black, grey, green, red, yellow, blue
Cable clamp	Brass	Gold imitation plating
Set screw	Carbon steel	Nickel plating
Backnut	Brass	Nickel, silver chromate or black chromate plating
Spring	Spring steel	Nickel plating
Coupler	Brass	Nickel, silver chromate or black chromate plating
Insulator	PA66/PPS	Black/Beige
Pin/socket contacts	Brass/Bronze	Gold plating
Inner shell	Zinc alloy	Nickel plating

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Technical Parameters

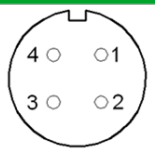
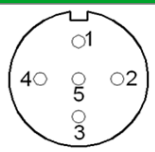
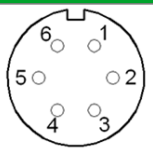
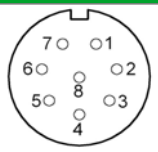
Environmental

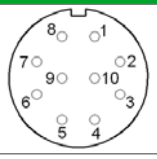
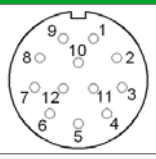
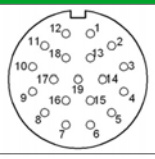
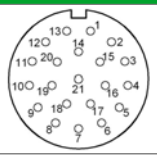
Working temperature: -40℃-105℃

Mechanical

Cycles: >3,000

Electrical

Connector size	M8			
Arrangement (from view of pin engagement)	 ★	 ★	 ★	 ☆
Insulation material	PA66, black			PPS, beige
Number of contacts	4	5	6	8
Mating diameter	0.6mm			0.5mm
Working current	3A			2A
Working voltage(VDC)	250	200		250
Working voltage(VAC)	150	110		150
Contact resistance	≤6mΩ			≤8mΩ
Insulation resistance	≥3,000MΩ			

Connector size	M11			
Arrangement (from view of pin engagement)	 ★	 ★	 ☆	 ☆
Insulation material	PA66, black		PPS, beige	
Number of contacts	10	12	19	21
Mating diameter	0.6mm		0.5mm	
Working current	3A		2A	
Working voltage(VDC)	200		250	
Working voltage(VAC)	110		150	
Contact resistance	≤6mΩ		≤8mΩ	
Insulation resistance	≥3,000MΩ			

Note: The arrangements with "★" are available now, and those with "☆" are to be developed.
For customized products, please contact factory.

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Ordering Nomenclature

S4	–	8		PB	–	6		S	–	N	–	K		50
①		②		③		④		⑤		⑥		⑦		⑧

1.Series code

2.Connector size（defined by receptacle mounting thread）

M8，M11

3.Connector style

RA-Front mount receptacle, back fixed
PA-Straight plug, without strain relief
RE-In-line receptacle
PB-Straight plug, with strain relief

4.Number of contacts

M8 connectors: 4, 5, 6, 8
M11 connectors: 10, 12, 19, 21

5.Type of contacts

S-Socket contact，solder type
P-Pin contact, solder type
V-Sokcet contact, straight PCB type
A-Pin contact, straight PCB type

6.Surface treatment of shell

N-Nickel plating C-Silver chromate plating K-Black chromate plating

7.Colour of strain relief(If any)

K-Black G-Grey N-Green Y-Yellow R-Red B-Blue

8.Cable outlet of strain relief(if any)

M8 connector: 30 - 3.0mm outlet; 50 - 5.0mm outlet
M11 connector: 50 -5.0mm outlet; 70 - 7.0mm outlet

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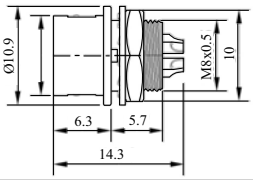
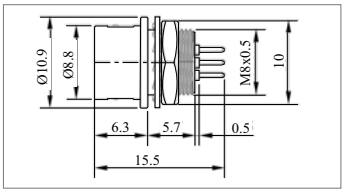
Outer Dimensions (mm)

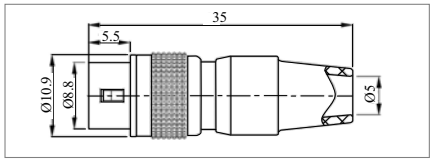
M8 Solder Receptacle ▸S4-8RA-*S or S4-8RA-*P



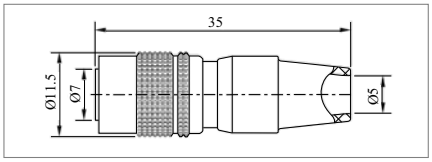
M8 Straight PCB Receptacle ▸S4-8RA-*V or S4-8RA-*A



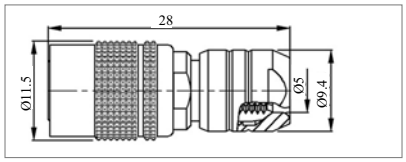
M8 In-line Receptacle ▸S4-8RE-*S or S4-8RE-*P



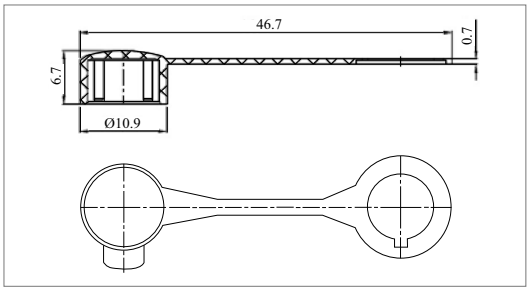
M8 Plug with Strain Relief ▸S4-8PB-*S or S4-8PB-*P



M8 Plug without Strain Relief ▸S4-8PA-*S or S4-8PA-*P



S4-M8 Dust-proof Cap ▸S4-8RC-1



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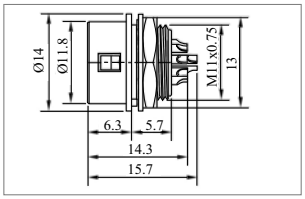
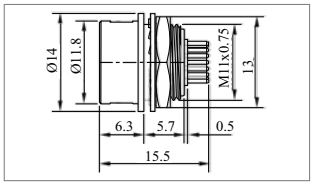
Outer Dimensions (mm)

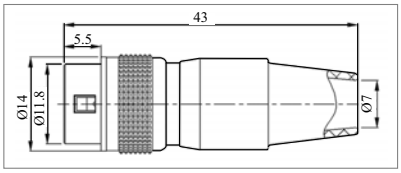
M11 Solder Receptacle ▸S4-11RA-**S or S4-11RA-**P



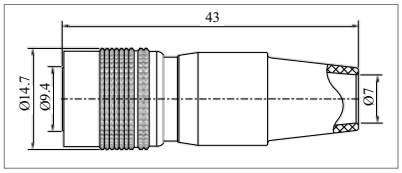
M11 Straight PCB Receptacle ▸S4-11RA-**V or 4-11RA-**A



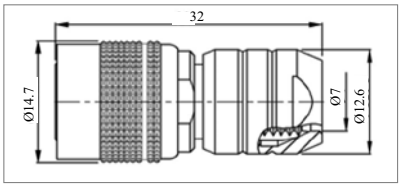
M11 In-line Receptacle ▸S4-11RE-**S or S4-11RE-**P



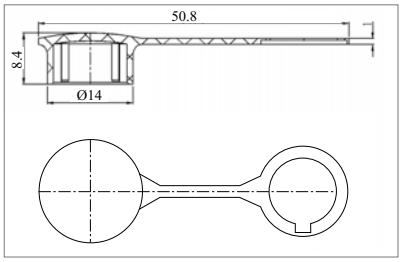
M11 Plug with Strain Relief ▸S4-11PB-**S or S-11PB-**P



M11 Plug without Strain Relief ▸S4-11PA-**S or S4-11PA-**P



S4-M11 Dust-proof Cap ▸S4-11RC-1



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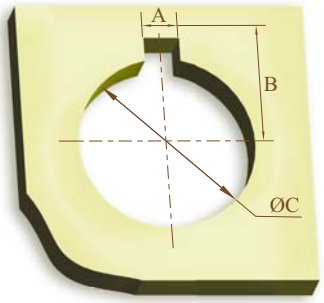
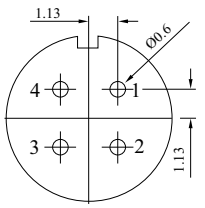
Installation Dimensions (mm)

Panel Cut-out

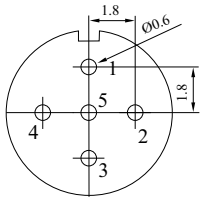


Dimension \ Receptacle	M8	M11
A	$1.60^{+0.1}$	$2.60^{+0.1}$
B	$5.10^{+0.1}$	$6.60^{+0.1}$
C	$8.10^{+0.1}$	$11.10^{+0.1}$
Panel thickness	0.7~2	0.7~2

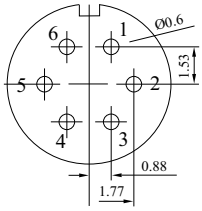
PCB Drilling Patterns



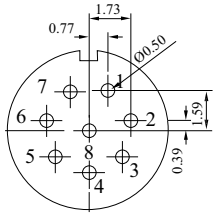
M8, 4-pole



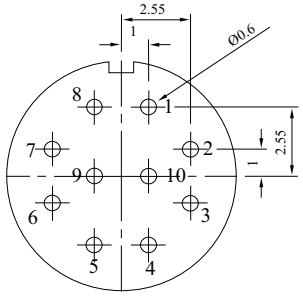
M8, 5-pole



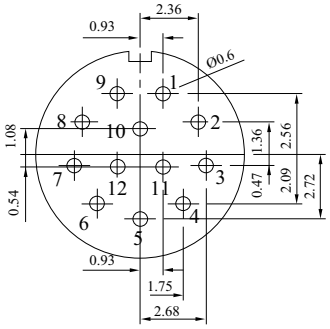
M8, 6-pole



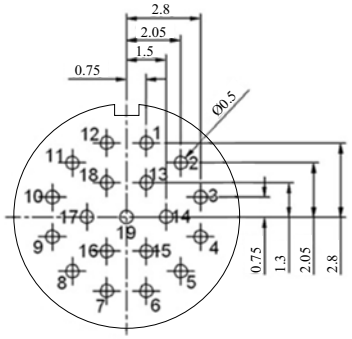
M8, 8-pole



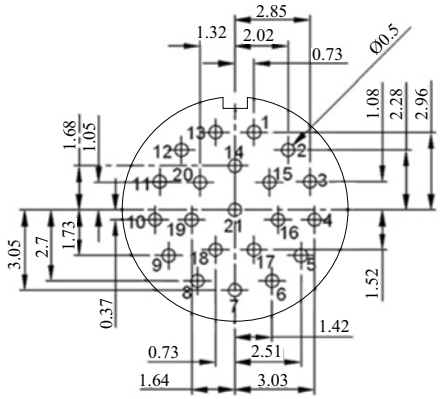
M11, 10-pole



M11, 12-pole



M11, 19-pole



M11, 21-pole

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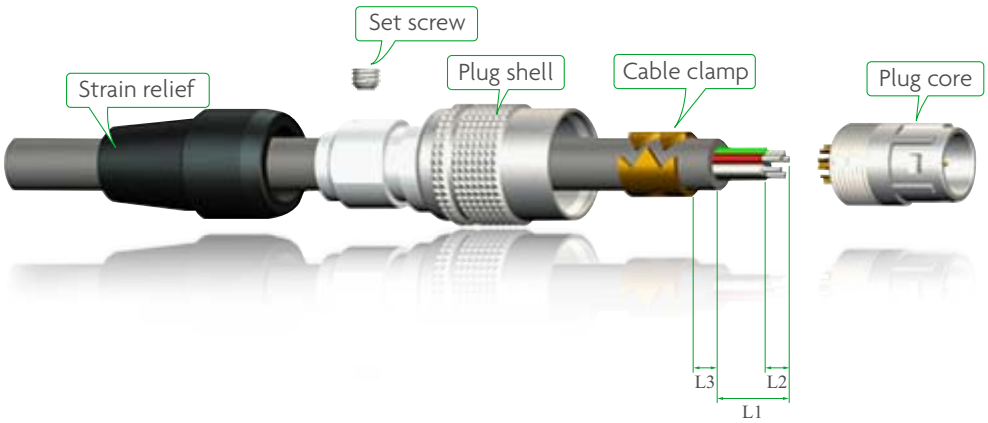
Installation Dimensions(mm)

Cable Installation



Plug size	Max. cable O.D.	Max. wire gauge	L1	L2	L3	Fix torque
M8	5.0	22AWG(0.4mm^2)	8	2	⩾2	1.5Nm
M11	7.0	22AWG(0.4mm^2)	14	2	⩾2	2Nm

◎Select a cable with applicable O.D. and wire gauge as above table.

◎Process cable end according to above dimensions, put the strain relief and the plug shell onto the cable, then close a cable clamp to the cable-end with pliers.

◎Put the plug core to an assembly stand, slide a shrink tube to each wire, and solder wires onto contacts, then shrink the tubes by a hot-gun to protect solder points.

◎Assemble the plug.

◎Turn the plug core into the plug shell with torques as shown in above table.

◎Fix set screw until its tip locates against the triangle dent of cable clamp.

◎Push the strain relief onto the plug backnut.

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