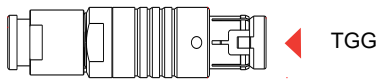


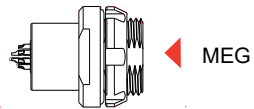
C SERIES (Outdoor, Multipole Mechanical Coding)



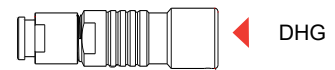
C SERIES Metal housing models



Straight Plug

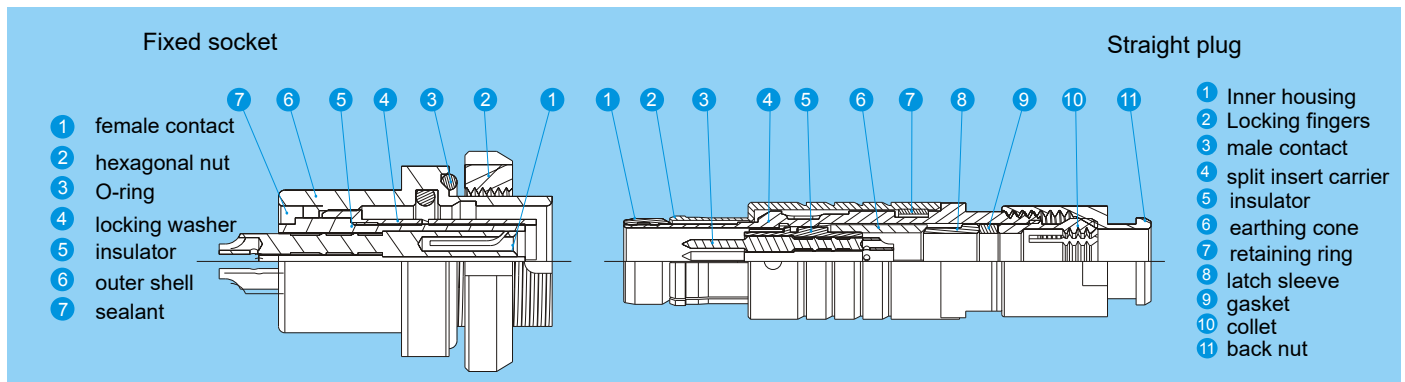


Fixed Socket



Fixed Socket

Part Section Showing Internal Components



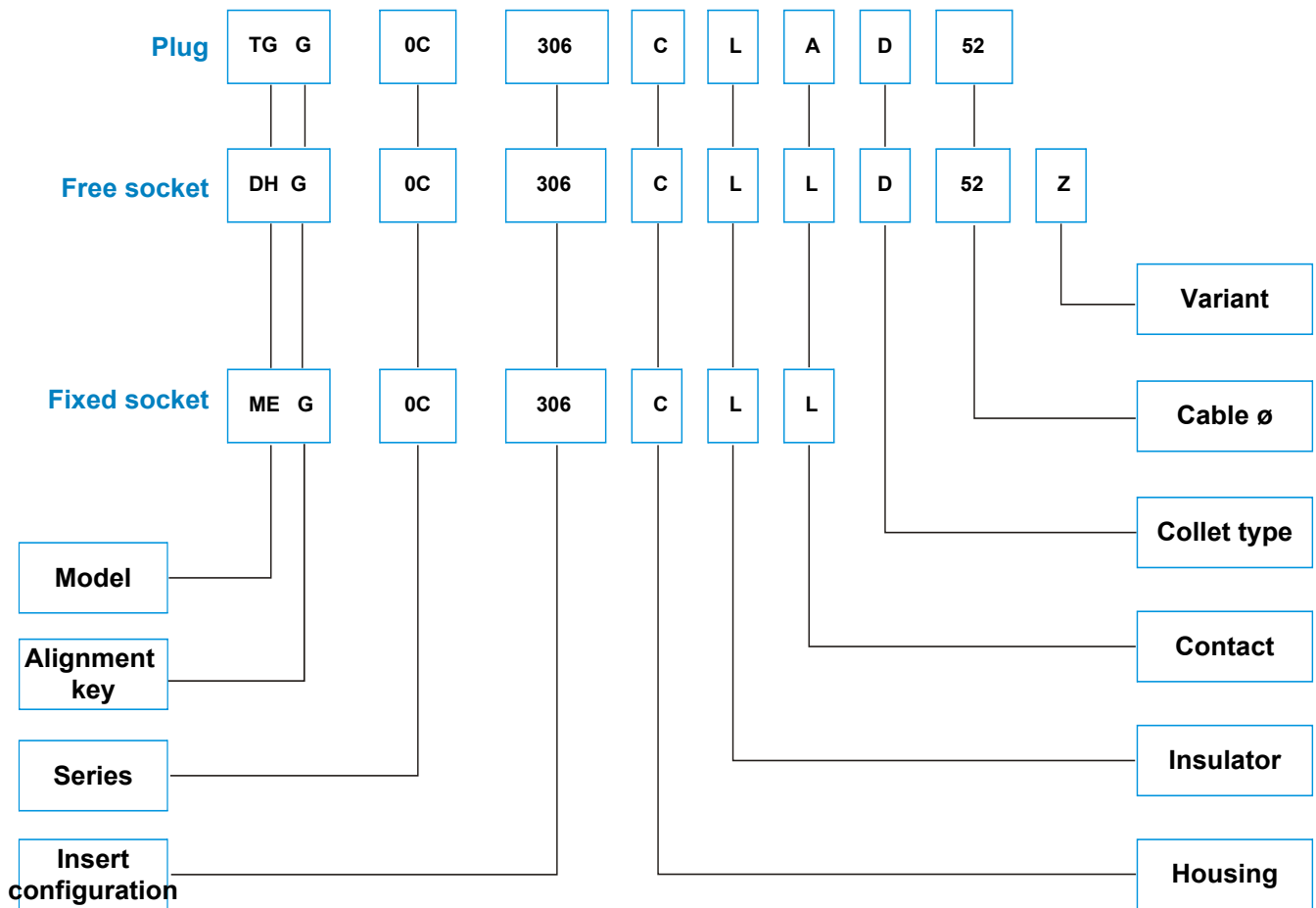
C series connectors have main features as follows:

- security of the Push-Pull self-latching system
- multiple types 1 to 19 contacts
- Easy mating, can be blind-mated (guiding mechanism ensures precise alignment)
- high packing density for space savings
- solder, print (straight or elbow) contacts
- keying system («G» key standard for connector alignment)
- multiple key options to avoid cross mating of similar connectors
- 360° screening for full EMC shielding

C Series Connectors Technical Characteristics:

- Endurance: > 5000 cycles
- Humidity: up to 95% at 60° C
- Temperature range: - 45° C, + 125° C
- Resistance to vibrations: 10-2000 Hz, 15g
- Shock resistance: 100 g, 6 ms
- Salt spray corrosion test: > 48h
- Protection index (mated): IP 68/IP 66

C Series Part Numbering System:



part number example

straight plug with cable collet:

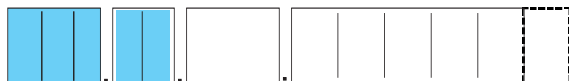
TGG.0C.306.CLAD52 = straight plug with key (G) and cable collet, 0C series, multipole type with 6 contacts, outer shell in chrome-plated brass, PPS insulator, male solder contacts, D type collet for 5.2 mm diameter cable.

Free socket:

DHG.0C.306.CLLD52Z = free socket with key (G) and cable collet, 0C series, multipole type with 6 contacts, outer shell in chrome-plated brass, PPS insulator, female solder contacts, D type collet for 5.2 mm diameter cable and nut for fitting a bend relief.

fixed socket:

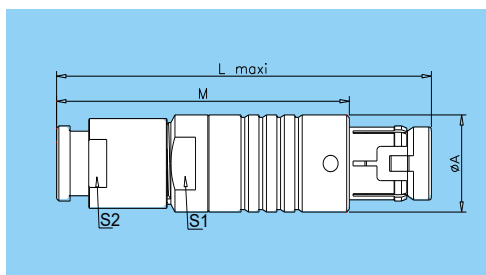
MEG.0C.306.CLL = fixed socket, nut fixing, with key (G), 0C series, multipole type with 6 contacts, outer shell in chrome-plated brass, PPS insulator, female solder contacts.



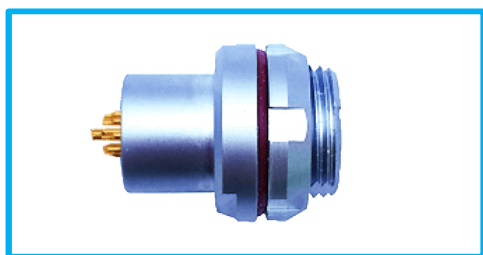
Metal Housing Models



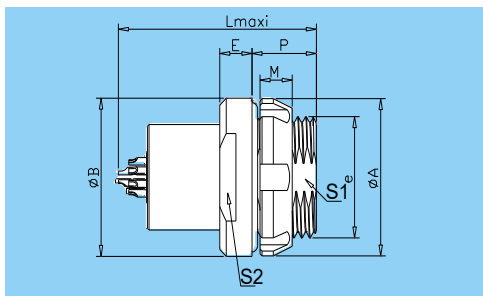
TGG Straight plug, key (G) or keys (A , B...),cable collet and nut for fitting a bend relief



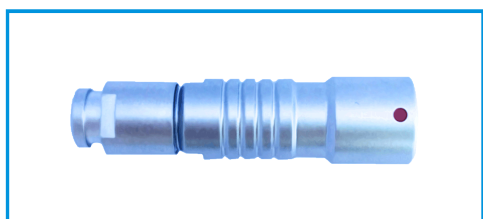
Reference		Dimensions (mm)				
Series	Model	A	L	M	S	S1
0C	TGG	9.4	37	28	8	7
1C	TGG	12	47	35	10	10
2C	TGG	15	50	38	13	12
3C	TGG	18	61	40	16	15



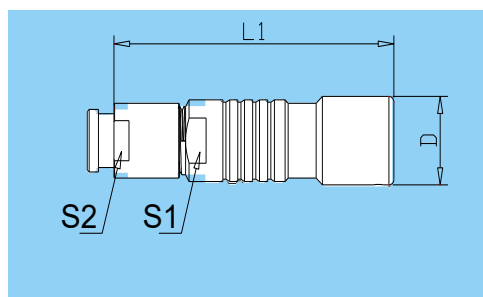
MEG Fixed socket, nut fixing, key (G) or keys (A, B...), watertight or vacuumtight



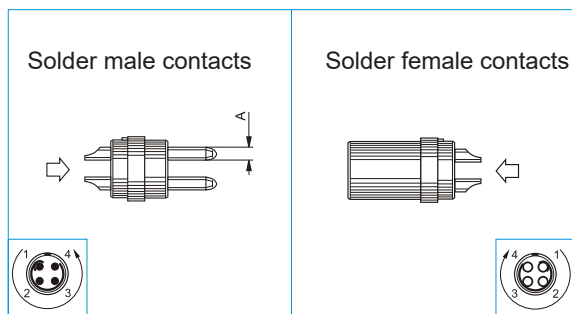
Reference		Dimensions (mm)								
Series	Model	A	B	e	L	E	M	P	S1	S2
0C	MEG	14	14.5	M9x0.5	21	3	3	6.5	8.2	12
1C	MEG	16	18	M14*1.0	26	4	4	8	12	15
2C	MEG	22	21	M16*1.0	29	4	4	7	14.8	18
3C	MEG	25	26	M20*1.0	33	4	3.5	8	18	22



DHG Free socket, key (G) or keys (A, B...),



Reference		Dimensions (mm)			
Series	Model	A	L	S1	S2
0C	DHG	9.5	35.5	8.0	7.0
1C	DHG	12.5	40.5	10.0	9.0
2C	DHG	16.5	47.0	13.0	12.0
3C	DHG	19.0	56.0	15.0	15.0

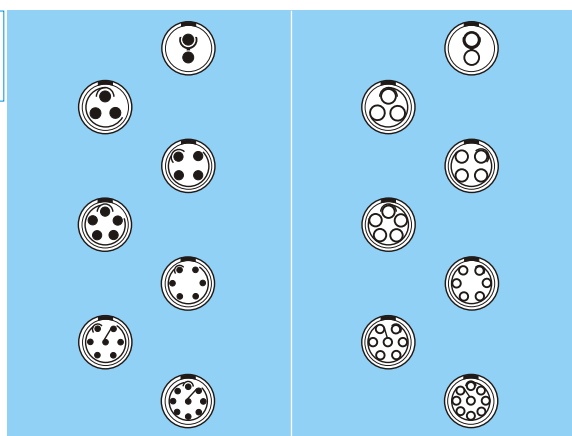


Reference	Multipole(contacts)	Φ A (mm)	Contact Type			Solder contact		Rated current (A)
			solder	Print (straight)	Print (elbow)	Test voltage (kV rms) Contact-contact	Test voltage (kV rms) Contact-shell	

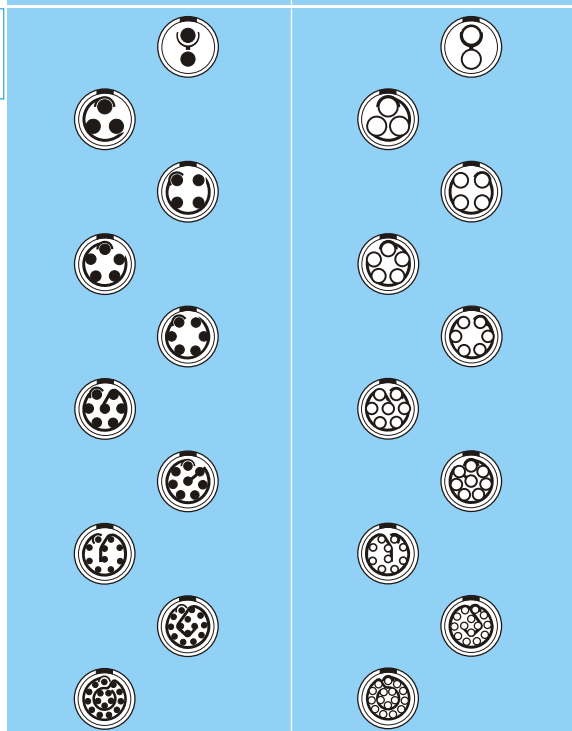
302	2	0.9	●	●	○	1.30	1.05	10.0 ₁₎
303	3	0.9	●	●	○	1.20	0.90	8.0 ₁₎
304	4	0.7	●	●	○	0.85	0.70	7.0 ₁₎
305	5	0.7	●	●	○	1.00	0.70	6.5 ₁₎
306	6	0.5	●	●	○	0.85	0.65	2.5
307	7	0.5	●	●	○	0.80	0.70	2.5
309	9	0.5	●	●	○	0.60	0.50	2.0

302	2	1.3	●	●	○	1.50	1.35	15.0 ₂₎
303	3	1.3	●	●	○	1.30	1.55	12.0
304	4	0.9	●	●	○	1.35	1.45	10.0 ₁₎
305	5	0.9	●	●	○	1.25	1.15	9.0 ₁₎
306	6	0.7	●	●	○	1.05	1.20	7.0 ₁₎
307	7	0.7	●	●	○	0.95	1.05	7.0 ₁₎
308	8	0.7	●	●	○	0.95	1.15	5.0
310	10	0.5	●	●	○	0.90	1.50	2.5
314	14	0.5	●	●	○	0.80	1.20	2.0
316	16	0.5	●	●	○	0.80	1.25	1.5

0C



1C



- First choice alternative
- Special order alternative

Note : 1) rated current = 6A for socket with elbow (90°) contact for printed circuit.
 2) rated current = 12A for socket with elbow (90°) contact for printed circuit.
 3) available only for connectors fitted with male contacts.



Solder male contacts

Solder female contacts

2C

Reference	Multipole(contacts)	ΦA (mm)	Contact Type			Solder contact		Rated current (A)
			Solder	Print (straight)	Print (elbow)	Test voltage (kV rms) Contact-contact	Test voltage (kV rms) Contact-shell	
302	2	2.0	●	●	○	2.10	1.75	30.0 ₂₎
303	3	1.6	●	●	○	2.40	1.85	17.0 ₂₎
304	4	1.3	●	●	○	1.85	1.85	15.0 ₂₎
305	5	1.3	●	●	○	1.75	1.60	14.0 ₂₎
306	6	1.3	●	●	○	1.35	1.45	12.0
307	7	1.3	●	●	○	1.75	1.60	11.0
308	8	0.9	●	●	○	1.50	1.25	10.0 ₁₎
310	10	0.9	●	●	○	1.45	1.30	8.0 ₁₎
312	12	0.7	●	●	○	1.25	1.35	7.0 ₁₎
314	14	0.7	●	●	○	1.15	1.35	6.5 ₁₎
316	16	0.7	●	●	○	0.95	1.25	6.0
318	18	0.7	●	●	○	0.85	1.20	5.5
319	19	0.7	●	●	○	0.95	1.25	5.0

- First choice alternative
- special order alternative

Note : 1) rated current = 6A for socket with elbow (90°) contact for printed circuit.
 2) rated current = 12A for socket with elbow (90°) contact for printed circuit.



Ref.	Outer shell and collet nut		Latch sleeve + earthing crown		Other metallic components		Note
	Material	Surf. treatment	Material	Surf. treatment	Material	Surf. treatment	
C	Brass	chrome	brass/bronze	nickel	Brass	nickel	
N	Brass	chrome	brass/bronze	nickel	Brass	nickel	
H	Brass	black chrome	brass/bronze	nickel	Brass	nickel	
S	Stainless steel 304	anodized	brass/bronze	-	Brass	nickel	
L	Stainless steel 316L	anodized	Stainless steel 316L	-	Stainless steel 316L	-	
T	Brass	satin nickel	brass/bronze	nickel	Brass	nickel	
G	Brass	brown and black	brass/bronze	nickel	Brass	nickel	
F	Brass	High phosphorus chemical nickel	brass/bronze	nickel	Brass	nickel	
Z	Aluminium alloy	High phosphorus chemical nickel	brass/bronze	nickel	Brass	nickel	
Y	Brass	golden yellow	brass/bronze	nickel	Brass	nickel	

Note:

Brass

Connectors are mostly brass case, which can meet most military or civil application requirements. The white surface of brass shell has nickel-chromium protective layer, which has remarkable effect in resisting industrial waste, salt spray and most corrosives.

In addition, we also have nickel plating, nickel-gold plating, nickel-black chromium plating and other options for application in specific environments of the anti-corrosion coatings.

Aluminium alloy

In the aviation, aerospace industry, portable mobile devices and so on. It is suitable for the connector with aluminium alloy shell.

In addition to its high mechanical lightness and excellent corrosion resistance, the surface of aluminium alloys can be protected by anodic plating, with a variety of colors to choose from.

Stainless steel

For the use of harsh environment, the surface coating is easy to be damaged. We recommend the use of stainless steel materials. AISI304 stainless steel and AISI316L stainless steel are usually used.

AISI304 stainless steel is recommended for special fields such as nuclear industry. It can resist radiation and nitric acid corrosion.

AISI316L stainless steel is recommended for medical and shipping industries. It has no surface treatment and strong corrosion resistance.



Ref.	Material	Contact type	Note
T	Teflon	Solder or print	
L	PPS	Solder or print	

Contacts (C series)



Soldering characteristics

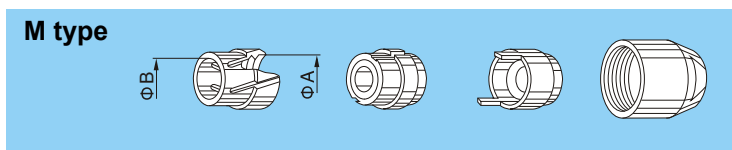
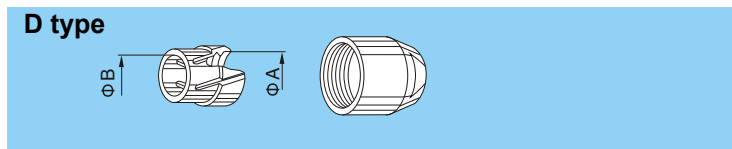
- no need to order specific tools, a simple soldering iron is sufficient
- ideal for very small and fragile conductors
- contacts with solder cups to allow the solder to flow

Contacts reference for plugs, free or fixed sockets

Contact type	Reference		Contact			Conductor					
	Male	Female	Φ A (mm)	Φ C (mm)	Form per fig.	Solid		Stranded			
						AWG min.	Section max. (mm ²)	AWG		Section (mm ²)	
							min.	max.	min.	max.	
Solder 	A	L	0.5	0.40	-	28	0.09	-	30	-	0.05
			0.5	0.45	-	28	0.09	-	28	-	0.09
			0.7	0.60	-	24	0.25	-	26	-	0.14
			0.7	0.80	-	22	0.34	-	22	-	0.34
			0.9	0.80	-	22	0.34	-	22	-	0.34
			1.3	1.00	-	20	0.50	-	20	-	0.50
			1.6	1.40	-	16	1.00	-	18	-	1.00
			2.0	1.80	-	14	1.50	-	16	-	1.50
			3.0	2.70	-	10	4.00	-	12	-	4.00
			4.0	3.70	-	10	6.00	-	10	-	6.00
Print 	D	N	L dimensions and C are detailed in the section on PCB drilling pattern.								
Print (elbow) 	V	V	L dimensions and C are detailed in the section on PCB drilling pattern.								



D and M type collets for C series

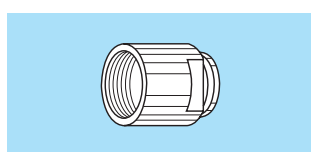


Reference		Collet ϕ		Cable ϕ	
Type	Code	ϕA	ϕB	max.	min.
0C	D 32	3.2	-	3.0	2.1
	D 42	4.2	-	4.0	3.1
	D 52	5.2	4.7	5.0	4.1
1C	M 31	3.1	-	3.0	2.6
	D 42	4.2	-	4.0	3.1
	D 52	5.2	-	5.0	4.1
	D 62	6.2	-	6.0	5.1
	D 72	7.2	6.7	7.0	6.1
2C	M 42	4.2	-	4.0	3.1
	D 52	5.2	-	5.0	4.1
	D 62	6.2	-	6.0	5.1
	D 72	7.2	-	7.0	6.1
	D 82	8.2	-	8.0	7.1
	D 92	9.2	8.6	9.0	8.1
	D 99	9.9	8.6	9.7	9.1

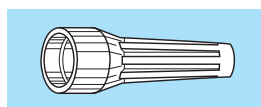
>>> Variant (C series)



Bend relief for C series models with collet



Need to be ordered



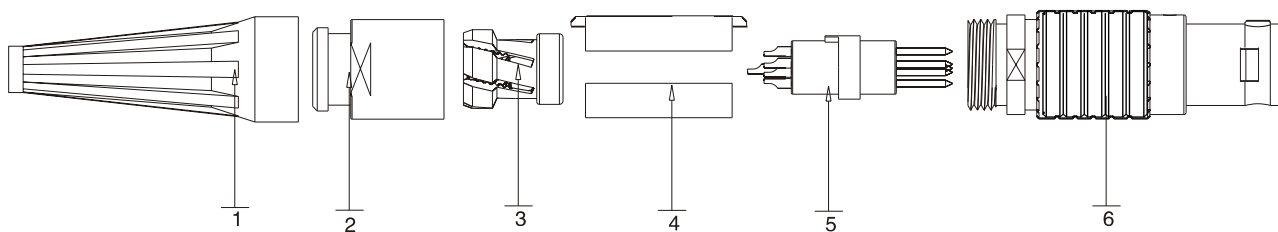
Ref.	Collet	
	Type	Code

Need to be ordered separately (see page)

0C	Z	D	21 to 52	GMA.0B....
1C	Z	M	27 and 31	GMA.1B....
		D	42 to 72	GMA.1B....
2C	Z	M	21 and 31	GMA.0B....
		D	42	GMA.2B....
		D	52 to 92	GMA.2B....

Note: all dimensions are in millimetres.

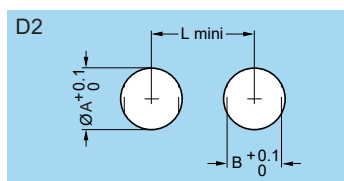
Plug assembly instructions for C series



1. Pass the cable through the bend relief ①, the collet nut ②, the cable collet ③, and solder to the insulator with contacts ⑤ in order.
2. Attach two pieces of split insert carriers ④ to the welded insulator with contacts ⑤, noting that the window on the split insert carriers ④ corresponds to the protrusion on the insulator with contacts ⑤.
3. Install the cable collet ③ in the proper position of the cable. Note that the protrusion on the cable collet ③ corresponds to the groove on the split insert carriers ④.
4. Push the insulator with contacts ⑤, the split insert carriers ④ and the cable collet ③ into the plug assembly in turn, and note that the protrusions on the split insert carriers ④ are correspondingly inserted into the notches in the plug assembly.
5. Screw the collet nut ② onto the housing subassy ⑥
6. Insert the bend relief ① into the corresponding step of the collet nut ②.

Panel cut-out: (C series)

C Series



series	D2		
	ØA	B	L
0C	9.1	8.3	15
1C	12.1	10.6	19
2C	15.1	13.6	23

Cut-out types

Model	Type
MEG	D2

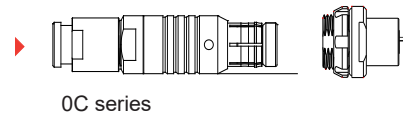
Note: when using the tapered washer a round hole apply 0C: ø 9.6 mm / 1C: ø 12.6 mm / 2C: ø 15.7 mm

Unipole Coaxial Series

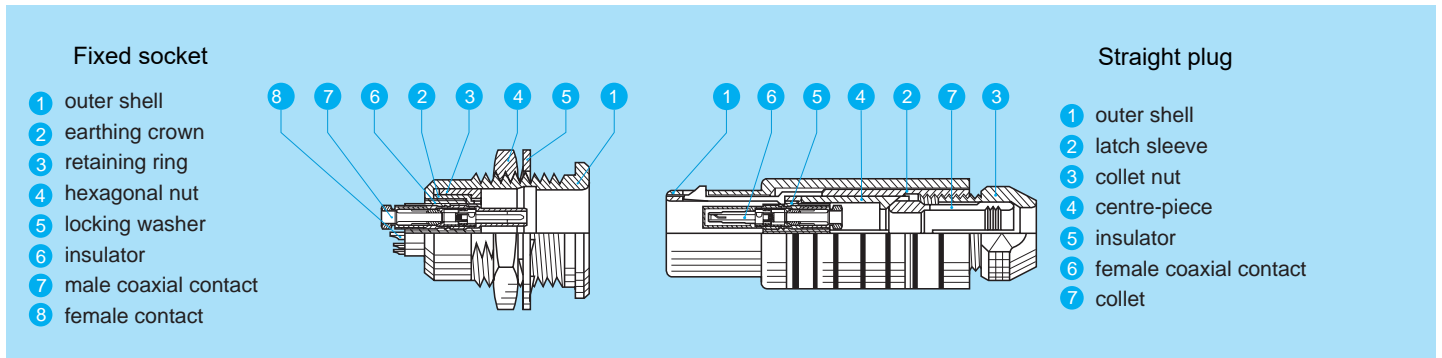
A unipole coaxial connector is generally considered to be an element attached to a cable or mounted on an instrument as an electrical connection or separate component of the transmission line.



Metal housing models (page 39)

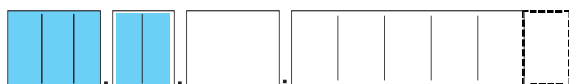


Part Section Showing Internal Components



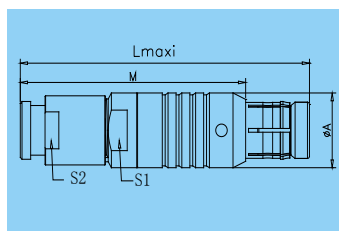
Unipole Coaxial series connectors have main features as follows:

- Small size, quick insertion and security of the Push-Pull self-latching system
- There are straight type, elbow (90°) type and other different types of plugs;
- High frequency: transmission frequency is 3MHZ \sim 30MHZ;
- Many functions: in addition to the role of the bridge, it also has the function of processing signals, such as filtering, phase adjustment, mixing, attenuation, detection, limiting, etc.
- Low standing wave, low loss: meeting the needs of weapon systems and precision measurement;
- Large capacity, high power: mainly to meet the development needs of the information superhighway.



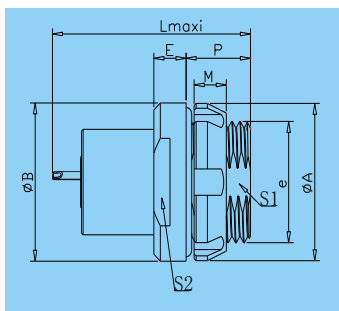
Metal Housing Models

0C Unipole Coaxial series



TGG Straight plug, cable collet and nut for fitting a bend relief

Reference	Series	Dimensions (mm)			
		A	L	M	S1
TGG. 0C. ***. CTAC**Z	0C	9	36	26	7



MEG Fixed socket, nut fixing

Reference	Series	Dimensions (mm)									
		A	B	e	E	L	M	P	S1	S2	
MEG. 0C. ***. CTL	0C	11.5	13	m9x1.0	3	21	3	6.5	8.2	12	



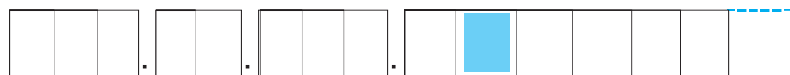
Series	Reference	Contact Type	Test voltage	Test voltage	Rated current	contact diameter (ø A)
OC	116	solder	1500V	2100V	12A	1.6mm
	250	solder	3000V	4200V	6A	0.9mm

➤➤➤ Housings (Unipole Coaxial series)



Ref.	Outer shell and collet nut		Latch sleeve + earthing crown		Other metallic components		Note
	Material	Surf. treatment	Material	Surf. treatment	Material	Surf. treatment	
C	Brass	chrome	brass/bronze	nickel	Brass	nickel	First choice alternative
N	Brass	chrome	brass/bronze	nickel	Brass	nickel	
H	Brass	black chrome	brass/bronze	nickel	Brass	nickel	
S	Stainless steel 304	anodized	brass/bronze	-	Brass	nickel	
L	Stainless steel 316L	anodized	Stainless steel 316L	-	Stainless steel 316L	-	
T	Brass	satin nickel	brass/bronze	nickel	Brass	nickel	
G	Brass	brown and black	brass/bronze	nickel	Brass	nickel	
F	Brass	High phosphorus chemical nickel	brass/bronze	nickel	Brass	nickel	
Z	Aluminium alloy	High phosphorus chemical nickel	brass/bronze	nickel	Brass	nickel	
Y	Brass	golden yellow	brass/bronze	nickel	Brass	nickel	

➤➤➤ Insulators (Unipole Coaxial series)



Ref.	Material	Contact type	Note
T	Teflon	Solder or print	First choice alternative
L	PPS	Solder or print	

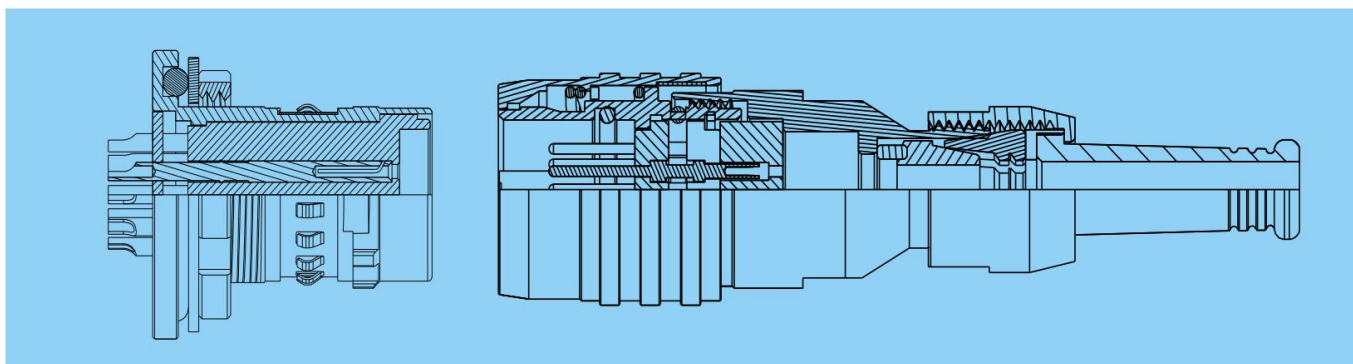
TL24 SERIES

TL24 series push-pull circular electrical connector, the connection method is push-type block locking. The connector has the characteristics of quick insertion and removal, convenient use, small volume, high density, good environmental resistance, beautiful appearance and good shielding property.

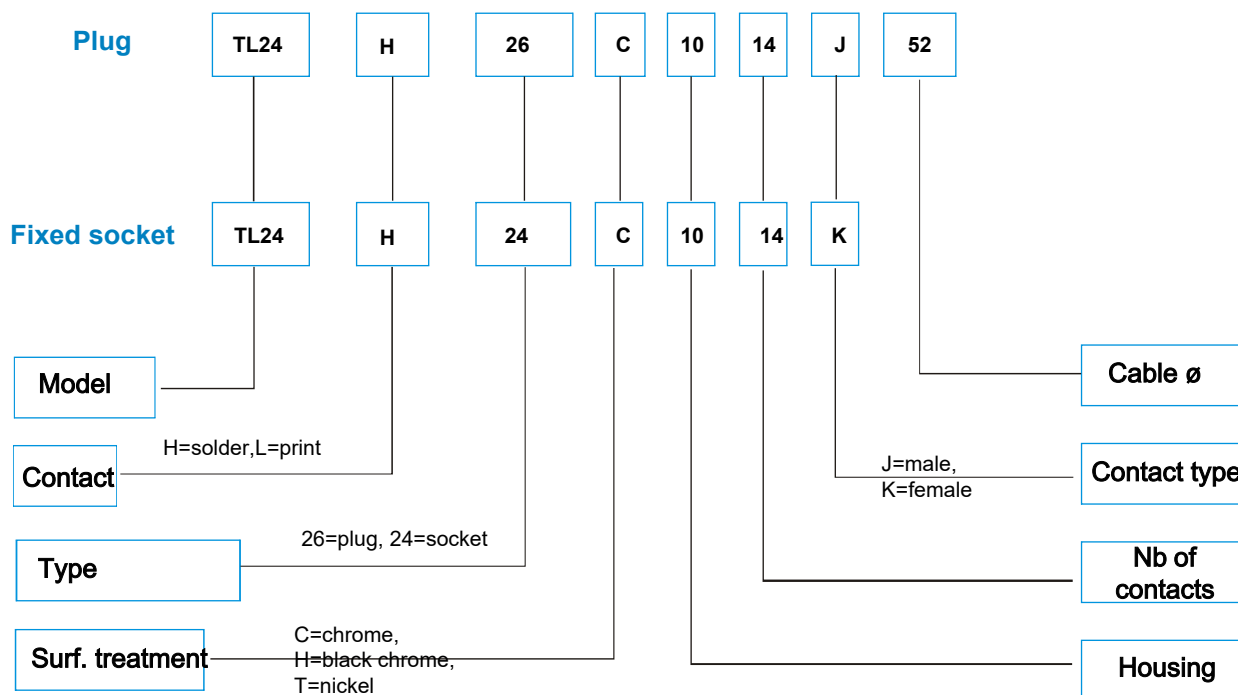
Technical specification:

Working temperature	-55 ° C ~ +125 ° C
Relative humidity	90%~95% (40±2°C)
Working pressure	4.39KPa~101.33KPa
Salt spray	96 hours in 5% NaCl mist
Sealing	socket: pressure difference 1.01×10 ⁵ Pa, no bubble leakage for 1min; Head socket: 1m water depth, 2h no water seepage
Vibration	10Hz~2000Hz, acceleration 147m/s ² ,instantaneous break ≤1μs
Impact	490m / s ² instantaneous break ≤ 1μs
Mechanical life	2000 times
Insulation resistance	≥5000MΩ (normal)
Working current	3A (22#)
Contact resistance	12.5MΩ
Working voltage	400V (AC)
Withstand voltage	1000V (AC)
Electrical continuity between the shells	5MΩ

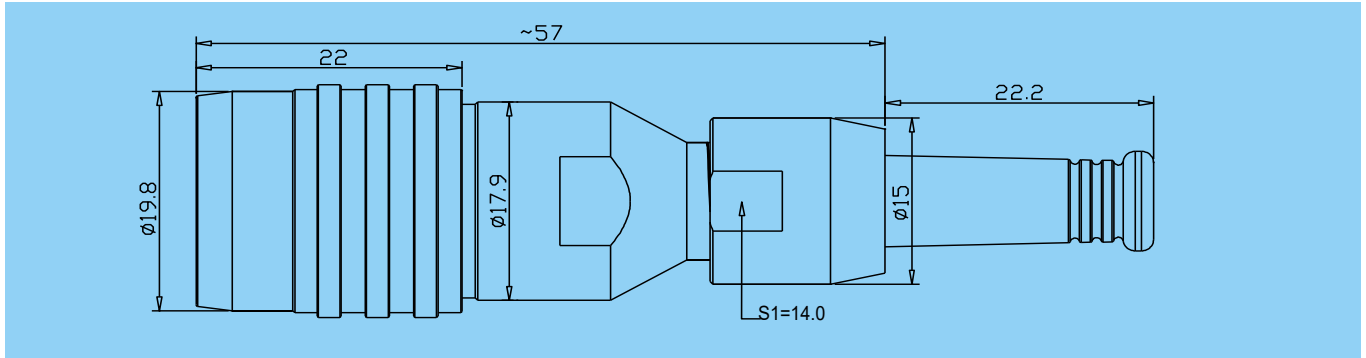
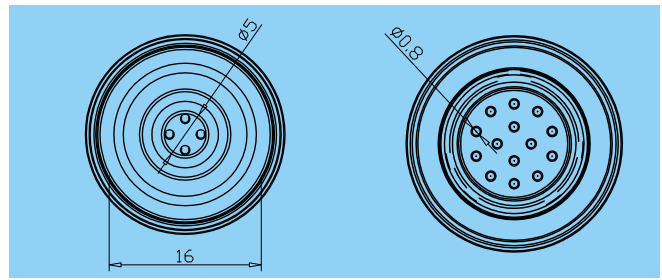
Construction:



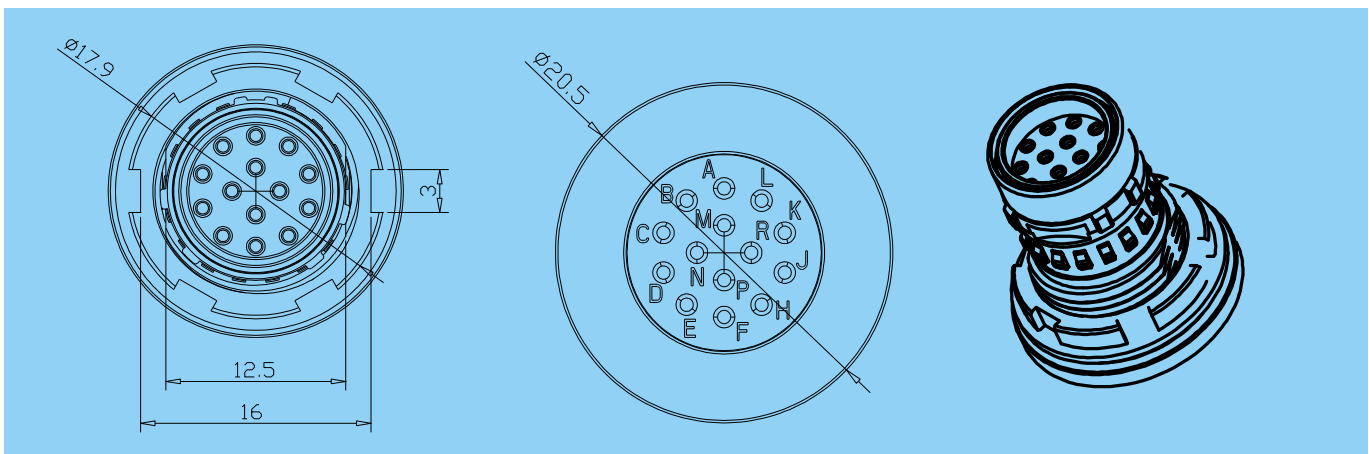
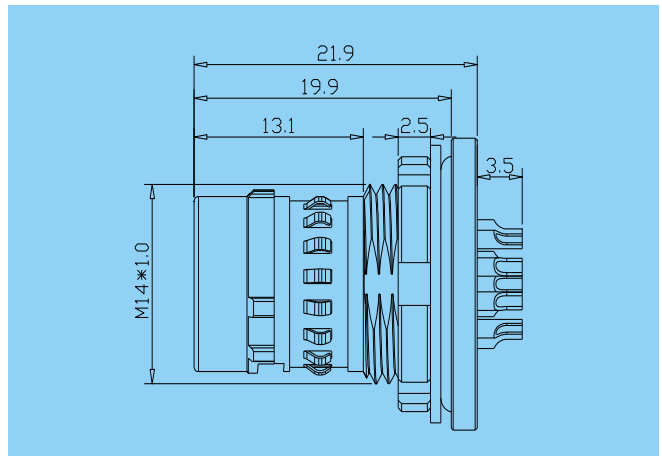
TL24 Series Part Numbering System



TL24 Plug



TL24 Socket

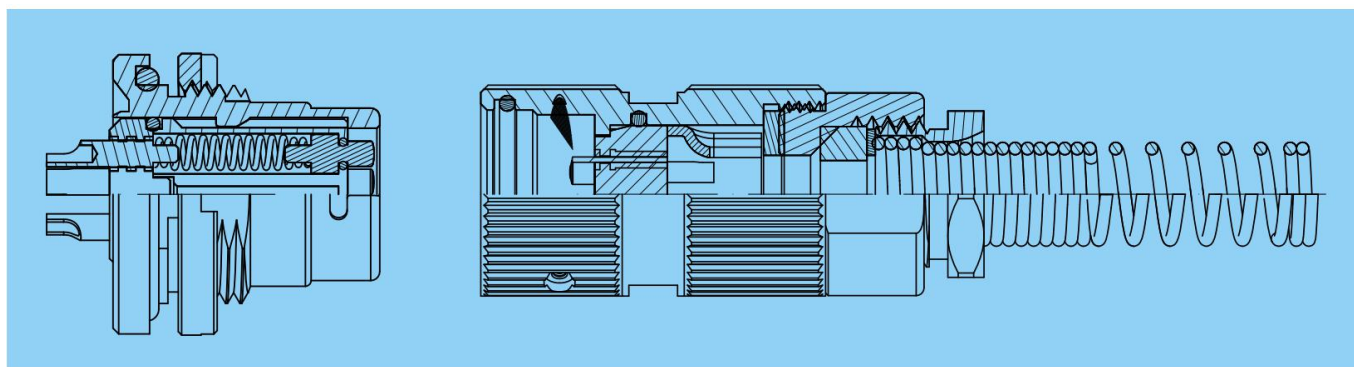


UL29 SERIES

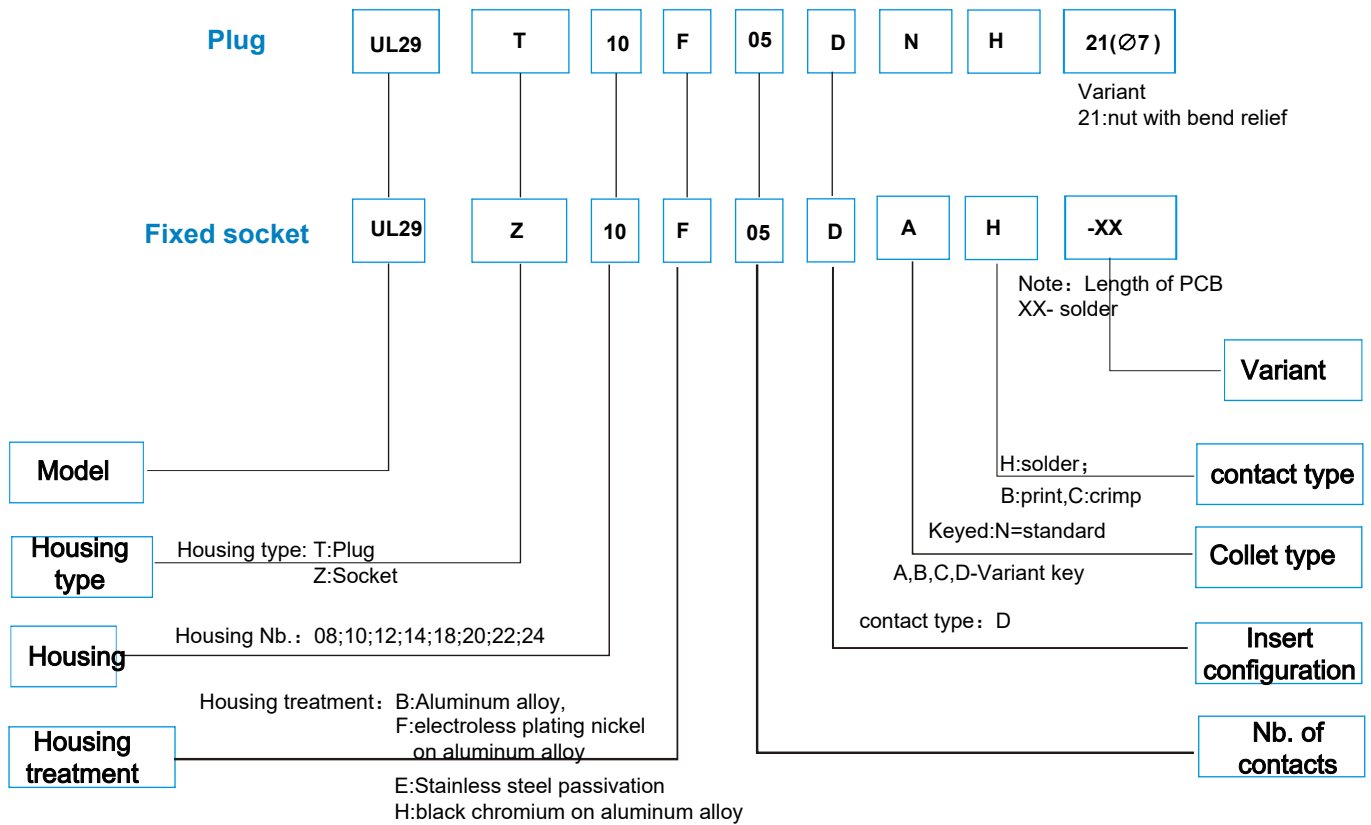
Technical specification:

Working temperature	-55 ° C ~ +125 ° C
Relative humidity	90%~95% (40±2°C)
Working pressure	4.39KPa~101.33KPa
Salt spray	72 hours in 5% NaCl mist
Vibration	10Hz~200GHz,
Impact	980 m / s ² , instantaneous break < 1μs
Mechanical life	3000 times
Insulation resistance	≥5000MΩ (normal)
Working current	8A
Contact resistance	< 10MΩ
Withstand voltage (sea level)	1150V (AC)

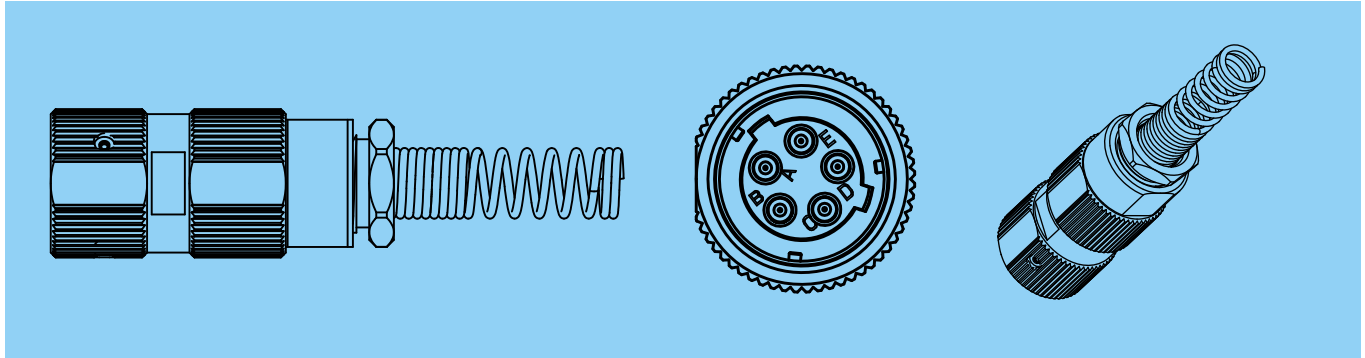
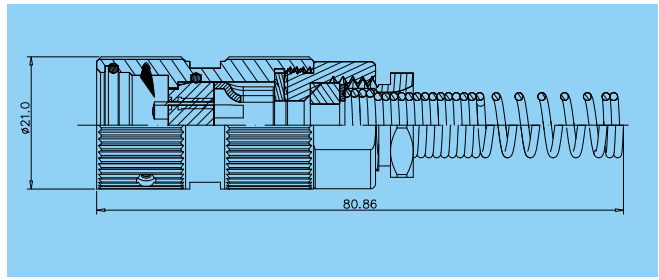
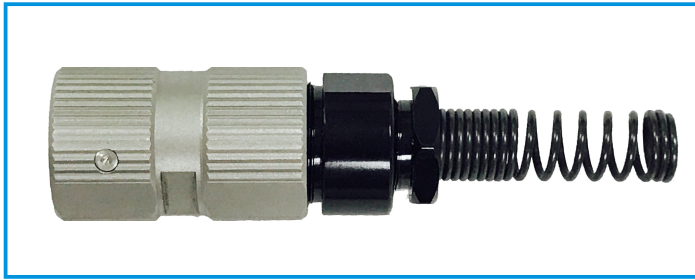
Construction:



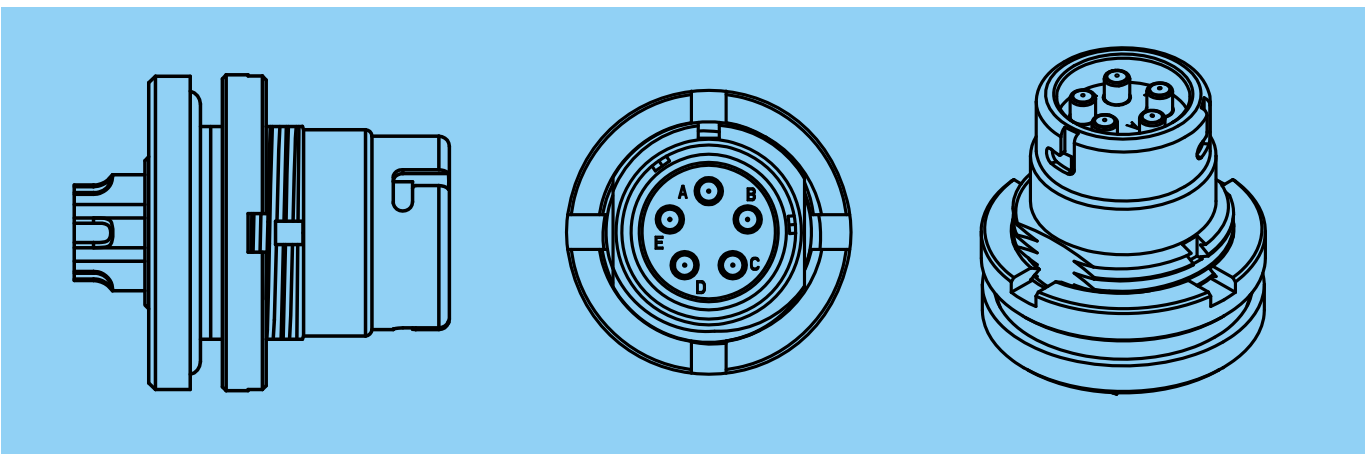
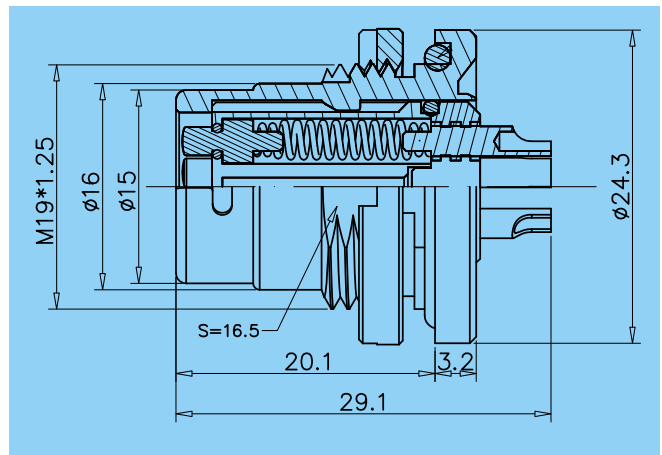
UL29 Series Part Numbering System



UL29 Plug



UL29 Socket

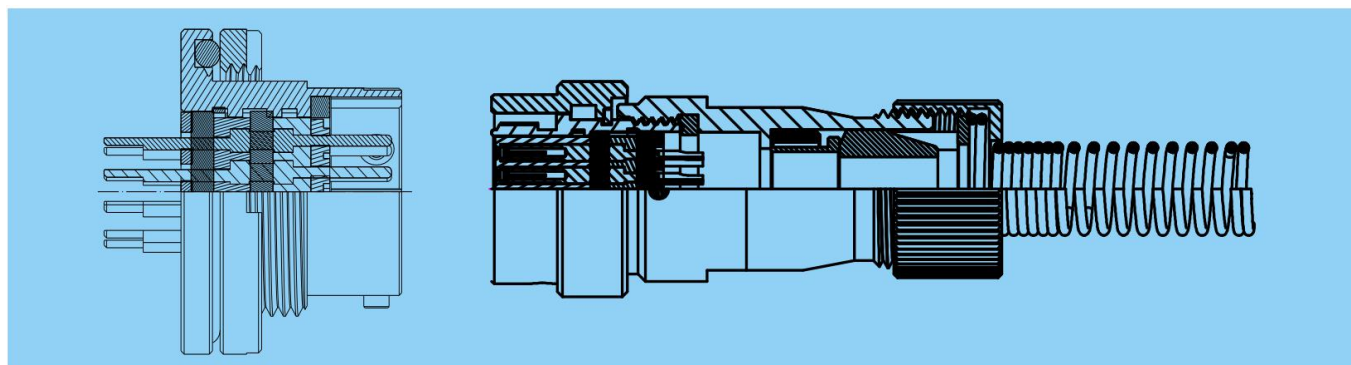


YL SERIES

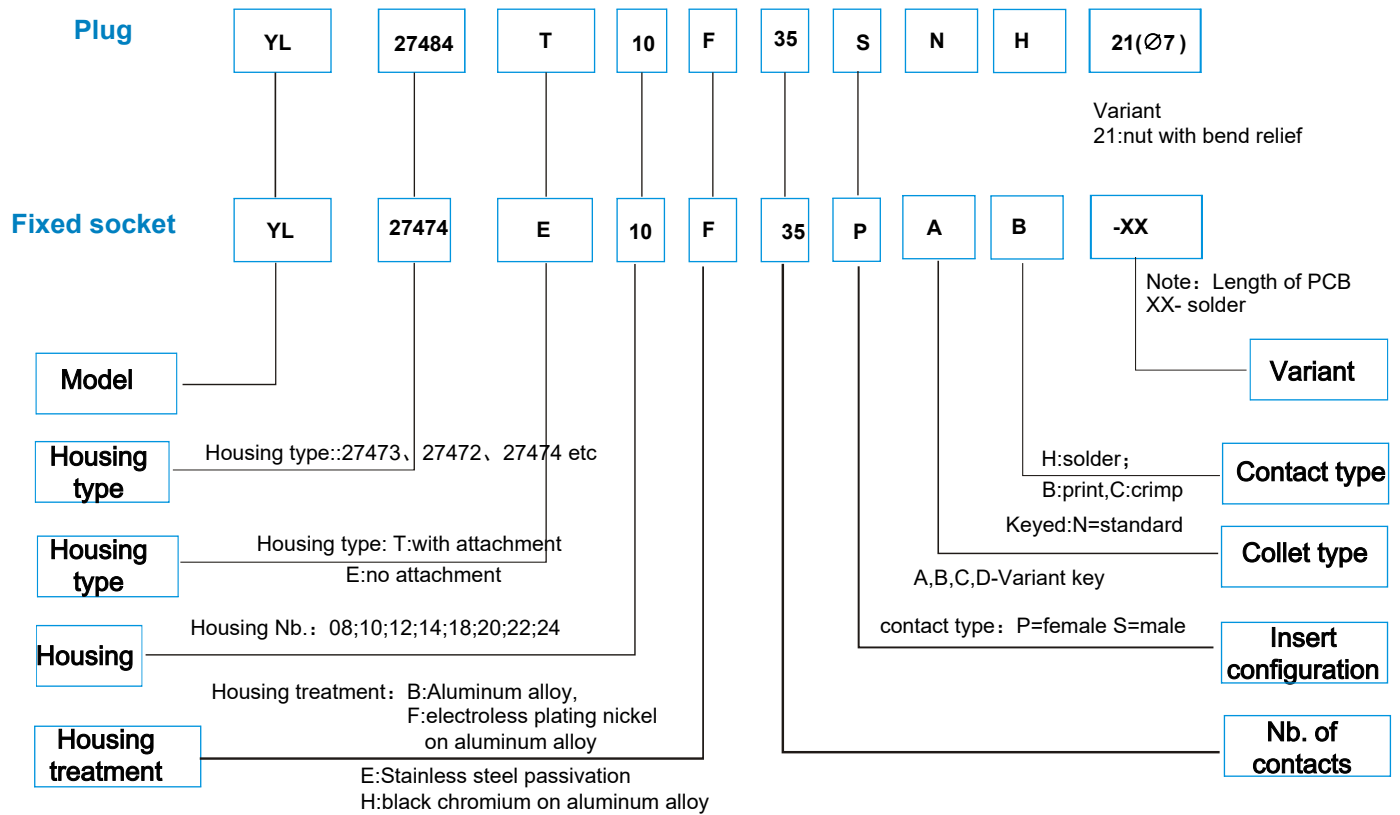
Technical specification:

Working temperature	-55 ° C ~ +125 ° C
Relative humidity	90%~95% (40±2°C)
Working pressure	4.39KPa~101.33KPa
Salt spray	96 hours in 5% NaCl mist
Sealing	socket: pressure difference 1.01×10 ⁵ Pa, no bubble leakage for 1min; Head socket: 1m water depth, 2h no water seepage
Vibration	10Hz~2000Hz,
Impact	980m / s ² , instantaneous break ≤ 1μs
Mechanical life	500 times
Insulation resistance	≥5000MΩ (normal)
Contact resistance	12.5MΩ
Withstand voltage (sea level)	1000V (AC)
Working current	3A

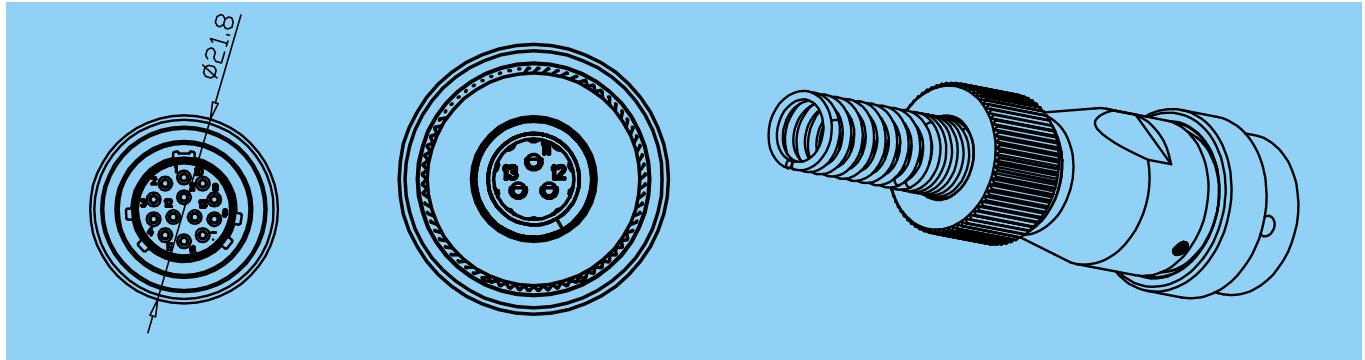
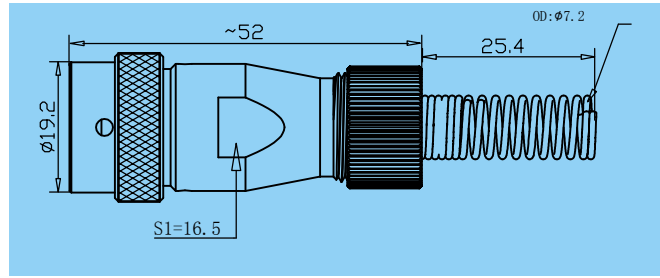
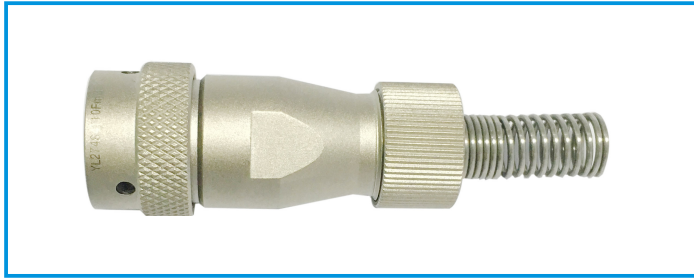
Construction:



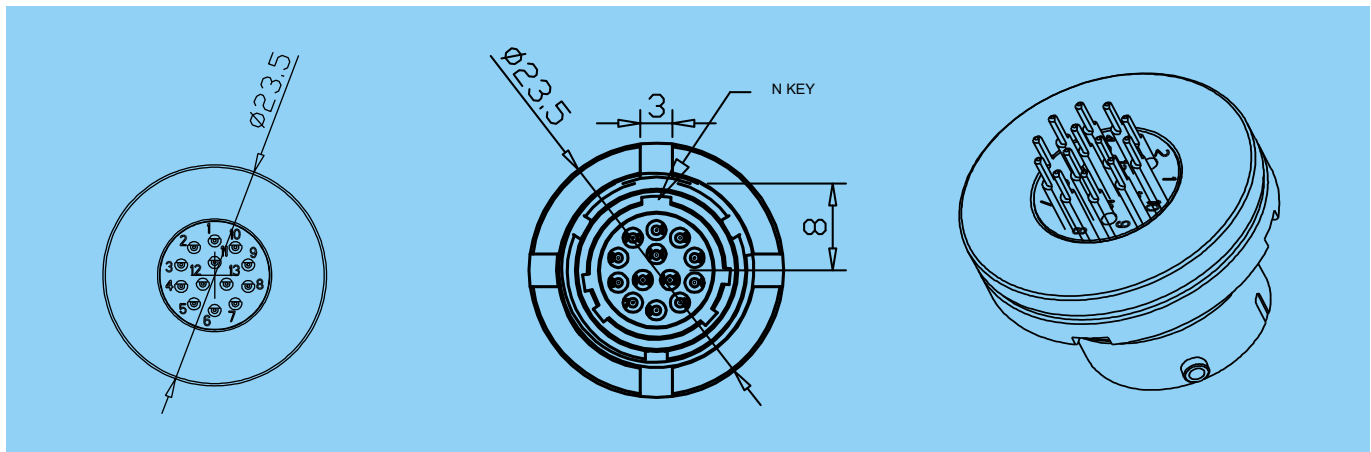
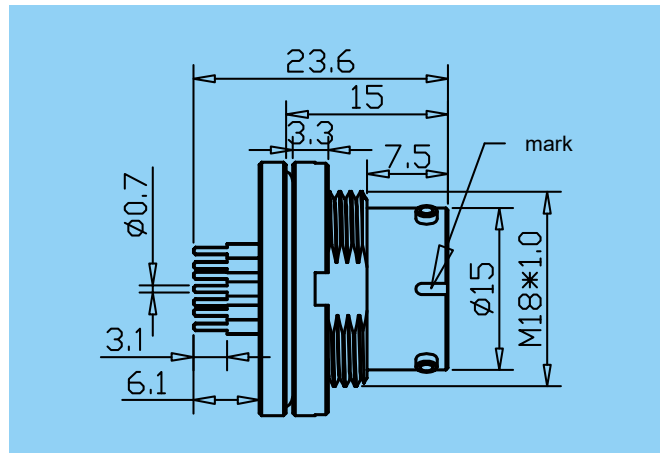
YL Series Part Numbering System



YL Plug



YL Socket



SPRING AMC – Advanced Military Connector



Applications

- Defence and security
- PTT and PRR systems
- Ruggedized computers and hand-helds
- Nightvision
- Power supply
- Dismounted soldier
- Unmanned systems
- Land vehicles
- Software defined radios.

Features

- Low weight
- Compact design
- Easy to handle
- Watertight
- Easy-Clean
- Robust
- Tested in accordance to MIL
- Blind mateable.

All dimensions are in mm.

Some figures are for illustrative purposes only.

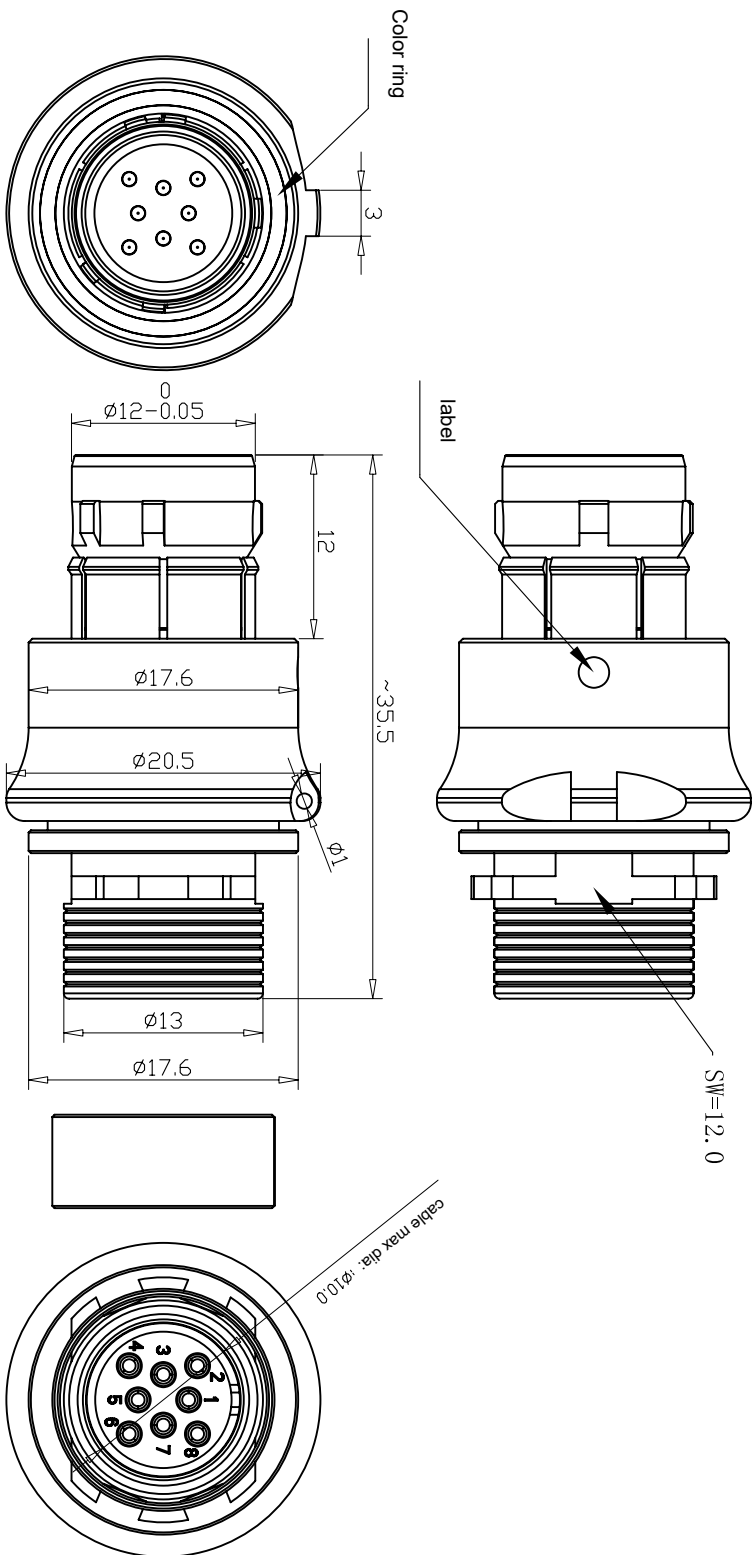
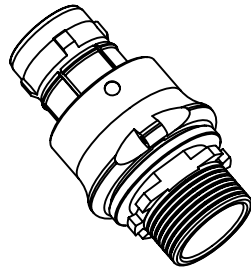
Subject to change without notice. Errors and omissions excepted.

We reserve the right to change our products and their technical specifications at any time in the interest of technical improvement

Features SPRING AMC Series



- Push-Pull locking or Break-Away function
- Lightweight, small and easy handling
- Operating temperatures range from -51°C to $+125^{\circ}\text{C}$
- Optimized mechanical and colour keying
- Lifetime of $\geq 5,000$ mating cycles
- Easy handling and blind mateable
- Multiple contact configurations:
signals, low/high voltage transmission, coax/triax
- Easy-Clean version available
- System solution inclusive cable assembly and overmolding: everything from one source
- Excellent shielding features (360°)
- Version for hot-plugging available
- Watertight protection class IP 68 and IP 69K
- Excellent data transmission up to 10 GBit



12	Salt mist	96H
11	Mating	>5000
10	Shock Resistance	100g 6ms
9	Vibration	15g (10Hz~2000Hz)
8	humidity	60°C, 95%
7	Temp	125°C~-55°C
6	IP Rating	IP68 (tail needs to be protected)
5	Ethernet4 Type	CAT6A up to 10 GBit
4	Rated Current	10A
3	R(MAX)	≤10 mΩ
2	Contact Dia	0.9mm
1	Vtest(contact-contact)	1500V

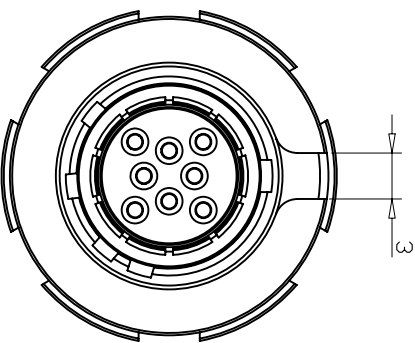
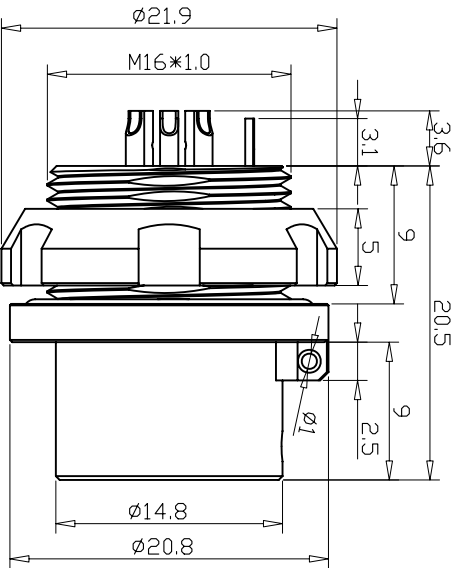
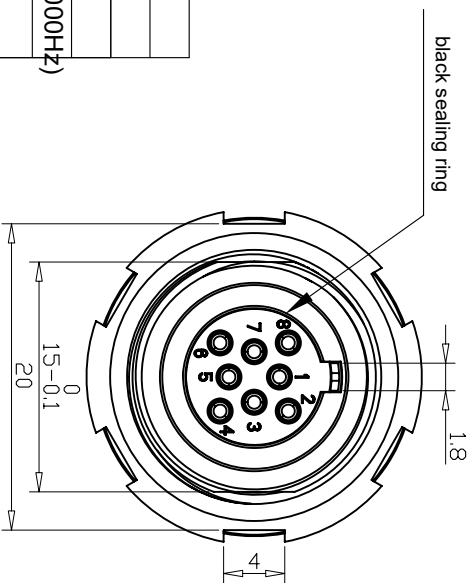
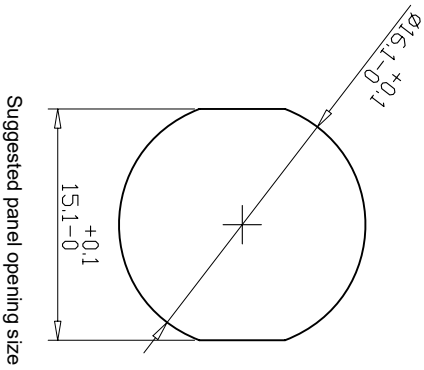
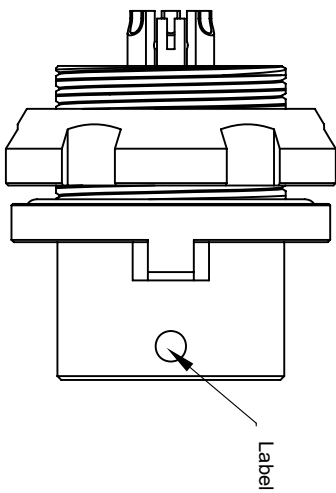
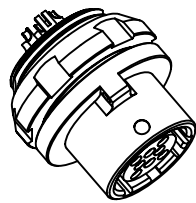
DEG	√			ANGLE
	A	B	C	
0-5	±0.02	±0.05	±0.10	0°-30°
5-20	±0.05	±0.10	±0.15	31°-60°
20-80	±0.10	±0.15	±0.20	61°-90°
80-150	±0.15	±0.20	±0.25	±0.5°

设计 DESIGNED
校对 CHECKED
审核 APPROVED

XIAN SPRING TECHNOLOGY CO.,LTD
名称 PART NAME
型号 TYPE
2R-S1 Plug
S11.2RM.PD8.100

版本 REV	比例 SCALE	单位 UNIT
A0	2:1	mm

1	2	3	4	5	6	7	8
OTHER CHARACTERISTICS							



12	Salt mist	96H
11	Mating	>5000
10	Shock Resistance	100g 6ms
9	Vibration	15g (10Hz~2000Hz)
8	humidity	60°C, 95%
7	Temp	125°C~-55°C
6	IP Rating	IP68
5	Ethernet4 Type	CAT6A up to 10 GBit
4	Rated Current	10A
3	R(MAX)	$\leq 10 \text{ m}\Omega$
2	Contact Dia	0.9mm
1	Vest(contact-contact)	1500V

OTHER CHARACTERISTICS		
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		

DEG	A	B	C	ANGLE
DIM				
0-5	± 0.02	± 0.05	± 0.10	$0^\circ\text{-}30^\circ$
5-20	± 0.05	± 0.10	± 0.15	$31^\circ\text{-}60^\circ$
20-80	± 0.10	± 0.15	± 0.20	$61^\circ\text{-}90^\circ$
80-150	± 0.15	± 0.20	± 0.25	$\pm 0.5^\circ$

DESIGNED	
CHECKED	
APPROVED	

设计 设计
校对 校对
审核 审核
XIAN SPRING TECHNOLOGY CO.,LTD

版本 REV	A0
比例 SCALE	2:1
单位 UNIT	mm

名称 PART NAME	2R-G1 socket
型号 TYPE	G11.2RM.PD8.K00

名称 PART NAME	2R-G1 socket
型号 TYPE	G11.2RM.PD8.K00

版本 REV	A0
比例 SCALE	2:1
单位 UNIT	mm

版本 REV	A0
比例 SCALE	2:1
单位 UNIT	mm

名称 PART NAME	2R-G1 socket
型号 TYPE	G11.2RM.PD8.K00

名称 PART NAME	2R-G1 socket
型号 TYPE	G11.2RM.PD8.K00

名称 PART NAME	2R-G1 socket
型号 TYPE	G11.2RM.PD8.K00

名称 PART NAME	2R-G1 socket
型号 TYPE	G11.2RM.PD8.K00