



QUANMA CONNECTOR

全马（美易连）连接器系统

PUSH AND PULL SELF LOCKING CONNECTOR

高品质 高性价比 连接器解决方案

HIGH QUALITY COST-EFFECTIVE CONNECTOR SOLUTION

QUANMA (MEIYILIAN) CONNECTOR

金属连接器产品样册

METAL CONNECTOR CATALOG

SMALLER FASTER
MORE RELIABLE
更小更快更可靠



Company Introduction

Quanma brand include: Quanma connector and Meiyilian connector (Quanma connector focus on military/industrial include Quanma marketing center and Shenzhen Quanma production research base. Meiyilian focus on medical field, include Meiyilian marketing center and Shenzhen Meiyilian production research base). Quanma and Meiyilina is the professional supplier for China domestic high-end inter-connection product manufacture field inter-connection technical solution. 13 years has passed since Quanma was founded in 2011. Quanma insist the guidance of whole marathon spirit. Living the belief that connecting creates a better future, continue innovation, cooperate with trust. We are committed to providing our customers with connected technology solutions that exceed their expectations

Our company include 2 production and research base (Shenzhen Quanma focus on military/industry, Meiyilian focus on medical field) and Shanghai sales center, covers an area of more than 5000 square meters, and the total capital exceeds 50 million yuan. Our company has over 150 employees, including 6 middle-level engineers and over 15 professional technicians. It also has a professional management team and a rigorous and professional R&D team for engineering. Fully equipped with a imported fine CNC machining lathes and various kinds of production and inspection equipment. Our company is committed to the research and development, production and sales of high-end electrical connectors and provide a full set of interconnection technology solutions, one-stop connector customization services. By the end of 2021, our company has successively passed the test of ISO9001: 2015 Quality System certification, weapon and Equipment Quality System certification (GJB9001C-2017), ISO13485:2016 Electronic connectors for active non-implantable medical devices, fiber/fluid/high voltage/RF hybrid connector and cable assembly design and production certification, ROHS environmental protection certification, CE certification, and many other authoritative certification, In 2022, Quanma (Shanghai) Company and the Quanma (Shenzhen) production and research base were awarded as the national high-tech enterprises. Our company insist "customer first" principle, adhere to technological innovation as the driving force, market demand as the vane, scientific management, lean manufacturing, to create value for customers, continuous self-improvement, represent industry benchmark, create a national brand.

Our company has a complete range of products, which are widely used in high-end medical equipment, automation/robot and other equipment, automatic driving equipment, artificial intelligence wearable equipment, high-precision testing equipment, audio/video transmission equipment, communication/communication electronic equipment, satellite navigation, infrared laser, military industry and other fields. Exported to Europe, the United States, Canada, Israel, Japan, South Korea, India and other overseas countries.

Vision:

To be a leader in the design and manufacture of connector solutions

Concept:

Connectivity creates a better future

Value:

Have responsibility, value, share

Purpose:

Customer-oriented, innovation-oriented full marathon spirit refers to, and constantly create connected products with customer satisfaction.

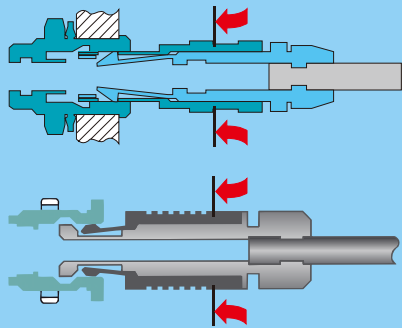
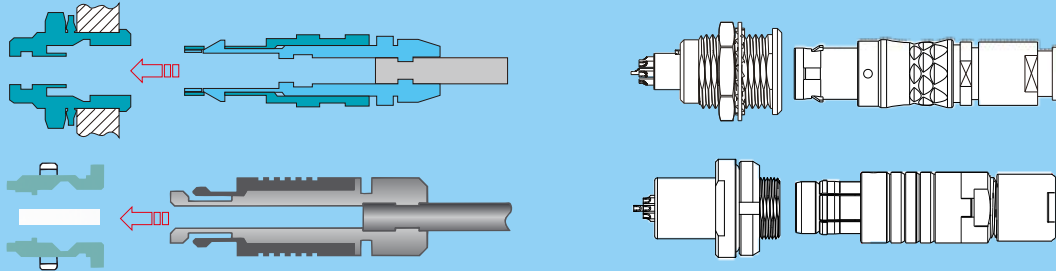


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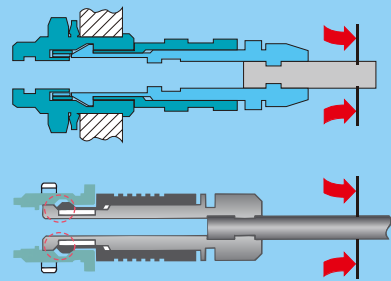
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Quanma push pull self-locking connector

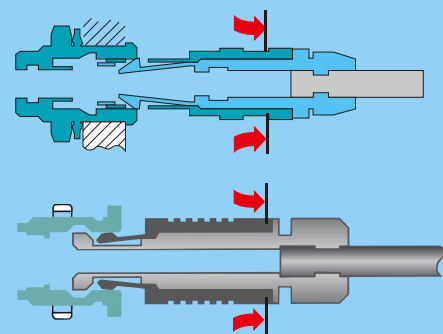
Push-pull self-locking connectors are known for their simple and quick insertion, effective shock resistance, shock resistance, and can prevent the breakage caused by pulling the cable. Make it absolutely safe and reliable to use, and easy to plug and unplug in a very limited space.



Easy to operate self-locking system, simply push the plug along the axial socket to lock.



Once locked, pulling the cable or anything else will not break the connection unless the unlocking device is pulled.



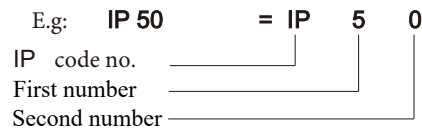
When needed, simply pull the unlocking device along the axis to first release the locking latch and then remove the plug from the socket.

Definition of access protection (IP code):

Refers to the classification of the sealing protection level of electrical equipment to prevent other objects (such as tools, dust, fingers) and humid gas from entering its shell. The classification method is expressed as the letters IP (Ingress Protection) followed by two numbers.

Protection level--- first number

The first IP code number indicates the degree of protection to prevent the human body from touching the moving parts and solid other objects from entering the equipment shell.



Protection level---second number

The second number indicates the degree of protection to prevent water and other forms (such as dripping, spraying, immersion, etc.) from entering the equipment shell.

No.	Meaning of the first number
0	No special protection
1	Prevent larger parts of the body (such as hands), or prevent solid material with a diameter > 50mm from entering inside
2	Prevent objects with diameter >12mm but length ,less than 80mm from entering inside
3	Prevent tools, wires and other objects with a diameter or thickness > 2.5mm from entering inside
4	Prevent solid objects with diameter or thickness > 1.0mm from entering inside
5	Prevent dust and dirt from affecting equipment operation
6	Completely dust proof
7	-
8	-

No.	Meaning of the second number
0	No special protection
1	Prevent water from dripping vertically
2	Prevent water from dripping at an angle of 15°
3	Prevent sprayed water from entering
4	Prevent water splash
5	Prevent sprayed water from entering
6	Prevent violent waves or strong water jets from entering
7	Prevent water from entering during temporary immersion
8	Prevent water from entering during complete and continuous flooding

Pin core parameters of plug, floating or fixed socket

Pin core type	No.		Pin core			Core wire (inner conductor)					
	Male pin	Female pin	ΦA (mm)	ΦC (mm)	Diagram	Solid core wire		Twisted core wire			
						AWG Max.	Section area Max. (mm ²)	AWG		Section area (mm ²)	
Min.	Max.	Min.	Max.	Min.	Max.						
Welding 	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	-	16	-	1.00
			2.0	1.60	-	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
Crimping 	C	M	0.5	0.45	1	-	-	32	28	0.035	0.09
			0.7	0.80	1	-	-	26	22	0.140	0.34
				0.45	2	-	-	32	28	0.035	0.09
			0.9	1.10	1	-	-	24	20	0.250	0.50
				0.80	2	-	-	26	22	0.140	0.34
				0.45	2	-	-	32	28	0.035	0.09
			1.3	1.40	1	-	-	20	18	0.500	1.00
				1.10	2	-	-	24	20	0.250	0.50
				0.80	2	-	-	26	22	0.140	0.34
			1.6	1.90	1	-	-	18	14	1.000	1.50
				1.40	2	-	-	22	18	0.340	1.00
			2.0	2.40	1	-	-	16	12	1.500	2.50
				1.90	2	-	-	18	14	1.000	1.50
			3.0	2.90	1	-	-	14	10	2.500	4.00
			4.0	4.00	1	-	-	12	10	4.000	6.00
			Printed board connection 	D	N						
Printed board connection (angled) 	DV	V									

Check the compatibility with the cable

Check whether the connector size you choose is compatible with the outer diameter of your cable.

Series	Cable outer diameter range(mm)	
	Cable clamp	
	Min.	Max.
00B	1.4	3.5
0B	2.1	5.2
1B	2.2	7.2
2B	3.2	10.2
3B	4.1	11.8
4B	5.1	16.0
0K	1.6	5.0
1K	3.1	7.0
2K	4.1	10.0

Series	Cable outer diameter range(mm)	
	Cable clamp	
	Min.	Max.
00S	2.2	3.6
0S	2.2	5.2
1S	2.6	7.2

Series	Cable outer diameter range(mm)	
	Cable clamp	
	Min.	Max.
0F	2.5	6.0
1F	3.1	7.0
AF	4.1	9.0
2F	4.1	10.2
3F	4.1	11.5

Series	Cable outer diameter range(mm)	
	Cable clamp	
	Min.	Max.
0C	2.1	5.0
1C	2.6	7.0
2C	3.1	9.7

Step 3: Confirm the complete model no.

Now you already confirmed connector series and pins configuration, with the help of below table you can complete the full model number.

Series	Page No. based on number rule	Series	Page No. based on number rule
B series	10	Q series	84
T series	24	Y series	97
K series	28	FX series	106
C series	36	Coxial mixed series	114
ML series	43	YL series	117
W series	46	YW series	122
HR10 series	56	Radio audio dedicated series	124
S series	59	Power dedicated series	127
F series	63	Flat connector	129
U series	73	M8, M12 Series	131
G series	81		

Shell material

No.	Shell and tail cover		Locking sleeve+grounding ring		Other metal components		Remark
	Material	Surface treatment	Material	Surface treatment	Material	Surface treatment	
C	Brass	Pearl Chromium	Brass/Bronze	Nickel	Brass	Nickel	
N	Brass	Nickel	Brass/Bronze	Nickel	Brass	Nickel	
K	Brass	Black Chromium	Brass/Bronze	Nickel	Brass	Nickel	
L	Brass	Bright Chromium	Brass/Bronze	Nickel	Brass	Nickel	
S	316 F stainless steel	Blunt	316 F stainless steel	Blunt	316 F stainless steel	Blunt	
T	Brass	Pearl nickel (Sardine nickel)	Brass/Bronze	Nickel	Brass	Nickel	
G	Brass	Gun color (brown black)	Brass/Bronze	Nickel	Brass	Nickel	
F	Brass	Matt nickel	Brass/Bronze	Nickel	Brass	Nickel	
U	Brass	Trivalent chromium	Brass/Bronze	Nickel	Brass	Nickel	
X	Aluminium alloy	Gun color (brown black)	Brass/Bronze	Nickel	Aluminium alloy	Gun color (brown black)	
Y	Brass	Golden yellow	Brass/Bronze	Nickel	Brass	Nickel	
O	Brass	Black oxide plating	Brass/Bronze	Nickel	Brass	Nickel	
CG	Brass	Cadmium plating	Brass/Bronze	Nickel	Aluminium alloy	Nickel	
XK	Aluminium alloy	Black Chromium	Brass/Bronze	Nickel	Aluminium alloy	Black Nickel	
XN	Aluminium alloy	Nickel	Brass/Bronze	Nickel	Aluminium alloy	Nickel	
XF	Aluminium alloy	Matte nickel	Brass/Bronze	Nickel	Aluminium alloy	Matte chromium	
XL		Bright Chromium	Brass/Bronze	Nickel	Aluminium alloy	Bright Chromium	
XC		Pearl Chromium	Brass/Bronze	Nickel	Aluminium alloy	Nickel	
P	PSU	/	/	/	PSU	/	
PC	PC	/	/	/	PC	/	
A	ABS	/	/	/	ABS	/	
Sr	Silicone rubber	/	/	/	Silicone rubber	/	
PA	PA	/	/	/	PA	/	
PV	PV	/	/	/	PV	/	
TPE	TPE	/	/	/	TPE	/	
PEI	PEI	/	/	/	PEI	/	
H	PVC+Brass	Pearl Chromium	Brass/Bronze	Nickel	/	Used for B series bending socket covering	
V	Aluminium alloy	Raw material surface is not treated (Non-magnetic product)	Aluminium alloy	Raw material surface is not treated (Non-magnetic product)	Aluminium alloy	Raw material surface is not treated (Non-magnetic product)	
J	Copper alloy	Raw material surface is not treated (Non-magnetic product)	Aluminium alloy	Raw material surface is not treated (Non-magnetic product)	Aluminium alloy	Raw material surface is not treated (Non-magnetic product)	

Remarks:

Brass:

Connectors are mostly brass shells, which can meet the requirements of most military or civilian applications. The surface of the brass shell has a unique nickel-chromium protective layer, which has a significant effect on resisting industrial waste, salt spray and most corrosive agents.

In addition, we also have nickel plating, nickel-gold plating, nickel-black chromium plating, etc. to choose from, which can be used as anti-corrosion coatings in specific environments.

Stainless steel:

In harsh environments, when the surface coating is easily damaged, we recommend using stainless steel. Usually use AISI304 stainless steel, AISI316L stainless steel, etc.

For special fields such as the nuclear industry, it is recommended to use AISI 304 stainless steel, which can resist radiation and corrosion by nitric acid. For the medical and marine industries, we recommend the use of AISI316L stainless steel, which has no surface treatment and has strong corrosion resistance.

Aluminum alloy:

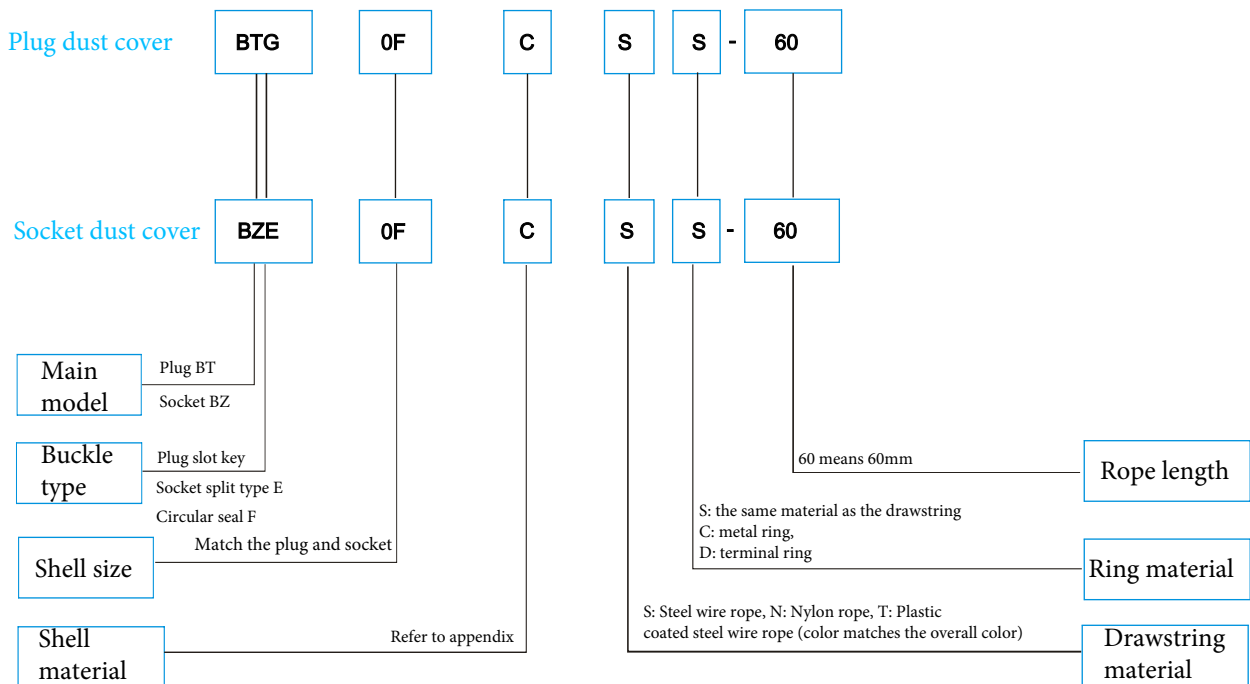
Aviation, aerospace industry, portable mobile equipment, etc. are suitable for connectors with aluminum alloy shells.

In addition to the high mechanical strength and excellent corrosion resistance of aluminum alloy, its surface can also be protected by anodizing, and a variety of colors to choose from.

Insulator material

No.	Material	Pin core type	Remark
T	TEFLON	Welding, printed board connection	
L K	PPS PEEK	Welding, printed board connection	

Numbering rules for dust cover



Main features of B series metal connectors:

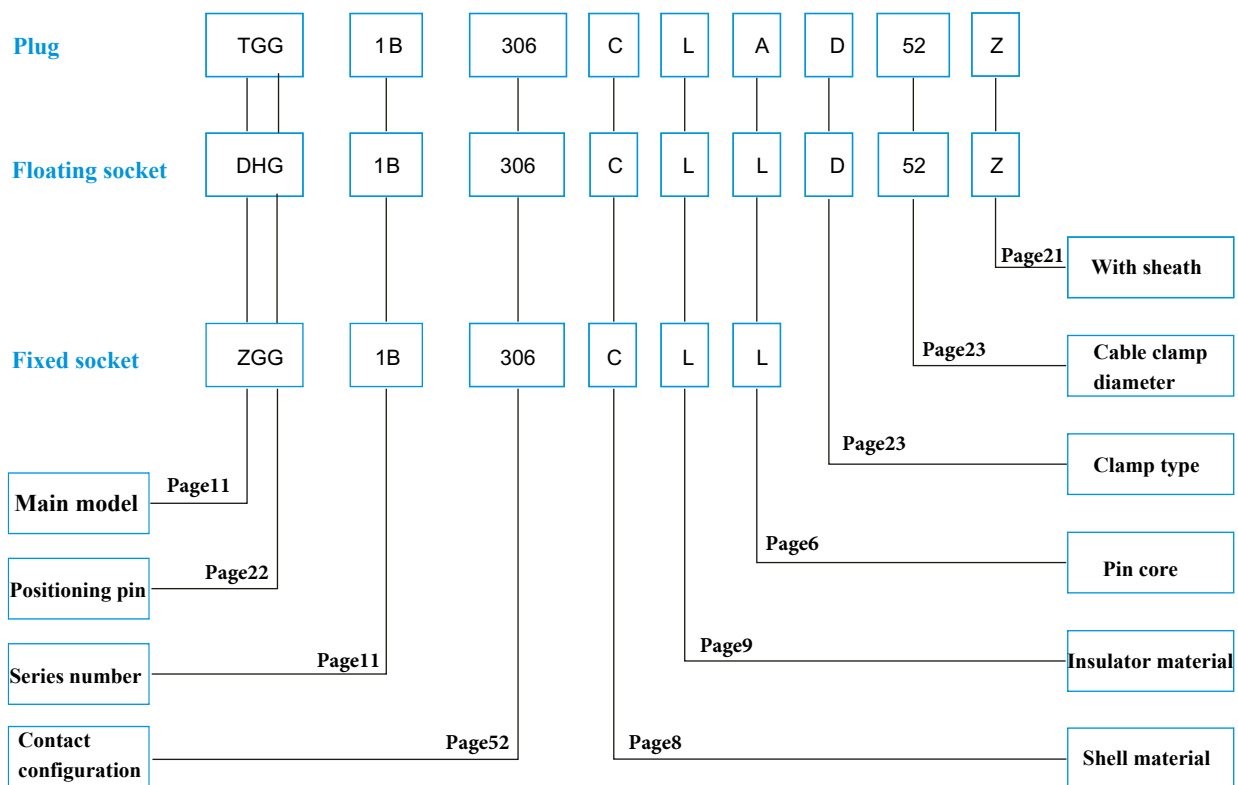
- Fast push pull self-locking system;
- There are welding pins in the tail, PCB board connecting straight pin and PCB board connecting 90° bending pin are optional
- Straight type, 90° angle type;
- Various of positioning pins options can avoid mixed insertion between similar connectors;
- All-round shielding effect could anti-electromagnetic interference;
- 2-48 multi-cores can be selected, high-density installation can save space;
- Positioning pin system, G is a standard positioning pin, used for connector alignment;
- PPS insulator, (PEEK insulator is optional).

Technical characteristics of B series metal connectors:

Mechanical properties and environmental factors:

- Number of inserts: > 5000
- Humidity: At 60°C, the highest humidity can reach 95%
- When filling silicone: -55°C+200°C, when filling epoxy resin: -20°C+125°C, when not filling (PPS insulator): -55°C+200°C.
- Vibration: 10-20000Hz, 15g
- Mechanical shock, 100g.6ms
- Salt spray corrosion test: > 96h
- Protection level: IP50 MGG+ TEG can reach IP67

Numbering rules of B series product:



Example of product number

Straight plug with wire clamp:

TGG.1 B.306.CLAD62=Straight plug,positioning pin (G), with clamp, 1 B series, multi-core type, 6-core, brass chrome plated shell, PPS insulator, welded type male pin core, suitable for outer diameter D-type clamp for 6.2mm cable.

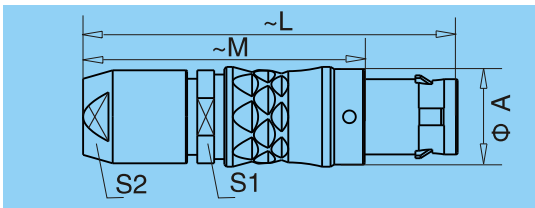
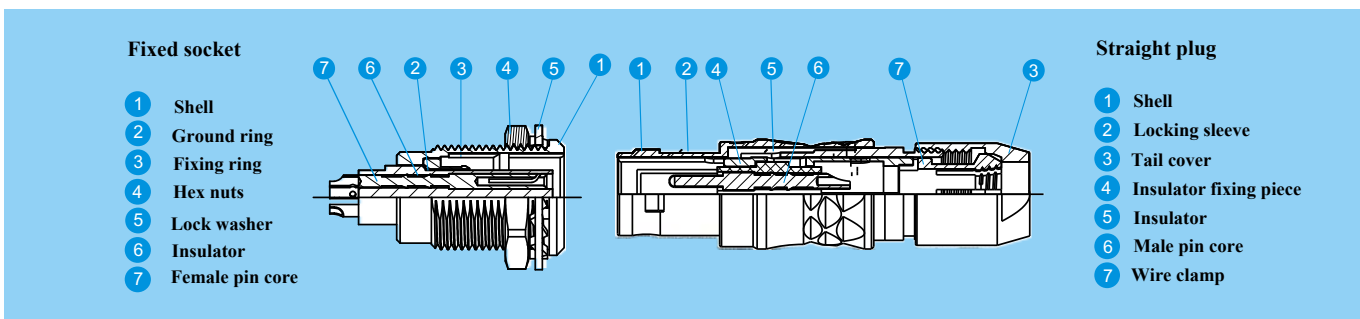
Floating socket:

DHG.1 B.306.CLLD62Z=Floating socket, positioning pin (G), with clamp, 1 B series, multi-core type, 6-core, brass chrome-plated shell, PPS insulator, welding-type female pin core, suitable for outer diameter D-type clamp for 6.2mm cable, tail cover with sheath.

Fixed socket:

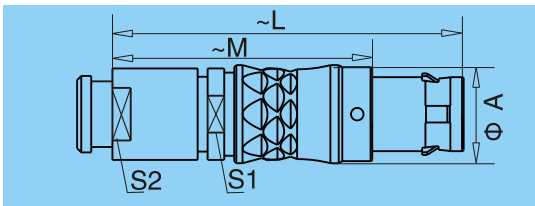
ZGG.1 B.306.CLL=Fixed socket, nut fixed,positioning pin (G), 1 B series, multi-core type, 6-core, brass chrome-plated shell, PPS insulator,welded female pin core.

Product section view



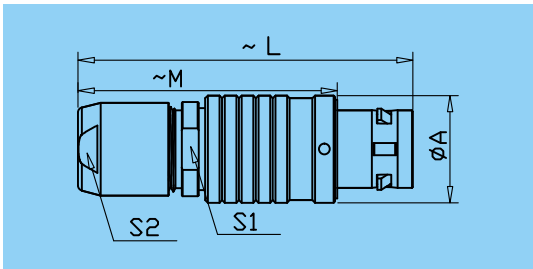
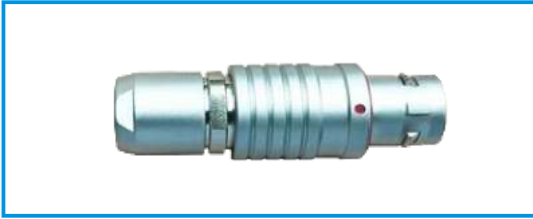
TGG straight plug, positioning pin (G) or positioning pin (A... M and R) cable clamp fixed

Series	Model	Size				
		A	L	M	S1	S2
00B	TGG	6	28.7	20.5	5.5	5.0
0B	TGG	8.7	35.5	25.5	8.0	7.0
1B	TGG	11.9	43.0	32.0	10.0	9.0
2B	TGG	15.0	49.0	37.0	13.0	12.0
3B	TGG	18.0	56.7	43.0	16.0	15.0
4B	TGG	25.0	78.8	60.8	21.0	20.0



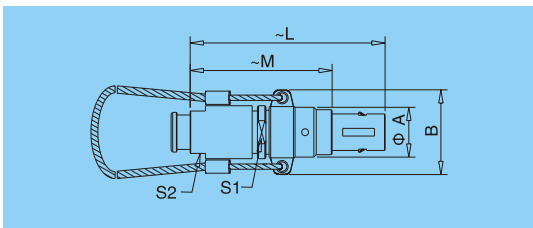
TGG straight plug, positioning pin (G) or positioning pin (A... M and R) cable clamp fixed and sheath type tail cover

Series	Model	Size				
		A	L	M	S1	S2
00B	TGG	6.0	36.5	28.5	5.5	6.0
0B	TGG	9.5	35.5	25.0	8.0	8.0
1B	TGG	11.9	42.0	31.0	10.0	9.0
2B	TGG	15.0	49.0	37.0	13.0	13.0
3B	TGG	18.0	56.5	42.0	16.0	15.0
4B	TGG	25.0	71.0	53.0	21.0	20.0



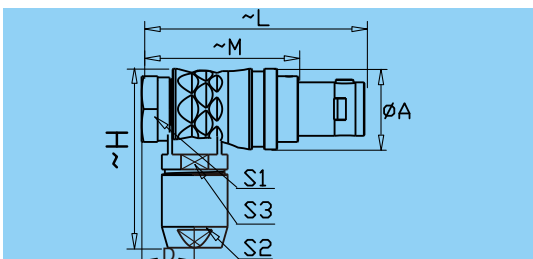
TEG straight plug, positioning pin (G) or positioning pin (A...M and R) cable clamp fixed, front seal and sheath type tail cover (IP67 when inserted)

Item		Size				
Series	Model	A	L	M	S1	S2
00B	TEG	7.6	32.0	25.0	5	6
0B	TEG	11.0	35.0	25.0	8	8
1B	TEG	13.5	42.0	33.0	10	9
2B	TEG	16.5	48.0	36.0	13	13
3B	TEG	19.0	56.0	41.5	16	15



TNG straight plug, positioning pin (G) or positioning pin (A...M and R), cable clamp fixed and sheathed tail cover (and unlocking cord)

Item		Size					
Series	Model	A	B	L	M	S1	S2
0B	TNG	9.5	15.5	36.0	26.0	8	7
1B	TNG	12.0	18.0	43.0	32.0	10	9
2B	TNG	15.0	21.0	49.0	37.0	13	12
3B	TNG	18.0	25.0	58.0	43.0	15	14

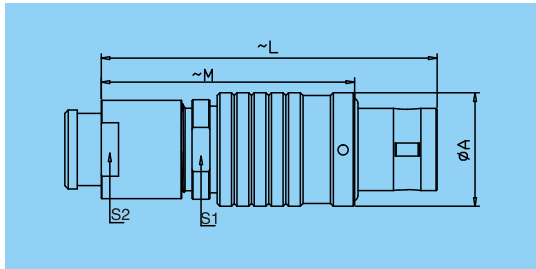


THG 90° angled plug, positioning pin (G) or positioning pin (A...M and R), cable clamp fixed and tail cover with sheath

Item		Size							
Series	Model	A	D	H	L	M	S1	S2	S3
00B	THG	7.9	5.1	20.0	24.5	16.7	7	6	5.5
0B	THG	11.0	6.5	22.8	30.0	20.0	9	8	8.0
1B	THG	13.5	9.0	30.5	37.0	25.0	12	9	10.0
2B	THG	17.0	6.5	39.0	41.3	29.3	15	13	13.0
3B	THG	19.0	10.0	37.0	50.0	35.0	17	15	15.0



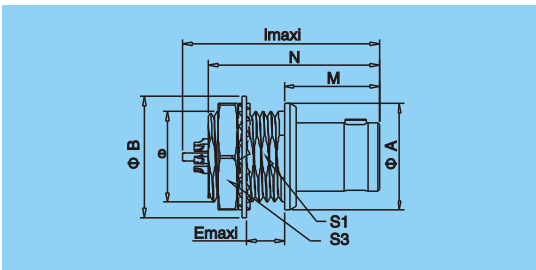
TFG straight plug, without locking device, positioning pin (G) or positioning pin (A ... M), fixed with cable clamp



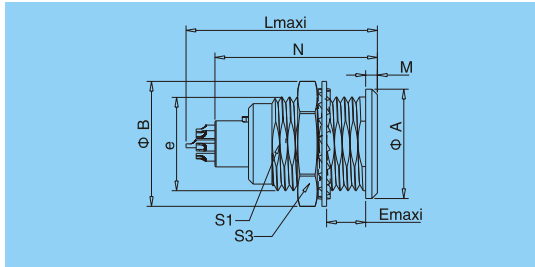
Item		Size				
Series	Model	A	L	M	S1	S2
0B	TFG	9.0	36	26	8.0	8.0
1B	TFG	11.9	42	31	10.0	9.0
2B	TFG	15.0	50	38	13.0	12.0
3B	TFG	17.8	66	43	15	15
4B	TFG	24.6	79.4	54.7	21.0	20.0



TAG fixed plug without locking device, fixed with nut, positioning pin (G) or positioning pin (A...M and R)

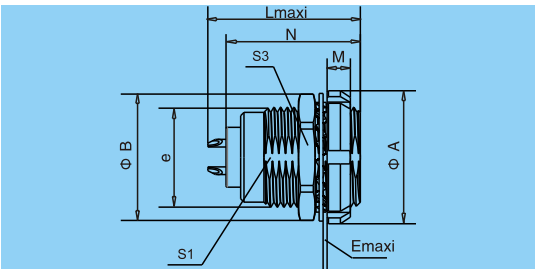
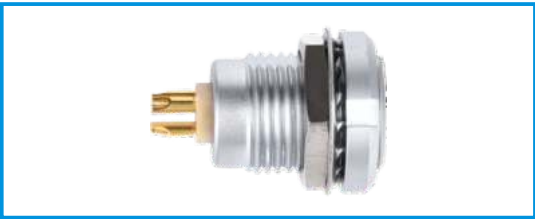


Item		Size								
Series	Model	A	B	e	E	L	M	N	S1	S3
0B	TAG	10	12.4	M9x0.5	4.2	20.8	11.2	18.9	8.1	11
1B	TAG	14	15.8	M12x1.0	5.4	25.2	12.5	21.6	10.5	14
2B	TAG	18	19.3	M15x1.0	6.0	28.7	13.8	23.9	13.5	17
3B	TAG	22	25.0	M18x1.0	5.8	32.1	17.0	30.2	16.5	22
4B	TAG	29	34.0	M25x1.0	7.0	37.0	20.5	34.7	23.5	30



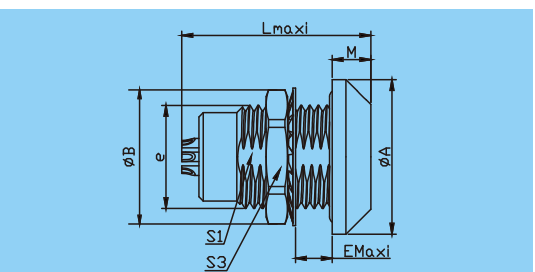
ZGG fixed socket, nut fixed, positioning pin (G) or positioning pin (A ... M and R) (fixed in the chassis)

Item		Size								
Series	Model	A	B	e	E	L	M	N	S1	S3
00B	ZGG	8	10.3	M7x0.5	6.0	16.2	1.0	13.7	6.3	9
0B	ZGG	10	12.5	M9x0.5	7.0	20.7	1.2	16.5	8.2	11
1B	ZGG	14	16.0	M12x1.0	7.0	23.0	1.5	18.7	10.5	14
2B	ZGG	18	19.2	M15x1.0	6.0	19.8	2.0	23	13.5	17
3B	ZGG	21	25.0	M18x1.0	11.5	25	1.8	25	16.5	22
4B	ZGG	28	34.0	M25x1.0	12.0	32.5	2.5	29.5	23.5	30



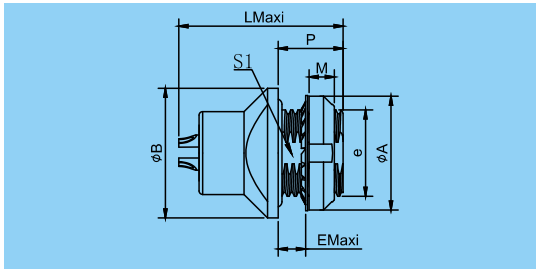
ZCG fixed socket with two nuts, positioning pins (G) or positioning pins (A...M and R) (rear panel installation) (fixed outside the chassis)

Item		Size								
Series	Model	A	B	e	E	L	M	N	S1	S3
00B	ZCG	10	11.0	M7X0.5	4.5	16.9	2.5	13.7	6.3	9
0B	ZCG	12	12.4	M9x0.5	5.5	19.2	2.5	16.5	8.2	11
1B	ZCG	16	15.8	M12x1.0	6.0	22.3	3.5	18.8	10.5	14
2B	ZCG	20	19.2	M15x1.0	6.5	23.4	3.5	19.8	13.5	17
3B	ZCG	24	25.0	M18x1.0	9.0	30.7	4.5	25	16.5	22
4B	ZCG	30	34.0	M25X1.0	10.0	34.0	4.5	29	23.5	30



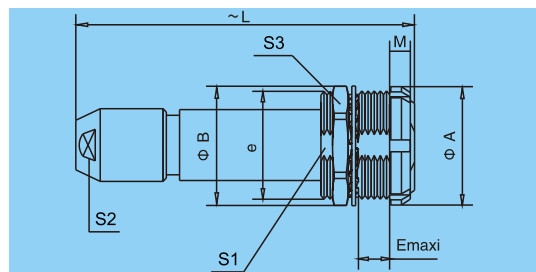
MGG fixed socket, nut fixed, positioning pin (G) or positioning pin (A ... M and R) water-sealed or vacuum-sealed, IP68

Item		Size								
Series	Model	A	B	e	E	L	M	S1	S3	
00B	MGG	11	10.3	M7X0.5	7.5	14	1.5	6.3	9	
0B	MGG	13	12.5	M9x0.6	7.0	22.1	3.0	8.2	11	
1B	MGG	18	15.8	M12x1.0	7.5	23.2	4.5	10.5	14	
2B	MGG	20	19.2	M15x1.0	8.0	24.3	4.0	13.5	17	
3B	MGG	23	25.4	M18x1.0	13.0	36.1	4.0	16.5	22	
4B	MGG	34	34.0	M25x1.0	10.5	37.2	4.0	23.5	30	



MEG fixed socket, nut fixed, positioning pin (G) positioning pin (A. .. M and R) water-sealed or vacuum-sealed (rear panel installation), IP68

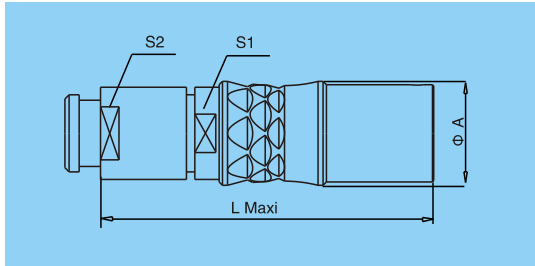
Item		Size							
Series	Model	A	B	e	E	L	M	P	S1
00B	MEG	10	11	M7X0.5	3.0	17.0	2.5	6.5	6.3
0B	MEG	12	13	M9x0.6	5.5	19.3	2.5	9.0	8.2
1B	MEG	16	18	M12x1.0	4.5	26.6	3.5	9.0	10.5
2B	MEG	20	20	M15x1.0	4.5	31.6	3.5	9.6	13.5
3B	MEG	24	24	M18X1.0	9.5	28.7	4.5	14.5	16.5



DFG fixed socket, fixed with nut, positioning pin (G) or positioning pin (A. .. M and R) , fixed with cable clamp

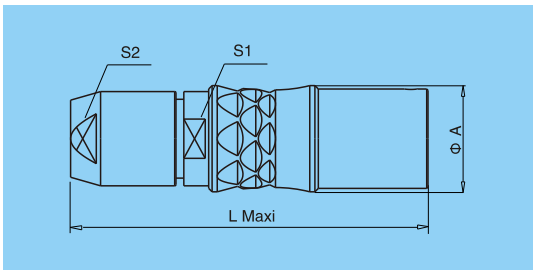
Item		Size								
Series	Model	A	B	e	E	L	M	S1	S2	S3
0B	DFG	12	12.4	M9x0.5	6.0	35.5	2.5	8.2	8	11
1B	DFG	16	15.8	M12x1.0	6.5	40.5	3.5	10.5	9	14
2B	DFG	20	19.2	M15x1.0	6.5	48.7	3.5	13.5	12	17
3B	DFG	24	25.0	M18x1.0	9.0	56	4.5	16.5	14	22

B series



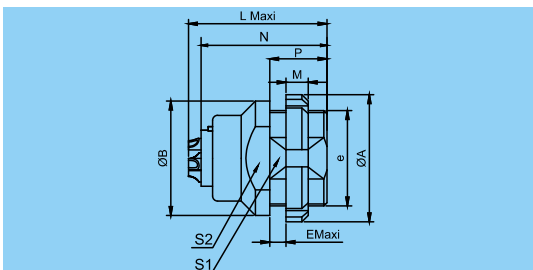
DHG floating socket, positioning pin (G) or positioning pin (A...M and R), cable clamp fixed and end cover with sheath

Item		Size			
Series	Model	A	L	S1	S2
00B	DHG	6.8	34	5.5	5
0B	DHG	9.5	35.5	8.0	8
1B	DHG	12	42	10.0	9
2B	DHG	15	47.0	13.0	13
3B	DHG	19.0	56.0	15.0	15
4B	DHG	25	63	21	20



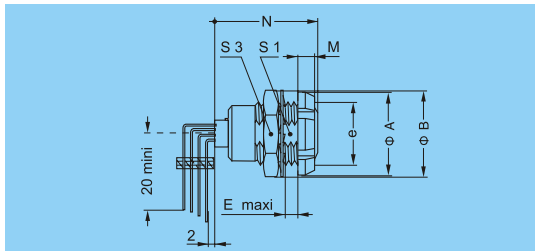
DHG floating socket, positioning pin (G) or positioning pin (A .. M and R), cable clamp fixed

Item		Size			
Series	Model	A	L	S1	S2
0B	DHG	9.5	35.5	8.0	7.0
1B	DHG	12	41.2	10.0	9.0
2B	DHG	15	48.0	13.0	12.0
3B	DHG	19	56.0	15.0	15.0
4B	DHG	25	69.0	21.0	20.0



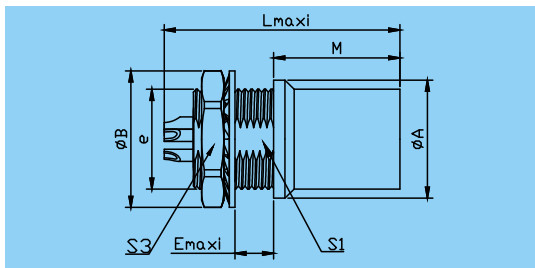
ZEG fixed socket, fixed by nut, positioning pin (G) or positioning pin (A .. M and R) (rear panel installation) (fixed outside the chassis)

Item		Size									
Series	Model	A	B	e	E	L	M	N	P	S1	S2
0B	ZEG	12	10	M9x0.5	6.0	20.7	2.5	16.5	8.2	8.2	9.0
1B	ZEG	16	14	M12x1.0	6.5	23.0	3.5	18.7	11.0	10.5	12.0
2B	ZEG	20	18	M15x1.0	5.0	26.7	3.5	19.8	9.0	13.5	15.0
3B	ZEG	24	21	M18x1.0	7.0	30.7	4.5	28.1	12.0	16.5	18.0



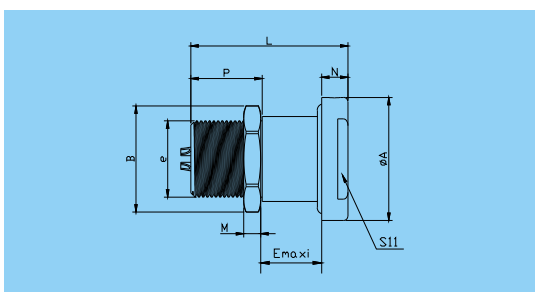
ZCG fixed socket, two nuts, positioning pin (G) or positioning pin (A...F), 90° angled pin core suitable for PCB (rear panel installation)

Item		Size							
Series	Model	A	B	e	E	M	N	S1	S3
00B	ZCG	10	11.0	M7x0.5	4.5	2.5	13.7	6.3	9
0B	ZCG	12	12.4	M9x0.5	5.5	2.5	16.5	8.2	11
1B	ZCG	16	15.8	M12x1.0	6.0	3.5	18.8	10.5	14
2B	ZCG	20	19.2	M15x1.0	6.5	3.5	19.8	13.5	17
3B	ZCG	24	25.0	M18x1.0	9.0	4.5	25.0	16.5	22
4B	ZCG	30	34.0	M25x1.0	10.0	4.5	34.0	23.5	30



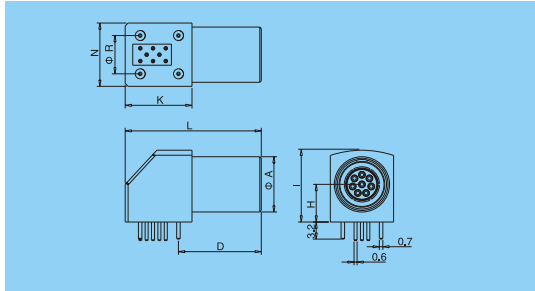
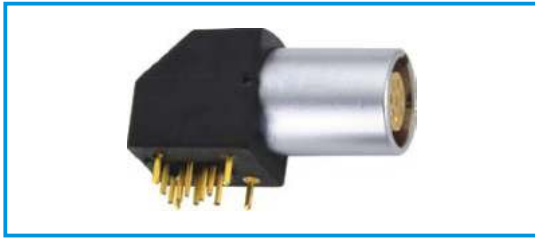
ZHG fixed socket, nut fixed, positioning pin (G) or positioning pin (A ... M and R), protruding shell

Item		Size							
Series	Model	A	B	e	E	M	L	S1	S3
0B	ZHG	10	12.4	M9x0.5	2	11.5	19.5	8.2	11
1B	ZHG	14	15.8	M12x1.0	4	12	21.7	10.5	14
2B	ZHG	18	19.2	M15x1.0	5.1	12.5	23.9	13.5	17
3B	ZHG	22	25	M18x1.0	8.0	13.5	30.7	16.5	22



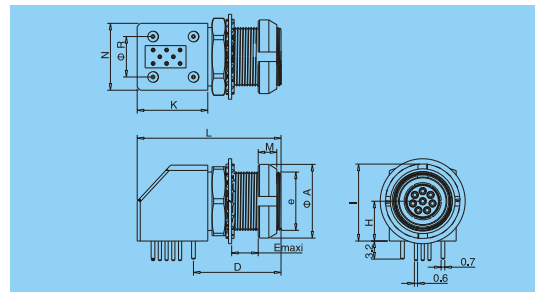
ZTG fixed socket, nut fixed, positioning pin (G) or positioning pin (A ... M and R) Suitable for thick panel mounting

Item		Size								
Series	Model	A	B	e	E	M	N	P	L	S11
0B	ZTG	14.5	12.5	M9X0.5	13	2	3.1	8.4	18.5	11



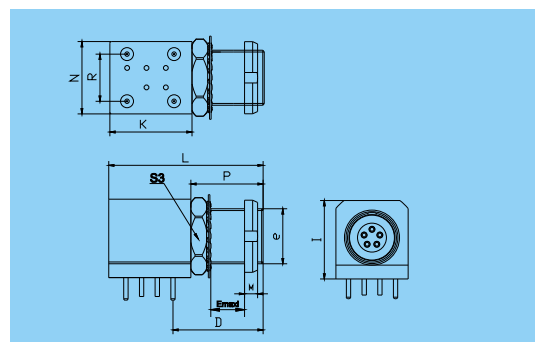
ZPG socket is suitable for 90 ° angled socket of PCB, positioning pin (G) or positioning pin (A .. F) (welding or fixing with screws) can provide metal type 00B size

Number	Size							
	A	D	H	I	K	L	N	R
ZPG.0B.302.HLN ZPG.0B.303.HLN ZPG.0B.304.HLN ZPG.0B.305.HLN ZPG.0B.306.HLN ZPG.0B.307.HLN ZPG.0B.309.HLN	9.0	14.6	6.7	12.7	13.3	25.0	11.7	7.62
ZPG.1B.302.HLN ZPG.1B.303.HLN ZPG.1B.304.HLN ZPG.1B.305.HLN ZPG.1B.306.HLN ZPG.1B.307.HLN ZPG.1B.308.HLN ZPG.1B.310.HLN	11.0	16.5	7.75	14.3	13.3	27.3	12.6	7.62



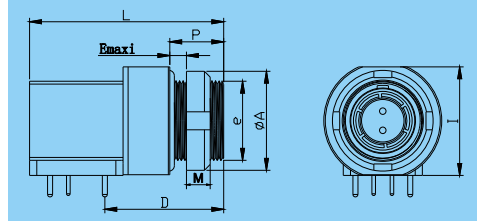
ZXG socket is suitable for 90 ° angled socket of PCB, positioning pin (G) or positioning pin (A .. F) (welding or fixing with screws)

Number	Size											
	A	D	e	E	H	I	K	L	M	N	R	S3
ZXG.0B.302.HLN ZXG.0B.303.HLN ZXG.0B.304.HLN ZXG.0B.305.HLN ZXG.0B.306.HLN ZXG.0B.307.HLN ZXG.0B.309.HLN	12	14.6	M9x0.5	6.0	6.7	12.7	13.5	25.0	2.5	11.7	7.62	11
ZXG.1B.302.HLN ZXG.1B.303.HLN ZXG.1B.304.HLN ZXG.1B.305.HLN ZXG.1B.306.HLN ZXG.1B.307.HLN ZXG.1B.308.HLN ZXG.1B.310.HLN	14	16.6	M11x0.5	7.5	7.5	14.3	13.0	27.3	3.3	12.5	7.62	13



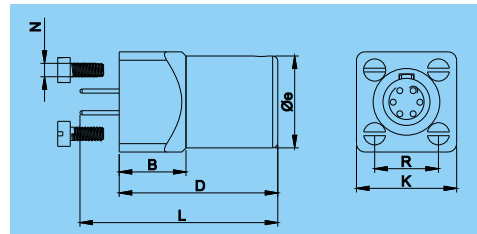
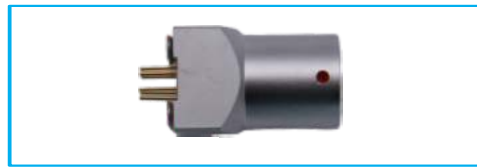
ZXNG full metal shell socket suitable for 90 ° angled socket of PCB, positioning pin (G) or positioning pin (A .. F), double nut fixed

Number	Size										
	D	e	E	I	K	P	L	M	N	R	S3
ZXNG.0B.302.HLN ZXNG.0B.303.HLN ZXNG.0B.304.HLN ZXNG.0B.305.HLN ZXNG.0B.306.HLN ZXNG.0B.307.HLN ZXNG.0B.309.HLN	14.6	M9x0.5	7	12.2	13	12	25	2.5	11.1	7.62	11



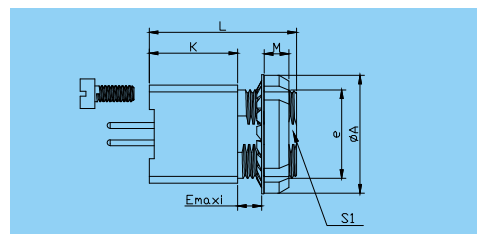
ZXNG full metal shell socket suitable for 90 ° angled socket of PCB, positioning pin (G) or positioning pin (A. .. F), single nut fixed single socket waterproof IP68

Number	Size									
	D	e	E	I	K	P	L	M	N	R
ZXNG.1B.302.HLN-(M)	16.5	M11x0.5	4	15	13	7.5	27	3.3	11.1	7.62
ZXNG.1B.303.HLN-(M)										
ZXNG.1B.304.HLN-(M)										
ZXNG.1B.305.HLN-(M)										
ZXNG.1B.306.HLN-(M)										
ZXNG.1B.307.HLN-(M)										
ZXNG.1B.308.HLN-(M)										
ZXNG.1B.310.HLN-(M)										



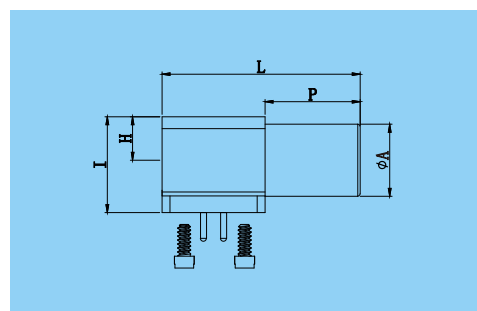
ZZG full metal shell socket suitable for straight socket of PCB, positioning pin (G) or positioning pin (A. .. F), fix with screw

Number	Size						
	N	e	B	D	L	R	K
ZZG.1B.302.CLN-LD	M1.6	11	8	19	22.8	7.62	12
ZZG.1B.303.CLN-LD							
ZZG.1B.304.CLN-LD							
ZZG.1B.305.CLN-LD							
ZZG.1B.306.CLN-LD							
ZZG.1B.307.CLN-LD							
ZZG.1B.308.CLN-LD							
ZZG.1B.310.CLN-LD							



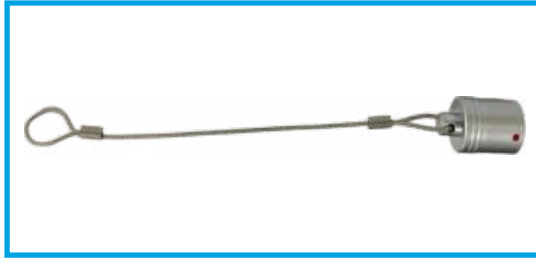
ZYG fixed socket suitable for PCB board, nut fixed, positioning pin (G) or positioning pin (A. .. F), outer nut mounting

Item		Size						
Series	Model	A	e	M	E	K	L	S1
0B	ZYG	12	M9X0.6	2.5	3	9	15	8.2
1B	ZYG	16	M11X0.5	3.5	5.5	19	19	10
2B	ZYG	20	M15X1	3.5	8	9	22.5	13.5



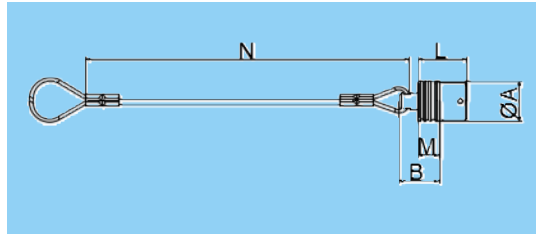
ZPNG suitable for 90 ° angled socket of PCB, full metal screw fixed positioning pin (G) or positioning pin (A. .. F)

Number	Size				
	A	P	L	H	I
ZPNG.0B.302.HLN-LD	9	12	25	5.5	12.2
ZPNG.0B.303.HLN-LD					
ZPNG.0B.304.HLN-LD					
ZPNG.0B.305.HLN-LD					
ZPNG.0B.306.HLN-LD					
ZPNG.0B.307.HLN-LD	11	14.8	27.8	5.5	13.1
ZPNG.0B.309.HLN-LD					
ZPNG.1B.302.HLN-LD					
ZPNG.1B.303.HLN-LD					
ZPNG.1B.304.HLN-LD					
ZPNG.1B.305.HLN-LD					
ZPNG.1B.306.HLN-LD					
ZPNG.1B.307.HLN-LD					
ZPNG.1B.308.HLN-LD					
ZPNG.1B.310.HLN-LD					



BTGB, S series plug dust cover

Shell material: brass chrome plated
 O-ring seal: Silicone rubber
 Waterproof rating: IP50
 Lanyard material: stainless steel (S)/nylon rope (N)
 Maximum working temperature: 135 °C

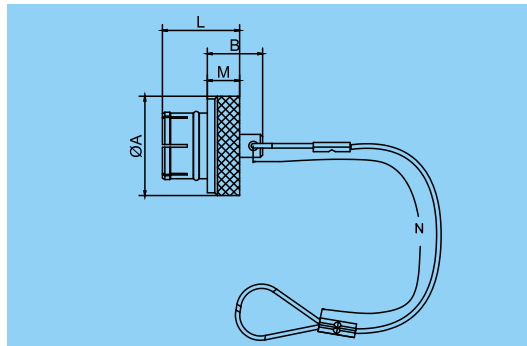


Product number	Series	Size(mm)				
		A	B	L	M	N
BTG.0B.CSS-085	0B-0S	9.5	9.5	12	4.5	85
BTG.1B.CSS-085	1B-1S	12	11	13	5	85
BTG.2B.CSS-085	2B-2S	15	12	14	6	85
BTG.3B.CSS-120	3B-3S	15.5	14	15.3	8	120
BTG.4B.CSS-120	4B-4S	25	14	22.5	8	120



BZF B, S series socket dust cover

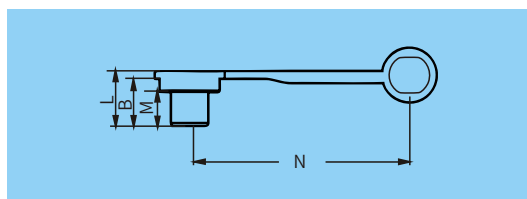
Shell material: brass chrome plated
 O-ring seal: Silicone rubber
 Waterproof rating: IP50
 Lanyard material: stainless steel (S)/nylon rope (N)
 Maximum working temperature: 135 °C



Product number	Series	Size(mm)				
		A	B	L	M	N
BZF.0B.CSS-085	0S-0B	10	9.5	10.5	4.5	85
BZF.1B.CSS-085	1S-1B	11	11	12.5	5	85
BZF.2B.CSS-085	2S-2B	18	12	14	6	85
BZF.3B.CSS-120	3S-3B	22	14	18	8	120
BZF.4B.CSS-120	4S-4B	28	20	16	9	120

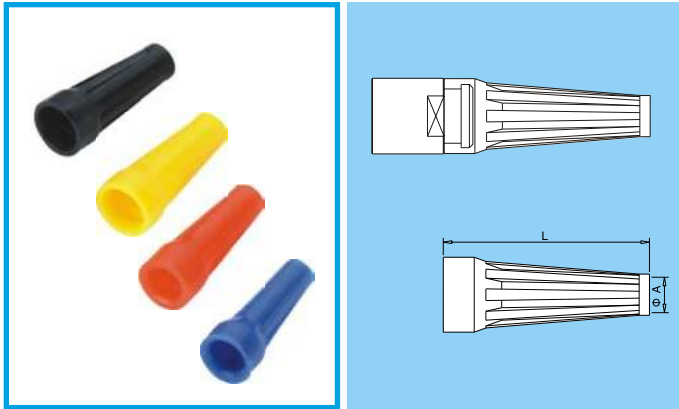


QM B series socket dust cover



Product number	Series	Size(mm)				
		A	B	L	M	N
QM.0B.100-PCSG	0B	13.5	9	10.5	6.5	36.5
QM.1B.100-PCSG	1B	16.5	10.5	12	7.5	42

Sheath



GM • Sheath (polyurethane)

The sheath is made of polyurethane material, abbreviation is PU; because PU contains a strong polar urethane group, is insoluble in non-polar groups, it has good oil resistance, toughness, abrasion resistance, aging resistance and stickiness. It can be installed on the plugs and sockets of our products to protect the cables.

Temperature range in dry air environment: -40°C-+80 °C

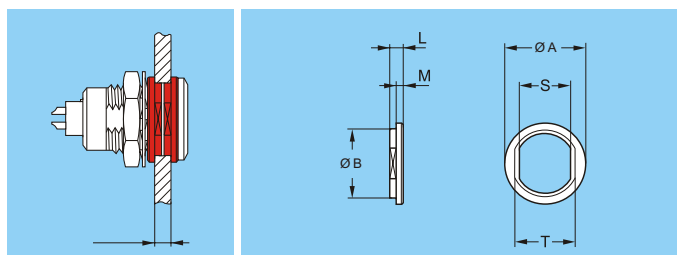
Series	Product number	Size(mm)			
		Sheath		Cable diameter	
		A	L	max.	Min
00B	GMA.00B.032.DG	3.4	22	3.2	3.0
0B	GMA.0B.021.DG	2.1	24	2.2	2.0
	GMA.0B.031.DG	3.1	24	3.2	3.0
	GMA.0B.042.DG	4.2	24	4.6	4.0
	GMA.0B.052.DG	5.2	24	5.6	4.5
	GMA.0B.056.DG	5.6	30	6.0	5.5
1B	GMA.1B.027.DG	2.7	30	2.8	2.5
	GMA.1B.031.DG	3.1	30	3.2	3.0
	GMA.1B.042.DG	4.2	30	4.5	4.0
	GMA.1B.052.DG	5.2	30	5.5	5.0
	GMA.1B.062.DG	6.2	30	6.5	6.0
	GMA.1B.072.DG	7.2	30	7.5	7.0
	GMA.1B.076.DG	7.6	30	8.0	7.5
2B	GMA.2B.042.DG	4.2	36	4.5	4.0
	GMA.2B.052.DG	5.2	36	5.5	5.0
	GMA.2B.062.DG	6.2	36	6.5	6.0
	GMA.2B.072.DG	7.2	36	7.5	7.0
	GMA.2B.082.DG	8.2	36	8.5	8.0
	GMA.2B.092.DG	9.2	36	9.5	9.0
	GMA.2B.099.DG	9.9	36	10	9.5

Series	Product number	Size(mm)			
		Sheath		Cable diameter	
		A	L	max.	Min
3B	GMA.3B.062.DG	6.2	42	6.5	6.0
	GMA.3B.072.DG	7.2	42	7.5	7.0
	GMA.3B.082.DG	8.2	42	8.5	8.0
	GMA.3B.092.DG	9.2	42	9.5	9.0
	GMA.3B.010.DG	10	42	10.5	10
	GMA.3B.011.DG	11	42	11.5	11
	GMA.3B.012.DG	12	42	12.5	12
4B	GMA.4B.010.DG	10	60	10.5	10
	GMA.4B.012.DG	12	60	12.2	12
	GMA.4B.013.DG	13	60	13.5	13
	GMA.4B.015.DG	15	60	15.5	15
GMA.4B.016.DG	16	60	16.5	16	

Number	Color	Number	Color
A	Blue	G	Grey
B	White	J	Yellow
J	Yellow	M	Brown
N	Black	R	Red
S	Orange	V	Green

GRA insulating washer (color ring)

Plugs or sockets installed on the panel can be equipped with insulating washers

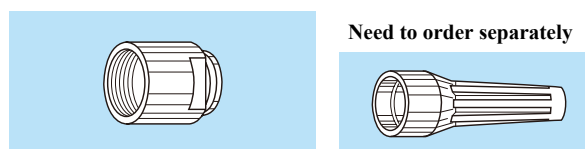


Product number	Series	Size(mm)						
		A	B	E	L	M	S	T
GRA.00.269.GG	00	10.0	8.8	4.5	1.8	1.0	6.4	8.0
GRA.0B.269.GG	0S-0B	12.0	10.8	6.0	1.8	1.0	8.3	9.9
GRA.1B.269.GG	1S-1B	16.0	13.8	6.5	1.8	1.0	10.6	12.2
GRA.2B.269.GG	2S-2B	21.1	17.9	7.3	2.3	1.3	13.6	16.2

Number	Color	Number	Color
A	Blue	N	Black
B	White	R	Red
G	Grey	S	Orange
J	Yellow	V	Green
M	Brown		

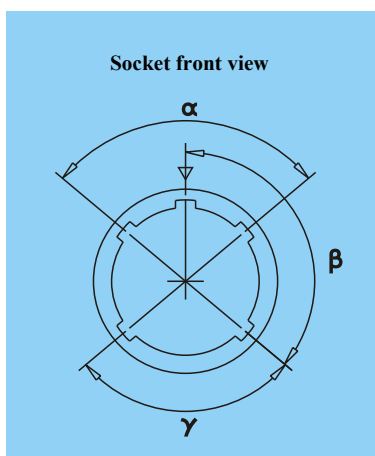
Suitable for B series sheath and adapter clamp

Number	Tail cover		Need to order separately
	Type	Number	
00	Z	D 17 to 35	GMA.00... .. GMB.00... ..
0B	Z	D 21 to 52	GMA.0B... ..
1B	Z	M 27 to 31	GMA.1B... ..
		D 42 to 72	GMA.1B... ..
2B	Z	M 21 to 31	GMA.0B... ..
		D 42	GMA.2B... ..
		D 52 to 92	GMA.2B... ..
3B	Z	M 52	GMA.1B... ..
		D 62 to 11	GMA.3B... ..
4B	Z	M 62 to 72	GMA.2B... ..
		M 82 to 92	GMA.4B... ..
		D 10 to 15	GMA.4B... ..



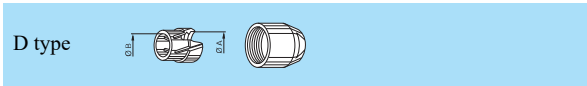
Positioning pin

B, C series connector shell model consists of 3 letters, the last letter indicates the location of the positioning pin and the type of pin core (male pin core and female pin core)



Key No.	No. of keys	Angle	Series		No. of keys	Angle	Series		Pin core type	
			0B-0C	1B-1C			2B-2C	3B-3C	Male pin	Female pin
G	1		0°	0°	1		0°	0°	Male pin	Female pin
A	2	α	30°	30°	2	α	30°	30°	Male pin	Female pin
B	2		60°	60°	2		45°	45°	Male pin	Female pin
C	2		90°	90°	2		60°	60°	Male pin	Female pin
D	2	β	135°	135°	2	β	95°	95°	Male pin	Female pin
E	2		145°	145°	2		120°	120°	Male pin	Female pin
F	2		155°	155°	2		145°	145°	Male pin	Female pin
J	2	γ	45°	45°	2	α	37.5°	37.5°	Female pin	Male pin

Suitable for D-type cable clamps of the B series



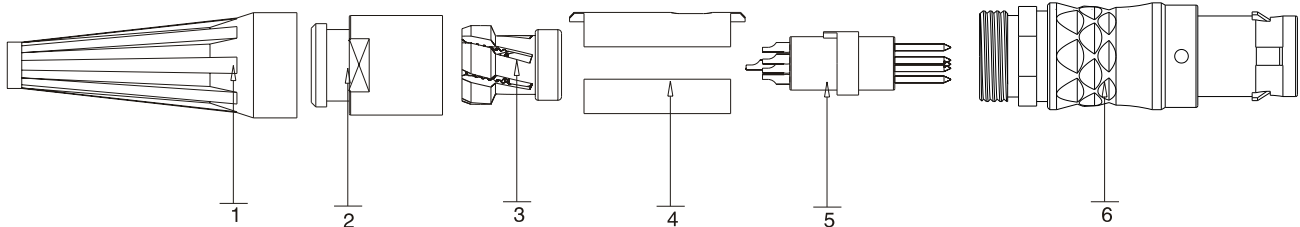
	Number		Cable clamp Ø		Cable Ø		Note
	Type	No.	Ø A	Ø B	Min.	Max.	
00B	D	30	2.7	3.4	2	2.5	
	D	32	3.2	3.4	2.2	3	
	D	35	3.5	3.6	2.5	3.3	
0B	D	20	2.5	5.2	1.8	2.3	
	D	32	3.2	5.2	2.2	3	
	D	35	3.5	5.2	2.4	3.3	
	D	42	4.2	5.2	3.1	4	
	D	52	5.2	5.2	4.1	5	
1B	D	32	3.2	5.5	2.2	3	
	D	35	3.5	5.5	2.5	3.3	
	D	42	4.2	5.5	3.1	4	
	D	52	5.2	6.2	4.1	5	
	D	62	6.2	6	5.1	6	
	D	72	6.5	7	5.4	6.3	
2B	D	42	4.2	8.5	3.1	4	
	D	45	4.5	8.5	3.4	4.3	
	D	52	5.2	8.5	4.1	5	
	D	62	6.2	8.5	5.1	6	
	D	72	7.2	8.5	6.1	7	
	D	82	8.2	8.5	7.1	8	
	D	92	9.2	9.5	8.1	9	
	D	102	10	10	9	9.8	

	Number		Cable clamp Ø		Cable Ø		Note
	Type	No.	Ø A	Ø B	Min.	Max.	
3B	D	52	5.2	10.5	4.1	5	
	D	62	6.2	10.5	5.1	6	
	D	72	7.2	10.5	6.1	7	
	D	82	8.2	10.5	7.1	8	
	D	92	9.2	10.5	8.1	9	
	D	102	10.2	10.5	9.1	10	
	D	112	11.2	10.5	10.1	11	
4B	D	120	12	10.5	10.9	11.8	
	D	122	12.2	12.8	11.1	12	
	D	132	13.2	12.8	12.1	13	
	D	142	14.2	15.6	13.1	14	
	D	156	15.6	15.6	14.5	15.4	

Note: The extended conversion cable clamp is represented by K, for example, TGG.0B.302.CLA72Z

B series

Assembly instructions for B series connector plugs



1. Pass the cable through the sheath ①, the tail nut ②, and the cable clamp ③ in sequence, and then weld them to the insulator assembly ⑤ in sequence.
2. Install the two-piece insulator snap ring ④ on the welded insulator assembly ⑤, and note that the window on the snap ring ④ corresponds to the protrusion on the insulator assembly ⑤.
3. Install the cable clamp ③ to the proper position of the cable. Note that the protrusion on the cable clamp ③ corresponds to the groove on the insulator retaining ring ④.
4. Push the insulator assembly ⑤, the insulator snap ring ④, and the cable clamp ③ into the plug assembly in turn, paying attention to the protrusions on the insulator snap ring ④ and the gap in the plug assembly ⑥.
5. Tighten the tail nut ② onto the plug assembly ⑥.
6. Put the sheath ① onto the corresponding step of the tail nut ②.

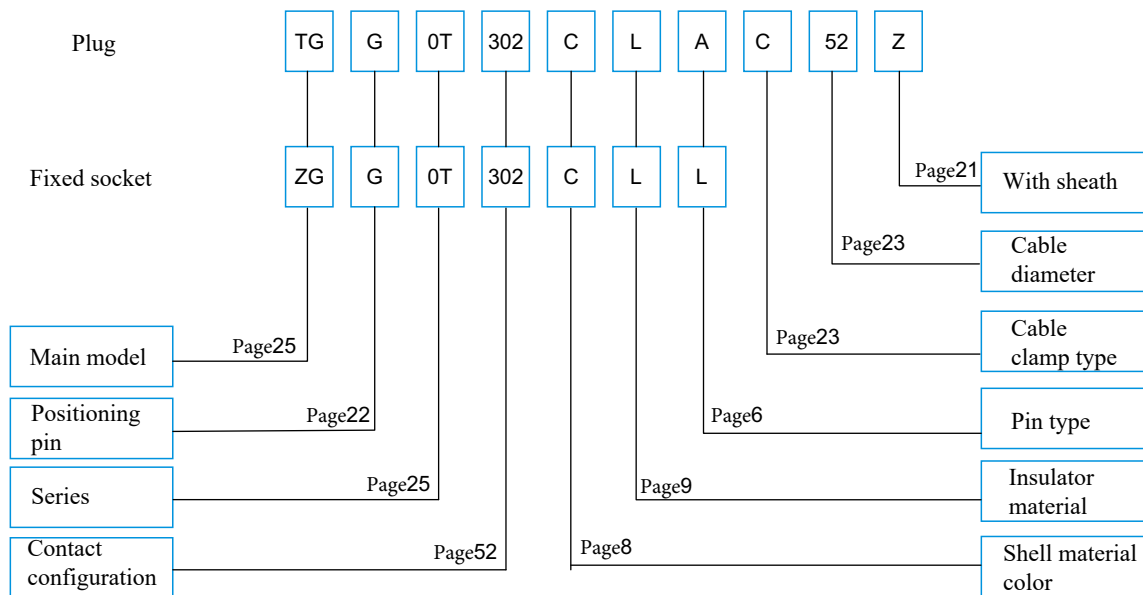
T series metal connectors have following main features

- Compatible with the B series socket, the mounting hole is the same as the B series socket;
- A variety of positioning pin options can avoid the mis-insertion of similar connectors
- Multi pin core 2 to 48 pin cores, and high-density installation saves space:
- 360° full shielding, anti-electromagnetic interference;

Technical characteristics of K series connectors:

- Waterproof grade IP68
- Number of inserts: > 5000
- Temperature range
 When filling silicone: -55°C-+200 °C,
 When filling epoxy resin: -20 °C-+125°C,
 When not filling (PPS insulator): -55°C-+200°C
- Vibration :15g[10Hz~2000Hz];
- Impact :100g[6ms];
- Salt spray :96h

T series metal connector product numbering rules:



TGG.1T.306.CKCC72Z

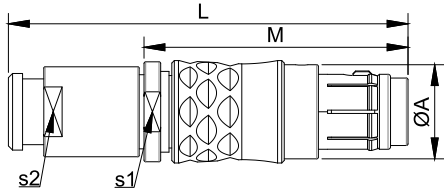
Straight plug Single positioning, 1T series, 6-core, brass pearl-plated chrome shell, PEEK insulator, crimped male pin core, suitable for C-type clamp of external 7.2mm cable, with jacketed tail

ZGG.1T.306.CLL fixed socket

Single position, 1T series, 6-core, brass plated pearl chrome housing, PPS insulator, welded female pin core



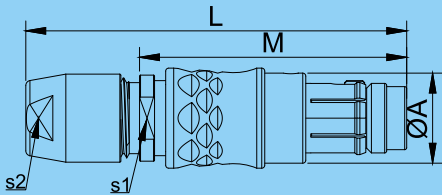
TGG straight plug, key positioning G\A\J, cable clamp type, with sheath type tail cover



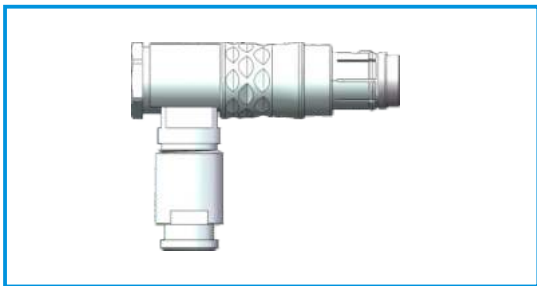
Item		Size				
Series	Model	A	L	M	S1	S2
00T	TGG	7	32.7	24.7	5.5	6
0T	TGG	9	40.2	26.7	7.5	8
1T	TGG	11.3	48	31.7	11	9
2T	TGG	14.6	55.5	36.5	13.5	13
3T	TGG	18.8	66	46	16	15



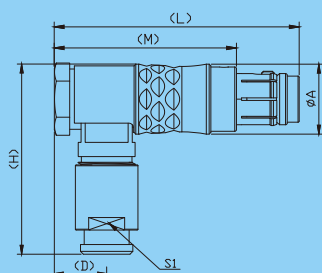
TGG Straight plug, key positioning G\A\J, cable clamp type, without sheath type tail cover



Item		Size				
Series	Model	A	L	M	S1	S2
00T	TGG	7	33.2	23.5	5.5	5
0T	TGG	9	39	26.7	7.5	8
1T	TGG	11.3	46	31.7	11	9
2T	TGG	14.6	55	36.5	13.5	13
3T	TGG	18.8	64	49	16	14



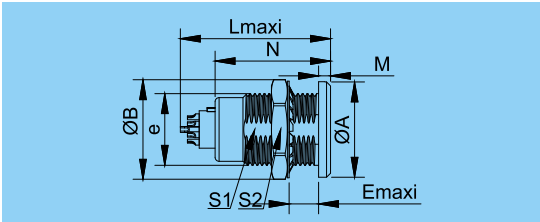
THG Straight plug, key positioning G\A\J, cable clamp type, with sheath type tail cover



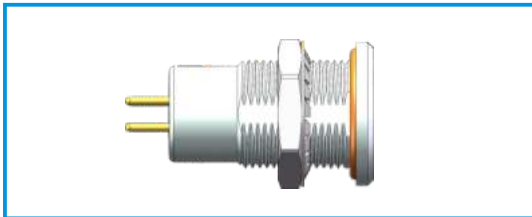
Item		Size					
Series	Model	A	D	H	L	M	S1
00T	TGG	8	5.2	20	28.5	20.5	6
0T	TGG	10	6.5	23	36	26	8
1T	TGG	12.3	9.2	33.4	43.1	32	9
2T	TGG	17	10	37.5	54	42	13



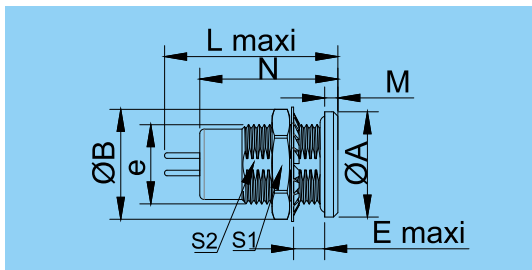
ZGG rear nut fixed socket, key positioning G/A/J, single socket is not chassis waterproof



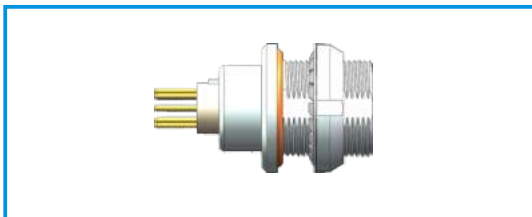
Item		Size								
Series	Model	A	B	e	E	L	M	N	S1	S2
00T	ZGG	10	10.5	M7x0.5	5.5	16	1.2	12.5	6.3	9
0T	ZGG	12	12.5	M9x0.6	6.5	19	1.5	14.5	8.2	11
1T	ZGG	15.5	16	M12X1	6.5	21	1.8	16.5	10.5	14
2T	ZGG	18.5	19.3	M15X1	7.5	23	1.8	18.5	13.5	17
3T	ZGG	23.5	24	M18X1	7.5	30.1	2.5	25	16.5	22



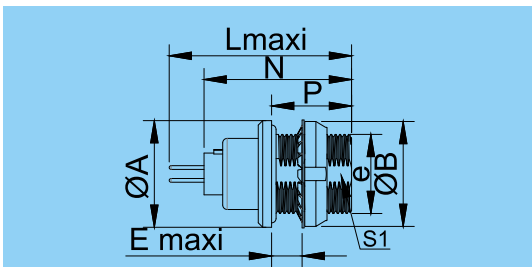
MGG rear nut fixed socket, key positioning G/A/J, single socket is chassis waterproof IP68



Item		Size								
Series	Model	A	B	e	E	M	L	N	S1	S2
00T	MGG	10	10.5	M7x0.5	5.5	1.2	18	15	6.3	9
0T	MGG	12	12.5	M9x0.6	6.5	1.5	22	18.5	8.2	11
1T	MGG	15.5	16	M12X1	6.5	1.8	26	21.5	10.5	14
2T	MGG	18.5	19.3	M15X1	8	1.8	30.5	25	13.5	17



ZEG outer nut fixed socket, key positioning G/A/J, single socket is not chassis waterproof

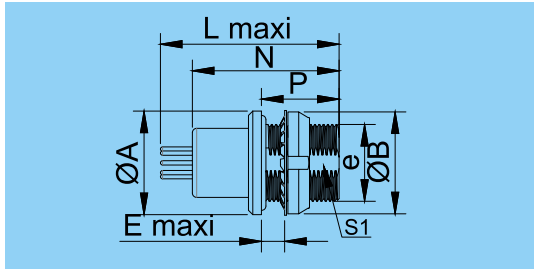


Item		Size							
Series	Model	A	B	e	E	P	L	N	S1
00T	ZEG	10	10	M7x0.5	5.5	7	16	13.5	6.3
0T	ZEG	12	11.8	M9x0.6	5.5	9	20.5	16.6	8.2
1T	ZEG	15.5	16	M12X1	6	10	23	18.8	10.5
2T	ZEG	18.5	19.3	M15X1	7.5	11	26.5	24.6	13.5
3T	ZEG	23.5	24	M18X1	7.5	12	30.1	25	16.5

T series



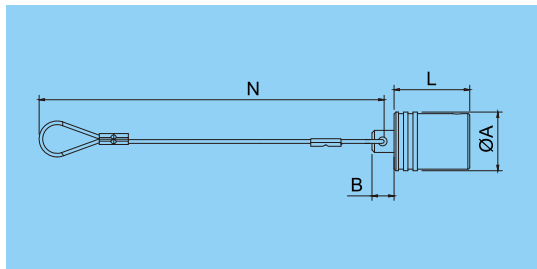
MEG outer nut fixed socket, key positioning G/A/J, single chassis waterproof IP68



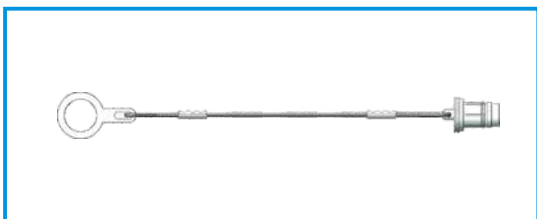
Item		Size							
Series	Model	A	B	e	E	P	L	N	S1
00T	MEG	10	10.5	M7x0.5	4.5	7	18	15	6.3
0T	MEG	12	11.8	M9x0.6	5.5	9	20	17.2	8.2
1T	MEG	15.5	16	M12X1	6	10	23	20	10.5
2T	MEG	18.5	20	M15X1	7.5	11	26.5	24.6	13.5



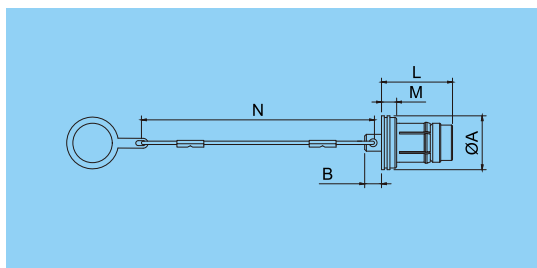
BTG T series plug dust proof cover



Product number	Series	Size			
		A	B	L	N
BTG.00T.CSS-100	00T	7	4.3	9	100
BTG.0T.CSS-100	0T	9.5	5	11	100
BTG.1T.CSS-120	1T	12	6.3	12.4	120
BTG.2T.CSS-120	2T	15	6.4	13.8	120



BZE T series socket dust proof cover



Product number	Series	Size				
		A	B	L	M	N
BZE.00T.CSC-085	00T	7	4.3	10.4	2.4	85
BZE.0T.CSC-085	0T	9.5	5	13.2	3.2	85
BZE.1T.CSC-100	1T	12	6.3	15.1	4.2	100
BZE.2T.CSC-100	2T	15	6.4	17.1	5.2	100

K series connectors are specially designed for outdoor applications

All models of this series can be waterproof when plugged in, and can reach the protection level of IP68 when properly assembled with the corresponding cable. K series has the same insulator as B series, and its main features are:

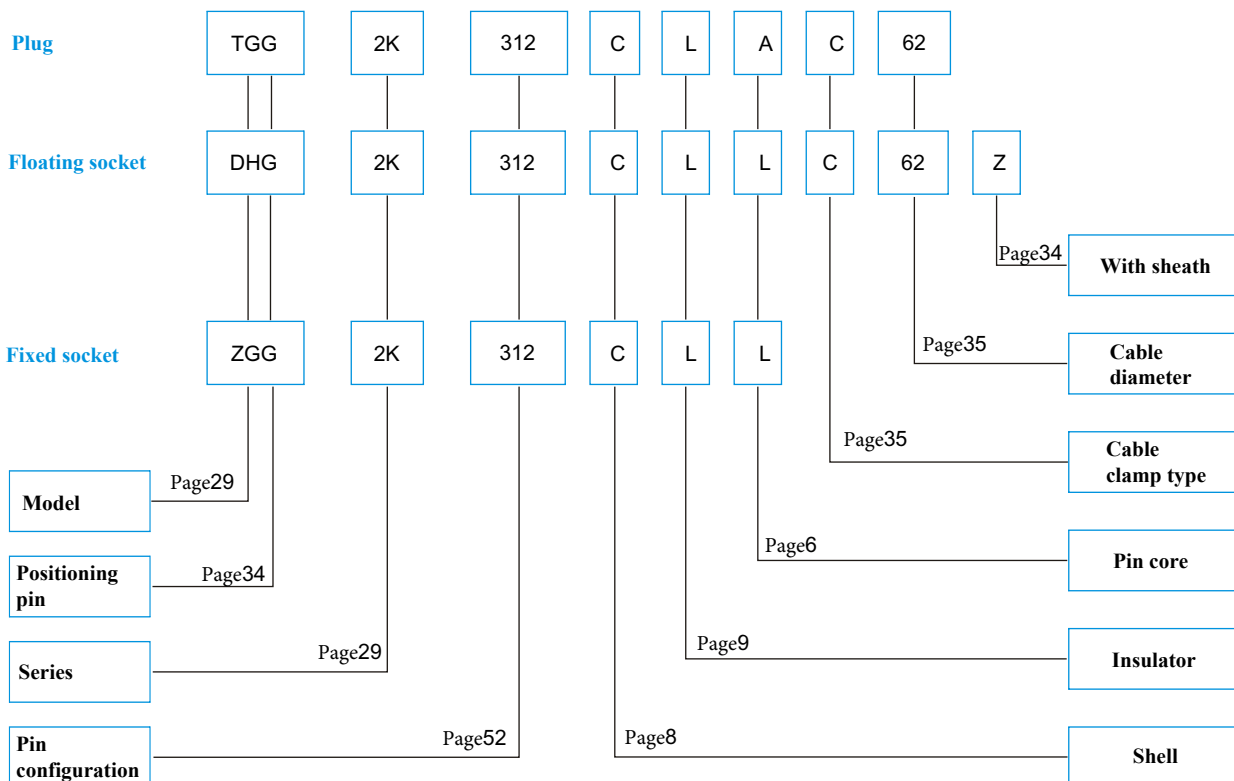
- Fast push-pull self-latching system;
- Rugged shell design is suitable for extremely harsh working environment;
- 360° shielding provides all-round EMC protection (anti-electromagnetic interference);
- Positioning pin system, G is a standard positioning pin, used for connector alignment;
- 2-48 multi-cores can be selected;
- Welding, printed circuit board pin core(Straight type or bending type);
- Various of positioning pins options can avoid mixed insertion between similar connectors;
- High-density installation can save space.

Technical characteristics of K series connectors:

Mechanical properties and environmental factors:

- Number of inserts: > 5000
- Humidity: At 60°C, the highest humidity can reach 95%
- Temperature range:
 - When filling silicone: -55°C-+200 °C, when filling epoxy resin: -55 °C-+125°C, when not filling (PPS insulator): -55°C-+200°C.
- Vibration: 10-20000Hz, 15g
- Mechanical shock: 100g.6ms
- Salt spray corrosion test: > 96h
- Protection level: IP68

K series product numbering rules:



Example of product number

Straight plug with wire clamp;

TGG.2K.312.CLAC62C=straight plug positioning pin (G), with clamp, 2K series, mu Iii-core type, 12-core, brass chrome-plated shell, PPS insulator welded male pin core, suitable for outer diameter C-type damp for 6.2mm cable.

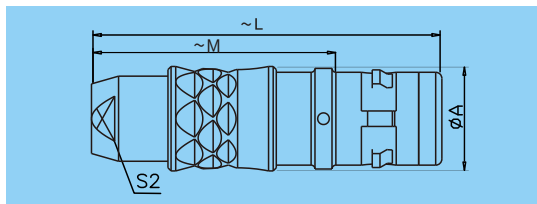
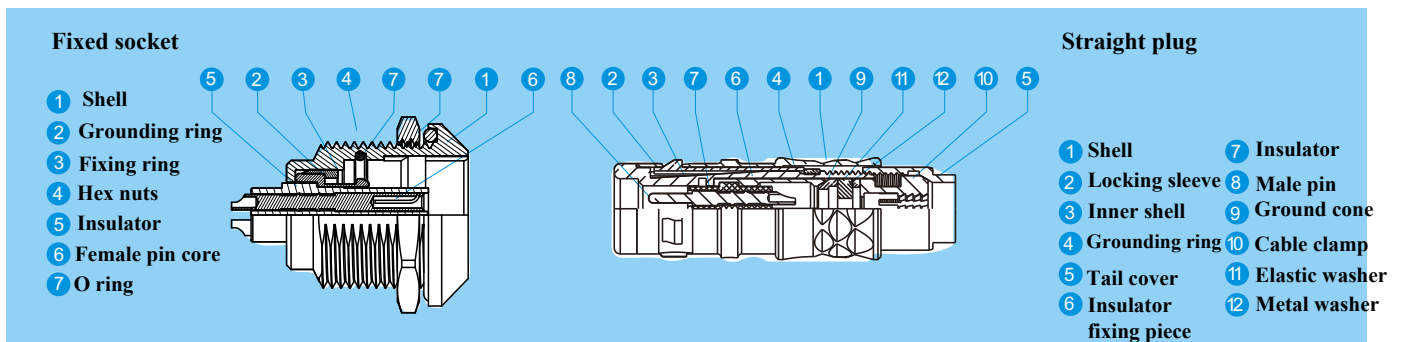
Floating socket:

DHG.2K.312.CLLC62Z=Floating socket, positioning pin (G), with clamp, 2K series, multi-core type, 12-core, brass chrome-plated shell, PPS insulator, welding-type female pin core, suitable for outer diameter C-type clamp for 6.2mm cable, tail cover with sheath

Fixed socket:

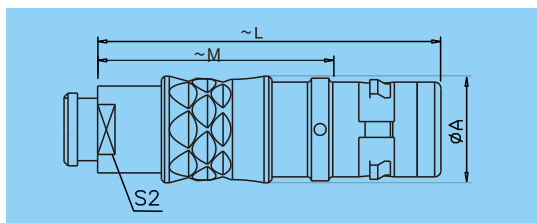
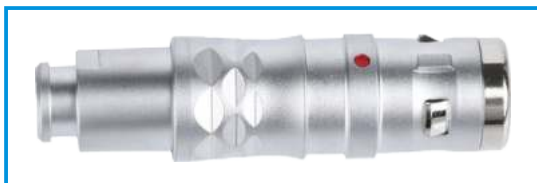
ZGG.2K.312.CLL--Flxed socket, nut fixed, positioning pin (G), 2K series, multi core type, 12-core, brass chrome-plated shell, PPS insulator, welded female pin core.

Product section view



TGG straight plug, positioning pin (G) or positioning pin (A , .. F,L and R), cable clamp fixed

Item		Size			
Series	Model	A	L	M	S2
0K	TGG	11	34	23	7
1K	TGG	13	42	28	9
2K	TGG	16.4	51.8	36	13
3K	TGG	18.9	60	41	15
4K	TGG	25.5	74	54	20

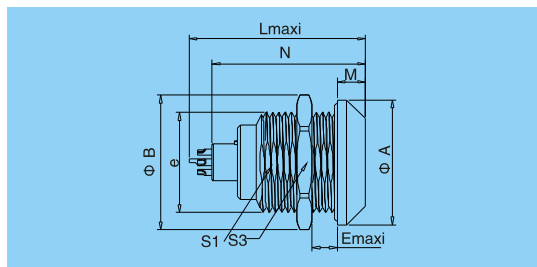


TGG straight plug , positioning pin (G) or positioning pin (A ... F,L and R) cable clamp fixed and sheath type tail cover

Item		Size			
Series	Model	A	L	M	S2
0K	TGG	10.9	34	23	8
1K	TGG	13	42	28	9
2K	TGG	16.4	52	36	13
3K	TGG	18.9	60	40	15
4K	TGG	25.5	74	53.5	20



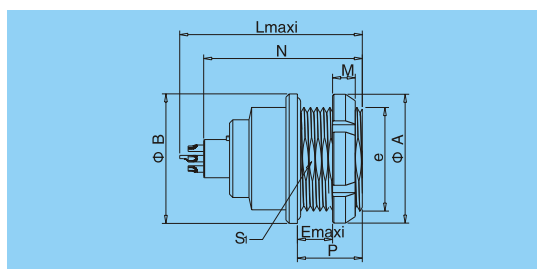
ZGG fixed socket, nut fixed, positioning pin (G) or positioning pin (A...F,L and R)



Item		Size								
Series	Model	A	B	e	E	L	M	N	S1	S3
0K	ZGG	18	19.5	M14x1.0	6	20.4	4.0	17.6	12.5	17
1K	ZGG	20	21.5	M16x1.0	10	27.2	4.5	23.2	14.5	19
2K	ZGG	25	27.0	M20x1.0	11	30.7	5.0	23.8	18.5	24
3K	ZGG	31	34.0	M24x1.0	10	36.2	6.0	33.6	22.5	30
4K	ZGG	37	40.0	M30x1.0	13.5	38.0	6.5	29.5	28.5	36



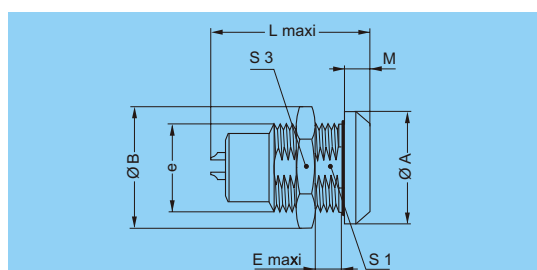
ZEG fixed socket, nut fixed, positioning pins (G) or positioning pins (A...F,L and R) (front nut fixed)



Item		Size								
Series	Model	A	B	e	E	L	M	N	P	S1
0K	ZEG	18	18	M14x1.0	3.5	21.7	3	17.8	7	12.5
1K	ZEG	20	20	M16x1.0	7	27.0	3	23.2	10	14.5
2K	ZEG	24.8	24.8	M20x1.0	6.5	30.7	3.5	28.6	10	18.5
3K	ZEG	30	30	M24x1.0	8.0	36.2	4.5	33.6	12.5	22.5



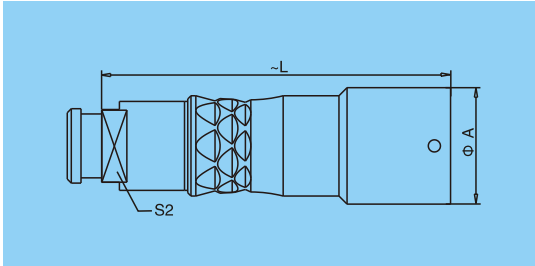
MGG fixed socket, nut fixed, positioning pin (G) or positioning pin (A...M and R) water-sealed or vacuum-sealed, IP68



Item		Size								
Series	Model	A	B	e	E	L	M	S1	S3	
0K	MGG	18	19.2	M14x1.0	5.5	20	4.0	12.5	17	
1K	MGG	20	21.5	M16x1.0	9	30.0	4.5	14.5	19	
2K	MGG	25	27.0	M20x1.0	10.5	33.7	5.5	18.5	24	
3K	MGG	31	34	M24x1.0	12.0	33.5	6.0	22.5	30	
4K	MGG	37	40	M30x1.0	13.5	40.2	6.5	28.5	36	



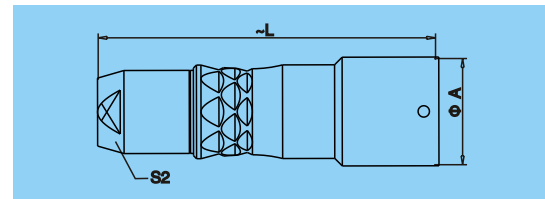
DHG floating socket, positioning pin (G) or positioning pin (A...F,L and R), cable clamp fixed and tail cover with sheath



Item		Size		
Series	Model	A	L	S2
0K	DHG	13	34	8
1K	DHG	15	45	9
2K	DHG	19	54	13
3K	DHG	23	64	15



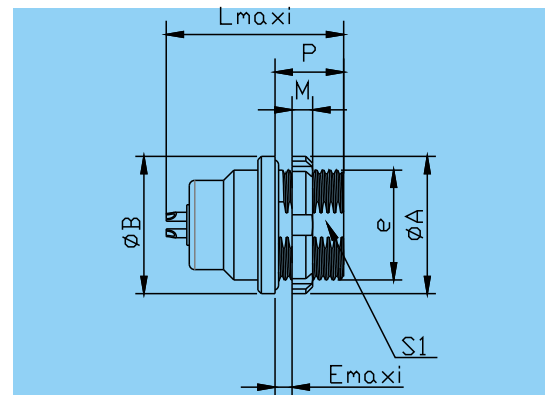
DHG floating socket, positioning pin (G) or positioning pin (A...F,L and R), cable clamp fixed



Item		Size		
Series	Model	A	L	S2
0K	DHG	13	38.0	7
1K	DHG	15	48.5	9
2K	DHG	19	52.0	12
3K	DHG	23	65.0	15



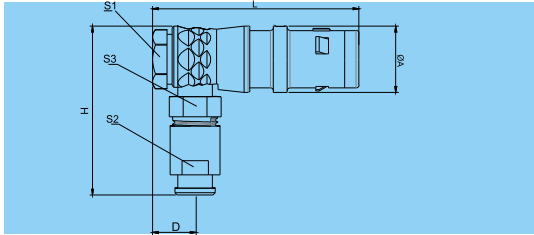
MEG fixed socket, nut fixed, positioning pin (G) or positioning pin (A...F, Land R) front nut fixed, the tail is filled with glue



Item		Size							
Series	Model	A	B	e	E	M	L	P	S1
0K	MEG	18	18	M14x1.0	3.5	3.0	21.7	7	12.5
1K	MEG	20	20	M16x1.0	7.0	3.0	30.0	10	14.5
2K	MEG	25	25	M20x1.0	6.5	3.5	33.7	10	18.5
3K	MEG	30	30	M24x1.0	7.0	4.5	35.2	12	22.5
4K	MEG	38	37	M30x1.0	7.5	5.5	36.5	13.5	28.5



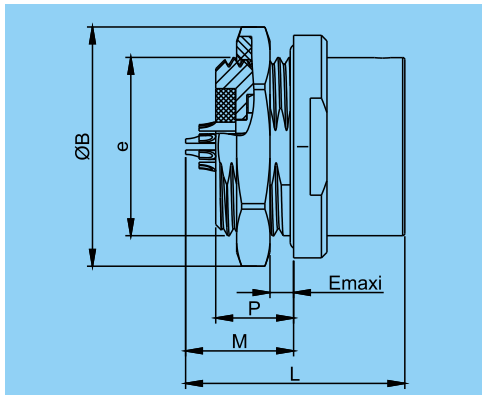
THG 90 ° angled plug, positioning pin (G) or positioning pin (A... E and R), cable clamp fixed and tail cover with sheath



Item		Size						
Series	Model	A	L	H	D	S1	S2	S3
0K	THG	11.5	36	27	7.6	10	8	8
1K	THG	14	43	33	8.8	12	9	10
2K	THG	17.5	51	40	10.5	15	12	13
3K	THG	21	60	47	11.5	18	15	15



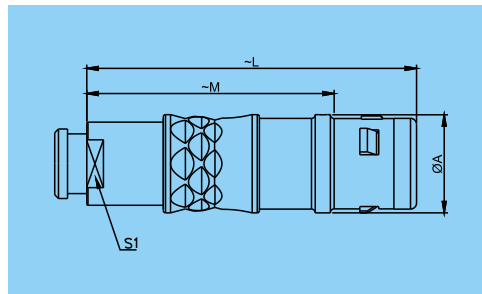
ZHXG fixed short socket , nut fixed ,used with TGXG plug



Item		Size					
Series	Model	B	P	e	E	L	M
1K	ZHXG	21.5	7	M16x1	4	19.7	9.7
2K	ZHXG	25	8.5	M20x1	5	20	13.8



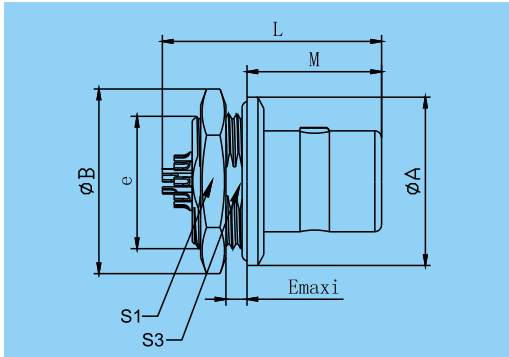
TGXG Short plug, used with the ZHXG



Item		Size			
Series	Model	A	L	M	S1
1K	TGXG	13	42	31	9
2K	TGXG	16.4	51.3	38.4	13

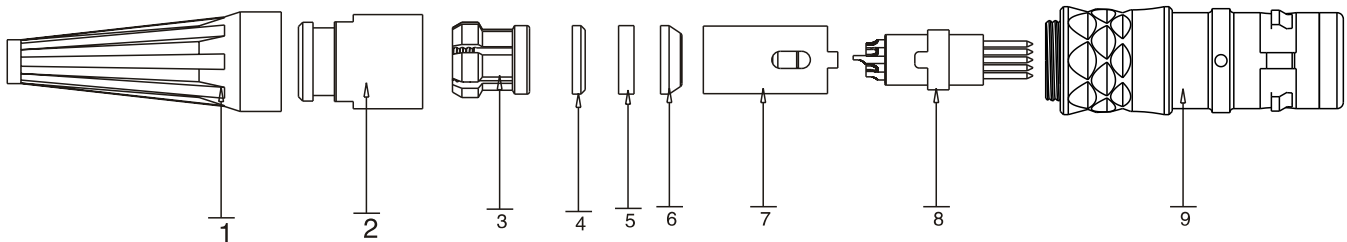


TAG fixed socket, without locking, nut fixed, positioning pin(G) or (G) or positioning pin (A. .. M and R)



Item		Size							
Series	Model	A	B	e	E	L	M	S1	S3
1K	TAG	20	21.5	M16X1	2.3	25	16	19	14.5

Assembly instructions for K series connector plugs



1. Pass the cable through the sheath①, the tail nut②, the cable clamp③, the V-shaped washer④, the cable sealing ring ⑤, the shielding wire pressing ring⑥, and then weld them to the insulator assembly ⑦ in order.
2. Install the insulator snap ring⑦ on the insulator assembly⑧, pay attention to the protrusions of the insulator snap ring ⑦ correspond to the gap of the insulator assembly⑧, in turn, the shielding wire pressing ring ⑥, cable sealing ring ⑤, V-shaped washer④, cable clamp③ Push it to a suitable position and ensure that the complete sheath of the cable is inserted into the shielding wire pressure ring⑥.
3. Put the assembled insulator assembly⑧ into the plug assembly⑨, pay attention to the notch on the insulator snap ring ⑦ corresponding to the protrusion in the plug assembly⑨.
4. Tighten the tail nut② to the plug assembly⑨.
5. Install the sheath① on the tail nut②.

Positioning pin

K series connector shell model is composed of 3 letters, the last letter indicates the location of the positioning pin and the type of pin (male pin and female pin)

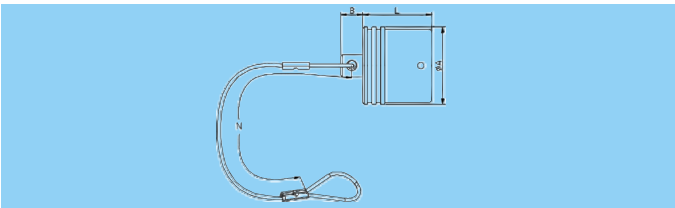
Socket front view	Number	Positioning pin No.	Angle	Series					Pin core type		
				0K	1K	2K	3K	4K	5K	Plug	Socket
	G	1		0°	0°	0°	0°	0°	0°	Male pin	Female pin
	A	2	α	30°	30°	30°	30°	30°	30°	Male pin	Female pin
	B	2		45°	45°	45°	45°	45°	45°	Male pin	Female pin
	C	2		60°	60°	60°	60°	60°	60°	Male pin	Female pin
	D	2	γ	95°	95°	95°	95°	95°	95°	Male pin	Female pin
	E	2	β	120°	120°	120°	120°	120°	120°	Male pin	Female pin
	F	2		145°	145°	145°	145°	145°	145°	Male pin	Female pin
	L	2	γ	75°	75°	75°	75°	75°	75°	Female pin	Male pin

Socket front view	Number	Positioning pin No.	Angle	Series					Pin core type		
				0K	1K	2K	3K	4K	5K	Plug	Socket
	R	5	α	-	-	-	95°	-	-	Male pin	Female pin
			β	-	-	-	115°	-	-		
			γ	-	-	-	35°	-	-		
			δ	-	-	-	25°	-	-		

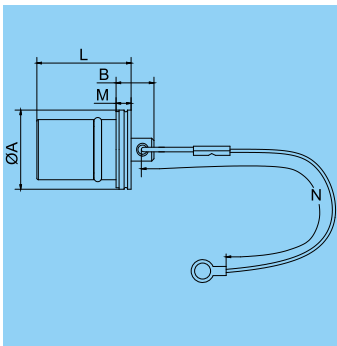


BTG K series plug dust cover, with positioning pin (G)

Shell material: brass chrome plated Lanyard material: stainless steel S/nylon nylon rope (N)
 O-ring seal: Silicone rubber Maximum working temperature: 135°C
 Waterproof rating: IP68



Product number	Series	Size(mm)			
		A	B	L	N
BTG.0K.CSS-085	0K	14	6	12.5	85
BTG.1K.CSS-085	1K	16	6	15.5	85
BTG.2K.CSS-085	2K	19	6	17.5	85
BTG.3K.CSS-120	3K	24	6	23.5	120

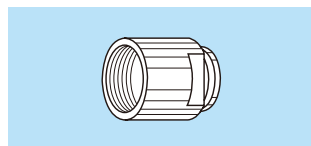


BZF K series socket dust cover

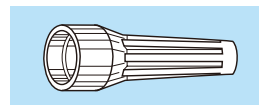
Shell material: brass chrome plated Lanyard material: stainless steel S/nylon nylon rope (N)
 O-ring seal: Silicone rubber Maximum working temperature: 135°C
 Waterproof rating: IP68

Product number	Series	Size(mm)				
		A	B	L	M	N
BZF.0K.CSD-085	0K	15	10	15	4	85
BZF.1K.CSD-085	1K	17	12	20	6	85
BZF.2K.CSD-085	2K	20.5	14	24	8	85
BZF.3K.CSD-120	3K	24	16	28	10	120

Suitable for K series sheath and adapter clamp



	No.	Tail cover	
		Type	Code
0K	Z	C	10 to 50
1K	Z	C	15 to 65
		K	70 to 85
2K	Z	C	15 to 85
		K	90 to 10

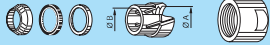


Need to order separately

Need to order separately	
GMA.0B...	..
GMA.1B...	..
GMA.2B...	..
GMA.2B...	..
GMA.3B...	..

Note: all dimensions unit is "mm"

C type



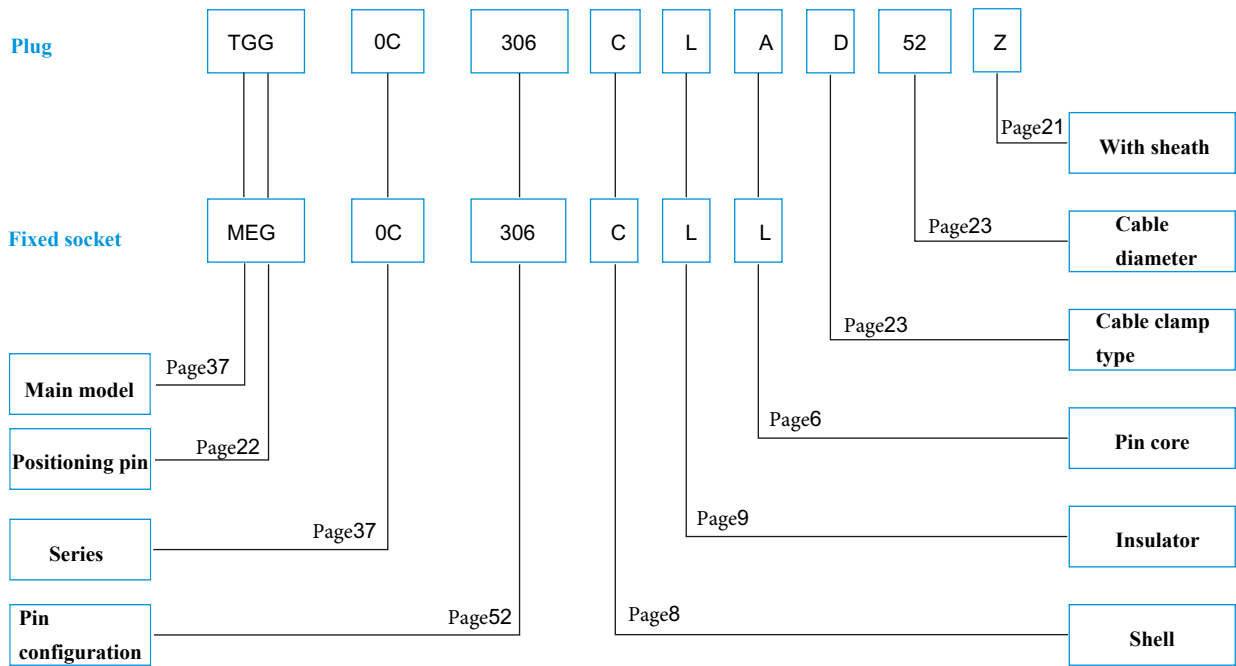
	Number		Cable clamp \varnothing		Cable \varnothing	
	Type	No.	$\varnothing A$	$\varnothing B$	Min.	Max.
0K	C	32	3.2	4.5	2.5	3
	C	42	4.2	4.5	3.1	4
	C	52	5.2	5.2	4.1	5
1K	C	42	4.2	5	3.1	4
	C	52	5.2	5.8	4.1	5
	C	62	6.2	6.3	5.1	6
	C	72	7.2	6.8	6.1	7
2K	C	52	5.2	6.2	4.1	5
	C	62	6.2	7.2	5.1	6
	C	72	7.2	8.2	6.1	7
	C	82	8.2	9.2	7.1	8
	C	92	9.2	10.2	8.1	9
	C	102	10.2	11.2	9.1	10
	C	110	11.2	11.2	10.1	11
3K	C	52	5.2	7.2	4.1	5
	C	62	6.2	8.2	5.1	6
	C	72	7.2	9.2	6.1	7
	C	82	8.2	10.2	7.1	8
	C	92	9.2	10.2	8.1	9
	C	102	10.2	10.2	9.1	10
	C	112	11.2	11.2	10.1	11
	C	122	12	12	11.1	11.8
4K	C	62	6.3	6	5.1	6.1
	C	72	7.3	7	6.1	7.1
	C	82	8.3	8	7.1	8.1
	C	92	9.3	9	8.1	9.1
	C	112	10.8	10.5	9.6	10.6
	C	122	12.3	12	11.1	12.1
	C	142	13.8	13.5	12.6	13.6
	C	152	15.3	15	14.1	15.1

Note: The extended conversion cable clamp is represented by K, for example, TGG.0K.302.CLAK72Z

Main features of C series connector:

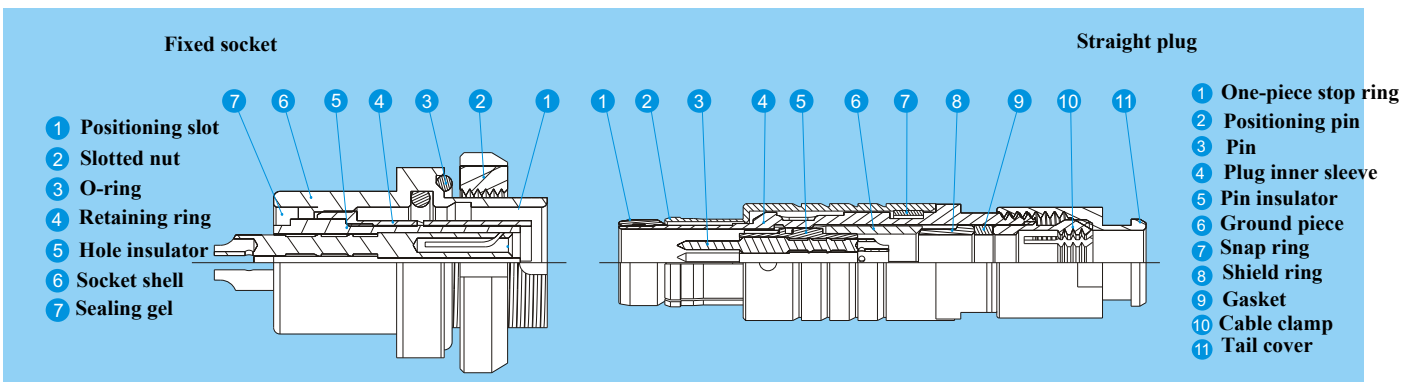
- Fast push-pull self-locking system;
- Safe split push-pull self-locking system;
- Multi-pin type 2-32 pins
- Welding, crimping and PCB(Printed Circuit Board) pin core
- High-density installation can save space;
- Positioning pin system,G is a standard Positioning pin, used for connector alignment;
- 360° shielding provides all-round EMC protection (anti-electromagnetic interference);
- Various of positioning pins options can avoid mixed insertion between similar connectors;
- Protection level:IP68
- Salt spray corrosion test: > 96h

C series product numbering rules:



Product section view

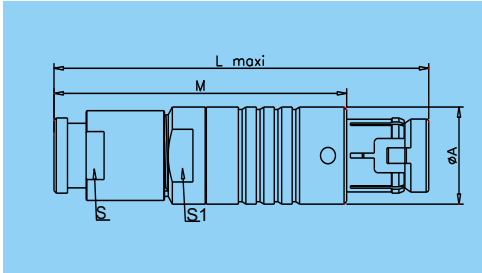
Seal glue



C series



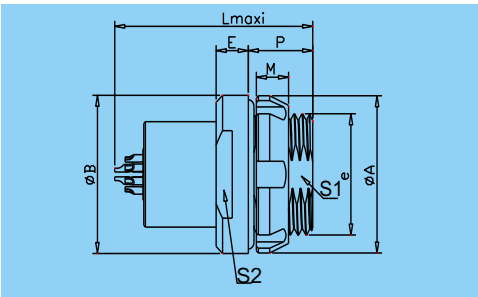
TGG straight plug, positioning pin (A) or positioning pin (A,B, ...)
tail sheath type tail cover or cable clamp fixed



Item		Size				
Series	Model	A	L	M	S	S1
0C	TGG	10.5	43	33	8	8
1C	TGG	11.8	52.3	35	9	10
2C	TGG	15	56.5	44.3	13	13
3C	TGG	18	61	40	16	15



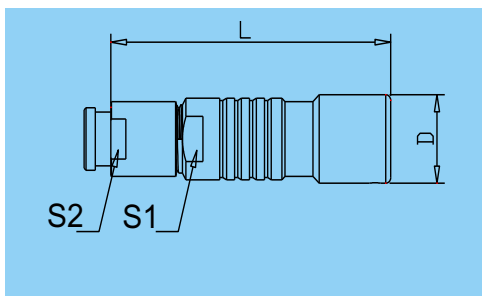
MEG fixed socket, nut fixed, positioning pin (G) or positioning pin (A,B, ...)
water-sealed or vacuum-sealed



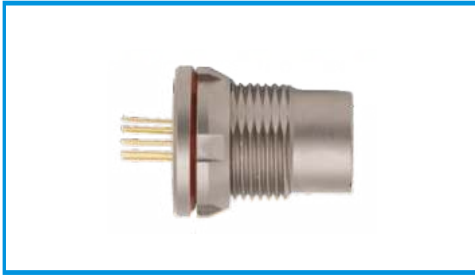
Item		Size								
Series	Model	A	B	e	L	E	M	P	S1	S2
0C	MEG	15	14.5	M10*0.5	20.3	3.5	3	6.5	9	11
1C	MEG	18	18	M14*1.0	23.4	4.1	4	8.1	12	15
2C	MEG	20	21	M16*1.0	27.8	4.8	3	7.8	15	18
3C	MEG	25	26	M20*1.0	33	4	3.5	8	18	22



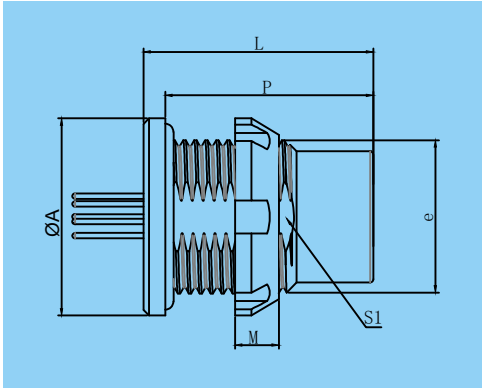
DHG floating socket, positioning pin (G) or positioning pin(A,B, ...)



Item		Size			
Series	Model	D	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



HEG protruding tail outer nut fixing socket, outer nut fixing (rear panel installation), multi-key positioning to prevent mis-insertion, IP68



Item		Size					
Series	Model	A	e	M	L	P	S1
1C	HEG	18	M14x1	4	21	19	12.5

No. 0-PCB board opening diagram

Pin core	PCB straight	PCB angled	Angle socket PCB straight	
2	Drill:0.8mm 	Drill:0.7mm 	Drill-contact:0.8mm Drill-mounting:0.8mm 	
3	Drill:0.8mm 	Drill:0.7mm 	Drill-contact:0.8mm Drill-mounting:0.8mm 	
4	Drill:0.6mm 	Drill:0.7mm 	Drill-contact:0.8mm Drill-mounting:0.8mm 	
5	Drill:0.6mm 	Drill:0.7mm 	Drill-contact:0.8mm Drill-mounting:0.8mm 	
6	Drill:0.6mm 	Drill:0.7mm 	Drill-contact:0.8mm Drill-mounting:0.8mm 	
7	Drill:0.6mm 	Drill:0.7mm 	Drill-contact:0.8mm Drill-mounting:0.8mm 	
9	Drill:0.6mm 	Drill:0.7mm 	Drill-contact:0.8mm Drill-mounting:0.8mm 	
10	Drill:0.6mm 	Drill:0.7mm 	Drill-contact:0.8mm Drill-mounting:0.8mm 	

No. 1 size-PCB board opening diagram

Pin core	PCB straight	PCB angled	Angle socket PCB straight	
2	Drill:0.8mm 	Drill:0.9mm 	Drill-contact:0.8mm Drill-mounting:0.8mm 	
3	Drill:0.8mm 	Drill:0.9mm 	Drill-contact:0.8mm Drill-mounting:0.8mm 	
4	Drill:0.6mm 	Drill:0.7mm 	Drill-contact:0.8mm Drill-mounting:0.8mm 	
5	Drill:0.8mm 	Drill:0.7mm 	Drill-contact:0.8mm Drill-mounting:0.8mm 	
6	Drill:0.6mm 	Drill:0.7mm 	Drill-contact:0.8mm Drill-mounting:0.8mm 	

No. 1 size-PCB board opening diagram

Pin core	PCB straight	PCB angled	Angle socket PCB straight	
7	<p>Drill:0.6mm</p>	<p>Drill:0.7mm</p>	<p>Drill-contact:0.8mm Drill-mounting:0.8mm</p>	
8	<p>Drill:0.6mm</p>	<p>Drill:0.7mm</p>	<p>Drill-contact:0.8mm Drill-mounting:0.8mm</p>	
10	<p>Drill:0.6mm</p>	<p>Drill:0.7mm</p>	<p>Drill-contact:0.8mm Drill-mounting:0.8mm</p>	
12	<p>Drill:0.6mm</p>	<p>Drill:0.7mm</p>		
14	<p>Drill:0.6mm</p>	<p>Drill:0.7mm</p>		
16	<p>Drill:0.6mm</p>	<p>Drill:0.7mm</p>		

No. 2 size-PCB board opening diagram

Pin core	PCB straight	PCB angled	Pin core	PCB straight	PCB angled
3	Drill:0.8mm Bohrung: 0.8mm 	Drill:0.9mm 	10	Drill:0.8mm 	Drill:0.7mm
4	Drill:0.8mm 	Drill:0.9mm 	12	Drill:0.6mm 	Drill:0.7mm
5	Drill:0.8mm 	Drill:0.9mm 	14	Drill:0.6mm 	Drill:0.7mm
6	Drill:0.8mm 	Drill:0.9mm 	16	Drill:0.6mm 	Drill:0.7mm
7	Drill:0.8mm 	Drill:0.7mm 	18	Drill:0.6mm 	Drill:0.7mm
8	Drill:0.8mm 	Drill:0.9mm 	19	Drill:0.6mm 	Drill:0.7mm

Technical characteristic

Treatment

Material and surface

Characteristic	Parameter	Standard
Push and pull time		IEC 60512-5 test 9a
Operating temperature (when mated)	When filling silicone: -55°C~+200 °C, when filling epoxy resin: -55 °C~+125°C, when not filling (PPS insulator): -55°C~+200°C.	-
Anti vibration	10-2000Hz, 15g	IEC 60512-4 test 6d
Anti impact	300g[3ms]	EIA-364-27
Salt spray corrosion test 2)	Verified	IEC 60512-6 test 11f
Protection level	IP68	IEC 60529
Cannon shock test	Satisfied	MIL STD-810-E
Lightning strike test	Satisfied	EIA-364-75
Acceleration	Satisfied	MIL STD-1344 (2011-1)

Characteristic	Parameter	Surface treatment
Shell, tail cover	Aluminium alloy(AA 6262A)	Nickel (5 μm) ¹⁾
Ground ring	Bronze(UNS C 54400)	Gold (1.5 μm)
Anti-inversion ratchet	PEEK Polyether ether ketone resin ink color	-
Insulator	PPS can choose PEEK	-
Pin	Brass/bronze	Nickel (3 μm)+Gold 1.5μm
Washer	FPM + FVMQ	-
Sealing ring	Silicone	-

1) smoke black 2)recommend brass chrome plated shell

Product numbering rule

TG . A . 1M . 307 . X L A

Model

Positioning pin(color code)

A=blue(standard)

P=yellow

U=green

S=red(counter rotation)

T=orange(counter rotation)

Series: 0M to 4M

Pin core type

L=welded female pin core

A=welded male pin core

N=PCB board type female pin core

D=PCB board type male pin core

Pin configuration

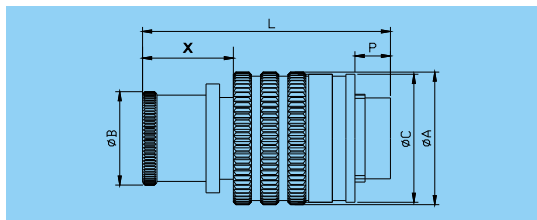
Example of product number

TGA.1 M. 307.XLA= Straight plug, positioning pin (A), 1 M series, 7 welded male pin cores

Positioning pin and polar Positioning pin system

The model number of the M series connector consists of 3 letters. The last letter indicates the position of the positioning pin and the corresponding needle core type. Straight plugs with A, P and Li-shaped positioning pins, with male pin cores. Straight plug with S-shaped positioning pin, with female pin core.

Model	Positioning pin no.	Series 0M to 1M		Color code	Pin core type(electric)	
		Angle			Plug	Socket
		β	γ			
□ A	3	165°	30°	Blue	Male pin	Female pin
□ P		150°	60°	Yellow		
□ U		130°	100°	Green		
□ S		155°	50°	Red	Female pin	Male pin
□ T		135°	90°	Orange		

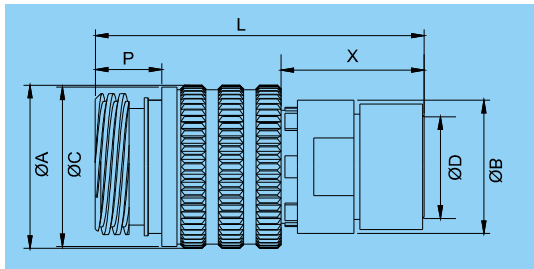


TG straight plug, positioning pin (A) or positioning pin (P and U), with nodular anti-skid ring

Series	Item	Model	Size					
			A	B	C	L	P	X
0M		TG	13	8.5	12.7	27.3	3.9	10
1M		TG	14.6	10.5	14.1	27.3	3.9	10
2M		TG	17.6	14	17.1	27.7	3.9	10
3M		TG	20	16	19.4	28.4	3.9	10
4M		TG	25	20.7	24.5	33	3.4	10.6



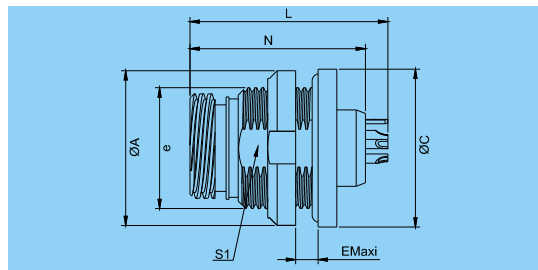
DM floating socket, positioning pin (A),positioning pin (P and U),grooved anti-skid ring, tail injection sealing



Item		Size						
Series	Model	A	B	C	D	L	P	X
0M	DM	13	8.8	12.7	8.0	26.2	5.3	11.4
1M	DM	14.2	13.2	14.2	9.7	25.6	5.3	6.7
2M	DM	17.6	14	17.0	11.0	34	5.3	6.7



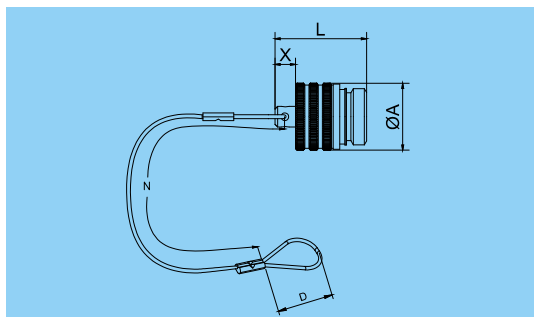
ZG fixed socket, nut fixed, positioning pin (A),positioning pin (P and U) outer nut install



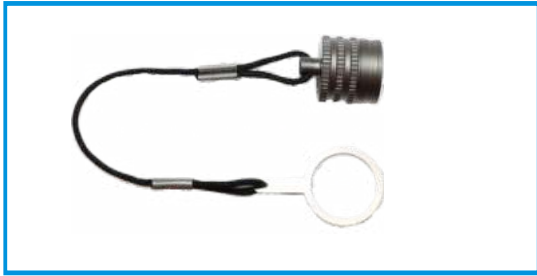
Item		Size						
Series	Model	A	C	e	E	L	N	S1
0M	ZG	17.0	17.0	M13X0.75	5.5	21.5	18.9	11.5
1M	ZG	17.7	18.0	M14X1	4.5	25	21.6	12.5
2M	ZG	20.8	21.0	M17X1	4.5	27	22.8	15.5
3M	ZG	23.0	22.8	M19X1	7.0	34	29.0	17.5



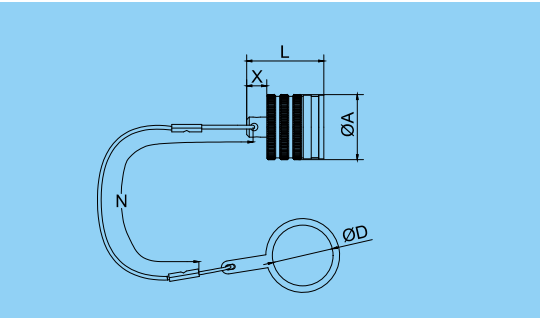
BTA plug dust cover



Item	Size				
Product number	A	L	X	N	D
BTA.0M.XNS-085	12.7	17.8	4	85	10
BTA.1M.XNS-085	14.6	17.8	4	85	12
BTA.2M.XNS-085	17.1	24.6	6	85	14
BTA.3M.XNS-120	19.1	24.6	6	120	16

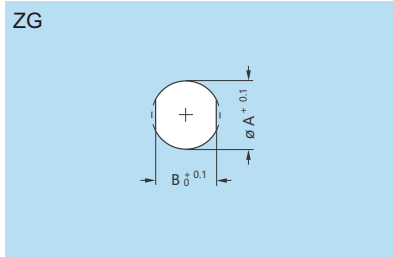


BZF socket dust cover



Item	Size				
	Product number	A	L	X	N
BZF.0M.XNC-085	12.7	15.4	4	85	13
BZF.1M.XNC-085	14.1	15.4	4	85	14
BZF.2M.XNC-085	17.1	15.4	4	85	18.1
BZF.3M.XNC-120	19.1	19.5	6	120	19.1

Panel opening size



Opening size

Series	Model	
	ZG •	
	Ø A	B
0M	13.1	11.6
1M	14.1	12.6
2M	17.1	15.6
3M	19.1	17.6

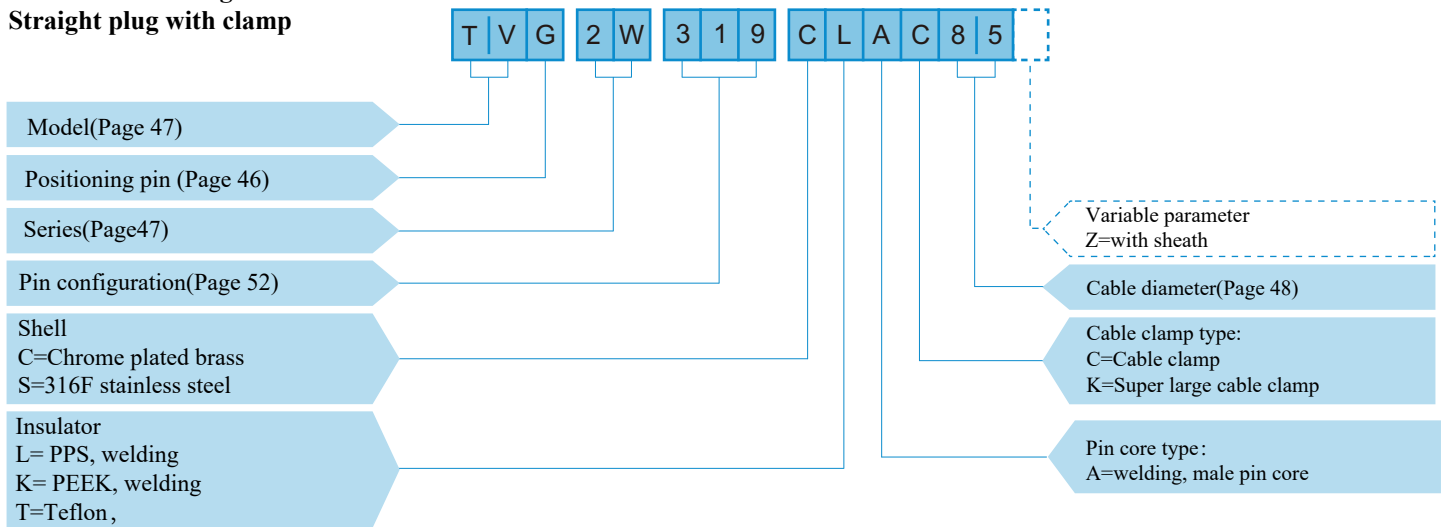
Assembly torque panel

Series	Torque(N.m)
0M	1.0
1M	1.5
2M	2.0

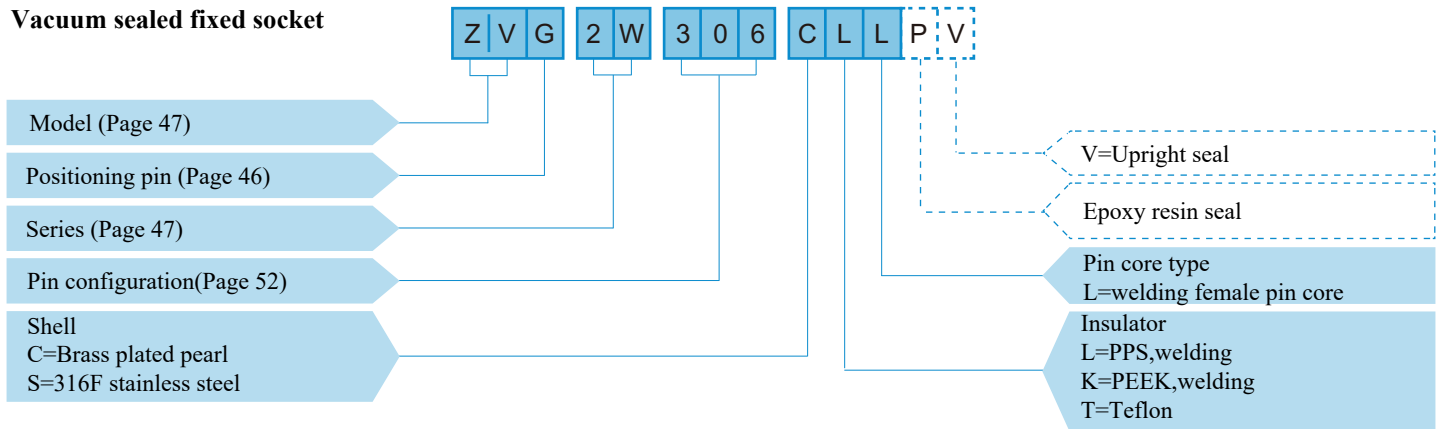
PCB drilling parameters(HE)

<p>0M. 302</p>	<p>0M. 303</p>	<p>0M. 304</p>	<p>0M. 305</p>
<p>1M. 305</p>	<p>1M. 307</p>	<p>1M. 308</p>	<p>2M. 308</p>
<p>2M. 310</p>	<p>2M. 312</p>	<p>2M. 319</p>	

**Product numbering rule
Straight plug with clamp**



Vacuum sealed fixed socket



Positioning pin

No.	Number	Angle	Series 0W-5W	Pin core type		Note
				Plug	Socket	
G	1		0°	Male	Female	●
A	2	α	30°	Male	Female	●
B	2	α	45°	Male	Female	●
L	2	γ	75°	Female	Male	○

● Have
○ Configurable

Technical feature

Mechanical properties and environmental factors

Feature	Parameter	Standard
Push and pull times	>1000 times	IEC 60512-5 test 9a
Temperature range	When filling silicone: -55°C+200°C, When filling epoxy resin: -55°C+125°C, When not filling (PPS insulator): -55°C+200°C.	
Salt spray corrosion test	96 h	IEC 60512-6 test 11f
Waterproof-level(when pushing and pulling)	IP 68	IEC 60529
Resistance of hydrostatic pressure (when pushing and pulling)	~ 30 bars ¹⁾	IEC 60512-7 test 14d
Environmental experiment	20/200/21	IEC 60068-1

Electrical feature

Feature	Parameter	Standard
Shielding effect	at 10 MHz	> 95 dB
	at 1 GHz	> 80 dB

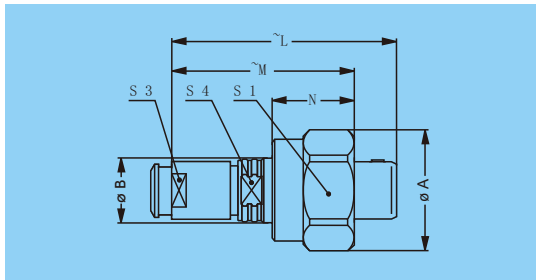
Note:

In order to perform correctly and withstand pressure, the cable assembly needs to be manufactured according to our recommended usage and instructions.



TVG straight plug, positioning pin (G) or positioning pin (A, B, or L), cable clamp or tail cover with sheath type

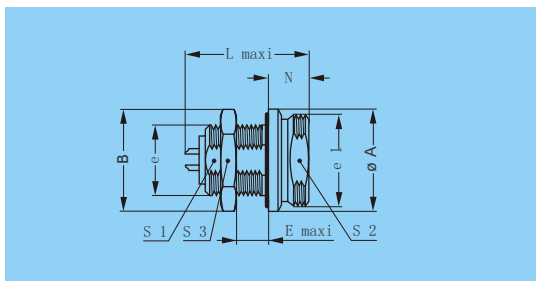
Note: To order the model with "Z" the sheath need to order separately



Item		Size							
Series	Model	A	B	L	M	N	S1	S3	S4
0W	TVG	17.2	10.0	36.0	30.8	13.5	16	8	8
1W	TVG	19.2	12.0	46.5	35.1	14.0	18	9	9.4
2W	TVG	23.5	16.0	52.5	43.0	15.5	22	12	13
3W	TVG	27.8	17.0	60.5	46.9	16.5	26	15	16
4W	TVG	34.3	22.0	71.5	57.5	17.5	32	19	-

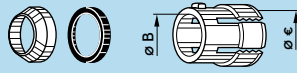


ZVG fixed socket, nut fixed. positioning pin (G) or positioning pin (A, B, or L)



Item		Size										
Series	Model	A	B	e	e1	E	L	N	S1	S2	S3	
0W	ZVG	16.2	16.0	M12X1.0	M14X1.0	4.0	21.7	8.0	10.5	12.5	14	
1W	ZVG	19.5	19.0	M14X1.0	M16X1.0	10.0	27.0	8.0	12.5	14.5	17	
2W	ZVG	22.5	21.8	M16X1.0	M20X1.0	9.0	30.7	9.0	14.5	18.5	19	
3W	ZVG	26.6	27.0	M20X1.0	M24X1.0	13.0	36.2	9.5	18.5	22.5	24	
4W	ZVG	32.8	34.2	M24X1.0	M30X1.0	15.0	40.2	9.5	22.5	28.5	30	
5W	ZVG	48.0	53.0	M38X1.5	M45X1.5	18.0	47.5	12.5	35.5	42.5	46	

0W, 1W, 2W, 3W series

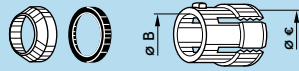


Number		Cable clamp ø		Cable ø		
		ø A	ø B	Max.	Min.	
0W	C 10 ¹⁾	1.6	–	1.2	1.0	
	C 15 ¹⁾	1.6	–	1.5	1.3	
	C 20 ¹⁾	2.1	–	2.0	1.6	
	C 25	3.1	–	2.5	2.1	
	C 30	3.1	–	3.0	2.6	
	C 35	4.2	4.2	3.5	3.1	
	C 40	4.2	4.2	4.0	3.6	
	C 45	5.2	5.2	4.5	4.1	
	K 50	5.2	5.2	5.0	4.6	
	K 55	6.2	6.2	5.5	5.1	
	K 60	6.2	6.2	6.0	5.6	
	K 65	7.2	6.7	6.5	6.1	
	1W	C 30	3.2	–	3.0	2.6
		C 35	4.2	–	3.5	3.1
C 40		4.2	–	4.0	3.6	
C 45		5.2	–	4.5	4.1	
C 50		5.2	–	5.0	4.6	
C 55		6.2	6.2	5.5	5.1	
C 60		6.2	6.2	6.0	5.6	
C 65		7.2	6.7	6.5	6.1	
K 70		7.2	–	7.0	6.6	
K 75		8.2	8.2	7.5	7.1	
K 80		8.2	8.2	8.0	7.6	
K 85		9.2	8.6	8.5	8.1	
2W		C 30	3.2	–	3.0	2.6
		C 35	4.2	–	3.5	3.1
	C 40	4.2	–	4.0	3.6	
	C 45	5.2	–	4.5	4.1	
	C 50	5.2	–	5.0	4.6	
	C 55	6.2	–	5.5	5.1	
	C 60	6.2	–	6.0	5.6	
	C 65	7.2	–	6.5	6.1	
	C 70	7.2	–	7.0	6.6	
	C 75	8.2	–	7.5	7.1	

Number		Cable clamp ø		Cable ø	
		ø A	ø B	Max.	Min.
2W	C 80	8.2	8.2	8.0	7.6
	C 85	9.2	8.6	8.5	8.1
	K 90	9.2	–	9.0	8.6
	K 95	10.2	10.2	9.5	9.1
	K 10	10.2	10.2	10.0	9.6
	K 11	11.2	10.6	10.5	10.1
	3W	C 30	3.2	–	3.0
C 35		4.2	–	3.5	3.1
C 40		4.2	–	4.0	3.6
C 45		5.2	–	4.5	4.1
C 50		5.2	–	5.0	4.6
C 55		6.2	–	5.5	5.1
C 60		6.2	–	6.0	5.6
C 65		7.2	–	6.5	6.1
C 70		7.2	–	7.0	6.6
C 75		8.2	–	7.5	7.1
C 80		8.2	–	8.0	7.6
C 85		9.2	–	8.5	8.1
C 90		9.2	–	9.0	8.6
C 95		10.2	10.2	9.5	9.1
C 10		10.2	10.2	10.0	9.6
C 11	11.2	10.6	10.5	10.1	
K 11	12.3	–	12.0	10.6	
K 12	13.8	13.8	12.8	12.1	
K 13	13.8	13.8	13.5	12.9	
K 14	15.3	15.3	14.0	13.6	
K 15	15.3	15.3	15.0	14.1	

Note: The unit of all dimensions is "mm"

0W, 1W, 2W, 3W series



4W

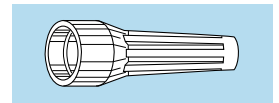
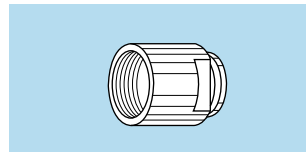
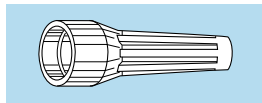
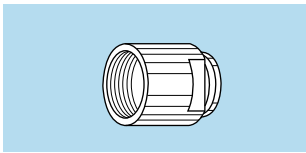
Number		Cable clamp ø		Cable ø	
Type	No.	ø A	ø B	Max.	Min.
C	50	6.3	-	5.0	4.8
C	55	6.3	-	5.5	5.1
C	60	6.3	-	6.0	5.6
C	65	7.3	-	6.5	6.1
C	70	7.3	-	7.0	6.6
C	75	8.3	-	7.5	7.1
C	80	8.3	-	8.0	7.6
C	85	9.3	-	8.5	8.1
C	90	9.3	-	9.0	8.6
C	95	10.8	-	9.5	9.1
C	10	10.8	-	10.5	9.6
C	11	12.3	-	12.0	10.6
C	12	13.8	13.8	12.8	12.1
C	13	13.8	13.8	13.5	12.9
C	14	15.3	15.3	14.0	13.6
C	15	15.3	15.3	15.0	14.1
K	16	17.8	-	16.5	15.6
K	17	17.8	-	17.5	16.6
K	18	19.8	-	18.5	17.6
K	19	19.8	-	19.5	18.6
K	20	21.8	-	20.5	19.6
K	21	21.8	-	21.5	20.6
K	22	23.8	23.8	22.5	21.6
K	23	23.8	23.8	23.5	22.6

5W

Number		Cable clamp ø		Cable ø	
Type	No.	ø A	ø B	Max.	Min.
C	10	11.8	-	10.5	9.6
C	11	11.8	-	11.5	10.6
C	12	13.8	-	12.5	11.6
C	13	13.8	-	13.5	12.6
C	14	15.8	-	14.5	13.6
C	15	15.8	-	15.5	14.6
C	16	17.8	-	16.5	15.6
C	17	17.8	-	17.5	16.6
C	18	19.8	-	18.5	17.6
C	19	19.8	-	19.5	18.6
C	20	21.8	-	20.5	19.6
C	21	21.8	-	21.5	20.6
C	22	23.8	23.8	22.5	21.6
C	23	23.8	23.8	23.5	22.6

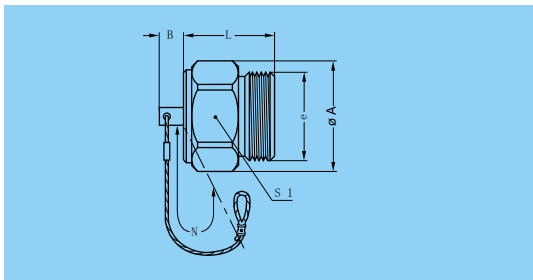
Note: The unit of all dimensions is "mm"

Variable parameter



Number	Z	Tail cover		Need to order separately	No.	Z	Tail cover		Need to order separately
		Type	Code				Type	Code	
0W	Z	C	30 to 45	GMA.0B.●●●●●	3W	Z	C	30 to 10	GMA.3B.●●●●●
		K	50	GMA.1B.●●●●●			K	11 to 15	GMA.4B.●●●●●
1W	Z	C	30 to 65	GMA.1B.●●●●●	4W	Z	C	50 to 15	GMA.4B.●●●●●
		K	70 to 85	GMA.2B.●●●●●					
2W	Z	C	30 to 85	GMA.2B.●●●●●	*Sheath need to order separately				
		K	90 to 10	GMA.3B.●●●●●					

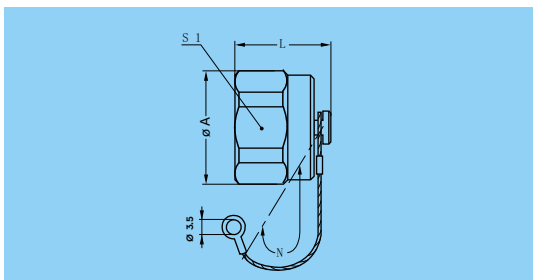
Attachment



BTG G-positioned plug dust cover(IP68 and hydrostatic pressure resistant 30bars)

Drawstring material: stainless steel, collar material: yellow steel forged nickel, dimension tolerance: ±5mm
 Body material: N brass nickel plated (3µm); S stainless steel

Item		Size					
Series	Model	A	B	e	L	N	S1
0W	BTG	17.2	6	M14X1.0	12.5	85	16
1W	BTG	19.3	6	M16X1.0	15.5	85	18
2W	BTG	23.5	6	M20X1.0	17.5	85	22
3W	BTG	27.8	6	M24X1.0	22.0	120	26
4W	BTG	34.3	10	M30X1.0	22.5	120	32
5W	BTG	50.0	10	M45X1.5	27.0	120	47



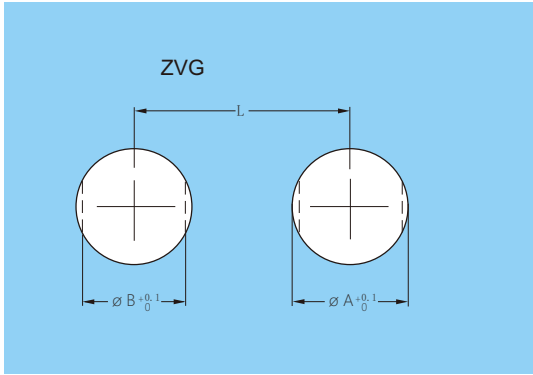
BZF fixed socket dust cover (IP68 after installation)

Drawstring material: stainless steel, collar material: yellow steel forged nickel, dimension tolerance: ±5mm
 Body material: N brass nickel plated (3µm); S stainless steel

Item		Size			
Series	Model	A	L	N	S1
0W	BZF	17.2	13.7	85	16
1W	BZF	19.3	13.7	85	18
2W	BZF	23.5	14.7	85	22
3W	BZF	27.8	14.7	120	26
4W	BZF	34.3	14.7	120	32
5W	BZF	50.0	16.2	120	47

W series

Panel opening



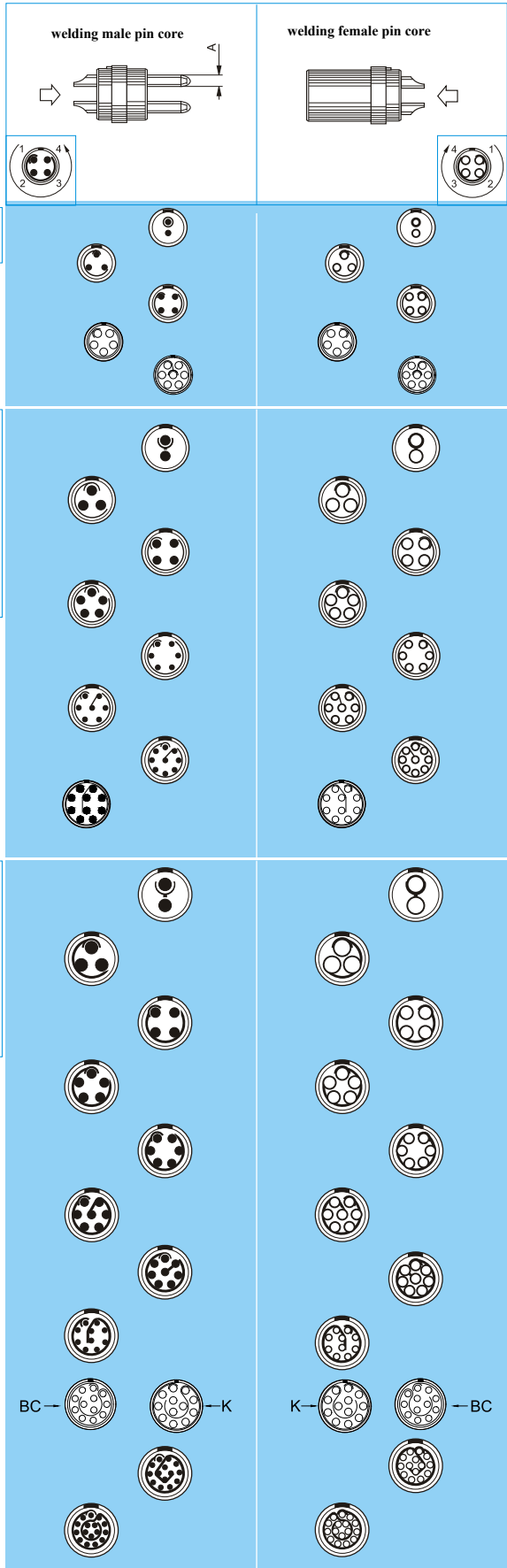
Item	Size		
Series	A	B	L
0W	12.1	10.6	19.0
1W	14.1	12.6	21.0
2W	16.1	14.6	25.5
3W	20.2	18.6	30.0
4W	24.2	22.6	37.0
5W	38.2	35.6	53.0

Nut installation torque

Components	Torque					
	0W	1W	2W	3W	4W	5W
Tail cover	0.7	0.8	2	3	5	8
Socket installation nut	5	7	9	12	17	22
Connect nut	0.7	0.8	2	3	5	8

1N = 0.102 kg

B, K, C, M, W series pin core configuration

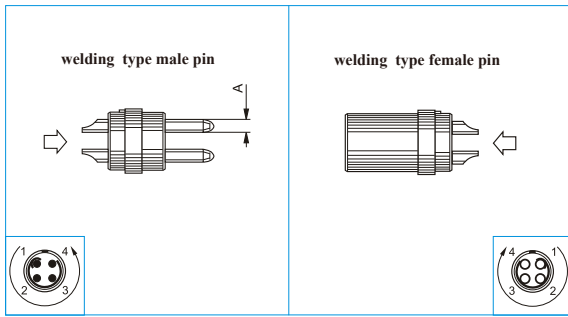


- Regular model, priority choice
- Special model: choose when have special requirements

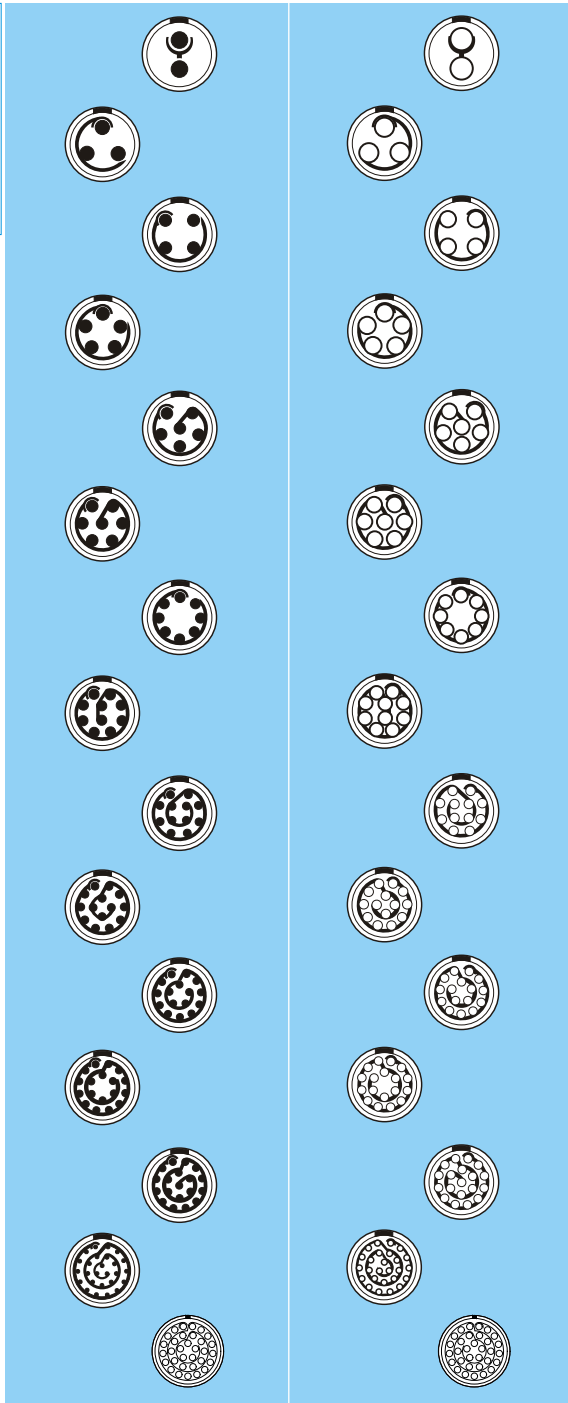
Number	Pin No.	ΦA (mm)	Pin core type			Welding pin core		Rated current (A)
			Welding pin	PCB straight pin core	PCB bend pin core	Pin to pin Test voltage (kVrms)	Pin to shell Test voltage (kVrms)	
302	2	0.5	●	●	●	1.00	0.95	5.0
303	3	0.5	●	●	●	0.80	0.95	3.0
304	4	0.5	●	●	●	0.80	0.65	2.0
305	5	0.35	●	●	●	0.7	1.0	1.7
307	7	0.3	●	●	●	0.35	0.3	0.5
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
310	10	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
312	12	0.5	●	●	●	0.75	1.50	2.0
314	14	0.5	●	●	●	0.75	1.20	2.0
316	16	0.5	●	●	○	0.75	1.25	1.5

Note: 1)When the socket PCB has a 90° angled pin core, the rated current is 6A
 2)When the socket PCB has a 90° angled pin core, the rated current is 12A
 3)Only used for connectors with male pins

Pin configuration



2B
2K
2C
2M
2W
2T



- Regular model. priority choice
- Special model: choose when have special requirements

Number	Pin No.	Φ A (mm)	Pin core type			Welding pin		Rated current (A)
			Welding pin	PCB Straight pin core	PCB bend pin core	Pin-Pin test voltage (kVrms)	Pin-Shell test voltage (kVrms)	
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
326	26	0.5	●	●	○	0.95	1.30	2.0
332	32	0.5	●	●	○	0.8	1.2	1.5

Notes: 1)When the socket equipped with PCB board connected to 90° angled pin core, the rated current is 6A 2)When the socket equipped with PCB board connected to 90° angled pin core, pin core, the rated current is 12A

Pin configuration

	welding male pin core		welding female pin core		Number	Pin No.	ØA (mm)	Pin core type			Weld pin core		
	crimp male pin core		crimp female pin core					Welding pin	PCB Straight pin core	PCB bend pin core	Pin-Pin test voltage (kVrms)	Pin-Shell test voltage (kVrms)	Rated current (A)
3B 3K 3C 3M 3W 3T					302	2	3.0	●	○	-	2.10	1.55	35.0
					303	3	2.0	●	●	○	1.90	1.50	25.0
					304	4	2.0	●	●	○	1.45	1.25	19.0
					305	5	1.6	●	●	○	1.90	1.25	19.0
					306	6	1.6	●	●	○	1.60	1.15	17.0
					307	7	1.6	●	●	○	1.70	1.25	15.0
					308	8	1.3	●	●	●	1.65	1.15	13.0
					309	8 9	1.3 2.0	●	●	-	1.35 1.35	1.05 1.05	6.0 15.0
					310	10	1.3	●	●	○	1.25	0.90	12.0
					312	12	0.9	●	●	●	1.45	1.00	9.0
					314	14	0.9	●	●	●	1.20	1.20	9.0 ²⁾
					316	16	0.9	●	●	●	1.20	0.85	8.0
					318	18	0.9	●	●	●	1.20	1.05	7.0
					320	20	0.7	●	●	●	1.00	0.90	6.0
					322	22	0.7	●	●	○	1.00	0.90	5.5
					324	24	0.7	●	●	●	0.95	0.80	4.0
					326	26	0.7	●	●	○	0.95	0.70	4.0
					330	30	0.7	●	●	●	0.80	0.70	3.5

- Regular model. priority choice
- Special model: choose when have special requirements

Notes: 1)When the socket equipped with PCB board connected to 90° angled pin core, the rated current is 6A 2)When the socket equipped with PCB board connected to 90° angled pin core, pin core, the rated current is 12A

4B
4K
4C
4M
4W
4T

	welding male pin core		welding female pin core		Number	Pin No.	ØA (mm)	Pin core type		Weld pin core		Rated current (A)
	crimp male pin core		crimp female pin core					Welding pin	PCB straight pin core	Pin-Pin test voltage (kVrms)	Pin-Shell test voltage (kVrms)	
					304	4	3.0	●	○	2.10	1.50	30.0
					306	6	2.0	●	○	2.00	1.75	24.0
					307	7	2.0	●	○	2.00	1.80	20.0
					310	10	1.6	●	○	1.85	1.30	17.0
					312	12	1.3	●	○	1.45	1.60	12.0
					316	16	0.9	●	●	1.35	1.50	10.0
					320	20	0.9	●	●	1.35	1.00	8.0
					324	24	0.9	●	●	1.20	1.45	7.0
					330	30	0.9	●	●	0.95	0.85	5.0
					340	40	0.7	●	●	0.90	0.90	2.0
					348	48	0.7	●	●	0.70	0.70	1.5

- Regular model. priority choice
- Special model: choose when have special requirements

Notes: 1)When the socket equipped with PCB board connected to 90° angled pin core, the rated current is 6A 2)When the socket equipped with PCB board connected to 90° angled pin core, pin core, the rated current is 12A

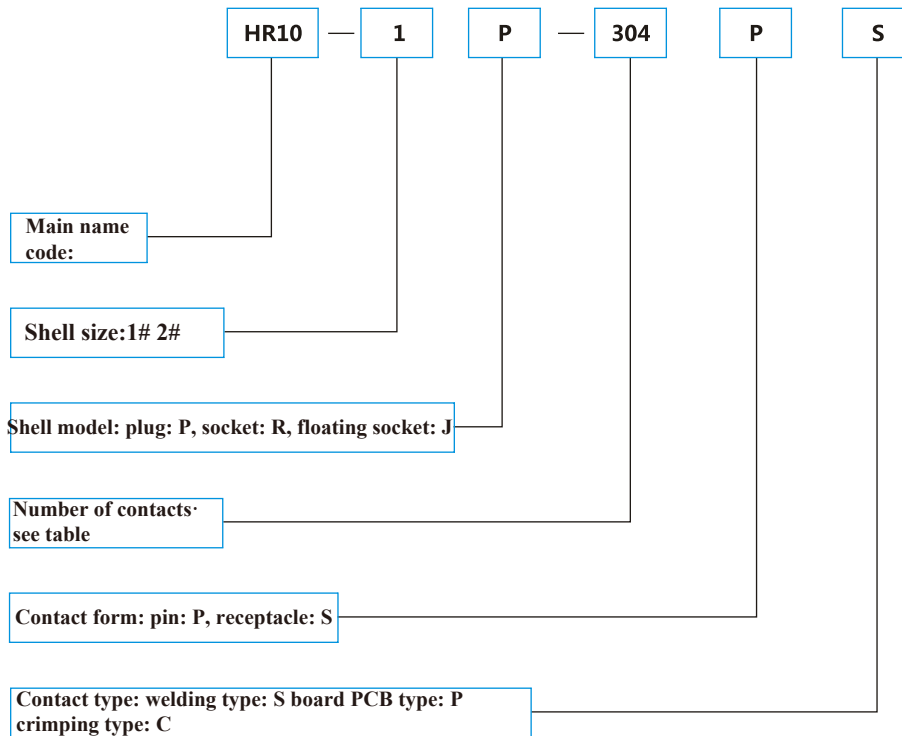
Pin configuration

HR10 mini push-pull self-locking circular electrical connectors are widely used in electronics, instrumentation, video processing, medical equipment, etc.

Features of HR10 series products:

- Push-pull self-locking connection separation, simple and fast (shell surface non-slip design)
- The exquisite self-locking device can ensure firm and reliable connection
- Reasonable five-key design, with complete anti-blind mating function.
- Miniaturized and exquisite structure design. (It can effectively save equipment space and realize the miniature design of equipment)

Product numbering rules:

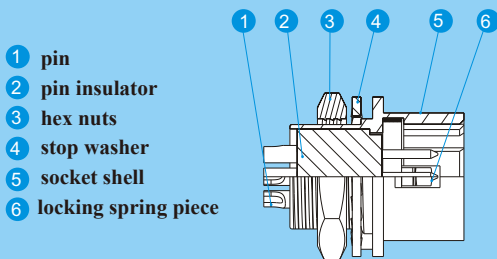


Example of product number:

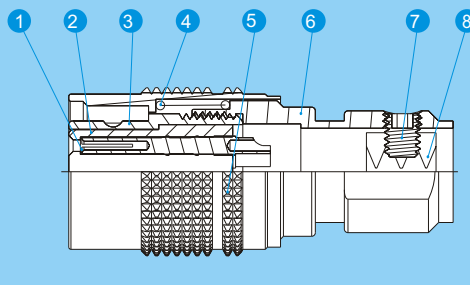
- HR10-1 P-4PS=Main name code is 03, 1# shell plug,4-core welding pin.
- HR10-1 P-4PS=Main name code is 03, 1# shell fixed socket,4-core welding pin.
- HR10-1J-4SS=Main name code is 03, 1# shell floating socket,4-core welding receptacle.

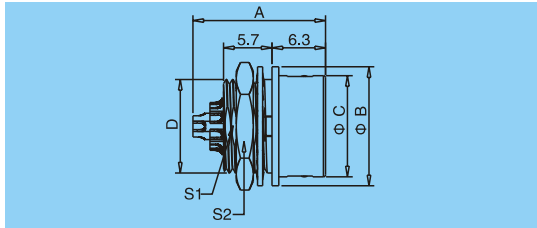
Product section view

Fixed socket



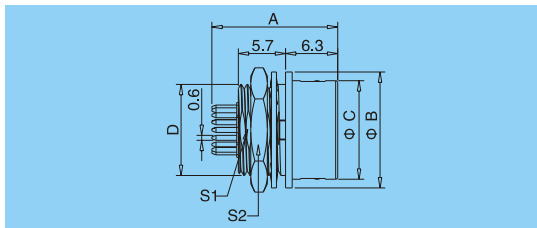
Straight plug





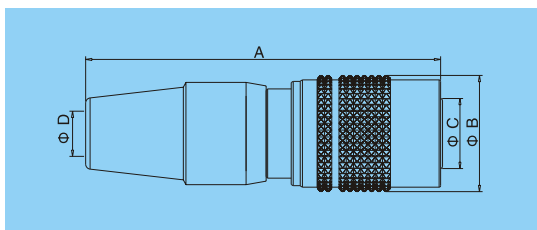
HR10 series welding socket

Shell no.	A	B	C	D	S1	S2
1#	14	11	8.8	M8*0.5	7.2	10
2#	15.6	14	10.9	M11*0.75	10	13



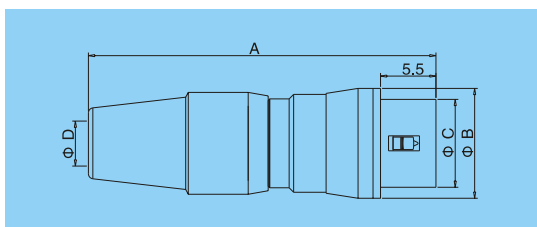
HR10 series board mounting socket

Shell no.	A	B	C	D	S1	S2
1#	15.5	11	8.85	M8*0.5	7.2	10
2#	15.5	14	11.9	M11*0.75	10	13



HR10 series plug

Shell no.	A	B	C	D
1#	35	11	8.8	6
2#	43	14	10.9	8



HR10 series floating socket

Shell no.	A	B	C	D
1#	35	11.5	7.5	6
2#	43	14.5	9.5	8

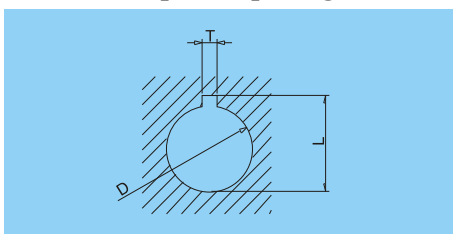
Technical parameters

No.	Performance	Insulator hole arrangement 1#	
		1# Shell	1# Shell
1	Contact diameter mm	0.5	
2	Contact resistance mΩ	10	
3	Operating voltage KV/DC	0.3	
	Operating voltage KV/AC	0.2	
4	Test voltage KV/DC	0.9	
	Test voltage KV/AC	0.5	
5	Operating current A	2	
6	Operating temperature θ°C	-50°C~125°C	
7	Mechanical life Times	1000	

Key positioning change

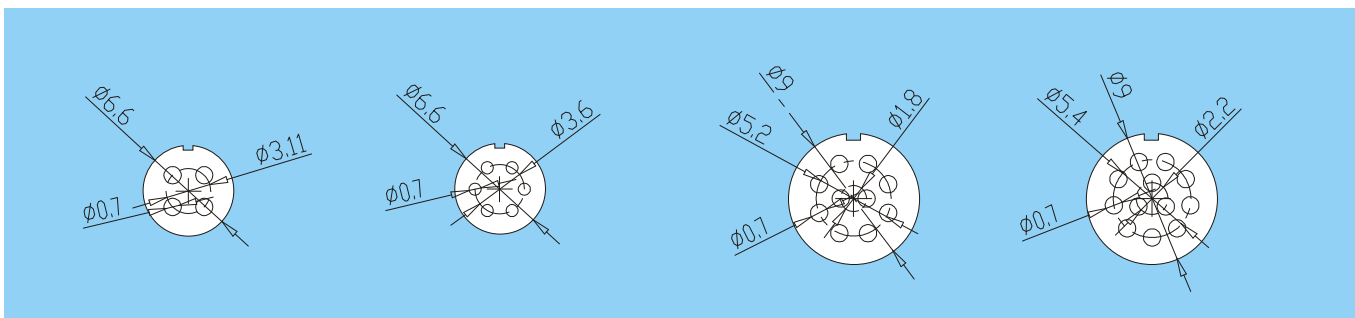
(Plug front) key positioning	
Contact form in plug	receptacle/pin
Contact form in socket	pin/pin
Number of contact	4、6、7、10、12

Installation panel opening hole size



Shell no.	D	T	L	B
1	8.0	1.6	9.0	7.3
2	11.1	2.5	11.5	11.3

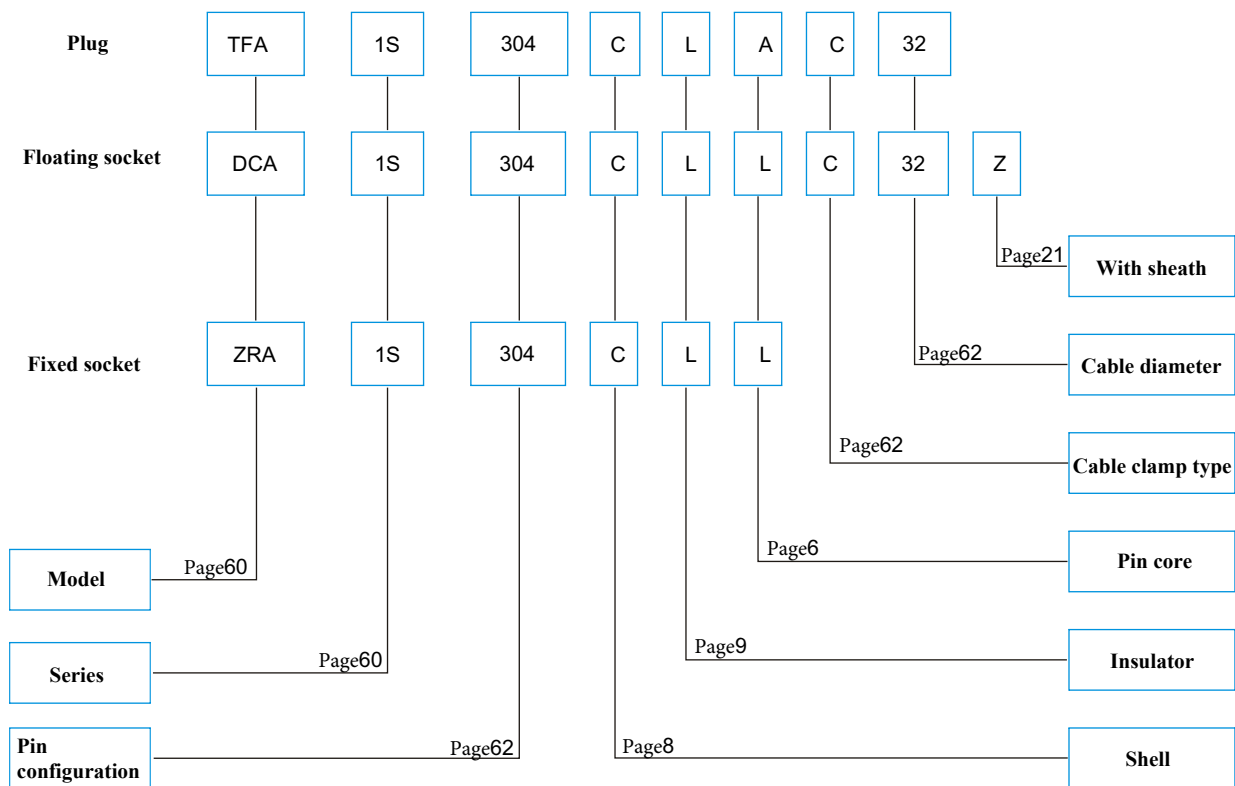
PCB board interface size



Main features of S series connectors

- Fast push pull self-locking system;
- 2-6 multi-cores;
- Welding and PCB(Printed Circuit Board) pin core(Straight type, angle type);
- High-density installation can save space;
- The stepped (half-moon) ferrule is equipped with male and female pins at the same time, polarity positioning;
- 360 degree all-round shielding effect could anti-electromagnetic interference;

Series product numbering rules



Example of product number

Straight plug with cable clamp

TFA.1S.304.CLAC32= Straight plug, with clamp, 1S series, multi-core type, 4core, brass chrome-plated shell, PPS insulator, 2 male pins and 2 female pins. welded type pin core, suitable for outer diameter C-type clamp for 3.2mm cable.

Floating socket

DCA.1S.304.CLLC32Z= Floating socket, with clamp, 1S series, multi core type, 4 core, brass chrome-plated shell, PPS insulator. 2 female pins and 2 male pins, welding-type pin core suitable for outer diameter C-type clamp for 3.2mm cable, tail cover with sheath.

Fixed socket:

ZRA.1S.304.CLL= Fixed socket, nut fixed, 1S series, multi-core type, 4core, brass chrome-plated shell, PPS insulator, 2 female pins and 2 male pins, welded type pin core.

Product section view

Fixed socket

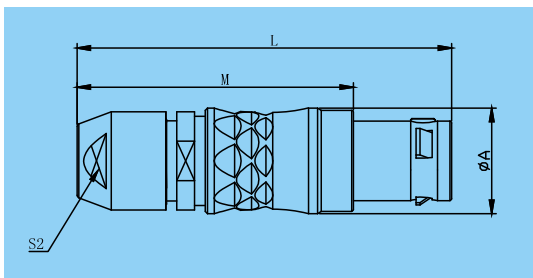
- 1 Shell
- 2 Ground ring
- 3 Fixing ring
- 4 Hex nut
- 5 Lock washer
- 6 Insulator
- 7 Male pin core
- 8 Female pin core

Straight plug

- 1 Shell
- 2 Locking sleeve
- 3 Tail cover
- 4 Locating piece
- 5 Insulator
- 6 Male pin core
- 7 Female pin core
- 8 Cable clamp



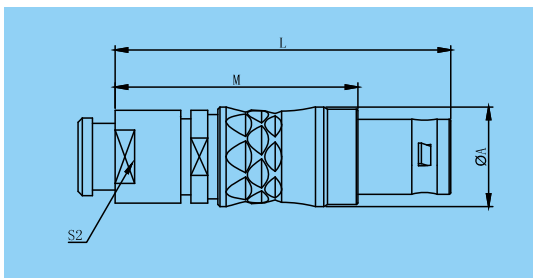
TFA Standard straight plug, cable clip fixed cable, internal parts to prevent cable rotation



Item		Size			
Series	Model	A	L	M	S2
00S	TFA	6.8	25.8	17.8	4.5
0S	TFA	8.8	33.6	23.6	6.5
1S	TFA	12.0	40.5	29.5	8.5
2S	TFA	14.7	52.0	40.0	11.0



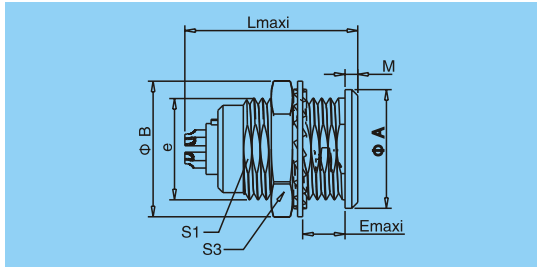
TFA Standard straight plug, cable clip fixed cable, internal parts to prevent cable rotation, sheath to prevent cable bending.



Item		Size			
Series	Model	A	L	M	S2
00S	TFA	6.8	26.0	18.0	6
0S	TFA	8	34.5	24.5	7
1S	TFA	12	42.5	31.5	9
2S	TFA	14.7	52.0	40.0	12



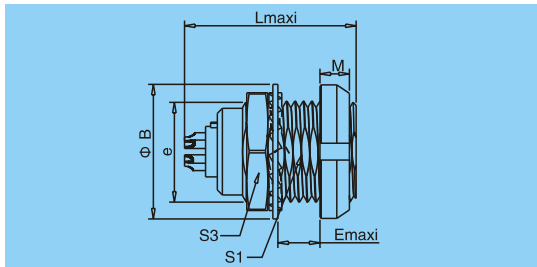
ZRA Fixed socket, the nut is fixed by the nut inside the chassis



Item		Size							
Series	Model	A	B	e	E	L	M	S1	S3
00S	ZRA	8	10.3	M7x0.5	5.5	14.5	1.0	6.3	9
0S	ZRA	10	12.3	M9x0.5	8.5	18.4	1.4	8.2	11
1S	ZRA	14	16.0	M12x1.0	7.5	21.9	1.5	10.5	14
2S	ZRA	18	19.3	M15x1.0	8.0	24.8	2.0	13.5	17



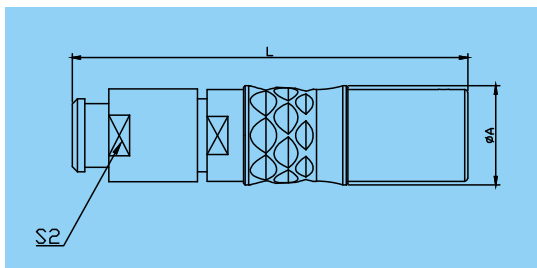
ZRD Fixed socket, inside and outside the chassis fixed double nuts.



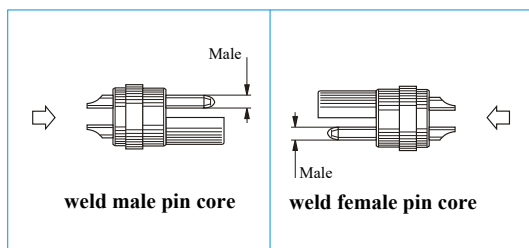
Item		Size							
Series	Model	A	B	e	E	L	M	S1	S3
0S	ZRD	12	12.5	M9x0.5	5.5	21.3	2.5	8.2	11
1S	ZRD	16	16.0	M12x1.0	6.0	23.2	3.2	10.5	14
2S	ZRD	20	20	M15x1.0	6.5	24.8	3.5	13.5	17



DCA Floating socket, used for connection between cables, cable clip fixed cable, sheath to prevent cable bending.



Item		Size		
Series	Model	A	L	S2
0S	DCA	8.9	35.2	7.3
1S	DCA	12.0	46.0	9
2S	DCA	14.8	50.0	12



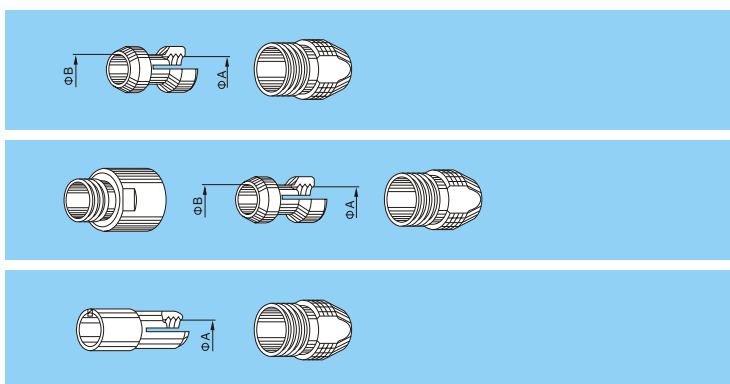
No.	Series			ΦA (mm)	Pin core type			Test voltage (kVrms)	Test voltage (kVdc)	Rated current (A)	
	Stand series	Water proof series	Pin core QTY		Weld pin core	Printed board straight pin	Printed board bending pin				
0S	302	0S	0E	2	0.9	●	●	●	1.5	2.1	10
	303	0S	0E	3	0.7	●	●	●	1.0	1.5	7
	304	0S	0E	4	0.7	●	●	●	1.0	1.5	7
1S	302	1S	1E	2	1.3	●	●	●	1.2	1.8	15
	303	1S	1E	3	0.9	●	●	●	1.2	1.8	10
	304	1S	1E	4	0.9	●	●	●	1.2	1.8	10
	305	1S	1E	2 3	0.9 0.7	●	●	●	1.5 1.5	2.1 2.1	10 7
	306	1S	1E	6	0.7	●	●	●	1.5	2.1	7

0S

1S

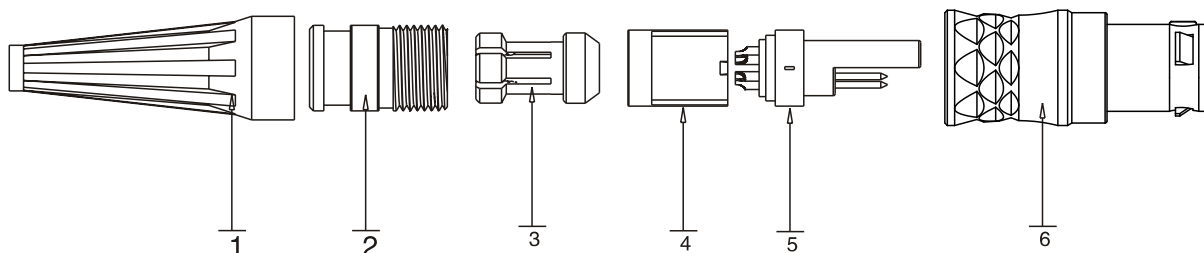
S series cable clamp

Suitable for C-type, K-type and L-type clamps of S series



Number	Cable clamp		Cable			
	Type	No.	ΦA	ΦB	Max.	Min.
00	C	27	2.7	-	2.6	2.2
	K	37	3.7	-	3.6	3.0
0S	C	27	2.7	-	2.6	2.2
	C	32	3.2	-	3.1	2.7
	C	42	4.2	3.7	4.1	3.3
	K	47	4.7	-	4.6	3.8
1S	C	32	3.2	-	3.1	2.6
	C	42	4.2	-	4.1	3.3
	C	47	4.7	-	4.6	3.8
	C	52	5.2	-	5.1	4.3

S series connector plug assembly instructions



1. Pass the cable through the tail nut①, cable clamp②, insulator retaining ring③ in sequence, and then weld them to the insulator assembly④ in sequence. C
2. Install the insulator retaining ring③ on the insulator assembly④. Pay attention that the protrusion of the insulator retaining ring③ corresponds to the gap of the insulator assembly④, and push the cable clamp② to the proper position of the cable.
3. Push the assembled cable clamp②, insulator retaining ring③ and insulator assembly④ into the plug assembly⑤.
4. Tighten the tail nut ① into the plug assembly⑥.

F series connector product introduction :

The F series micro-circular high-density connector has a split push-in and pull-out structure, which has a self-locking function after insertion. The internal semicircular positioning plate prevents incorrect insertion and prevents incorrect insertion and removal on the same number of cores. It also has Blind mating function, convenient and quick to use.

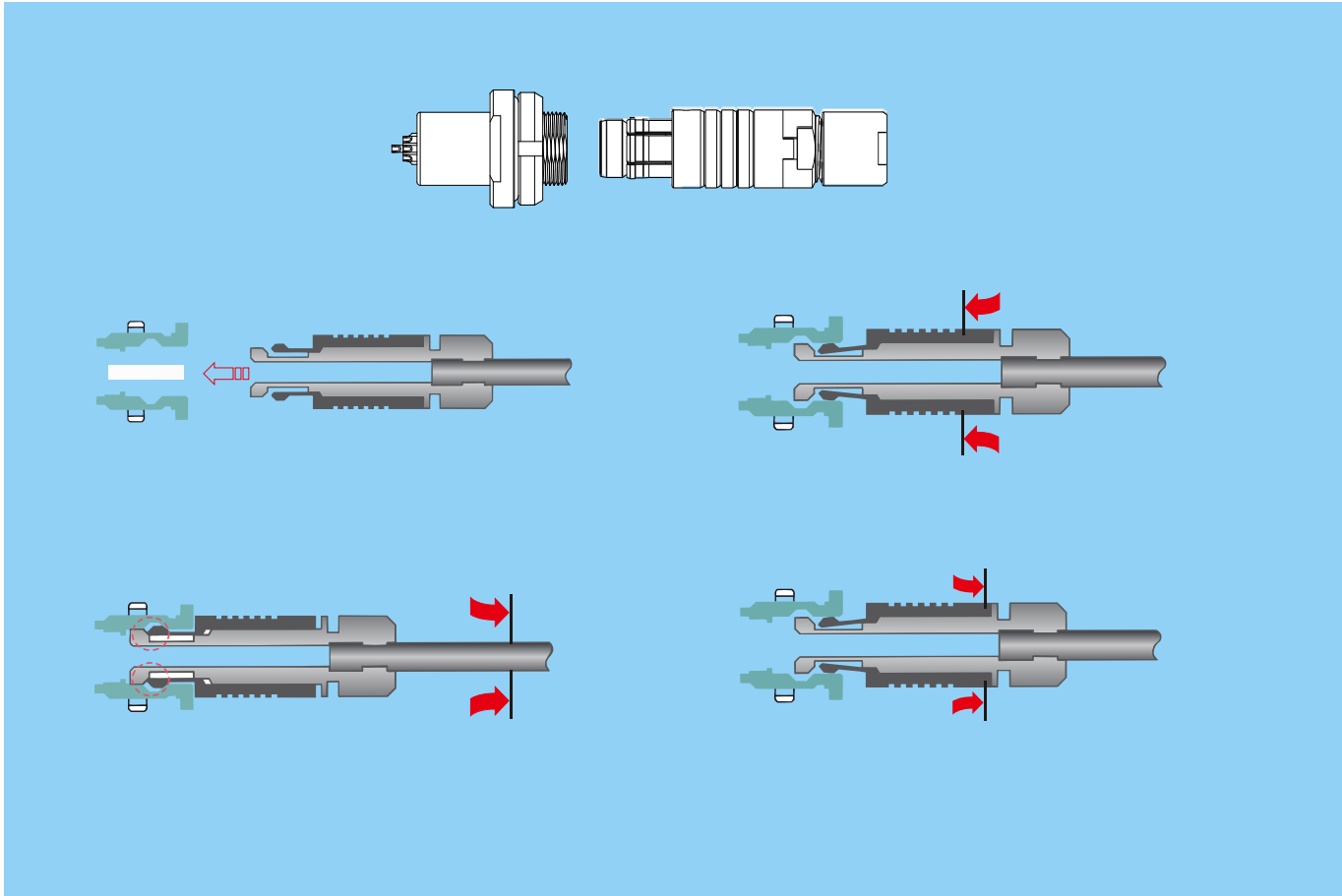
This series of connectors have the characteristics of fast plugging, high density, waterproof, small size, blind mating and long life. It is especially suitable for high-density installation, relatively small space installation and places where it is difficult to insert and separate by rotating. It can be used in harsh outdoor environment, protection grade: IP68.

This connector is widely used in the electrical connection of DC and AC circuits in military and civilian fields such as radio navigation equipment, medical equipment test equipment, audio equipment, data acquisition, industrial control, aerospace and other occasions.

Main features of F series connector :

- Fast push-pull self-latching system;
- 1-40 multi-cores;
- Welding and PCB(Printed Circuit Board) pin core;
- High-density installation can save space;
- Positioning of the internal semicircle to prevent mis-insertion;
- IP68 protection level, waterproof, sand-proof;
- 360° shielding provides all-round EMC protection.

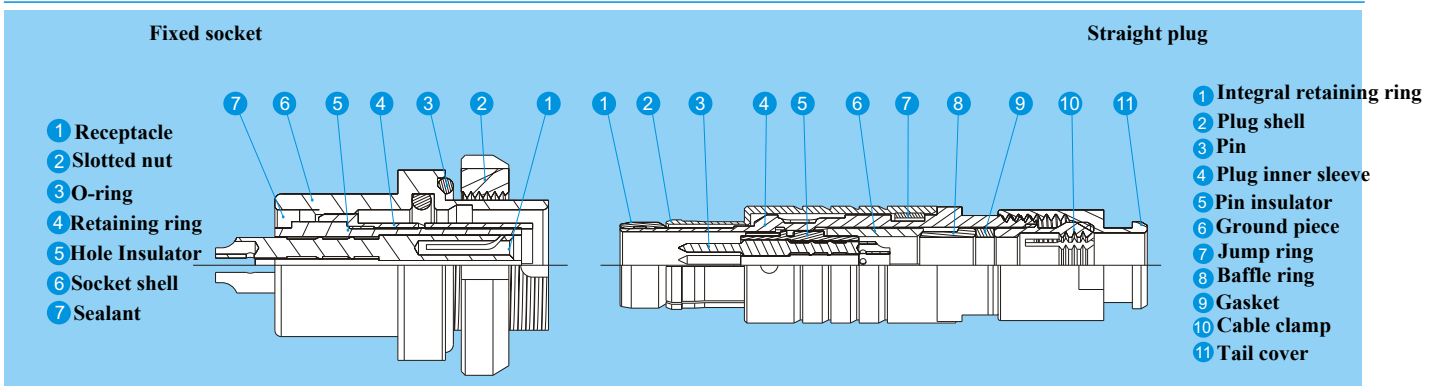
Product appearance graphic example :



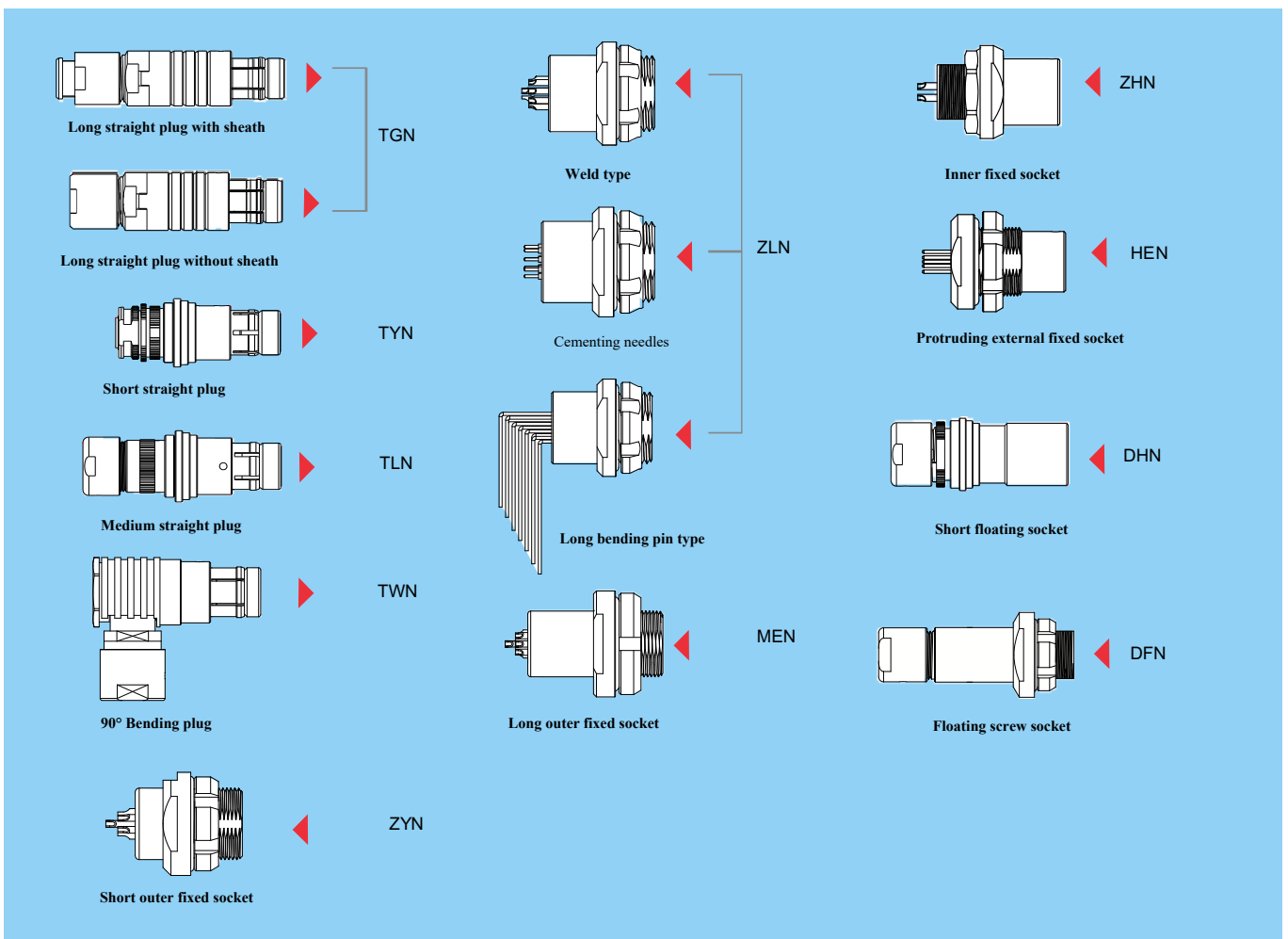
Technical characteristics of F series connectors:

- Mechanical life: over 5000 times
- Vibration: 15g[10Hz~2000Hz]
- Shock: 100g[6ms]
- When filling silicone: -55°C+200°C, when filling epoxy resin: -55°C+125°C, when not filling (PPS insulator): -55°C+200°C
- Salt spray corrosion test: > 96h
- Protection level: IP68

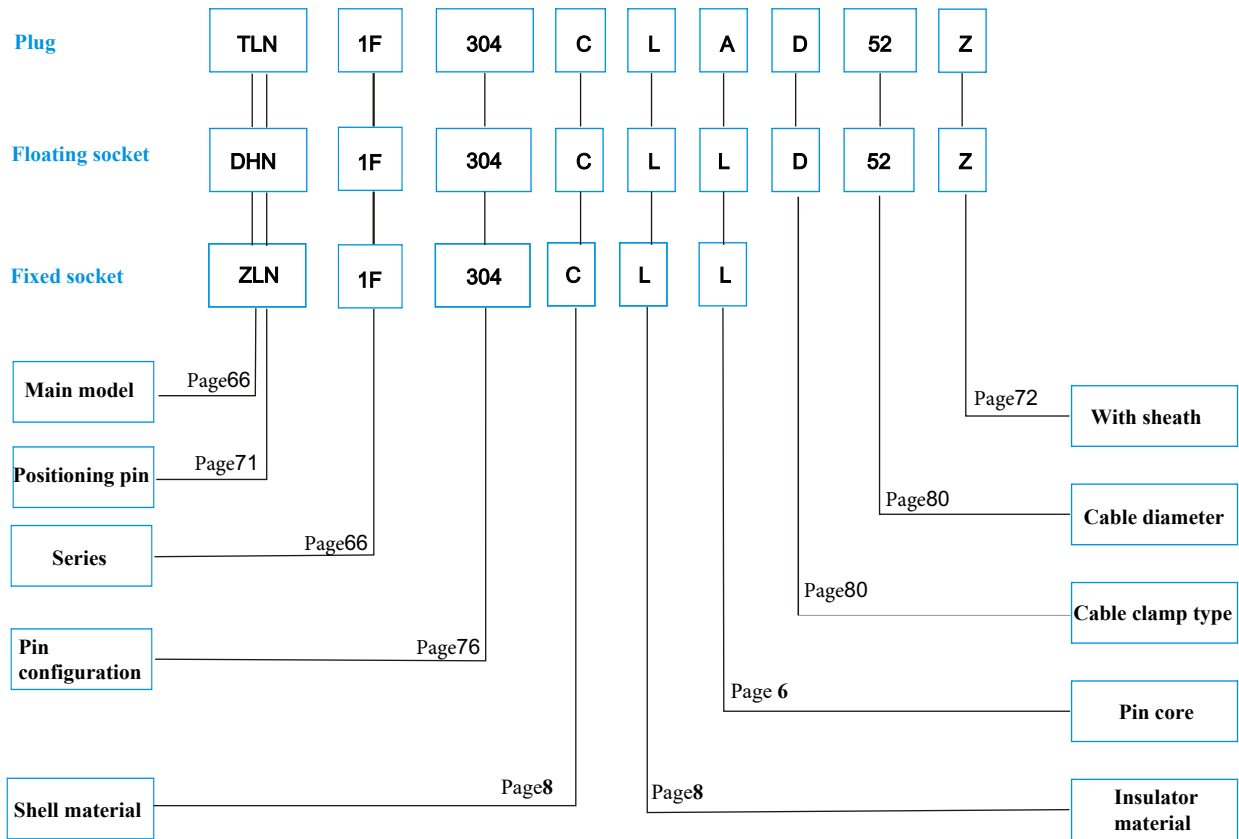
Product section view



Metal shell model:



F series product numbering rules:



Product code example

Straight plug with cable clamp:

TGN.0F.306.CLAD52Z= Straight plug, positioning piece (N), 0F series, positioning key (1), multi-core type, 6-core, brass chrome-plated shell, PPS insulator, welded male pin core, suitable for D-type clamp for 5.2mm cable.

Floating socket:

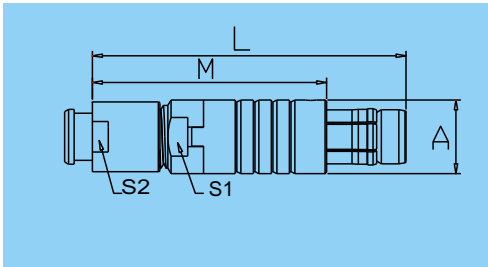
DHN.0F.306.CLAD52Z= Floating socket, positioning piece (N), 0F series, positioning key (1), multi-core type, 6-core, brass chrome-plated shell, PPS insulator, welding-type male pin core, suitable for D-type clamp for 5.2mm cable.

Fixed socket:

ZLN.0F.306.CLL= Fixed socket, positioning piece (N), 0F series, positioning key (1), multi-core type, 6-core, brass chrome-plated shell, PPS insulator, PCB board is connected to female pin core, epoxy resin (P) is filled with PCB pin length 30mm.



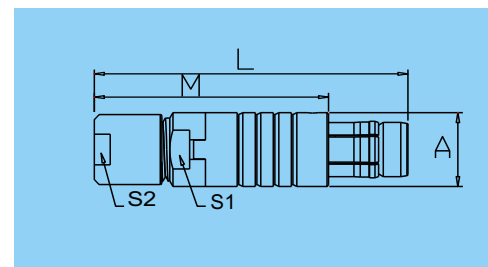
TGN standard long straight plug, the cable clamp fixes the cable, the internal parts prevent the cable from rotating, and the semi-circular metal prevents incorrect insertion. (With sheath type)



Item		Size				
Series	Model	A	L	M	S2	S1
0F	TGN	9.4	40.5	30.5	8	8
1F	TGN	12	48	36.8	9	10
AF	TGN	13	48	38	12	11
2F	TGN	15	51.4	38	13	13
3F	TGN	18	62	47	15	16



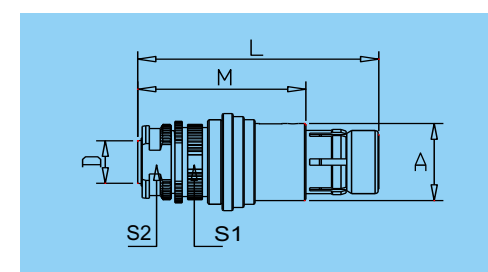
TGN standard long straight plug, the cable clamp fixes the cable, the internal parts prevent the cable from rotating, and the semi-circular metal prevents incorrect insertion. (Without sheath type)



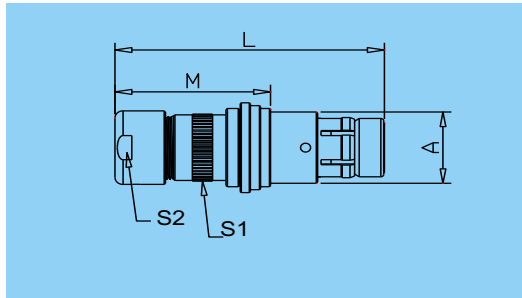
Item		Size				
Series	Model	A	L	M	S2	S1
0F	TGN	9.4	40.5	30.5	8	7
1F	TGN	12	48	36.8	10	10
AF	TGN	13	48	38	12	11
2F	TGN	15	50	38	12	13
3F	TGN	18	62	47	15	16



TYN short straight plug, multi-lobe positioning, semi-circular metal to prevent incorrect insertion, and external thread at the tail for embedded connection. (Suitable for injection molding)

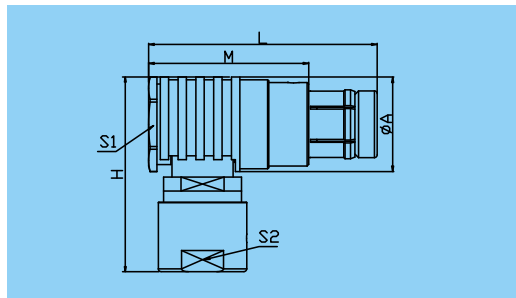


Item		Size					
Series	Model	A	L	M	S1	S2	D(max)
0F	TYN	9	30	20	8	7	3.8
1F	TYN	12	33	22	11	10	6
AF	TYN	12.4	33	23	11	10	6.2
2F	TYN	15	38	26	13	12	8
3F	TYN	18	44	29	16	15	10



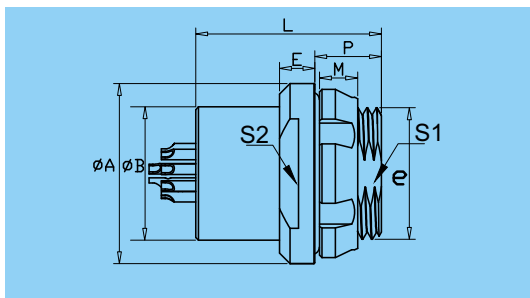
TLN short straight plug, multi-lobe positioning, semi-circular metal to prevent incorrect insertion, internal thread at the tail.

Item		Size				
Series	Model	A	L	M	S1	S1
0F	TLN	9	33.8	17.5	8	7
1F	TLN	12	38	26.8	12	11
AF	TLN	12.4	40.8	23	11.5	12
2F	TLN	15	47	26	14	14
3F	TLN	18	53.3	29	16.5	16



TWN 90° angled plug, semi-circular positioning piece for positioning, internal structure to prevent cable rotation, semi-circular metal to prevent mis- insertion.

Item		Size					
Series	Model	A	L	M	H	S1	S2
0F	TWN	11.2	33.5	23.7	25.5	8	7
1F	TWN	15	38	27	31	11	10
AF	TWN	17	38.5	28.5	31	12	12
2F	TWN	17	41	28.7	35	14	14
3F	TWN	23	53	38	46	17	15

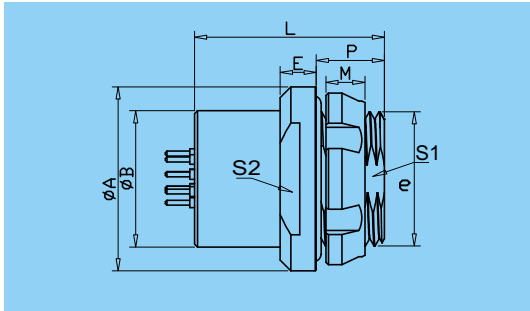


ZLN welding socket, external nut fixing structure, metal semi-circle positioning to prevent mis-insertion.

Item		Size								
Series	Model	A	B	e	L	E	M	P	S1	S2
0F	ZLN	14	9.0	M9x0.5	17	3.5	3	6.5	8.2	11
1F	ZLN	18	12	M14*1.0	21	4	4	8	12	15
AF	ZLN	19	14	M14*1.0	19.5	3	4	7	12	15
2F	ZLN	22	14	M16*1.0	21	4.5	3.5	8	14.5	18
3F	ZLN	27	21	M20x0.75	26.5	5	5	10	19	22



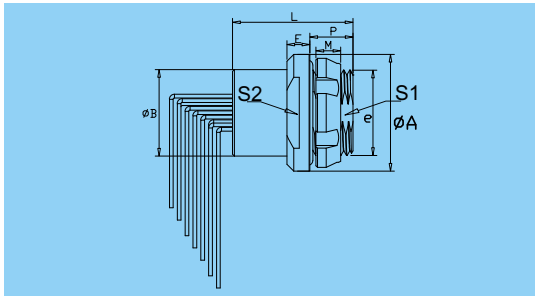
ZLN PCB board connection socket, outer nut fixing structure, metal semi-circle positioning to prevent mis-insertion.



Item		Size								
Series	Model	A	B	e	L	E	M	P	S1	S2
0F	ZLN	14	9.0	M9x0.5	17	3.5	3	6.5	8.2	11
1F	ZLN	18	12	M14*1.0	21	4	4	8	12	15
AF	ZLN	19	14	M14*1.0	19.5	3	4	7	12	15
2F	ZLN	22	14	M16*1.0	21	4.5	3.5	8	14.5	18
3F	ZLN	27	21	M20x0.75	26.5	5	5	10	19	22



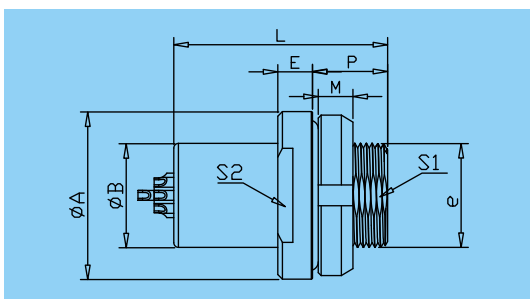
ZLN 90° long bent pin PCB board socket, external nut fixing structure metal semi-circle positioning to prevent mis-insertion.



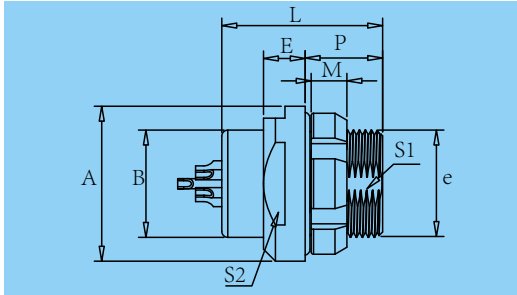
Item		Size								
Series	Model	A	B	e	L	E	M	P	S1	S2
0F	ZLN	14	9.0	M9x0.5	17	3.5	3	6.5	8.2	11
1F	ZLN	18	12	M14*1.0	21	4	4	8	12	15
AF	ZLN	19	14	M14*1.0	19.5	3	4	7	12	15
2F	ZLN	22	14	M16*1.0	21	4.5	3.5	8	14.5	18
3F	ZLN	27	21	M20x0.75	26.5	5	5	10	19	22



MEN vacuum-sealed socket, external nut fixing structure, semi-circular metal to prevent mis-insertion.

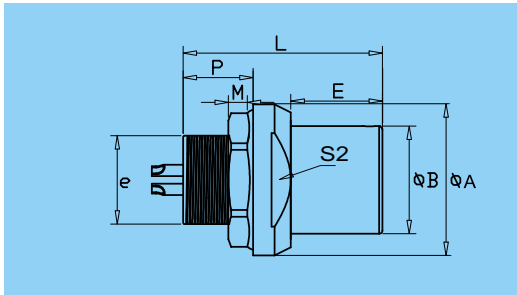


Item		Size								
Series	Model	A	B	e	L	E	M	P	S1	S2
0F	MEN	14.5	9	M9x0.5	18.5	3	3	6.5	8.2	12
1F	MEN	18	14	M14*1.0	22	3	4	9	12.5	15



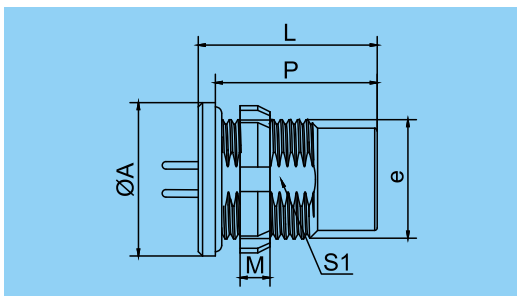
ZYN vacuum sealed short socket, fixed by outer nut internal semi-circular metal to prevent mis-insertion, waterproof, IP68

Item		Size								
Series	Model	A	B	e	E	L	M	P	S1	S2
0F	ZYN	13	9.0	M9x0.5	3.5	13.5	3.0	6.5	8.2	11
1F	ZYN	18	12	M14x1.0	4.0	17	4	6.5	12	15



ZHN protruding tail inner nut fixing socket, inner nut fixing (front panel installation), internal semi-circular metal to prevent mis-insertion, waterproof, IP68

Item		Size							
Series	Model	A	B	e	L	E	M	P	S2
0F	ZHN	14	9	M9x0.5	17	5.5	2.0	8	11
1F	ZHN	18	12	M14x1.0	21.0	7	2.5	10.5	14

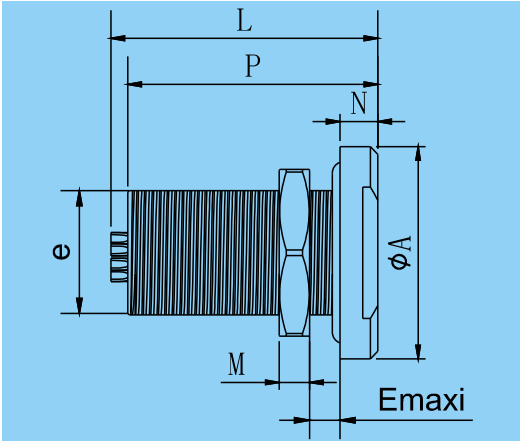


HEN protruding tail outer nut fixing socket, outer nut fixing (rear panel installation), internal semi-circular metal to prevent mis-insertion, waterproof, IP68

Item		Size					
Series	Model	A	e	L	M	P	S1
0F	HEN	14	M10x0.5	18	2.5	14.5	9
1F	HEN	18	M14x1.0	21	4.0	19	12.5
AF	HEN	19	M15x1.0	19.5	4.0	16	13.4
2F	HEN	22	M18x1.0	21	3.5	17	16



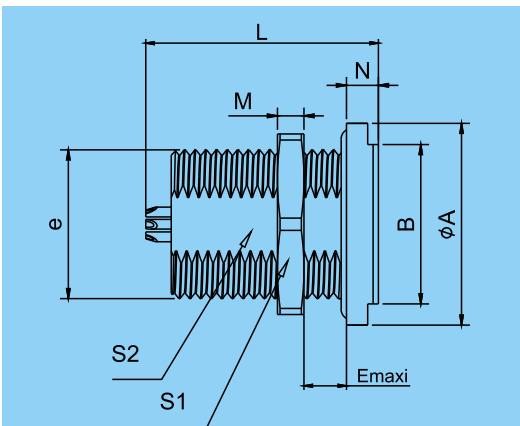
ZDN Fixed socket, inner nut mounting, with a flat mouth, suitable for thick panel installation



Item		Size						
Series	Model	A	P	e	E	M	N	L
0F	ZDN	14	16.5	M9X0.5	12	2	2.5	17.8



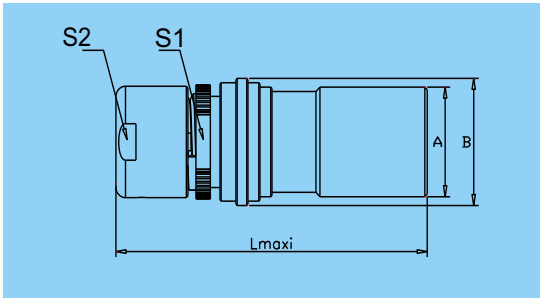
ZGN fixed socket, inner nut mounting, with two flat mouth, suitable for thick panel mounting



Item		Size								
Series	Model	A	B	e	E	M	N	L	S1	S2
0F	ZGN	14	11	M9X0.5	10	2	2.5	20	11	8.2
AF	ZGN	19	15	M14X1	14	2.5	3	23	17	12



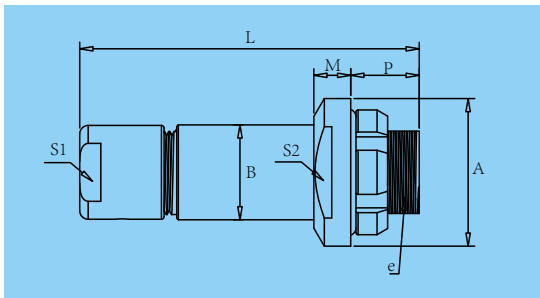
DFN floating socket, semi-circular positioning piece, internal parts to prevent the cable from rotating, semi-circular metal to prevent mis-insertion.



Item		Size				
Series	Model	A	B	L	S1	∅
0F	DFN	10	12	33.5	8	8
1F	DFN	12.5	13.5	40	11	12
AF	DFN	13	14.5	39.5	11.5	12
2F	DFN	16	18	45.5	14	14
3F	DFN	19	21	51	16.5	11



DFN fixing socket with cable clamp semi-circular positioning piece internal parts to prevent the cable from rotating, semi-circular metal to prevent incorrect insertion.

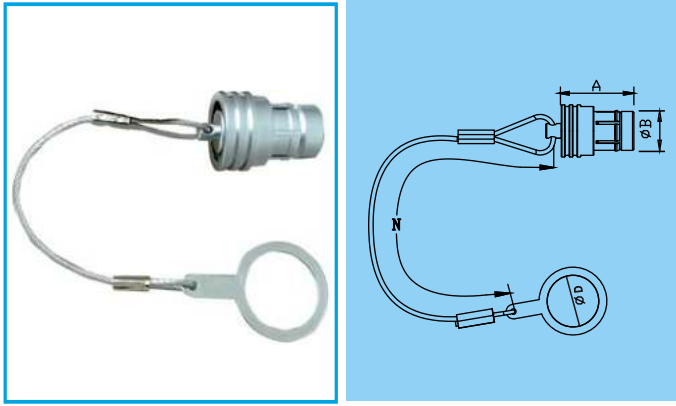


Item		Size							
Series	Model	A	B	e	P	L	M	S1	S2
0F	DFN	14	9.0	M9x0.5	6.5	39	3.5	7	11
2F	DFN	22	16	M16x1	8	51	5	14	18

F series positioning piece

Plug Socket	Graphic example		
	Single positioning piece	Double positioning piece1	Double positioning piece2
Positioning piece code	N	A	B

F series



BZE F series socket dust cover

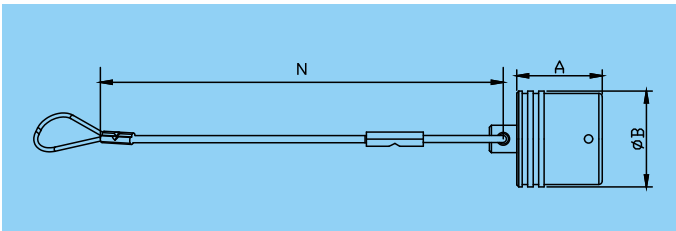
Shell material: brass chrome plated Lanyard material: stainless steel (S)/nylon rope (N)
 O-ring seal: Silicone rubber Working temperature max.: 135°C
 Waterproof level: IP68

Product number	Series	Size(mm)			
		A	B	D	N
BZE.0F.CSC-100	0F	16.5	9	9	100
BZE.1F.CSC-100	1F	19.8	12	14	100
BZE.AF.CSC-100	AF	18.4	13	14	100
BZE.2F.CSC-150	2F	21	15	16	150
BZE.3F.CSC-150	3F	24	18	20	150

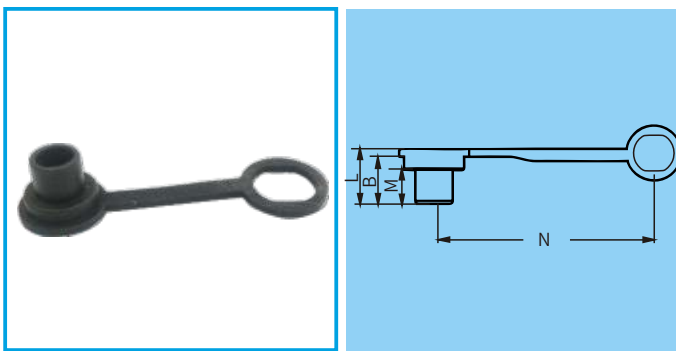


BTF F series plug dust cover

Shell material: brass chrome plated Lanyard material: stainless steel (S)/nylon rope (N)
 O-ring seal: Silicone rubber Working temperature max.: 135°C
 Waterproof level: IP68



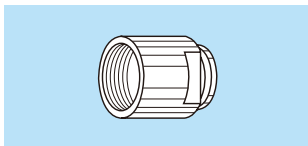
Product number	Series	Size(mm)		
		A	B	N
BTF.0F.CSS-100	0F	14.5	9	100
BTF.1F.CSS-100	1F	21	12	100
BTF.AF.CSS-100	AF	20	13	100
BTF.2F.CSS-150	2F	21	15	150
BTF.3F.CSS-150	3F	29	18	150



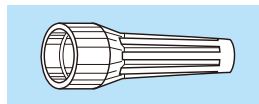
QM F series rubber socket dust cover

Product number	Series	Size(mm)			
		B	L	M	N
QM.0F.100-PCSG	0F	9	10.5	6.5	36.5

Suitable for F series sheath and adapter cable clamp



Need to order separately

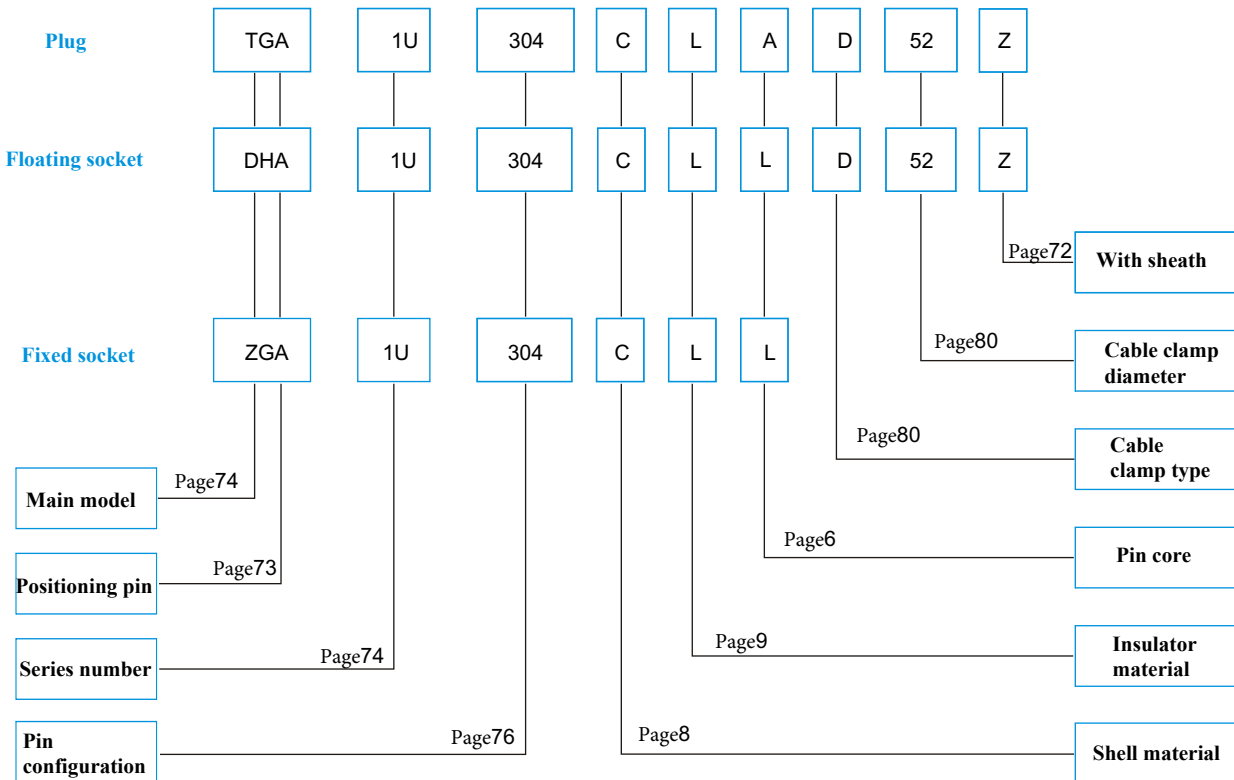


	No.	Tail cover		Need to order separately
		Type	Code	
0F	Z	D	17 to 35	GMA.00... .. GMB.00... ..
1F	Z	D	21 to 52	GMA.0B... ..
2F	Z	M	21 to 31	GMA.0B... ..
		D	24	GMA.2B... ..
		D	52 to 92	GMA.2B... ..

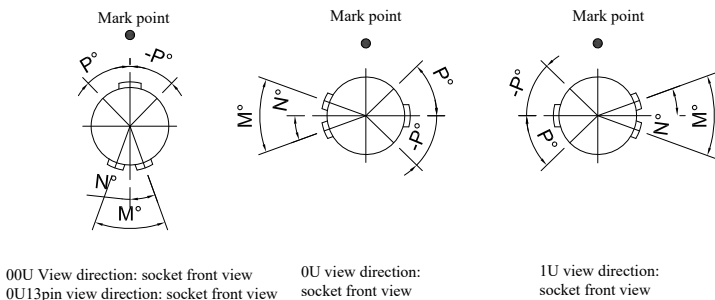
U series connector introduction

U-series micro-circular high-density connector is split push-pull structure, which has a self-locking function after being inserted. The internal use of multi-key positioning prevents mis-insertion and removal of the same core number, and also has a blind insertion function, which is convenient and quick to use. This series of connectors has the characteristics of fast plugging, high density, waterproof, small size, blind mating, and long use time. It is especially suitable for high-density installation, relatively small space installation, and places where it is difficult to push and pull by rotating. It can adapt to the harsh environment in the field, and the protection grade is IP68. The connector is mainly used for low-frequency signal transmission in electronic equipment. It has small size, convenient operation, good shielding effect, good sealing, multi-key positioning, strong shell, anti-electromagnetic interference, and resistance Good environmental performance and long service life. It is widely used in medical machinery, communication systems, computers, small-scale communication and other equipment.

U series product numbering rules



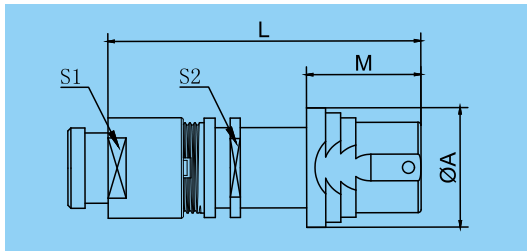
U series positioning



Series	Key position number	M°	N°	P°
00U	A	45	22.5	0
	B	60	30	0
0U	A	40	20	0
	B	60	30	45
	C	70	35	-20
	D	80	40	0
	E	100	50	45
0U 13pin	C	100	55	0
1U	A	40	20	0
	B	60	30	0
	C	80	40	0
	D	100	50	0



DHA floating socket, cable clamp to fix the cable, internal parts to prevent the cable from rotating, multi-key positioning to prevent mis-insertion.

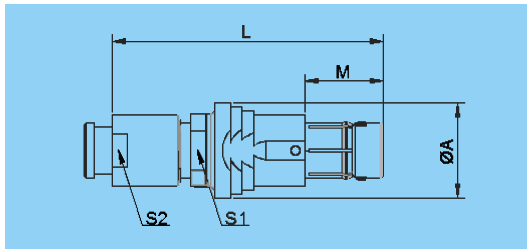


Item		Size				
Series	Model	A	L	M	S1	S2
00U	DHA	9.9	26.5	9.5	6.0	6.5
0U	DHA	11.9	30.5	11.5	8.0	8.0

U series



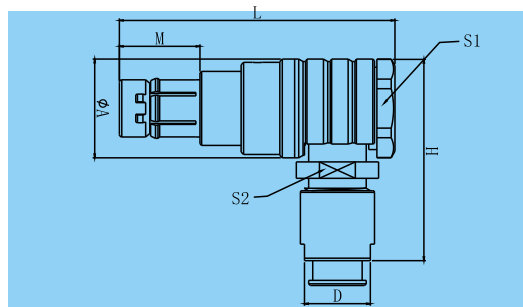
TGA short plug, cable clamp to fix the cable, internal parts to prevent the cable from rotating, multi-key positioning to prevent mis-insertion.



Item		Size				
Series	Model	A	L	M	S1	S2
00U	TGA	10.5	30.8	7.7	8	8
0U	TGA	12	34	9.9	8	8
1U	TGA	15	38	11.2	11	11



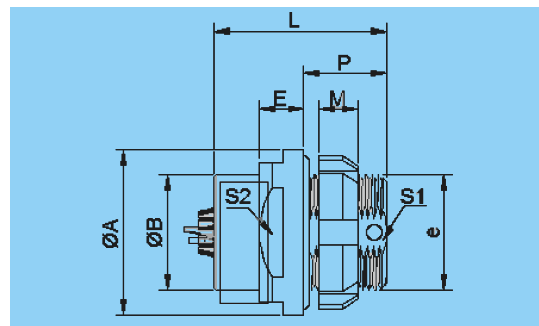
TWA 90 degree angle plug, multi-key positioning, internal structure to prevent cable rotation



Item		Size						
Series	Model	A	L	M	H	D	S1	S2
0U	TWA	12	33.5	9.8	24.5	8	11	9



ZGA vacuum sealed short socket, external nut fixed, multi-key positioning to prevent mis-insertion, waterproof level: IP68

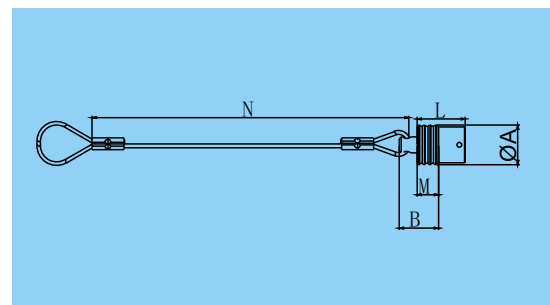


Item		Size									
Series	Model	A	B	e	L	E	M	P	S1	S2	
00U	ZGA	9.8	6.2	M7x0.5	12.5	3	2.5	5	6.3	8	
0U	ZGA	13	9	M9x0.5	13.5	3.5	3	6.5	7.9	11	
1U	ZGA	16.4	10.2	M12x1	17	5	3.5	6.5	10	14	



BTA U series plug dust cover

Shell material: brass chrome plated Lanyard material: stainless steel (S)/nylon rope (N)
 O-ring seal: Silicone rubber Working temperature max.: 135°C
 Waterproof level: IP68

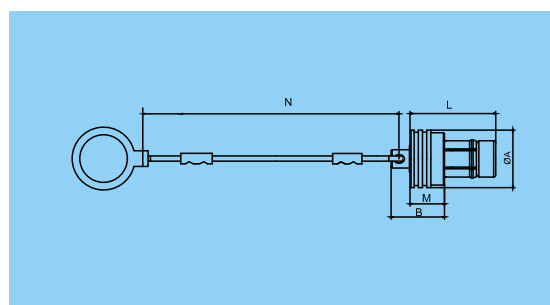


Product number	Series	Size(mm)				
		A	B	L	M	N
BTA.00U.CSS-085	00U	7.8	10	9.6	4	85
BTA.0U.CSS-085	0U	9	9.8	12	5.3	85
BTA.1U.CSS-100	1U	13	11	13.2	6.4	100



BZE U series socket dust cover

Shell material: brass chrome plated Lanyard material: stainless steel (S)/nylon rope (N)
 O-ring seal: Silicone rubber Working temperature max.: 135°C
 Waterproof level: IP68



Product number	Series	Size(mm)				
		A	B	L	M	N
BZE.00U.CSC-085	00U	7.8	10	16	4	85
BZE.0U.CSC-085	0U	11	10.1	16.5	6.6	85
BZE.1U.CSC-100	1U	13	11	18.5	8	100

U series

F, U series pin core configuration diagram

Use level of sea level withstand voltage: M: ACSOOV; I: AC750V; II: AC875V; III: AC1000V

					Pin core assembly number	Pin core number	Contact ϕA	Pin core type			Use level		Rated current (A)	Contact resistance (m Ω)
	A direction	B direction	A direction	B direction				Welding type	Printed board straight pin type	Printed board 90° bend pin type	Rated voltage V	Voltage resistance V		
OU					310	10P	0.5	✓	✓	✓	I	I	2.5	≤15
					313	13P	0.4	✓	✓	✓	I	I	0.8	≤15
OF OU					302	2P	0.9	✓	✓	✓	II	II	10.0 ^{2*}	≤5.0
					303	3P	0.9	✓	✓	✓	I	I	8.0 ^{2*}	≤5.0
					304	4P	0.7	✓	✓	✓	I	I	7.0 ^{2*}	≤12.5
					305	5P	0.7	✓	✓	✓	I	I	6.5 ^{2*}	≤12.5
					307	7P	0.5	✓	✓	✓	M	M	2.5	≤15.0
					309	9P	0.5	✓	✓	✓	M	M	2.0	≤15.0
					0F310	10P	0.5	✓	✓	✓	I	I	2.5	≤15
					310	10P	0.7	✓	✓	✓	II	II	6.0	≤12.5
AF					312	12P	0.7	✓	✓	✓	II	II	6.0	≤12.5
					319	19P	0.5	✓	✓	✓	M	M	2.5	≤15.0

✓: Indicates the common model, choose first

2*: Indicates that when the pin core type is PCB 90° bend pin, the rated current is 6.0A

Pin configuration

F, U series pin core configuration diagram

Use level of sea level withstand voltage: M: AC500V; I: AC750V; II: AC875V; III: AC1000V

			Pin core assembly number	Pin core number	Contact ϕ A	Pin core type			Use level		Rated current (A)	Contact resistance (m Ω)		
	A direction	B direction				A direction	B direction	Weld type	Printed board straight type	Printed board 90° bend pin type			Rated voltage V	Voltage resistance V
1F 1U					302	2P	1.3	√	√	√	III	III	12.0	≤5.0
					303	3P	1.3	√	√	√	III	III	12.0	≤5.0
					304	4P	0.9	√	√	√	II	II	10.0 ^{2*}	≤5.0
					305	5P	0.9	√	√	√	II	II	9.0 ^{2*}	≤5.0
					1U305	5P	0.9	√	√	√	II	II	9.0 ^{2*}	≤5.0
					306	6P	0.7	√	√	√	II	II	7.0 ^{2*}	≤12.5
					1U306	6P	0.7	√	√	√	II	II	7.0 ^{2*}	≤12.5
					307	7P	0.7	√	√	√	II	II	7.0 ^{2*}	≤12.5
					1U307	7P	0.7	√	√	√	II	II	7.0 ^{2*}	≤12.5
					308	8P	0.7	√	√	√	M	M	5.0	≤12.5
					1U308	8P	0.7	√	√	√	M	M	5.0	≤12.5
					310	10P	0.5	√	√	√	400V	400V	2.5	≤15.0
					1U310	10P	0.5	√	√	√	400V	400V	2.5	≤15.0
					312	12P	0.5	√	√	√	400V	400V	2.0	≤15.0
					314	14P	0.5	√	√	√	400V	400V	2.0	≤15.0
					316	16P	0.5	√	√	√	350V	350V	1.5	≤15.0
					1U316	16P	0.5	√	√	√	350V	350V	1.5	≤15.0

√: Indicates the common model, choose first

2*: Indicates that when the pin core type is PCB 90° bend pin, the rated current is 6.0A

F, U series pin core configuration diagram

Use level of sea level withstand voltage: M: ACS00V; I: AC750V; II: AC875V; III: AC1000V

					Pin core assembly number	Pin core number	Contact ϕA	Pin core type			Use level		Rated current (A)	Contact resistance (m Ω)
	A direction		B direction					Weld type	Printed board straight type	Printed board 90° bend pin type	Rated voltage V	Voltage resistance V		
	Weld side	Weld side	Weld side	Weld side										
2F					302	2P	2	✓	✓	✓	III	III	15.0 _{3*}	≤3.0
					303	3P	1.6	✓	✓	✓	III	III	15.0 _{3*}	≤3.0
					304	4P	1.3	✓	✓	✓	II	II	14.0 _{3*}	≤5.0
					305	5P	1.3	✓	✓	✓	II	II	12.0	≤5.0
					306	6P	0.9	✓	✓	✓	II	II	10.0	≤5.0
					307	7P	0.9	✓	✓	✓	II	II	10.0	≤5.0
					308	8P	0.9	✓	✓	✓	II	II	8.0 _{2*}	≤5.0
					309	8+1P	0.9	✓	✓	✓	II	II	6.0	≤5.0
							1.3	✓	✓	✓	II	II	10.0 _{2*}	≤3.0
					310	10P	0.9	✓	✓	✓	II	II	7.0	≤5.0
					311	11P	0.9	✓	✓	✓	II	II	6.0	≤5.0
					316	16P	0.7	✓	✓	✓	I	I	5.0	≤12.5
					319	19P	0.7	✓	✓	✓	I	I	4.5	≤12.5
					326	26P	0.5	✓	✓	✓	I	I	2	≤12.5

Pin configuration

✓: Indicates the common model, choose first

2*: Indicates that when the pin core type is PCB 90° bend pin, the rated current is 6.0A
3* Indicates that when the pin core type is PCB 90° bend pin, the rated current is 12.0A

F, U series pin core configuration diagram

Use level of sea level withstand voltage: M: AC500V; I: AC750V; II: AC875V; III: AC1000V

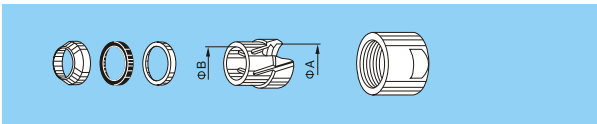
					Pin core assembly number	Pin core number	Contact ϕ A	Pin core type			Use level		Rated current (A)	Contact resistance (m Ω)
	A direction	B direction	A direction	B direction				Weld type	Printed board straight type	Printed board 90° bend pin type	Rated voltage V	Voltage resistance V		
3F					302	2P	3.0	✓	✓	☆	III	III	30.0 ₃ *	≤1.0
					303	3P	2.0	✓	✓	☆	III	III	25.0 ₃ *	≤2.0
					304	4P	2.0	✓	✓	☆	II	II	18.0 ₃ *	≤2.0
					307	6P	1.3	✓	✓	☆	II	II	7.0	≤5.0
						1P	2.0	✓	✓	☆	II	II	18.0 ₃ *	≤3.0
					308	8P	1.3	✓	✓	☆	II	II	10.0	≤5.0
					309	8P	1.3	✓	✓	☆	II	II	5.0	≤5.0
						1P	2.0	✓	✓	☆	II	II	18.0 ₃ *	≤3.0
					310	10P	1.3	✓	✓	☆	II	II	9.0 ₂ *	≤5.0
					312	12P	1.3	✓	✓	☆	II	II	8.0 ₂ *	≤5.0
					318	18P	0.9	✓	✓	☆	II	II	7.0 ₂ *	≤5.0
					319	19P	0.9	✓	✓	☆	II	II	7.0 ₂ *	≤5.0
					324	24P	0.7	✓	✓	☆	I	I	5.0	≤12.5
					327	27P	0.7	✓	✓	☆	I	I	5.0	≤12.5
					337	27P	0.5	✓	✓	☆	400	400	4.0	≤15.0
				10P		0.7	✓	✓	☆	M	M	4.0	≤12.5	
				340	40P	0.5	✓	✓	☆	400	400	3.5	≤15.0	

✓: Indicates the common model, choose first
 ☆: Indicate uncommon model, ask for customize

2*: Indicates that when the pin core type is PCB 90° bend pin, the rated current is 6.0A
 3* Indicates that when the pin core type is PCB 90° bend pin, the rated current is 12.0A

	Weld type male pin core 	Weld type female pin core 	Number	Pin number	Pin core diameter (mm)	Pin core type			Voltage resistance (V)(AC)	Rated current(A)
						Weld pin core	Printed board straight pin	Printed board bend pin		
00U			302	2	0.5	●	●	●	700	5
			303	3	0.5	●	●	●	700	3
			304	4	0.5	●	●	●	650	2
			305	5	0.4	●	●	●	450	1
			307	7	0.3	●	●	●	350	0.5

Cable clamp suitable for F series and U series



	Number		Cable clamp		Cable	
	Type	Code	ΦA	ΦB	Min.	Max.
00U	D	32	3.2	-	2.5	3.0
	D	42	4.2	-	3.1	4.0
	D	52	5.2	-	4.1	5.0
0U 0F	D	32	3.2	-	2.5	3.0
	D	35	3.5	-	2.4	3.3
	D	42	4.2	-	3.1	4.0
	D	52	5.2	-	4.1	5.0
1F 1U	D	62	6.2	-	5.1	6.0
	D	72	7.2	-	6.1	7.0
	D	42	4.2	-	3.1	4.0
	D	52	5.2	-	4.1	5.0
AF	D	62	6.2	-	5.1	6.0
	D	72	7.2	-	6.1	7.0
	D	82	8.2	-	7.1	8.0
	D	92	9.2	8.6	8.1	9.0
	D	52	5.2	-	4.1	5.0

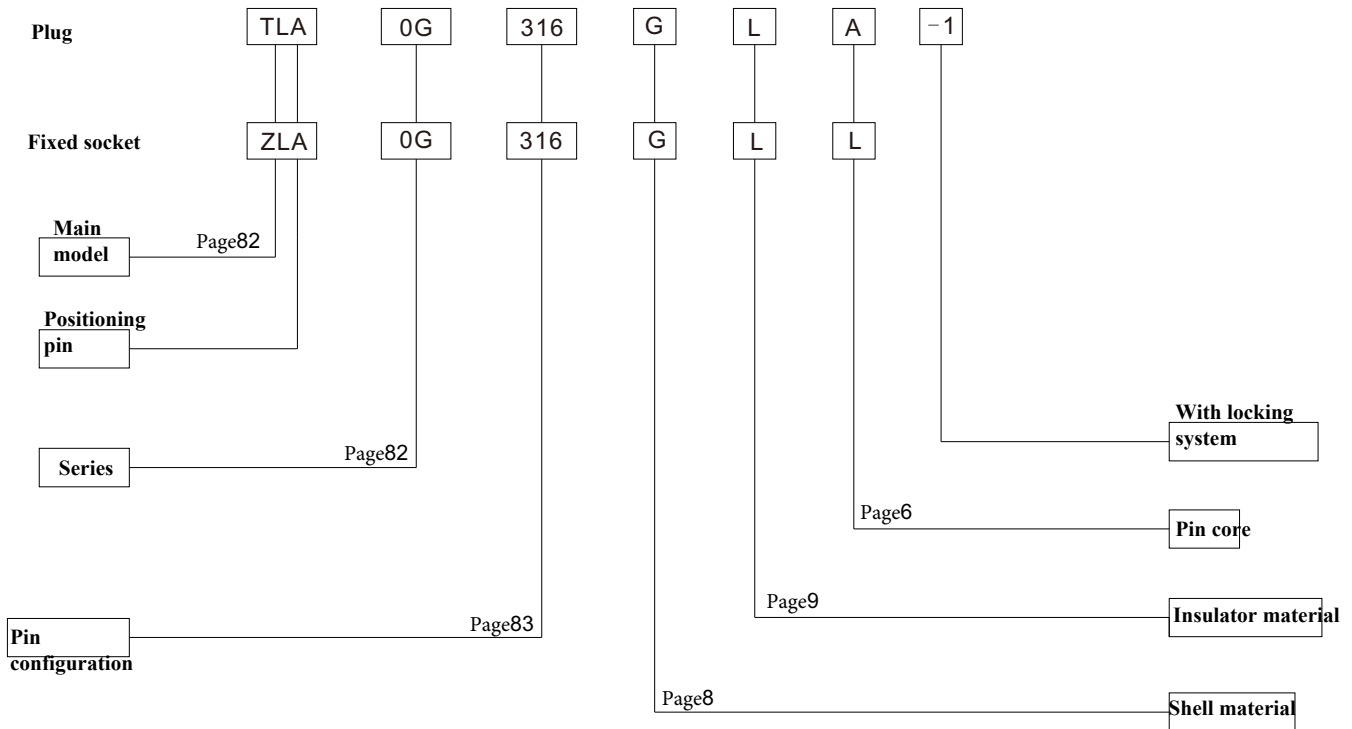
	Number		Cable clamp		Cable	
	Type	Code	ΦA	ΦB	Min.	Max.
2F	D	52	5.2	-	4.1	5.0
	D	62	6.2	-	5.1	6.0
	D	72	7.2	-	6.1	7.0
	D	82	8.2	-	7.1	8.0
	D	92	9.2	8.6	8.1	9.0
3F	D	10.2	10.2	-	9.1	10.2
	D	52	5.2	-	4.1	5.0
	D	62	6.2	-	5.1	6.0
	D	72	7.2	-	6.1	7.0
	D	82	8.2	-	7.1	8.0
	D	92	9.2	8.6	8.1	9.0
D	11.5	11.5	-	10.1	11.5	

G series connector



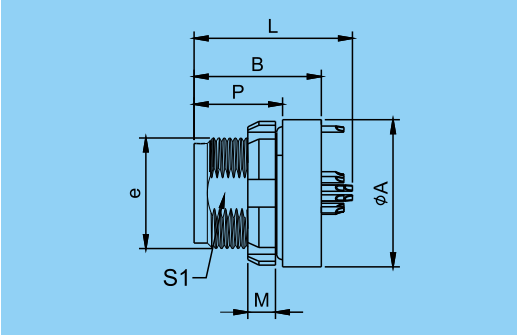
The trend toward miniaturization of connectors continues. High-density connectors deliver as many pins and cores as possible, transmitting more signals in the most compact space, and it offer new possibilities and solutions while challenging manufacturers. Despite the compact size of the connector, reliability and electrical and mechanical robustness must be maintained at all times. G series high density connector series Provides high performance data transmission, high reliability and easy processing. Includes USB3.0, USB2.0, and HDMI. Housing is keyed and color coded to ensure reliable and simple prevention of mis-insertion

G series product coding rules





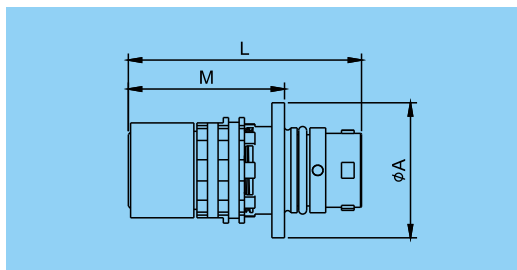
ZLA Fixed socket, high density pin core, five key positioning, front nut installation



Item		Size						
Series	Model	A	P	B	e	M	L	S1
0G	ZLA	13.3	8	11.5	M10X0.5	2.5	16.8	9



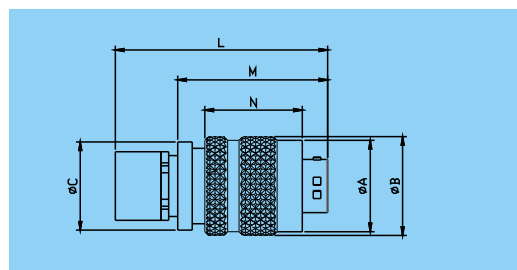
TLA Plug, high density pin core, five key positioning, without locking system



Item		Size		
Series	Model	A	M	L
0G	TLA	12.8	14.8	22.1












TLA Plug, high density pin core, five key positioning, with locking system



Item		Size					
Series	Model	A	B	C	N	M	L
0G-1	TLA	12	13	11.6	12.8	19.7	27.9

G series pin core diagram

Series	Pin core arrangement	Pin core number	Max current	Cable no.	Signal type
00		2	3A	2xAWG 24 [Power]	Power
		4	1A	4xAWG 28 [Signal]	Signal
		4	1A	2xAWG 28 [Signal cable]	USB2.0
			3A	2xAWG 24 [Power]	
	7	1A	7xAWG 28	Signal	
0		9	1A	3xAWG 28 [Signal cable]	USB2.0 + Power
			5A	6xAWG 22 [Power]	
		12	1A	10xAWG 28 [Signal cable]	USB3.1Gen + Power
5A			2xAWG 22 [Power]		
	16	1A	16xAWG 28	Signal	
1		27	1A	27xAWG 28	Signal
1.5		40	1A	40xAWG 28	Signal

Q series connector product introduction

High-density miniaturization

- Unique combination of signal and power
- Replacing multiple large connectors with fewer, smaller connectors
- Combines multiple protocols into a single connector

QM connector main features

- IP68, -20m/24h waterproof <10-6mbar I/s airtight
- 5000 times insertion and removal life
- Resistant to 96 hours of salt spray
- Impact resistance 300g [3ms]

High speed data transmission

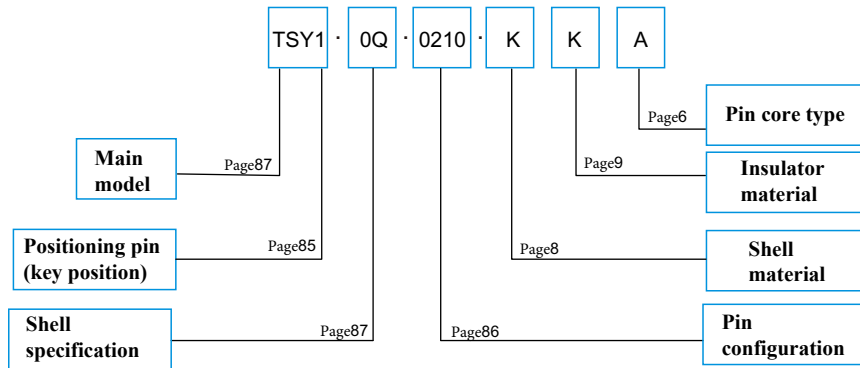
	0Q-4Pin	0Q-7Pin	0Q-12Pin	1Q-8Pin	1Q-9Pin	1Q-19Pin	1Q-24Pin	2Q-12Pin	2Q-30Pin
USB 2.0	OK	OK	OK	OK	OK	OK	OK	OK	OK
USB 3.2 GEN 1(5Gbps) GEN 2(10Gbps)	—	—	OK*	—	OK	OK*	OK*	OK	OK*
Ethernet (10Gbps)	—	—	OK*	OK	—	OK*	OK*	—	OK*
HDMI	—	—	—	—	—	OK*	OK*	—	OK*

Note:

1, * dependent application

2, for USB 3.2, the full specification is set to 1 meter cable

Q series product model description



Q series

Q Series positioning key - Plug front view

Shell no.	Position key - Plug front view							
0Q	1		2		3		4	
1Q	1		2		3		4	
2Q	1		2		3		4	

Q series pin core number

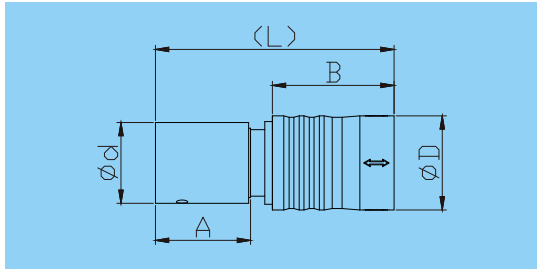
Q Series pin numbers are represented by a combination of 4 digits:

1. The first digit indicates the number of pins the first inserted/the last disconnected;
2. The second number indicates the number of pin cores with larger diameters (and larger solder cups);
3. The third and four digits as a whole indicate the number of remaining pin cores (standard size, non-advanced);
4. The Q series uses an androgynous pin core configuration, except for the size of 0Q 4 pins (2 power + 2 signal) and 7 pins (3 power + 4 signal);
5. In order to avoid confusion, the size of 0Q, with 2 power pin core 4 pins (also for advance contact) use the number 0202 to indicate instead of 2202. Represented by a number 2202, may misunderstand that there are 6 pins, rather than the actual 4 pins.

Shell number	Plug		Socket
0Q	0202	Match	0202
	0304		0304
	0210		0210
1Q	0008		0008
	2007		0009
	0019		0019/2017
	0420		0420/2418
2Q	2307		0309
	0624		0624



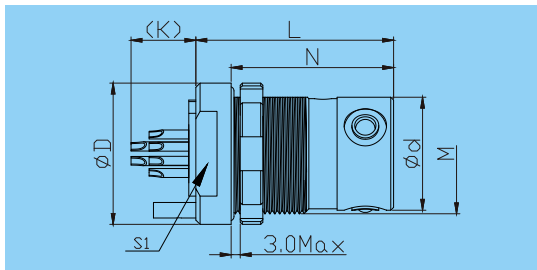
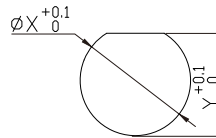
TLN Straight plug, positioning 1\2\3\4, crimped tail cap



Shell number	Φd	ΦD	A	B	L
0Q	8.5	9.9	10	12.8	25.1
1Q	10.4	12.9	10	12.8	25.1
2Q	12.4	14.9	10	12.8	25.1



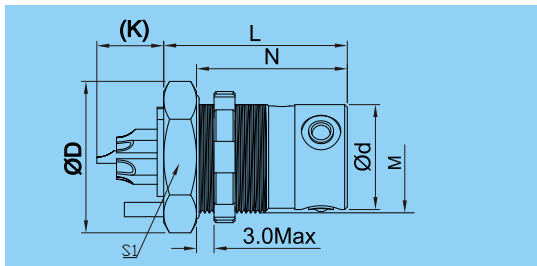
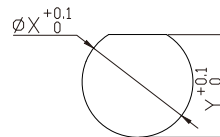
ZLY Front nut fixed socket, positioning 1\2\3\4



Shell number	Φd	ΦD	N	L	K	M	S1	ΦX	Y
0Q	8.0	10.0	11.5	14.0	5.1	M8.5X0.35	8.0	8.60	8.25
1Q	10.0	12.0	11.5	14.0	6.6	M10.5X0.5	10.0	10.45	10.2
2Q	12.0	14.0	11.5	14.0	5.1	M12.5X0.5	12.0	12.45	12.2



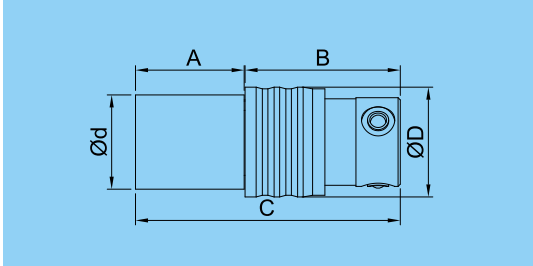
ZLL Front nut fixed socket, positioning 1\2\3\4



Shell number	Φd	ΦD	N	L	K	M	S1	ΦX	Y
0Q	8.0	11.4	11.5	14.0	5.1	M8.5X0.35	10	8.60	8.25
1Q	10.0	13.7	11.5	14.0	6.6	M10.5X0.5	12	10.45	10.2
2Q	12.0	15.5	11.5	14.0	5.1	M12.5X0.5	14	12.45	12.2



DLZ Floating socket, positioning 1\2\3\4

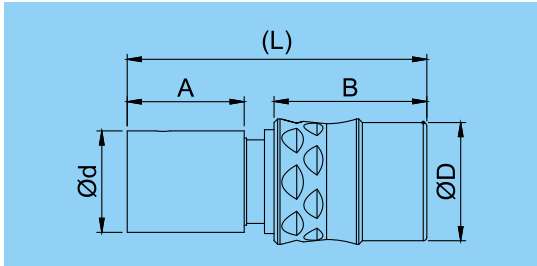


Shell number	Φd	ΦD	A	B	C
0Q	8.5	9.9	10.1	13.7	25
1Q	10.5	12.9	10.1	13.7	25
2Q	-	-	-	-	-

Q series



TSX Straight plug, positioning 1/2/3/4, crimped tail cap

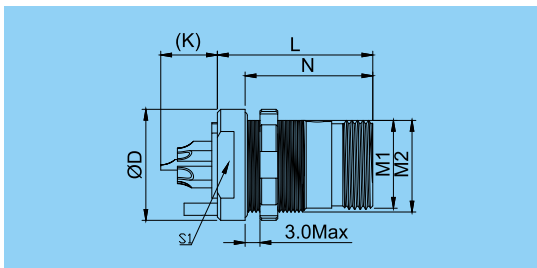
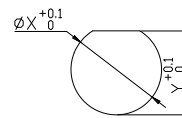


Shell number	Φd	ΦD	A	B	L
0Q	8.5	9.9	10.1	14	25
1Q	10.4	12.9	10.1	14	25
2Q	-	-	-	-	-

Q series



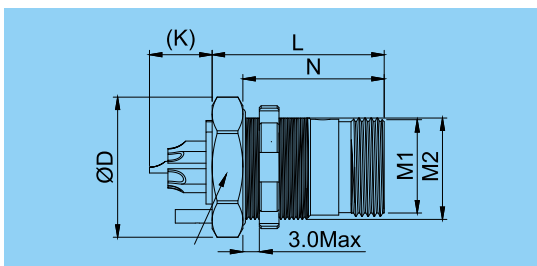
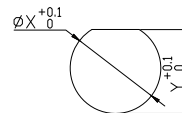
ZSY Front nut fixed socket, positioning 1/2/3/4



Shell number	ΦD	N	L	K	M1	M2	S1	ΦX	Y
0Q	10.0	11.5	14	4.6	M8X2	M8.5X0.35	8.0	8.60	8.25
1Q	12.0	11.5	14	6.6	M10X2	M10.5X0.5	10.0	10.45	10.2
2Q	-	-	-	-	-	-	-	-	-



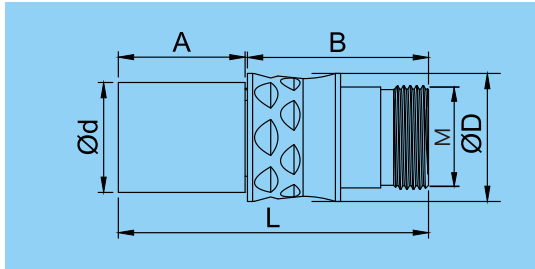
ZSL Front nut fixed socket, positioning 1/2/3/4



Shell number	ΦD	N	L	K	M1	M2	S1	ΦX	Y
0Q	11.4	11.5	14	4.6	M8X2	M8.5X0.35	10.0	8.60	8.25
1Q	13.7	11.5	14	6.6	M10X2	M10.5X0.5	12.0	10.45	10.2
2Q	-	-	-	-	-	-	-	-	-



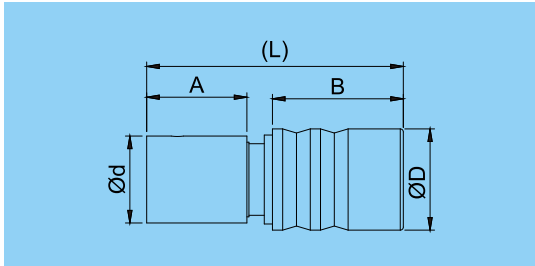
DSJ Floating socket, positioning 1\2\3\4



Shell number	Φd	ΦD	A	B	L	M
0Q	8.5	9.9	10.1	13.7	25	M8X2
1Q	10.5	11.9	10.1	13.7	25	M10X2
2Q	-	-	-	-	-	-



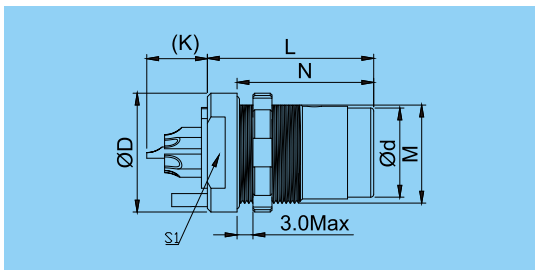
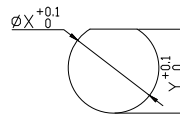
TQZ Straight plug, positioning 1/2/3/4, crimped tail cap



Shell number	Φd	ΦD	A	B	L
0Q	8.5	9.9	10	12.8	25
1Q	10.4	12.9	10	13.6	25
2Q	12.4	14.9	10	13.6	25



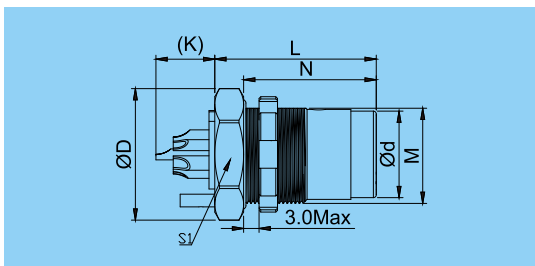
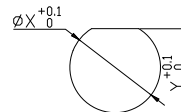
ZQY Front nut fixed socket, positioning 1/2/3/4



Shell number	ΦD	N	L	K	Φd	M	S1	ΦX	Y
0Q	10.0	11.5	14.0	4.6	7.8	M8.5X0.35	8.0	8.60	8.25
1Q	12.0	11.5	14.0	6.6	9.8	M10.5X0.5	10.0	10.45	10.2
2Q	14.0	11.5	14.0	5.1	11.8	M12.5X0.5	12.0	12.45	12.2



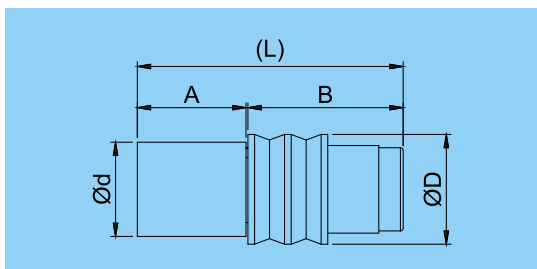
ZQL Front nut fixed socket, positioning 1/2/3/4



Shell number	ΦD	N	L	K	Φd	M	S1	ΦX	Y
0Q	11.4	11.5	14.0	4.6	7.8	M8.5X0.35	10.0	8.60	8.25
1Q	13.7	11.5	14.0	6.6	9.8	M10.5X0.5	12.0	10.45	10.2
2Q	15.5	11.5	14.0	5.1	11.8	M12.5X0.5	14.0	12.45	12.2

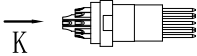


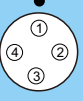


















DQZ Floating socket, positioning 1\2\3\4



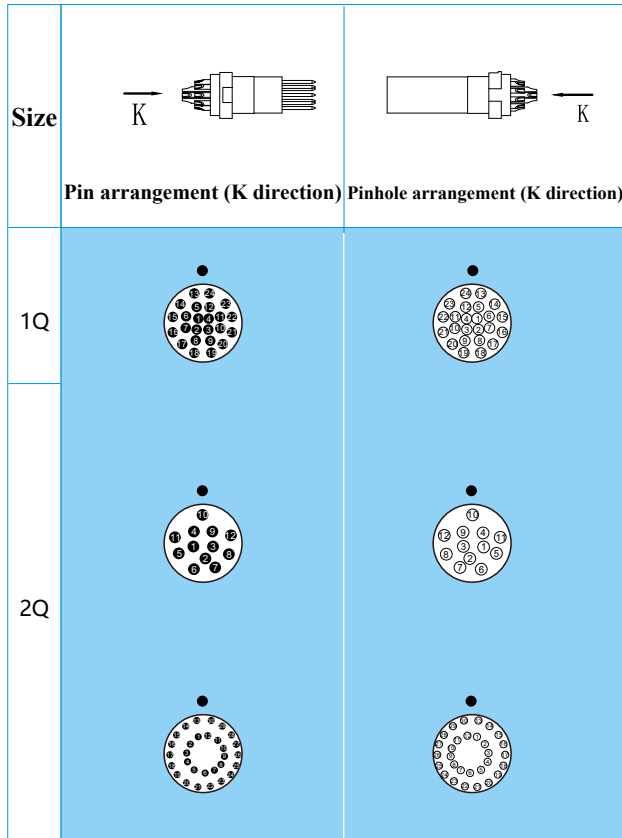
Shell number	Φd	ΦD	A	B	C
0Q	8.5	9.9	10.1	13.7	25
1Q	10.5	12.9	10.1	13.7	25
2Q	-	-	-	-	-

Q series

Size	 Pin arrangement (K direction)	 Receptacle arrangement (K direction)
0Q		
		
		
1Q		
		
		
		
		
		

Pin core number	Pin core diameter (mm)	Rated current (A)	Rated voltage (V)	Test voltage(kV)				
				AC r. m. s		DC		
				Pin-Shell	Pin-Pin	Pin-Shell	Pin-Pin	
4	2	0.5	1	≤200	1.4	1.2	2.3	1.9
	2	1.3	10					
7	4	0.5	0.02(2x) +1.5A(2x)	≤160	1.0	1.2	2.0	1.7
	3	0.7	7					
12	10	0.5	0.02(2x) +1.5A(2x)	≤50	0.9	0.9	1.5	1.2
	2	0.7	7					
8		0.5	3.8	≤320	1.6	1.6	2.2	2.2
9	7	0.5	1	≤250	1.5	1.2	2.4	1.8
	2	0.5	5					
19	15	0.5	1	≤100	0.9	0.9	1.5	1.2
	4	0.5	5					
19	13+2 ¹⁾	0.5	1	≤100	0.9	0.9	1.5	1.2
	4	0.5	5					
24	20	0.5	1	≤63	0.9	0.9	1.5	1.2
	4	0.5	5					

Q series



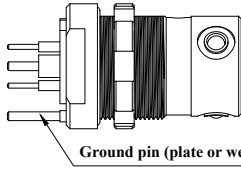
Pin core number	Pin core diameter (mm)	Rated current (A)	Rated voltage (V)	Test voltage(kV)				
				AC r. m. s		DC		
				Pin-Shell	Pin-Pin	Pin-Shell	Pin-Pin	
24	18+2 ¹⁾	0.5	1	≤63	0.9	0.9	1.5	1.2
	4	0.5	5					
12	7	0.5	0.02	≤250	1.7	1.5	2.3	2.0
	2	0.5	3		1.7	1.5	2.3	2.0
	3	0.9	8		1.8	3.1	2.4	4.5
					/	2 ²⁾	/	2.7 ²⁾
30	24	0.5	1	≤160	1.2	1	1.9	1.7
	6	0.5	5		1.2	1	1.9	1.7

Note:

- 1) Two advanced contacts for USB power supply can be used for soldering (S) or PCB (P) sockets;
- 2) Test the voltage between Pin-0.9 and Pin-0.5 of the Q series shell No. 2Q 2307/0309;
- 3) Test the voltage between Pin-0.7 and Pin-0.5 configured with Q Series shell number 0Q 0304.

		Q series straight pin plate opening diagram (view direction A-A)			
		0Q		1Q	
		2+2 pin	3+4 pin	12 pin	
		8 Pin	9 pin	19 pin	24 pin
		12 pin	30 pin		

	Pin core	
	Plug	Socket
○	Pin	Pin hole
○	Pin hole	Pin



Ground pin (plate or welded)

Ground pin connected to the shell:
 - Pins for PCB board contact
 - Pins for welding contacts

Q series

Recommended contact definition

Size	0Q			1Q			2Q
Pin configuration	2+2	3+4	12	8	19	24	30
Power	2;4	5;6;7	5;9	any2	9;12 15;18 ①	14;17; 20;23	14;17; 20;23; 26;29
Ethernet	-	-	1/6; 3/10; 7/8; 11/12 ①	1/2; 3/4; 5/6; 7/8 ①	8/19; 10/11; 13/14; 16/17 ①	15/16; 18/19; 21/22; 13/24 ①	Any other
Priority contact/ disconnect pin	2;4	-	-	-	13;19 ②	18;24 ②	-

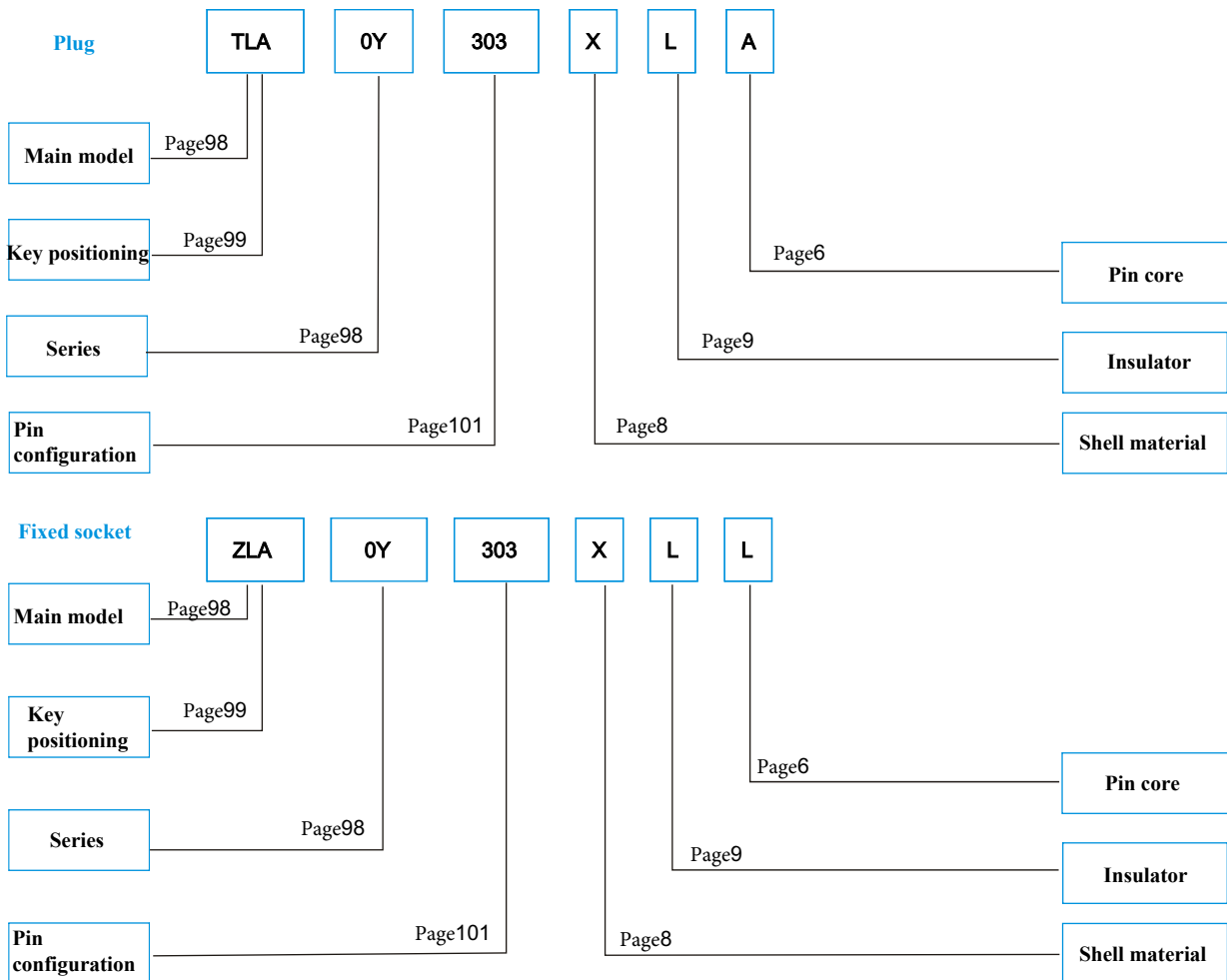
Note: ① Contact definition is recommended ② Fixed socket is available

USB signal			
	Shell 1Q,9 core configuration		Shell 1Q,2 core configuration
	(1) USB 2.0 D- (2) SS drain (3) USB 2.0 D+ (4) Vbus 5 V (5) SS TX+ (6) SS TX- (7) SS RX+ (8) SS RX- (9) Vbus GND		(1) USB 2.0 D- (7) SS RX+ (2) SS drain (8) SS RX- (3) USB 2.0 D+ (9) Vbus GND (4) Vbus 5 V (10) Power (5) SS TX+ (11) Power (6) SS TX- (12) Power

Main features of Y series connector

- Divided into push-pull self-locking and easy separation
- Small, light and easy to operate
- Working temperature range:
Silicone injection -55° C-+200° C
Epoxy resin adhesive -55° C-+125° C
No glue (PPS insulator) - 55° C-+200° C
- Mechanical positioning and color positioning, double anti-misplugging
- Can be customized and easy to clean -POGO-PIN pin
- Very sturdy shell
- Signal, high/low voltage, coaxial, triaxial , optical fiber, gas circuit and other signals can be mixed in one connector
- Provide system solutions, including component processing
- Suitable for harsh environments
- Can push and pull blindly, easy to operate
- Good shielding characteristics
- Protection level: IP68
- Reliable data transmission
- More than 5000 push and pull times

Y series product code rules:



Example of product number

Straight plug:

TLA.0Y.303.XLA=Short straight plug, positioning key (A), 0Y series, multi-core type, 3-core, aluminum alloy chemical nickel shell,PPS insulation, welding male pin core.

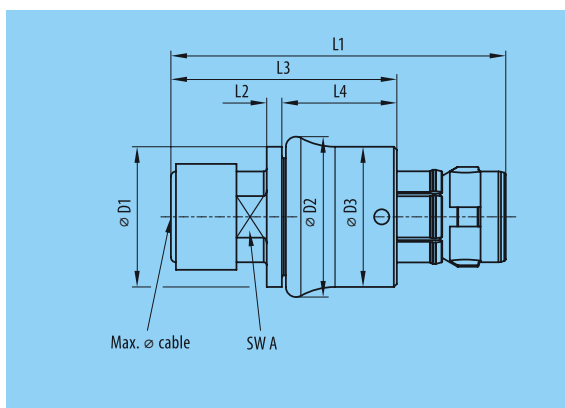
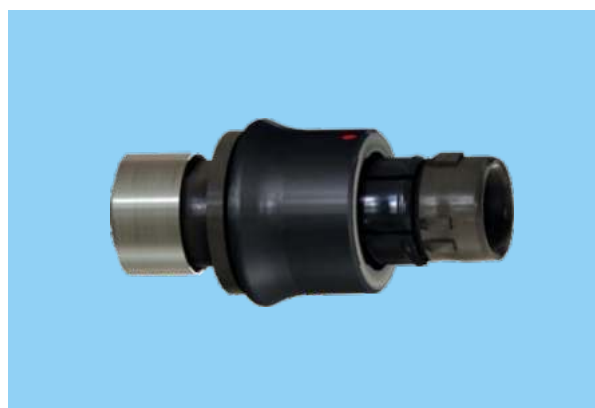
Fixed socket:

ZLA.0Y.303.XLL=fixed socket, positioning key (A), 0Y series, multi-core type, 3-core, aluminum alloy chemical nickel shell,PPS insulation, welding female pin core

TL push pull self-locking plug

Size		Unit(mm)								
		L1	L2	L3	L4	D1	D2	D3	SWA	Maximum cable diameter
0	0	31.4	1.5	21.4	10.4	11.9	14.0	12.0	7.0	5.0
1	1	33.0	1.5	22.4	11.4	13.9	15.9	13.9	8.0	6.5
A	1.5	33.8	1.5	22.7	11.7	14.5	16.5	14.5	10.0	8.0
2	2	35.2	1.5	23.6	12.2	17.6	19.6	17.6	12.0	10

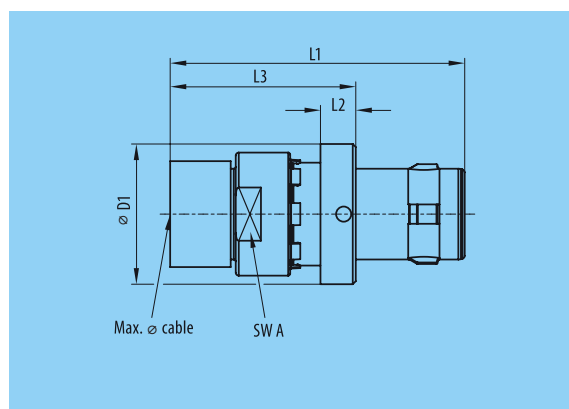
1) Cable with single braided shield




TA easy separate plug

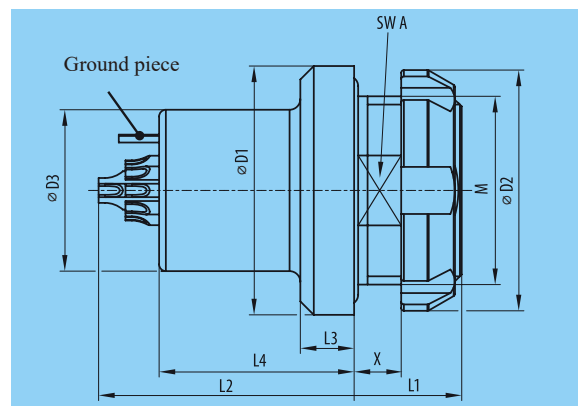
Size		Unit(mm)					
		L1	L2	L3	D1	SWA	Maximum cable diameter
0	0	25.0	3.0	15.0	11.9	9	5.0
1	1	29.2	3.5	18.4	13.9	11	6.5
A	1.5	28.5	3.5	18.5	15.9	12	8.0
2	2.0	31.0	4.0	19.0	17.6	14	8.0

1) Cable with single braided shield











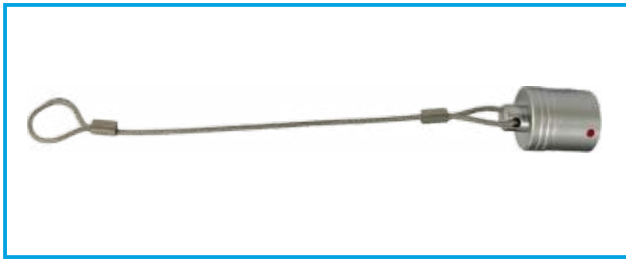
ZL socket

Size		Unit(mm)											
		L1	L2 max.	L3	L4	X max.	D1	D2	D3	SWA	M	SW	Ø
0	0	6.5	15.5	3.0	11.5	3.0	15.5	15.0	9.2	10.0	11x0.75	10.1	11.1
1	1	8.0	19.0	4.0	14.5	3.5	18.5	17.9	12.0	13.0	14x1	13.1	14.1
A	1.5	7.0	17.7	2.5	12.5	3.0	18.9	18.0	14.0	13.0	14x1	13.1	14.1
2	2.0	8.0	21.5	4.0	14.0	3.0	20.8	21.9	14.5	15.0	16x1	15.1	16.1



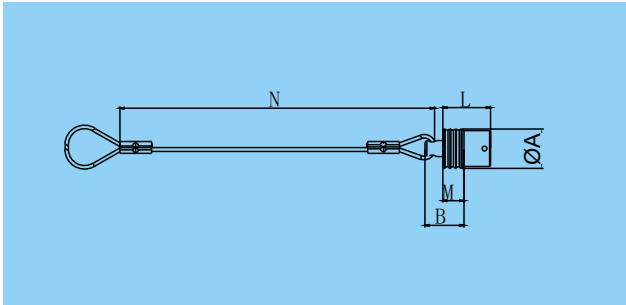
Positioning

	Positioning	Socket front view	Color positioning	
Standard	A			Light brown
	B			Red
	C			Blue
	D			Green



BTA Y series plug dust cover

Shell material: aluminium alloy Lanyard material: stainless steel (S)/nylon rope (N)
 O-ring seal: Silicone rubber Working temperature max.: 135°C
 Waterproof level: IP68

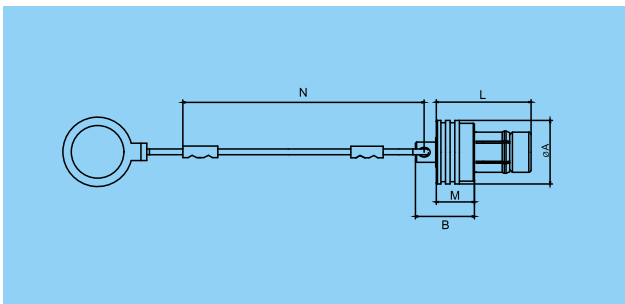


Product number	Series	Size(mm)				
		A	B	L	M	N
BTA.0Y.CSS-085	0Y	10.5	9	12.7	5.0	85
BTA.1Y.CSS-085	1Y	12.5	10	13.6	5.0	85
BTA.AY.CSS-085	AY	13.5	10	12.8	5.0	85
BTA.2Y.CSS-085	2Y	15.5	10	15.3	5.0	85



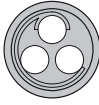
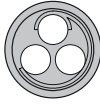

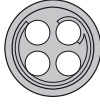
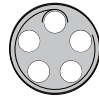
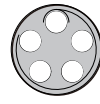
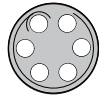
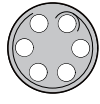




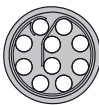
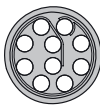
BZE Y series plug dust cover

Shell material: aluminium alloy Lanyard material: stainless steel (S)/nylon rope (N)
 O-ring seal: Silicone rubber Working temperature max.: 135°C
 Waterproof level: IP68



Product number	Series	Size(mm)				
		A	B	L	M	N
BZE.0Y.CSC-085	0Y	9	10.3	16.5	7.0	85
BZE.1Y.CSC-085	1Y	12	11.8	17.2	7.0	85
BZE.AY.CSC-085	AY	13	11.8	16.5	7.0	85
BZE.2Y.CSC-085	2Y	15	11.8	18.2	7.0	85

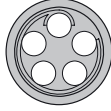
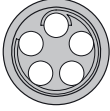
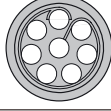

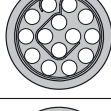
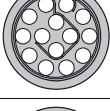
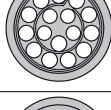
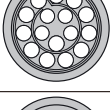
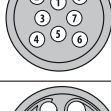
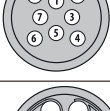
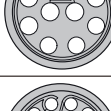
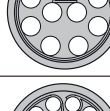
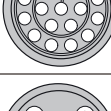
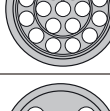
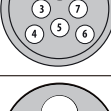
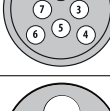
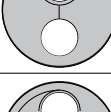
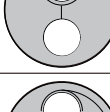
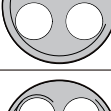
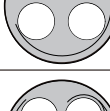
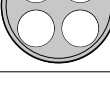
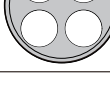
Y series pin configuration diagram

	Pin number	Pin diameter (mm)	Single pin load current A	Test voltage between pin and pin KV	Operating voltage KV	Termination method		Terminating surface view	
						Weld	PCB	Pin	Pinhole
0Y	3 pin	0.9	10	1.200	0.400	•	•		
	4 pin	0.7	7	0.900	0.300	•	•		
	5 pin	0.7	7	0.900	0.300	•	•		
	6 pin	0.5	5	0.900	0.300	•	•		
	7 pin	0.5	5	0.900	0.300	•	•		
	9 pin	0.5	5	0.600	0.200	•	•		
	10 pin	0.5	5	0.600	0.200	•	•		

1 Working voltage is according to SAE 13441, suitable for the environment of 2000m above sea level
 2 Other pin cores need to be customized

Pin configuration

Y series pin configuration diagram

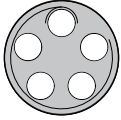
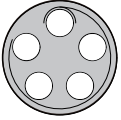
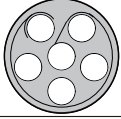
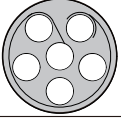
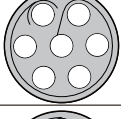
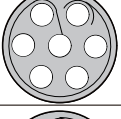
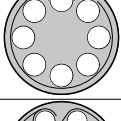
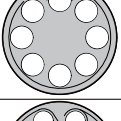
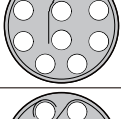
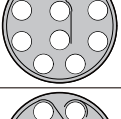
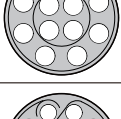
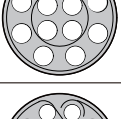
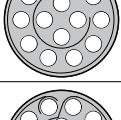
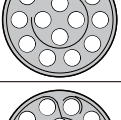
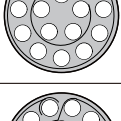
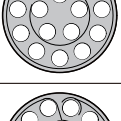
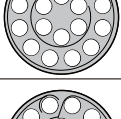
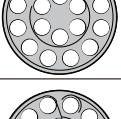
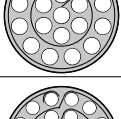
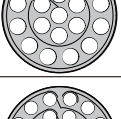
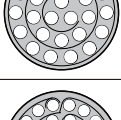
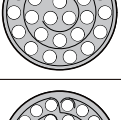
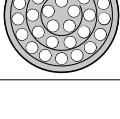
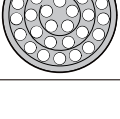
	Pin number	Pin diameter mm	Single pin load current A	Test voltage between pin and pin KV	Operating voltage KV	Termination method		Terminating surface view	
						Weld	PCB	Pin	Pinhole
1Y	5 pin	0.9	10	1.350	0.450	●	●		
	8 pin	0.7	7	1.000	0.333	●	●		
	14 pin	0.5	5	0.900	0.300	●	●		
	16 pin	0.5	5	0.900	0.300	●	●		
	8 pin	0.5	Type: CAT5 Gigabit Ethernet ¹⁾			●	●		
AY	10 pin	0.7	7	1.200	0.400	●	●		
	19 pin	0.5	5	1.000	0.333	●	●		
	8 pin	0.7	Type: CAT5 Gigabit Ethernet ¹⁾			●	●		
2Y	2 pin	2	30	2.100	0.700	●	●		
	3 pin	1.6	17	2.400	0.800	●	●		
	4 pin	1.3	15	1.850	0.62	●	●		

1 Working voltage is according to SAE 13441, suitable for the environment of 2000m above sea level

2 Other cores need to be customized

Pin configuration

Y series pin configuration diagram

	Pin number	Pin diameter mm	Single pin load current A	Test voltage between pin and pin KV	Operating voltage KV	Termination method		Terminating surface view	
						Weld	PCB	Pin	Pinhole
2Y	5 pin	1.3	14	1.750	0.580	●	●		
	6 pin	1.3	12	1.350	0.450	●	●		
	7 pin	1.3	11	1.750	0.580	●	●		
	8 pin	0.9	10	1.500	0.50	●	●		
	10 pin	0.9	8	1.450	0.480	●	●		
	12 pin	0.7	7	1.250	0.420	●	●		
	14 pin	0.7	6.5	1.150	0.380	●	●		
	16 pin	0.7	6	0.950	0.320	●	●		
	18 pin	0.7	5.5	0.850	0.280	●	●		
	19 pin	0.7	5	0.950	0.320	●	●		
	26 pin	0.5	2	0.950	0.320	●	○		
	32 pin	0.5	1.5	0.800	0.270	●	○		

1 Working voltage is according to SAE 13441, suitable for the environment of 2000m above sea level

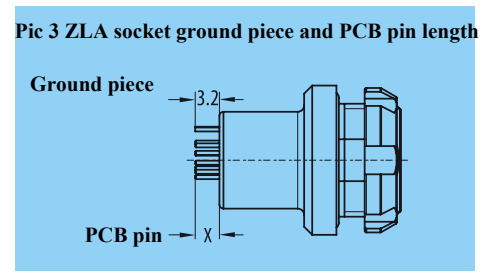
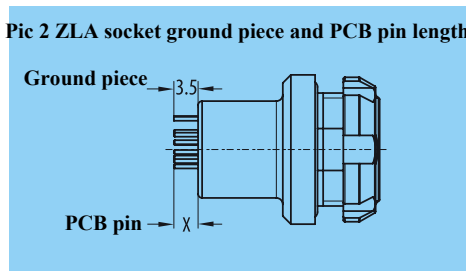
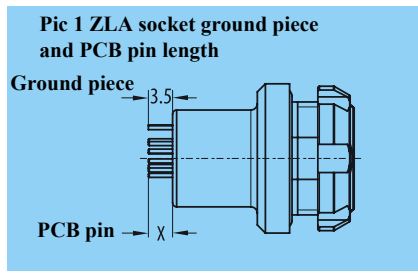
2 Other cores need to be customized

0Y-PCB open hole diagram 1Y-PCB open hole diagram

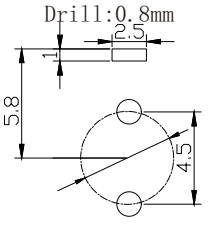
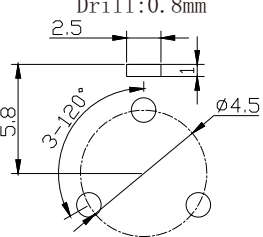
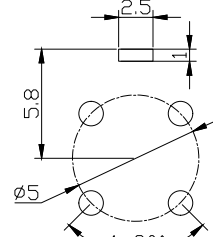
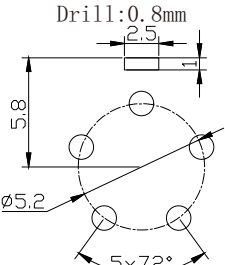
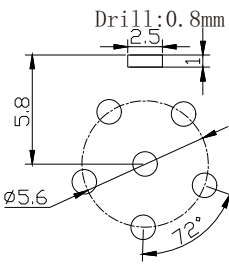
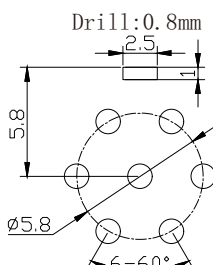
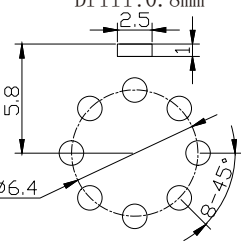
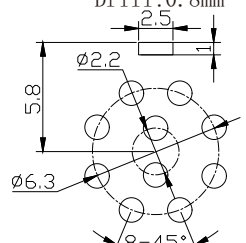
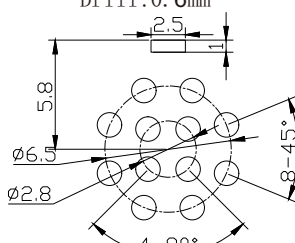
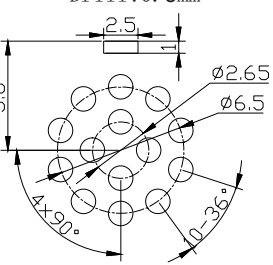
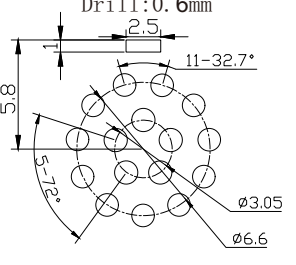
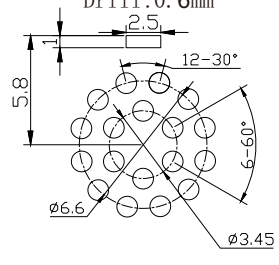
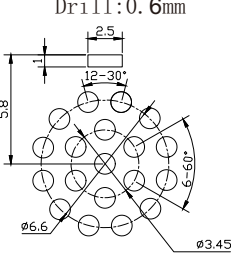
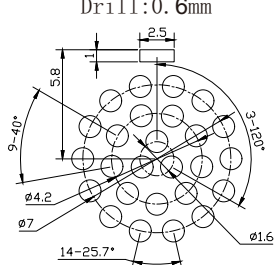
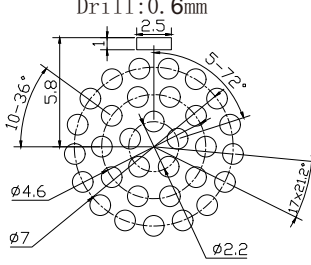
AY-PCB open hole diagram

		Pic1 ZLA socket mm			Pic2 ZLA socket mm			Pic3 ZLA socket mm
3 pin		3.5	5 pin		3.5	10 pin		3.2
4 pin		3.5	8 pin		3.5	19 pin		3.2
5 pin		3.5	14 pin		3.0	8 pin		3.2
6 pin		3.5	16 pin		3.0			
7 pin		3.5	8 pin		3.5			
9 pin		3.5						
10 pin		3.5						

PCB opening diagram



2Y-PCB open hole diagram

2 pin		3 pin		4 pin	
5 pin		6 pin		7 pin	
8 pin		10 pin		12 pin	
14 pin		16 pin		18 pin	
19 pin		26 pin		32 pin	

FX series micro circular high-density connector



- Straight push-in and pull-out structure, with features of fast push-pull, five-key positioning, high density, small size, blind insertion, etc.
- Shielding, sealing, environmental resistance, high push-pull mechanical life, light weight
- Integrated transmission: low frequency, power, high speed, radio frequency, optical fiber and other signals can be integrated in one connector
- It can meet the transmission of a variety of standard protocol high-speed signals (USB2.0, USB3.0, Gigabit Ethernet, 10 Gigabit Ethernet, HDMI, etc.)
- It is widely used in the electrical connection of DC, AC, high-speed, radio frequency, optical fiber, etc. in the military and civilian fields of radio equipment, medical equipment, test and inspection equipment, audio and video equipment, data acquisition, industrial control, etc., especially suitable for high density installation, installation in a relatively small space and places where it is difficult to insert and separate by rotating.

Main performance and characteristics

Plug and socket straight push-pull locking structure

The socket is a nut-fastened installation form with a conductive O-ring

Leakage rate: The pressure difference is $1 \times 10^5 \text{ Pa}$, and the leakage rate should be $< 1.0 \text{ Pa} \cdot \text{cm}^3/\text{s}$ (optical fiber, radio frequency is not airtight)

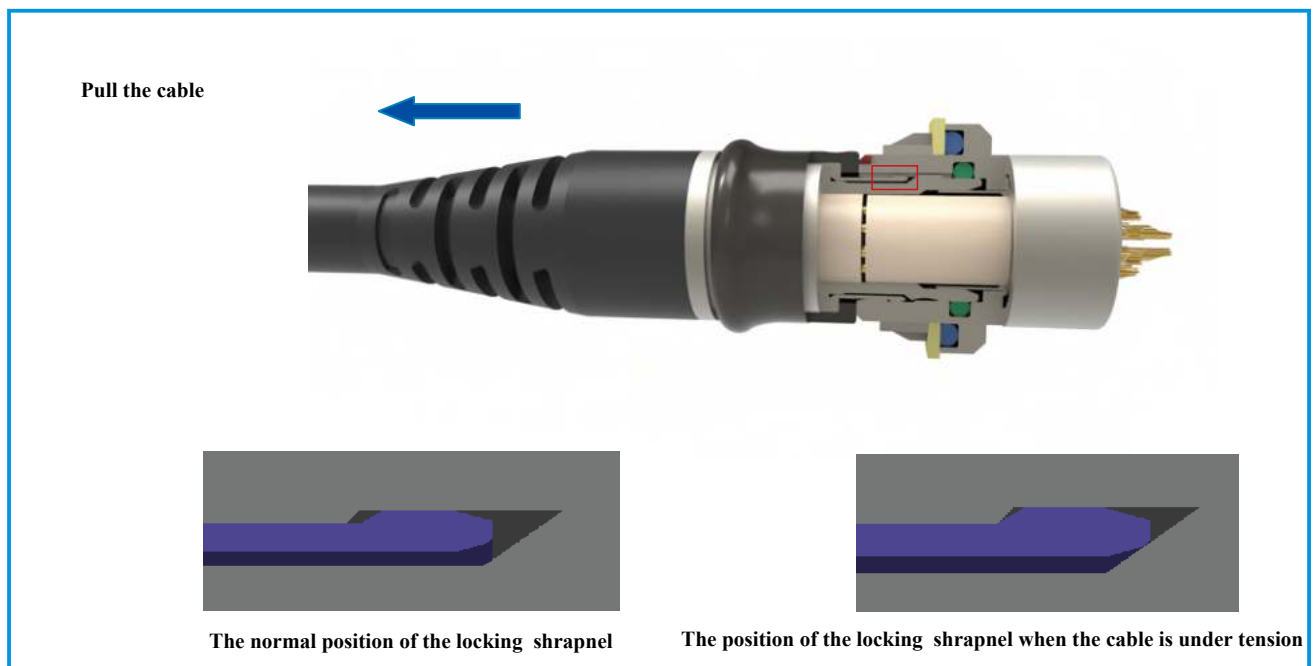
When plug and socket is locked, water pressure resistance is 24h under 2m depth water

Both plugs and sockets can be equipped with pins and holes

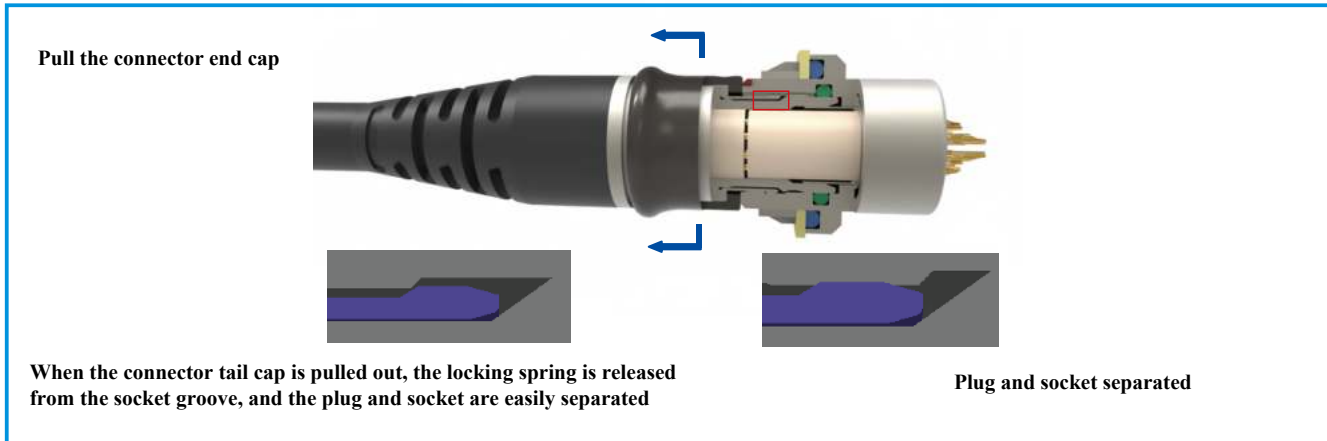
Termination form: plug---welding, socket---welding, straight printed board, curved printed board

Five key positioning, four key positions and color double anti-misplugging

There are seven shell codes such as 101, 102, 103, 1031, 104, 105, 106, etc.



When pulling the cable, the locking shrapnel is still embedded in the groove of the socket, and the plug and socket cannot be separated



Positioning

Plug	Shell positioning	Shell number	Positioning key			
			N	A	B	C
		101				
102						
103						
1031						
104						
105						
106						
Color positioning			Red	White	Blue	Green

Socket	Shell positioning	Shell number	Positioning key			
			N	A	B	C
		101				
102						
103						
1031						
104						
105						
106						
Color positioning			Red	White	Blue	Green

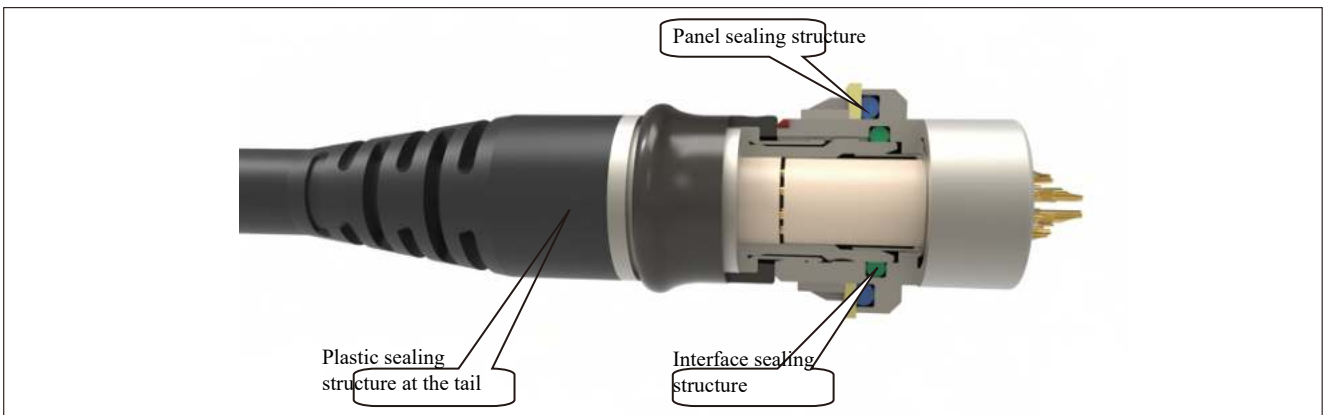
Main technical performance

Mechanical performance

- Mechanical life: 5000 times
- Vibration: 101, 102 housing sinusoidal vibration; frequency 10-2000Hz, acceleration 147m/ S², instantaneous interruption ≤1μs. Random vibration of other shells: power spectral density 1.0g²/Hz, average root square value 36.6g, instantaneous interruption ≤1μs.
- Impact: Acceleration 2940m/s², instantaneous interruption ≤1μs

Environmental performance

- Operating temperature: -55°C -125°C
- Relative humidity: 95% at 40°C
- Socket leakage rate: air pressure difference is 1x10⁵Pa, the leakage rate ≤1.0 Pa.CM³ /s (optical fiber, radio frequency is not airtight)
- Salt spray: aluminum alloy 96h, copper alloy 500h
- Plug and socket mating, water pressure resistance: 2m water depth, 24h



Electrical performance

Contact specification, contact resistance, wire cup diameter, maximum wire specification

Contact specification mm	Contact resistance (mΩ)	Wire weld cup diameter mm	Maximum wire specification	
			mm ²	AWG
Φ0.3	25	Φ0.35	0.06	30
Φ0.5	15	Φ0.6	0.15	26
Φ0.7	12.5	Φ0.75	0.2	24
Φ0.9	5	Φ0.8	0.3	22
Φ1.3	3	Φ1.2	0.5	20
Φ1.6	2.5	Φ1.8	2.0	14
Φ2.0	2	Φ2.0	2.0	14
Φ2.3	1.5	Φ2.1	3.0	12
Φ3.0	1	Φ3.1	4.8	10

Insulation resistance:

Number	Working environment	Insulation resistance MΩ
1	Normal temperature state	≥5000
2	125°C	≥500
3	Wet	≥100

Rated current:

Number	Contact specification mm	Rated current A
1	Φ0.3	1
2	Φ0.5	1.8
3	Φ0.7	3.8
4	Φ0.9	6.3
5	Φ1.3	9
6	Φ1.6	15
7	Φ2.0	19
8	Φ2.3	20
9	Φ3.0	30

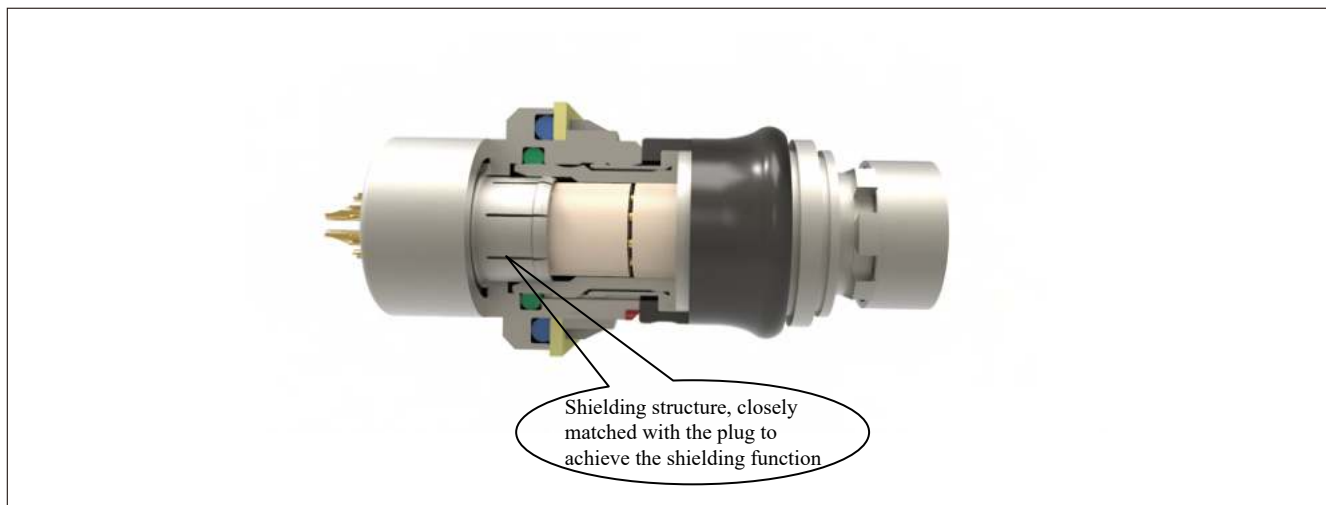
When multiple contacts are working at the same time, the rate of decrease of the rated working current should meet the requirements of the following table:

Number of contact	1 ~ 10	11 ~ 20	21 ~ 30	31 ~ 62
Rated working current drop rate %	0	10	20	30

Dielectric withstand voltage:

Working conditions	Sea level V, AC	21336m,height V,AC
I	750	175
II	875	225
III	1000	250

Shielding effectiveness:>55dB(1GHz)



Model naming

Series main name	FX series micro circular connector	FX	102	T02	F	056	A1	N	-	H	S	01
Shell code	101-102-103-1031-104-105-106											
Plug and socket type	T02-plug Z02----Install the socket after the panel is fastened by the nut											
Shell material and coating①	Aluminium alloy plated with satin nickel F Aluminum alloy plated with Copper alloy plated with satin nickel C pearl chrome XC Copper alloy plated with black chrome K Copper alloy plated with pearl chrome CC											
Contact code	See contact arrangement for details											
Contact form	Differential contact pin A1, socket B1											
Key position	N-A-B-C											
Delimiter	-											
Contact termination form Only A2., B2 is not optional	Welding---H Straight PCB---B Curved PCB----W											
Ground piece Ground piece (Only Z02 is optional)	Without ground piece 0 With ground piece 1											
Cable processing form (Only T02 is optional)	Plastic seal form S Clamping form J											
Modification No.	01、02、03...											

Model designation mark

FX102T02F056A1N-HS:

FX series connector, shell number is 102, plug T02, aluminum alloy satin-plated nickel, contact code is 056, contact is pin, key position is N, contact is welded, and cable processing is plastic sealed.

FX102Z02F056B1N-H0:

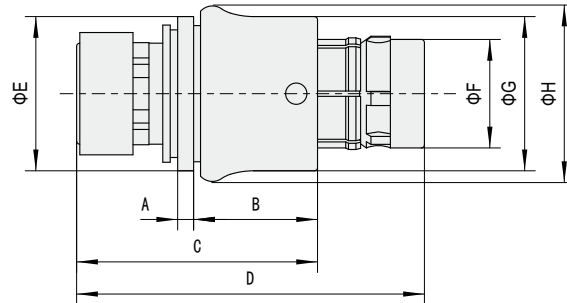
FX series connector, the shell number is 102, the pin Z02 is installed after the nut is fastened to the panel, the aluminum alloy is plated with satin nickel, the contact code is 056, the contact is a socket, the key is N, the contact is welded, without grounding piece.

①: Product appearance and color corresponding to the shell material and coating



Dimensions

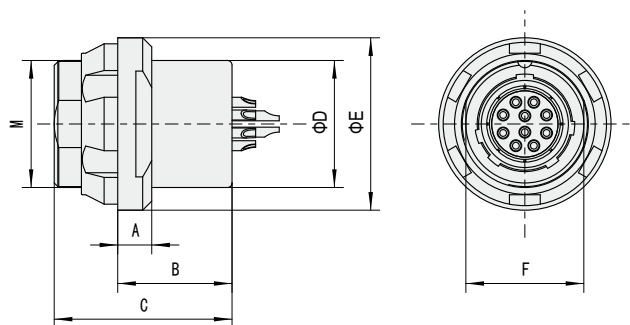
T02-Cable plastic sealed plug



Unit: mm

Shell No.	A	B	C	D	E	F	G	H	Cable diameter(Max.)
101	1.5	9.2	17.3	25.6	9.9	5	9	11	3.5
102	1.5	10.4	21.4	31.4	11.9	7	12	14	5.5
103	1.5	11.4	22.4	33.2	13.9	9	13.9	15.9	6.5
1031	1.5	11.7	22.7	32.7	14.5	10.2	14.5	16.5	8
104	1.5	12.2	23.2	35.2	17.6	12	17.6	19.6	10
105	1.5	12.2	23.2	38.3	21.9	15	22	23.9	11.5
106	2.2	18.1	34.1	52.6	29.8	22.5	30	33	17.5

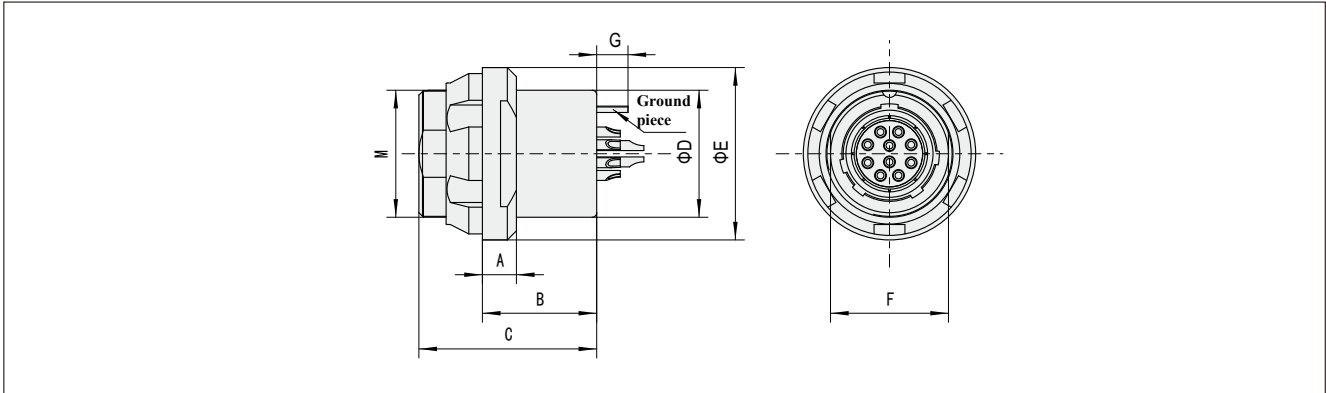
Z02 socket without grounding piece



Unit: mm

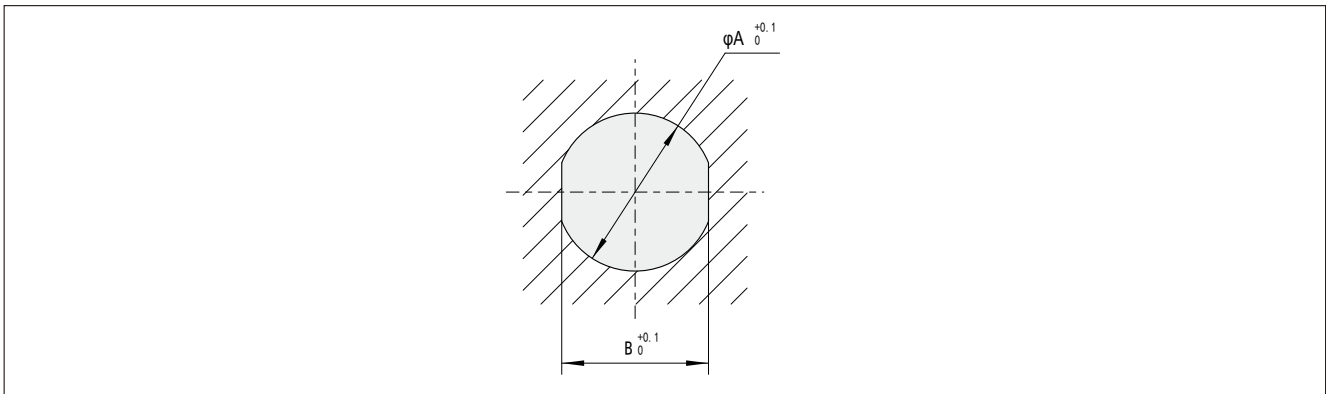
Shell No.	A	B	C	D	E	F	M
101	3	7.8	14.3	8	12.4	7	8*0.75
102	3.5	10	16.7	9	15.5	10	11*0.75
103	3.55	13.1	21.1	12	18.5	13	14*1
1031	3.75	12.6	19.6	14	19	13	14*1
104	4	14.5	22.5	15	22	15	16*1
105	4.55	15.6	26.6	21.05	27.1	18	20*1
106	5	13	26	27	39	27	30*1.5

Z02 socket with grounding piece



Unit: mm								
Shell No.	A	B	C	D	E	F	G	M
101	3	7.8	14.3	8	12.4	7	3.5	8*0.75
102	3.5	10	16.7	9	15.5	10	3.6	11*0.75
103	3.55	13.1	21.1	12	18.5	13	3.2	14*1
1031	3.75	12.6	19.6	14	19	13	3.5	14*1
104	4	14.5	22.5	15	22	15	5.7	16*1
105	4.55	15.6	26.6	21.05	27.1	18	5	20*1
106	5	13	26	27	39	27	6.1	30*1.5

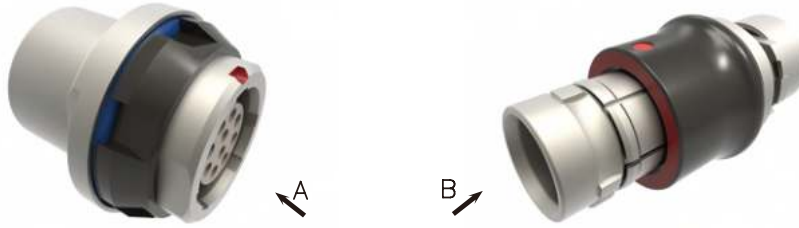
Z02 socket recommended panel opening size



Unit: mm				
Shell No.	A	B	Minimum thickness of panel	Maximum thickness of panel
101	8.1	7.1	1	3
102	11.1	10.4	1.5	3
103	14.1	13.1	1.5	3.5
1031	14.1	13.1	1.5	3
104	16.1	15.1	1.5	3
105	20.1	18.1	1.5	5.5
106	30.1	27.1	2	6.5

FX series

High speed contact arrangement



Contact arrangement				Shell code	Contact code	Contact quantity	Contact diameter (mm)	Interface type	Contact form	Differential transmission rate
Socket hole	Plug pin	Socket pin	Plug hole							
A direction	B direction	A direction	B direction							
				1031	051	8	0.5	Gigabit network	A1/B1	2.5Gbps
					052	12	0.5 0.7	USB3.0 +Power	A4/B4	5Gbps
					054	8	0.5 0.7	2 channel USB2.0	A1/B1	480Mbps
					056	8	0.5	Gbps network	A1/B1	250Mbps
				104	038	20	0.5	HDMI/DP/DVI	A1/B1	3.4Gbps
					039	20	0.5	Two channel Gbps network	A1/B1	250Mbps

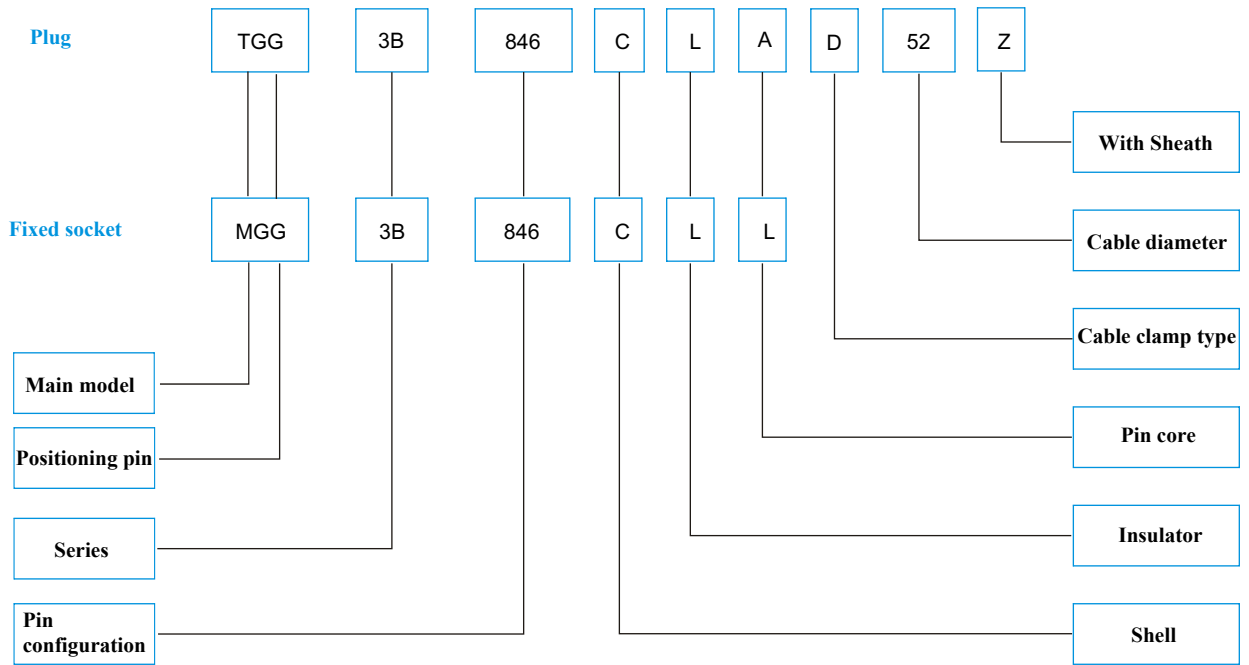
Note: I, II, III represents the withstand voltage level, see the main technical performance above for details. See the model name for the contact form.

High-speed contact signal definition															
1031-051		1031-052		1031-054		1031-056		104-038				104-039			
Hole position	Signal definition	Hole position	Signal definition	Hole position	Signal definition	Hole position	Signal definition	Hole position	Signal definition	Hole position	Signal definition	Hole position	Signal definition	Hole position	Signal definition
1	DATA1+	1	VBUS	1	DATA+	1	DATA1+	2	DATA1+	1	Signal or Power	1	1-DATA1+	9	2-DATA3+
2	DATA1-	4	GND	7	DATA-	2	DATA1-	7	Shield	8	Signal or Power	13	1-DATA1-	20	2-DATA3-
3	DATA2+	2	DATA+	2	VCC	3	DATA2+	3	DATA1-	15	Signal or Power	12	1-DATA2+	10	2-DATA4+
4	DATA2-	3	DATA-	6	GND	4	DATA2-	5	DATA2+	17	Signal or Power	14	1-DATA2-	19	2-DATA4-
5	DATA3+	5	SSTX+	8	DATA+	5	DATA3+	11	Shield	13	Signal or Power	3	1-DATA3+	2	Signal or Power
6	DATA3-	11	GND DRAIN	4	DATA-	6	DATA3-	12	DATA2-	20	Signal or Power	16	1-DATA3-	5	Signal or Power
7	DATA4+	6	SSTX-	3	VCC	7	DATA4+	18	DATA3+	4	Signal or Power	4	1-DATA4+	8	Signal or Power
8	DATA4-	8	SSRX+	5	GND	8	DATA4-	14	Shield	6	Signal or Power	15	1-DATA4-	11	Signal or Power
		12	GND DRAIN					19	DATA3-			6	2-DATA1+		
		9	SSRX-					9	DATA4+			18	2-DATA1-		
		7	POWR					10	Shield			7	2-DATA2+		
		10	GND					16	DATA4-			17	2-DATA2-		

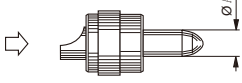
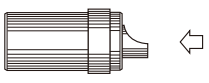




Low frequency push pull self locking,coaxial,triaxial and mixed series introduction

Low frequency push pull self locking,coaxial,triaxial and mixed connector insulator can be used in B,K,C, and F series. The mixed connector pins include coaxial+ low voltage pin configuration and coaxial+ multi- core configuration

Low frequency push pull self locking,coaxial,triaxial and mixed series product numbering rules



Single pin

	 Weld male pin core	 Weld female pin core	Number	Series		$\varnothing A$ (mm)	Pin core type		Test voltage (kVrms)	Test voltage (kVdc)	Rated current (A)
				Standard series	Water proof series		Weld pin core	Crimp pin core			
00			250	00	-	1.3			0.8	1.2	8

Coaxial
Mixed

		Coaxial core	Number	Coaxial core				Low voltage(LV)						
				Pin core No.	Impedance(Ω)	Type	Cable set	Pin core number	ø A (mm)	Pin core type		Test voltage (kVrms)	Test voltage (kVdc)	Rated current (A)
										Weld	Crimp			
	0U		804	1	75	F	2	1	0.4	●	●	0.75	0.75	0.8
1U 1Y	1B		801	1	50	F	2	1	0.9	●	●	0.85	1.20	10
	1K		803	1	50	F	2	3	0.9	●	●	0.75	1.05	10
	1C 1F 1K		809	1	50	F	2	9	0.5	●	●	0.75	0.75	2
2B 2K 2C 2F	2B		802	1	50	A1	1-2-3	2	0.9	●	●	0.85	1.20	10
	2K		804	1	50	A1	1-2-3	4	0.7	●	●	0.75	1.05	7
	2C		2F806	1	50	A1	1-2-3	6	0.7	●	●	0.75	1.05	7
	2F		806	1	50	A1	1-2-3	6	0.7	●	●	0.75	1.05	7
			810	1	50	C	1-2-3	10	0.7	●	●	0.95	1.35	7
			841	2	50	E	2	1	1.6	●	●	1.90	2.70	17
			232	2	50	G	-	-	-	-	-	-	-	-
			243	3	50	E	2	-	-	-	-	-	-	-
3B 3K 3C 3F	3B		803	1	50	A0	6	3	0.9	●	-	1.10	1.55	8
	3K		806	1	50	A1	1-2-3	6	0.7	●	●	1.00	1.50	7
	3C		809	1	50	A1	1-2-3	9	0.7	●	●	1.00	1.50	7
	3F		812	1	50	A1	1-2-3	12	0.9	●	●	0.80	1.10	5
			813	1	50	A1	1-2-3	13	0.7	●	●	0.90	1.30	7
			822	1	50	C	1-2-3	22	0.7	●	●	0.70	1.00	5
			844	2	50	C	1-2-3	4	0.9	●	●	0.90	1.30	10
			846	2	50	C	1-2-3	6	0.9	●	●	0.90	1.30	10
			850	2	50	C	1-2-3	10	0.7	●	●	0.75	1.05	8
			856	2	50	C	1-2-3	16	0.7	●	●	0.70	1.00	7
			242	2	50	C	1-2-3	-	-	-	-	-	-	-
			243	3	50	C	1-2-3	-	-	-	-	-	-	-
			862	3	50	C	1-2-3	2	0.9	●	●	1.10	1.60	9

● Regular model, priority choice ○ Special model: choose when have special requirements

YL series

Working temperature: -55°C-+125°C

Relative humidity: 90%-95%

Working pressure: 4.39KPa-101.33KPa

Salt spray: 96h in 5% NaCl fog

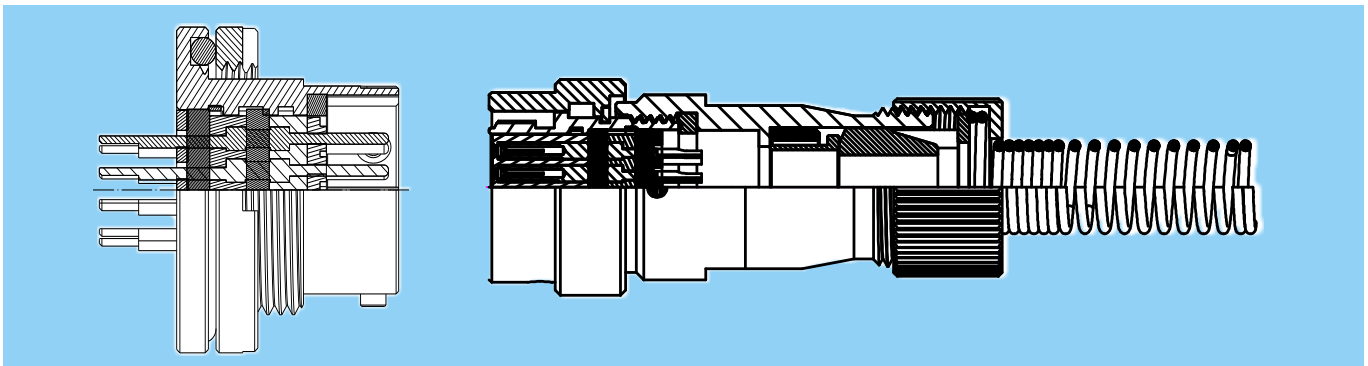
Tightness: The socket pressure difference is 1.01×10^5 Pa, there is no air bubble leakage for 1 min, when the plug socket is inserted into 1m water depth 2h and without water leakage

Vibration: 10-2000GHz 196m/s^2 , instantaneous interruption $<1\mu\text{s}$ **Mechanical life:** 500 times

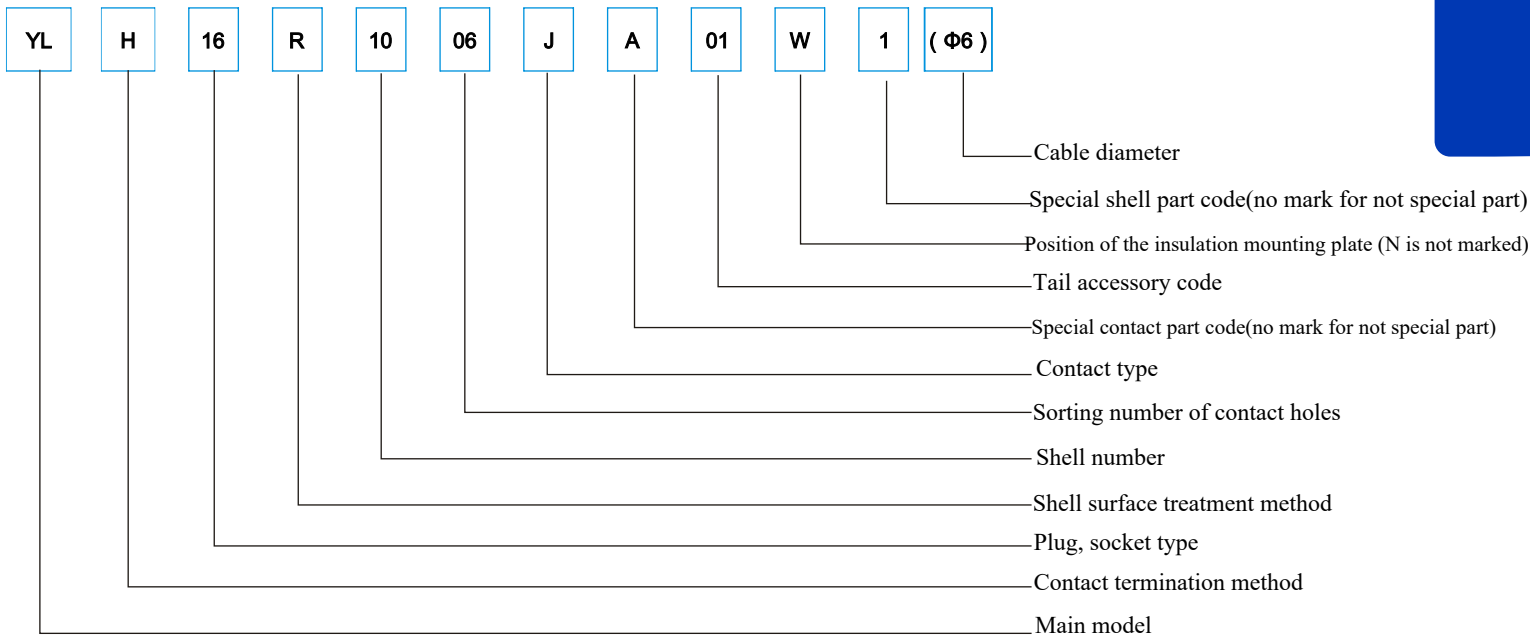
Insulation resistance: 5000M Ω under normal conditions

Contact resistance: 12.5M Ω

Withstand voltage (sea level): 1000V (AC)



YL series product numbering rules 1

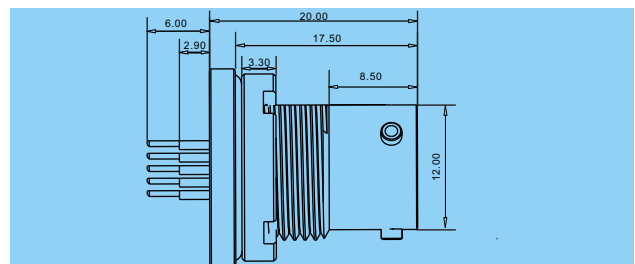
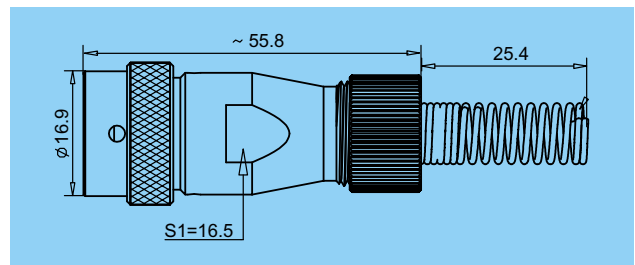


Number	Classification features	Mark code	Classified content
1	Main model code	YL	Circular electrical connector
2	Contact termination method	H	Cable welding
		B	Printed board welding
3	Type of plug and socket	16/26	Ordinary plug/shield type
		10/20	Square flange socket/shielded type
		14/24	Front nut install socket/shield type
		15/25	Rear nut install socket/shield type
		17/27	Floating socket/shielded type
		18/28	Through-wall nut installation socket/shielded type
		19/29	Through-wall square flange installation socket/shielded type
		30/40	Threaded at the end, square flange installation socket/shielded type
		34/44	Threaded at the end, nut installation socket/shielded type
4	Surface treatment method	B	Electroplating Army Green Cadmium
		Ba	Brown-green cadmium plating
		H	Black chrome plating
		He	Copper alloy black chrome plating
		N	Electroless plating of dark nickel
		Na	Copper plating bright nickel
		Nb	Bright nickel electroless plating
		Nc	Electroless nickel plating on copper alloy
		R	Black anodizing
		S	Stainless steel bright passivation
		Sb	Stainless steel matt passivation
		Sc	Stainless steel nickel plated
		W	Sand green anodization
		Wa	Grass green anodized
Wb	Bright green anodized		
Wc	Sand sub-green anodized		

















Number	Classification features	Mark code	Classified content
5	Shell number	Figure	Electrical connector shell number
6	Sorting number of contact holes	Arabic numerals + lower case letters	Sorting code of contact holes
7	Contact type	J	Pin contact
		K	Hole contact
		S	Wall pin, panel external hole, panel internal pin
		SI	Wall pin, panel external hole, panel internal pin
8	Contact modification model number	A、B、C、...	Serial number using special contacts
9	Tail accessory code	01*/21	Straight cable sealed/shielded type
		02/22/32	Straight cable clamp type/shielded type/sealed shielded type
		03/23	Rubber tail cover sealed/shielded
		04/24	Curved cable anti-rotation sealed/shielded
		05/25	Curved cable clamp type/shielded type
		...	Increasing other forms
10	Septal line	-	
11	Insulation board position	Angle value or angle code	The corresponding position of the insulator install board and main key of the shell
12	Septal line	-	
13	Shell modification model number	1□2□3	Serial number with special shell
14	Cable diameter	(Φ figure)	Cable diameter

Note When the shell number is 08 and 10, the mark code of the straight cable sealed tail accessory is "11", and the mark code of the straight cable anti-rotation sealed tail accessory is "10"

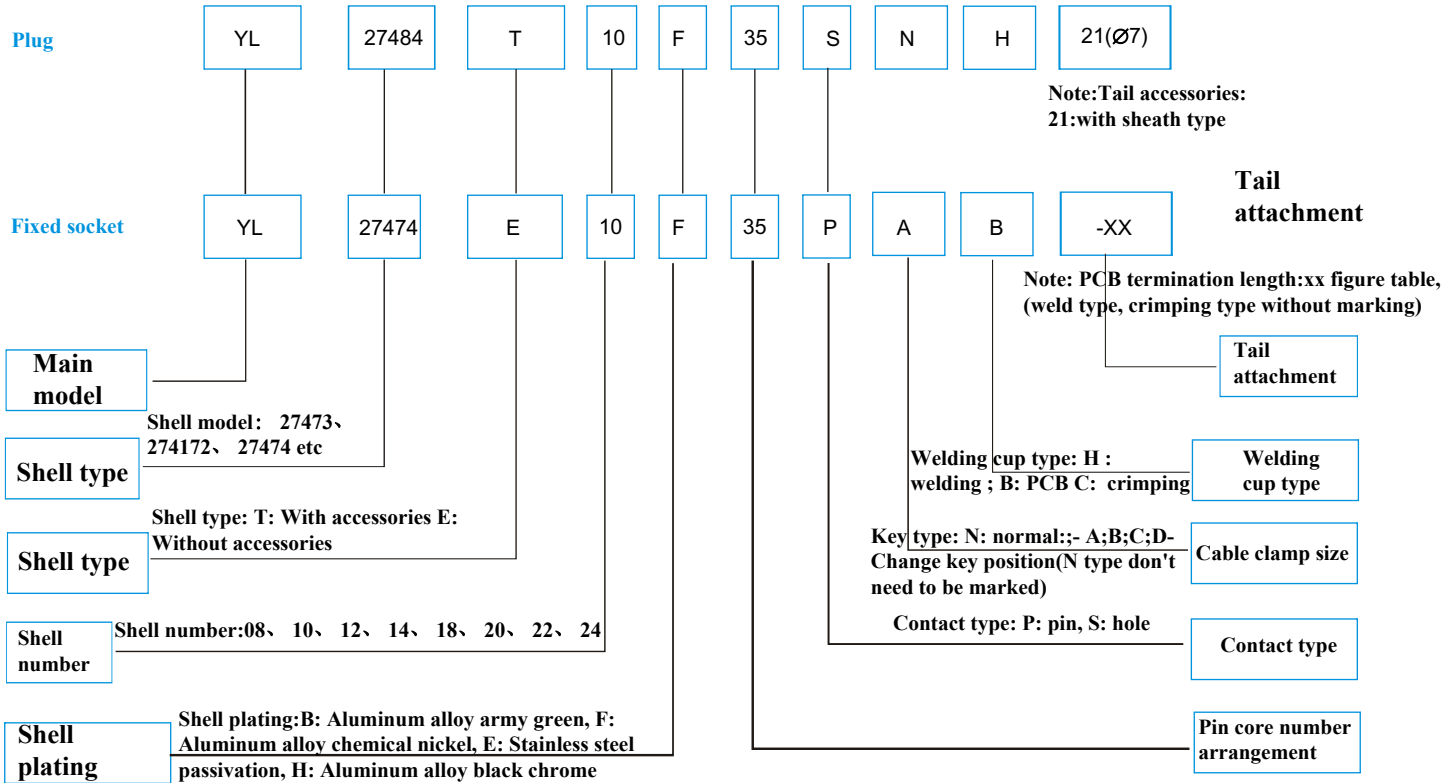
YL series 08 shell details picture



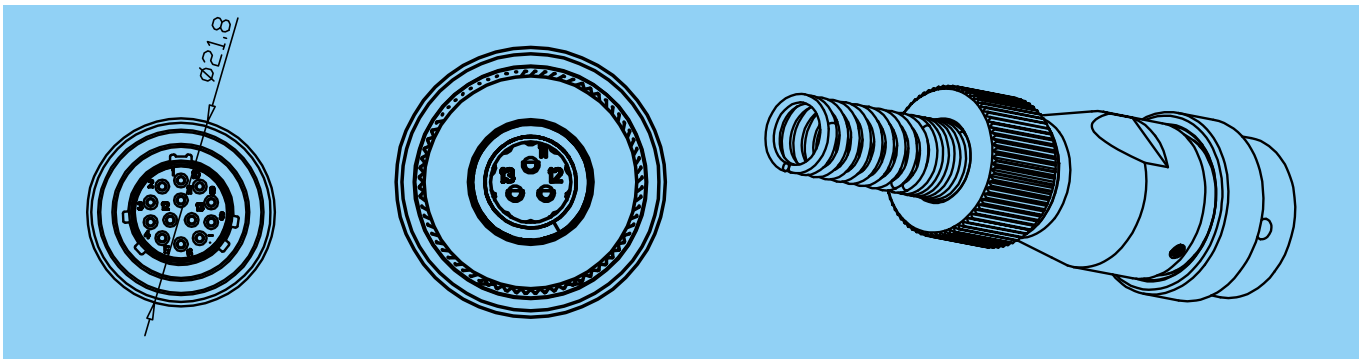
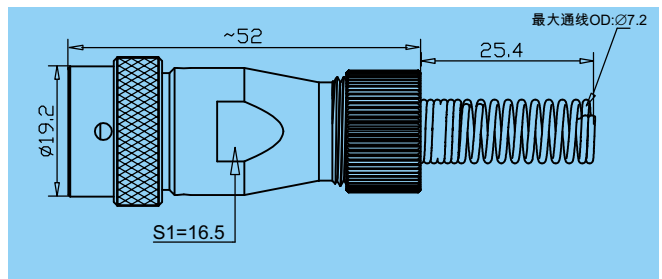
YL series pin core configuration 1

Pin core configuration (View the hole position of the hole insulator from the welding surface)	Contact code	Contact diameter(mm)	Contact resistance (mm)	Working current(A)	Working voltage(V/AC)
	0604	4-Ø0.76	12.5	3	400
	0607	7-Ø0.76	12.5	3	400
	0803	3-Ø1.02	5	7.5	400
	0804	4-Ø1.02	5	7.5	400
	0804b	4-Ø1.02	5	7.5	400
	0805	2-Ø2 3-Ø0.76	2 12.5	20 3	400
	0807	7-Ø0.8	12.5	3	400
	0809	9-Ø0.76	12.5	3	400
	1006	6-Ø1.02	5	7.5	400
	1098	6-Ø1.02	5	7.5	400
	1007(E)	7-Ø1.02	5	7.5	400
	1002	2-Ø1.02	5	7.5	400
	1004	4-Ø1.02	5	7.5	400
	1010	10-Ø0.8	12.5	3	400
	1010a	10-Ø0.8	12.5	3	400
	1013	13-Ø0.8	12.5	3	400

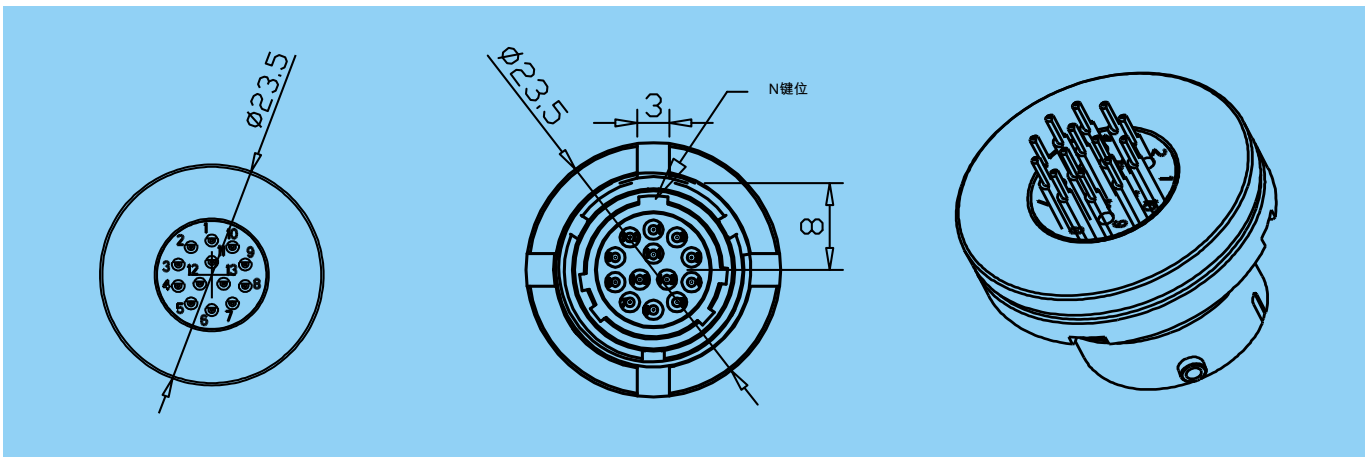
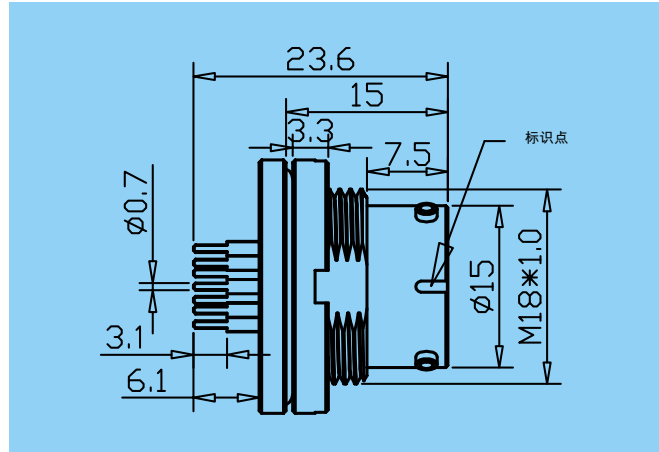
YL series product numbering rules 2




YL series plug details picture(27484)



YL series socket details picture(27474)



YL series pin core arrangement 2

Pin core arrangement (view the hole position of the insulator from the solder side)	Contact code	Contact diameter(mm)	Contact resistance(mΩ)	Working current(A)	Voltage resistance (Sea level)
	1013	13-0.76	15	5	1300V

YW Series Connector Introduction

YW series environmental resistant high-speed network circular electrical connector integrates RJ45, USB, HDMI, and other network data interfaces into a standard circular connector to improve the reliability, environmental resistance, and impact resistance. It also has fast connection installation and the advantages of convenient wiring, etc., is a very reliable network connector, especially suitable for data transmission between electronic devices.

Main structural features

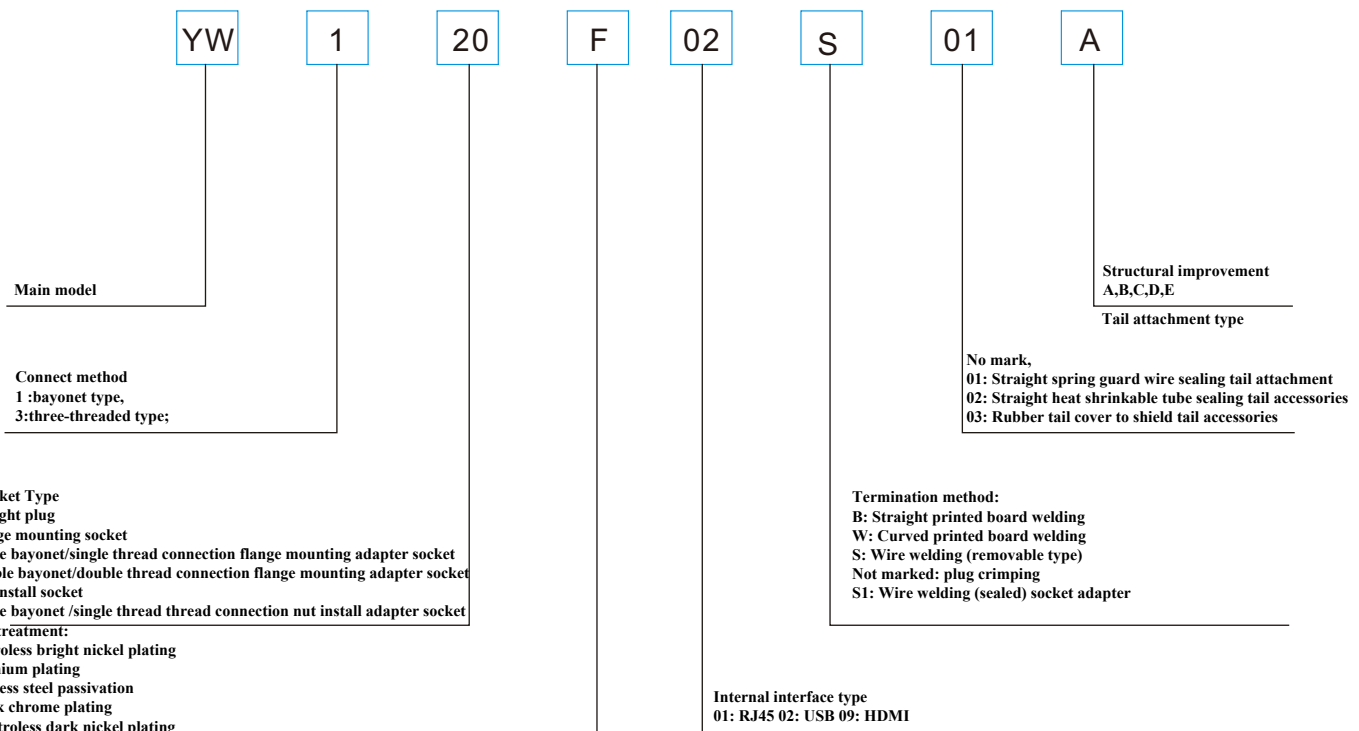
Connection method: bayonet type, three-threaded type; Built-in RJ45, USB, HDMI and other interfaces;
 The socket has weld type;
 Termination forms include wire welding, crimping, printed board connection and transfer;
 The adapter forms are single bayonet (single thread) and double bayonet (double thread);
 Gold-plated contacts;
 The interface installation size conforms to the installation of GJB599A.

Main technical characteristics

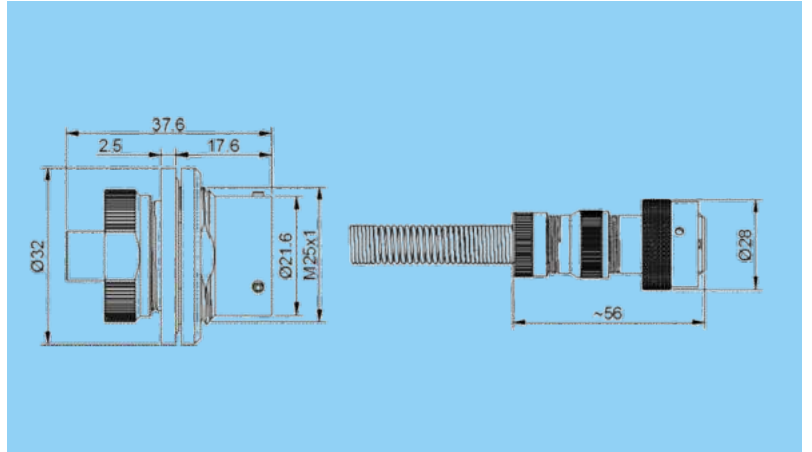
Working temperature: -55°C+125°C (without LED indicator)
 -40°C+85°C (with LED indicator)
 Relative humidity: 90%-95% (40±1°C)
 Working voltage: 150V (RJ45/RJ 11)
 30V (USB)
 Working current: 1.5A(RJ45/RJ 11)
 1A (USB)
 Insulation resistance: >5000mΩ
 Withstand voltage:1000V(RJ45/RJ11)
 5000V (USB)
 Contact resistance: ≤20mΩ(RJ45/RJ11),
 ≤30mΩ(USB)
 Vibration: 10-2000Hz 147m/s²
 Shock:490m/s²
 Salt spray:96h
 Mechanical life: 500 times
 Data transmission performance:
 RJ45/RJ11 :Insertion loss:0.4dB(100MHz))
 Crosstalk:30.1dB(100MHz)
 Impedance: 100±50Ω
 USB:Comply with USB 2.0 standard requirements
 Waterproof grade: IP68(when inserted)

YW series

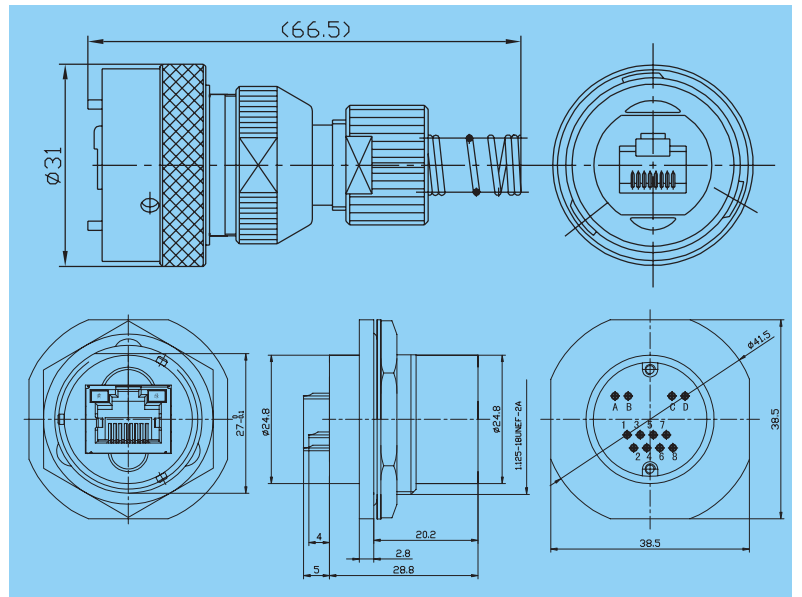
YW series product coding rules



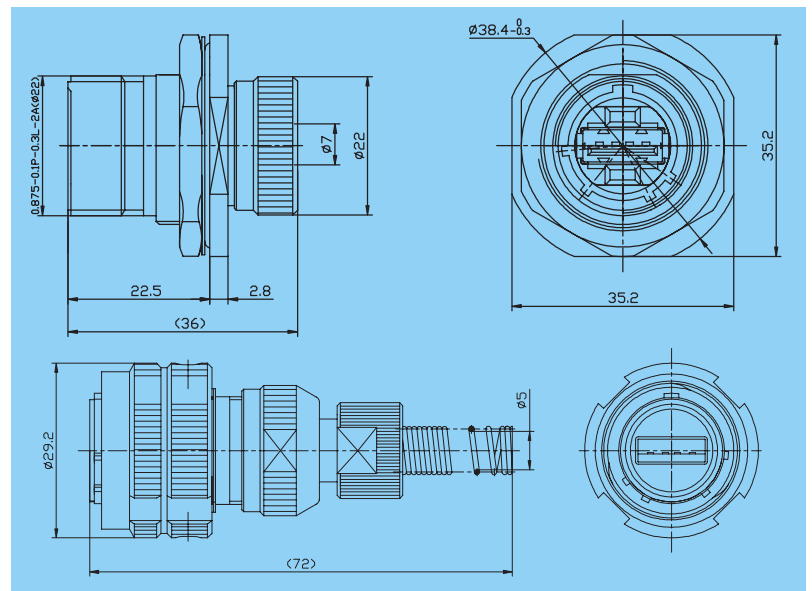
HDMI



RJ45



USB



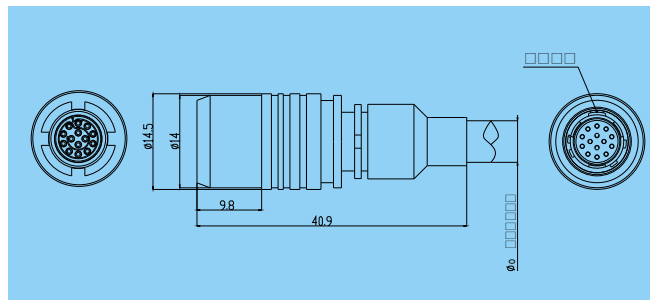
TL2Y1-114 and TL2Y1-116 push-pull connectors introduction

Working temperature: -55°C~+125°C
 Vibration: 10-500Hz, 98m²/s, instantaneous interruption ≤ 1μs
 Relative humidity: 90%-95% (40±2°C)
 Impact: 49m²/s, instantaneous interruption ≤ 1μs
 Insulation resistance: >5000MΩ (normal)
 Salt spray: 96h in 5% NaCl fog
 Mechanical life: 5000 times

Material: Plug: copper alloy black chrome plated (black)
 Socket: copper alloy dark nickel plated (gray)
 Tightness:
 Socket: pressure difference 1.01 x 10⁵Pa, no air bubble leakage for 1 min;
 Plug and socket mating: 1.5m water depth 24h no water seepage (the tail needs to be sealed and protected)
 Withstand voltage, working current, contact diameter and contact resistance:

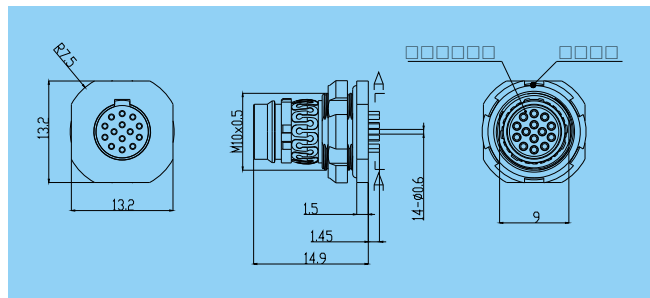
Shell No.	Pin core	Voltage resistance	Working current	Pin contact diameter	Contact resistance
1	14/16	500V(Sea level)	2.5A	Φ0.6	About 25mΩ (initial value)

114/116 plug

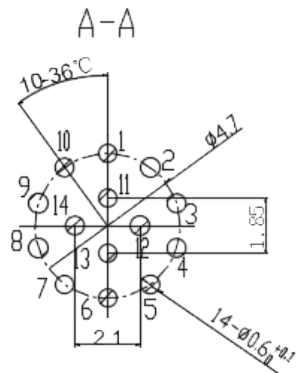


Plug dimensions: TL2Y1BHK1N114J-65, 65 represents wire diameter specifications, mainly 55, 60, 65
 Note: The picture has been simplified, the actual product has no hole number

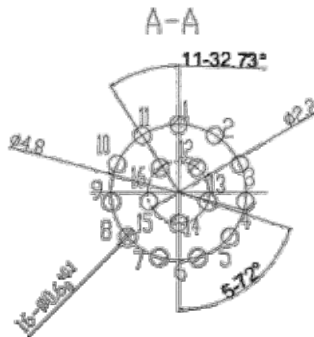
114/116 socket



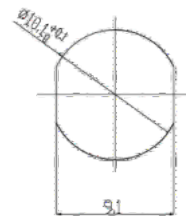
Socket appearance size: TL2Y1BBGWN114K-1



14-pin PCB board opening size



16-pin PCB board opening size



Installation board opening size

TL24 Series Connector Introduction

TL24 series push-pull circular electrical connector, its connection method is push-in locking block locking, the connector has features of fast push-pull, easy to use, small size, high density, resistance to harsh environments, beautiful appearance, good shielding, etc. The products are mainly used for electrical connection in DC or AC circuits of instruments, electronic equipment, etc.

Working temperature: -55°C+125°C

Relative humidity: 90%-95% (40±°C)

Working pressure: 4.39KPa-101.33KPa

Salt spray: 96h in 5% NaCl fog

Socket: pressure difference 1.01 x10⁵Pa, no air bubble leakage for 1 min

Plug and socket mating: 1 m water depth 2h no water

Vibration: 10-2000Hz, 147m/s², momentary interruption.1s

Impact: 490m/s² instantaneous interruption ≤1μs

Mechanical life: 2000 times

Insulation resistance: >5000MΩ

Working current:3A(22AWG)

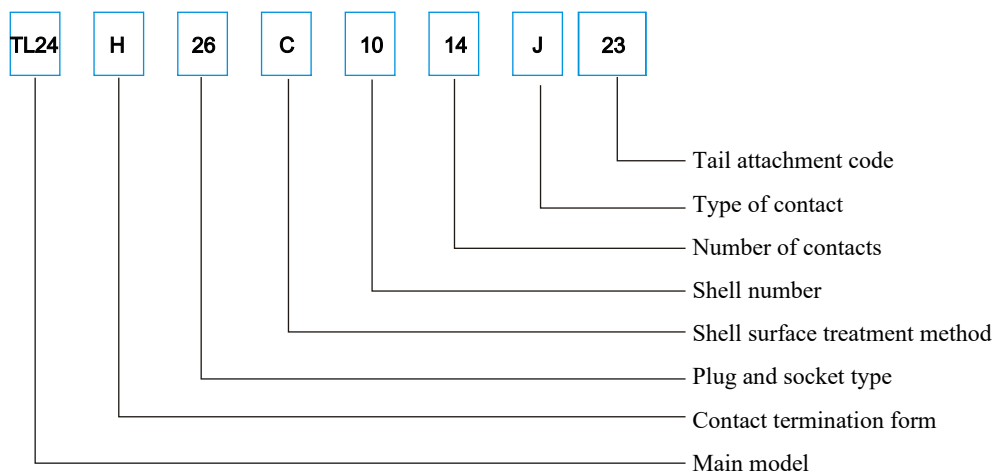
Contact resistance:12.5mΩ

Operating Voltage, 400V(AC)

Withstand voltage, 1000V(AC)

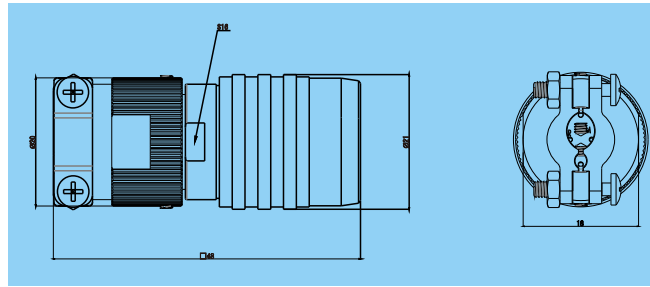
Electrical continuity between shells: 5mΩ

TL24 series product numbering rules

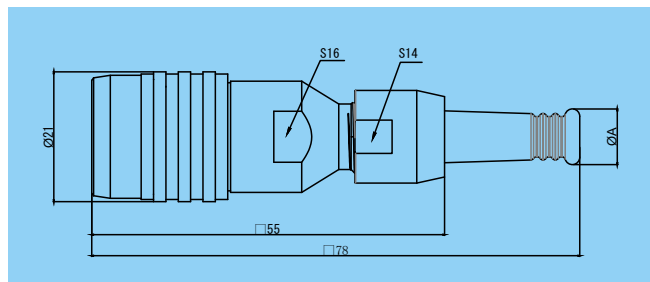


Classification features	Code	Meaning
Main model	TL24	Circular push pull connector
Contact termination form	H	Wire welding
	B	PCB welding
Plug, socket type	24	Disc nut shielded installation socket
	20	Square flange socket
	26	Shielded plug
Shell surface treatment method	H	Black chrome plating
	N	Nickel plated
	C	Electroplated sand chrome
Shell number	Number	Number of socket outer diameter
Sorting number of contact holes	Number	Sorting number of contact holes
Contact type	J	Pin
	K	Hole
Main model	23	Shielded rubber tail cover sealed
	...	Increasing other forms

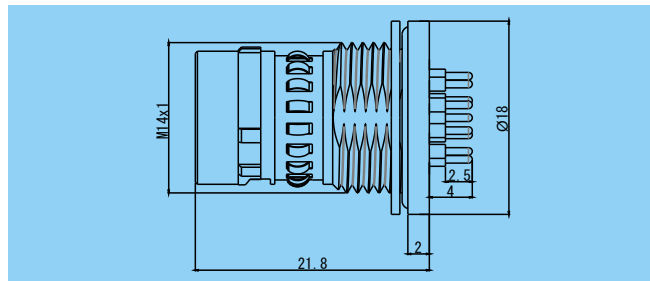
TL24 plug with tail clamp



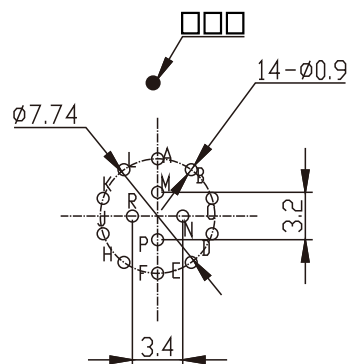
TL24 plug with sheath



TL24 socket

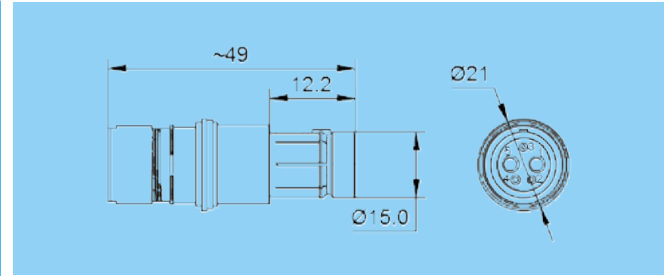


TL24 PCB board opening diagram

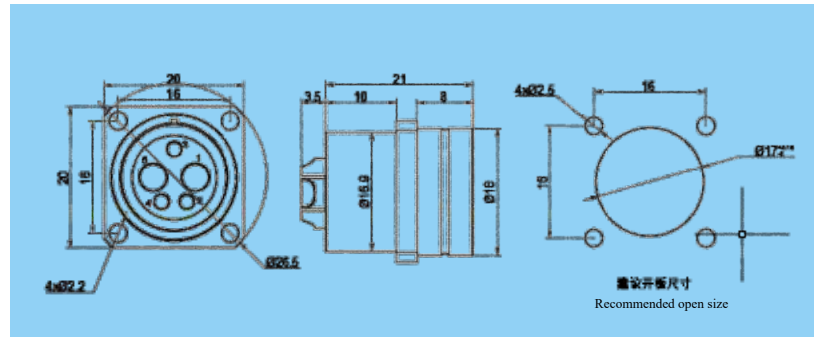


Radio audio dedicated

DB-Y-5JT

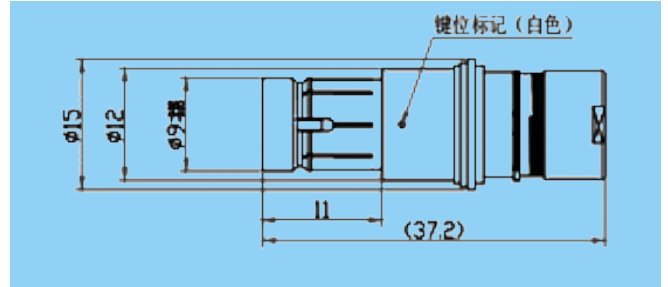


DB-Y-5KZ

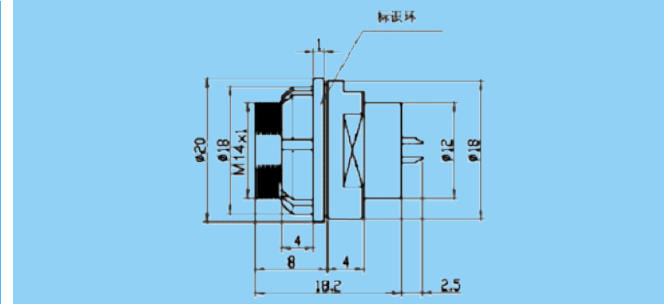


Working current	Maximum number of pin cores	Hole size	Termination method	Maximum diameter of cable
10A(1.3mm Contact) 30A(3.0mm Contact)	3+2	Φ17	Welding&PCB connection	11.2mm

JX-AC-3KT

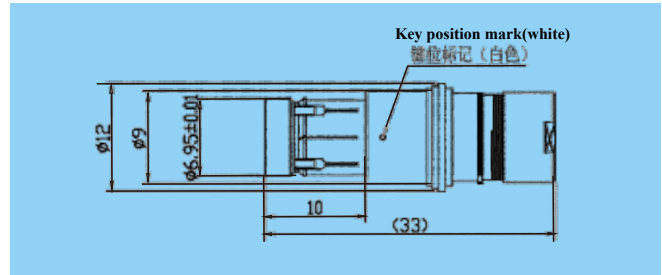


JX-AC-3JZ

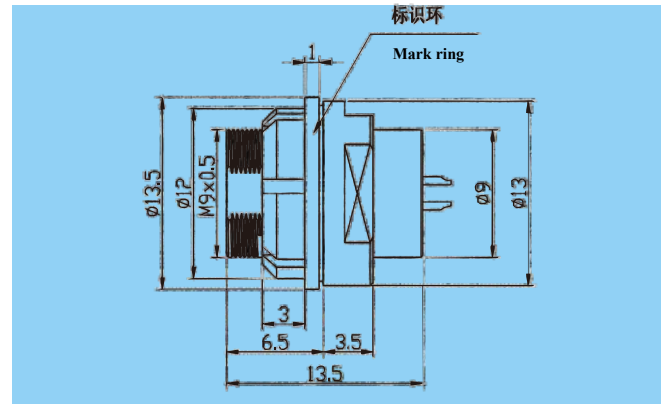


Working current	Maximum number of pin cores	Hole size	Termination method	Maximum diameter of cable
Single core 13A	3-Φ1.3mm	M14x1	Welding&PCB connection	7.2mm

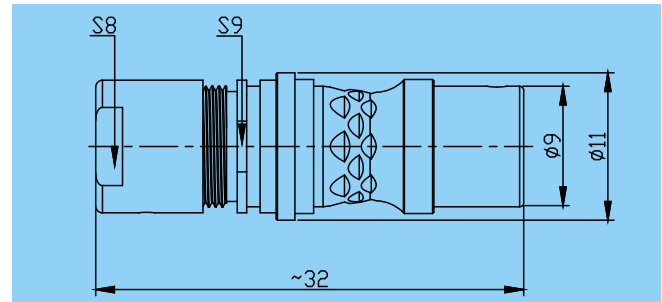
JX-DC-2JT/JX-DC-3JT/JX-DC-4JT



JX-DC-2KZ/JX-DC-3KZ/JX-DC-4KZ



JX-DC-2KZ-H/JX-DC-3KZ-H/JX-DC-4KZ-H



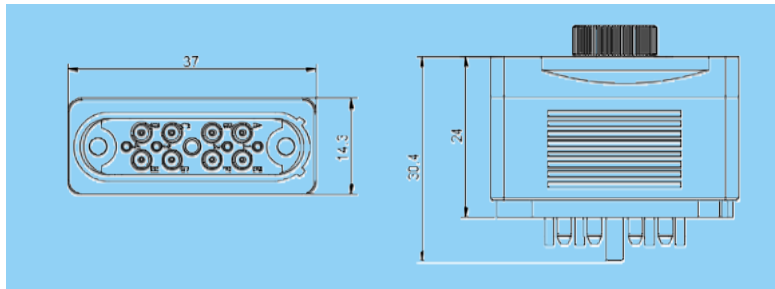
Power dedicated

Working current	Maximum number of pin cores	Hole size	Termination method	Maximum diameter of cable
2 core, single core 10A 3 core, single core 8A 4 core, single core 6A	2□3□4	M9x0.5	Welding&PCB connection	5.5mm

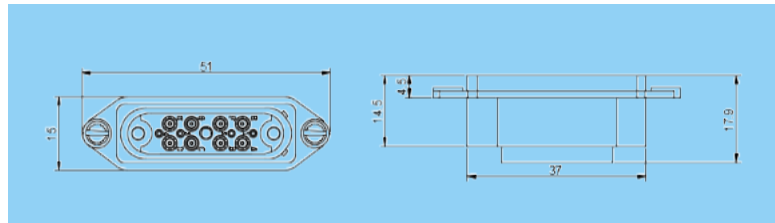
R Series Flat Connector Introduction:

Working temperature: -55°C~+125°C	Rated working current: 5A
Relative humidity: 90%-95% (40±2°C)	Salt spray: 96h in 5% NaCl fog
Insulation resistance: 5000MΩ(normal)	Contact specifications: Φ0.9
Withstand voltage: 750V (sea level)	Meet ROHS requirements
Vibration: 10-2000Hz, 147m/s ²	Performance index of coaxial contact:
Instantaneous interruption ≤1μs	Characteristic impedance: 50Ω
Impact: 980m/s ² .	Operating frequency: 0-1 GHz
Instantaneous interruption ≤1μs	Standing wave ratio: ≤1.3
Mechanical life: 5000 times	Contact resistance: inner conductor
Contact resistance: ≤9mΩ	≤6mΩ, outer conductor ≤2mΩ
Protection level: IP50	

TGG.1R.804.XLL Plug(8 coaxial + 4 signal)



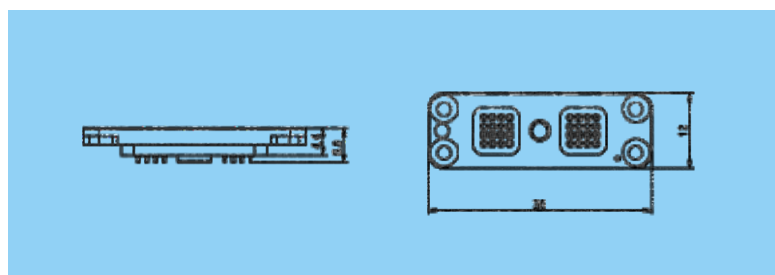
ZGG.1R.804.XLA Socket(8 coaxial + 4 signal)



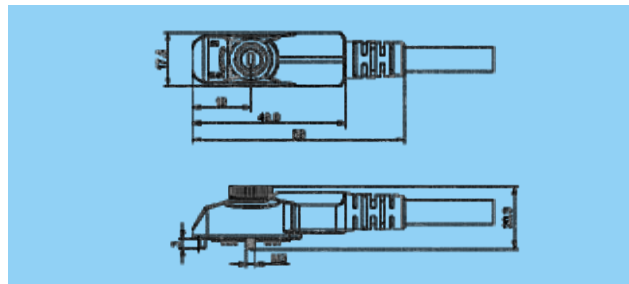
TJ33 Flat Connector Introduction

Shell plugging times: 1000 times	Vibration: 15g (10Hz-500Hz)
Lowest operating temperature: -55°C	Impact: acceleration 490m/s ²
Maximum operating temperature: +105°C	Insulation resistance: ≤500MΩ(normal)
Maximum humidity: ≤95%	Tightness (socket): under 1 standard atmospheric pressure, no air bubble leakage for 1 min

TJ33-32cZQ socket (32-core contact hole)



TJ33C-32cTQ 500 plug (32-core contact pin)

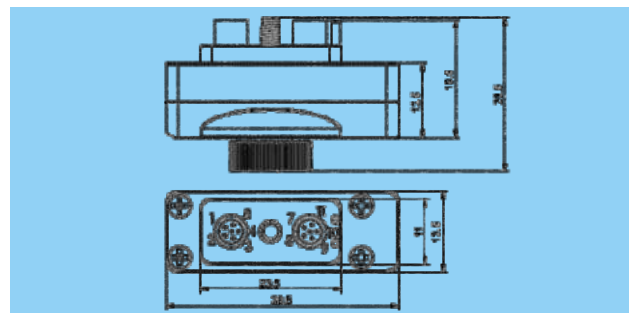


TJ60 Flat Connector Introduction

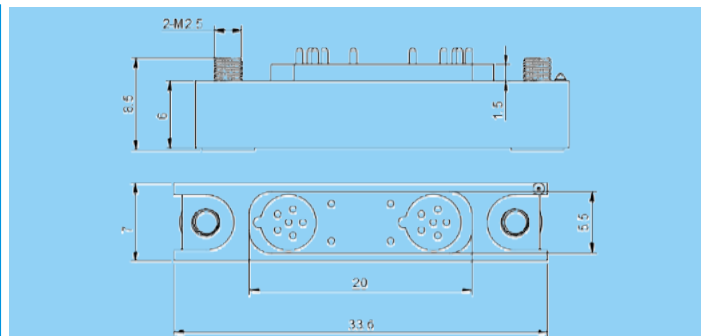
Rated voltage: 300V
 Rated current: 2A
 Contact resistance: 12.5mΩ
 Insulation resistance: 5000MΩ
 Vibration: 10Hz-2000Hz, 147m/s', instantaneous interruption: ≤1μs
 Impact: 980m/s', instantaneous interruption ≤1μs

Withstand voltage: 1000V
 Mechanical life: 1000 times
 Working temperature: -55°C-+125°C
 Relative humidity: 90%-95% (40±2°C)
 Protection level: IP68
 (Coaxial, 2pin, 4pin, 6pin, 8pin, 10pin, 12pin optional)

TJ60-N6P6PT plug

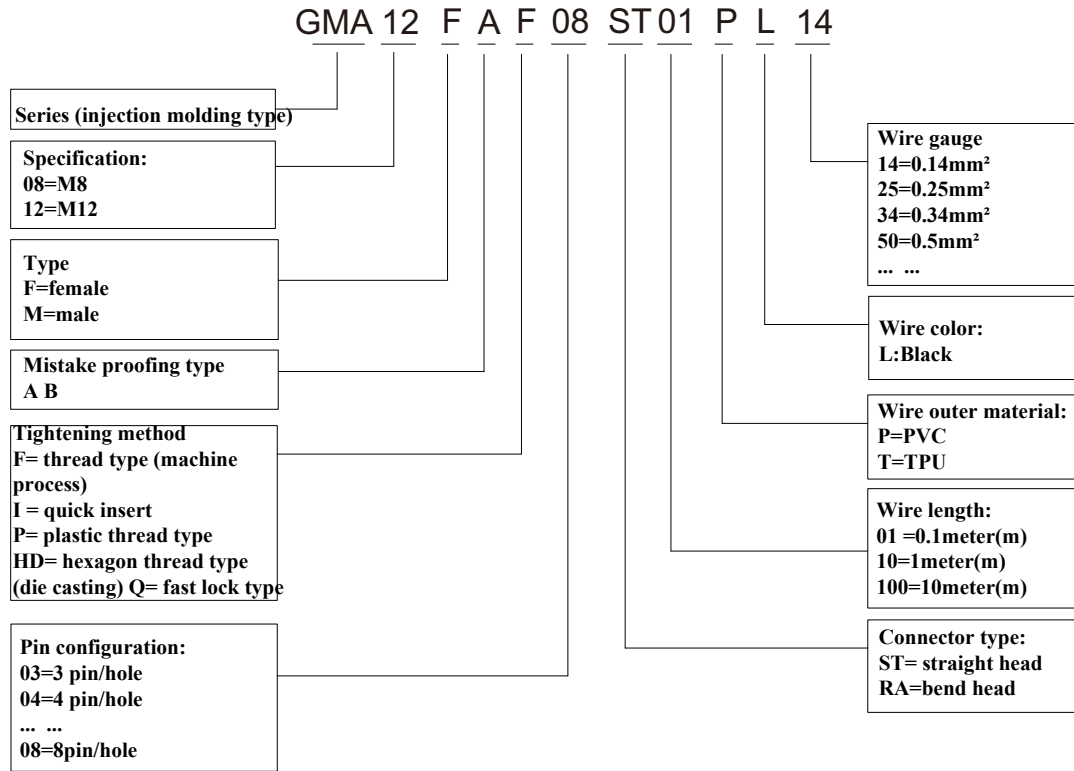


TJ60-N6S6SZB socket

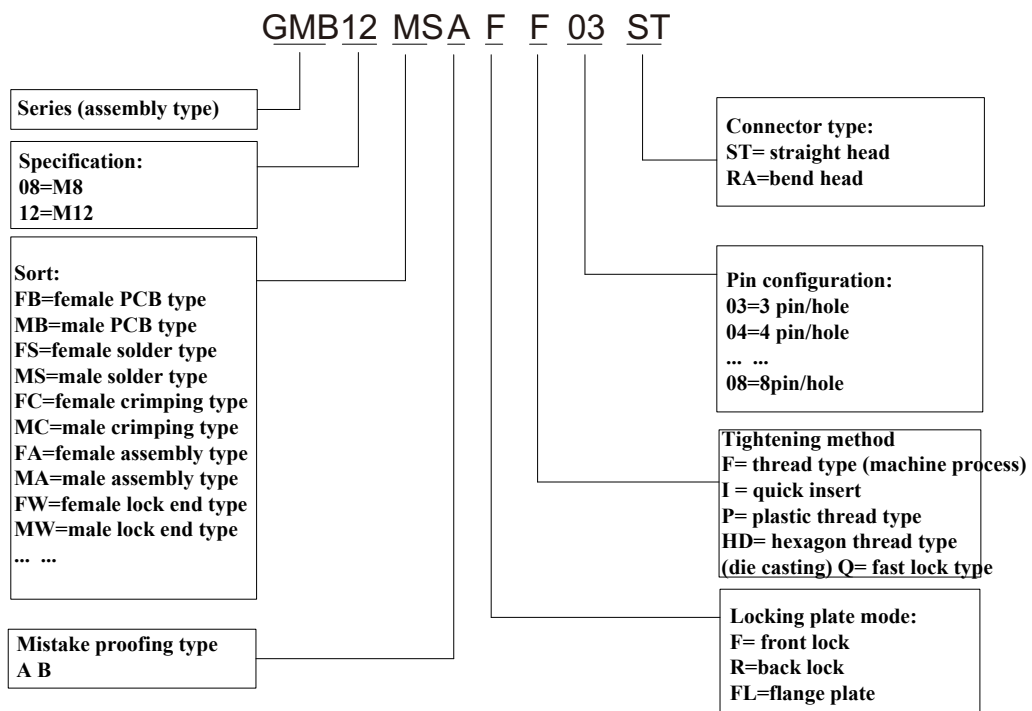


M8、M12 Series numbering rules

Injection molding type:

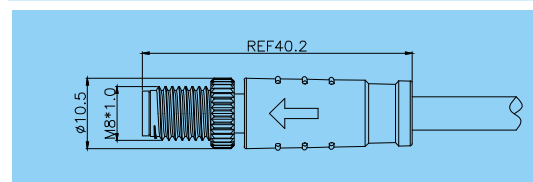


Assembly/panel type:



M8 Male straight head, injection molding type

- Connector Series:M8
- Type: male head
- Interface mistake proof type: A,B
- Locking method: thread type
- Connection type: straight
- Product part number: GMA08M*F**ST
- * Refer to the fool proof type of the interface
- * * Reference to pin core number



Technical specification

Operative standard:	IEC 61076-2-104
Suitable temperature:	-40°C~+80°C(static temperature)
	-20°C~+80°C(dynamic temperature)
Rubber core material:	PPS
Terminal material:	Brass forging gold
The mold material:	TPU
Screw/nut material:	Copper alloy plated with nickel

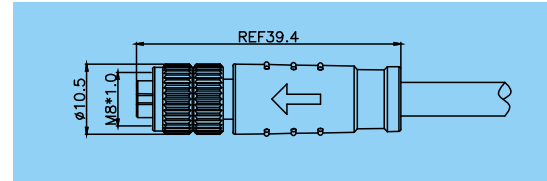
Insulation resistance:	≥100MΩ
Contact resistance:	≤5mΩ
Whether shielding:	No
IP Grade:	IP68 (locked state)
Number of insertions:	>500 times

Electric parameter

Pin core	Rated current	Nominal voltage		Conductors Size		Wire coat	Product part number
		Interflow(A/C)	Cocurrent(D/C)	AWG	mm ²		
03 pins (A-coding)	3A	50V	60V	24AWG	0.25	PVC	GMA08MAF03ST
						PUR	GMA08MAF03ST
04 pins (A-coding)	3A	50V	60V	24AWG	0.25	PVC	GMA08MAF04ST
						PUR	GMA08MAF04ST
05 pins (B-coding)	3A	30V	30V	24AWG	0.25	PVC	GMA08MBF05ST
						PUR	GMA08MBF05ST
06 pins (A-coding)	1.5A	30V	30V	26AWG	0.14	PVC	GMA08MAF06ST
						PUR	GMA08MAF06ST
08 pins (A-coding)	1.5A	30V	30V	26AWG	0.14	PVC	GMA08MAF08ST
						PUR	GMA08MAF08ST

M8 female straight head, injection molding type

- Connector Series: M8
- Type: female head
- Interface mistake proof type: A,B
- Locking method: thread type
- Connection type: straight
- Product part number: GMA08F*F**ST
- * Refer to the mistake proof type of the interface
- * * Reference core number








Technical specification

Operative standard:	IEC 61076-2-104
Suitable temperature:	-40°C~+80°C(static temperature) -20°C~+80°C(dynamic temperature)
Rubber core material:	PPS
Terminal material:	Brass forging gold
The mold material:	TPU
Screw/nut material:	Copper alloy plated with nickel
Sealing material/sealing ring:	Fluorine rubber(FKM)

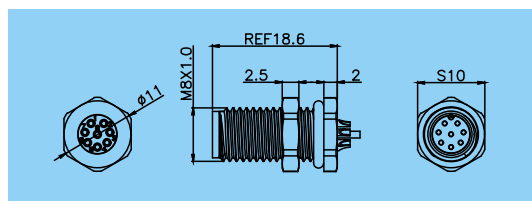
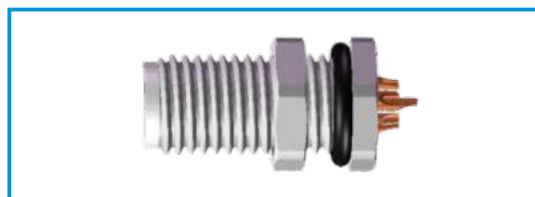
Insulation resistance:	≥100MΩ
Contact resistance:	≤5mΩ
Whether shielding:	No
IP Grade:	IP68 (locked state)
Number of insertions:	>500 times

Electric parameter

Pin core	Rated current	Nominal voltage		Conductors Size		Wire coat	Product part number
		Interflow(A/C)	Cocurrent(D/C)	AWG	mm ²		
03 pins  (A-coding)	3A	50V	60V	24AWG	0.25	PVC	GMA08FAF03ST
						PUR	GMA08FAF03ST
04 pins  (A-coding)	3A	50V	60V	24AWG	0.25	PVC	GMA08FAF04ST
						PUR	GMA08FAF04ST
05 pins  (B-coding)	3A	30V	30V	24AWG	0.25	PVC	GMA08FBF05ST
						PUR	GMA08FBF05ST
06 pins  (A-coding)	1.5A	30V	30V	26AWG	0.14	PVC	GMA08FAF06ST
						PUR	GMA08FAF06ST
08 pins  (A-coding)	1.5A	30V	30V	26AWG	0.14	PVC	GMA08FAF08ST
						PUR	GMA08FAF08ST

M8 Male head, panel plate, welding type, front lock

- Connector Series: M8
- Type: male head
- Interface mistake proof type: A
- Locking method: thread type
- Connection header type: front lock
- Product part number:GMB08MS*FF**ST
* * Reference core number



Technical specification

Operative standard:	IEC 61076-2-104
Suitable temperature:	-25 °C ~ +90 °C
Rubber core material:	PPS
Terminal material:	Brass forging gold
Shell mold material:	Brass forging nickel
Screw/nut material:	Fluorine rubber(FKM)

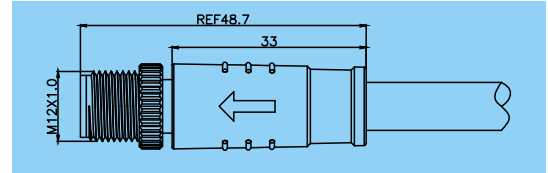
Insulation resistance:	≥100MΩ
Contact resistance:	≤5mΩ
Whether shielding:	No
IP Grade:	IP68 (locked state)
Number of insertions:	>500 times

Electric parameter

Pin core	Terminal type	Rated current	Nominal voltage		Conductors Size		Core insulation	Product part number
			Interflow(A/C)	Cocurrent(D/C)	AWG	mm ²		
03 pins (A-coding)	welding type	3A	50V	60V	24AWG	0.25	PVC or customize	GMB08MSAFF03ST
04 pins (A-coding)	welding type	3A	50V	60V	24AWG	0.25	PVC or customize	GMB08MSAFF04ST
05 pins (B-coding)	welding type	3A	30V	30V	24AWG	0.25	PVC or customize	GMB08MSBFF05ST
06 pins (A-coding)	welding type	1.5A	30V	30V	26AWG	0.14	PVC or customize	GMB08MSAFF06ST
08 pins (A-coding)	welding type	1.5A	30V	30V	26AWG	0.14	PVC or customize	GMB08MSAFF08ST

M12 Male straight head, injection molded type, 90° bend available

- Connector Series: M12
- Type: male head
- Interface mistake proof type: A,B,C,D
- Locking method: thread type
- Connection type: straight, bend
- Product part number: GMA12M*F**ST
*Refer to the mistake proof type of the interface
**Reference core number

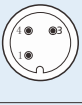

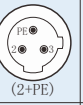


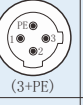



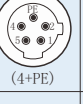
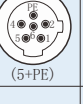

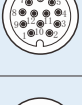
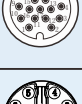
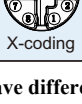


Technical specification

Operative standard:	IEC 61076-2-101
Suitable temperature:	-40°C~+80°C(static temperature) -20°C~+80°C(dynamic temperature)
Rubber core material:	PPS
Terminal material:	Brass forging gold
The mold material:	TPU
Screw/nut material:	Copper alloy plated with nickel

Insulation resistance:	≥100MΩ
Contact resistance:	≤5mΩ
Whether shielding:	No
IP Grade:	IP68 (locked state)
Number of insertions:	>500 times

Electric parameter

Pin core	Interface mistake proof type				Rated current	Nominal voltage		Conductors Size		Wire coat	Product part number
	A	B	C	D		Interflow(A/C)	Cocurrent(D/C)	AWG	mm ²		
03 pins			 (2+PE)		4A	250V	250V	22AWG	0.34	PUR/PVC	GMA12MAF03ST GMA12MBF03ST GMA12MCF03ST
04 pins			 (3+PE)		4A	250V	250V	22AWG	0.34	PUR/PVC	GMA12MAF04ST GMA12MBF04ST GMA12MCF04ST GMA12MDF04ST
05 pins			 (4+PE)		4A 2A (C-code)	60V	60V	22AWG 24AWG (C-code)	0.34 0.25 (C-code)	PUR/PVC	GMA12MAF05ST GMA12MBF05ST GMA12MCF05ST
06 pins			 (5+PE)		2A	30V	30V	24AWG	0.25	PUR/PVC	GMA12MCF06ST
08 pins					2A	30V	30V	24AWG	0.25	PUR/PVC	GMA12MAF08ST
12 pins					1.5A	30V	30V	26AWG	0.14	PUR/PVC	GMA12MAF12ST
17 pins					1.5A	30V	30V	26AWG	0.14	PUR/PVC	GMA12MAF17ST
Gigabit Lan 8 pins	 X-coding				0.5A	50V	60V	27~24AWG	0.14~0.25	CAT6A/CAT7	GMA12FSXF08ST

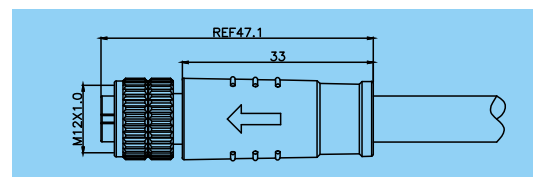
*17 pins have different outer mold

M12 Male straight head, injection molded type, 90° bend available

- Connector Series: M12
- Type: female head
- Interface mistake proof type: A,B,C,D
- Locking method: thread type
- Connection type: straight, bend

Product part number: GMA12F*F**ST

- *Refer to the mistake proof type of the interface
- **Reference core number



Technical specification

Operative standard:	IEC 61076-2-101
Suitable temperature:	-40°C~+80°C(static temperature)
	-20°C~+80°C(dynamic temperature)
Rubber core material:	PPS
Terminal material:	TPU
The mold material:	Copper alloy plated with nickel
Screw/nut material:	Fluorine rubber(FKM)

Terminal material:	Brass forging gold
Insulation resistance:	≥100MΩ
Contact resistance:	≤5mΩ
Whether shielding:	No
IP Grade:	IP68 (locked state)
Number of insertions:	>500 times

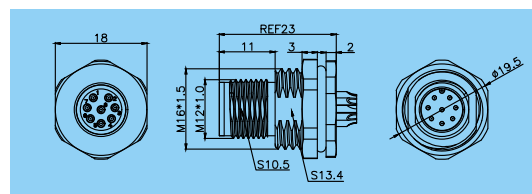
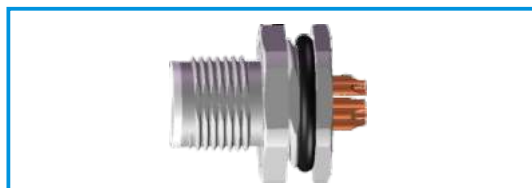
Electric parameter

Pin core	Interface mistake proof type				Rated current	Nominal voltage		Conductors Size		Wire coat	Product part number
	A	B	C	D		Interflow(A/C)	Cocurrent(D/C)	AWG	mm ²		
03 pins					4A	250V	250V	22AWG	0.34	PUR/PVC	GMA12FAF03ST GMA12FBF03ST GMA12FCF03ST
04 pins					4A	250V	250V	22AWG	0.34	PUR/PVC	GMA12FAF04ST GMA12FBF04ST GMA12FCF04ST GMA12FDF04ST
05 pins					4A 2A (C-code)	60V	60V	22AWG 24AWG (C-code)	0.34 0.25 (C-code)	PUR/PVC	GMA12FAF05ST GMA12FBF05ST GMA12FCF05ST
06 pins					2A	30V	30V	24AWG	0.25	PUR/PVC	GMA12FCF06ST
08 pins					2A	30V	30V	24AWG	0.25	PUR/PVC	GMA12FAF08ST
12 pins					1.5A	30V	30V	26AWG	0.14	PUR/PVC	GMA12FAF12ST
17 pins					1.5A	30V	30V	26AWG	0.14	PUR/PVC	GMA12FAF17ST
Gigabit Lan 8 pins					0.5A	50V	60V	27~24AWG	0.14~0.25	CAT6A/CAT7	GMA12FSXF08ST

*17 pins have different outer mold

M12 Male head, panel type, welding type, front lock

- Connector Series: M12
- Type: female head
- Interface fool proof type: A,B,C,D
- Locking method: thread type
- Connection type: front lock
- Product part number: GMB12MS*FF**ST
*Refer to the fool proof type of the interface
**Reference core number



Technical specification

Operative standard:	IEC 61076-2-101
Suitable temperature:	-25°C ~ +90°C
Rubber core material:	PPS
Terminal material:	Brass forging gold
Screw/nut material:	Brass forging nickel
Sealing material/sealing ring:	Epoxy resin/Fluorine rubber(FKM)

Insulation resistance:	≥100MΩ
Contact resistance:	≤5mΩ
Whether shielding:	No
IP Grade:	IP68 (locked state)
Number of insertions:	>500 times

Electric parameter

Pin core	Interface mistake proof type				Terminal type	Rated current	Nominal voltage		Conductors Size		Product part number
	A	B	C	D			Interflow(A/C)	Cocurrent(D/C)	AWG	mm ²	
03 pins					welding type	4A	250V	250V	22AWG	0.34	GMB12MSAFF03ST GMB12MSBFF03ST GMB12MSCFF03ST
04 pins					welding type	4A	250V	250V	22AWG	0.34	GMB12MSAFF04ST GMB12MSBFF04ST GMB12MSCFF04ST GMB12MSDFF04ST
05 pins					welding type	4A 2A (C-code)	60V	60V	22AWG 24AWG (C-code)	0.34 0.25 (C-code)	GMB12MSAFF05ST GMB12MSBFF05ST GMB12MSCFF05ST
06 pins					welding type	2A	30V	30V	24AWG	0.25	GMB12MSCFF06ST
08 pins					welding type	2A	30V	30V	24AWG	0.25	GMB12MSAFF08ST
Gigabit Lan 8 pins					welding type	0.5A	50V	60V	27~24AWG	0.14~0.25	GMB12MSXFF08ST

Working voltage, relationship between test voltage and working environment

According to DIN VOE 0110 T1 (1989-01), the definition of insulation class is as follows:

The classification depends on the external environment and operating conditions,

Grade A0: Constant temperature and dry weak current working environment;

Grade A: Constant temperature and dry working environment;

Grade B: General office and living environment

Grade C: General natural environment

Grade D: Relatively harsh natural environment, with dust, water, rain and snow, etc., without protection.

E.g:

Use reference Grade A in the laboratory and reference Grade B in the workshop.

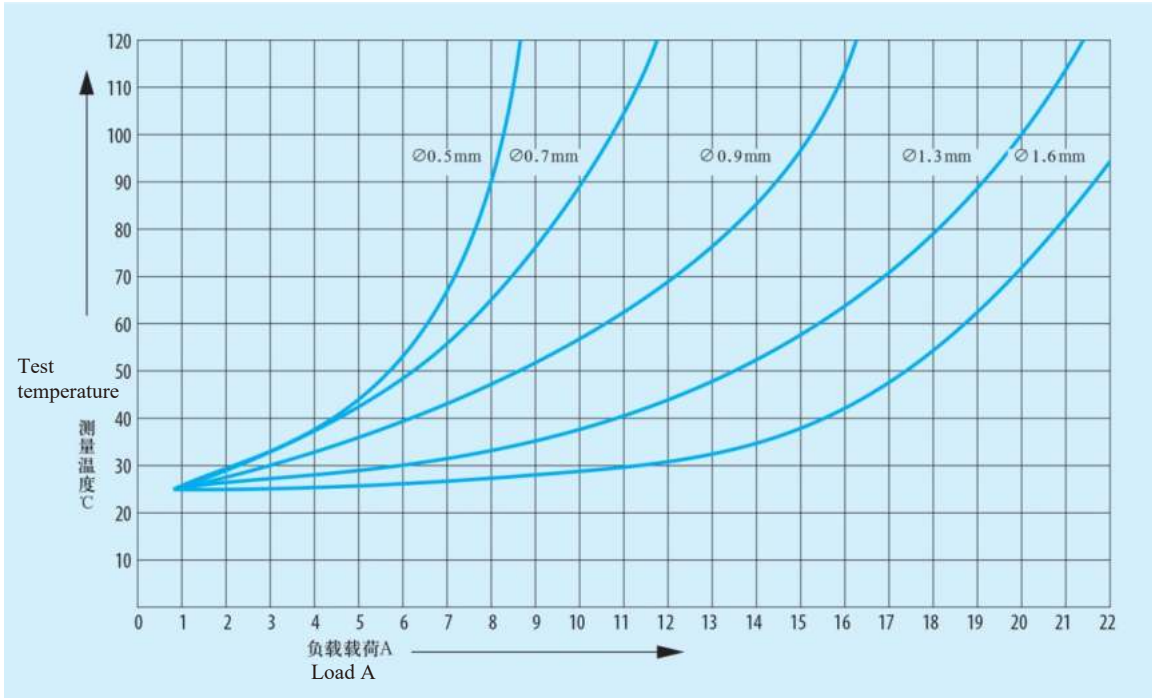
According to the description of VDE 0627, refer to the following table to calculate the value of the working voltage from the test voltage: (In actual use, the nominal voltage, rated voltage and reference voltage all refer to the same concept) The actual working voltage is usually less than the nominal voltage. Can refer to the standard DIN VOE 0110, P131.

Form 3 (Extracted from DIN VOE0627)

Reference voltage/working voltage(V)		Test voltage(V,AC50Hz)				
Direct current(V)	Alternating current(V)	Working environment				
		A0	A	B	C	D
15	12	375	500	750	875	1250
36	30	500	500	750	1000	1500
75	60	500	625	875	1000	1500
150	125	625	750	1000	1250	1750
300	250	750	875	1250	1750	2250
450	380	875	1000	1750	2250	3000
600	500	1000	1250	2000	2750	3500
800	660	1250	1750	2500	3500	4000
900	750	1500	1750	2750	3500	4500
1200	1200	1750	2250	3500	4500	5500

Working current-pin/hole

Working current of single core pin/hole (nominal diameter 0.5mm-1.6mm)



Maximum working temperature of pin/socket is 120°C.

The pins/sockets tested are connected to the largest diameter wire allowed. Multi-core cables or connectors will generate more heat than single-core connectors, so the downgrade factor must be considered. The degradation factor of the connector is defined in accordance with DIN 57298 part4/NDE 0298 part 2.

The downgrade factor is calculated from 5 cores (refer to DIN 41640 T3).

Pin core	Degradation factor
5	0.75
7	0.65
10	0.55
14	0.50
19	0.45
24	0.40

Operating voltage defined by SAE AS 13441-Method 3001.1

SAE AS 13441-Method 3001.1 standard is consistent with the MIL-Std, 1344-method 3001 standard. The data in the table is obtained according to IEC 60512, the pins are tested in the connected state, the test voltage is applied to both ends of the pins, and 75% of the damage voltage is measured as the calculation basis. 1/3 of this value is the operating voltage.

All tests are performed in a standard environment (room temperature conditions), which is also applicable to an environment with an altitude of 2000m.

If any test condition changes, please make corrections according to relevant standards.

Test voltage= breakdown voltage x 0.75

Working voltage= breakdown voltage x 0.75 x 0.33

Remark:

In different electrical equipment, the safety factor regulations for working voltage are more stringent. In such applications, the most important correlation coefficient is the stitch length and creepage distance.

AWG and metric conversion

AWG=American Wire Gauge (American Wire Specification)
 American AWG system is compiled according to the rule of cross-sectional area increase by 26% and specification number decreasing. The larger the diameter of the cable, the smaller the specification number, that is, the larger the size of the cable, the smaller the specification number.

The vast majority of cables are multi-strand conductors. Compared with solid cables, the connection of multi-strand conductors is more durable, stronger, and has better bending performance and shock resistance. Multi-stranded wires are made up of smaller diameter cores (larger specifications). Multi-strand conductor cables and solid cables of the same size have the same specification number. The cross-sectional area of a multi-strand cable is equal to the sum of the cross-sectional areas of the individual cables that make up the cable.

Conversion table AWG/mm²

AWG	Circular cable				
	Diameter		Sectional area mm ²	Weight kg/km	Maximum impedance Ω/km
	Inch	mm			
10 (1)	0.1020	2.5900	5.2700	47.000	3.45
10 (37/26)	1.1090	2.7500	4.5300	43.600	4.13
12 (1)	0.0808	2.0500	3.3100	29.500	5.45
12 (19/25)	0.0895	2.2500	3.0800	28.600	6.14
12 (37/28)	0.0858	2.1800	2.9700	26.300	6.36
14 (1)	0.0641	1.6300	2.0800	18.500	8.79
14 (19/27)	0.0670	1.7000	1.9400	18.000	9.94
14 (37/30)	0.0673	1.7100	1.8700	17.400	10.50
16 (1)	0.0508	1.2900	1.3100	11.600	13.94
16 (19/29)	0.0551	1.4000	1.2300	11.000	15.70
18 (1)	0.0403	1.0200	0.8200	7.320	22.18
18 (19/30)	0.0480	1.2200	0.9600	8.840	20.40
20 (1)	0.0320	0.8130	0.5200	4.610	35.10
20 (7/28)	0.0366	0.9300	0.5600	5.150	34.10
20 (19/32)	0.0384	0.9800	0.6200	5.450	32.00
22 (1)	0.0252	0.6400	0.3240	2.890	57.70
22 (7/30)	0.0288	0.7310	0.3540	3.240	54.80
22 (19/34)	0.0307	0.7800	0.3820	3.410	51.80
24 (1)	0.0197	0.5000	0.1960	1.830	91.20
24 (7/32)	0.0230	0.5850	0.2270	2.080	86.00
24 (19/36)	0.0252	0.6400	0.2400	2.160	83.30
26 (1)	0.1570	0.4000	0.1220	1.140	147.00
26 (7/34)	0.0189	0.4800	0.1400	1.290	140.00
26 (19/38)	0.0192	0.4870	0.1500	1.400	131.00
28 (1)	0.0126	0.3200	0.0800	0.716	231.00
28 (7/36)	0.0150	0.3810	0.0890	0.813	224.00
28 (19/40)	0.0151	0.3850	0.0950	0.931	207.00
30 (1)	0.0098	0.2500	0.0506	0.451	374.00
30 (7/38)	0.0115	0.2930	0.0550	0.519	354.00
30 (19/42)	0.0123	0.3120	0.0720	0.622	310.00
32 (1)	0.0080	0.2030	0.0320	0.289	561.00
32 (7/40)	0.0094	0.2400	0.0350	0.340	597.10
32 (19/44)	0.0100	0.2540	0.0440	0.356	492.00
34 (1)	0.0063	0.1600	0.0201	0.179	951.00
34 (7/42)	0.0083	0.2110	0.0266	0.113	1,491.00
36 (1)	0.0050	0.1270	0.0127	0.072	1,519.00
36 (7/44)	0.0064	0.1630	0.0161	0.130	1,322.00
38 (1)	0.0040	0.1000	0.0078	0.072	2,402.00
40 (1)	0.0031	0.0800	0.0050	0.043	3,878.60
42 (1)	0.0028	0.0700	0.0038	0.028	5,964.00
44 (1)	0.0021	0.0540	0.0023	0.018	8,660.00

Surface treatment of shell material

The shell material of the connector is brass alloy (Brass), nickel-based inscriptions, and the surface is matte. It can also be plated with nickel or black chromium as required. The internal metal parts are made of brass alloy (Brass), and the surface is plated with nickel.

Part	Material	Surface coating
Part	Material	Coating thickness
Shell Nut Slotted nut	Aluminum alloy Brass alloy	+1μm brass +3-6μm nickel +0.3-1μm Matt chrome
Cable clamp Shielding ring Half round shield Non-slip gasket Hex nuts Thickness adjustment ring	Aluminum alloy Brass alloy	6-8μm matte nickel
Pins (welding and PCB connection) Socket(welding and PCB connection) Pin(crimping) Hole(crimping)	Aluminum alloy Brass alloy	+1.25μm nickel +0.75μm gold

Insulator material

	Standard		Unit	PBT	PTFE ¹⁾	PEEK	PPS
Electric strength	DIN 53481	ASTM D-149	KV/mm	30	>50	19	19
Operating temperature	--	--	C	-40/+140	-100/+260	-50/+250	-40/+200
Flammability rating	UL94	--	--	V-0	V-0	V-0	V-0
Creepage distance(CTI)	IEC 60112		(V)	275	600	175	175

1)PTFE is only used in coaxial and triaxial connectors

Military specifications GJB

1、 Contact insertion force and separation force

The test shall be conducted according to method 2014 in GJB-1217A-2009, and the insertion force and separation force shall comply with table 1.1

Diameter of plug end(mm)	Maximum insertion force(N)	Minimum separation force(N)	Maximum separation force(N)
Φ0.3	2	0.1	0.6
Φ0.4	2.23	0.15	0.6
Φ0.5	2.23	0.15	0.6
Φ0.7	3.34	0.2	0.6
Φ0.9	5.01	0.5	1
Φ1.3	8.35	1.3	2.3
Φ1.6	8.35	1.3	2.3
Φ2.0	8.35	1	3
Φ2.3	8.35	2	3
Φ3.0	16.7	4	7

Table 1.1

2、 Meshing force and separation force

When inserting and separating a pair of connectors, the maximum engagement force of the connector should not be greater than five times the sum of the maximum insertion force of all pairs of contacts, and the maximum separation force of the connector should not be greater than five times the sum of the maximum separation force of all pairs of contacts. The minimum separation force of the connector should not be less than the sum of the minimum separation force of all pairs of contacts.

The test shall be carried out in accordance with method 2013 of GJB 1217 A-2009 and shall comply with the following provisions:

- The meshing and separation forces of connectors are measured with a force measuring device with an allowable error limit of 10% or less
- The rate of engagement and separation shall be 1N/s;
- Should be engaged and separated 10 times after the measurement.

3、 Vibration

The finished connector shall be tested according to the test method specified in method 2005 in GJB1217A-2009. There should be no mechanical damage and parts looseness during vibration test, and electrical continuity interruption should not be more than 1μs.

4、 Impact

The plugged-in connector shall be tested according to method 2004 in GJB1217A200.

There should be no mechanical damage and parts looseness during impact test. Electrical continuity interruption shall not exceed 1μs.

5、 Mechanical life

The test shall be conducted according to method 2016 in GJB1217A-2009.

After 5000 times of connection and separation test, there should no damage which will affect the performance, and the contact resistance of the connector in the inserted state should comply with the provisions of the contact resistance in the electrical performance.

6、 Weldability

Each terminal shall be subjected to the test specified in method 208 of GJB360B-2009.

At least 95% of the soaked part of the terminal shall be covered with a continuous, smooth and bright new solder layer, and the other 5% of the area shall not allow pinhole holes and other defects in a single piece.

7、 Welding heat resistant

Test according to method 210 of GJB360B-2009, test condition B.

After connector withstands $260^{\circ}\text{C} \pm 5^{\circ}\text{C}$, welding resistance test lasting 4s-5s, the connector should have no damage and can be inserted and removed normally.

8、 Impact

The free end connector of the connected cable shall be tested according to the test method specified in 2015 in GJB1217A-2009

After impact test, the free-end connector meets the following requirements:

—With the corresponding fixed connector can be inserted normally, and can be locked and separated;—No pin bending, insulation mounting plate breakage, cracks and other defects occur;

—When plugged in with the corresponding fixed connector, the contact resistance of the contact parts shall conform to the provisions of insulation resistance in electrical performance.

9、 Dielectric voltage resistance

Unplugged connectors shall be tested in accordance with method 3001 of GJB 1217A-2009 and shall conform to the following requirements

Dielectric withstand voltage:

Operating conditions	Sea level V, AC effective value	21336m height V, AC effective value
I	750	175
II	875	225
III	1000	250

Table 1.2

10、 Contact resistance

The plugged-in connector shall be tested according to the test method specified in method 3004 of GJB1217A-2009 (excluding the resistance of the wire itself).

The contact resistance of the contacts in the plugged-in state shall conform to table 1.3.

Diameter of plug end(mm)	Maximum contact voltage resistance mΩ	
	Initial value	After testing
Φ0.3	25	38.5
Φ0.4	20	29.5
Φ0.5	15	19.5
Φ0.7	12.5	16.25
Φ0.9	5	6.5
Φ1.3	3	3.9
Φ1.6	2.5	3.25
Φ2.0	2	2.6
Φ2.3	1.5	1.95
Φ3.0	1	1.3

Table 1.3

11、 Electrical conductivity between shells

The maximum DC resistance measured across the assembled connector shell should not be greater than 50mΩ, provided that the probe does not damage the connector surface. The inserted connectors should be tested in accordance with method 3007 of GJB1217A-2009.

12、 Insulation resistance

The insulation resistance between adjacent contacts and between any contact and the shell should comply with table 1.4.

Test condition	Insulation resistance(MΩ)
Normal temperature	≥5000
125°C	≥500
200°C	≥500
Humidity	≥100
Hydraulic pressure	≥100

Table 1.4

Normal temperature insulation resistance should meet the following requirements:

- Unplugged connectors shall be measured according to the provisions of method 3003 in GJB1217A-2009;
- Measurements shall be made between all adjacent contacts and between all contacts of adjacent enclosures. Connectors should be exposed to (125 ± 3) °C for 30min. All test samples should be measured and recorded at (125 ± 3) °C after 30min of completion.

13、 Shielding effectiveness

The coaxial method specified by method 3009 in GJB1217A-2009 was used for measurement. After the specified test, the shielding efficiency of the plug-in shell should not be lower than the specified value at the specified frequency in Table 1.5.

Frequency(MHz)	Leakage of attenuation(dB)
100	65
200	60
300	55
400	55
800	45
1000	45

Table 1.5

14、 Magnetic conductivity

The plugged-in connector shall be tested according to method 3006 in GJB1217A-2009, and the relative permeability of the connector shall be less than 2.0.

15、 Operating temperature

The connector can operate from 55°C to 125°C.

Test criteria according to GJB1217A-2009 Method 1003 Test condition A(minimum temperature -55°C~125°C)

16、 Air leak

The tests shall be carried out according to method 1008 of GJB1217 A-2009.

When 1×10^6 Pa pressure difference is applied between the two ends of the fixed connector, the leakage rate shall not be greater than 1.0 Pa cm³/s.

17、 Hydraulic pressure

The inserted connector should be immersed in water 2m deep, and there should be no water seepage at the connector interface after 24 hours. The insulation resistance of the connector should conform to the provisions of insulation resistance in electrical performance after 30min waning at room temperature

18、 Low temperature

Conduct the test according to the test method specified in GJ8367A-2001 "A01 Low temperature test ". Connector in the low temperature test and after the low temperature test, there should be no harmful to the work of the mirror layer bubble, peeling, removing layers, insulation mounting plate cracks and other damage, connector should be normal plug, and can be locked and separated.

7、 High temperature operation life test

The finished connector shall be tested according to the test method specified in method 1005 of GJB1217A-2009. After high temperature life test, free end connector and fixed connector should not appear stuck phenomenon; Glue filling material should not overflow: the surface treatment layer of the connector metal shell should not crack, fracturing, layer up and other phenomena.

8、 Humidity

The plugged-in connectors shall be tested in accordance with GJB1217A-2009, method 1002, test method II. The insulation resistance of connectors shall conform to the requirements of 2.5 moisture conditions after moisture testing.

9、 Temperature shock

The inserted connector shall be tested in accordance with the test method specified in GJB1217A-2009, method 1003. After the temperature impact test, there should be no damage to the forging layer, such as bubble, peeling, layer dropping and crack that affect the work of the connector.

10、 Salt spray

The plugged-in connector shall be tested according to method 1001 in GB1217A-2009. After the connector is subjected to salt spray test, there should be no corrosion affecting the performance of the connector. The engaging force and separation force of the connector should meet the requirements of 1.2, and the contact resistance should meet the requirements of 2.3.

11、 Mould

The material and coating used in the connector construction shall be tested according to GJB150.10A-200 Strain Group 2 and conform to class 1 growth.

12、 Transportation






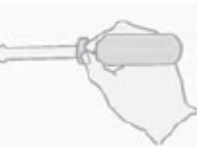









Finished products packed in boxes can be transported by any means of transport under the condition of avoiding direct rain and snow.

13、 Storage

Packed connectors should be stored in a storeroom where the temperature is -5°C to 35°C , the relative humidity is not greater than 85%, and the ambient air is free from corrosive gases such as acidity and alkalinity.

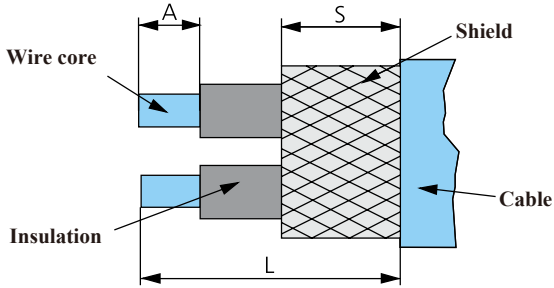
International Protection Class(IP)DIN EN60 529 Refer to IEC60529、GB700-86、GB4208

Meaning of protection class code IP
 Dustproof _____ Waterproof _____

IPXX	Protection grade	Brief description	IPXX	Protection grade	Description
0		Non-protective	0		Non-protective
1		It can prevent solid foreign matter with diameter less than 50mm	1		Vertical droplet protection
2		Protect against 12.5mm diameter and larger solid particles	2		15 angle water drop protection
3		Protect against 2.5mm diameter and larger solid particles	3		60 angle water drop protection
4		Protect against 1.0mm diameter and larger solid particles	4		Shoot water at any angle
5		Complete protection	5		Strong shoot water at any angle
6		Absolute protection	6		Strong shoot water at any angle
			7		Short-term immersion
			8		Long-term immersion

IP69K is not in EN60529 and IEC60529 standards, but in DIN40509 is defined

Wire harness processing



Size	Wire harness processing			B series bending plug		
	welding			welding		
	L	A	S	L	A	S
00	5	2	2	11	2	2
0	7	2	2,5	16	2	2,5
1	9	2	2,5	18	2	2,5
2	11	2	2,5	27	2	2,5
3	13	2	2,5	30	2	2,5

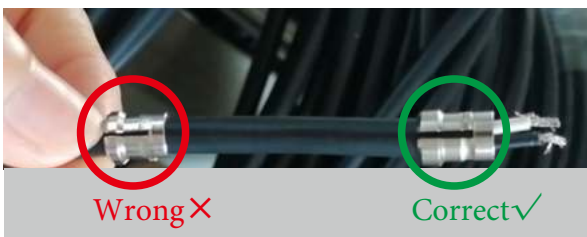
Unit: mm, tolerance: +10%

Precautions for welding



- The outer diameter of the cable should match the size of the cable clamp
- The wire core specification should match the diameter of the pin core termination
- The temperature of the soldering iron should be controlled at about 380°C(lead-free)
- Single core welding time is less than 1 second
- After welding, each core should be insulated with heat shrinkable tube
- Pay attention to protect the pins and insulators when soldering

Use method of cable clamp







MTC12pin connector



High and low voltage mixed connector



Photoelectric hybrid connector



High voltage connector



Fluid mix connector



Coaxial hybrid connector

Custom connector display



Precision wire testing machine



Push pull test machine



High voltage test machine



Wire swing test machine



Air tightness testing machine



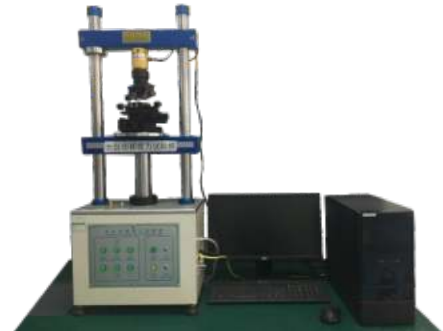
Network analyzer



Image measuring instrument



Salt spray test machine



Fully automatic push-pull force test machine



Injection molding machine



Constant temperature and humidity machine



Turning and milling machine

Testing and production equipment



Machining workshop



Injection molding workshop



Quality department



Laboratory



Connector production line



Wire production line

Production and research base

Solutions and R&D capabilities

———— Connector customization



Fast responsive design



Excellent product quality



Extensive production experiences



Complete after-sales service

Quanma connectors meet diverse design requirements, customized connectors and harness interconnect solutions.

From design to delivery, Quanma Connectors works hand in hand with customers to design custom connectors and cable solutions to meet specific application requirements.

What we deliver to our customers is not only consistent and reliable quality, but also excellent service and quick response time.

We are willing to help customers solve complex interconnection challenges.



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