



QUANMA CONNECTOR

# 全马（美易连）连接器系统

QUANMA (MEIYILIAN) CONNECTOR SYSTEM

高品质 高性价比 连接器解决方案

HIGH QUALITY COST-EFFECTIVE CONNECTOR SOLUTION

塑料连接器产品样册

METAL CONNECTOR CATALOG

SMALLER FASTER LIGHTER MORE RELIABLE

更小 更快 更轻 更安全



## Company Introduction

Quanma brands include: Quanma connectors and Meiyilian connectors (Quanma connectors focus on military/industrial industries, including Shanghai Quanma sales center and Shenzhen Quanma production and research base, Meiyilian connectors focus on the medical industry, including Quanma sales center and Shenzhen Meiyilian production and research base). It is a professional brand supplier of interconnection technology solutions in the field of domestic high-end interconnection product manufacturing. In the 13 years since the brand was founded (established in 2011), it has adhered to the spirit of the full marathon as a guide and implemented the concept of connecting to create a better future. We will continue to innovate, operate with integrity, and wholeheartedly provide customers with Internet technology solutions that exceed their expectations.

Our company consists of 2 production and research bases (Shenzhen Quanma focuses on military/industrial, Shenzhen Meiyilian focuses on the medical industry) and a Shanghai sales center, covering an area of about 5,000 square meters, with a total investment of over 50 million yuan. There are more than 150 employees, including 6 engineers with intermediate professional titles, more than 15 professional and technical personnel, and an efficient and professional management team and a rigorous and professional engineering R&D team. Our company is well-equipped with a number of imported high-precision CNC machining lathes and various production inspection equipment and R&D experimental equipment. The company is committed to the research and development, production and sales of mid-to-high-end electrical connectors, as well as providing a full set of interconnection technology solutions and one-stop connector customization services. By the end of 2021, our company has successfully passed ISO9001:2015 quality system certification, weapons and equipment quality system certification (GJB9001C-2017), ISO13485:2016/ENISO13485:2016 electronic connectors for active non-implantable medical devices, optical fiber/fluid/high voltage/radio frequency mixed connectors and cable assemblies design and production certification, ROHS environmental protection certification, CE certification and many other authoritative certifications. In 2022, Quanma (Shanghai) Company and Quanma (Shenzhen) Production and Research Base were both awarded the National High-tech Enterprise. In 2023, Quanma (Shenzhen) won the title of Specialized and New Enterprise. Our company adheres to the principle of "customer first", insists on technological innovation as the driving force and market demand as the vane, scientific management, lean manufacturing, creating value for customers, constantly improving itself, setting industry benchmarks and creating national brands.

Our company has a complete range of products, which are widely used in high-end medical equipment, automation 1 robots and other equipment, autonomous 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 ot. It is exported to many overseas countries such as Europe, the United States, Canada, Israel, Japan, South Korea, India, etc.

### Vision:

To become a leader in the customization, design and manufacturing of connector solutions for the medical industry

### Concept:

Connectivity creates a better future

### Value:

Responsible, valuable, and sharing

### Purpose:

Customers are the root, innovation is the basis, and the spirit of the full marathon is the guide to continuously create interconnected products that satisfy customers



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# P Series Product Introduction

The P series connector is a plastic push-pull self-locking connector. This circular plastic connector is particularly suitable for fields such as medical electronics, test equipment, industrial electronics, testing equipment, data acquisition and automation.

P series connectors can provide different transmission configurations, such as electrical signal, high voltage, coaxial, fiber optic, fluid and mixed.

The P series connectors have 4 sizes: 0P, 1P, 2P, 3P, and the opening sizes are M10, M11, M14, M17, and M20 respectively. The shell material is PSU, and all materials comply with RoHS2.0 requirements.

## P Series Product Features

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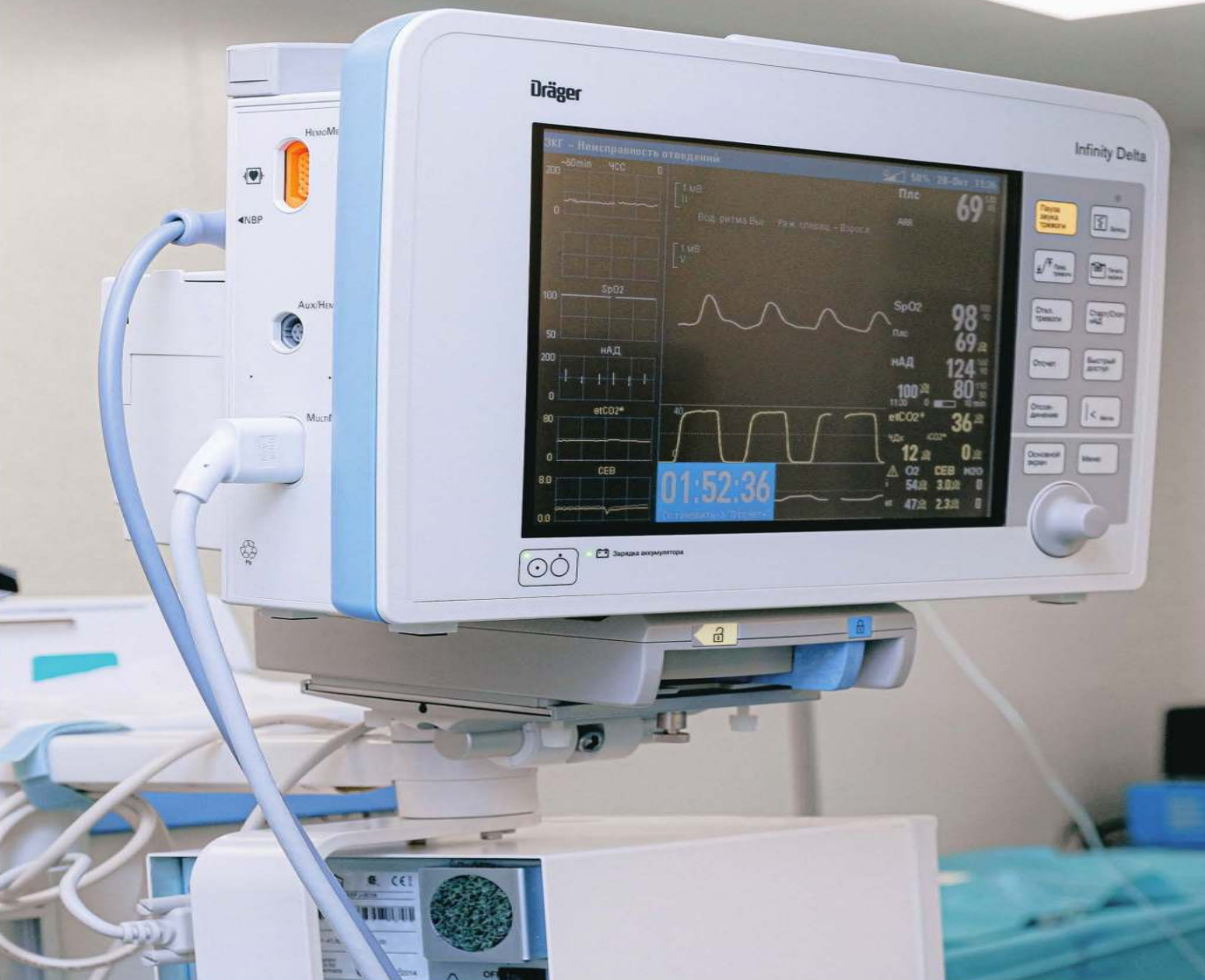
### Advantages of plugging and unplugging self-locking connectors

- Fast plug and unplug
- High plug and unplug times
- Multiple key positions to prevent mis-plugging
- High-density installation
- With lock prompt
- Easy and convenient operation

### Characteristics of plastic connectors

- Can be used in non-magnetic environments
- Can be sterilized with gas or steam
- Can be used on the consumable side
- Light weight
- Warm appearance
- Multiple optional shell color recognition

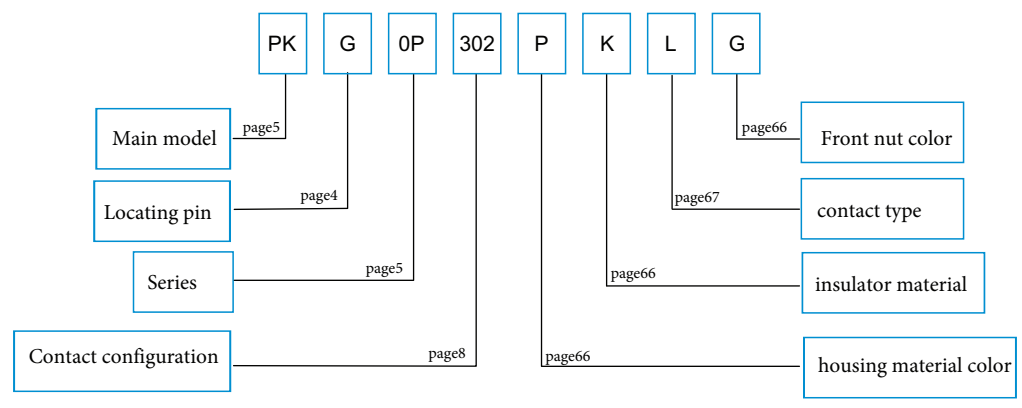
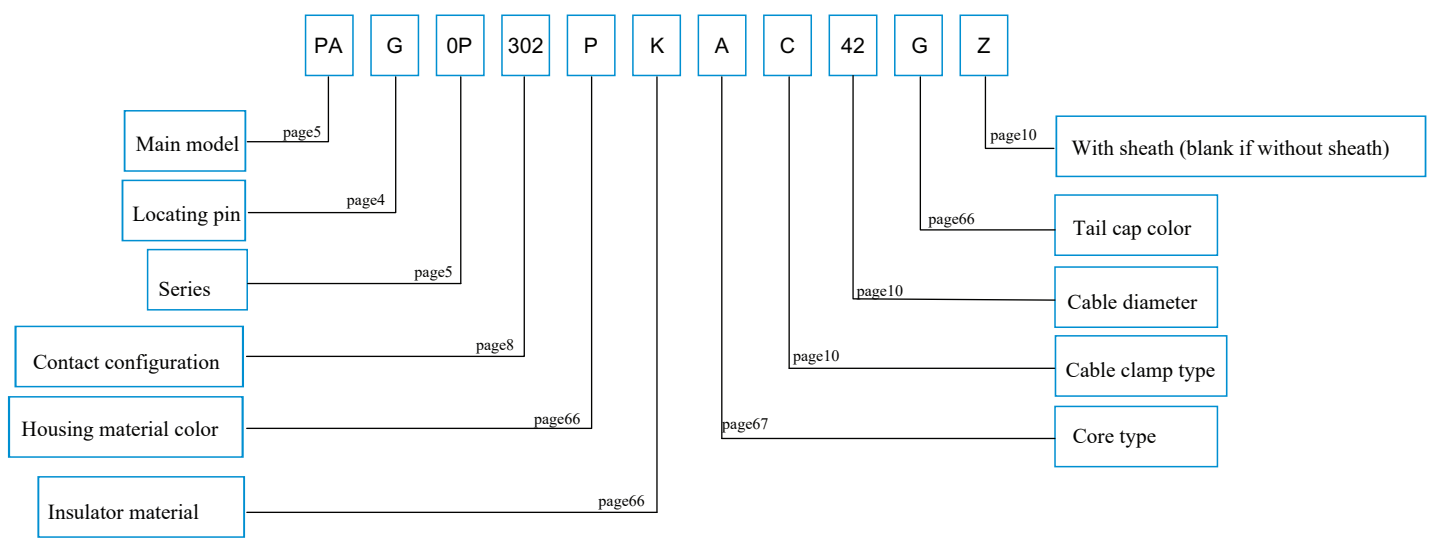
# OP Series Products



### Performance parameters:

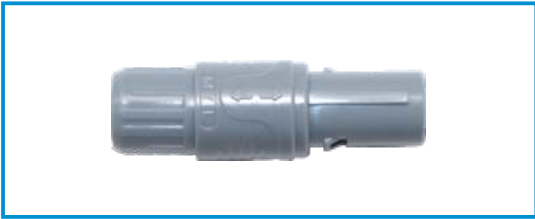
- Working temperature: -55 °C ~ 150 °C
  - Plug and unplug times: 1200+
  - Maximum humidity: <=95% [at 60 deg C /140F]
  - Vibration: 15g [10Hz~2000Hz]
  - Protection level: IP50
- \*All materials comply with RoHS requirements.

Product Number Rules:

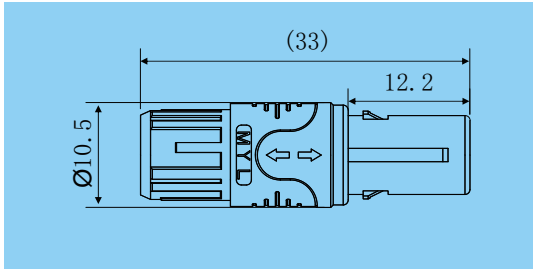


Key Angle

<p>Socket front view</p>	Key position	Number of keys	Angle	
	G	1	0°	
	A	2	<b>α</b>	40°
	B	2		60°
	C	2		80°



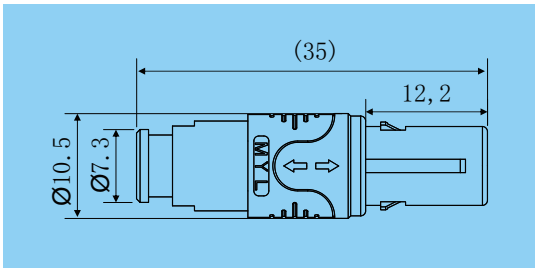
**PAG** Straight plug, key position G\A\B\C, wire clamp type, without sheath tail cap



Model	A ( mm )	Adapter cable outer diameter(mm)	
		min	max
PAG.OP***.PKAC32A	3.2	2.0	3.0
PAG.OP***.PKAC42A	4.2	3.0	4.0
PAG.OP***.PKAC48A	4.8	4.0	4.6



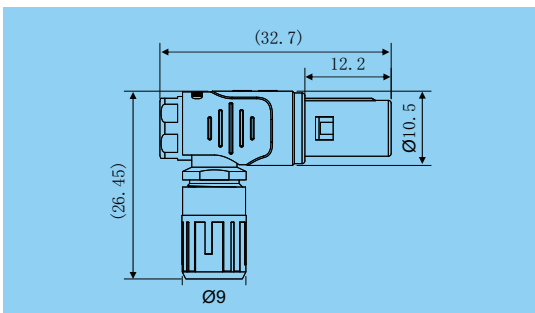
**PAG** Straight plug, key position G\A\B\C, wire clamp type, with sheath tail cap



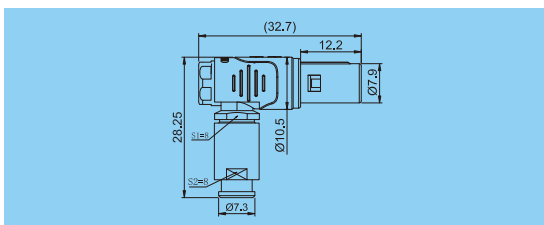
Model	A ( mm )	Adapter cable outer diameter(mm)	
		min	max
PAG.OP***.PKAC32AZ	3.2	2.0	3.0
PAG.OP***.PKAC42AZ	4.2	3.0	4.0
PAG.OP***.PKAC48AZ	4.8	4.0	4.6



**PWG** 90 degree angle plug, key position G\A\B\C, wire clip type, without sheath tail cap

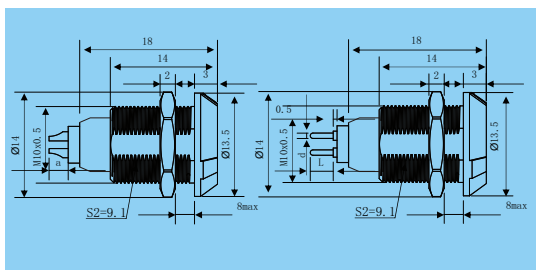


Model	A ( mm )	Adapter cable outer diameter(mm)	
		min	max
PWG.OP***.PKAC32A	3.2	2.0	3.0
PWG.OP***.PKAC42A	4.2	3.0	4.0
PWG.OP***.PKAC48A	4.8	4.0	4.6



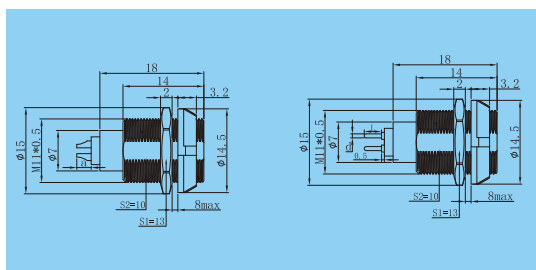
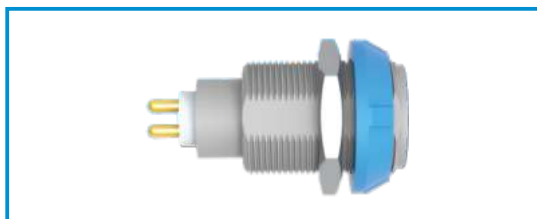
**PWG** 90 degree angle plug, key position G\A\B\C, wire clip type, with sheath tail cap

Model	A ( mm )	Adapter cable outer diameter(mm)	
		min	max
PWG.OP.***.PKAC32AZ	3.2	2.0	3.0
PWG.OP.***.PKAC42AZ	4.2	3.0	4.0
PWG.OP.***.PKAC48AZ	4.8	4.0	4.6



**PLG** Rear nut fixed socket, key position G\A\B\C

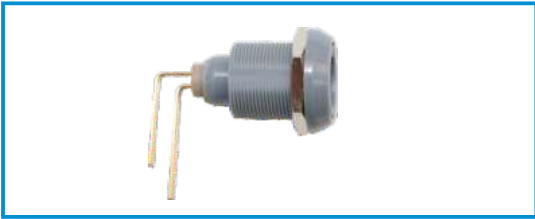
Model	Number of cores	Termination mode		
		welding a(mm)	straight pin board connection L(mm)	Φd(mm)
PLG.OP.302.PKLA	2	2.5	3	0.5
PLG.OP.303.PKLA	3	2.5	3	0.5
PLG.OP.304.PKLA	4	2.5	3	0.5
PLG.OP.305.PKLA	5	2.5	3	0.5
PLG.OP.306.PKLA	6	2.5	3	0.5
PLG.OP.307.PKLA	7	2.5	3	0.5
PLG.OP.308.PKLA	8	2.5	3	0.5
PLG.OP.309.PKLA	9	2.5	3	0.5



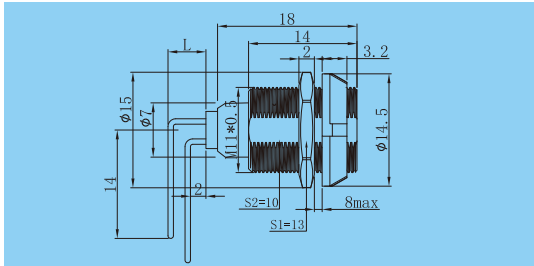
**PKG** Double nut fixed socket, key position G\A\B\C

Model	Number of cores	Termination mode		
		welding a(mm)	straight pin board connection L(mm)	Φd(mm)
PKG.OP.302.PKLA	2	2.5	3	0.7
PKG.OP.303.PKLA	3	2.5	3	0.7
PKG.OP.304.PKLA	4	2.5	3	0.5
PKG.OP.305.PKLA	5	2.5	3	0.5
PKG.OP.306.PKLA	6	2.5	3	0.5
PKG.OP.307.PKLA	7	2.5	3	0.5
PKG.OP.308.PKLA	8	2.5	3	0.5
PKG.OP.309.PKLA	9	2.5	3	0.5





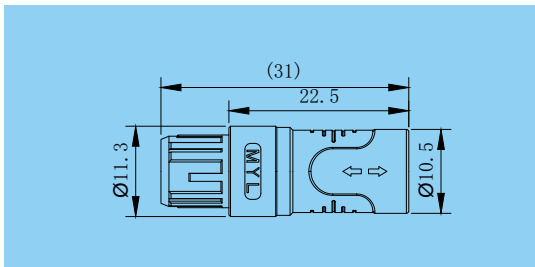
**PKG** Double nut fixed socket, 90 degree bent pin plate connection, key position G\A\B\C



Model	Number of cores	L(mm)
PKG.0P.302.PKVG	2	5
PKG.0P.303.PKVG	3	5
PKG.0P.304.PKVG	4	5
PKG.0P.305.PKVG	5	6.5
PKG.0P.306.PKVG	6	6.5
PKG.0P.307.PKVG	7	8.5
PKG.0P.308.PKVG	8	8.5
PKG.0P.309.PKVG	9	8.5



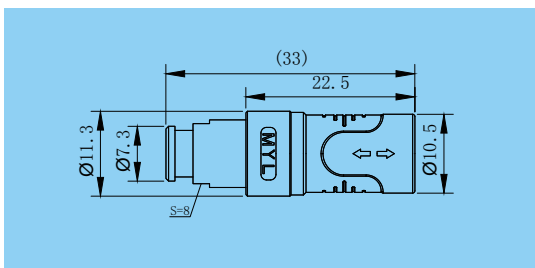
**PRG** Floating socket, key position G\A\B\C, wire clamp type, without sheath tail cap



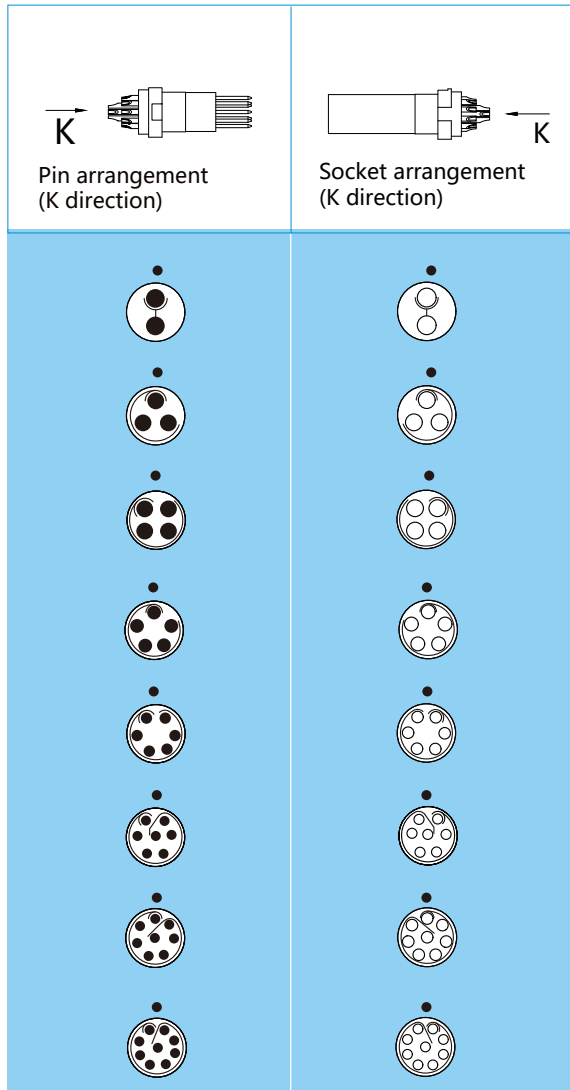
Model	A ( mm )	Adapter cable outer diameter (mm)	
		min	max
PRG.0P***.PKLC32G	3.2	2.0	3.0
PRG.0P***.PKLC42G	4.2	3.0	4.0
PRG.0P***.PKLC48G	4.8	4.0	4.6



**PRG** Floating socket, key position G\A\B\C, wire clamp type, with sheathed tail cap



Model	A ( mm )	Adapter cable outer diameter (mm)	
		min	max
PRG.0P***.PKLC32GZ	3.2	2.0	3.0
PRG.0P***.PKLC42GZ	4.2	3.0	4.0
PRG.0P***.PKLC48GZ	4.8	4.0	4.6

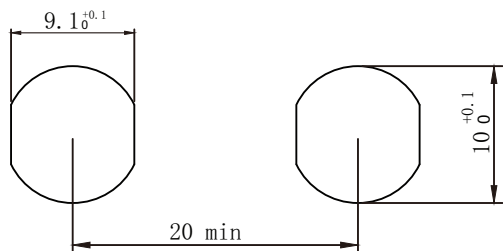


Contact configuration number	Number of cores	Pin core diameter (mm)	Related current (A)	Withstand voltage (V/AC)	Contact resistance (mΩ)
302	2	0.9	10	1800	≤9
303	3	0.9	8	1600	≤9
304	4	0.7	7	1500	≤12.5
305	5	0.7	6.5	1200	≤12.5
306	6	0.5	2.5	1000	≤15
307	7	0.5	2.5	1000	≤15
308	8	0.5	2.5	850	≤15
309	9	0.5	2	750	≤15

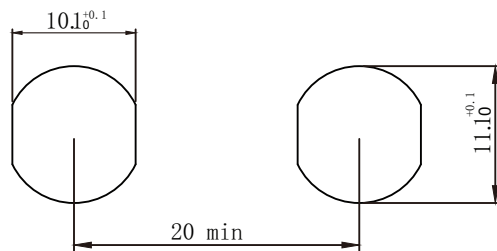
OP Series Straight pin plate opening diagram (view direction A-A)			
OPSeries Straight pin board joint	302	303	304
305	306	307	308
309			

OP Series Looper plate opening diagram (view direction A-A)			
OPSeries Looper plate joint	302	303	304
305	306	307	308
309			

OP Series Fixed socket opening dimensions



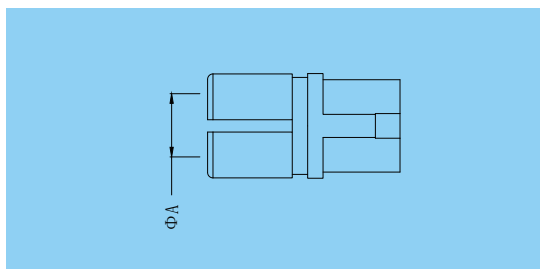
For PL type fixed socket



For PK type fixed socket



OP Series Cable clip

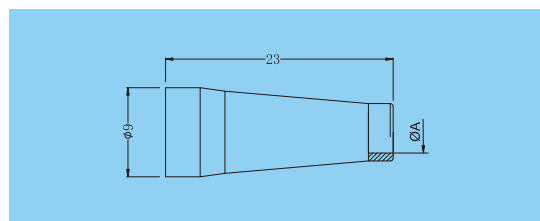


Model	Number	A ( mm )	Adapter cable outer diameter(mm)	
			min	max
QMP00-007-032*	32	3.2	2.0	3.0
QMP00-007-042*	42	4.2	3.0	4.0
QMP00-007-048*	48	4.8	4.0	4.6

\*Color: W-white N-black G-grey



OP Series Silicone sheath

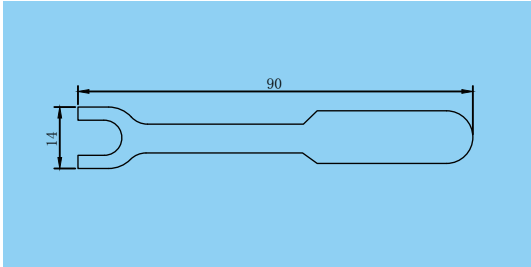


Model	A ( mm )	Adapter cable outer diameter(mm)	
		min	max
GMA.OP.032.R*	3.2	2.5	3.5
GMA.OP.042.R*	4.2	3.5	4.5
GMA.OP.052.R*	5.2	4.5	5.0

\*Sheath color: N(black), A(blue), G(grey), J(yellow), R (red)

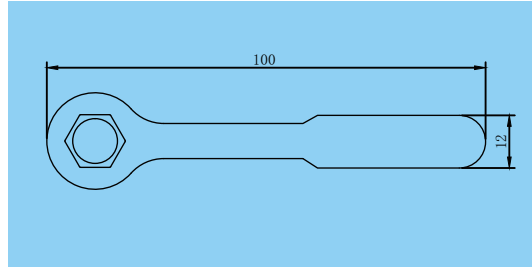
0P Series Fastening tools

MYLG-0P-001



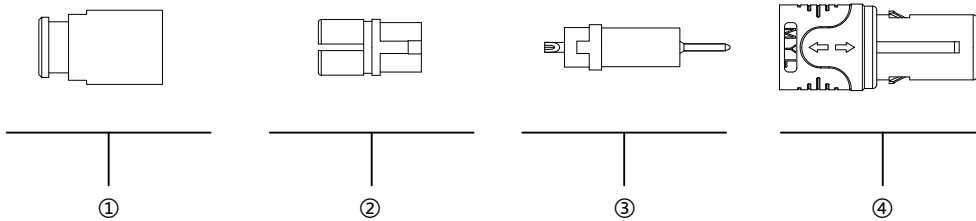
Material: POM

MYLG-0P-002



Material: POM

0P-PA Plug Assembly Instructions



1. Align the convex key of the wire clamp ② with the concave key of the insulator assembly ③.
2. After alignment, align the key position with the arrow on the inner and outer sleeve ④ and put it in.
3. Tighten the tail cap ①

# 1P Series products

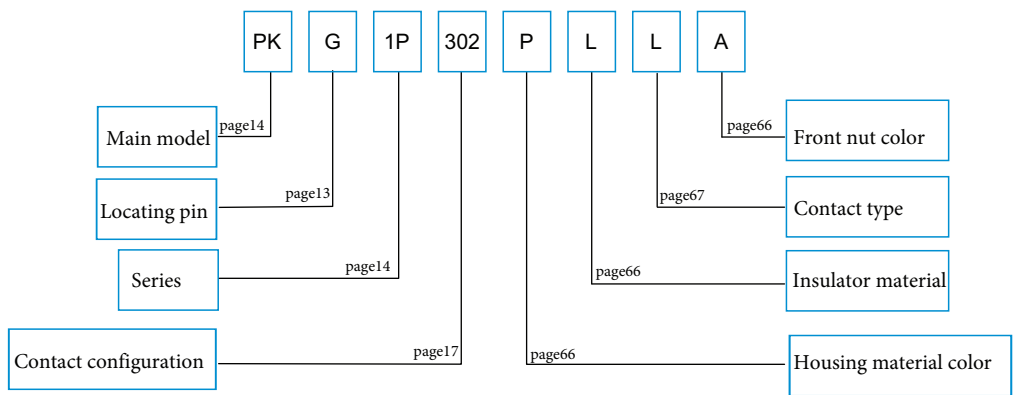
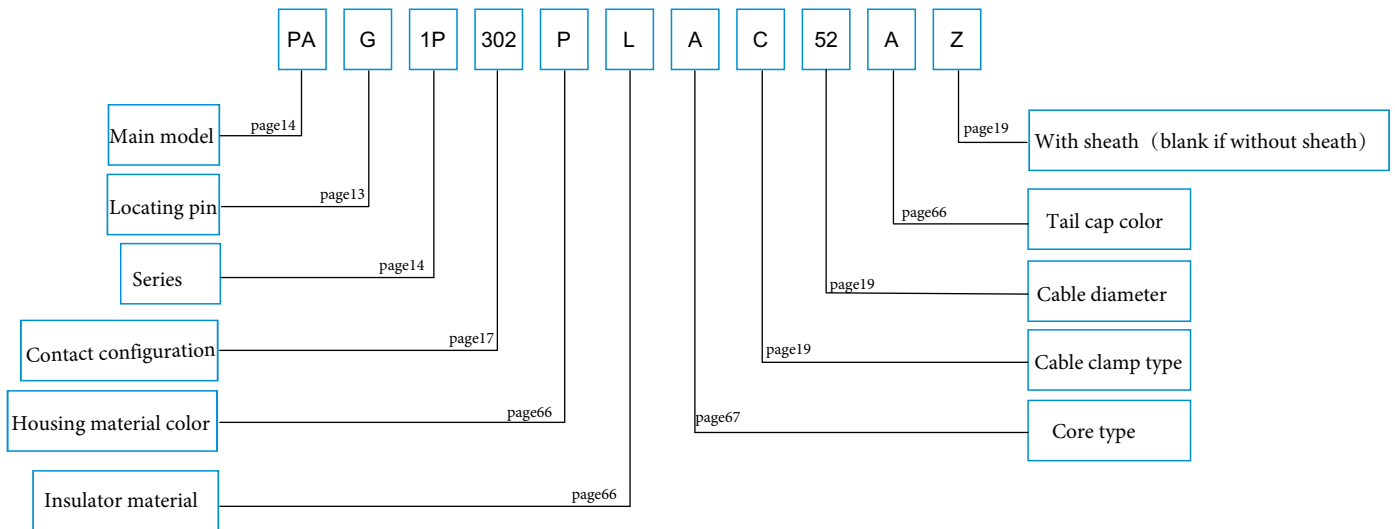
1  
P  
Series

### Performance parameters:

- Working temperature:  $-55^{\circ}\text{C} \sim 150^{\circ}\text{C}$
- Plug and unplug times: 2000+
- Maximum humidity:  $\leq 95\%$  [at 60 deg C / 140 F]
- Vibration: 15g [10Hz~2000Hz]
- Protection level: IP50/IP64

\*All materials comply with RoHS requirements.

## Product Number Rules:

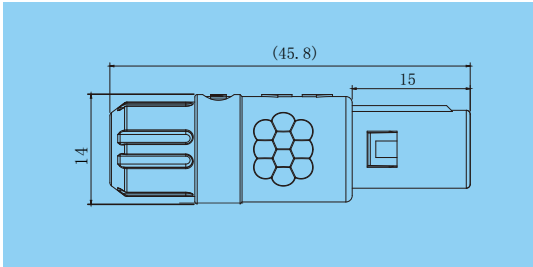


## Key Anlge

 Socket front view	Key position	Number of keys	Angle	
	G	1	0°	
	A	2	<b>α</b>	40°
	B	2		60°
	C	2		80°



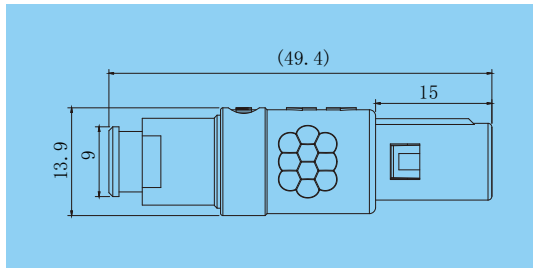
**PAG** Straight plug, key position G\A\B\C, wire clamp type, without sheath tail cap



Model	A ( mm )	Adapter cable outer diameter (mm)	
		min	max
PAG.1P***.BLAC42W	4.2	3.5	4.5
PAG.1P***.BLAC52W	5.2	4.5	5.5
PAG.1P***.BLAC62W	6.2	5.5	6.2



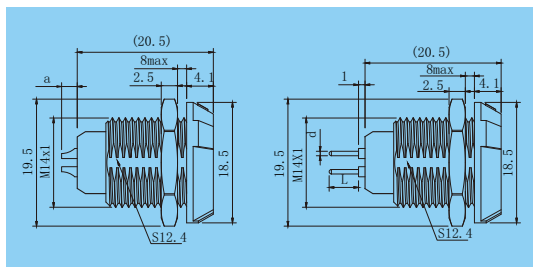
**PAG** Straight plug, key position G\A\B\C, wire clamp type, with sheath tail cap



Model	A ( mm )	Adapter cable outer diameter (mm)	
		min	max
PAG.1P***.BLAC42WZ	4.2	3.5	4.5
PAG.1P***.BLAC52WZ	5.2	4.5	5.5
PAG.1P***.BLAC62WZ	6.2	5.5	6.2



**PLG** Rear nut fixed socket, key position G\A\B\C

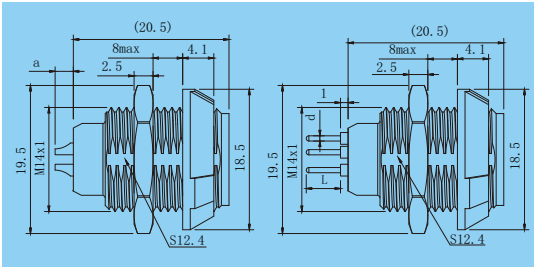


Model	Number of cores	Termination mode		
		welding a(mm)	straight pin board connection L(mm)	connection Φd(mm)
PLG.1P302.BLLW	2	2.7	5	0.7
PLG.1P303.BLLW	3	2.7	5	0.7
PLG.1P304.BLLW	4	2.7	5	0.7
PLG.1P305.BLLW	5	2.7	5	0.7
PLG.1P306.BLLW	6	2.7	3	0.5
PLG.1P307.BLLW	7	4.7	3	0.5
PLG.1P308.BLLW	8	4.7	3	0.5
PLG.1P309.BLLW	9	4.7	3	0.5
PLG.1P310.BLLW	10	4.1	3	0.5
PLG.1P314.BLLW	14	4.1	3	0.5
PLG.1P316.BLLW	16	4.1	3	0.5

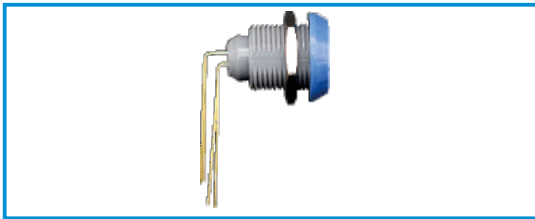




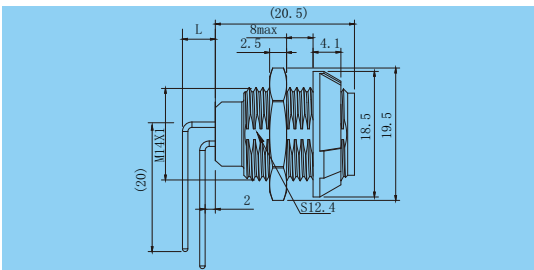
**PKG** Double nut fixed socket, key position G\A\B\C



Model	Number of cores	Termination mode		
		welding a(mm)	straight pin board connection L(mm)	Φd(mm)
PKG.1P.302.BLLW	2	2.7	5	0.7
PKG.1P.303.BLLW	3	2.7	5	0.7
PKG.1P.304.BLLW	4	2.7	5	0.7
PKG.1P.305.BLLW	5	2.7	5	0.7
PKG.1P.306.BLLW	6	2.7	3	0.5
PKG.1P.307.BLLW	7	4.7	3	0.5
PKG.1P.308.BLLW	8	4.7	3	0.5
PKG.1P.309.BLLW	9	4.7	3	0.5
PKG.1P.310.BLLW	10	4.1	3	0.5
PKG.1P.314.BLLW	14	4.1	3	0.5
PKG.1P.316.BLLW	16	4.1	3	0.5



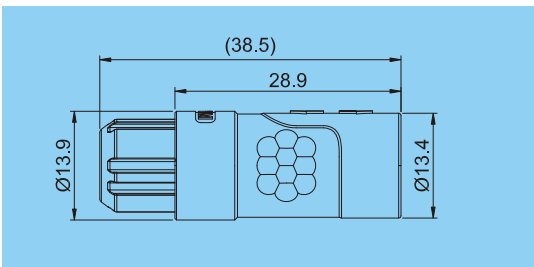
**PKG** Double nut fixed socket, 90 degree bent pin plate connection, key G\A\B\C



Model	Number of cores	L(mm)
PKG.1P.302.PLVA	2	5.34
PKG.1P.303.PLVA	3	5.14
PKG.1P.304.PLVA	4	5.14
PKG.1P.305.PLVA	5	7.68
PKG.1P.306.PLVA	6	7.68
PKG.1P.307.PLVA	7	7.68
PKG.1P.308.PLVA	8	7.68
PKG.1P.309.PLVA	9	10.22
PKG.1P.310.PLVA	10	10.22
PKG.1P.314.PLVA	14	12.76
PKG.1P.316.PLVA	16	12.76



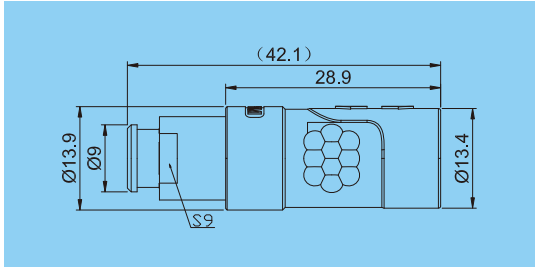
**PRG** Floating socket, key position G\A\B\C, wire clamp type, without sheath tail cap



Model	A ( mm )	Adapter cable outer diameter(mm)	
		min	max
PRG.1P.***.PKLC42A	4.2	3.5	4.5
PRG.1P.***.PKLC52A	5.2	4.5	5.5
PRG.1P.***.PKLC62A	6.2	5.5	6.2



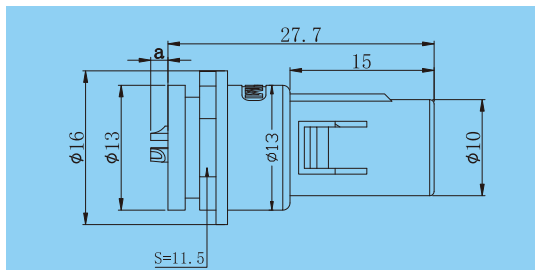
**PRG** Floating socket, key position G\A\B\C, wire clamp type, with sheathed tail cap



Model	A ( mm )	Adapter cable outer diameter(mm)	
		min	max
PRG.1P.***.PKLC42AZ	4.2	3.5	4.5
PRG.1P.***.PKLC52AZ	5.2	4.5	5.5
PRG.1P.***.PKLC62AZ	6.2	5.5	6.2



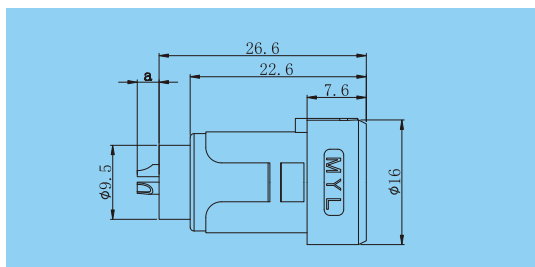
**PJG** Separate plug, key position G\A\B\C, tail injection or tail guard



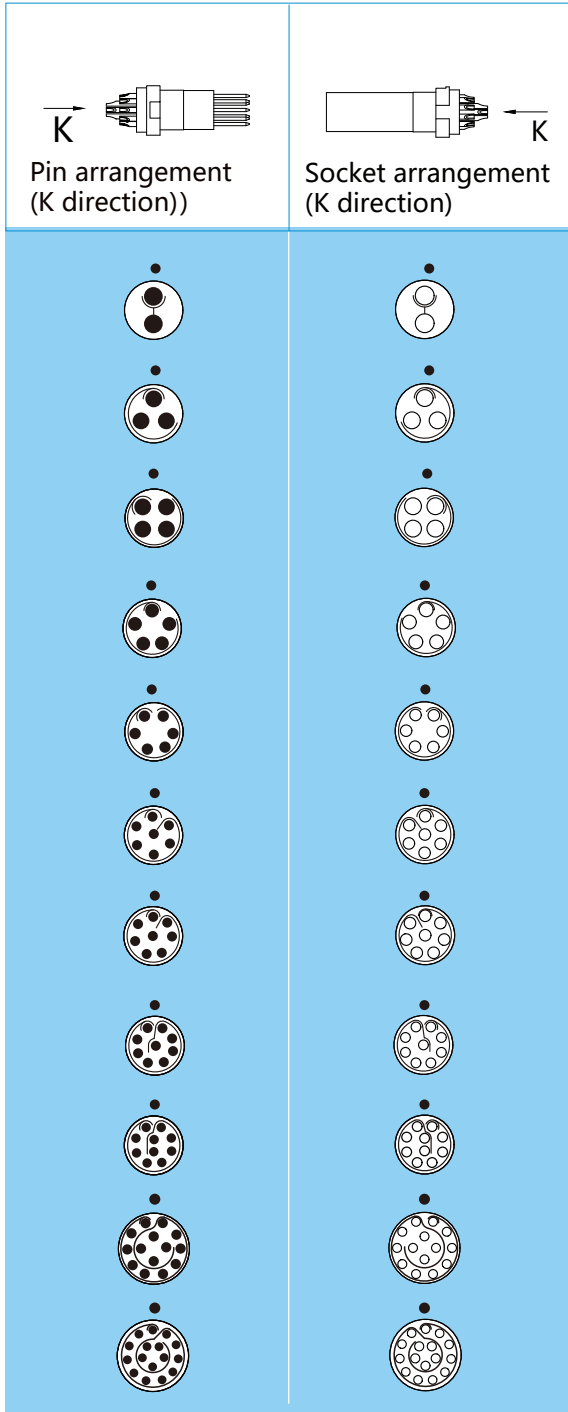
Model	Number of cores	welding
		a(mm)
PJG.1P.302.PKA	2	1.6
PJG.1P.303.PKA	3	1.6
PJG.1P.304.PKA	4	1.6
PJG.1P.305.PKA	5	1.6
PJG.1P.306.PKA	6	1.6
PJG.1P.307.PKA	7	1.6
PJG.1P.308.PKA	8	4
PJG.1P.309.PKA	9	4
PJG.1P.310.PKA	10	4
PJG.1P.314.PKA	14	4
PJG.1P.316.PKA	16	4



**PYG** Fixed socket, key position G\A\B\C, removable and repairable



Model	Number of cores	welding
		a(mm)
PYG.1P.302.PKL	2	2.7
PYG.1P.303.PKL	3	2.7
PYG.1P.304.PKL	4	2.7
PYG.1P.305.PKL	5	2.7
PYG.1P.306.PKL	6	2.7
PYG.1P.307.PKL	7	2.7
PYG.1P.308.PKL	8	4.7
PYG.1P.309.PKL	9	4.7
PYG.1P.310.PKL	10	4.7
PYG.1P.314.PKL	14	4.7
PYG.1P.316.PKL	16	4.7



Contact configuration number	Number of cores	pin core diameter (mm)	Related current (A)	Withstand voltage (V/AC)	Contact resistance (mΩ)
302	2	1.3	10	1200	≤5
303	3	1.3	10	1200	≤5
304	4	0.9	8	1200	≤9
305	5	0.9	7	1050	≤9
306	6	0.7	6	1050	≤12.5
307	7	0.7	5	1050	≤12.5
308	8	0.7	5	875	≤12.5
309	9	0.5	2.5	750	≤15
310	10	0.5	2	750	≤15
314	14	0.5	2	750	≤15
316	16	0.5	1.5	750	≤15

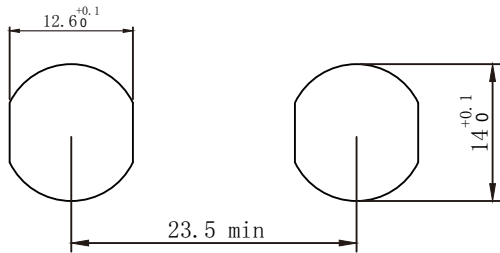
1 P Series

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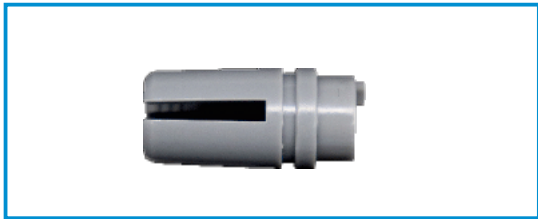
1P Series Straight pin plate opening diagram (view direction A-A)			
IP Series Straight pin board joint	302	303	304
305	306	307	308
309	310	314	316

1P Series Looper plate opening diagram (view direction A-A)			
IP Series Looper plate joint	302	303	304
305	306	307	308
309	310	314	316

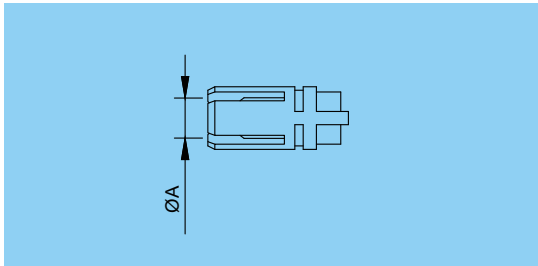
## 1P Series Fixed socket opening dimensions



For PK\PL type fixed socket



### 1P Series Cable clip

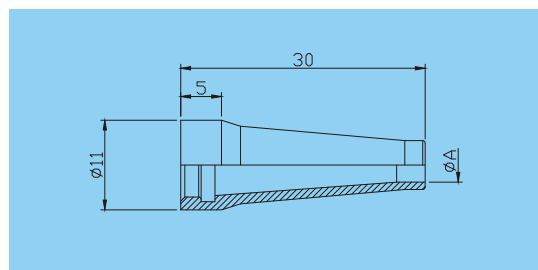


Model	Number	A ( mm )	Adapter cable outer diameter(mm)	
			min	max
QMP01-007-042*	42	4.2	3.5	4.5
QMP01-007-052*	52	5.2	4.5	5.5
QMP01-007-062*	62	6.2	5.5	6.2

\*Color: W-white N-black G-grey



### 1P Series Silicone sheath

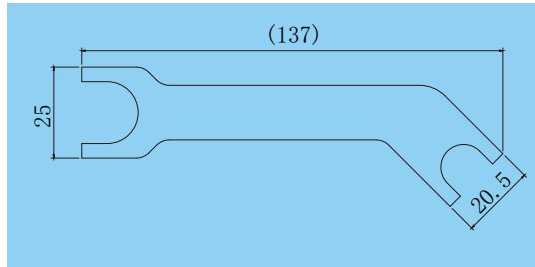


Model	A ( mm )	Adapter cable outer diameter(mm)	
		min	max
GMA.1P.032.R*	3.2	2.5	3.5
GMA.1P.042.R*	4.2	3.5	4.5
GMA.1P.052.R*	5.2	4.5	5.5
GMA.1P.062.R*	6.2	5.5	6.5
GMA.1P.072.R*	7.2	6.5	7.2

\*Sheath color: N(black)、A(blue)、G(grey)、J(yellow)、R(red)、B(white)、V(green)

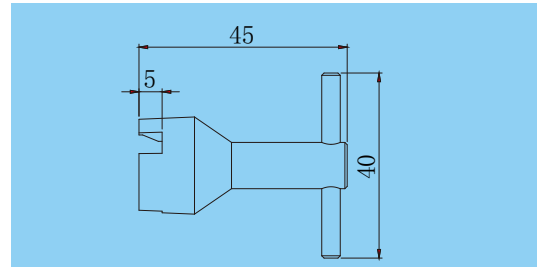
## 1P Series Fastening tools

MYLG-1P-001



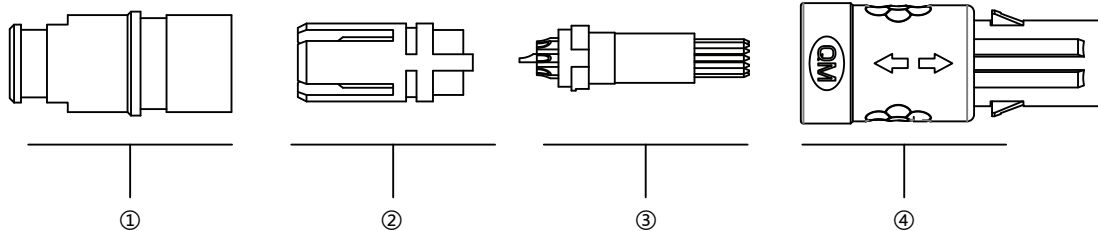
Material: Stainless steel

MYLG-1P-002



Material: Stainless steel

## 1P-PA Plug Assembly Instructions



1. Align the convex key of the wire clamp ② with the concave key of the insulator assembly ③.
2. After alignment, align the key position with the arrow on the inner and outer sleeve ④ and put it in.
3. Tighten the tail cap ①

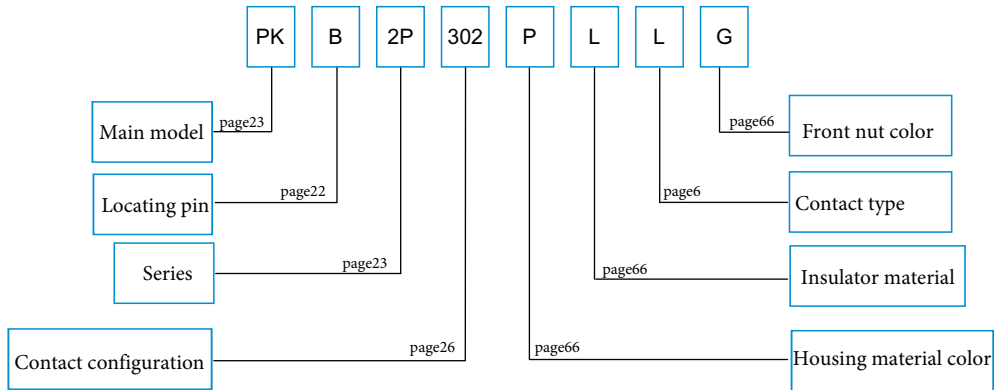
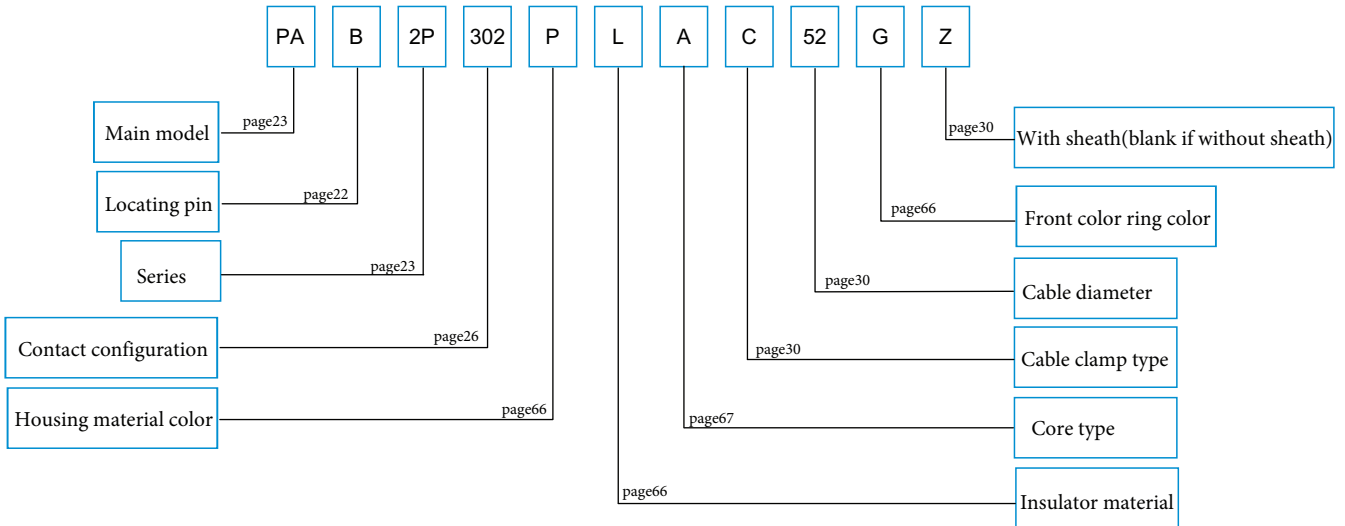
# 2P Series products

## Performance parameters:

- Working temperature:  $-55^{\circ}\text{C} \sim 150^{\circ}\text{C}$
- Plug and unplug times: 1000+
- Maximum humidity:  $\leq 95\%$  [at  $60^{\circ}\text{C} / 140^{\circ}\text{F}$ ]
- Vibration:  $15\text{g}$  [ $10\text{Hz} \sim 2000\text{Hz}$ ]
- Protection level: IP50/IP66

\*All materials comply with RoHS requirements.

Product Number Rules:



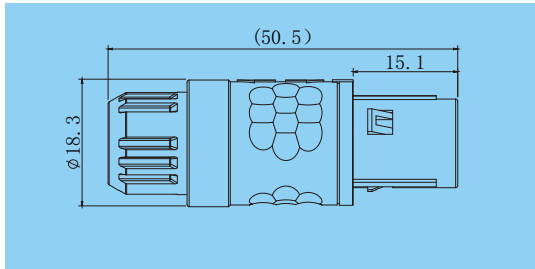
Key Angle

Socket front view	Key position	Number of keys	Angle	
			$\alpha$	Angle
	B	3	$\alpha$	60°
	C	3		100°
	D	3		110°
	H	3		80°
	J	3		90°





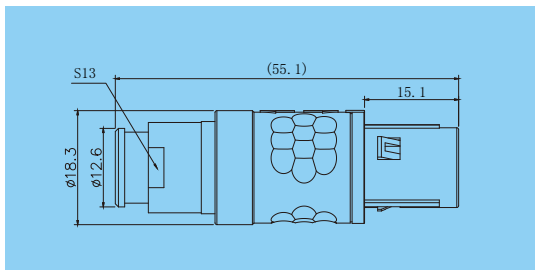
**PAB** Straight plug, key position B\C\D\H\J, wire clamp type, without sheath tail cap



Model	A ( mm )	Adapter cable outer diameter(mm)	
		min	max
PAB.2P***.PLAC52G	5.2	3.2	5.2
PAB.2P***.PLAC72G	7.2	5.3	7.2
PAB.2P***.PLAC92G	9.2	7.3	8.9



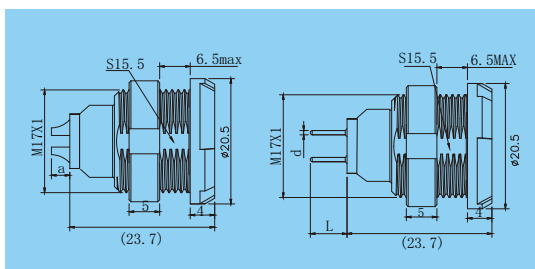
**PAB** Straight plug, key position B\C\D\H\J, wire clamp type, with sheathed tail cap



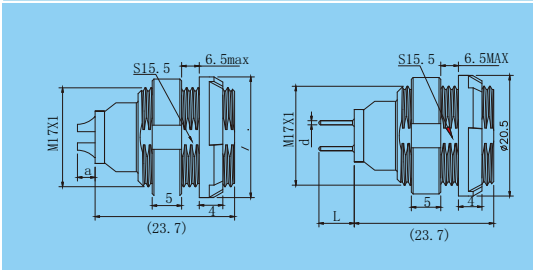
Model	A ( mm )	Adapter cable outer diameter(mm)	
		min	max
PAB.2P***.PLAC52GZ	5.2	3.2	5.2
PAB.2P***.PLAC72GZ	7.2	5.3	7.2
PAB.2P***.PLAC92GZ	9.2	7.3	8.9



**PLB** Rear nut fixed socket, key position B\C\D\H\J

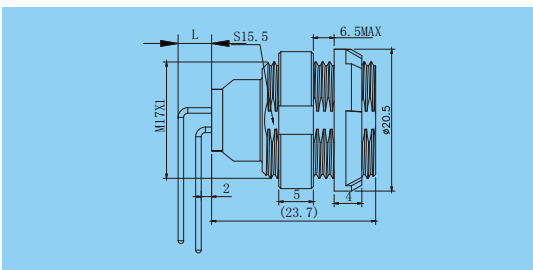


Model	Number of cores	Termination mode		
		welding	straight pin board connection	
		a(mm)	L(mm)	Φd(mm)
PLB.2P308.PLLG	8	3.3	6	0.7
PLB.2P334.PLLG	34	5.5	3	0.5



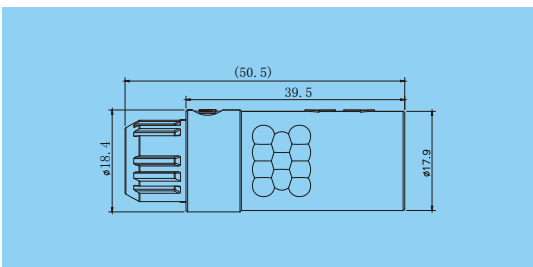
**PKB** Double nut fixed socket, key position B\C\D\H\J

Model	Number of cores	Termination mode		
		welding	straight pin board connection	
		a(mm)	L(mm)	$\Phi d$ (mm)
PKB.2P.308.PLLA	8	3.3	6	0.7
PKB.2P.334.PLLA	34	5.5	3	0.5



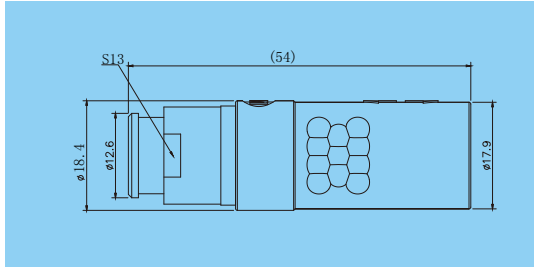
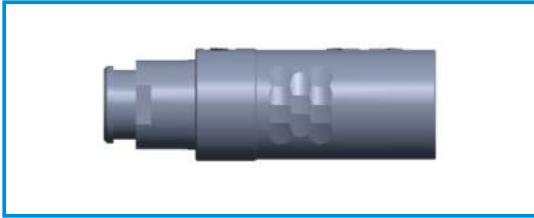
**PKB** Double nut fixed socket, 90 degree bent pin plate connection, key position B\C\D\H\J

Model	Number of cores	L(mm)
PKB.2P.312.PLVA	12	10.22
PKB.2P.316.PLVA	16	12.76
PKB.2P.319.PLVA	19	10.22
PKB.2P.326.PLVA	26	15.2



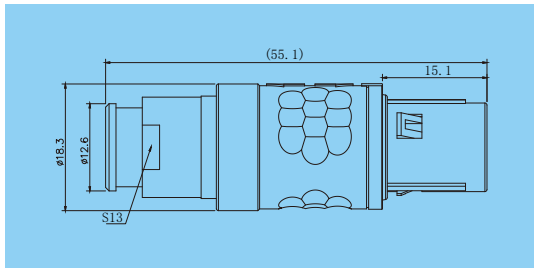
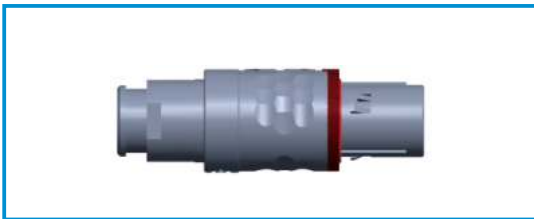
**PRD** Floating socket, key position B\C\D\H\J, wire clamp type, without sheath tail cap

Model	A ( mm )	Adapter cable outer diameter(mm)	
		min	max
PRD.2P.***.PLLC52G	5.2	3.2	5.2
PRD.2P.***.PLLC72G	7.2	5.3	7.2
PRD.2P.***.PLLC92G	9.2	7.3	8.9



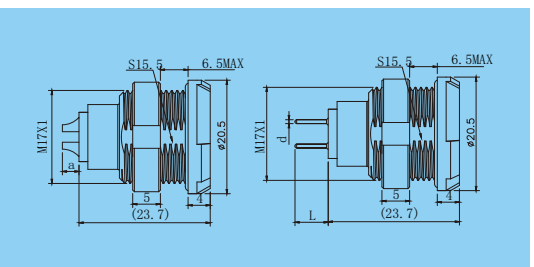
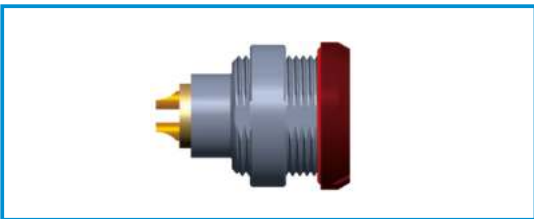
**PRD** Floating socket, key position B\C\D\H\J, wire clamp type, with sheathed tail cap

Model	A ( mm )	Adapter cable outer diameter(mm)	
		min	max
PRD.2P.***.PLLC52GZ	5.2	3.2	5.2
PRD.2P.***.PLLC72GZ	7.2	5.3	7.2
PRD.2P.***.PLLC92GZ	9.2	7.3	8.9



**PFB** Straight plug, key position B\C\D\H\J, wire clamp type, with sheathed tail cap, waterproof IP66

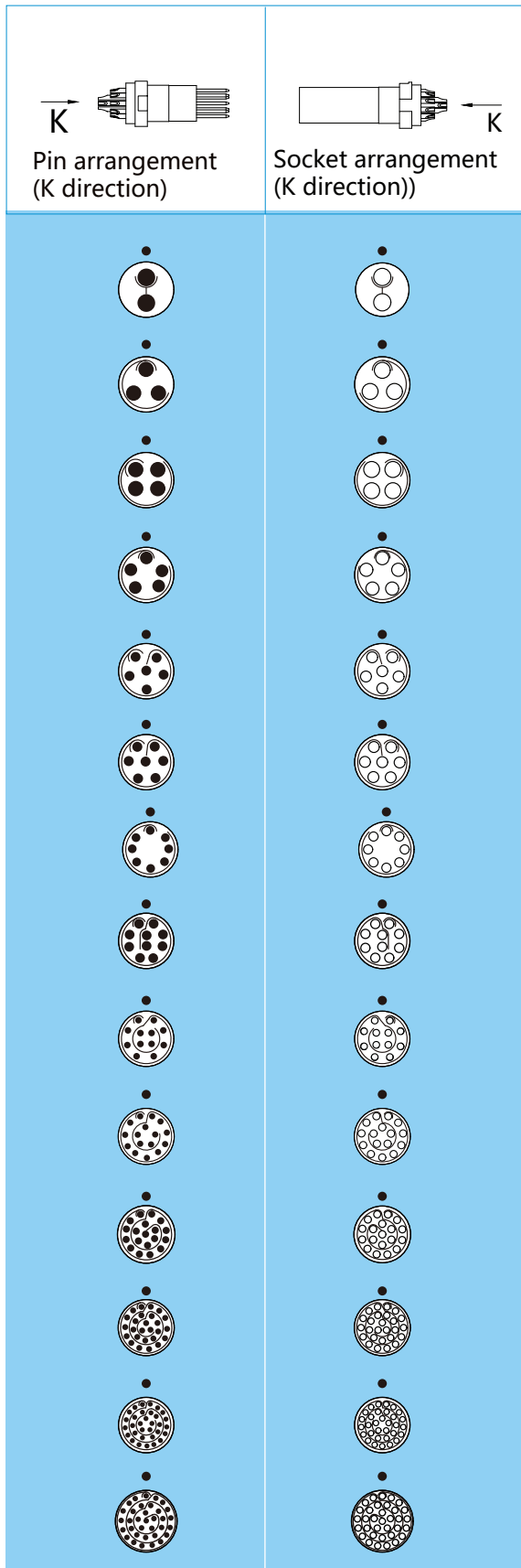
Model	A ( mm )	Adapter cable outer diameter(mm)	
		min	max
PFB.2P.***.PLAC52RZ	5.2	3.2	5.2
PFB.2P.***.PLAC72RZ	7.2	5.3	7.2
PFB.2P.***.PLAC92RZ	9.2	7.3	8.9



**PNB** Rear nut fixed socket, key position B\C\D\H\J, waterproof IP66

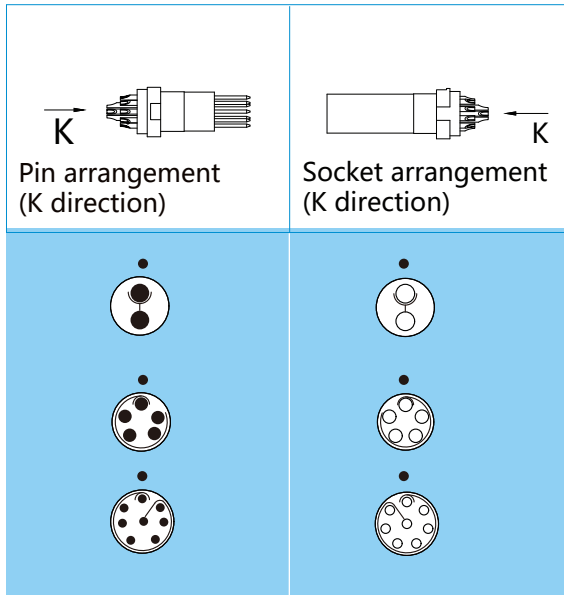
Model	Number of cores	Termination mode		
		welding	straight pin board connection	Φd(mm)
		a(mm)	L(mm)	
PNB.2P.308.PLLR	8	3.3	6	0.7
PNB.2P.334.PLLR	34	5.5	3	0.5

## 2P Series Contact configuration



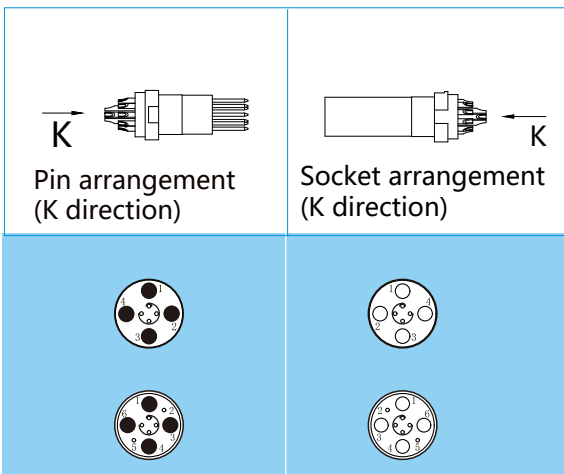
Contact configuraton number	Number of cores	Pin core diameter (mm)	Realted current (A)	Withstand voltage (V/AC)	Contact resisance (mΩ)
302	2	2	30	2100	≤3.5
303	3	1.6	17	2400	≤4
304	4	1.3	15	1850	≤5
305	5	1.3	14	1750	≤5
306	6	1.3	12	1350	≤5
307	7	1.3	11	1750	≤5
308	8	0.9	10	1500	≤9
310	10	0.9	8	1450	≤9
312	12	0.7	7	1250	≤12.5
316	16	0.7	6	1500	≤12.5
319	19	0.7	5	1400	≤12.5
326	26	0.5	2	1000	≤15
332	32	0.5	1.5	700	≤15
334	34	0.5	1.5	700	≤15

### 2P Series High pressure resistant pin core configuration



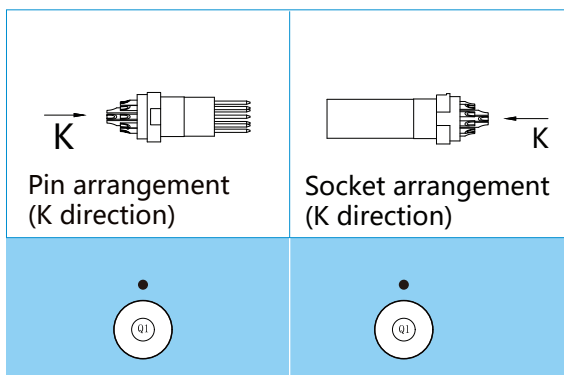
Contact configuration number	Number of cores	Pin core diameter (mm)	Related current (A)	Withstand voltage (V/AC)	Contact resistance (mΩ)
H02	2	1.3	15	4000	≤15
H05	5	0.7	7	2500	≤12.5
H08	8	0.7	7	1500	≤12.5

### 2P Series High pressure resistant mixed pin core configuration



Contact configuration number	Number of cores	Pin core diameter (mm)	Related current (A)	Withstand voltage (V/AC)	Contact resistance (mΩ)
H404	4LV + 4HV	05 +07	5	3500	≤15
H406	6LV + 4HV	05 +07	5	3500	≤15

### 2P Series Gas pin core configuration

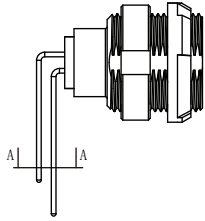
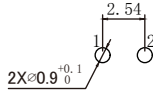
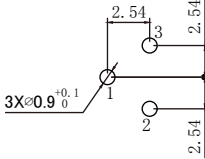
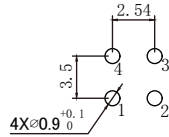
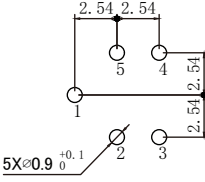
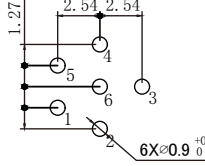
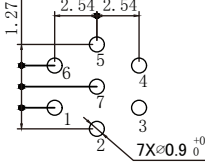
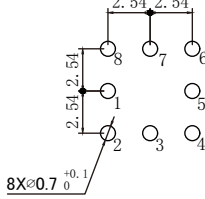
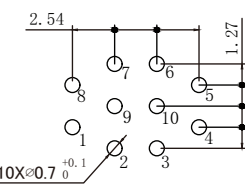
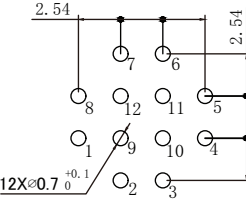
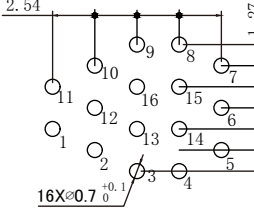
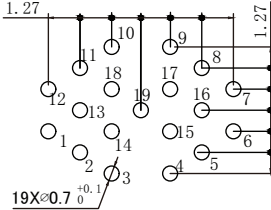
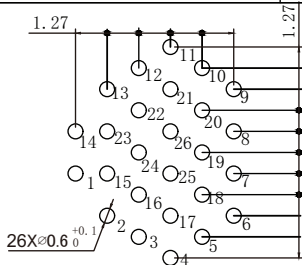


Contact configuration number	Number of cores	Air pipe size (mm)	Gas circuit pressure resistance (Bar)
Q01	1 Gas circuit	8*5	2

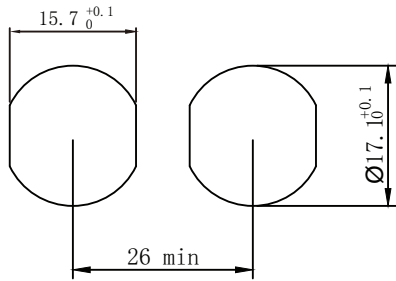
2P Series Straight pin plate opening diagram (view direction A-A)

<p>2P Series Straight pin board joint</p>	<p>302</p>	<p>303</p>	<p>304</p>
<p>305</p>	<p>306</p>	<p>307</p>	<p>308</p>
<p>310</p>	<p>312</p>	<p>316</p>	<p>319</p>
<p>326</p>	<p>332</p>	<p>334</p>	

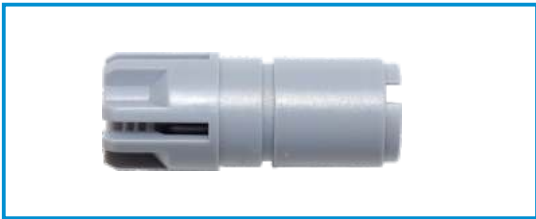
2P Series

2P Series Looper plate opening diagram (view direction A-A)			
			
2P Series Looper plate joint	302	303	304
			
305	306	307	308
			
310	312	316	319
			
326			

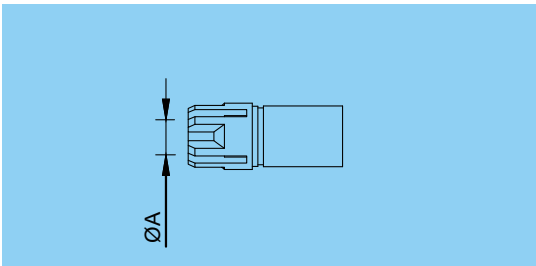
### 2P Series Fixed socket opening dimensions



For PK\PL type fixed socket



### 2P Series Cable clip

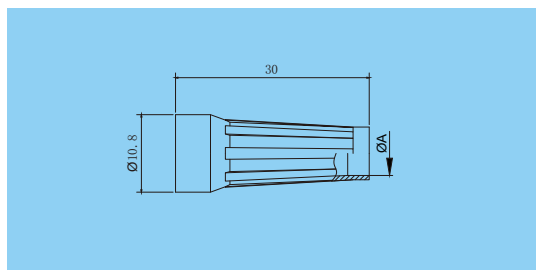


Model	Number	A ( mm )	Adapter cable outer diameter(mm)	
			min	max
QMP02-007-052*	52	5.2	3.2	5.2
QMP02-007-072*	72	7.2	5.3	7.2
QMP02-007-092*	92	9.2	7.3	8.9

\*Color: W-white N-black G-grey



### 2P Series sheath



Model	A ( mm )	Adapter cable outer diameter(mm)	
		min	max
GMA.2B.052.D*	5.2	3.2	5.2
GMA.2B.072.D*	7.2	5.3	7.2
GMA.2B.092.D*	9.2	7.3	9.2

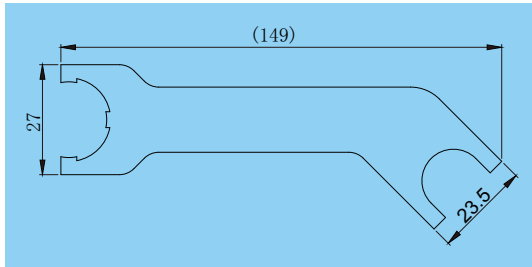
\*Sheath color: N(black)、A(blue)、G(grey)、J(yellow)、R (red)

2P Series



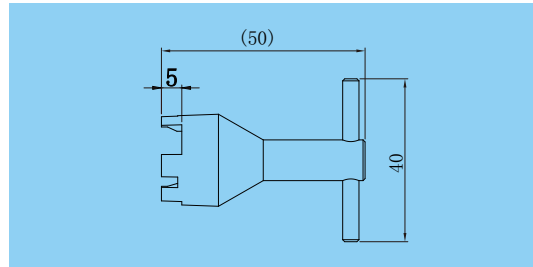
## 2P Series Fastening tools

MYLG-2P-001



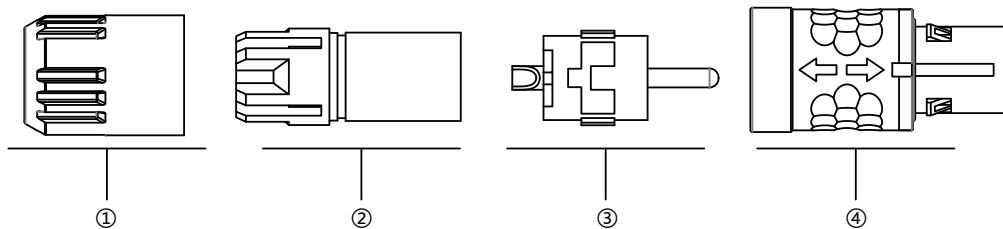
Material:SS

MYLG-2P-002



Material:SS

## 2P-PA Plug Assembly Instructions



1. Align the convex key of the wire clamp ② with the concave key of the insulator assembly ③.
2. After alignment, align the key position with the arrow on the inner and outer sleeve ④ and put it in.
3. Tighten the tail cap ①.

# 3P Series products

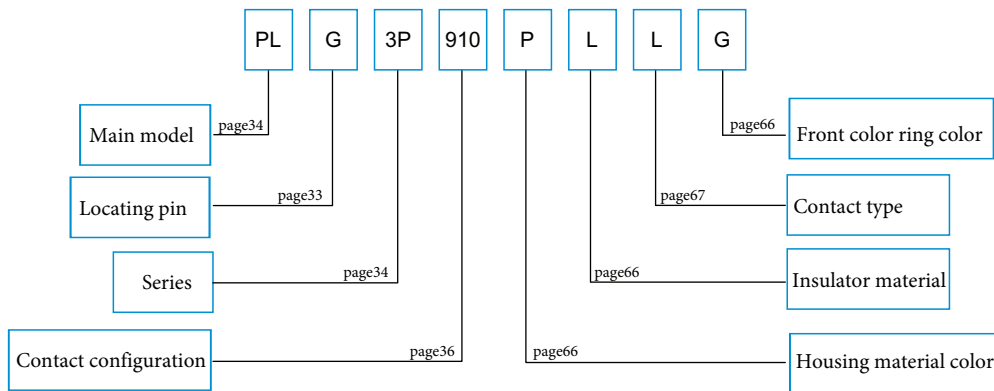
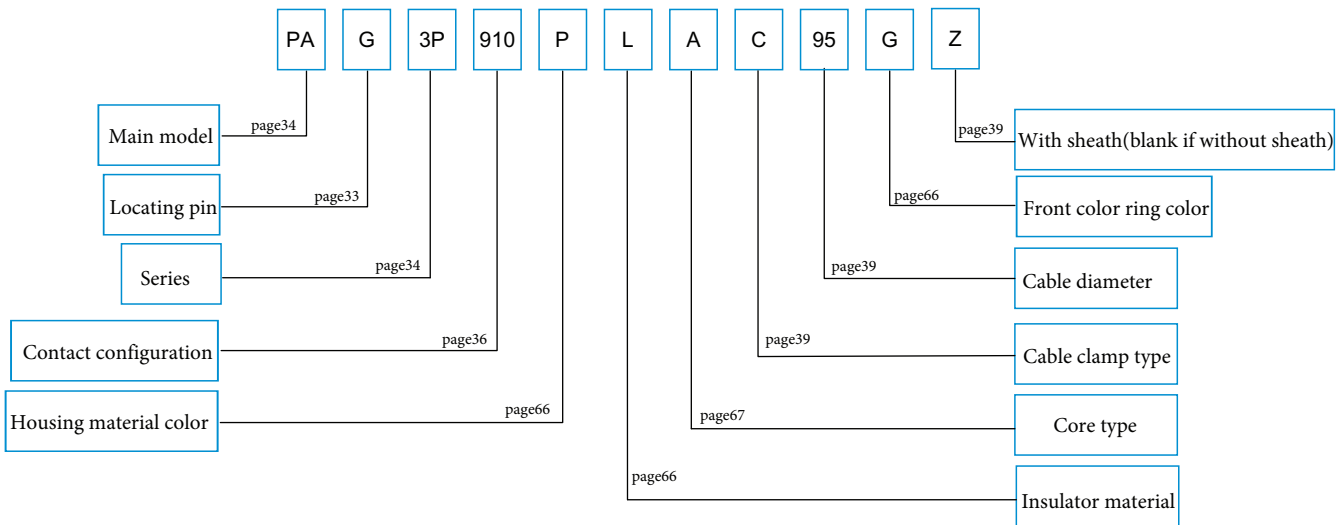


## Performance parameters:

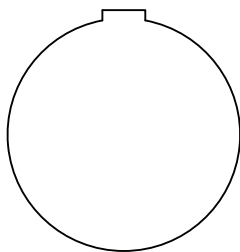
- Working temperature:  $-55^{\circ}\text{C} \sim 150^{\circ}\text{C}$
- Plug and unplug times: 1000+
- Maximum humidity:  $\leq 95\%$  [at  $60^{\circ}\text{C} / 140^{\circ}\text{F}$ ]
- Vibration: 15g [10Hz~2000Hz]
- Protection level: IP61

\*All materials comply with RoHS requirements.

**Product Number Rules:**



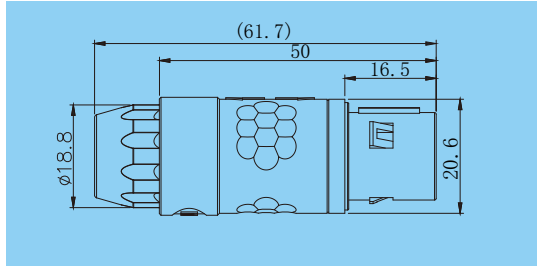
**Key Angle**



Socket front view



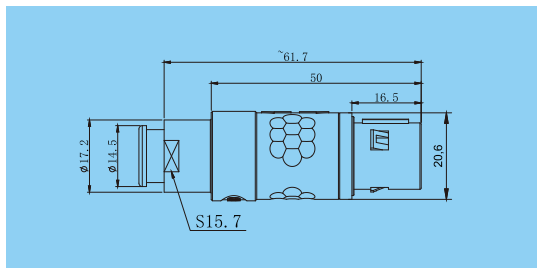
**PAG** Straight plug, key position G, wire clamp type, without sheath type tail cap



Model	A ( mm )	Adapter cable outer diameter(mm)	
		min	max
PAG.3P***.PLAC65G	6.5	5.5	6.5
PAG.3P***.PLAC75G	7.5	6.6	7.5
PAG.3P***.PLAC85G	8.5	7.6	8.5
PAG.3P***.PLAC95G	9.5	8.6	9.5



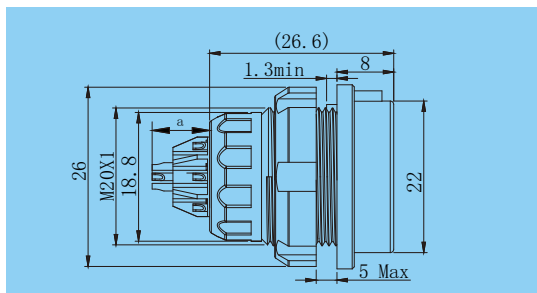
**PAG** Straight plug, key position G, wire clamp type, with sheath type tail cap



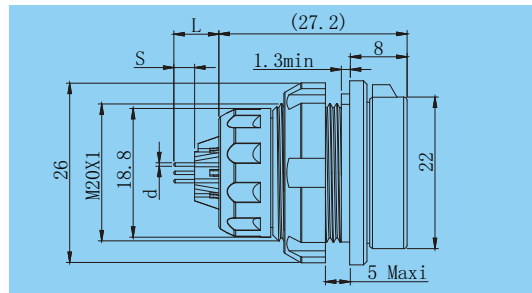
Model	A ( mm )	Adapter cable outer diameter(mm)	
		min	max
PAG.3P***.PLAC65GZ	6.5	5.5	6.5
PAG.3P***.PLAC75GZ	7.5	6.6	7.5
PAG.3P***.PLAC85GZ	8.5	7.6	8.5
PAG.3P***.PLAC95GZ	9.5	8.6	9.5



**PLG** Fixed socket, key position G, internal nut mounting

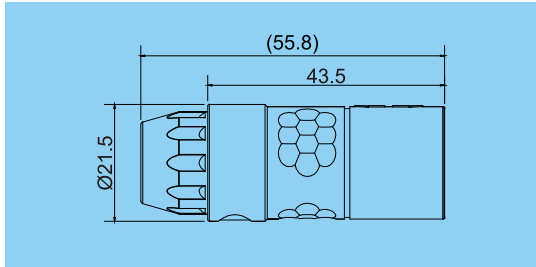


Model	Number of cores	Termination mode			
		welding a(mm)	straight pin L(mm)	board connection S(mm)	Φd(mm)
PLG.3P.910.PLLG	6HV+4LV	5.3	-	-	-
PLG.3P.910.PLNG	6HV+4LV	-	5.7	2.8	0.5





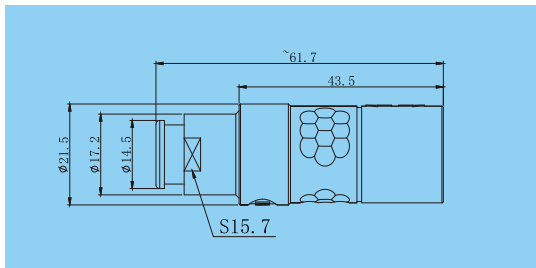
**PRG** Floating socket, key position G, wire clamp type, without sheath type tail cap



Model	A ( mm )	Adapter cable outer diameter(mm)	
		min	max
PRG.3P***.PLLC65G	6.5	5.5	6.5
PRG.3P***.PLLC75G	7.5	6.6	7.5
PRG.3P***.PLLC85G	8.5	7.6	8.5
PRG.3P***.PLLC95G	9.5	8.6	9.5

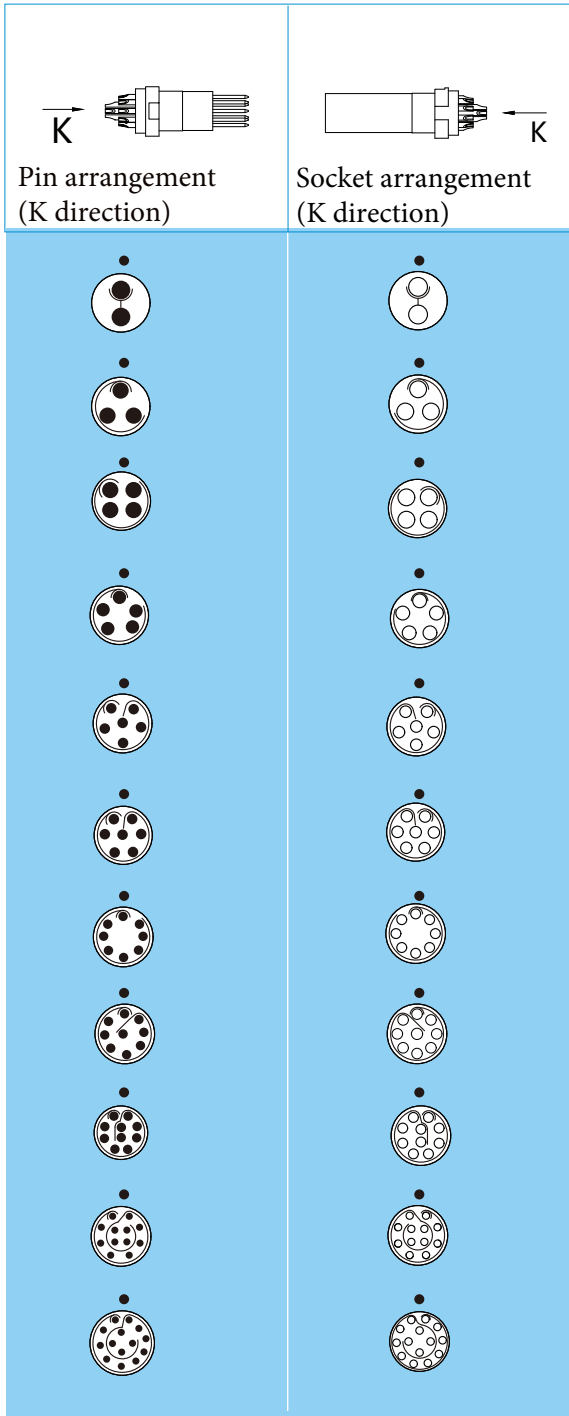


**PRG** Floating socket, key position G, wire clamp type, with sheath type tail cap



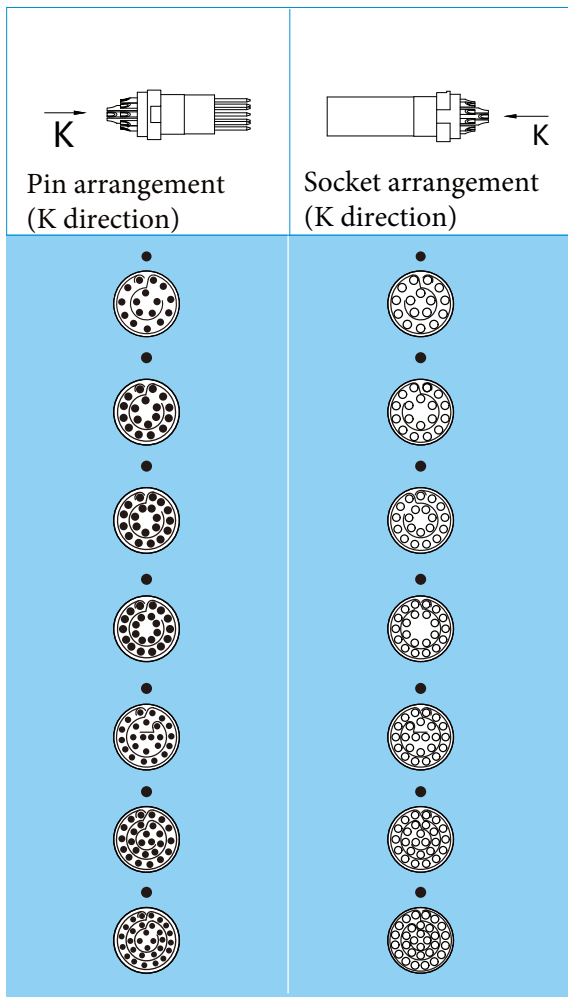
Model	A ( mm )	Adapter cable outer diameter(mm)	
		min	max
PRG.3P***.PLLC65GZ	6.5	5.5	6.5
PRG.3P***.PLLC75GZ	7.5	6.6	7.5
PRG.3P***.PLLC85GZ	8.5	7.6	8.5
PRG.3P***.PLLC95GZ	9.5	8.6	9.5

**3P Series**  
Contact configuration



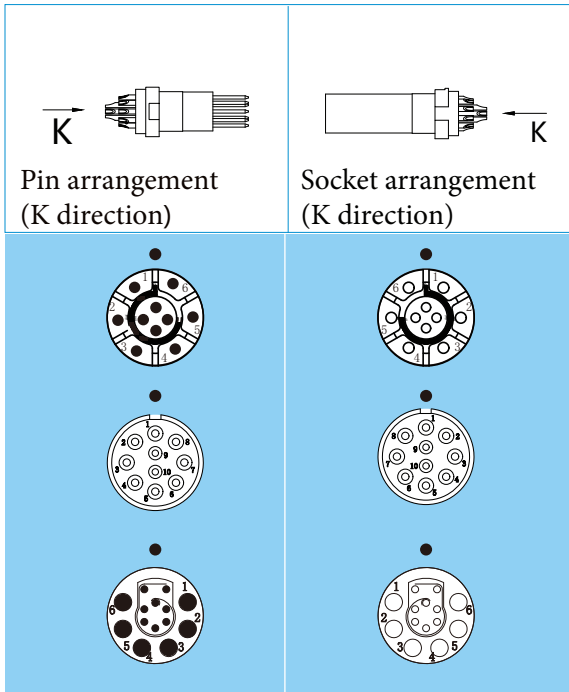
Contact configuration number	Number of cores	Pin core diameter (mm)	Related current (A)	Withstand voltage (V/AC)	Contact resistance (mΩ)
302	2	3	35	1550	≤3
303	3	2	25	1500	≤3.5
304	4	2	19	1250	≤3.5
305	5	1.6	19	1250	≤4
306	6	1.6	17	1150	≤4
307	7	1.6	15	1150	≤4
308	8	1.3	13	1150	≤5
309	9	1.3	12	1000	≤5
310	10	1.3	12	1000	≤5
312	12	0.9	9	1000	≤9
314	14	0.9	9	1000	≤9

3P Series



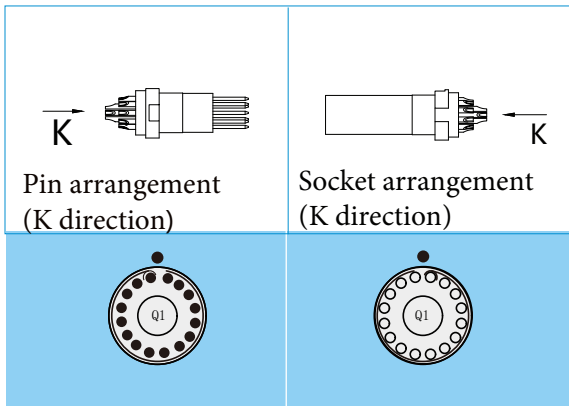
Contact configuration number	Number of cores	Pin core diameter (mm)	Related current (A)	Withstand voltage (V/AC)	Contact resistance (mΩ)
316	16	0.9	8	850	≤9
318	18	0.9	7	850	≤9
320	20	0.7	6	750	≤12.5
322	22	0.7	5.5	750	≤12.5
324	24	0.7	4	750	≤12.5
326	26	0.7	4	700	≤12.5
330	30	0.7	3.5	700	≤12.5

3P Series High pressure resistant mixed pin core configuration



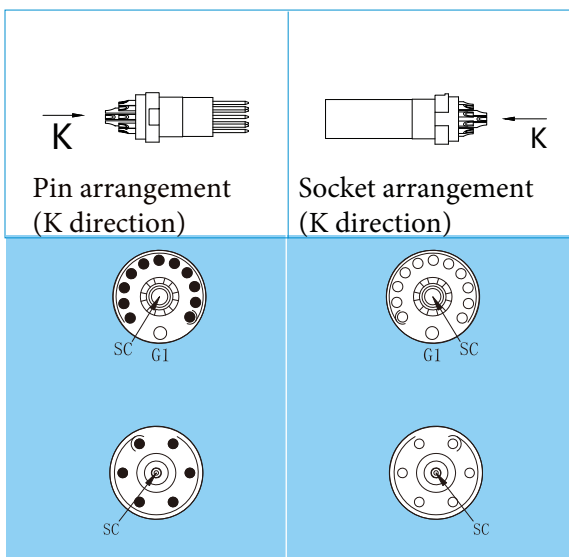
Contact configuration number	Number of cores	Pin core diameter (mm)	Related current (A)	Withstand voltage (V/AC)	Contact resistance (mΩ)
910	4LV+6HV	0.5+0.7	5	4000	≤12.5
H802	2LV+8HV	0.5+0.7	10	9000	≤12.5
914	8LV+6HV	0.5+0.7	5	4000	≤12.5

3P Series Mixed pin core configuration for gas circuit



Contact configuration number	Number of cores	Pin core diameter (mm)	Related current (A)	Withstand voltage (V/AC)	Contact resistance (mΩ)	Air pipe size (mm)	Air circuit pressure resistance (Bar)
316+1	16 signals +1 gas circuit	0.7	3.5	700	≤12.5	4*2.5	2

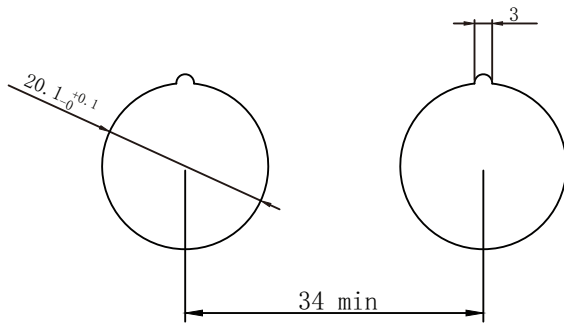
3P Series Fiber optic mixed pin core configuration



Contact configuration number	Number of cores	Pin core diameter (mm)	Related current (A)	Withstand voltage (V/AC)	Contact resistance (mΩ)	Fiber modulus
7112	1 fiber 11 low voltage 1 ground connection	0.7 low voltage 0.9 ground connection	7	750	≤12.5	Multimode
7106	1 fiber 6 low voltage	0.7 low voltage	7	750	≤12.5	Multimode



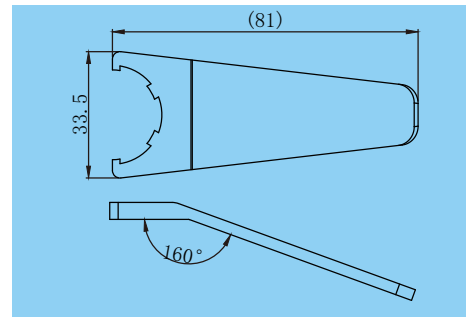
### 3P Series Fixed socket opening dimensions



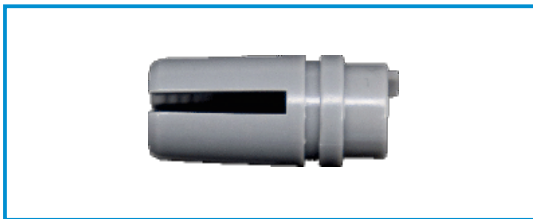
For PK type fixed socket

### 3P Series Fastening tools

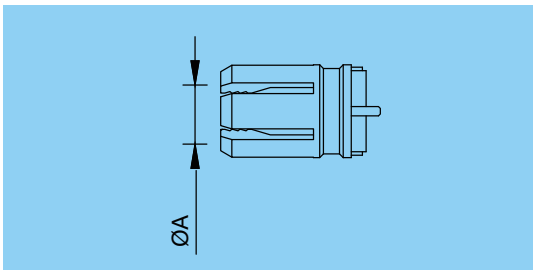
MYLG-3P-001



Material:SS



### 3P Series Cable clip

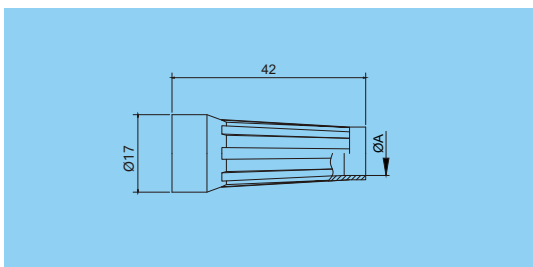


Model	Number	A ( mm )	Adapter cable outer diameter(mm)	
			min	max
QMP03-007-065*	65	6.5	5.5	6.5
QMP03-007-075*	75	7.5	6.6	7.5
QMP03-007-085*	85	8.5	7.6	8.5
QMP03-007-095*	95	9.5	8.6	9.5

\*Color: W-white N-black G-grey



### 3P Series Sheath



Model	A ( mm )	Adapter cable outer diameter(mm)	
		min	max
GMA.3P.065.D*	6.5	5.5	6.5
GMA.3P.075.D*	7.5	6.6	7.5
GMA.3P.085.D*	8.5	7.6	8.5
GMA.3P.095.D*	9.5	8.6	9.5

\*Sheath color:

N(black)、A(blue)、G(grey)、J(yellow)、R (red) 、B (white) 、  
V (green) 、M (brown) 、S (orange)

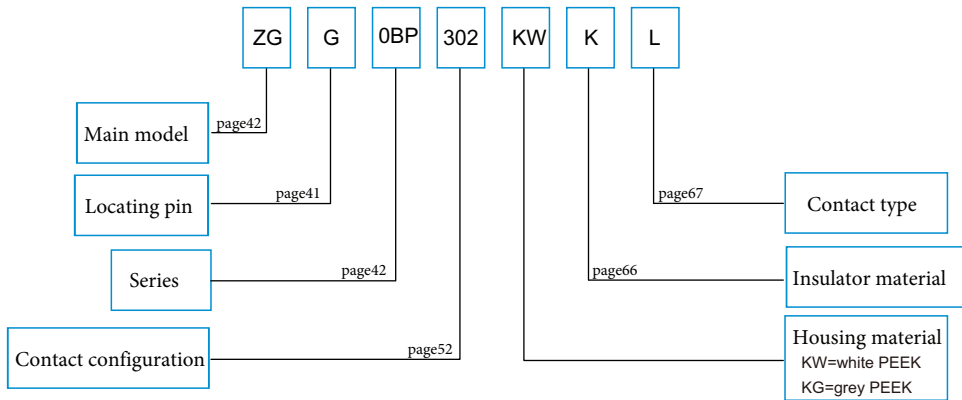
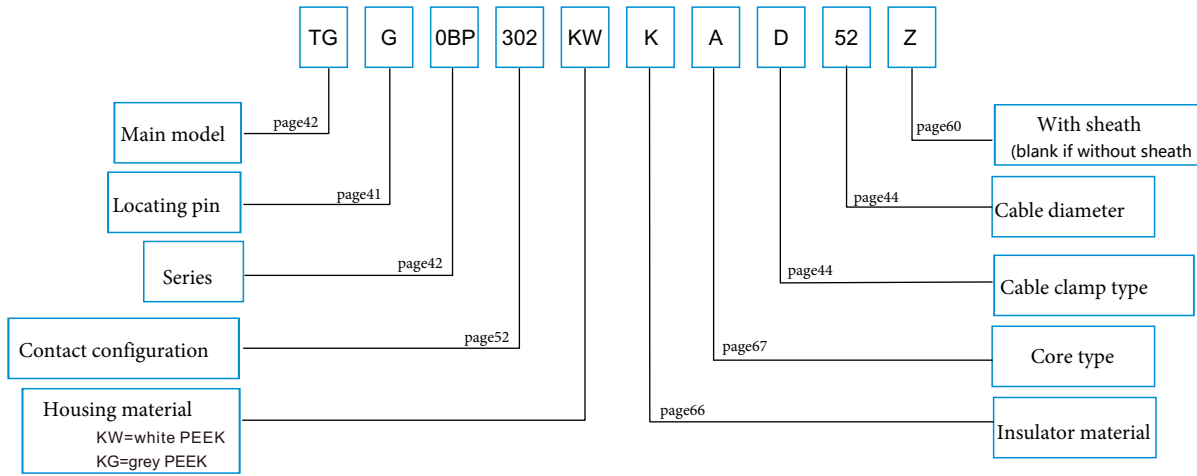
## BP Series(Plastic wrapped metal) products

### Performance parameters:

- Working temperature:  $-55^{\circ}\text{C} \sim 150^{\circ}\text{C}$
- Plug and unplug times: 5000+
- Maximum humidity:  $\leq 95\%$  [at  $60^{\circ}\text{C} / 140^{\circ}\text{F}$ ]
- Vibration: 15g [10Hz~2000Hz]
- Salt spray: 96h
- Protection level: IP50

\*All materials comply with RoHS requirements.

Product Number Rules:

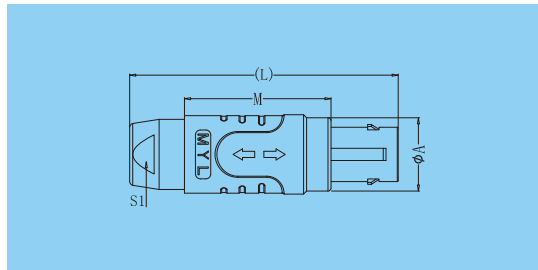


Key Angle

Socket front view	Key position	Number of keys	Angle	Series		Number of keys	Angle	series			
				0BP	1BP			2BP	3BP	4BP	
	G	1		0°	0°	1		0°	0°	0°	
	A	2	$\alpha$	30°	30°	2	$\alpha$	30°	30°	30°	
	B	2		60°	60°	2		45°	45°	45°	
	C	2		90°	90°	2		60°	60°	60°	
	D	2	$\beta$	135°	135°	2	$\gamma$	95°	95°	95°	
	E	2		145°	145°	2		$\beta$	120°	120°	120°
	F	2		155°	155°	2			145°	145°	145°
	J	2	$\gamma$	45°	45°	2	$\alpha$	37.5°	37.5°	37.5°	



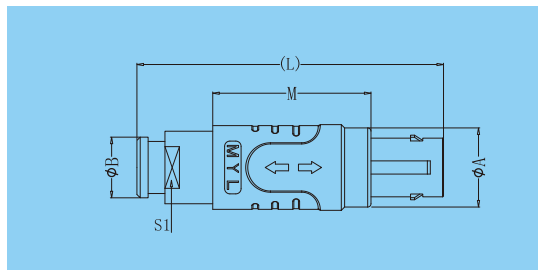
**TGG** Straight plug, key position G\A\B\C, wire clamp type, without sheath tail cap



Item		Size			
Series	Model	A	L	M	S1
0BP	TGG	9.5	36	20	8
1BP	TGG	12	44	24	9
2BP	TGG	15.5	50.5	28	12
3BP	TGG	19	58	32.1	15
4BP	TGG	25	78	46	20



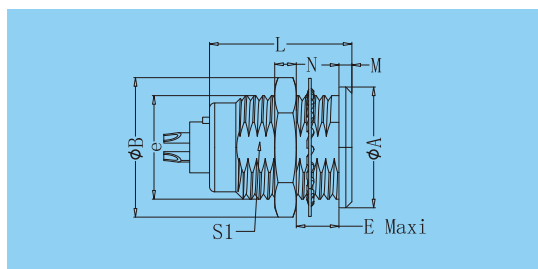
**TGG** Straight plug, key position G\A\B\C, wire clamp type, with sheath tail cap



Item		Size				
Series	Model	A	B	L	M	S1
0BP	TGG	9.5	7	38	20	8
1BP	TGG	12	9.2	46.5	24	9
2BP	TGG	15.5	12	53.7	28	13
3BP	TGG	19	14.5	62	32.1	15
4BP	TGG	25	21	80.7	46	20



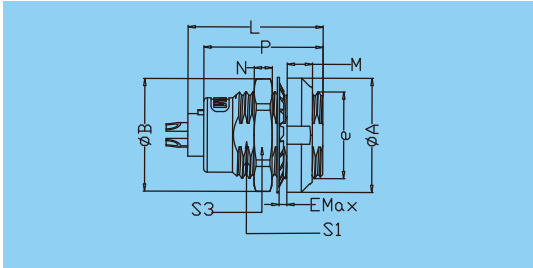
**ZGG** Rear nut fixed socket, key G\A\B\C



Item		Size							
Series	Model	A	B	e	E	L	M	N	S1
0BP	ZGG	11	12.5	M9x0.5	7	14.5	1.5	2	8.2
1BP	ZGG	14	16	M12x1	9	16.5	2	2.5	10.5
2BP	ZGG	18	19.2	M15x1	9	19	2	2.5	13.5
3BP	ZGG	21	25	M18x1	11.5	22.5	2	3	16.5
4BP	ZGG	28	34	M25x1	12	27	3	5	23.5



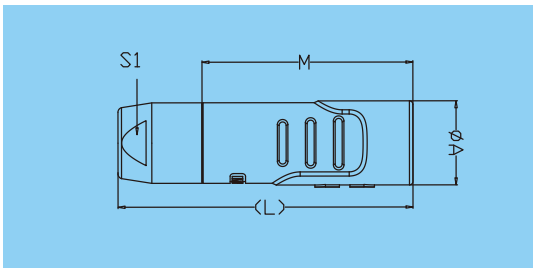
**ZCG** Double nut fixed socket, key G\A\B...



Item		Size									
Series	Model	A	B	P	e	E	L	M	N	S1	S3
0BP	ZCG	11.91	12.5	14.5	M9x0.5	5.5	16.5	2.5	2	8.2	11
1BP	ZCG	16	16	16.5	M12x1	6	18.7	3.5	2.5	10.5	14
2BP	ZCG	20	19.2	19	M15x1	6.5	21	3.5	2.5	13.5	17
3BP	ZCG	24	25	22.5	M18x1	9	25	4.5	3	16.5	22



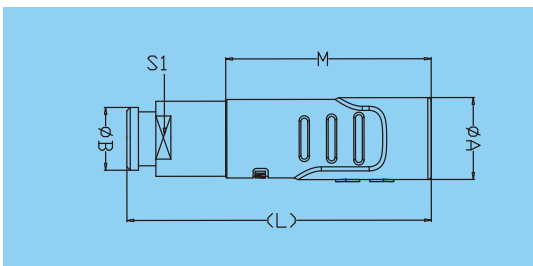
**DHG** Floating socket, key position G\A\B..., wire clamp type, without sheath tail cap



Item		Size			
Series	Model	A	L	M	S1
1BP	DHG	12	42	30.1	9
2BP	DHG	15.5	50	34.5	12
3BP	DHG	19	59	43	15



**DHG** Floating socket, key position G\A\B..., wire clamp type, with sheath tail cap



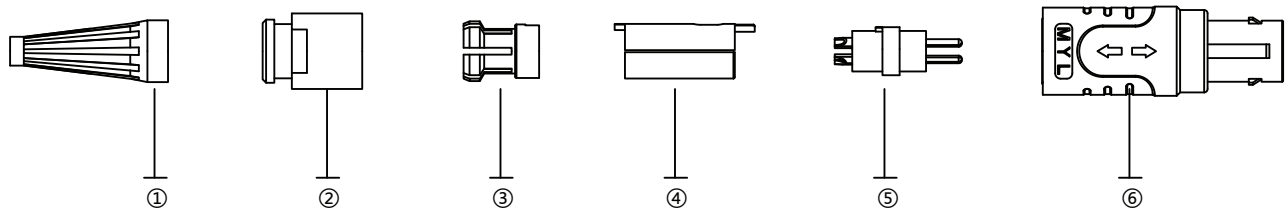
Item		Size				
Series	Model	A	B	L	M	S1
1BP	DHG	12	9.2	44.5	30.1	9
2BP	DHG	15.5	12	51.5	34.5	13
3BP	DHG	19	14.5	62	43	15

## BP Series Cable clamp

Size	Cable clamp diameter ( mm )	Adapter cable outer diameter(mm)	
		min	max
0BP	3.2	2.1	3.0
	3.5	2.4	3.3
	4.2	3.1	4.0
	5.2	4.1	5.0
1BP	3.2	2.1	3.0
	3.5	2.4	3.3
	4.2	3.1	4.0
	5.2	4.1	5.0
	5.8	4.4	5.3
	6.2	5.1	6.0
	7.2	6.1	7.0
2BP	4.2	3.1	4.0
	4.5	3.4	4.3
	5.2	4.1	5.0
	6.2	5.1	6.0
	7.2	6.1	7.0
	8.2	7.1	8.0
	9.2	8.1	9.0
	10.2	9.1	10.0

Size	Cable clamp diameter ( mm )	Adapter cable outer diameter(mm)	
		min	max
3BP	5.2	4.1	5.0
	6.2	5.1	6.0
	7.2	6.1	7.0
	8.2	7.1	8.0
	9.2	8.1	9.0
	10.2	9.1	10.0
	11.2	10.1	11.0
	12.0	10.9	11.8
4BP	6.2	5.1	6.0
	7.2	6.1	7.0
	8.2	7.1	8.0
	9.2	8.1	9.0
	11.2	10.1	11.0
	12.2	11.1	12.0
	13.2	12.1	13.0
	14.2	13.1	14.0
	15.2	14.1	15.0
15.6	14.5	15.4	

## BP Series Connector Plug Assembly Instructions



1. Pass the cable clamp through the sheath ①, tail nut ②, cable clamp ③, and weld them to the insulator assembly ⑤ in order.
2. Install the two-piece insulator clamp ring ④ onto the welded insulator assembly ⑤, and make sure that the notch on the clamp ring ④ corresponds to the protrusion on the insulator assembly ⑤.
3. Install the cable clamp ③ to the appropriate position of the cable, and make sure that the protrusion on the cable clamp ③ corresponds to the groove on the insulator clamp ring ④.
4. Push the insulator assembly ⑤ insulator clamp ring ④ cable clamp ③ into the plug assembly in sequence, and make sure that the protrusion on the insulator clamp ring ④ corresponds to the notch 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.

## KP Series(Plastic wrapped metal) products

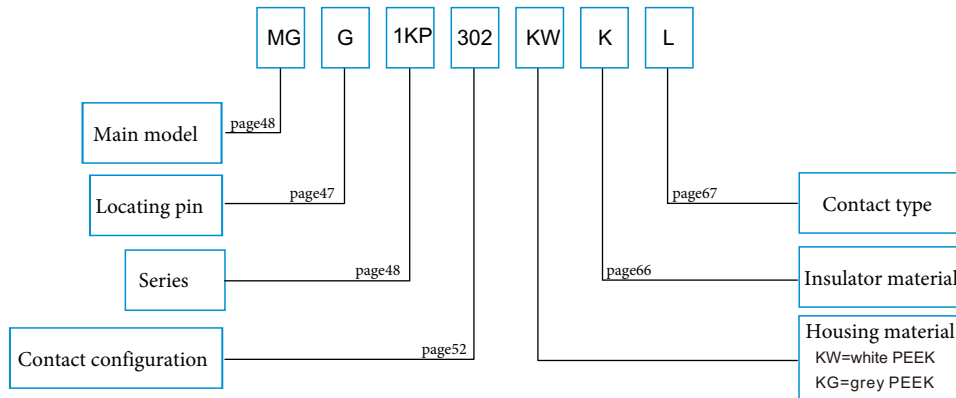
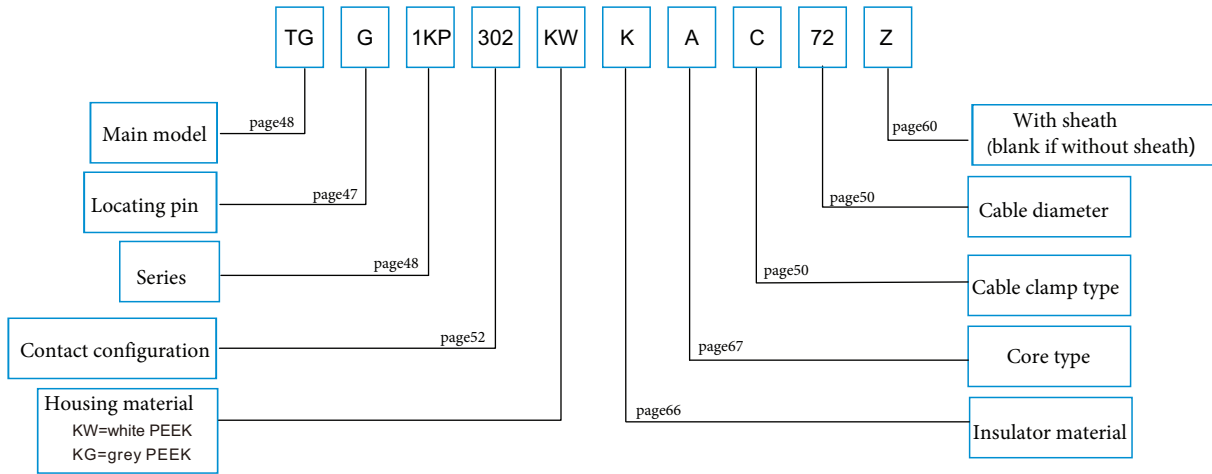
### Performance parameters:

- Working temperature:  $-55^{\circ}\text{C} \sim 150^{\circ}\text{C}$
- Plug and unplug times: 5000+
- Maximum humidity:  $\leq 95\%$  [at  $60^{\circ}\text{C} / 140^{\circ}\text{F}$ ]
- Vibration: 15g [10Hz~2000Hz]
- Salt spray: 96h
- Protection level: IP68

\*All materials comply with RoHS requirements.



Product Number Rules:



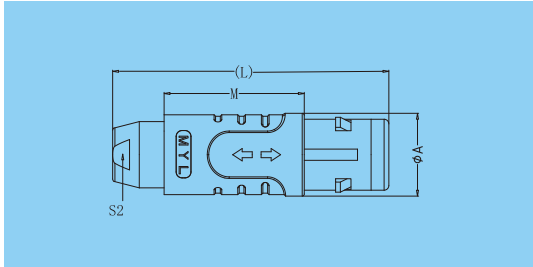
Key Angle

Socket front view diagram showing key positions and angles. The diagram includes labels for key positions (G, A, B, C, D, E, F, L) and angles ( $\alpha$ ,  $\beta$ ,  $\gamma$ ).

Key position	Number of keys	Angle	
G	1	0°	
A	2	$\alpha$	30°
B	2		45°
C	2		60°
D	2	$\gamma$	95°
E	2	$\beta$	120°
F	2		145°
L	2	$\gamma$	75°



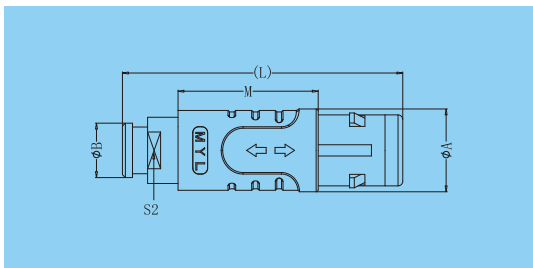
**TGG** Straight plug, key position G\A\B..., wire clamp type, without sheath tail cap



Item		Size			
Series	Model	A	L	M	S2
0KP	TGG	12	39.5	21	8
1KP	TGG	14	44.5	22.5	9
2KP	TGG	17.5	55	28.15	12
3KP	TGG	20.5	61	30.75	15
4KP	TGG	27.5	78	44.5	20



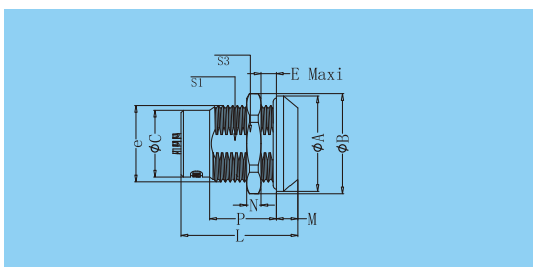
**TGG** Straight plug, key position G\A\B..., wire clamp type, with sheath tail cap



Item		Size				
Series	Model	A	B	L	M	S2
0KP	TGG	12	7	42	21	8
1KP	TGG	14	9.2	47	22.5	9
2KP	TGG	17.5	11.5	57	28.15	13
3KP	TGG	20.5	14.5	63	30.75	15
4KP	TGG	27.5	21	81	44.5	20



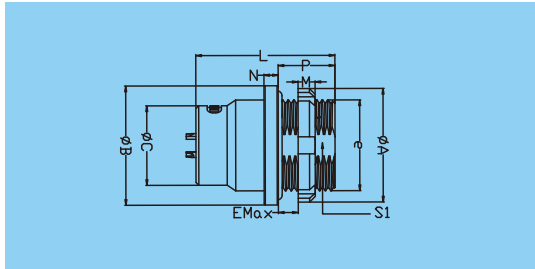
**MGG** Rear nut fixed socket, key position G\A\B...



Item		Size										
Series	Model	A	B	C	P	e	E	L	M	N	S1	S3
0KP	MGG	18	19.2	12	13	M14x1	5.5	18	4	2.5	12.5	17
1KP	MGG	20	21.5	14	14	M16x1	9	24.5	4.5	3	14.5	19
2KP	MGG	25	27	18	14	M20x1	9	25	5	4	18.5	24
3KP	MGG	31	34	22	18.1	M24x1	12	31	6	5	22.5	30
4KP	MGG	37	40	27	19	M30x1	13	34.5	6.5	5.5	28.5	36



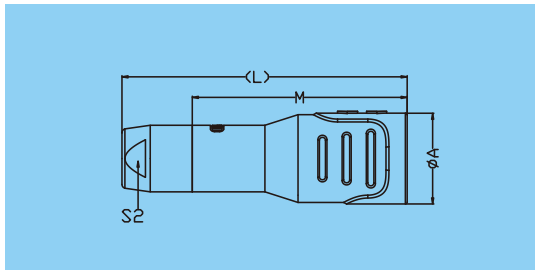
**MEG** Fixed socket, nut fixed (fixed outside the chassis), key position G\A\B...



Item		Size									
Series	Model	A	B	C	P	e	E	L	M	N	S1
1KP	MEG	20	21	14	10	M16x1	7	24.5	3	2.5	14.5
2KP	MEG	25	25	18	10	M20x1	6.5	24.67	3.5	2.5	18.5
3KP	MEG	30	30	22	12	M24x1	7	31	4.5	3	22.5



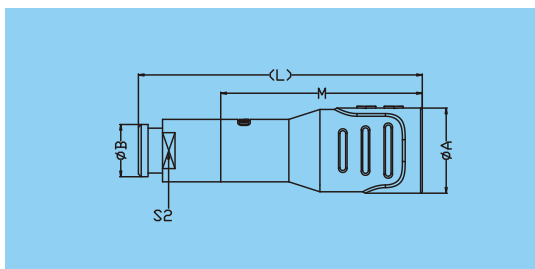
**DHG** Floating socket, key position G\A\B..., wire clamp type, without sheath tail cap



Item		Size			
Series	Model	A	L	M	S2
1KP	DHG	15	47	35.5	9
2KP	DHG	19	57.5	40.5	12
3KP	DHG	22	61	47.6	15



**DHG** Floating socket, key position G\A\B..., wire clamp type, with sheath tail cap



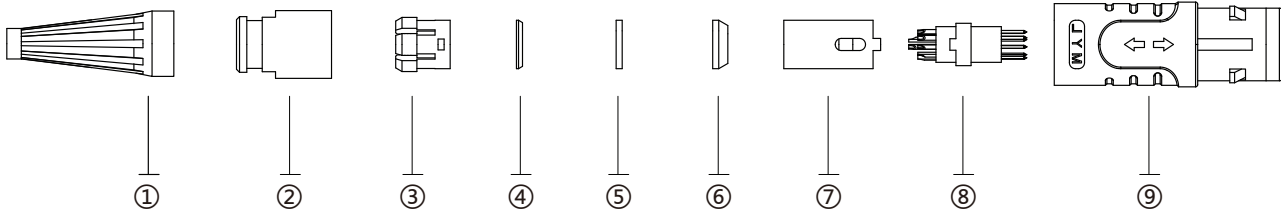
Item		Size				
Series	Model	A	B	L	M	S2
1KP	DHG	15	9.2	50	35.5	9
2KP	DHG	19	11.5	57.5	40.5	13
3KP	DHG	22	14.5	61	47.6	15

KP Series Cable clamp

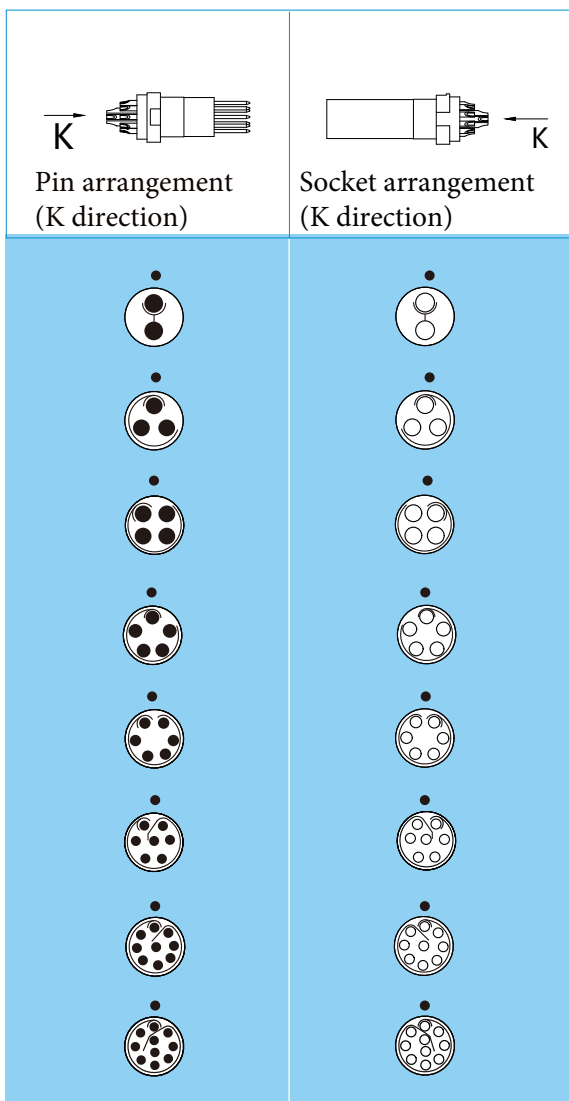
Size	Cable clamp diameter ( mm )	Adapter cable outer diameter(mm)	
		min	max
0KP	3.2	2.1	3.0
	3.5	2.4	3.3
	4.2	3.1	4.0
	5.2	4.1	5.0
1KP	4.2	3.1	4.0
	5.2	4.1	5.0
	6.2	5.1	6.0
	7.2	6.1	7.0
2KP	5.2	4.1	5.0
	6.2	5.1	6.0
	7.2	6.1	7.0
	8.2	7.1	8.0
	9.2	8.1	9.0
	10.2	9.1	10.0

Size	Cable clamp diameter ( mm )	Adapter cable outer diameter(mm)	
		min	max
3KP	5.2	4.1	5.0
	6.2	5.1	6.0
	7.2	6.1	7.0
	8.2	7.1	8.0
	9.2	8.1	9.0
	10.2	9.1	10.0
	11.2	10.1	11.0
	12.0	10.9	11.8
4KP	6.2	5.1	6.0
	7.2	6.1	7.0
	8.2	7.1	8.0
	9.2	8.1	9.0
	11.2	10.1	11.0
	12.2	11.1	12.0
	13.2	12.1	13.0
	14.2	13.1	14.0
	15.2	14.1	15.0
	15.6	14.5	15.4

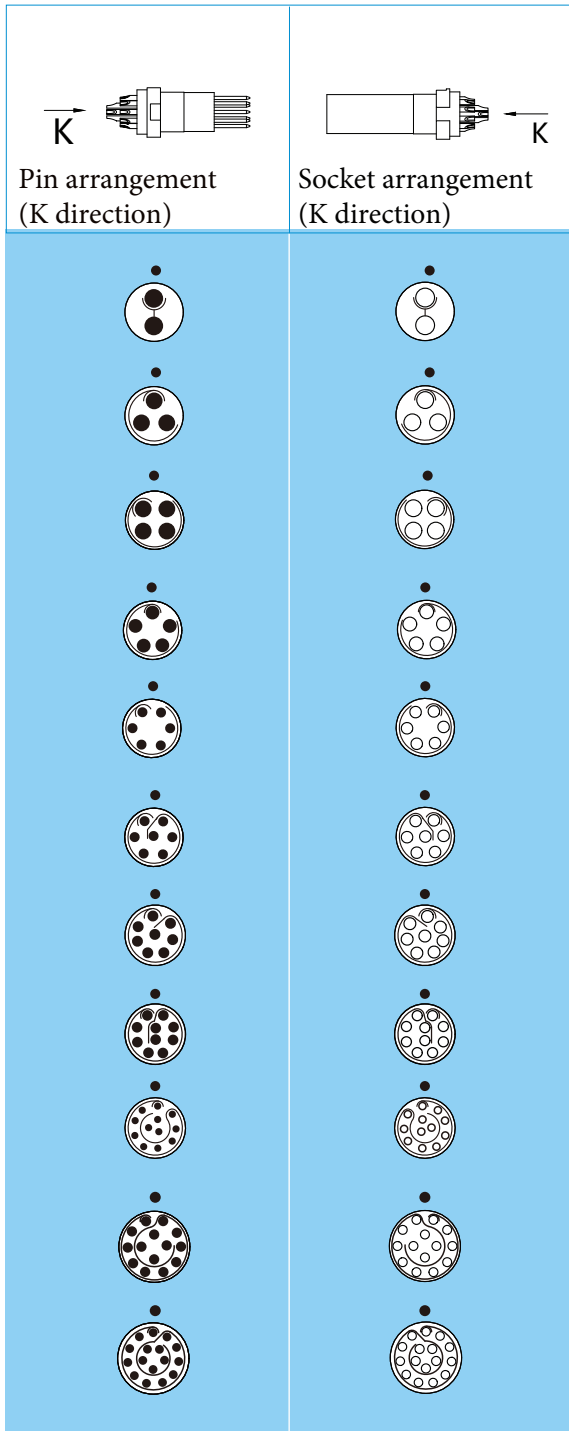
## KP Series Connector Plug Assembly Instructions



1. Pass the cable clamp through the sheath ①, tail nut ②, cable clamp ③, V-shaped pad ④ cable sealing ring ⑤, shielding wire pressure ring ⑥, and weld them to the corresponding pins of the insulator component ⑧ in order.
2. Install the insulator clamp ⑦ on the welded insulator component ⑧, note that the protrusion on the insulator clamp ⑦ corresponds to the notch on the insulator component ⑧, and push the shielding wire pressure ring ⑥ cable sealing ring ⑤, V-shaped pad ④ cable clamp ③ to the appropriate position in turn, ensuring that the complete outer skin of the cable is inserted into the shielding wire pressure ring ⑥.
3. Install the installed insulator component ⑧ into the plug component ⑨. Note that the notch on the insulator clamp ⑦ corresponds to the protrusion in the plug component ⑨.
4. Tighten the tail cap ② onto the plug assembly ⑨.
5. Put the sheath ① onto the tail cap ②.

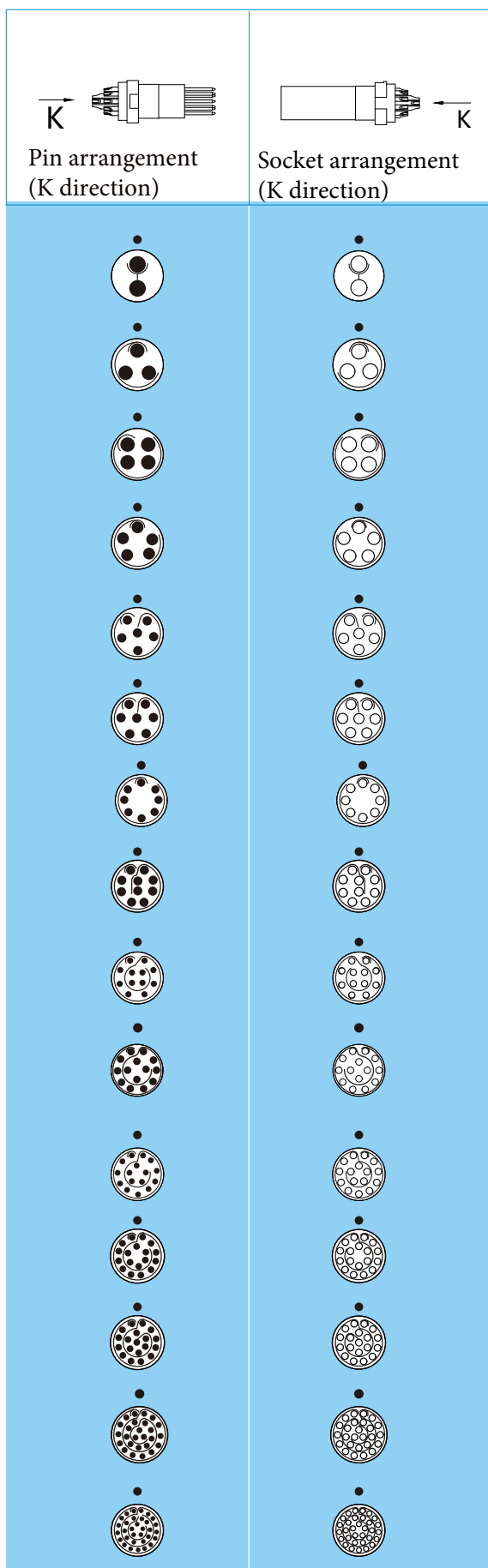


Contact configuration number	Number of cores	Pin core diameter (mm)	Related current (A)	Withstand voltage (V/AC)	Contact resistance (mΩ)
302	2	0.9	10	1300	≤9
303	3	0.9	8	1200	≤9
304	4	0.7	7	850	≤12.5
305	5	0.7	6.5	1000	≤12.5
306	6	0.5	2.5	850	≤15
307	7	0.5	2.5	800	≤15
309	9	0.5	2	600	≤15
310	10	0.5	2	600	≤15



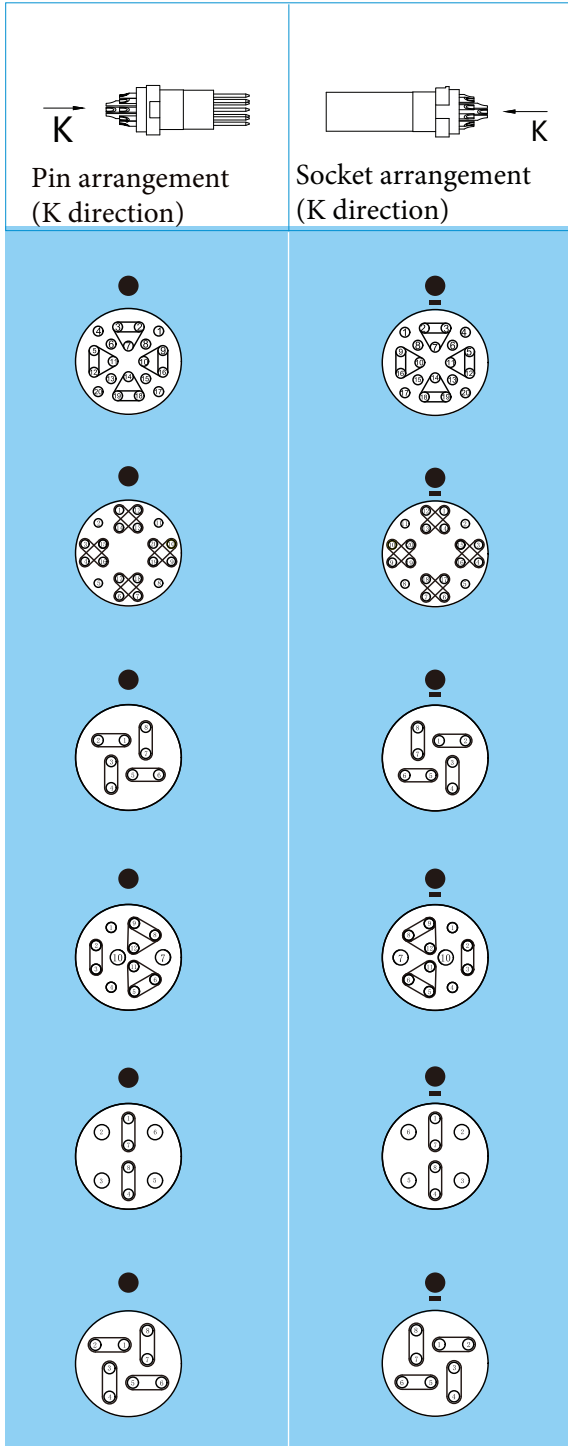
Contact configuration number	Number of cores	Pin core diameter (mm)	Related current (A)	Withstand voltage (V/AC)	Contact resistance (mΩ)
302	2	1.3	15	1500	≤5
303	3	1.3	12	1300	≤5
304	4	0.9	10	1350	≤9
305	5	0.9	9	1250	≤9
306	6	0.7	7	1050	≤12.5
307	7	0.7	7	950	≤12.5
308	8	0.7	5	950	≤12.5
310	10	0.5	2.5	900	≤15
312	12	0.5	2	750	≤15
314	14	0.5	2	750	≤15
316	16	0.5	1.5	750	≤15

2BP、2KP Series  
Contact configuration



Contact configuration number	Number of cores	Pin core diameter (mm)	Related current (A)	Withstand voltage (V/AC)	Contact resistance (mΩ)
302	2	2	30	2100	≤3.5
303	3	1.6	17	2400	≤4
304	4	1.3	15	1850	≤5
305	5	1.3	14	1750	≤5
306	6	1.3	12	1350	≤5
307	7	1.3	11	1750	≤5
308	8	0.9	10	1500	≤9
310	10	0.9	8	1450	≤9
312	12	0.7	7	1250	≤12.5
314	14	0.7	6.5	1150	≤12.5
316	16	0.7	6	950	≤12.5
318	18	0.7	5.5	850	≤12.5
319	19	0.7	5	950	≤12.5
326	26	0.5	2	950	≤15
332	32	0.5	1.5	800	≤15



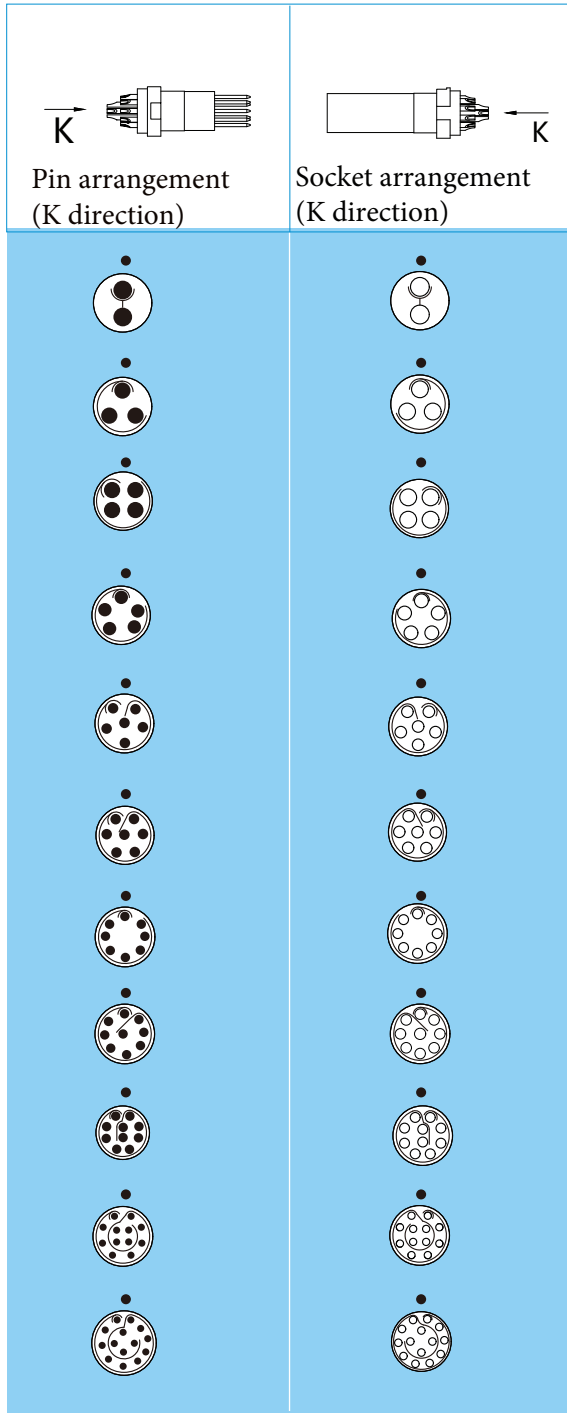


Contact configuration number	Number of cores	Pin core diameter (mm)	Related current (A)	Withstand voltage (V/AC)	Contact resistance (mΩ)	Interface type	Differential transmission rate
038	20	0.5	1.8	750	≤15	HDMI/DP/DVI	3.4Gbps
039	20	0.5	1.8	750	≤15	2-way Gigabit Ethernet	250Mbps
051	8	0.5	1.8	750	≤15	10GbE	2.5Gbps
052	10	0.5	1.8	875	≤15	USB3.0 + power supply	5Gbps
	2	0.7	3.8				
054	4	0.5	1.8	875	≤15	2-way USB2.0	480Mbps
	4	0.7	3.8				
056	8	0.5	1.8	750	≤15	Gigabit Ethernet	250Mbps

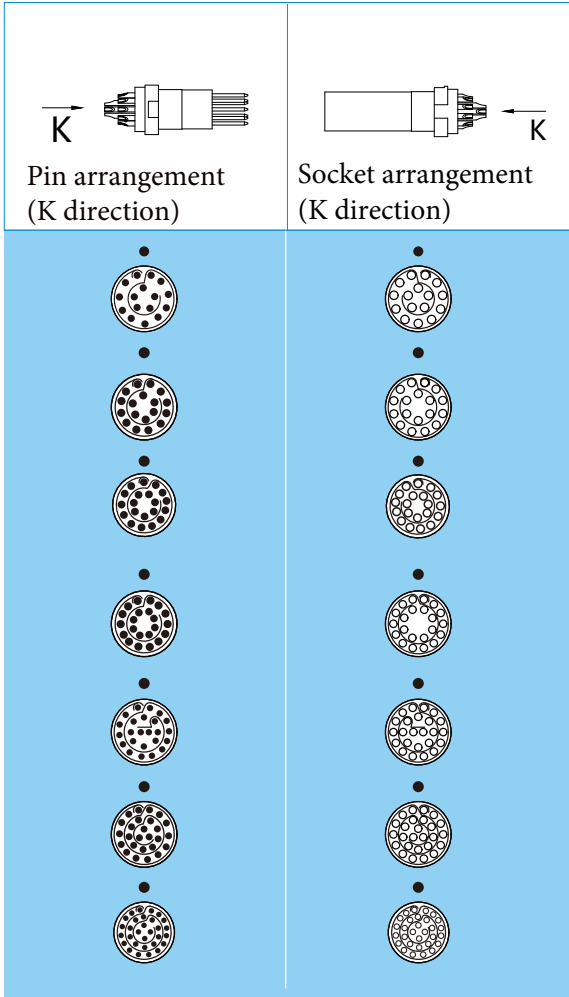
2BP、2KP Series High-speed contact signal definition

038				039			
Hole position	signal definition	Hole position	signal definition	Hole position	signal definition	Hole position	signal definition
2	DATA1+	1	Signal or Powr	1	1-DATA1+	9	2-DATA3+
7	Shield	8	Signal or Powr	13	1-DATA1-	20	2-DATA3-
3	DATA1-	15	Signal or Powr	12	1-DATA2+	10	2-DATA4+
5	DATA2+	17	Signal or Powr	14	1-DATA2-	19	2-DATA4-
11	Shield	13	Signal or Powr	3	1-DATA3+	2	Signal or Powr
12	DATA2-	20	Signal or Powr	16	1-DATA3-	5	Signal or Powr
18	DATA3+	4	Signal or Powr	4	1-DATA4+	8	Signal or Powr
14	Shield	6	Signal or Powr	15	1-DATA4-	11	Signal or Powr
19	DATA3-			6	2-DATA1+		
9	DATA4+			18	2-DATA1-		
10	Shield			7	2-DATA2+		
16	DATA4-			17	2-DATA2-		

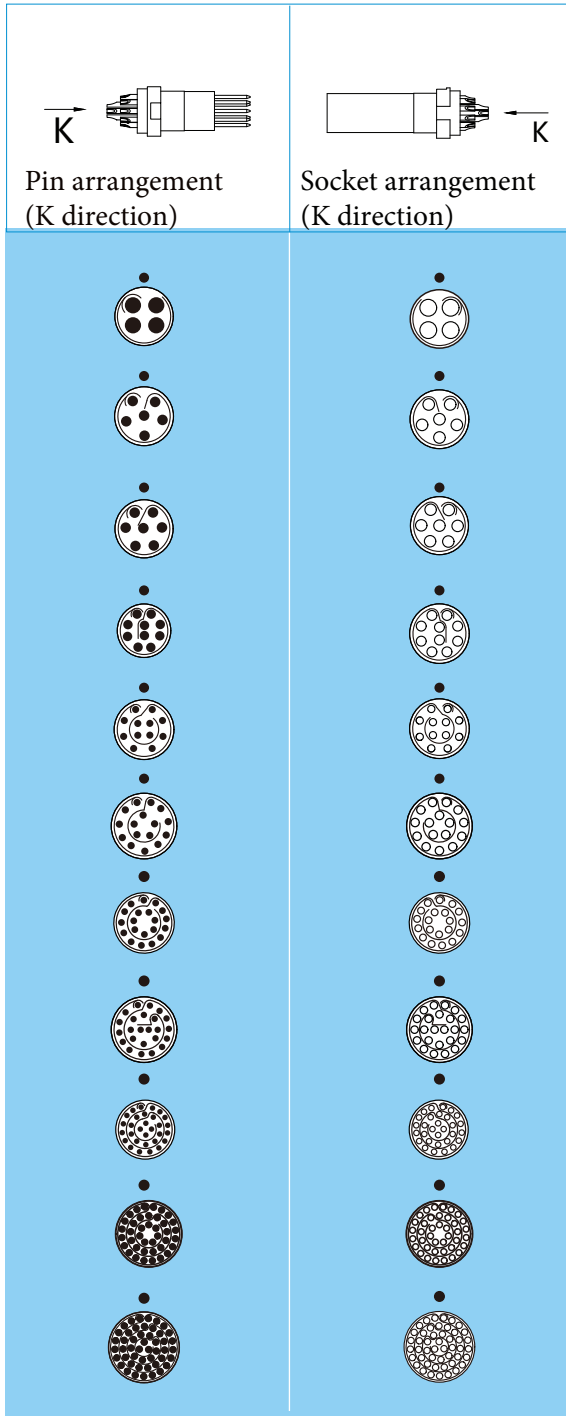
051		052		054		056	
Hole position	signal definition	Hole position	signal definition	Hole position	signal definition	Hole position	signal definition
1	DATA1+	1	VBUS	1	DATA+	1	DATA1+
2	DATA1-	4	GND	7	DATA-	2	DATA1-
3	DATA2+	2	DATA+	2	VCC	3	DATA2+
4	DATA2-	3	DATA-	6	GND	4	DATA2-
5	DATA3+	5	SSTX+	8	DATA+	5	DATA3+
6	DATA3-	11	GND DRAIN	4	DATA-	6	DATA3-
7	DATA4+	6	SSTX-	3	VCC	7	DATA4+
8	DATA4-	8	SSRX+	5	GND	8	DATA4-
		12	GND DRAIN				
		9	SSRX-				
		7	POWR				
		10	GND				



Contact configuration number	Number of cores	Pin core diameter (mm)	Related current (A)	Withstand voltage (V/AC)	Contact resistance (mΩ)
302	2	3	35	2100	≤3
303	3	2	25	1900	≤3.5
304	4	2	19	1450	≤3.5
305	5	1.6	19	1900	≤4
306	6	1.6	17	1600	≤4
307	7	1.6	15	1700	≤4
308	8	1.3	13	1650	≤5
309	9	2.0/1.3	15/6	1350	≤3.5 ≤5
310	10	1.3	12	1250	≤5
312	12	0.9	9	1450	≤6
314	14	0.9	9	1200	≤6



Contact configuration number	Number of cores	Pin core diameter (mm)	Related current (A)	Withstand voltage (V/AC)	Contact resistance (mΩ)
316	16	0.9	8	1200	≤6
318	18	0.9	7	1200	≤6
320	20	0.7	6	1000	≤4.5
322	22	0.7	5.5	1000	≤4.5
324	24	0.7	4	950	≤4.5
326	26	0.7	4	950	≤4.5
330	30	0.7	3.5	800	≤4.5

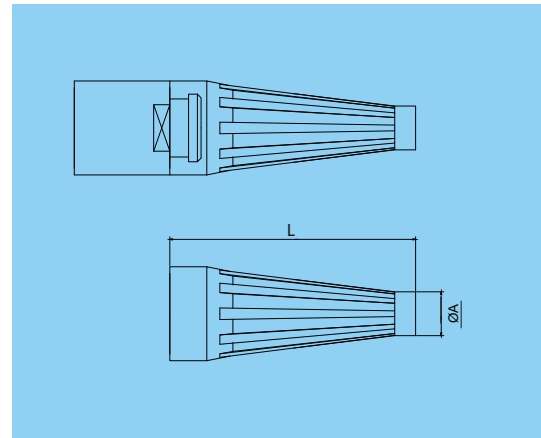


Contact configuration number	Number of cores	Pin core diameter (mm)	Related current (A)	Withstand voltage (V/AC)	Contact resistance (mΩ)
304	4	3.0	30	2100	≤3
306	6	2.0	24	2000	≤3.5
307	7	2.0	20	2000	≤3.5
310	10	1.6	17	1850	≤4
312	12	1.3	12	1450	≤4
316	16	0.9	10	1350	≤4
320	20	0.9	8	1350	≤9
324	24	0.9	7	1200	≤9
330	30	0.9	5	950	≤9
340	40	0.7	2	900	≤12.5
348	48	0.7	1.5	700	≤12.5

### GM Sheath(PU)

The sheath is made of polyurethane material, abbreviated as PU. Since PU contains a very strong urethane group, it is insoluble in non-polar groups and has good oil resistance, toughness, wear resistance, aging resistance and adhesion. It can be installed on the plugs and sockets of our products to protect the cables. The temperature range in dry air environment: -40°C~80°C

1BP、1KP existing silicone sheath can be used together with 1P series silicone sheath.



\*Sheath color: N(black)、A(blue)、G(grey)、J(yellow)、R (red)

Series	Product code	Size ( mm )			
		Sheath		Cable diameter	
		A	L	min	max
0BP 0KP	GMA.0B.032.DG	3.2	24	2.1	3.0
	GMA.0B.042.DG	4.2	24	3.1	4.0
	GMA.0B.052.DG	5.2	24	4.1	5.0
1BP 1KP	GMA.1B.032.DG	3.1	30	2.1	3.0
	GMA.1B.042.DG	4.2	30	3.1	4.0
	GMA.1B.052.DG	5.2	30	4.1	5.0
	GMA.1B.062.DG	6.2	30	5.1	6.0
	GMA.1B.072.DG	7.2	30	6.1	7.0
2BP 2KP	GMA.2B.052.DG	5.2	36	4.2	5.2
	GMA.2B.062.DG	6.2	36	5.2	6.2
	GMA.2B.072.DG	7.2	36	6.2	7.2
	GMA.2B.082.DG	8.2	36	7.2	8.2
	GMA.2B.092.DG	9.2	36	8.2	9.2

Series	Product code	Size ( mm )			
		Sheath		Cable diameter	
		A	L	min	max
3BP 3KP	GMA.3B.062.DG	6.2	42	5.1	6.0
	GMA.3B.072.DG	7.2	42	6.1	7.0
	GMA.3B.082.DG	8.2	42	7.1	8.0
	GMA.3B.092.DG	9.2	42	8.1	9.0
	GMA.3B.102.DG	10.2	42	9.1	10.0
	GMA.3B.112.DG	11.2	42	10.1	11.0
4BP 4KP	GMA.4B.10.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

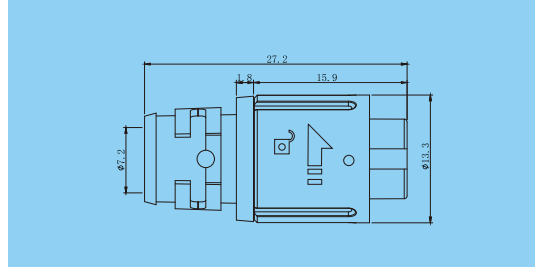
# Locking Connector Series Products

## Performance parameters:

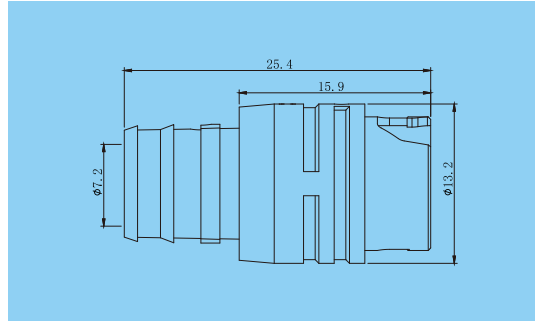
- Working temperature:  $-55^{\circ}\text{C} \sim 150^{\circ}\text{C}$
- Plug and unplug times: 5000+
- Maximum humidity:  $\leq 95\%$  [at  $60^{\circ}\text{C} / 140^{\circ}\text{F}$ ]
- Vibration: 15g [10Hz~2000Hz]
- Salt spray: 96h
- Protection level: IP50/IP67

\*All materials comply with RoHS requirements.

PAA.M11.3\*\*.NNA



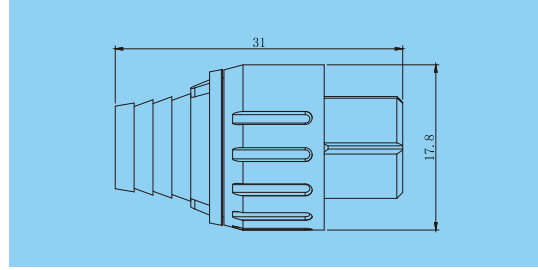
PRA.M11.3\*\*.NNL



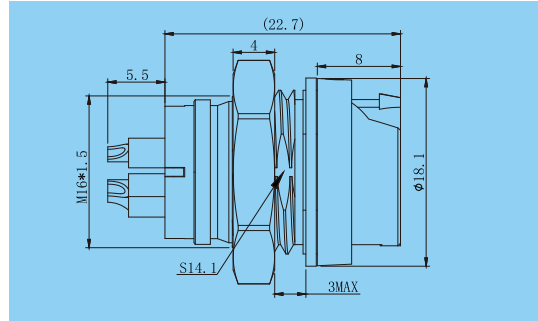
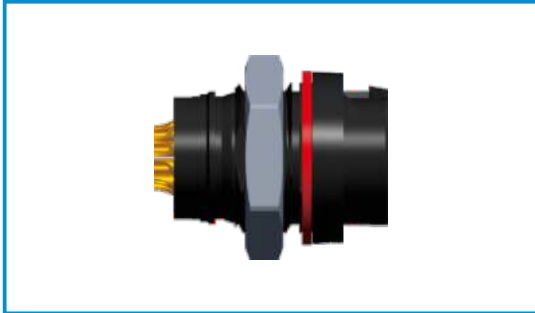
Contact configuration	302	303	304	305	306	307	308	310	314
Socket welding surface									
Contact body diameter(mm)	0.9	0.9	0.7	0.7	0.7	0.7	0.7	0.5	0.5
Withstand voltage(V)(AC)	1050	1050	875	875	875	750	750	750	750
Related current (A)	9.0	9.0	6.0	6.0	6.0	5.0	5.0	2.0	2.0
Insulation resistance(mΩ)	≥5000(mΩ)( test voltage 500V (DC) )								
Contact resistance(mΩ)	≤9	≤9	≤10	≤10	≤10	≤12.5	≤12.5	≤15	≤15



PAB.M16.3\*\*.NNA

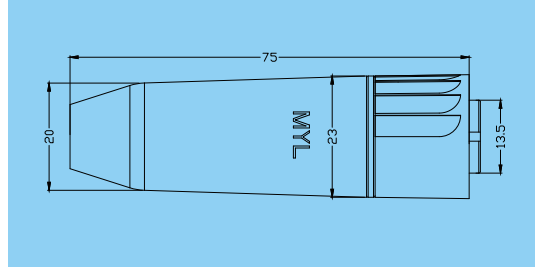


PLB.M16.3\*\*.NNL

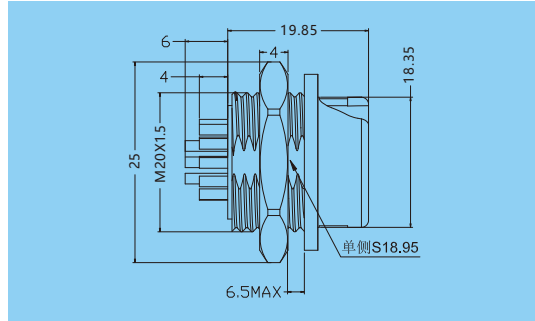


Contact configuration	302	303	304	305	306	307	308	310	312	316	318	324
Socket welding surface												
Contact body diameter(mm)	1.6	1.6	1.3	1.3	1.3	0.7	0.7	0.7	0.7	0.7	0.5	0.5
Withstand voltage(V)(AC)	2100	2100	1750	1750	1750	1450	1450	1450	1250	1250	850	850
Related current (A)	15.0	14.0	12.0	12.0	12.0	7.0	7.0	6.0	6.0	6.0	2.5	2.5
Insulation resistance(mΩ)	≥5000(mΩ) ( test voltage 500V (DC) )											
Contact resistance(mΩ)	≤4	≤4	≤5	≤5	≤5	≤9	≤9	≤9	≤12.5	≤12.5	≤15	≤15

PAG.M20.318.PNL09

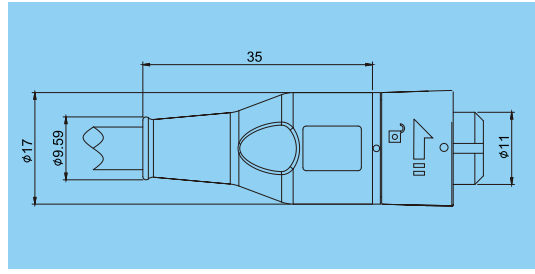
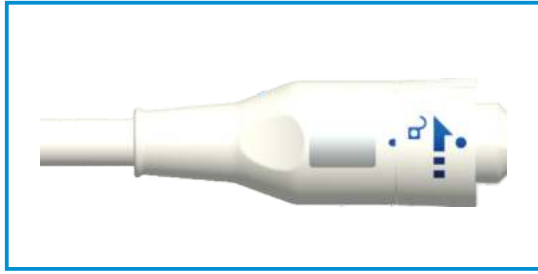


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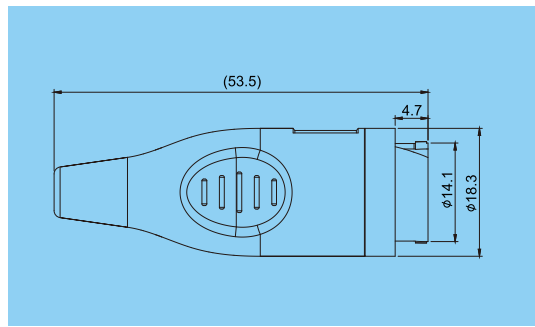


Number of cores	302	304	310	312	314	316	318
Socket welding surface							
Pin diameter	Φ2.0	Φ1.6	Φ1.3	Φ1.3	Φ0.9	Φ0.9	Φ0.9
Related current (A)	30A	22A	14A	12A	8A	7.5A	7A
Withstand voltage(V)(AC)	2100	2400	1850	1750	1200	1200	1200
Contact resistance(mΩ)	≤3.5	≤4	≤5	≤5	≤9	≤9	≤9

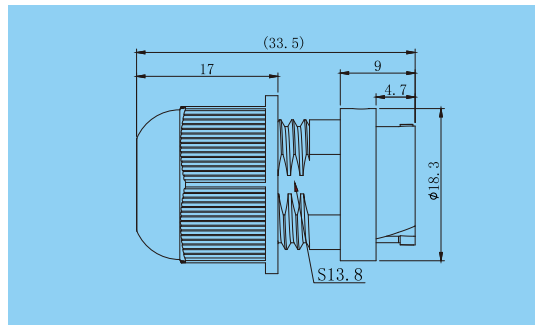
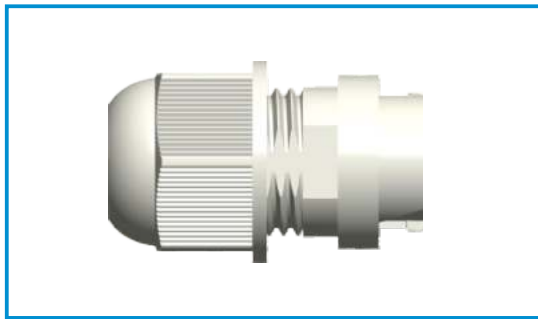
THB.KX.305.PAM




DHB.KX.305.BLZ



ZGB.KX.305.PLZ



Contact configuration	305
Socket welding surface	
Contact body diameter(mm)	0.8
Withstand voltage(V)(AC)	6KV(Secondary insulation treatment)
Related current (A)	7.0
Insulation resistance(mΩ)	≥5000(mΩ) (test voltage 500V (DC) )
Contact resistance(mΩ)	≤9

### Insulator material

Number	L	K	T
Material	PPS	PEEK	Teflon

### Housing color

Color	white	blue	grey	black
Code	B	J	P	N
Material	PSU	PSU	PSU	PSU

### Color ring, nut, end cap and sheath color

Color	blue	grey	yellow	black	red	green	white
Code	A	G	J	N	R	V	W

Technical Parameters

### Definition of Ingress Protection (IP Code)

Classification of the degree of protection provided to electrical equipment against the ingress of foreign objects (such as tools, dust, fingers) and humid gases into its enclosure. The classification is represented by the letters IP (Ingress Protection) followed by two numbers.

#### Protection Level - 1st Number

The first number of the IP Code indicates the degree of protection provided against human contact with moving parts, and against the ingress of solid foreign objects into the enclosure of the equipment.

Code	The meaning of the first number
0	No special protection
1	Protected against penetration by larger body parts (e.g. hands) or solid objects with a diameter greater than 50 mm
2	Protected against objects with a diameter greater than 12 mm and a length not exceeding 80 mm
3	Prevents the entry of objects such as tools and wires with a diameter or thickness greater than 2.5 mm
4	Prevents the ingress of solid objects with a diameter or thickness greater than 1.0 mm
5	Prevent dust accumulation from affecting equipment operation
6	Completely dustproof
7	-
8	-

For example : IP 50 = IP 5 0

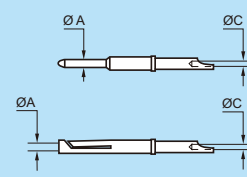
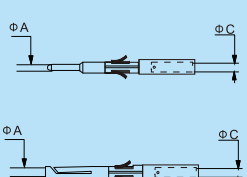
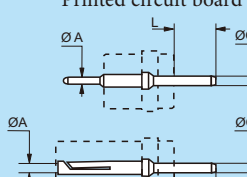
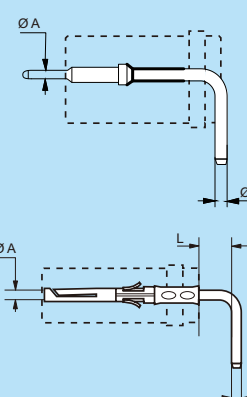
IP Letter Code  
 the first number  
 the second number

#### Protection Level - 2nd Number

The second number indicates the degree of protection of the device casing against water ingress in various forms (such as dripping, spraying, immersion, etc.)

Code	The meaning of the second number
0	No special protection
1	Prevent water from dripping vertically
2	Prevent water from dripping at an angle not exceeding 15°
3	Prevent water from entering
4	Prevent water splashing
5	Protect against jets of water
6	Protect against strong waves or powerful water jets
7	Prevents water ingress during temporary immersion
8	Prevents water ingress during complete, continuous submersion

## Pin-and-socket termination

Contact Type	Number		Pin core			Core wire (inner conductor)					
	Male needle core	Female needle core	ΦA (mm)	ΦC (mm)	Graphics	Solid core wire		Twisted braided wire			
						AWG Max	Cross-sectional area Max (mm <sup>2</sup> )	AWG	Cross-sectional area	Cross-sectional area	
						Min	Max	Min	Max (mm <sup>2</sup> )		
<b>Welding</b> 	A	L	0.3	0.3	-	28	0.08	-	30	-	0.05
			0.35	0.4	-	26	0.12	-	28	-	0.08
			0.5	0.4	-	28	0.09	-	30	-	0.05
			0.7	0.6	-	24	0.25	-	26	-	0.14
			0.9	0.75	-	22	0.34	-	24	-	0.22
			1.3	1.1	-	20	0.5	-	20	-	0.50
			1.6	1.6	-	16	1.00	-	16	-	1.00
			2.0	1.8	-	14	1.5	-	16	-	1.50
			3.0	2.8	-	10	4.00	-	12	-	4.00
<b>Crimping</b> 	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
			1.10	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			
<b>Printed circuit board</b> 	D	N									
<b>Printed circuit board connection (elbow)</b> 	DV	V									

AWG to Metric Conversion

AWG = American Wire Gauge

The American AWG system is based on a rule that the cross-sectional area increases by 26% and the specification number decreases. The larger the cable diameter, the smaller the specification, that is, the larger the cable size, the smaller the specification number. Most cables are multi-strand wire structures. Compared with solid cables, multi-strand wire structures have more durable and stronger connections, better bending performance and vibration resistance. Multi-strand wires are composed of smaller diameter wire cores to form larger (larger specification numbers). Multi-strand wire structures and solid cables of the same size have the same specification number. The cross-sectional area of a multi-strand wire cable is equal to the sum of the cross-sectional areas of the individual wires that make up the cable.

Conversion table: AWG/mm<sup>2</sup>

AWG	Diameter		Cross-sectional area mm <sup>2</sup>	Weight kg/km	Maximum impedance Ω/km
	Inch	mm			
	10 (1)	0.1020			
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





MTC 12-core connector



High and low voltage mixed connector



Optical and electrical hybrid connector



High voltage connector



Fluid Mixing Connectors



Coaxial Mixed Connectors

Customized  
Connector  
Display





Optical fiber insertion loss and return loss tester



Horizontal fully automatic plug-in test machine



High Voltage Tester



Wire swing test machine



Air tightness tester



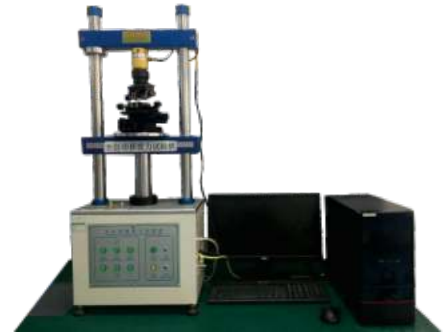
Network Analyzer



Image measuring instrument



Salt spray test machine



Fully automatic plug-in force tester



Injection molding machine



Constant temperature and humidity chamber



Milling machine

Testing and production equipment



Machine shop



Injection workshop



Quality department



laboratory



Connector production line



Harness production line

Production  
and  
R&D  
Base

## Solutions and R&D capabilities

### Customization of connectors



**Fast responsive design**



**Excellent product quality**



**Rich production experience**



**Complete after-sales service**

Quanma connectors meet diverse design requirements and provide customized connector and wiring harness interconnection solutions.

From design to delivery, Quanma Connectors always works with customers to design customized connectors and cable solutions to meet specific application requirements.

In addition to consistent reliable quality, we deliver excellent service and fast response speed to our customers.

We are willing to help customers solve various complex interconnection challenges.



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