

# PRECISION PUSH-PULL SELF-LATCHING CONNECTOR

Push-Pull self-latching system



## Connect to put the new realm of technique

WEIPU was established in 1996, specialize in R&D and manufacturing the industrial connectors , we are the member of “ National Electrical Appliances Standardization Technical Committees ” and one of the members to draft the national standard for industrial connectors GB/T11918.



Factory premises

Workshop building



**ISO 9001**

**ISO/TS 22163**

**IATF16949**

# W Series Connector

## Screw coupling watertightness connectors

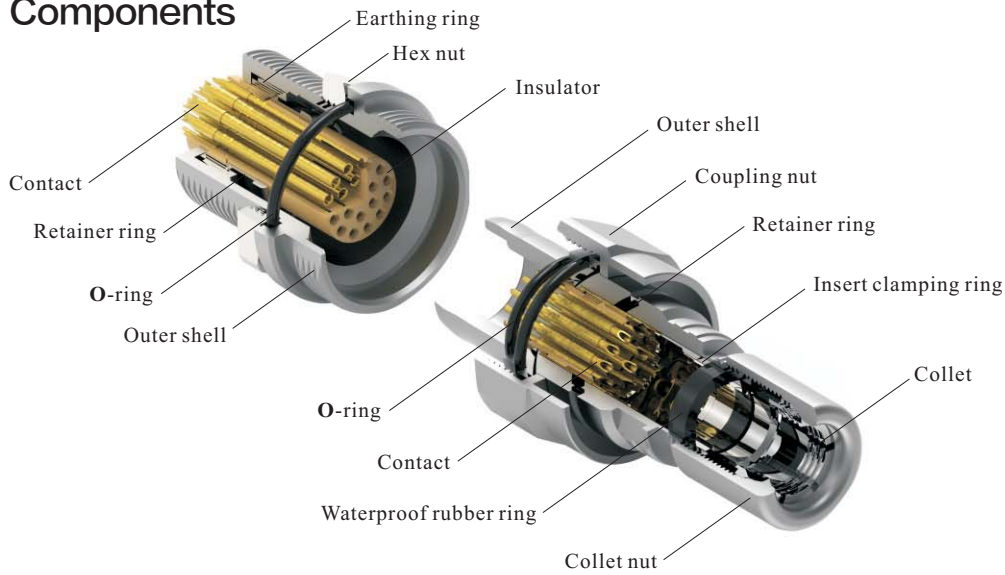
Alignment key, working pressure that can exceed 30 bars in mated conditions

### Technical Parameter:

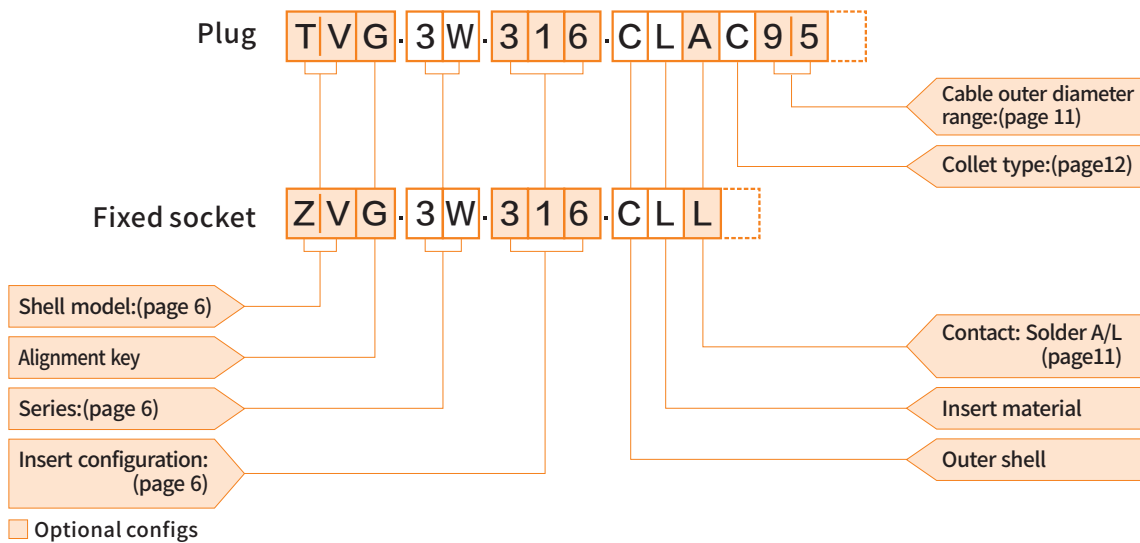
Temperature range: -20°C~+200°C  
 Mating cycle: >1000  
 Insert material: PEEK  
 Insulator: Brass with gold plating  
 Shell material: outer shell in chrome-plated brass  
 Insulation resistance: ≥100MΩ  
 IP rating: IP68  
 Shielding efficiency: at 10MHz >95dB/at 1GHz >80dB  
 Salt spray test: 144hrs  
 Resistance to hydrostatic pressure (mated): ~30bars



### Part Section Showing Internal Components



### Part Numbering System



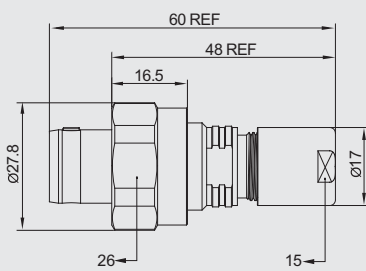
**TVG.3W.316.CLAD95** = straight plug with key (G) and cable collet, 3W series, multipole type with 16 contacts, outer shell in chrome-plated brass, PEEK insulator, male solder contacts, C type collet for 9.1mm-9.5mm diameter cable.

**ZVG.3W.316.CLA** = fixed socket, nut fixing, with key (G), 3W series, multipole type with 16 contacts, outer shell in chrome-plated brass, PEEK extended insulator, female crimp contacts.

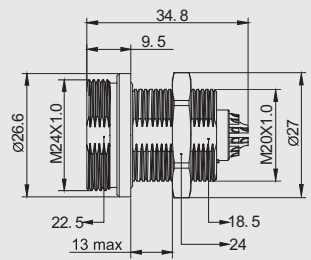


# 3W Series Insert configuration

Male solder contacts		Female solder contacts		Insert configuration		Reference	Contact		Contact type			Test voltage (kVrms)				Rated current (A)
Male crimp contacts		Female crimp contacts		Plug	Fixed socket		Number of contact	Cable mm	Solder	Crimp	PCB	Solder		Crimp		
												Contact ↑	Contact ↓	Contact ↑	Contact ↓	
												Contact Housing	Contact Housing	Contact Housing	Contact Housing	
						302	2	3.0	●	●	●	2.10	1.55	2.30	1.80	35.0
						303	3	2.0	●	●	●	1.90	1.50	3.20	2.65	25.0
						304	4	2.0	●	●	●	1.45	1.25	2.50	2.20	19.0
						305	5	1.6	●	●	●	1.90	1.25	2.40	1.75	19.0
						306	6	1.6	●	●	●	1.60	1.15	1.90	1.80	17.0
						307	7	1.6	●	●	●	1.70	1.25	2.00	2.05	15.0
						308	8	1.3	●	●	●	1.65	1.15	1.85	1.75	13.0
						309	8	1.3	●	●	●	1.35	1.05	1.10	1.05	6.0
						310	10	1.3	●	●	●	1.35	1.05	1.10	1.05	15.0
						312	12	0.9	●	●	●	1.25	0.90	1.50	1.80	12.0
						314	12	0.9	●	●	●	1.45	1.00	1.65	1.85	9.0
						314	14	0.9	●	●	●	1.20	1.20	1.80	1.65	9.0
						316	16	0.9	●	●	●	1.20	0.85	1.80	1.50	8.0
						316	16	0.9	●	●	●	1.20	0.85	1.80	1.50	8.0
						318	18	0.9	●	●	●	1.20	1.05	1.85	1.60	7.0
						318	18	0.9	●	●	●	1.20	1.05	1.85	1.60	7.0
						320	20	0.7	●	●	●	1.00	0.90	1.35	1.55	6.0
						320	20	0.7	●	●	●	1.00	0.90	1.35	1.55	6.0
						322	22	0.7	●	●	●	1.00	0.90	1.70	1.45	5.5
						322	22	0.7	●	●	●	1.00	0.90	1.70	1.45	5.5
						324	24	0.7	●	●	●	0.95	0.80	1.35	1.35	4.0
						324	24	0.7	●	●	●	0.95	0.80	1.35	1.35	4.0
						326	26	0.7	●	●	●	0.95	0.70	1.50	1.30	4.0
						326	26	0.7	●	●	●	0.95	0.70	1.50	1.30	4.0
						330	30	0.7	●	●	●	0.80	0.70	1.35	1.20	3.5
						330	30	0.7	●	●	●	0.80	0.70	1.35	1.20	3.5



**TVG**  
Straight plug, key(G), cable collet



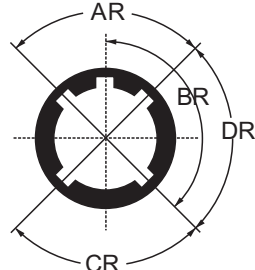
**ZVG**  
Fixed socket, nut fixing, key(G)

**Note:** Panel cut-out, nut fixing torque, (page 13)

- First choice alternative
- In development

# Alignment key (B Series)

**1 B**     **C L**



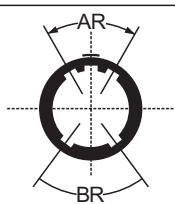
Front view of a socket

Ref.	Nb of keys	Series			Contact type		Note		
		Angles	1B	Angles	2B	3B		Plug	Socket
G	1	-	0°	-	0°	0°	male	female	●
A	2	AR	30°	AR	30°	30°	male	female	●
B	2		60°		45°	45°	male	female	●
C	2		90°		60°	60°	male	female	●
D	2	BR	135°	CR	95°	95°	male	female	○
E	2		145°	BR	120°	120°	male	female	○
F	2		155°		145°	145°	male	female	○
J	2	CR	45°	AR	37.5°	37.5°	female	male	●
K	2		70°		52.5°	52.5°	female	male	○
L	2		80°	CR	70°	70°	female	male	○
M	2	DR	-	-	-	-	female	male	○
Y	3	-	-	BR	112.5°	126°	male	female	●
		-	-	CR	100°	102°			

- First choice alternative
- Special order alternative

# Alignment key (W Series)

**3 W**     **G L**



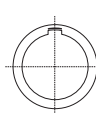



Front view of a socket



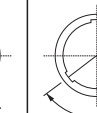
Ref.	Nb of keys	Angles	Series	Contact type		Note
			3W	Plug	Socket	
G	1	-	0°	male	female	●
A	2	AR	30°	male	female	●
B	2		45°	male	female	●
L	2	BR	75°	female	male	○

- First choice alternative
- Special order alternative

# Alignment key (P Series)

**1 P**     **G L**

Ref.(1P)	G	A	B	C
Front view of a socket				
Nb of keys	1	2	2	2

Ref.(2P)	B	C	D
Front view of a socket			
Nb of keys	3	3	3

- First choice alternative
- In development

## Contacts reference for B&W series plugs, free or fixed sockets



Contact type	Reference		Contact			Conductor				F <sub>r</sub> (N)		
	Male	Female	ØA (mm)	ØC (mm)	Form per fig.	Solid		Stranded				
						AWG max.	Section max. (mm <sup>2</sup> )	AWG min. max.	Secrion(mm <sup>2</sup> ) min. max.			
	A	L	0.5	0.40	-	28	0.09	-	30	-	0.05	-
			0.5	0.45	-	28	0.09	-	28	-	0.05	-
			0.7	0.80	-	22	0.34	-	22 <sup>1)</sup>	-	0.34	-
			0.9	0.80	-	22	0.50	-	22 <sup>1)</sup>	-	0.50	-
			1.3	1.00	-	20	0.50	-	20 <sup>1)</sup>	-	0.50	-
			1.6	1.40	-	16	1.00	-	18	-	1.00	-
			2.0	1.80	-	14	1.50	-	16	-	1.50	-

**Note:** 1) for a given AWG, the diameter of some stranded conductor designs is larger than the solder cup diameter. Make sure that the maximum conductor diameter is smaller than ØC.

## Contacts reference for 1P series plugs, free or fixed sockets



Contact type	Reference		Contact			Conductor				F <sub>r</sub> (N)		
	Male	Female	ØA (mm)	ØC (mm)	Form per fig.	Solid		Stranded				
						AWG max.	Section max. (mm <sup>2</sup> )	AWG min. max.	Secrion(mm <sup>2</sup> ) min. max.			
	A	L	0.5	0.45	-	28	0.09	-	28	-	0.09	-
			0.7	0.85	-	22	0.34	-	22 <sup>1)</sup>	-	0.34	-
			0.9	0.85	-	22	0.34	-	22 <sup>1)</sup>	-	0.34	-
			1.3	1.4	-	20	0.50	-	20 <sup>1)</sup>	-	0.50	-

## Contacts reference for 2P series plugs, free or fixed sockets



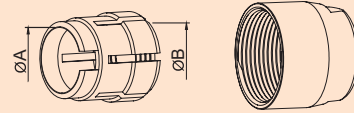
Contact type	Reference		Contact			Conductor				F <sub>r</sub> (N)		
	Male	Female	ØA (mm)	ØC (mm)	Form per fig.	Solid		Stranded				
						AWG max.	Section max. (mm <sup>2</sup> )	AWG min. max.	Secrion(mm <sup>2</sup> ) min. max.			
	A	L	0.5	0.45	-	28	0.09	-	28	-	0.09	-
			0.7	0.85	-	22	0.34	-	22 <sup>1)</sup>	-	0.34	-
			0.9	0.85	-	22	0.34	-	22 <sup>1)</sup>	-	0.34	-
			1.3	1.4	-	20	0.50	-	20 <sup>1)</sup>	-	0.50	-
			2.0	1.80	-	14	1.50	-	16	-	1.50	-

**Note:** 1) for a given AWG, the diameter of some stranded conductor designs is larger than the solder cup diameter. Make sure that the maximum conductor diameter is smaller than ØC.

# Collets (B series)



## D type collets for B series



	Reference		Collet $\Phi$		Cable $\Phi$		Notes
	Type	Code	$\Phi A$	$\Phi B$	max.	min.	
<b>1B</b>	D	42	4.2	—	4.2	3.1	
	D	52	5.2	—	5.2	> 4.2	
	D	62	6.2	—	6.2	> 5.2	
	D	72	7.2	6.2	7.2	> 6.2	
	D	76	7.6	6.9	7.6	> 7.2	1)
<b>2B</b>	D	42	4.2	—	4.2	> 3.2	
	D	52	5.2	—	5.2	> 4.2	
	D	62	6.2	—	6.2	> 5.2	
	D	72	7.2	—	7.2	> 6.2	
	D	82	8.2	—	8.2	> 7.2	
	D	92	9.2	8.6	9.2	> 8.2	
	D	99	9.9	8.6	9.9	> 9.2	1)
<b>3B</b>	D	62	6.2	—	6.2	4.9	
	D	72	7.2	—	5.7	> 6.2	
	D	92	9.2	—	9.2	> 7.7	
	D	10	10.2	—	10.0	> 9.2	
	D	11	11.0	—	11.0	> 10.1	
	D	12	12.0	10.2	11.9	10.8	1)

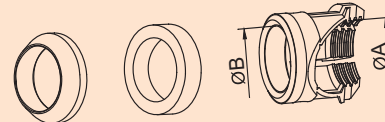
Note: all dimensions are in millimetres.

1) these collets cannot be used for connector models with nut for fitting a bend relief.  
No bend relief available for this cable size.

# Collets (W series)

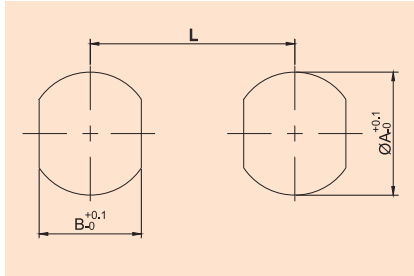


## C type collets for W series



	Reference		Collet $\Phi$		Cable $\Phi$		Notes
	Type	Code	$\Phi A$	$\Phi B$	max.	min.	
<b>3W</b>	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	
	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	10.6	10.6	10.5	10.1	

# Panel cut-outs



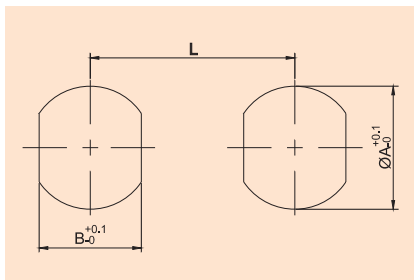
## B series

Series	$\varnothing A$	B	L
1B	12.1	10.6	18.5
2B	15.1	13.6	22.5
3B	18.2	16.6	27.0

## Mounting nut torque

Series	Torque (Nm)	
	Metal shell	Plastic shell
1B	4.5	0.7
2B	6.0	0.8
3B	9.0	1.0

1N=0.102kg



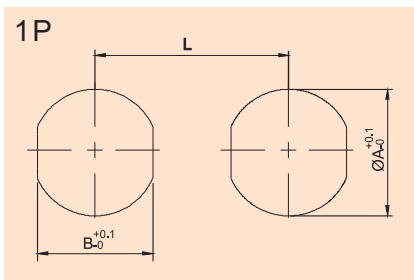
## W series

Series	$\varnothing A$	B	L
3W	20.2	18.6	30.0

## Mounting nut torque

Series	Torque (Nm)
3W	12

1N=0.102kg



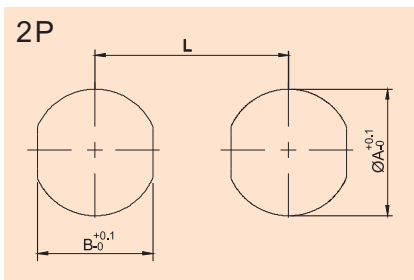
## P series

Series	$\varnothing A$	B	L
1P	14	12.6	23.5
2P	17.1	15.6	26

## Mounting nut torque

Series	Torque (Nm)
1P	1.5
2P	0.8

1N=0.102kg





Beijing Olympic Stadium(Bird's Nest) project and Beijing Olympic Opening Ceremony  
China Import and Export Fair Complex  
Guangzhou Baiyun International Convention Center  
Lingao, Yangjiang and Taishan Nuclear Power Station  
Guangdong Huangpu Power Plant  
China Mobile, China Telecom  
Nanning international Convention and Exhibition Center  
Sinopec Maoming ethylene project  
The Three Gorges river closure project  
Zhongshan ABB transformer distribution box  
Guiyang Grand Theater Project  
Shanghai Oriental Art Center project  
Beijing/Shanghai/Guangzhu Metro Network Project  
Workshop reconstruction project of Changchun No.1 Automobile Factory  
Daqing Oilfield project  
Lighting system of Tiananmen Square for the 60th anniversary of National Day  
Shanghai World Expo project and Lighting system for opening ceremony  
Qingdao Grand Theatre  
Shanghai GM powertrain workshop  
Zhejiang Yourworld International Conference Center  
Shanghai Hongqiao Airport Terminal 2  
The TMRT 65-m radio telescopes of Shanghai Astronomical Observatory (Tianma Radio Telescope)

## **MAIN PROJECTS**