

YF Series Circular Electrical Connectors

Brief introduction

- Compliant with TB/T2761-1996
- Quick bayonet coupling system with blind mating function
- Contact crimped with wires for easy extraction
- High reliable hyperboloid wire spring socket
- Plug and receptacle loaded with pins or sockets
- Standard: 21E0.204.024JT

Main technical characteristics

[Mechanical characteristics]

—shell: high strength aluminum alloy
anodized
black paint, bright nickel plating
—insulator: thermosetting plastic
—contact: copper alloy with gold or silver
plating
—vibration: 10~2000Hz, acceleration
196m/s²
—shock: acceleration 980m/s²
—endurance: 1000 cycles

[Environmental characteristics]

—Operation temperature: -55~+125°C
—RH: 95%, at 40°C
—Protection performances: moisture proof,
salt spray proof, rainproof, fungus proof,
dust proof.

[Electrical characteristics]

—contact resistance and rated current:

Contact dia.	Rated current (A)	Contact resistance (Ω)	Contact dia.	Rated current (A)	Contact resistance (Ω)
Φ1.0	5	≤0.005	Φ2.5	25	≤0.001
Φ1.5	10	≤0.0025	Φ3.0	40	≤0.00075
Φ2.0	20	≤0.00125			

—rated voltage, withstanding voltage and Insulation resistance

Operation environment	rated voltage (V)	withstanding voltage (V) (50HzAC RMS)	Insulation resistance
Normal	500	2500	≥1000MΩ
Heat damp	500	1250	≥20 MΩ

—Releasable crimp contact applicable wire sizes range

Contact size	Wire section (mm ²)	Max OD with insulator (mm)	Crimp strength (N)	Crimp tool	Extraction tool	Installation tool
Φ2C	1.0	Φ4	180	XCXY-02	QX-01A	TYZ
Φ2B	1.5	Φ4.5	260			
Φ2	2.5	Φ5.25	400			
Φ1.5-1	1.0	Φ4	180	XCXY-02	QX-01B	

Φ1.5-2	1.5		260			
Φ1.5-3	3.0		500			

Note: indicate contact diameter or wire section when ordering plug or receptacle.

Designation

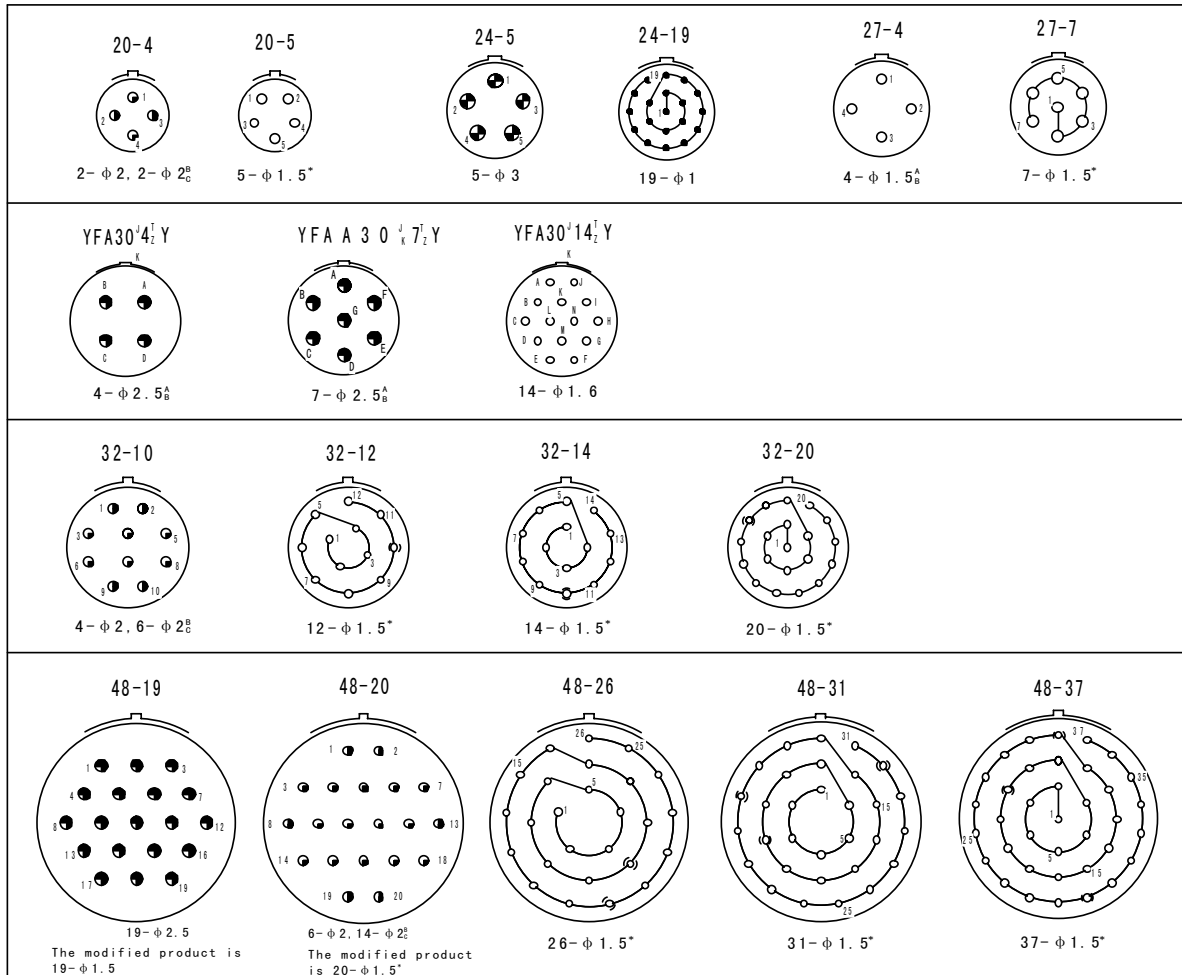
Series	YF	32	J	14	Z	Y	...	-01
VA —railway circular connectors with hyperboloid sockets								
VAA—railway circular connectors with hyperboloid sockets (bayonet coupling)								
Shell size	20, 27, 30 (only for TYA) 32, 48							
Contact type	J pin K socket							
Number of contacts	4~37							
Connector type	Z—receptacle T—plug							
Wire termination type	Y-crimp H-soldering							
Polarization	N, W, X, Y							
Modification code	-01, -02							

Part number cross references

Classification	Shell size	Electrical connector	Number of contacts	Contact diameter	Contact plating
I	YF20	YF20 _K 4 ^T _Z Y	4	φ2	Silver
		YF20 _K 5 ^T _Z Y	5	φ1.5	Gold
	YF27	YF27 _K 4 ^T _Z Y	4	φ1.5	Gold
	YF32	YF32 _K 10 ^T _Z Y	10	φ2	Silver
		YF32 _K 12 ^T _Z Y-02	12	φ1.5	Gold
		YF32 _K 14 ^T _Z Y-02	14	φ1.5	Gold
		YF32 _K 20 ^T _Z Y-02	20	φ1.5	Gold
	YF48	YF48 _K 20 ^T _Z Y	20	φ2	Silver
		YF48 _K 20 ^T _Z Y-02	20	φ1.5	Gold
		YF48 _K 26 ^T _Z Y-02	26	φ1.5	Gold
YF48 _K 31 ^T _Z Y-02		31	φ1.5	Gold	
YF48 _K 37 ^T _Z Y-02		37	φ1.5	Gold	
II	YF27	YF27 _K 7 ^T _Z Y ^N _W	7	φ1.5	Gold
	YF32	YF32 _K 12 ^T _Z Y	12	φ1.5	Gold
		YF32 _K 14 ^T _Z Y	14	φ1.5	Gold
		YF32 _K 20 ^T _Z Y	20	φ1.5	Gold
	YF48	YF48 _K 20 ^T _Z Y-01	20	φ1.5	Gold
		YF48 _K 26 ^T _Z Y	26	φ1.5	Gold
		YF48 _K 31 ^T _Z Y	31	φ1.5	Gold
YF48 _K 37 ^T _Z Y		37	φ1.5	Gold	

III	YF24	YF24 _K 5 _Z ^T Y _{XY} ^{NW}	5	φ3	Gold
		YF24 _K 19 _Z ^T Y _{XY} ^{NW}	19	φ1	Gold
	YF48	YF48 _K 19 _Z ^T Y _{XY} ^{NW}	19	φ2.5	Gold
		YF48 _K 19 _Z ^T Y _{XY} ^{NW} -01	19	φ1.5	Gold

Insert arrangement (Mating interface view of pin insulator)

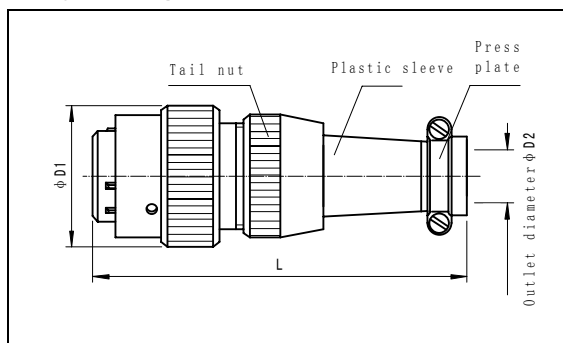


* φ1.5 There are three types of contacts, please specify when ordering.

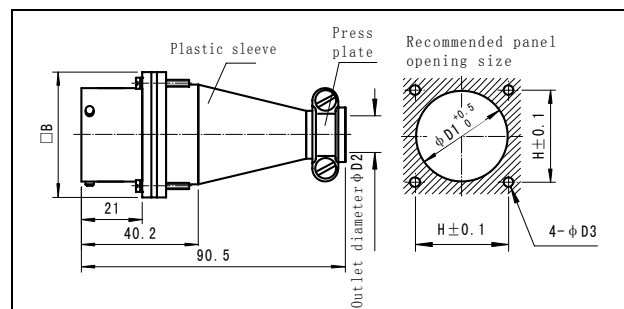
● φ1.0 ○ φ1.5 ● φ2 ● φ2.0 ● φ2.5 ● φ3.0

Outline dimensions

[I type plug]



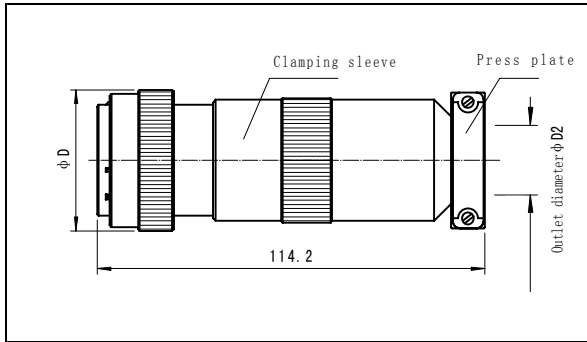
[I type receptacle]



Shell size	D1	D2	L
20	32	15	105.2
27	37	10	86.5
32	42	19	105.2
48	58	27	115.2

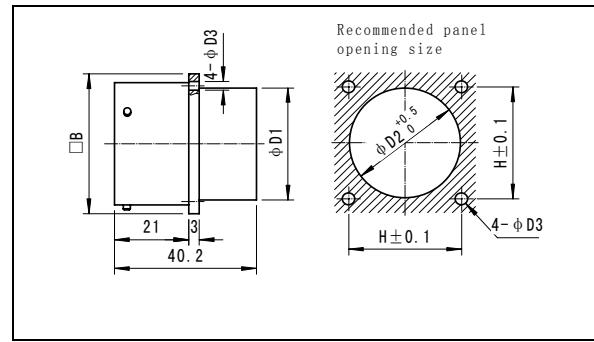
Shell size	D1	D2	D3	B	H
20	20.3	15	3.2	30	22
27	27.3	7	3.2	34.5	28
32	32.5	19	3.2	40	32
48	48.5	27	4.5	58	48

[II type plug]



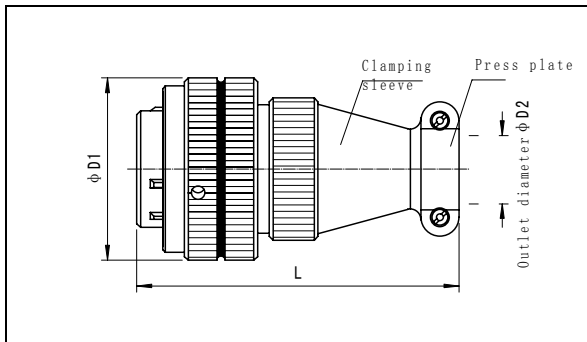
Shell size	D1	D2 min	D2 max
27	37	21.2	17.2
32	42	27	23
48	58	43	39

[II type receptacle]



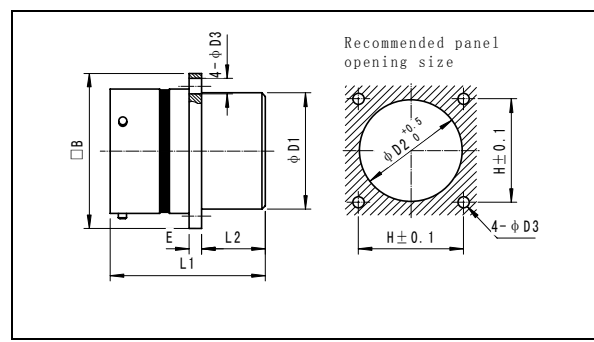
Shell size	D1	D2	D3	B	H
27	27	27.3	3.2	37	28
32	32	32.3	3.2	42	32
48	48	48.3	4.5	58	48

[III type plug]



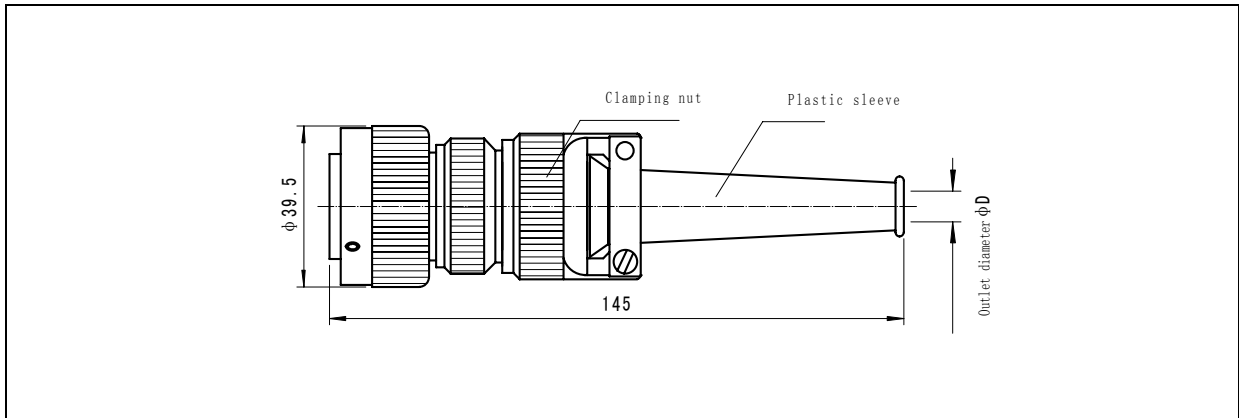
Shell size	D1	D2 min	D2 max	L
24	34	7	11	56
48	60	19	23	78.3

[III type receptacle]



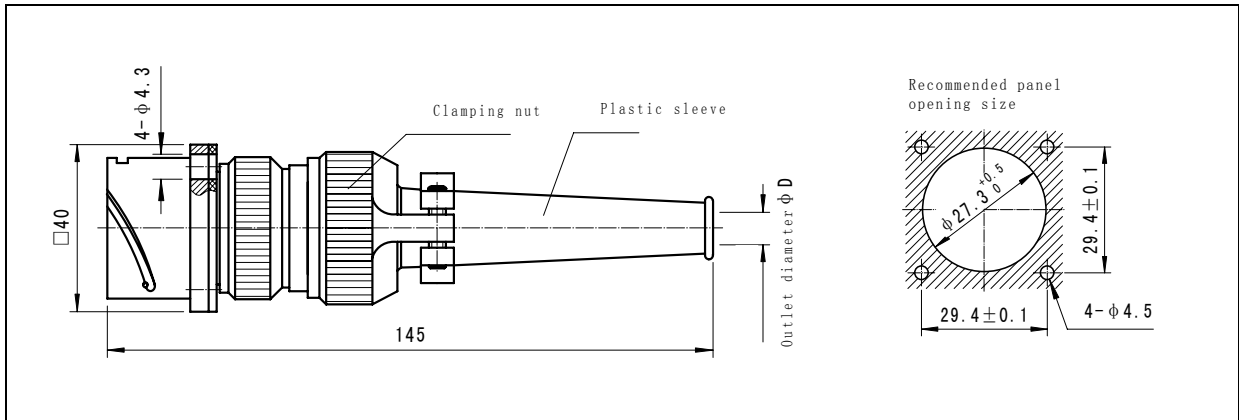
Shell size	D1	D2	D3	L1	L2	E	B	H
24	24	24.3	3.2	31.5	13	2.5	32	26
48	48	48.3	4.5	33.6	10.6	3	58	48

[YFA plug]





[YFA receptacle]



Plug	Receptacle	Assembly condition	ΦD
YFA30J-TY	YFA30K-ZY	Without cable clamp nut or rubber sleeve	—
YFA30J-TYA	YFA30K-ZYA	With big cable outlet rubber sleeve	Φ15
YFA30J-TYB	YFA30K-ZYB	With small cable outlet rubber sleeve	Φ8

YFA series contacts

Connector	Contact dia.	Crimp bucket ID
YFA30 ^J _K 4 ^T _Z Y	Φ2.5A	Φ1.8
	Φ2.5B	Φ1.0
YFA30 ^J _K 7 ^T _Z Y	Φ2.5A	Φ1.8
	Φ2.5B	Φ1.0
YFA30 ^J _K 14 ^T _Z Y	Φ1.6	Φ1.4