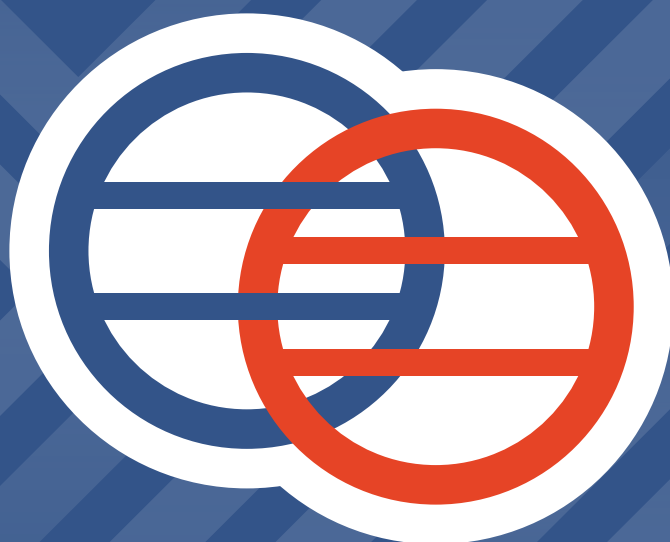




MATENG

Y50EX SERIES

CATALOG

Y50 SERIES

CIRCULAR ELECTRICAL CONNECTOR

PRODUCT BRIEF INTRODUCTION

Y50 series circular electrical connectors have 3 series: inch, metric and power series. Inch series are compliant with GJB598A (MIL-C-26482) and metric series GJB101A. Y50 series are applied in electrical and communication signals connections in tactical system, electronic antagonizing system, field operating power supply, communication signal connection system, aerospace, aviation and marine communication and test tracking system, computer system, posts and telecommunications railway command system, imported medical devices. Y50 series use bayonet coupling system. The characteristics include quick connect and disconnect, small volume and light weight. Plug has many mounting type, such as cable clip wire board type, simple packing, grounding pressing type, anti-wave tensile resistant type, right angle wire protecting type, cable "mike" type and elastic wire protecting type. Cable outlet has sealing rubber wire protecting sleeves with various sizes which are used with cables to strengthen cable and plug's rainproof, waterproof, dustproof and tensile strength. Contacts are soldered. Shells have many plating available. Receptacles have general sealing and glass filled hermetic sealing types for various operation environment. Applied enterprise standard: Q/21E20077

MAIN PERFORMANCES

MECHANICAL PERFORMANCES

- Vibration: frequency 10Hz—2000Hz, acceleration 196 m/s².
- Shock: acceleration 980.7 m/s².
- Endurance: 500 cycles.

ENVIRONMENTAL PERFORMANCES

- Operation temperature: -55°C~+125°C
- RH: temperature 40°C±2°C, 90%~95%
- Operation atmosphere: 101.33kPa-1.33Pa
- Air leakage: normal receptacle: not more than 6×10⁻² PaL/s
- Glass filled receptacle: not more than 1×10⁻⁵ PaL/s

ELECTRICAL PERFORMANCES

RATED VOLTAGE:

Operation environment	Rated voltage(DC or 50Hz AC rms)
Normal condition	600 V
Heat damp	600 V
High Altitude (4.39 kPa)	300 V

WITHSTANDING VOLTAGE:

Condition	Withstanding voltage(DC or 50Hz AC rms)
Sea level	1500 V
21366m (4.39 kPa)	375 V

Insulation resistance: ≥3000MΩ

Y50DX

XPOWER CIRCULAR ELECTRICAL



DESIGNATION

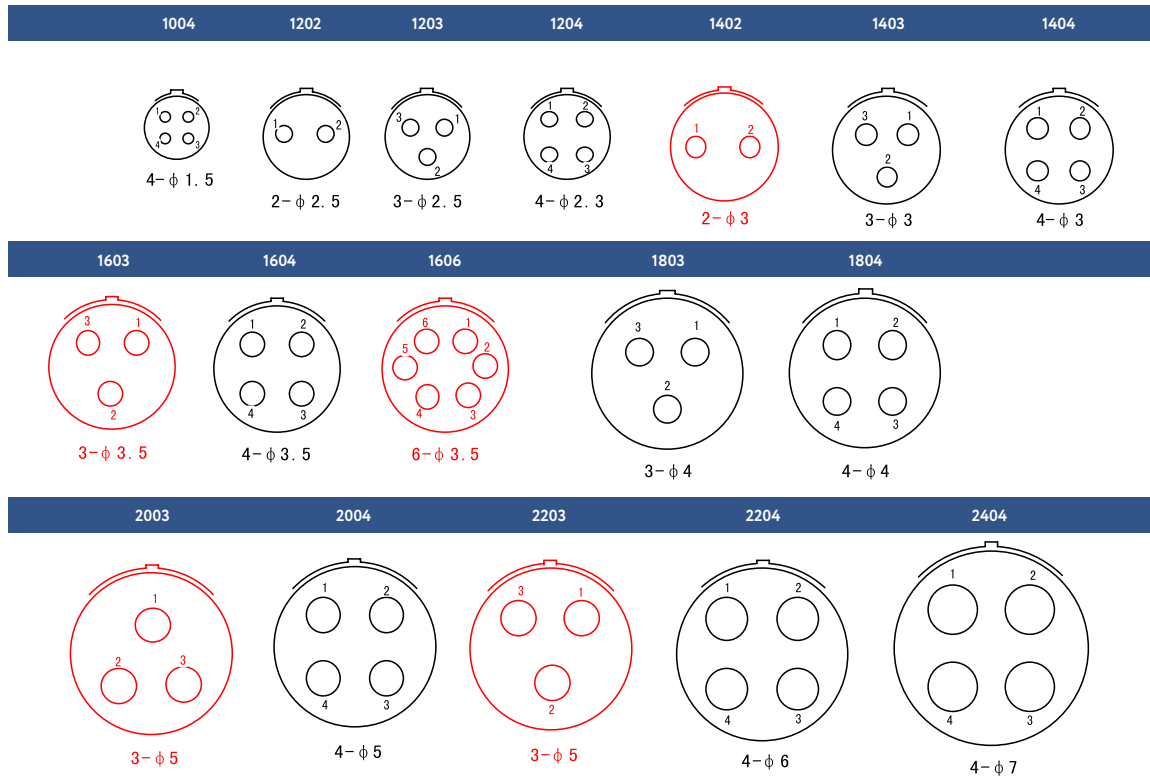
PLUG DESIGNATION

Basic series	Y50D	X	-14	04	T	J	2	I	-5
Y50D—Y50Power Circular Electrical Connectors									
connector type	X — Solder glue sealing , aluminum base anodization with black paint X3— Solder glue sealing, aluminum base anodization with olive green P— Solder shielding glue sealing, aluminum base plated by satin nickel P2 — Solder shielding glue sealing , olive green cadmium plating P40— Solder shielding glue sealing, stainless steel passivation S-Solder shielding glue sealing, copper base plated by satin nickel P15— Solder shielding glue sealing, aluminum base plated by black chrome P18— Solder shielding glue sealing, base plated by satin nickel BW-Solder shielding glue sealing, aluminum base plated by olive drab cadmium								
Shell size	10, 12, 14, 16, 18, 20, 22, 24								
Number of contacts	See “Insert arrangements”								
Plug identification	T-Plug								
Contact type	J— Pin, K— Socket								
Backshell type	1-grounding pressing type 2- clip wire board type 4-anti-wave tensile resistant type 5-right angle wire protecting type 6-”mike” type 6A-elastic wire protecting type								
Polarization	I II III IV V and (III is not marked)								
Accessories cable outlet diameter	Mark the value								

RECEPTACLE DESIGNATION

Basic series	Y50D	X	-14	04	Z	K	10	I
Y50D—Y50Power Circular Electrical Connectors								
connector type	X — Solder glue sealing , aluminum base anodization with black paint X3 — Solder glue sealing , aluminum base anodization with olive green P—Solder shielding glue sealing, aluminum base plated by satin nickel P2— Solder shielding glue sealing, olive green cadmium plating P40— Solder shielding glue sealing, stainless steel passivation S-Solder shielding glue sealing, copper base plated by satin nickel P15— Solder shielding glue sealing, aluminum base plated by black chrome P18— Solder shielding glue sealing, base plated by satin nickel BW-Solder shielding glue sealing, aluminum base plated by olive drab cadmium H-Glass filled hermetic sealing							
Shell size	10, 12, 14, 16, 18, 20, 22, 24							
Number of contacts	See “Insert arrangements”							
Receptacle identification	Z-Receptacle							
Contact type	J— Pin K— Socket S— Bulkhead contact							
Backshell type	10-Square flange, 14-Jam nut mounting							
Receptacle mounting style	10— Square flange, 14-Jam nut mounting							
Polarization	I II III IV and V (III is not marked)							

INSERT ARRANGEMENT (FRONT FACE OF PIN INSERTS ILLUSTRATED)



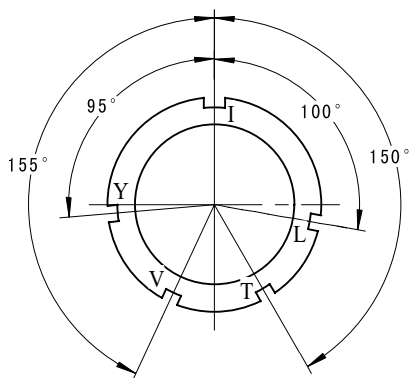
CONTACT SIZE:

No.	Contact size mm	Rated current A	Contact resistance mΩ	Solder cup ID mm
1	Φ1.5	10	≤3	Φ1.7
2	Φ2.3	20	≤2.5	Φ2.5
3	Φ2.5	25	≤2	Φ2.5
4	Φ3.0	50	≤1	Φ3.3
5	Φ3.5	50	≤1	Φ4.0
6	Φ4.0	60	≤1	Φ4.0
7	Φ5.0	75	≤1	Φ6.5
8	Φ6.0	100	≤1	Φ6.5
9	Φ7.0	100	≤1	Φ7.5

ANTI-MISMATING KEYWAYS (INSERT ROTATING IN THE METALLIC SHELL)

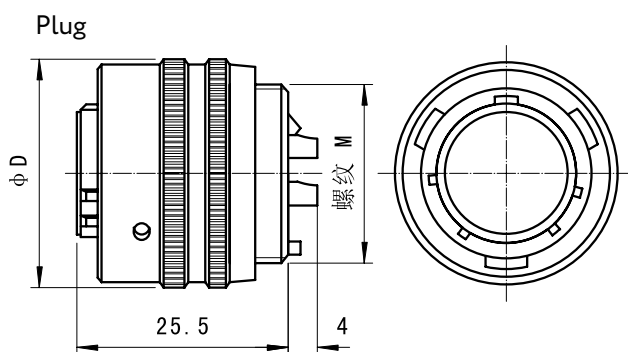
In order to avoid mismatching of plug and receptacle with the same insert arrangement and used in the same equipment but with different transmitting signals, we add keys of various angles on the insert out periphery and can rotate and mount products according to user's requirements.

See the figure below:



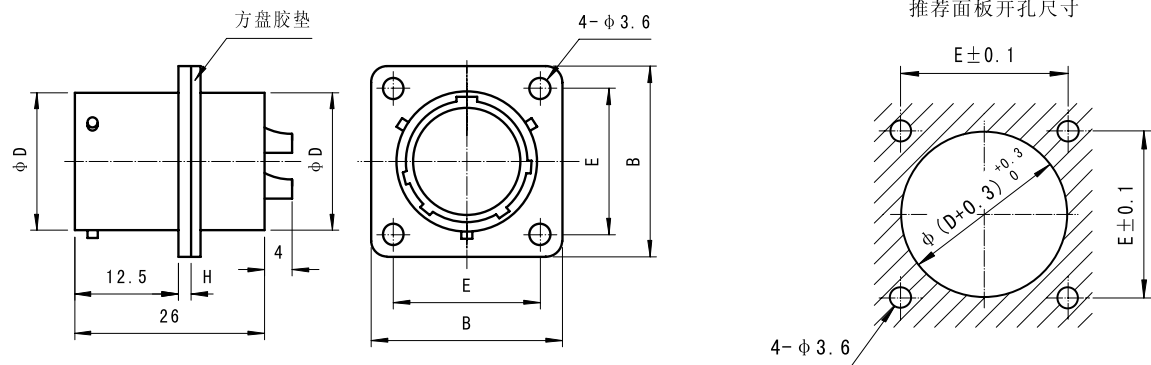
Polarization	Insert mounting identification	Angle from master keyway
I	V	155°
II	Y	95°
II	I	0°
IV	L	100°
V	T	150°

OUTLINE DIMENSIONS



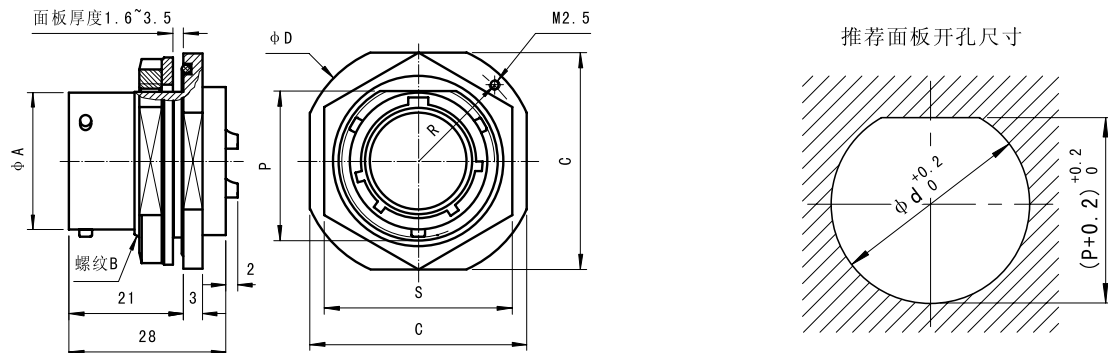
Shell size	D	Thread M
10	23	M18×1
12	26	M20×1
14	30	M24×1
16	33	M27×1
18	36	M30×1
20	39	M33×1.5
22	42	M36×1.5
24	45	M39×1.5

Square flange receptacle



Shell size	H	D	B	E	Shell size	H	D	B	E
10	1.5	16	24	18	18	2	29	36	27
12	2	20	27	21	20	2	32	39	29
14	2	23	30	23	22	2	35	42	32
16	2	26	33	25	24	2	38	45	35

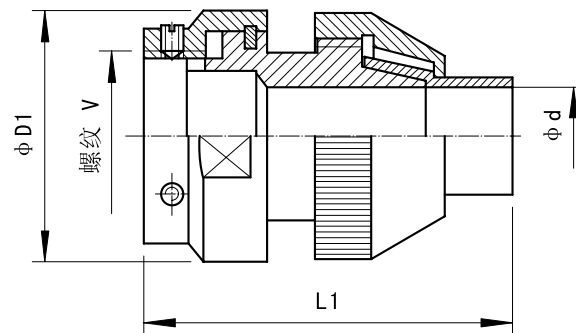
Jam nut receptacle



Shell size	A	Thread B	C	D	S	R	P	d
10	16	M20×1	27	33.2	24	14.4	19	20.5
12	20	M24×1	32	39.2	27	17.4	23	24.5
14	23	M27×1	36	42.2	30	18.9	26	27.5
16	26	M30×1	38	45.2	32	20.0	29	30.5
18	29	M33×1	41	47.2	36	21.7	32	33.5
20	32	M36×1	46	50.2	41	23.0	35	36.5
22	35	M39×1	50	54.2	43	25.0	38	39.5
24	38	M42×1	53	56.2	46	26.0	41	42.5

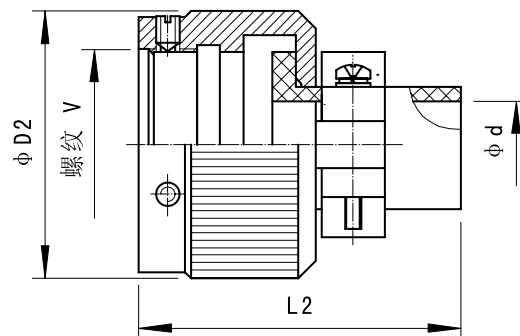
AVAILABLE BACKSHELL

Grounding pressing type backshell



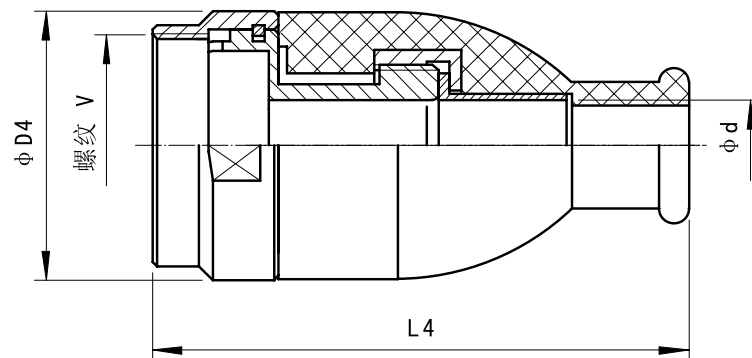
Shell size	Thread V 2B	D1	L1	Cable outlet diameter d
08	0.5000-20 UNF	18	39	6.3, 7.9, 9.5
10	0.6250-24 UNEF	23	39	6.3, 7.9, 9.5, 11.1, 12.7, 16
12	0.7500-20 UNEF	25	39	6.3, 7.9, 9.5, 11.1, 12.7, 16, 19
14	0.8750-20 UNEF	29	40	7.9, 9.5, 11.1, 12.7, 13, 16, 19
16	1.0000-20 UNEF	32	39	11.1, 12.7, 16, 19, 22.2
18	1.0625-18 UNEF	35	41	11.1, 12.7, 16, 19, 22.2, 25.4
20	1.1875-18 UNEF	38	42	9.5, 11.1, 12.7, 16, 17.5, 19, 22.2, 25.4
22	1.3125-18 UNEF	41	39	11.1, 12.7, 16, 19, 22.2, 25.4
24	1.4375-18 UNEF	44	39	12.7, 16, 17.5, 19, 22.2, 25.4, 28.5, 31.8

clip wire board type backshell



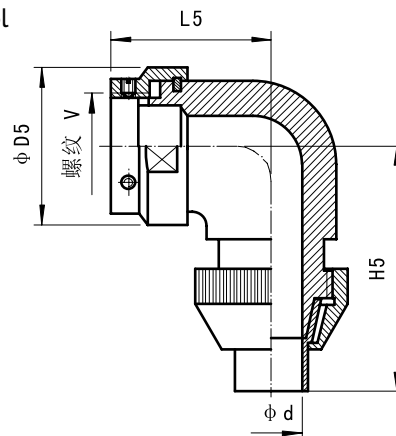
Shell size	Thread V 2B	D2	L2	Cable outlet diameter d
08	0.5000-20 UNF	18.5	29	6.3, 7.9, 9.5
10	0.6250-24 UNEF	20	29	6.3, 7.9, 9.5, 11.1
12	0.7500-20 UNEF	24	31	6.3, 7.9, 9.5, 11.1, 12.7, 16
14	0.8750-20 UNEF	28	36	7.9, 9.5, 11.1, 12.7, 16
16	1.0000-20 UNEF	30	36	11.1, 12.7, 16, 19
18	1.0625-18 UNEF	34	37	11.1, 12.7, 16, 19, 22.2, 25.4
20	1.1875-18 UNEF	36	39	11.1, 12.7, 16, 19, 22.2, 25.4
22	1.3125-18 UNEF	39	39	11.1, 12.7, 16, 19, 22.2, 25.4
24	1.4375-18 UNEF	42	44	12.7, 16, 19, 22.2, 25.4, 28.5

anti-wave tensile resistant type backshel



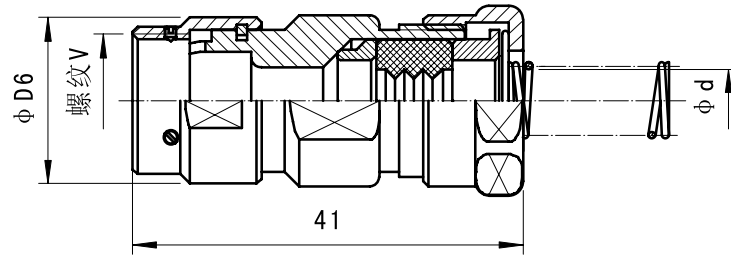
Shell size	Thread V 2B	D4	L4	Cable outlet diameter d
08	0.5000-20 UNF	18	38.5	4, 6.4
10	0.6250-24 UNEF	21.7	42	5.7, 6.9, 8.1, 8.9, 10
12	0.7500-20 UNEF	25	50.5	5.7, 7.1, 8.1, 9.6, 11.1
14	0.8750-20 UNEF	29	58	7.7, 8.5, 9.6, 11, 14
16	1.0000-20 UNEF	31	58.5	8.5, 12.7
18	1.0625-18 UNEF	35	65	10.9, 11.3
20	1.1875-18 UNEF	38	63	11
22	1.3125-18 UNEF	41	63	11.8, 13.4, 15.7
24	1.4375-18 UNEF	45	63	13.5

right angle wire protecting type backshel



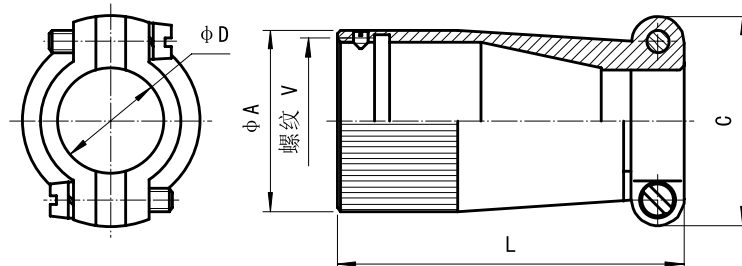
Shell size	Thread V 2B	D5	L5	H5	Cable outlet diameter d
08	0.5000-20 UNF	18	30	35	6.3, 7.9, 9.5
10	0.6250-24 UNEF	23	33	38.5	6.3, 7.9, 9.5, 11.1
12	0.7500-20 UNEF	25	33.8	38.5	9.5, 11.1, 12.7, 16
14	0.8750-20 UNEF	29	36.3	42.5	11.1, 12.7, 16, 19
16	1.0000-20 UNEF	32	37.1	42.5	12.7, 16, 19, 22.2
18	1.0625-18 UNEF	35	37.1	42.5	12.7, 16, 19, 22.2
20	1.1875-18 UNEF	38	39.3	48.5	12.7, 16, 19, 22.2, 25.4
22	1.3125-18 UNEF	41	42.3	51.5	12.7, 16, 19, 22.2, 25.4, 28.5
24	1.4375-18 UNEF	44	41.3	51.4	12.7, 16, 19, 22.2, 25.4, 28.5

Available Backshell



Shell size	Thread V 2B	D6	Cable outlet diameter d
08	0.5000-20 UNF	18	6.3, 7.9, 9.5
10	0.6250-24 UNEF	23	6.3, 7.9, 9.5, 11.1
12	0.7500-20 UNEF	25	6.3, 7.9, 9.5, 11.1, 12.7, 16
14	0.8750-20 UNEF	29	7.9, 9.5, 11.1, 12.7, 16
16	1.0000-20 UNEF	32	11.1, 12.7, 16, 19
18	1.0625-18 UNEF	35	11.1, 12.7, 16, 19, 22.2, 25.4
20	1.1875-18 UNEF	38	11.1, 12.7, 16, 19, 22.2, 25.4
22	1.3125-18 UNEF	41	11.1, 12.7, 16, 19, 22.2, 25.4
24	1.4375-18 UNEF	44	12.7, 16, 19, 22.2, 25.4, 28.5

“mike” type backshell



Shell size	Thread V 2B	A	C	D	L
08	0.5000-20 UNF	16.0	18.5	7	25.1
10	0.6250-24 UNEF	19.5	21.6	10	27.1
12	0.7500-20 UNEF	23.0	25.0	12	34.1
14	0.8750-20 UNEF	26.5	29.6	14	44.1
16	1.0000-20 UNEF	29.5	29.6	16	36.1
18	1.0625-18 UNEF	31.0	32.0	18	48.1
20	1.1875-18 UNEF	34.0	33.6	20	52.5
22	1.3125-18 UNEF	37.0	36.5	22	52.5
24	1.4375-18 UNEF	40.5	41.1	24	52.5



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