XCD Bayonet Power Connectors, 25 to 300 A per Contact

Power contacts 25–300 A · hyperboloid sockets · bayonet



Current per contact	25 to 300 A
Contacts	1 to 9
Rated voltage	500 V (1500 V test)
Coupling	Bayonet, five keys
Temperature	−55 to +150 °C
Mating cycles	500

Key features

- Dedicated power connector: contacts from Ø2.5 mm (25 A) to Ø14 mm (300 A)
- Hyperboloid wire-spring sockets for low contact resistance and smooth mating
- 16 standard layouts in shell sizes 22 to 85
- Solder, crimp or threaded (bolted) cable connection
- Plugs and receptacles can carry pins or sockets
- Five key positions to prevent mis-mating of parallel power lines
- Resistant to damp heat, salt spray, mold, rain, sand and dust

Specifications

Electrical

Parameter	Value	Condition
Rated voltage / withstanding voltage	500 V / 1500 V	Normal atmosphere
Rated voltage / withstanding voltage, damp heat	500 V / 1125 V	
Insulation resistance	≥ 5000 MΩ / ≥ 1000 MΩ	Normal / damp heat
Shell-to-shell conductivity	≤ 0.012 Ω (nickel)	

Mechanical

Parameter	Value	Condition
Coupling	Bayonet	
Durability	500 mating cycles	
Vibration	10–2000 Hz, 196 m/s² (20 g)	
Shock	980 m/s² (100 g)	
Acceleration	980 m/s² (100 g)	

Environmental		
Parameter	**Value**	**Condition**
Operating temperature	–55 to +150 °C	
Relative humidity	Up to 95 % at 40 °C	
Altitude	30,000 m	

Materials		
Parameter	**Value**	**Condition**
Shell	High-strength aluminum alloy, electroless nickel	
Insulator	Thermoset plastic	
Contacts	Copper alloy, gold plated	

Versions

Series code	Version	Notes
XCD...T	Plug	
XCD...F	Square-flange receptacle	With or without rear thread
XCD...L	Jam-nut receptacle	
Type I / Type II	Solder or crimp cable connection / threaded (bolted) cable connection	

Contact sizes and current ratings

Contact size	Engaging diameter	Contact resistance	Current rating
Ø2.5	2.5 mm	≤ 1.00 mΩ	25 A
Ø3.5	3.5 mm	≤ 0.50 mΩ	50 A
Ø4.5	4.5 mm	≤ 0.35 mΩ	60 A
Ø5.5	5.5 mm	≤ 0.30 mΩ	100 A
Ø7.5	7.5 mm	≤ 0.20 mΩ	150 A
Ø9.0	9.0 mm	≤ 0.17 mΩ	200 A
Ø10	10 mm	≤ 0.20 mΩ	200 A
Ø12	12 mm	≤ 0.15 mΩ	250 A
Ø14	14 mm	≤ 0.12 mΩ	300 A

Crimp and solder contact dimensions

Contact	Solder cup or crimp barrel ID (mm)	Outside diameter (mm)	Length beyond shell (mm)
Ø1.5	2.0	2.5	6.2
Ø2.0	2.5	3.1	3.5
Ø2.5	2.5	3.1	6.2
Ø3.5	4.8	5.8	6.2
Ø4.5	5.5	6.5	8.0

Contact	Solder cup or crimp barrel ID (mm)	Outside diameter (mm)	Length beyond shell (mm)
Ø5.5	6.5	7.5	10.0
Ø7.5	9.0	10.5	10.5
Ø9.0 crimp	12.0	17.0	—
Ø10.0	10.0	12.0	10.0
Ø12.0 crimp	15.0	20.0	—

How to order

XCD [shell][type][layout][contact][finish][key]

Example: **XCD36T4K1P1(W)** — Plug, shell 36, layout 36-4 (4 × Ø4.5 mm), gold-plated sockets, nickel with rear thread, key W

Code segment	Options
Shell	**22–85** 22, 27, 33, 36, 39, 45, 85
Type	**T** Plug
Type	**F** Square-flange receptacle
Type	**L** Jam-nut receptacle
Layout	**—** See insert arrangements
Contact	**Z1** Pin, gold plated
Contact	**K1** Socket, gold plated
Finish	**D1** Electroless nickel, no rear thread
Finish	**P1** Electroless nickel, rear thread
Key	**(none)** N
Key	**(W) (X) (Y) (Z)** Alternate keys

Contacts Ø1.0 to Ø3.0 mm in mixed layouts have the ratings of the XC series (5 to 40 A).

Insert arrangements

Arrangement	Contacts	Contact sizes
22-1	1	1 × Ø10
22-3	3	3 × Ø3
22-4	4	4 × Ø3
27-1	1	1 × Ø12
27-6	6	4 × Ø1.5, 2 × Ø3.5
33-9	9	5 × Ø2.5, 4 × Ø3.5
36-2	2	2 × Ø10
36-3	3	3 × Ø4.5
36-4	4	4 × Ø4.5
36-6	6	5 × Ø2.0, 1 × Ø10
39-3	3	3 × Ø10
39-4	4	4 × Ø5.5

Arrangement	Contacts	Contact sizes
45-1	1	1 × Ø14
45-4	4	4 × Ø7.5
45-8	8	4 × Ø1.0, 4 × Ø7.5
85-4	4	1 × Ø9.0, 3 × Ø12

Request a quote or drawing: https://sinoxh.com/request-a-quote/?product=XCD