KH High-Current Circular Connectors, 5 to 800 A

5–800 A per contact · 400 V · 30 layouts · hermetic bulkhead version



Current per contact	5 to 800 A
Rated voltage	400 V at sea level
Test voltage	1500 V
Layouts	30 in shells 16–45
Temperature	–55 to +150 °C
Mating cycles	500

Key features

- Contacts from Ø1 mm (5 A) to Ø15 mm (800 A), very low contact resistance
- 30 standard layouts in shells 16, 20, 27, 33 and 45
- Bayonet coupling, small size and light weight
- Plugs with shielded nut, straight or 90° cable clamp
- Hermetic through-bulkhead receptacle with left- and right-hand plugs and keyed mating
- Nickel or cadmium finishes
- Contact sizes and layouts can be customized

Specifications

Electrical

Parameter	Value	Condition
Rated voltage	400 V DC or AC 50 Hz	101 kPa
Rated voltage, low pressure	250 V DC or AC 50 Hz	2.2 kPa
Withstanding voltage	1500 V	Normal conditions
Insulation resistance	≥ 500 MΩ / ≥ 20 MΩ	Normal / damp heat

Mechanical

Parameter	Value	Condition
Coupling	Bayonet	
Durability	500 mating cycles	
Vibration	10–2000 Hz, 98 m/s²	
Bump	343 m/s², 60–80 per minute	

Environmental

Parameter	Value	Condition
Operating temperature	–55 to +150 °C	
Salt spray	48 h (nickel), 96 h (cadmium)	
Mold	28 days, grade 2	

Versions

Series code	Version	Notes
KH	Bayonet solder connector	
KHT	Threaded solder connector	
KH...-GQ / KHT...-GQ	Front-mounting versions	
KH...Z-MC1 / MC2	Hermetic through-bulkhead receptacle	Mates with a left-hand plug (C1/C2) on one side and a right-hand plug (U1/U2) on the other; the 30° C1 key is recommended

Contact sizes and current ratings

Contact size	Engaging diameter	Contact resistance	Current rating
Ø1	1 mm	0.005 Ω	5 A
Ø1.5	1.5 mm	0.003 Ω	10 A
Ø2	2 mm	0.002 Ω	15 A
Ø2.5	2.5 mm	0.001 Ω	25 A
Ø3.5	3.5 mm	0.0005 Ω	50 A
Ø5.0	5.0 mm	0.0004 Ω	75 A
Ø5.5	5.5 mm	0.0004 Ω	80 A
Ø7.0	7.0 mm	0.0003 Ω	140 A
Ø10	10 mm	0.0002 Ω	200 A
Ø15	15 mm	0.00015 Ω	800 A

Standard layouts

The layout code gives shell size and contact count (for example 45-4 = shell 45, four contacts). Contact sizes per layout are shown on the layout drawing, which we send with the quotation.

Shell	Layouts
KH16	16-3
KH20	20-1, 20-4, 20-7
KH27	27-1, 27-4, 27-6, 27-6A, 27-6B, 27-7, 27-7-1, 27-12
KH33	33-3, 33-4, 33-9, 33-12, 33-12-1, 33-12-2, 33-12-3, 33-21, 33-A1
KH45	45-1, 45-3, 45-4, 45-7, 45-8, 45-9, 45-10, 45-10A, 45-24

How to order

KH [shell][contact][contacts][type][backshell][-GQ]

Example: **KH33J4ZP** — Receptacle, shell 33, pin contacts, 4 contacts, shielded nut

Code segment	Options
Shell	**16, 20, 27, 33, 45** Shell size
Contact	**J** Pin
Contact	**K** Socket

Code segment	Options
Contacts	**—** See layouts
Type	**Z** Receptacle
Type	**T** Plug
Type	**MC** Hermetic through-bulkhead receptacle
Backshell	**P** Shielded nut
Backshell	**Q** Straight cable clamp
Backshell	**S** 90° cable clamp
Mounting	**-GQ** Front mounting

Example set: hermetic receptacle KH45J24Z-MC1 with left-hand plug KH45K24TP-C1 and right-hand plug KH45K24TP-U1.

Cadmium finishes are not RoHS compliant and are supplied on request.

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