Y27 Sealed Push-Pull Circular Connectors, up to 121 Contacts

Push-pull · 1–121 contacts · 2 m immersion · hermetic receptacles



Coupling	Push-pull, latching
Contacts	1 to 121
Current per contact	3 to 250 A
Test voltage	750 to 2500 V
Immersion	2 m (Y27F, G, H)
Temperature	–55 to +125 °C

Key features

- Push-pull coupling with latching lock: quick, blind mating
- Lanyard-release (pull-away) plugs for separation under load
- 58 layouts in seven sub-series, contacts Ø0.8 to Ø12 mm
- Y27F, Y27G and Y27H immersion-proof to 2 m
- EMI shielding: minimum 45 dB attenuation from 100 MHz to 1 GHz
- Rubber-sealed or glass-sealed receptacles (leak rate ≤ 1×10^{-7} Pa·L/s)
- Aluminum, stainless-steel or brass shells; stainless and brass (B, C) for marine environments
- Cable, square-flange, jam-nut, solder-mount and through-bulkhead receptacles
- Heat-shrink, cable-clamp, shielded and 90° backshells; metal protective caps

Specifications

Electrical

Parameter	Value	Condition
Test voltage, standard conditions	750 V (Y27), 1300 V (Y27A, Y27H), 1500 V (Y27B), 2500 V (Y27C), 2300 V (Y27F, G)	50 Hz rms
Test voltage, ≤ 1.33 kPa	100 V (Y27), 200 V (others)	
Insulation resistance	≥ 1000 to 5000 MΩ	Standard conditions, by sub-series
Insulation resistance, damp heat / rain / immersion	≥ 50–100 MΩ / ≥ 20 MΩ / ≥ 20 MΩ	
EMI shielding	≥ 45 dB	100 MHz to 1 GHz
Shell-to-shell conductivity	≤ 10 mΩ (aluminum), ≤ 50 mΩ with stainless, copper-alloy or iron-alloy shell	

Mechanical

Parameter	Value	Condition
Coupling	Push-pull; lanyard-release plugs available	

Mechanical		
Parameter	**Value**	**Condition**
Durability	500 mating cycles	
Sine vibration	10–2000 Hz, 196 m/s²	
Random vibration	0.4 g²/Hz, 23.1 g rms	
Shock	980 m/s², 6 ± 1 ms	

Environmental		
Parameter	**Value**	**Condition**
Operating temperature	−55 to +125 °C	
Pressure	101.3 to 1.33 kPa	
Relative humidity	92–98 % at 40 ± 2 °C	
Salt spray	48 h (Y27, A, B, C aluminum); 96 h (Y27F, G aluminum); 1000 h (brass, stainless)	
Immersion	2 m	Y27F, Y27G, Y27H
Receptacle leak rate	≤ 1 × 10^{-5} Pa·L/s (rubber-sealed), ≤ 1 × 10^{-7} Pa·L/s (glass-sealed)	

Versions

Series code	Version	Notes
Y27	High-density signal	
Y27A	Signal, solder or rear-release crimp contacts	
Y27B	Mixed signal and power	
Y27C	Power, up to 2500 V test voltage	
Y27F	Immersion-proof signal, up to 55 contacts	
Y27G	Immersion-proof signal and power, up to 250 A contacts	
Y27H	Immersion-proof high density, up to 121 contacts	

Contact sizes and current ratings

Contact size	Engaging diameter	Contact resistance	Current rating
Ø0.8	0.8 mm	≤ 7 mΩ (after endurance)	3 A
Ø1.0	1.0 mm	≤ 6 mΩ (after endurance)	5 A (Y27, A, B, C, H); 7.5 A (Y27F, G)
Ø1.5	1.5 mm	≤ 5 mΩ (after endurance)	10 A (Y27, A, B, C, H); 13 A (Y27F, G)
Ø2.5	2.5 mm	≤ 1.5 mΩ (after endurance)	25 A (Y27, A, B, C, H); 25 A (Y27F, G)
Ø3.5	3.5 mm	≤ 1 mΩ (after endurance)	50 A (Y27, A, B, C, H); 50 A (Y27F, G)

Contact size	Engaging diameter	Contact resistance	Current rating
Ø5.0	5.0 mm	≤ 0.7 mΩ (after endurance)	75 A (Y27, A, B, C, H); 75 A (Y27F, G)
Ø7.0	7.0 mm	≤ 0.5 mΩ (after endurance)	100 A (Y27, A, B, C, H); 100 A (Y27F, G)
Ø9.0	9.0 mm	≤ 0.4 mΩ (after endurance)	150 A (Y27, A, B, C, H); 150 A (Y27F, G)
Ø10.0	10.0 mm	≤ 0.4 mΩ (after endurance)	200 A (Y27, A, B, C, H); 200 A (Y27F, G)
Ø12.0	12.0 mm	≤ 0.3 mΩ (after endurance)	250 A (Y27F, G)

Standard layouts

Layout codes: first two digits = shell size, remaining digits = number of contacts (for example 2455 = shell 24, 55 contacts).

Sub-series	Layouts
Y27	1424, 1430, 2255, 2261, 2485
Y27A	0804, 1007, 1410, 1414, 1619, 2024, 2030, 2237, 2444, 2455, 2661
Y27B	1203, 1607, 2001, 2004, 2012, 2214, 2404, 2412, 2419, 2624
Y27C	1604, 2004, 2604, 2617, 3004, 3006
Y27F	1004, 1610, 1814, 2019, 2224, 2430, 2637, 2844, 2855
Y27G	1003, 1203, 1204, 1405, 1407, 1604, 1810, 2004, 2014, 2424, 2837, 3203, 3204, 3255
Y27H	2692, 2885, 28121

How to order

Y27[sub-series] [key]-[shell][contacts][type][contact][mounting][seal][release][backshell]-[material]

Example: **Y27A II-1410ZJBMFII-B** — Y27A, key II, shell 14, 10 contacts, receptacle, pins, square flange, rubber-sealed, pull-away release, backshell type II, stainless steel

Code segment	Options
Sub-series	**(none), A, B, C, F, G, H** See versions
Key	**(none) / II / III** Key positions I, II, III
Shell	**08–32** 08, 10 … 32
Type	**T** Plug
Type	**Z** Receptacle
Contact	**J / K** Pin / socket; J1, J3, J4 for solder-cup orientation or crimp
Mounting	**L** Cable receptacle
Mounting	**B, B1** Square flange
Mounting	**B2** Jam nut
Mounting	**B3** Solder mount
Mounting	**B4** Through-bulkhead

Code segment	Options
Receptacle seal	**P** Unsealed
Receptacle seal	**M** Rubber-sealed
Receptacle seal	**H** Glass-sealed
Release	**A** Push-pull
Release	**F** Lanyard pull-away (plugs)
Backshell	**I–VIII** Heat-shrink, cable clamp, double clamp, shielded, 90° shielded, clamp, shielded
Shell material	**(none)** Aluminum
Shell material	**B** Stainless steel
Shell material	**C** Brass

Metal protective caps: JS27A (Y27, A, B, C) or JS27F (Y27F, G, H) + shell + T (plug) or Z (receptacle) + N aluminum, B stainless or C copper alloy + L with chain.

Standards

- **GJB 2905A-2004** — Chinese specification for push-pull circular connectors, to which Y27 is built.

Request a quote or drawing: https://sinoxh.com/request-a-quote/?product=Y27