XY2 Lightweight Micro Circular Connectors

≈ 30 % lighter, 50 % smaller than Series III · threaded · 9 shell sizes



Coupling	Triple-start thread
Weight saving	≈ 30 % vs. Series III
Shell sizes	8 to 23 (9 sizes)
Insert arrangements	29
Contact sizes	23, 20HD, 16, 12 (5–23 A)
Temperature	–65 to +200 °C

Key features

- About 30 % lighter and 50 % smaller than a GJB 599 Series III connector with the same layout
- Triple-start threaded coupling with anti-decoupling; scoop-proof, six key positions
- EMI/RFI shielding ≥ 55 dB at 10 GHz on all finishes
- Integrated banding platform for shield termination with a steel band — no backshell needed, about 10 mm shorter
- Size 23 and 20HD contacts carry the same current as 22D and 20 with the same crimp process
- Six finishes, including nickel-fluorocarbon (T) with 240 h acid salt spray
- Removable crimp contacts; PCB pins for receptacles; fluorosilicone seals for fluid immersion

Specifications

Electrical

Parameter	Value	Condition
Dielectric withstanding voltage, size 12 and 16	1800 / 1800 Vrms	Sea level, mated / unmated
Dielectric withstanding voltage, size 12 and 16	850 / 550 Vrms	12,192 m, mated / unmated
Dielectric withstanding voltage, size 12 and 16	450 / 250 Vrms	21,336 m, mated / unmated
Dielectric withstanding voltage, size 20HD	1000 / 1000 Vrms	Sea level, mated / unmated
Dielectric withstanding voltage, size 20HD	750 / 450 Vrms	12,192 m, mated / unmated
Dielectric withstanding voltage, size 20HD	550 / 300 Vrms	21,336 m, mated / unmated
Dielectric withstanding voltage, size 23	750 / 750 Vrms	Sea level, mated / unmated
Dielectric withstanding voltage, size 23	400 / 250 Vrms	12,192 m, mated / unmated
Dielectric withstanding voltage, size 23	400 / 150 Vrms	21,336 m, mated / unmated
Insulation resistance	≥ 5000 MΩ	Room temperature

Electrical		
Parameter	**Value**	**Condition**
Insulation resistance	≥ 1000 MΩ / ≥ 100 MΩ	High temperature / humidity
Shell-to-shell conductivity	2.5–10 mΩ	Depends on finish
EMI shielding	≥ 55 dB at 10 GHz	

Mechanical and environmental		
Parameter	**Value**	**Condition**
Coupling	Triple-start thread, anti-decoupling	
Durability	500 mating cycles	
Shock	300 g	
Sine vibration	10–2000 Hz, 60 g (140–2000 Hz), 3 × 12 h	With temperature cycling
Random vibration	50–2000 Hz, 1 g²/Hz (100–2000 Hz), 2 × 8 h	At maximum temperature
Random vibration	25–2000 Hz, 5 g²/Hz (100–300 Hz), 2 × 8 h	
Damp heat, cyclic	10 cycles × 24 h	
Operating temperature	−65 to +200 °C	−65 to +175 °C for T and W finishes

Versions

Series code	Version	Notes
XY2/2	Plug	
XY2/3	Square-flange receptacle	M2 screws for shells 8–12, M3 for 15–23
XY2/0	Square-flange receptacle, improved	Mounting holes for M3 screws
XY2/1	Jam-nut receptacle	Hex nut with lockwire hole (H) or spanner nut (S)
...-1... / ...-2...	Rear configuration: banding platform (1) or backshell thread (2)	
XY2/26, 26A, 26B	Cable-clamp backshells: straight, short straight, 90°	
XY2/22, 24	Shielded banding backshells: straight, 90°	
XY2/14, 16	Shielded cable-clamp backshells: straight, 90°	
XY2/32, 33	Protective caps for plug / receptacle	

Shell materials and finishes

Code	Shell material	Finish	Shell conductivity	EMI shielding	Temperature	Salt spray
T	Aluminum alloy	Nickel-fluorocarbon	2.5 mΩ	≥ 55 dB at 10 GHz	−65 to +175 °C	500 h neutral; 240 h acid

Code	Shell material	Finish	Shell conductivity	EMI shielding	Temperature	Salt spray
W	Aluminum alloy	Olive-drab cadmium	2.5 mΩ	≥ 55 dB at 10 GHz	−65 to +175 °C	500 h neutral; 240 h acid
F	Aluminum alloy	Nickel	2.5 mΩ	≥ 55 dB at 10 GHz	−65 to +200 °C	48 h
K	Stainless steel	Passivated	10 mΩ	≥ 55 dB at 10 GHz	−65 to +200 °C	500 h neutral; 240 h acid
S	Stainless steel	Nickel	2.5 mΩ	≥ 55 dB at 10 GHz	−65 to +200 °C	500 h
TA	Titanium alloy	None	10 mΩ	≥ 55 dB at 10 GHz	−65 to +200 °C	500 h neutral; 240 h acid

Contact sizes and current ratings

Contact size	Engaging diameter	Contact resistance	Current rating	Wire size
23	0.686 mm	≤ 14.6 mΩ	5 A	AWG 22–26; insulation Ø 0.76–1.22 mm
20HD	1.02 mm	≤ 7.3 mΩ	7.5 A	AWG 20–24; insulation Ø 1.02–1.78 mm
16	1.58 mm	≤ 3.7 mΩ	13 A	AWG 16–20; insulation Ø 1.65–2.77 mm
12	2.41 mm	≤ 1.83 mΩ	23 A	AWG 12–14; insulation Ø 2.46–3.61 mm

Weights

Weight in grams, pin / socket version.

Arrangement	Plug	Square-flange receptacle
08-04	8.55 / 9.06	6.80 / 7.42
08-06	8.65 / 9.17	5.67 / 7.52
08-07	7.52 / 7.93	5.77 / 6.28
08-23	7.73 / 8.24	5.97 / 6.59
09-01	11.23 / 11.74	7.00 / 7.62
09-10	11.02 / 11.95	6.80 / 7.73
10-02	13.70 / 14.52	9.17 / 9.99
10-13	13.08 / 13.80	8.55 / 9.27
10-28	15.66 / 16.89	9.37 / 10.51
11-04	15.86 / 16.89	10.61 / 11.64
11-19	14.73 / 15.86	9.48 / 10.61
12-02	17.92 / 19.26	12.26 / 13.60
12-05	18.13 / 19.57	12.57 / 14.01
12-26	16.27 / 17.92	10.82 / 12.36

Arrangement	Plug	Square-flange receptacle
15-02	21.32 / 22.97	17.61 / 19.26
15-07	22.56 / 25.24	18.85 / 21.53
15-37	20.70 / 23.69	17.00 / 19.98
15-202	21.42 / 23.38	17.72 / 19.67
18-12	31.62 / 35.33	27.60 / 31.42
18-55	28.12 / 31.62	24.10 / 27.60
18-204	29.87 / 33.99	25.85 / 30.08
18-205	30.18 / 34.30	26.16 / 30.39
18-235	29.87 / 33.68	27.19 / 31.31
19-07	28.74 / 31.93	25.85 / 29.05
19-14	33.89 / 33.58	30.90 / 30.59
19-85	27.40 / 32.03	24.51 / 29.15
19-204	27.19 / 31.21	24.31 / 28.43
23-12	41.41 / 46.56	37.80 / 43.05
23-130	38.93 / 46.25	35.43 / 42.85

How to order

XY2/ [type] - [rear end] [finish] [shell] - [arrangement] [contact] [key] [nut] [V]

Example: **XY2/2-2T08-07SA** — Plug, backshell thread, aluminum nickel-fluorocarbon, shell 08, arrangement 08-07, socket contacts, key A

Code segment	Options
Type	**2** Plug
Type	**3** Square-flange receptacle
Type	**0** Square-flange receptacle, M3 mounting holes
Type	**1** Jam-nut receptacle
Rear configuration	**1** Banding platform for shield termination
Rear configuration	**2** Backshell thread
Finish	**T / W / F** Aluminum — nickel-fluorocarbon / olive-drab cadmium / nickel
Finish	**K / S** Stainless steel — passivated / nickel
Finish	**TA** Titanium alloy
Shell	**08 09 10 11 12 15 18 19 23** Shell size
Arrangement	**e.g. 07** See the insert arrangement table below
Contact	**P / S** Pin / socket
Contact	**PC** PCB pin (receptacles only)
Key	**A** Normal
Key	**B C D E F** Alternate
Nut (jam-nut receptacles)	**H** Hex nut with lockwire hole
Nut (jam-nut receptacles)	**S** Spanner nut

Code segment	Options
V	**V** Fluorosilicone seals (fluid immersion)

Second example: XY2/1-1F11-13PAH — jam-nut receptacle, banding platform, aluminum nickel, shell 11, arrangement 11-13, pin contacts, key A, hex nut.

Insert arrangements

Arrangement	Contacts	Contact sizes
8-04	4	4 × size 23
8-06	6	6 × size 23
8-07	7	7 × size 23
8-23	3	3 × size 20HD
9-01	1	1 × size 12
9-10	10	10 × size 23
10-02	2	2 × size 16
10-13	13	13 × size 23
10-28	8	8 × size 20HD
11-04	4	4 × size 16
11-19	19	19 × size 23
12-02	2	2 × size 12
12-05	5	5 × size 16
12-26	26	26 × size 23
15-02	2	2 × size 12
15-07	7	7 × size 16
15-37	37	37 × size 23
15-202	22	20 × size 23, 2 × size 16
18-12	12	12 × size 16
18-55	55	55 × size 23
18-204	42	2 × size 16, 40 × size 23
18-205	36	4 × size 16, 32 × size 23
18-235	35	35 × size 20HD
19-07	7	7 × size 12
19-14	14	14 × size 16
19-85	85	85 × size 23
19-204	32	4 × size 12, 28 × size 23
23-12	12	12 × size 12
23-130	130	130 × size 23

Standards

- **GJB 599 Series III (comparison basis)** — Weight, size and environmental comparison made with GJB 599 Series III connectors of the same layout.

Request a quote or drawing: https://sinoxh.com/request-a-quote/?product=XY2