J599WR Marine-Grade 38999-Type Circular Connectors, Cadmium-Free

Cadmium-free nickel-PTFE finish · marine-grade · up to 5000 mating cycles





Coupling	Triple-start thread
Shell sizes	9 to 25
Insert arrangements	105
Contact sizes	22D to 10 (5–33 A)
Mating cycles	500, 1500 or 5000
Acid salt spray	240 h
Temperature	–65 to +175 °C

Key features

- Cadmium-free nickel-PTFE (T) finish with 2.3 times the wear resistance of cadmium plating
- Marine-grade: neutral salt spray 500 h, acid salt spray 240 h, acid atmosphere 28 days
- Electrical, mating and mounting interfaces replace GJB 599B Series III (J599 Series III) connectors directly
- 500-, 1500- or 5000-cycle versions for frequent mating
- Reinforced interfacial seal keeps moisture away from the contacts
- Triple-start threaded coupling with anti-decoupling, scoop-proof and keyed; master-key mark for installation
- Removable crimp and solder contacts; matching J1784WR backshells and protective caps

Specifications

Electrical

Parameter	Value	Condition
Dielectric withstanding voltage, service rating M	1300 Vrms / 800 Vrms	Sea level / 21,000 m altitude, mated
Dielectric withstanding voltage, service rating N	1000 Vrms / 600 Vrms	Sea level / 21,000 m altitude, mated
Dielectric withstanding voltage, service rating I	1800 Vrms / 1000 Vrms	Sea level / 21,000 m altitude, mated
Dielectric withstanding voltage, service rating II	2300 Vrms / 1000 Vrms	Sea level / 21,000 m altitude, mated
Insulation resistance	≥ 5000 MΩ	500 VDC
Shell-to-shell conductivity	2.5 mΩ	
EMI shielding	50 dB at 10 GHz	

Mechanical

Parameter	Value	Condition
Coupling	Triple-start thread, self-locking	
Durability	500, 1500 or 5000 mating cycles	G version 500, H/J contacts 1500, H version 5000

Mechanical		
Parameter	**Value**	**Condition**
Shock	2940 m/s² peak, half-sine, 3 ± 1 ms	

Environmental		
Parameter	**Value**	**Condition**
Operating temperature	–65 to +175 °C	
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), 41.7 g rms, 2 × 8 h	At maximum temperature
Random vibration	25–2000 Hz, 5 g²/Hz (100–300 Hz), 49.5 g rms, 2 × 8 h	At ambient temperature
Damp heat, cyclic	Up to 98 % RH, 10 cycles of 24 h	
Neutral salt spray	500 h	
Acid salt spray	240 h	pH 3.5 ± 0.5
Acid atmosphere	28 days	pH 3.5 ± 0.5
Mold resistance	Grade 1, 84 days	GJB 150.10A-2009, fungus group 2 plus Scopulariopsis brevicaulis

Versions

Series code	Version	Notes
J599WR/26	Plug	
J599WR/20	Square-flange receptacle	Panel up to 2.5 mm (rear mount) or 3.2 mm (front mount); no backshell with front mounting
J599WR/24	Jam-nut receptacle	Panel up to 3.2 mm
J599WR/98	Round-flange adapter receptacle	
J599WR/32, /33	Protective caps for plug / receptacle	Stainless-steel cable, steel wire rope or nylon cord lanyard
J1784WR/14	Backshell, straight, non-shielded	Anti-rotation, no cable clamp
J1784WR/38, /38S, /39, /39S	Backshells with cable clamp, straight or 90°	S versions add anti-loosening
J1784WR/88, /90, /20G1–G4	Shielded backshells, straight or 90°	Optional Ti-Ni shape-memory band for 360° shield termination
J1784WR/69, /20	Shielded backshells, heat-shrink boot or band clamp	
J1784WR/18, /79, HE, HK	Shielded backshells with cable clamp, straight or 90°	

Shell materials and finishes

Code	Shell material	Finish	Shell conductivity	EMI shielding	Temperature	Salt spray
T	Aluminum alloy	Nickel-PTFE (cadmium-free)	2.5 mΩ	50 dB at 10 GHz	−65 to +175 °C	500 h neutral; 240 h acid

Contact sizes and current ratings

Contact size	Engaging diameter	Contact resistance	Current rating	Contact retention
22D	0.775 mm	≤ 14.6 mΩ	5 A	44 N
20	1.02 mm	≤ 7.3 mΩ	7.5 A	67 N
16	1.59 mm	≤ 3.7 mΩ	13 A	111 N
12	2.39 mm	≤ 1.83 mΩ	23 A	111 N
10	3.18 mm	≤ 1 mΩ	33 A	111 N

How to order

J599WR [life] / [type] T [shell] [arrangement] [contact] [key] [options] [-lockwire]

Example: **J599WRH/26TE35SN** — Plug, 5000 mating cycles, nickel-PTFE finish, shell E (size 17), arrangement 17-35, socket contacts, key position N

Code segment	Options
Life	**G** 500 mating cycles
Life	**H** 5000 mating cycles
Type	**26** Plug
Type	**20** Square-flange receptacle
Type	**24** Jam-nut receptacle
Type	**98** Round-flange adapter receptacle
Finish	**T** Aluminum alloy, nickel-PTFE
Shell	**A B C D E F G H J** Shell size 9, 11, 13, 15, 17, 19, 21, 23, 25
Arrangement	**e.g. 35** See the insert arrangement table below
Contact	**P / S** Pin / socket
Key	**N** Normal key position
Key	**A B C D E** Alternate key positions
Options	**H** Solder contacts
Options	**C1** Fluorosilicone (oil-resistant) seals
Lockwire	**-S** Lockwire provision; square-flange receptacles supplied with M3 × 12.5 screws
Lockwire	**-S10, -S14** Square-flange receptacle with M3 × 10 or M3 × 14 screws
Lockwire	**-SC, -S10C** Countersunk M3 × 12.5 or M3 × 10 screws for countersunk panels

More examples: J599WRG/20TE35PN — square-flange receptacle, 500 cycles, shell 17, arrangement 17-35, pin contacts. J599WRH/26TE35SNC1 — as the plug example above, with fluorosilicone seals.

Earlier catalogs use J599HL/... for the 5000-cycle version (for example J599HL/26TE35SN = J599WRH/26TE35SN) and J599/...T with H (pin) or J (socket) contacts for the 1500-cycle version (for example J599/20TE35HN). We quote under either designation.

Insert arrangements

Arrangement	Contacts	Contact sizes	Service rating
9-03	3	3 × size 20	I
9-35	6	6 × size 22D	M
9-44	4	4 × size 22	M
9-98	3	3 × size 20	I
11-02	2	2 × size 16	I
11-04	4	4 × size 20	I
11-05	5	5 × size 20	I
11-08a	8	4 × size 20, 4 × size 22D	M
11-35	13	13 × size 22D	M
11-98	6	6 × size 20	I
11-99	7	7 × size 20	I
13-03	3	3 × size 16	II
13-04	4	4 × size 16	I
13-06	6	2 × size 12, 4 × size 20	M
13-06A	6	2 × size 16, 4 × size 20	M
13-08	8	8 × size 20	I
13-08A	8	4 × size 16, 4 × size 20	M
13-12A	12	12 × size 20	N
13-16	16	3 × size 16, 13 × size 22D	N
13-35	22	22 × size 22D	M
13-98	10	10 × size 20	I
15-03	3	3 × size 12	M
15-04A	4	4 × size 12	M
15-05	5	5 × size 16	II
15-06A	6	6 × size 16	M
15-13	13	4 × size 16, 2 × size 20, 7 × size 22D	M
15-14	14	6 × size 16, 8 × size 22D	N
15-15	15	1 × size 16, 14 × size 20	I
15-18	18	18 × size 20	I
15-19	19	19 × size 20	I
15-23	23	3 × size 16, 2 × size 20, 18 × size 22D	M
15-32	32	9 × size 20, 23 × size 22D	M
15-35	37	37 × size 22D	M
15-97	12	4 × size 16, 8 × size 20	I
17-06	6	6 × size 12	I
17-06C	6	4 × size 12, 2 × size 22	I

Arrangement	Contacts	Contact sizes	Service rating
17-08	8	8 × size 16	II
17-14	14	2 × size 12, 4 × size 16, 8 × size 20	M
17-19	19	4 × size 16, 11 × size 20, 4 × size 22D	M
17-20	20	4 × size 12, 16 × size 22D	M
17-26	26	26 × size 20	I
17-28A	28	3 × size 12, 25 × size 22D	M
17-30	6	3 × size 10, 3 × size 20	N
17-35	55	55 × size 22D	M
17-42	42	42 × size 22	M
17-99	23	2 × size 16, 21 × size 20	I
19-11	11	11 × size 16	II
19-13	13	8 × size 12, 5 × size 20	I
19-17	17	2 × size 12, 15 × size 20	M
19-20	20	8 × size 16, 4 × size 20, 8 × size 22D	M
19-22	22	7 × size 12, 15 × size 22D	M
19-28	28	2 × size 16, 26 × size 20	I
19-30	30	1 × size 16, 29 × size 20	I
19-32	32	32 × size 20	I
19-35	66	66 × size 22D	M
19-45	67	67 × size 22D	M
19-53	53	53 × size 22	M
19-96	9	9 × size 12	I
21-11	11	11 × size 12	I
21-13	13	2 × size 10, 7 × size 12, 4 × size 20	M
21-16	16	16 × size 16	II
21-24	24	24 × size 20	I
21-25	25	25 × size 20	I
21-27	27	27 × size 20	I
21-28	28	3 × size 10, 25 × size 22D	I
21-35	79	79 × size 22D	M
21-39	39	2 × size 16, 37 × size 20	I
21-41	41	41 × size 20	I
21-61	61	6 × size 16, 55 × size 22D	M
21-75A	4	4 × size 12	I
23-02	85	85 × size 22	M
23-06H	6	6 × size 10	II
23-14	14	14 × size 12	I

Arrangement	Contacts	Contact sizes	Service rating
23-21	21	21 × size 16	II
23-26	26	8 × size 12, 18 × size 20	M
23-32	32	32 × size 20	I
23-34	34	34 × size 20	I
23-34A	34	4 × size 12, 16 × size 16, 14 × size 22D	M
23-35	100	100 × size 22D	M
23-36	36	36 × size 20	I
23-44a	44	2 × size 10, 4 × size 12, 38 × size 22D	M
23-53	53	53 × size 20	I
23-55	55	55 × size 20	I
23-70	70	10 × size 20, 60 × size 22D	M
23-86	86	16 × size 20, 70 × size 22D	M
23-97	16	16 × size 16	I
23-99	11	11 × size 16	II
25-02	100	100 × size 22	M
25-04	56	8 × size 16, 48 × size 20	I
25-10	10	6 × size 10, 4 × size 12	N
25-11	11	9 × size 10, 2 × size 20	N
25-19	19	19 × size 12	I
25-24	24	12 × size 12, 12 × size 16	I
25-29	29	29 × size 16	I
25-32	32	6 × size 10, 10 × size 16, 16 × size 20	M
25-35	128	128 × size 22D	M
25-39	39	2 × size 12, 17 × size 16, 20 × size 20	M
25-43	43	20 × size 16, 23 × size 20	I
25-45	45	8 × size 12, 37 × size 20	M
25-61	61	61 × size 20	I
25-64a	64	8 × size 16, 40 × size 20, 16 × size 22D	M
25-69	69	10 × size 16, 15 × size 20, 44 × size 22D	M
25-92	92	4 × size 20, 88 × size 22D	M
25-93	118	8 × size 16, 110 × size 22D	M
25-118G	118	8 × size 16, 110 × size 22D	N

Standards

- **GJB 599B-2012** — Chinese specification for Series III threaded circular connectors, the counterpart of MIL-DTL-38999 Series III. J599WR meets GJB 599B-2012 and adds marine environmental tests.

Request a quote or drawing: https://sinoxh.com/request-a-quote/?product=J599WR