38999 Series III-Type EMI Filter Connectors, Marine Grade

C or π filter per contact · up to 55 dB · marine grade



Filter circuits	C or π
Capacitance	75 pF to 100 nF
Insertion loss	Up to 55 dB at 100 MHz
Coupling	Triple-start thread
Temperature	–55 to +125 °C

Key features

- Each contact is a complete low-pass filter — C or π circuit
- Replaces the standard connector without changing wiring; filtering and shielding in one part
- Different filter values mixed in one connector
- Smaller and lighter than filtering outside the connector
- Marine grade: 240 h acid salt spray, acid atmosphere and 84-day mold
- Aluminum (olive-drab cadmium) or titanium shells
- Triple-start threaded coupling; scoop-proof, keyed

Specifications

Electrical

Parameter	Value	Condition
Insulation resistance	≥ 1000 MΩ	100 VDC
Dielectric withstanding voltage	500 VDC, 5 s	
Working voltage classes	50, 100, 200 or 400 VDC	
Filter circuits	C or π, planar array; mixed values in one connector	

Mechanical and environmental

Parameter	Value	Condition
Durability	500 mating cycles	
Operating temperature	–55 to +125 °C	
Vibration	10–2000 Hz, 20 g	
Shock	100 g	
Acid salt spray	240 h (5 × 48 h), pH 3.5 ± 0.5	GJB 150.11A
Acid atmosphere	4 cycles, pH 3.5 ± 0.5	GJB 150.28
Mold	84 days, grade 1 or better	GJB 150.10A

Versions

Series code	Version	Notes
J599/20, /24, /26	Square-flange receptacle, jam-nut receptacle, plug	
...d...	Double-flange receptacle	

Shell materials and finishes

Code	Shell material	Finish	Shell conductivity	EMI shielding	Temperature	Salt spray
W	Aluminum alloy	Olive-drab cadmium	—	EMI shielded	−55 to +125 °C	240 h acid
TA	Titanium alloy	None	—	EMI shielded	−55 to +125 °C	240 h acid

Filter values

Planar filter arrays; minimum insertion loss measured at 25 °C, no load, 50 Ω system.

Circuit	Code	Capacitance	3 dB cut-off	1 MHz	3 MHz	10 MHz	30 MHz	100 MHz
C	750	75 pF	70 MHz					1 dB
C	151	150 pF	35 MHz					3 dB
C	271	270 pF	20 MHz					3 dB
C	471	470 pF	12 MHz				3 dB	10 dB
C	102	1000 pF	5.1 MHz				6 dB	20 dB
C	252	2500 pF	3 MHz		1 dB	6 dB	12 dB	22 dB
C	332	3300 pF	2.5 MHz		3 dB	13 dB	20 dB	30 dB
C	472	4700 pF	2 MHz		3 dB	13 dB	20 dB	30 dB
C	682	6800 pF	1.5 MHz	2 dB	9 dB	19 dB	25 dB	35 dB
C	103	10000 pF	1 MHz	2 dB	9 dB	19 dB	25 dB	35 dB
C	104	100000 pF	0.1 MHz	5 dB	12 dB	22 dB	30 dB	40 dB
π	471	470 pF	12 MHz				4 dB	12 dB
π	102	1000 pF	3.2 MHz				7 dB	24 dB
π	252	2500 pF	1.3 MHz		1 dB	6 dB	16 dB	25 dB
π	332	3300 pF	1.1 MHz		2 dB	8 dB	20 dB	41 dB
π	472	4700 pF	0.8 MHz		2 dB	8 dB	20 dB	41 dB
π	682	6800 pF	1.5 MHz	2 dB	5 dB	13 dB	30 dB	50 dB
π	103	10000 pF	1 MHz	2 dB	5 dB	13 dB	30 dB	50 dB
π	104	100000 pF	0.1 MHz	5 dB	10 dB	25 dB	30 dB	55 dB

How to order

J599/ [type] M [finish] [d] [shell+arrangement] [contact] [key] BL [circuit] [capacitance+tol] [voltage]

Example: **J599/20MWd18PNBL1103HI** — Square-flange marine receptacle, olive-drab cadmium, double flange, arrangement 18, pin contacts, key N, planar filter, C circuit, 10000 pF (+100/0 %), 50 VDC

Code segment	Options
Type	**20 / 24 / 26** Square-flange / jam-nut receptacle / plug
M	**M** Marine grade
Finish	**W / TA** Aluminum olive-drab cadmium / titanium
Finish	**M / J** Composite, nickel / cadmium
Flange	**d / (none)** Double / single flange
Contact	**P / S** Pin / socket
Contact	**PC, PL / SC, SL** PCB pin / socket
Contact	**PQ / SQ** Press-fit pin / socket
Contact	**H / J** 1500-cycle pin / socket (composite)
Key	**N A B C D** Key positions
Circuit	**1 / 2** C / π filter
Capacitance	**e.g. 103** 10 × 10^3 pF = 10 nF
Capacitance tolerance	**K / M** ±10 % / ±20 %
Capacitance tolerance	**S / Z / H** +50/−20 %, +80/−20 %, +100/0 %
Working voltage	**I / II / III / IV** 50 / 100 / 200 (default) / 400 VDC

DC filter connectors must not be used on AC supply lines.

Tell us about surge voltages, inductive loads (relays, motors) and any conducted-susceptibility test requirements before selection.

Do not test filter connectors with a megger or AC hipot above the rated values.

Standards

- **38999 Series III type** — Mating interface of the standard J599 Series III connector.

Request a quote or drawing: https://sinoxh.com/request-a-quote/?product=J599%20III%20filter