

# 38999 Series III Integrated Backshell



## 38999 All In One!

Plug with integrated backshell: all the features and the benefits of 38999 Series III connectors now ready to use.

**Embedded backshell** ■ Space and time saving.  
Better electrical continuity and signal protection.  
Lighter than with standard backshell.  
Easier supply chain.  
Single piece backshell and connector.

**EMI backshell** ■ Shield band compatible.  
Overmolding best solution.



**Flexibility** ■ All Series III layouts developed by SOURIAU available (more than 90 layouts).

**Versatility** ■ Compatible, among others, with VG95343 and MIL-I-81765 heat shrink boots.



## Description

- Derived from standard MIL-DTL-38999 Series III
- Plug in 9 sizes (from size 09 to 25)
- Black zinc nickel RoHS plating, a robust QPL 500 hours finish backward compatible with cadmium receptacle.
- Standard cadmium and nickel plating available.

## Technical features

### Mechanical

- **Shell:** Aluminum
- **Shell plating:**
  - . Nickel (F)
  - . Black zinc nickel (Z)
  - . Olive drab cadmium: (W)
- **Insulator:** Thermoplastic
- **Seal:** Silicone elastomer
- **Contact:** Copper alloy
- **Contact plating:** Gold over nickel
- **Endurance:** 500 matings/unmatings
- **Shock & Vibration:**
  - . According to 38999 specification

### Electrical

- **Contact resistance:**

Contacts size	22	20	16	12	8	4
Resistance mΩ	14.6	7.3	3.8	3.5	3	2
- **Insulation resistance:**
  - . ≥5000mΩ (at 500Vdc)
- **Contact rating:**

Contacts size	22	20	16	12	8	4
Rating (A)	5	7.5	13	23	45	80
- **Shell continuity**
  - . Nickel (F): 1 mΩ
  - . Black zinc nickel (Z): 2.5 mΩ
  - . Olive drab cadmium (W): 2.5 mΩ

### Environmental

- **Temperature range:**
  - . -55°C to +175°C (Z & W)
  - . -55°C to +200°C (F)
- **Sealing mated connectors:**
  - . IP 67 (1 meter for 30 min minimum)
- **Salt spray:**
  - . 48 hours (F)
  - . 500 hours (Z & W)

### Resistance to fluids

- **According to MIL-DTL-38999 standard**
  - . Gasoline: JP5 (OTAN F44)
  - . Mineral hydraulic fluid: MIL-H-5606 (OTAN H515)
  - . Synthetic hydraulic fluid: Skydrol 500 B4
- **LD4 (SAE AS 1241)**
  - . Mineral lubricating: MIL-L-7870A (OTAN 0142)
  - . Synthetic lubricating: MIL-L-23699 (OTAN 0156), MIL-L-7808
  - . Cleaning fluid: MIL-C-87936 diluted
  - . De-icing fluid: MIL-A-8243
  - . Extinguishing fluid: Bromochloromethane
  - . Cooling fluid: Coolanol

## Ordering information

<b>Basic series</b>	8DA	5	-	13	Z	35	P	N
<b>Shell type:</b>	5: Plug with RFI shielding							
<b>Style:</b>	-: Connector with standard crimp contacts							
<b>Shell size:</b>	09, 11, 13, 15, 17, 19, 21, 23, 25							
<b>Plating:</b>	Z: Black zinc nickel F: Nickel W: Olive drab cadmium							
<b>Contact layout:</b>	See «8D Series - MIL-DTL-38999 Series III» SOURIAU catalog							
<b>Contact type:</b>	P: Male S: Female							
<b>Orientation:</b>	N, A, B, C, D, E							
<b>L:</b>	Without contact							

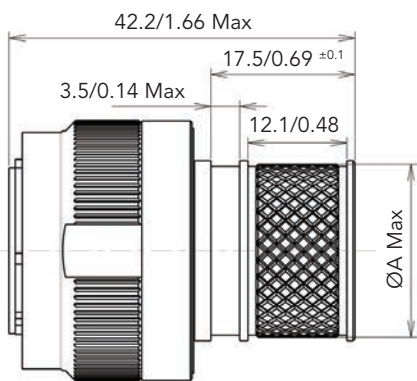
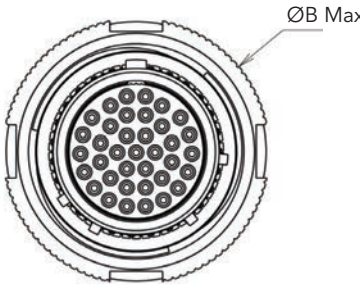

Note: Power, Quadrax and Optical layouts, please consult us. Type 0 and Type 7 on request.

## 3D models

8D Integrated Backshell 3D models are available on [www.traceparts.online.net](http://www.traceparts.online.net)  
Registration is quick and the downloads are free!

## Dimensions

**Plug Type 5**

	09	11	13	15	17	19	21	23	25
ØA	11.1/0.44	14.1/0.55	17.1/0.67	21.1/0.83	24.1/0.95	27.1/1.07	30.1/1.18	33.1/1.30	36.1/1.42
ØB	21.8/0.86	25.0/0.98	29.4/1.16	32.5/1.28	35.7/1.41	38.5/1.52	41.7/1.64	44.9/1.77	48.0/1.89

Note: All dimensions are in millimeters and inches (mm/inch)

## Connectors weight - in gram ( $\pm 15\%$ )

Shell size & layout	9-35	11-35	13-35	15-35	17-35	19-35	21-35	23-35	25-35
Weight with contacts	14.92	20.62	29.82	40.37	48.33	59.51	70.23	82.41	96.86

## Accessories & Tooling

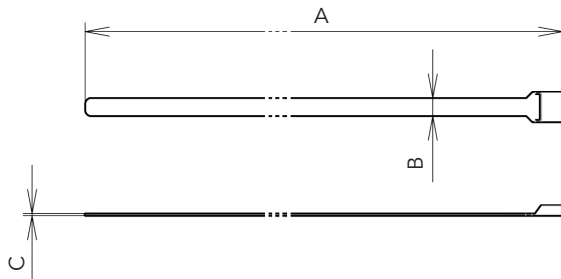
### Recommended accessories for wiring

Shell size	Shield band (recommended)	Hand banding tool	Rear diameter to fit with boot
9	85930337A (individually coiled) 85930338A (not individually coiled)	85930339A	11.1/0.44
11			14.1/0.55
13			17.1/0.67
15			21.1/0.83
17			24.1/0.95
19			27.1/1.07
21			30.1/1.18
23	85999344 (not individually coiled) 85999345 (individually coiled)	85999346	33.1/1.30
25			36.1/1.42



To order braid, boot or other accessories, please contact your SOURIAU distributor.

### Shield Band Dimension



	85930337A or 85930338A	85999344 or 85999345
A	200/7.87 Min	362.1/14.26 $\pm 1.5$
B	3.0/0.12	6.0/0.24
C	0.4/0.016 Max	0.5/0.019

Note: All dimensions are in millimeters and inches (mm/inch)

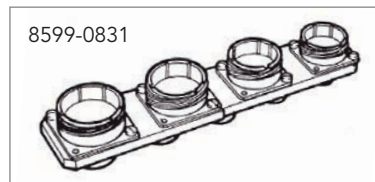
## Accessories & Tooling

### Recommended installation torque

Shell Size	Installation Torque (Inch-Pounds)
09, 11, 13, 15, 17 & 19	40
21, 23 & 25	80

Note: Torque values are based on 80% of the coupling thread strength specified in SAE-AS85049 standard.

### Tightening support



Part number: **8599-0831**  
 This tool is made up of dummy receptacles housings of all 9 sizes for all key polarisation, and secures free connectors during wiring and fitting of rear accessories.

### Crimping tools - for standard contacts

Contact size	Contact type	Contact Part number	Plier M22520/1-01	Plier M22520/2-01 (SOURIAU 8476-01)
			Turret Part number MIL Spec	Locator Part number MIL Spec
#22D	Pin	8599-0702 JJ	-	M22520/2-09
	Socket	8599-0706 900	-	M22520/2-06
#20	Pin	8599-0703 SA	M22520/1-04	M22520/2-10
	Socket	8599-0707 900		
#16	Pin	8599-0704 MJ	M22520/1-04	-
	Socket	8599-0708 900		-
#12	Pin	8599-0705 MJ	M22520/1-04	-
	Socket	8599-0709 900		-

### Insertion & extraction tools - for standard contacts

Contact size	Material	Part number	Color	
			Insertion	Extraction
#22D	Plastic	M81969/14-01	Green	White
#20	Plastic	M81969/14-10	Red	Orange
#16	Plastic	M81969/14-03	Blue	White
#12	Plastic	M81969/14-04	Yellow	White
#10	Plastic	M81969/14-05	Grey	-

### Other Accessories, Tooling & Contacts

See SOURIAU «8D Series - MIL-DTL-38999 Series III» catalog.

For further information contact us at [technical.emear@souriau.com](mailto:technical.emear@souriau.com) (Europe - Asia - Africa)  
[technical.americas@souriau.com](mailto:technical.americas@souriau.com) (North America)  
 or visit our web site [www.souriau.com](http://www.souriau.com)