



SOURIAU

High Vibration Miniature Connectors
Qualified According MIL-DTL-38999

8DA, 8BA & 8LTA Series



Presentation

The micro38999 Series (8DA, 8BA and 8LTA ranges) is made to meet a new generation of applications where space and weight are limited (Tactical radio, UAV, on board equipment, infantry, C4ISR, instrumentation, small equipment for industry, ...).

The micro38999 is the first complete platform on the market of integrated backshell products available with a 38999 design in order to be compliant with the harshest specification (high vibration, operating temperature, durability, corrosion resistance, EMI shielding, ...)



Compactness



Density



38999 design



Robustness



Space & weight saving

Contents

Overview

Typical applications	6
Features & Benefits	7
A wide product range of compact 38999	8
Smaller and more compact than D38999	9
All the features and excellence of D38999	10
Always a solution to meet your needs	10
Worldwide sales network / Multisourcing	11

micro38999 Series

8DA Series Threaded coupling	14
8BA Series Break away	19
8LTA Series Bayonet coupling	22

Common Section

Contacts & Tooling	30
Wiring instruction / Installation	31
Accessories	32
Orientations / Coordinates	33

Range Extension

8D integrated backshell	36
micro38999 with ELIO® contact	36
38999 high density	37
microComp® Series	37
8STA Series	38
Box mount interconnect solutions	38

micro38999 SERIES

8DA, 8BA & 8LTA Series

Overview

■ Typical applications	6
■ Features & Benefits	7
■ A wide product range of compact 38999	8
■ Smaller and more compact than D38999	9
■ All the features and excellence of D38999	10
■ Always a solution to meet your application needs	10
■ Worldwide sales network / Multisourcing	11

Typical applications



Radio / Network Systems



Infantry / Display



Control Unit / Solar



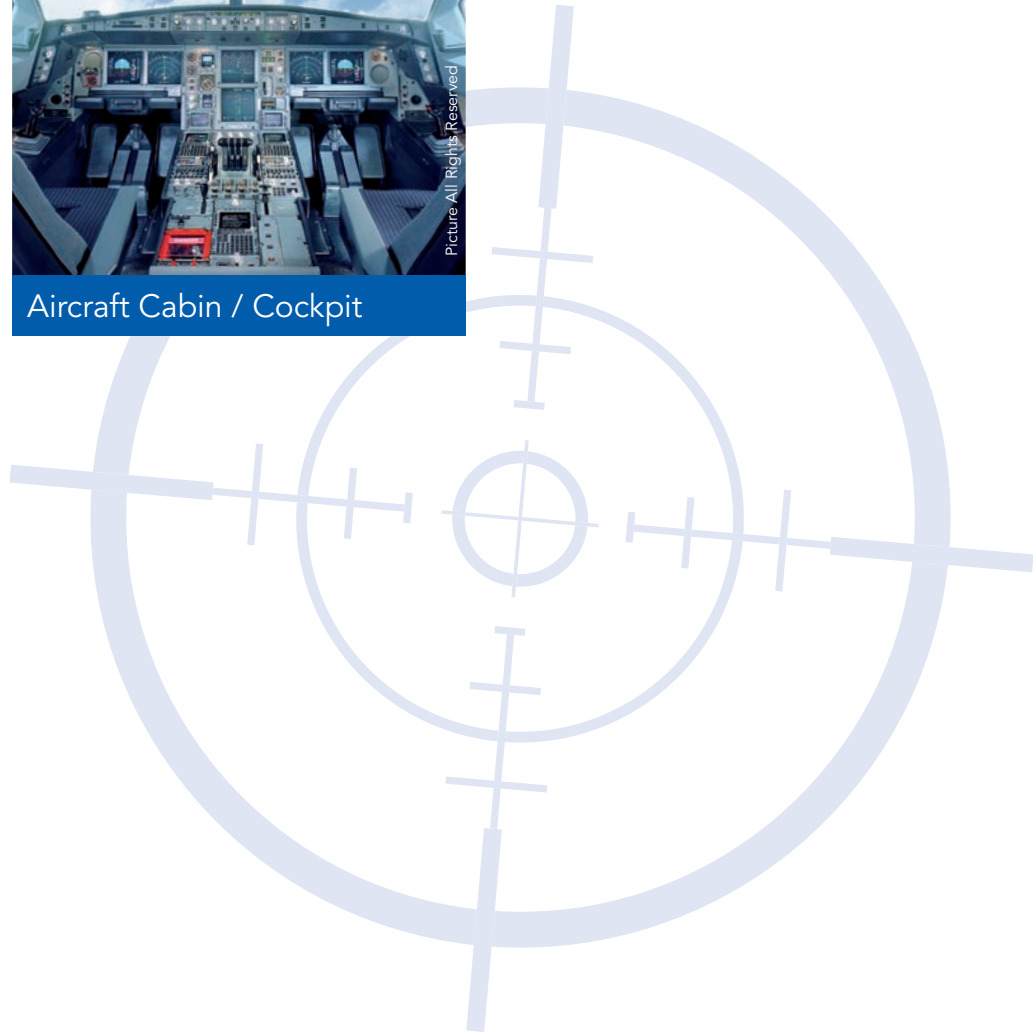
UAV / On Board Equipment



Aircraft Cabin / Cockpit



Industrial Equipment



Features & Benefits

HIGH VIB

D38999 Compliant

Connectors designed for harsh environment applications.
High vibration and high temperature withstanding.
Scoop proof.

SPACE SAVING

Compacity

Miniature shell sizes 3, 5 & 7.
#26 high density layouts.

MULTI SOURCE

Secured Supply Chain

A reliable network of manufacturers and distributors.
Less risks, more flexibility!

USER FRIENDLY

Integrated Backshell

No need of additional rear accessories.
Cost & time saving.
IP67 or IP68 with appropriate cable termination.

LARGE OFFER

A Wide and Reliable Range

3 coupling systems: threaded, break away, bayonet.
2 materials, 4 platings.
Up to 1000 mating cycles.

Not QPL listed.

A wide product range of compact 38999

3
coupling
systems

5
shell
types

Threaded coupling 8DA Series, see p.14



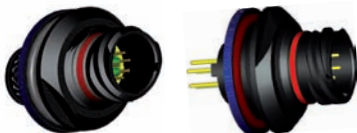
Plug

In Line Receptacle



Jam Nut Receptacle

PC tail contacts available



Square Flange Receptacle

PC tail contacts available



Break away 8BA Series, see p.19



Plug

In Line Receptacle



Jam Nut Receptacle



Bayonet coupling 8LTA Series, see p.22



Plug

In Line Receptacle



Jam Nut Receptacle

PC tail contacts available



Square Flange Receptacle

PC tail contacts available



Oval Flange Receptacle

PC tail contacts available



A wide product range of compact 38999



Aluminum

- Black Zinc Nickel RoHS
- Nickel RoHS
- Cadmium

Stainless Steel

- Passivated RoHS



AWG 26

#26 Ø 1.29 mm

AWG 22

#22D Ø 1.5 mm



Shell size 3

Layouts 3-05; 3-35

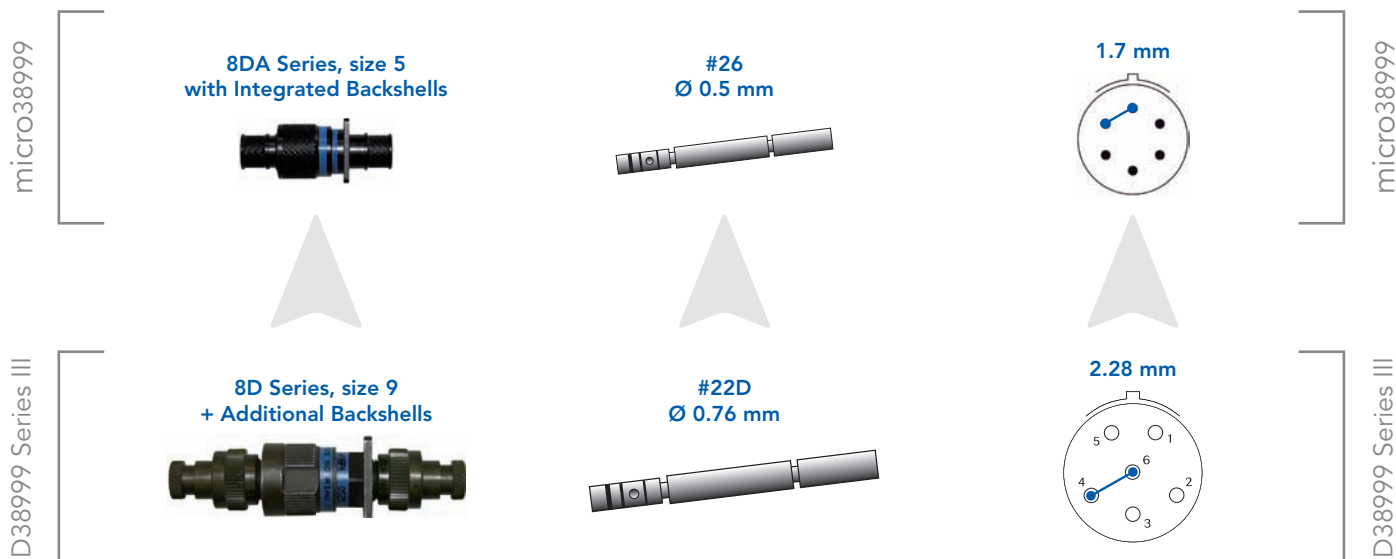
Shell size 5

Layouts 5-06; 5-35

Shell size 7

Layouts 7-09; 7-35

Smaller and more compact than D38999



Same number of contacts in a smaller connector!

50% SHORTER LENGTH | **33% SMALLER DIAMETER** | **3 TIMES LIGHTER**

Although smaller, all the features and excellence of D38999

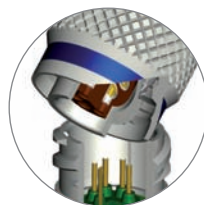


High grade thermoplastic insert

Silicone elastomer grommet and sealing
-55° to +175°C
as in D38999



Ratcheting system
Vibration:
44grms @125°C

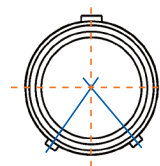


Scoop proof
Contacts protected
like D38999



Triple-start thread
Contact design according to M39029

EMI grounding
Connection as
in D38999



6 keyings
Same as D38999

Not QPL listed.

Always a solution to meet your application needs



Tactical radio/ Network systems
Switch, docking station, power supply, ...



Infantry/ Display
Battery charger, helmet, radio, ...



Autonomous robot/Solar
Control unit, data transmission, ...



UAV/On board equipment
Missile, civil & military aircraft, control unit, actuator, ...



Cockpit/ Aircraft cabin
Lighting, interconnect, ...



Industrial equipment
Instrumentation, small equipment for industry, ...



Threaded
8DA, see p.14



Break away
8BA, see p.19



Bayonet
8LTA, see p.22



Worldwide Sales Network

SOURIAU is recognized as one of the top international manufacturers of connectors for harsh environment and is continuously strengthening its leading position through its solid structure as an international group. Today the **SOURIAU** group has a strong global presence and operates 24 facilities (10 production sites and 14 offices) on 4 continents:

- 15 in Europe,
- 4 in Americas,
- 4 in Asia
- 1 in Africa.

Our international presence is reinforced by 26 franchised and value added distributors in 14 countries.

We also rely upon an extensive network of distributors and resellers worldwide. This coverage, together with a strong commitment towards service, ensures rapid responses to the specific needs of our customers.



Multisourcing

SOURIAU have reached a partnership agreement in the manufacturing, qualification, and marketing of micro38999 connectors

This partnership will provide customers with two independent sources of manufacture, guaranteed interchangeability and intermateability, with all critical features including interfacial and mounting dimensions, based on common controlled shared drawings.

Please contact us for more information.

micro38999 SERIES

8DA, 8BA & 8LTA Series

micro38999 Series

■ 8DA Series, threaded coupling	14
■ 8BA Series, break away	19
■ 8LTA Series, bayonet coupling	22

Description

- **A compact solution**
 - The smallest connector available on the market (shell size 3)
 - Miniaturization of MIL-DTL-38999 Series III
 - Threaded coupling (between 1/2 and 3/4 turn to mate) with ratcheting system (size 5 & 7)
 - Integrated backshell:
 - . Easy to wire and handle
 - . Compatible with heat shrink boot and braid retention band
 - . Compliant with overmolding
 - Triple-start thread
- **A versatile solution**
 - 3 shell sizes (3, 5, 7), 4 shell types
 - 2 materials, 4 platings
 - Crimp & PC tails contacts
 - Removable contacts #22D & #26
 - 6 keyings
- **Harsh environment-resistant solution**
 - Scoop Proof
 - Cavity to cavity sealed with interfacial seal and grommet
 - EMI ring (for size 5 & 7)
 - Fluid resistant

Technical features

Mechanical

- **Shell:**
 - Aluminum alloy
 - Passivated stainless steel (for size 5 & 7)
- **Shell plating:**
 - Aluminum:
 - . Zinc nickel (RoHS)
 - . Nickel (RoHS)
 - . Olive drab cadmium
 - Passivated stainless steel (RoHS)
- **Insulator:** Thermoplastic
- **Contact body:** Copper alloy
- **Contacts plating:** Gold over nickel plated
- **Shell endurance:**
 - Aluminum:
 - 500 mating/unmating cycles
 - Passivated stainless steel:
 - 1000 mating/unmating cycles
- **Vibration:**
 - 44 grms @125°C, 2 axes during 8 hours
- **Shock:**
 - 300g, 3 ms

Electrical

- **Wire size**

Layouts	Wire (AWG)
03-05; 05-06; 07-09	24-30
03-35; 05-35; 07-35	22-28
- **Test voltage (at sea level):**
 - Size 22D: 1000 Vrms
 - Size 26: 400 Vrms
- **Contact resistance:**
 - Size 22D: <14.6 mΩ Size 26: <16 mΩ
- **Contact rating:**
 - Size 22D: 5A Size 26: 3A
- **Contact retention:**
 - Size 22D: 45N Size 26: 30N
- **Shell to shell continuity (typical value)**

Shell size	Aluminum version	Stainless steel version
3		NA
5	10 mΩ	60 mΩ
7		
- **EMI:**
 - Aluminum: -70dB @ 1GHz
 - Passivated stainless steel: -55 dB @ 1Ghz

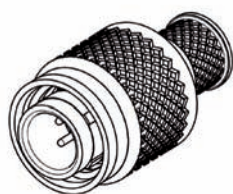
Environmental

- **Temperature range:**
 - 55°C to +175°C
- **Water immersion:**
 - IP 67 on mated connector
 - 1 meter for 30 min minimum
 - > IP68 with appropriate cable termination
- **Salt spray:**
 - Zinc nickel: 500 hours
 - Nickel: 48 hours
 - Olive drab cadmium: 500 hours
 - Passivated stainless steel: 250 hours

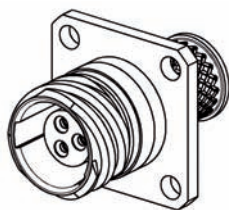
Resistance to fluids

- **According to MIL-DTL-38999 standard**
 - Gasoline: JP5 (OTAN F44)
 - Mineral hydraulic fluid: MIL-H-5606 (OTAN H515)
 - Synthetic hydraulic fluid: Skydrol 500 B4
- **Compatible with de-icing fluids containing potassium acetate**

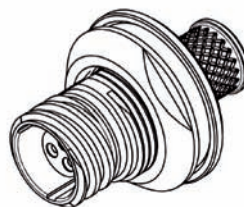
Shell types



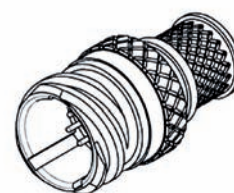
Plug



Square flange receptacle
(PC tail version available)



Jam nut receptacle
(PC tail version available)



In line
receptacle

For other configuration, please consult us.

Contact layouts

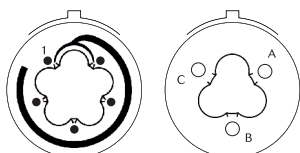
03

05

07

05

35

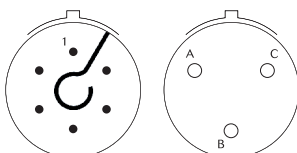


5#26

3#22D

06

35

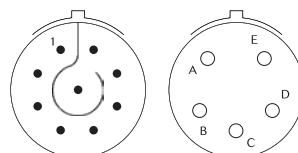


6#26

3#22D

09

35



9#26

5#22D

Size 3: Marking on shell.

Rear view of receptacle for male and female insulator.
Opposite marking between plug and receptacle.

Sizes 5 and 7: Marking on insulator.

Rear view of male insulator for plug and receptacle.
Opposite marking between male and female insulator.

Ordering information

Basic Series	8DA	0	03	W	05	P	N
Shell type: 0: Square flange receptacle 1: In line receptacle 5: Plug with EMI ring (Size 5 & size 7) 6: Plug without EMI ring (Size 3 only) 7: Jam nut receptacle 90: Square flange receptacle with PCB contacts 97: Jam nut receptacle with PCB contacts							
Contact type: None: Standard crimp contacts C: Short PC tail L: Long PC tail (consult us)							
Shell size: 03, 05, 07							
Plating : Z: Black zinc nickel F: Nickel W: Olive drab cadmium K: Passivated stainless steel (only for sizes 05 & 07 with standard crimp contacts)							
Contact layouts: See above							
Contact type: P: Pin (Shell size 3 scoop proof only when pin contacts mounted in Type 6) S: Socket (Shell size 3 scoop proof only when socket contacts mounted in Types 0, 1 or 7) - not available for PCB version							
Orientation: N, A, B, C, D, E (see page 33)							

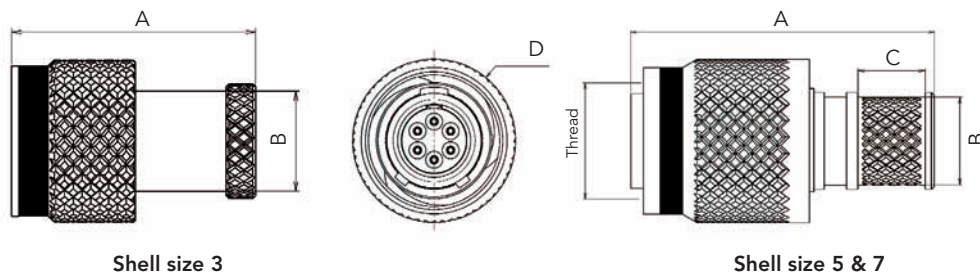
Connector weights

Aluminum version - in gram $\pm 10\%$

Shell size & layout	Plug		Square flange receptacle		Jam nut receptacle	
	Without contacts	With crimp contacts	Without contacts	With crimp contacts	Without contacts	With crimp contacts
3-05	2.4	2.5	1.9	2.1	3	3.1
5-06	6	6.2	5.4	5.8	6	6.4
7-09	6.5	6.8	6	6.5	7	7.5

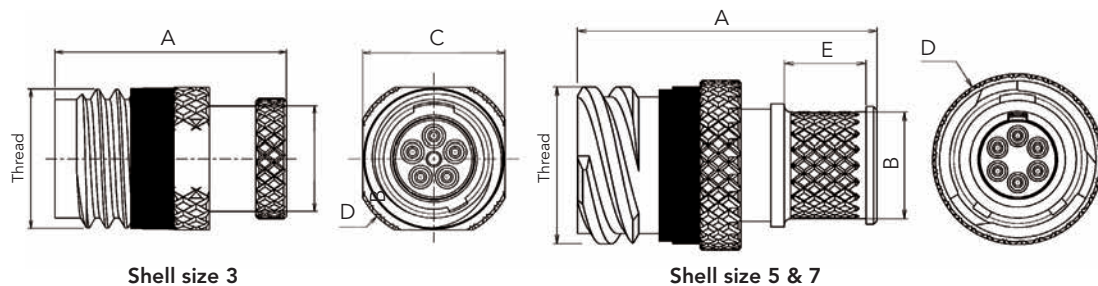
Dimensions

Plug - Shell type 5 & 6



Shell size	Thread	A Max	ØB Max	C Max	ØD Max
3	3-05	-	17	7	-
	3-35	-	17.5	7	-
5	5/11"-1P	28	8	6.1	15
7	1/2"-1P	28	9.5	6.1	16

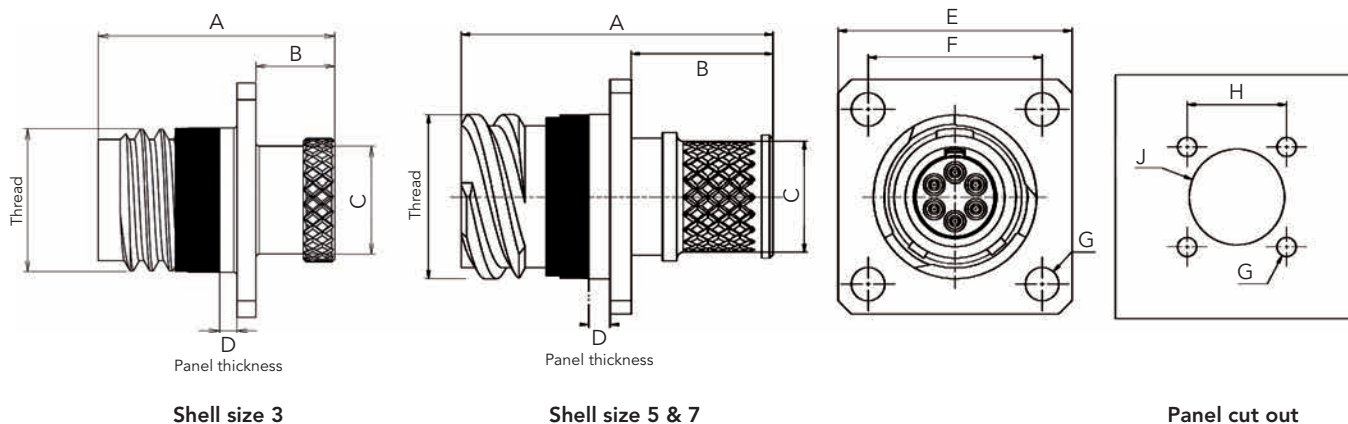
In line receptacle - Shell type 1



Shell size	Thread	A Max	B Max	C Max	ØD Max	E Max
3	M9	15.5	7	9.3	11	-
5	5/11"-1P	23	8	-	13	6.1
7	1/2"-1P	25	9.5	-	13.5	6.1

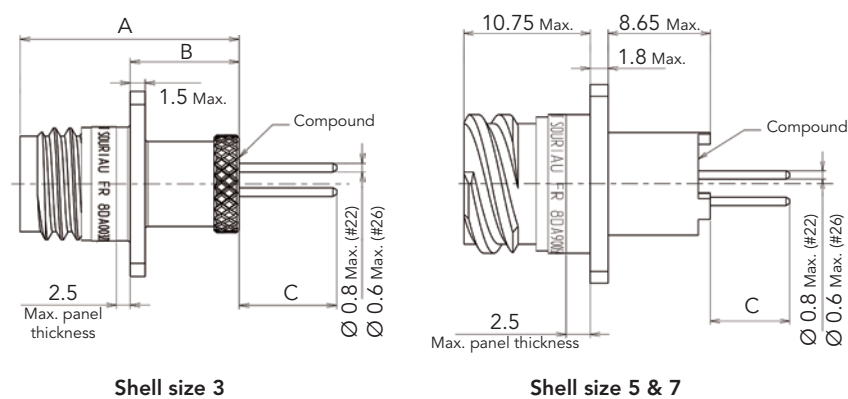
Note: All dimensions are in millimeters (mm)

Square flange receptacle - Shell type 0



Shell size		Thread	A Max	B Max	ØC Max	D Max	E Max	F Max	ØG Max	H Max	ØJ Max
3	3-05	M9	15	5	6.8	2.5	15	10.5	2.35±0.08	10.5	9.5
	3-35	M9	18	8	6.8	2.5	15	10.5	2.35±0.08	10.5	9.5
5		5/11"-1P	23	10.5	8	2.5	16.6	12.27	2.35±0.08	12.27	11.75
7		1/2"-1P	25	13	10	2.5	18	13.84	2.35±0.08	13.8	12.95

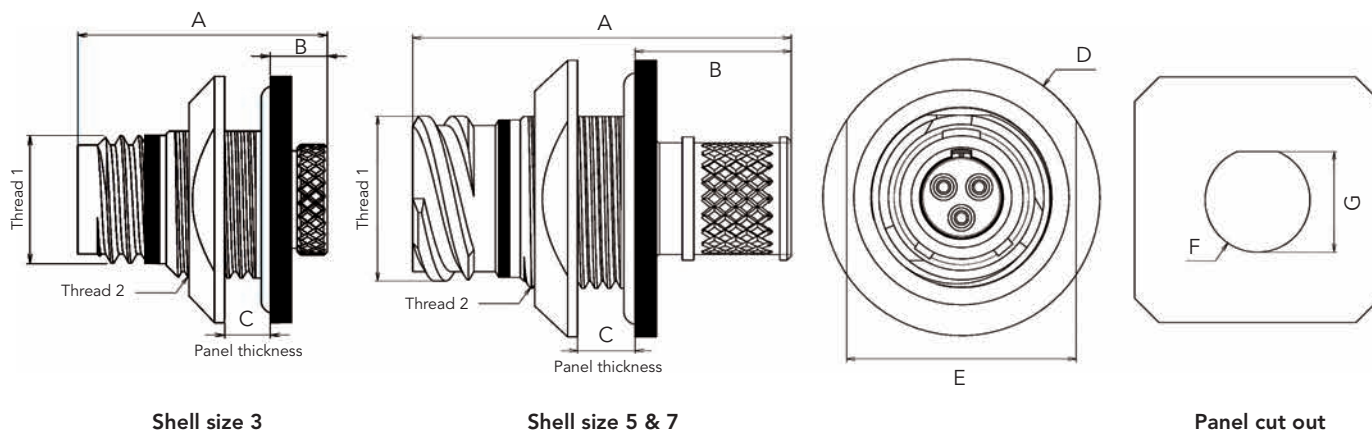
Square flange receptacle with PC tail contacts - Shell type 90



Layout	A Max.	B Max.	C Min.	C Max.
03-05	15	6.5	8.47	9.47
03-35	18	9	7.39	8.12
05-06	-	-	5.89	7
05-35	-	-	5.87	6.9
07-09	-	-	6.04	7
07-35	-	-	5.82	6.9

Shell design vary according to shell size.
For L contact (long PC tail) please consult us.

Jam nut receptacle - Shell type 7



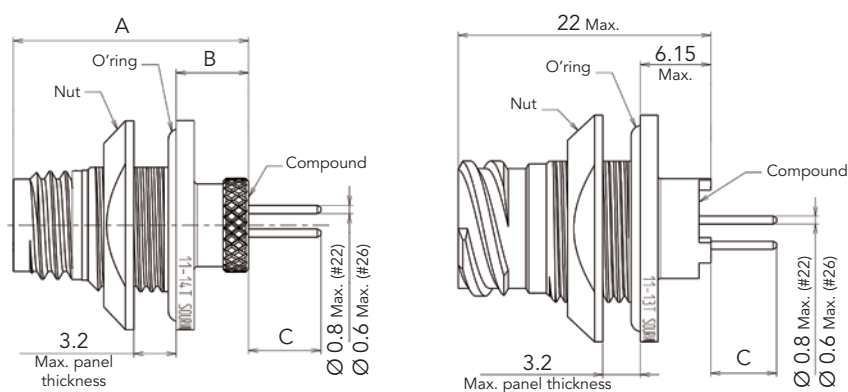
Shell size 3

Shell size 5 & 7

Panel cut out

Shell size		Thread 1	Thread 2	A Max	B Max	C Max	ØD Max	E Max	ØF Max	G Max
3	3-05	M9	7/16"28 UNEF 2A	18	4.5	3.2	18	14	11.3	10.6
	3-35	M9	7/16"28 UNEF 2A	20	6.5	3.2	18	14	11.3	10.6
5		5/11"-1P	1/2"28 UNEF 2A	27	11	3.2	19.5	16	12.8	12.3
7		1/2"-1P	9/16"24 UNEF 2A	27	11.5	3.2	21	17	14.5	13.8

Jam nut receptacle with PC tail contacts - Shell type 97



Shell size 3

Shell size 5 & 7

Layout	A Max.	B Max.	C Min.	C Max.
03-05	18.5	4.2	5.87	6.97
03-35	20.5	6.2	5.19	6.02
05-06	-	-	4.86	5.95
05-35	-	-	4.82	5.85
07-09	-	-	4.99	5.95
07-35	-	-	4.77	5.85

Shell design vary according to shell size.
For L contact (long PC tail) please consult us.



Description

- **A compact solution**
 - The smallest connector available on the market (shell size 3)
 - Break away: quick disconnect
 - Integrated backshell:
 - . Easy to wire and handle
 - . Compatible with heat shrink boot and braid retention band
 - . Compliant with overmolding
- **A versatile solution**
 - 3 shells sizes: 3, 5, 7
 - Plug; In line and jam nut receptacle
 - Crimp & PC tails contacts (on request)
 - Removable contacts #22D & #26
 - 6 keyings
- **Harsh environment-resistant solution**
 - Scoop Proof (when sockets mounted into receptacle only)
 - Cavity to cavity sealed with interfacial seal and grommet
 - Fluid resistant

Technical features

Mechanical

- **Shell:**
 - Aluminum alloy
- **Shell plating:**
 - Aluminum:
 - . Zinc nickel (RoHS)
 - . Nickel (RoHS)
 - . Olive drab cadmium
- **Insulator:** Thermoplastic
- **Contact body:** Copper alloy
- **Contacts plating:** Gold over nickel plated
- **Shell endurance:**
 - Aluminum:
 - 500 mating/unmating cycles
- **Vibration:**
 - 30 grms ambient, 2 axes during 8 hours
- **Shock:**
 - 300g, 3 ms

Electrical

- **Wire size**

Layouts	Wire (AWG)
03-05; 05-06; 07-09	24-30
03-35; 05-35; 07-35	22-28
- **Test voltage (at sea level):**
 - Size 22D: 1000 Vrms
 - Size 26: 400 Vrms
- **Contact resistance:**
 - Size 22D: <14.6 mΩ
 - Size 26: <16 mΩ
- **Contact rating:**
 - Size 22D: 5A
 - Size 26: 3A
- **Contact retention:**
 - Size 22D: 45N
 - Size 26: 30N
- **Shell to shell continuity (typical value)**

Shell size	Aluminum version
3	
5	
7	10 mΩ
- **EMI:**
 - Aluminum: -70dB @ 1GHz

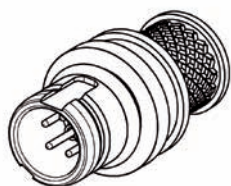
Environmental

- **Temperature range:**
 - 55°C to +175°C
- **Water immersion:**
 - IP 67 on mated connector
 - 1 meter for 30 min minimum
 - > IP68 with appropriate cable termination
- **Salt spray:**
 - Zinc nickel: 500 hours
 - Nickel: 48 hours
 - Olive drab cadmium: 500 hours

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
- **Compatible with de-icing fluids containing potassium acetate**

Shell types



Plug



In line receptacle



Jam nut receptacle

For other configuration or PC tail version, please consult us.

Contact layouts

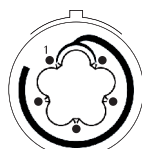
03

05

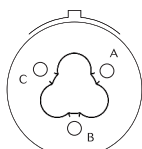
07

05

35



5#26



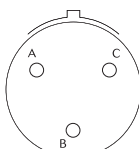
3#22D

06

35



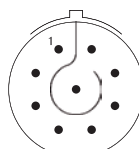
6#26



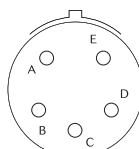
3#22D

09

35



9#26



5#22D

Size 3: Marking on shell.

Rear view of receptacle for male and female insulator.
Opposite marking between plug and receptacle.

Sizes 5 and 7: Marking on insulator.

Rear view of male insulator for plug and receptacle.
Opposite marking between male and female insulator.

Ordering information

Basic Series	8BA	1	03	W	05	P	N
Shell type: 1: In line receptacle 6: Plug 7: Jam nut receptacle							
Shell size: 03, 05, 07							
Plating : Z: Black zinc nickel F: Nickel W: Olive drab cadmium							
Contact layouts: See above							
Contact type: P: Pin S: Socket (Scoop proof only when socket contacts mounted in Type 1 & Type 7)							
Orientation: N, A, B, C, D, E (see page 33)							

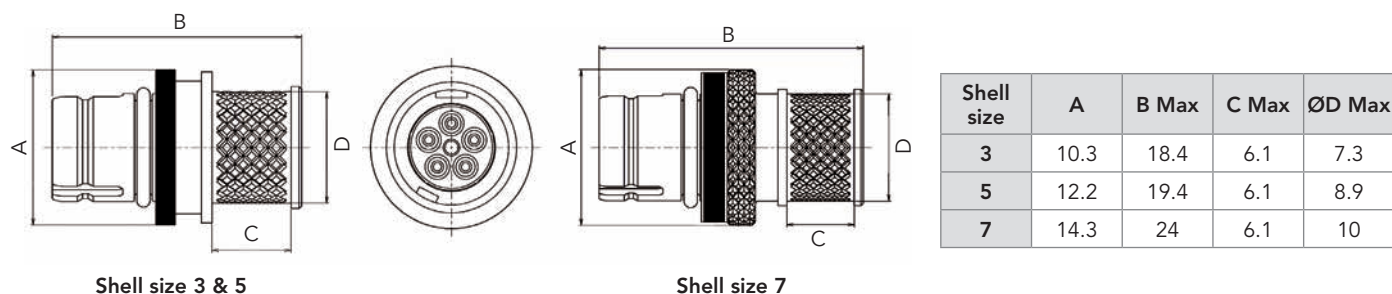
Connector weights

Aluminum version - in gram $\pm 10\%$

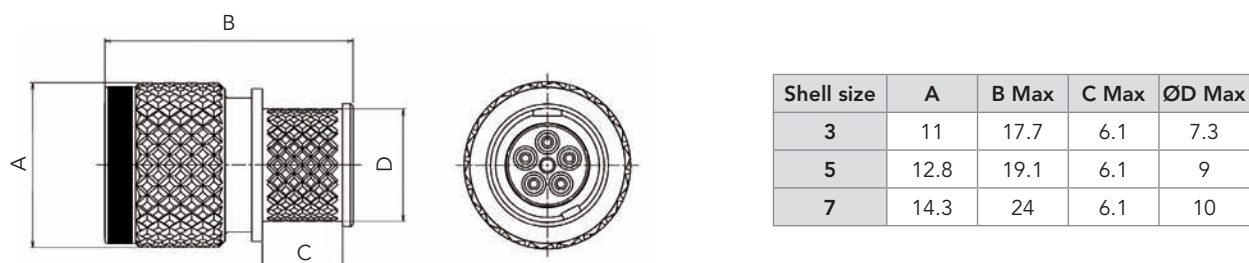
Shell size & layout	Plug		In line receptacle	
	Without contacts	With crimp contacts	Without contacts	With crimp contacts
3-05	1.7	1.8	1.3	1.4
5-06	2.6	2.8	2.9	3.1
7-09	4.3	4.7	4.7	5.1

Dimensions

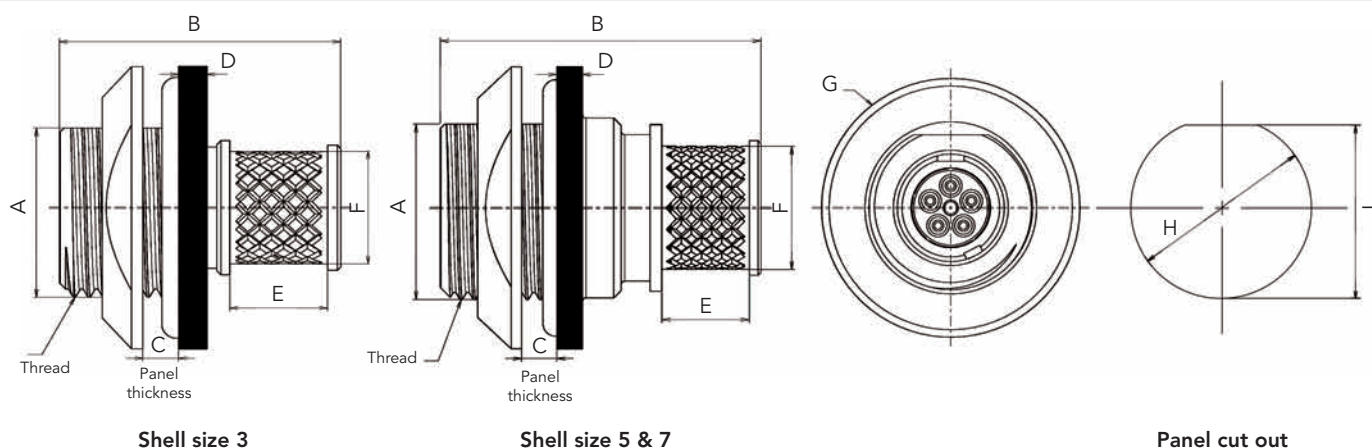
Plug - Shell type 6



In line receptacle - Shell type 1



Jam nut receptacle - Shell type 7



Shell size	Thread	A Max	B Max	C Max	D	E Max	ØF Max	ØG Max	ØH	J
3	7/16"28 UNEF 2A	10.55	17.7	3.2	1.75±0.3	6.1	7.3	17.5	11.3±0.1	10.6±0.05
5	1/2"28 UNEF 2A	12.2	22.5	3.2	1.75±0.3	6.1	8.9	19.5	12.8±0.1	12.3±0.05
7	9/16"24 UNEF 2A	13.6	24	3.2	1.75±0.3	6.1	10	21	14.5±0.1	13.8±0.05

Note: All dimensions are in millimeters (mm)



Description

- **A compact solution**
 - The smallest connector available on the market (shell size 3)
 - Miniaturization of MIL-DTL-38999 Series I
 - Quick bayonet locking
 - Integrated backshell:
 - . Easy to wire and handle
 - . Compatible with heat shrink boot and braid retention band
 - . Compliant with overmolding
- **A versatile solution**
 - 3 shell sizes (3, 5, 7), 5 shell types
 - 2 materials, 4 platings
 - Crimp & PC tails contacts
 - Removable contacts #22D & #26
 - 6 keyings
- **Harsh environment-resistant solution**
 - Scoop Proof
 - Cavity to cavity sealed with interfacial seal and grommet
 - Fluid resistant

Technical features

Mechanical

- **Shell:**
 - Aluminum alloy
 - Passivated stainless steel (for size 5 & 7)
- **Shell plating:**
 - Aluminum:
 - . Zinc nickel (RoHS)
 - . Nickel (RoHS)
 - . Olive drab cadmium
 - Passivated stainless steel (RoHS)
- **Insulator:** Thermoplastic
- **Contact body:** Copper alloy
- **Contacts plating:** Gold over nickel plated
- **Shell endurance:**
 - Aluminum:
 - 250 mating/unmating cycles
 - Passivated stainless steel:
 - 500 mating/unmating cycles
- **Vibration:**
 - 30 grms ambient, 2 axes during 8 hours

Electrical

- **Wire size**

Layouts	Wire (AWG)
03-05; 05-06; 07-09	24-30
03-35; 05-35; 07-35	22-28
- **Test voltage (at sea level):**
 - Size 22D: 1000 Vrms
 - Size 26: 400 Vrms
- **Contact resistance:**
 - Size 22D: <14.6 mΩ
 - Size 26: <16 mΩ
- **Contact rating:**
 - Size 22D: 5A
 - Size 26: 3A
- **Contact retention:**
 - Size 22D: 45N
 - Size 26: 30N
- **Shell to shell continuity (typical value)**

Shell size	All versions
3	250 mΩ
5	
7	
- **EMI:** -55dB @ 1GHz

Environmental

- **Temperature range:**
 - 55°C to +175°C
- **Water immersion:**
 - IP 67 on mated connector
 - 1 meter for 30 min minimum
 - > IP68 with appropriate cable termination
- **Salt spray:**
 - Zinc nickel: 500 hours
 - Nickel: 48 hours
 - Olive drab cadmium: 500 hours
 - Passivated stainless steel: 250 hours

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
- **Compatible with de-icing fluids containing potassium acetate**

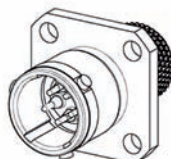
Shell types



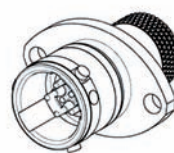
Plug



In line receptacle



Square flange receptacle
(PC tail version available)



Oval flange receptacle
(PC tail version available)



Jam nut receptacle
(PC tail version available)

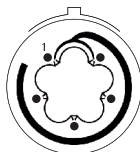
For other configuration, please consult us.

Contact layouts

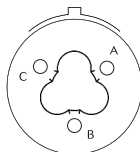
03

05

35



5#26



3#22D

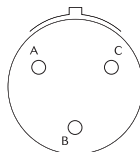
05

06

35



6#26

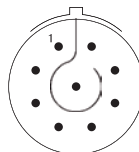


3#22D

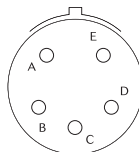
07

09

35



9#26



5#22D

Size 3: Marking on shell.

Rear view of receptacle for male and female insulator.

Opposite marking between plug and receptacle.

Sizes 5 and 7: Marking on insulator.

Rear view of male insulator for plug and receptacle.

Opposite marking between male and female insulator.

Ordering information

Basic Series	8LTA	0	03	W	05	P	N
Shell type: 0: Square flange receptacle 1: In line receptacle 2: Oval flange receptacle 6: Plug without EMI ring 7: Jam nut receptacle 90: Square flange receptacle with PCB contacts 92: Oval flange receptacle with PCB contacts 97: Jam nut receptacle with PCB contacts							
Contact type: None: Standard crimp contacts C: Short PC tail L: Long PC tail (consult us)							
Shell size: 03, 05, 07							
Plating : Z: Black zinc nickel F: Nickel W: Olive drab cadmium K: Passivated stainless steel (only for sizes 05 & 07 with standard crimp contacts)							
Contact layouts: See above							
Contact type: P: Pin S: Socket - not available for PCB version							
Orientation: N, A, B, C, D, E (see page 33)							

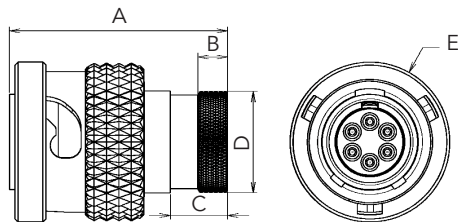
Connector weights

Aluminum version - in gram $\pm 10\%$

Shell size & layout	Plug		In line receptacle	
	Without contacts	With crimp contacts	Without contacts	With crimp contacts
3-05	1.7	1.8	1.3	1.4
5-06	2.6	2.8	2.9	3.1
7-09	4.3	4.7	4.7	5.1

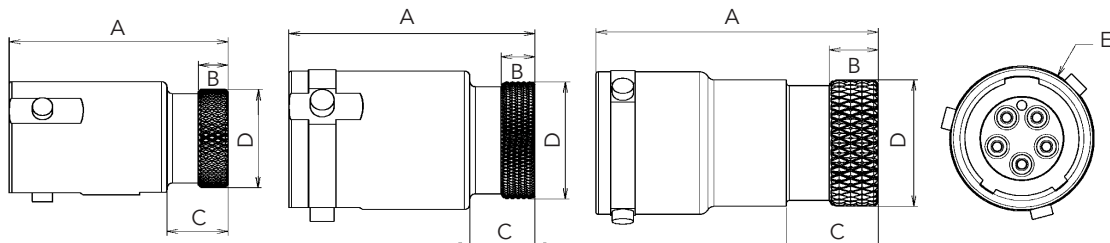
Dimensions

Plug - Shell type 6



Shell size		A Max	B Max	C Max	ØD Max	ØE Max
3	3-05	16.2	2.2 ± 0.15	4.6	7.2	10.5
	3-35	17.5	2.2 ± 0.15	5.9	7.2	10.5
05		18.4	2.5 ± 0.15	4.9	8.55	13.5
07		22.06	3.65 ± 0.15	6.35	10.3	15.06

In line receptacle - Shell type 1



Shell size 3

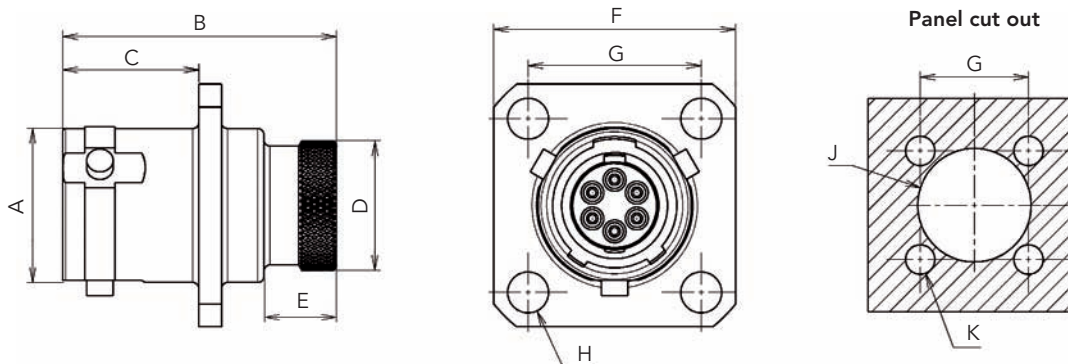
Shell size 5

Shell size 7

Shell size		A Max	B Max	C Max	ØD Max	ØE Max
3	3-05	16.2	2.2 ± 0.15	4.6	7.2	8.3
	3-35	17.5	2.2 ± 0.15	5.9	7.2	8.3
5		18.2	2.5 ± 0.15	4.9	8.55	10.15
7		23.6	4 ± 0.15	7.5	10.3	11.6

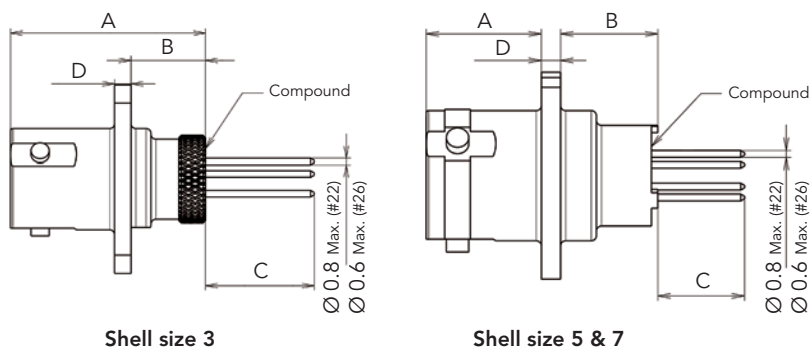
Note: All dimensions are in millimeters (mm)

Square flange receptacle - Shell type 0



Shell size		ØA Max	B Max	C Max	ØD Max	E Max	F Max	G Max	ØH Max	ØJ Max	ØK Max
3	3-05	8.3	16.2	8.7	7.2	4.6	15.5	10.8	2.7±0.1	9.3±0.1	3.1±0.1
	3-35	8.3	17.5	8.7	7.2	5.9	15.5	10.8	2.7±0.1	9.3±0.1	3.1±0.1
5		10.15	18.2	9.05	8.55	4.9	16	11.45	2.7±0.1	12±0.1	3.1±0.1
7		11.6	23.06	10.8	10.3	7.5	18	12.7	2.7±0.1	13±0.1	3.1±0.1

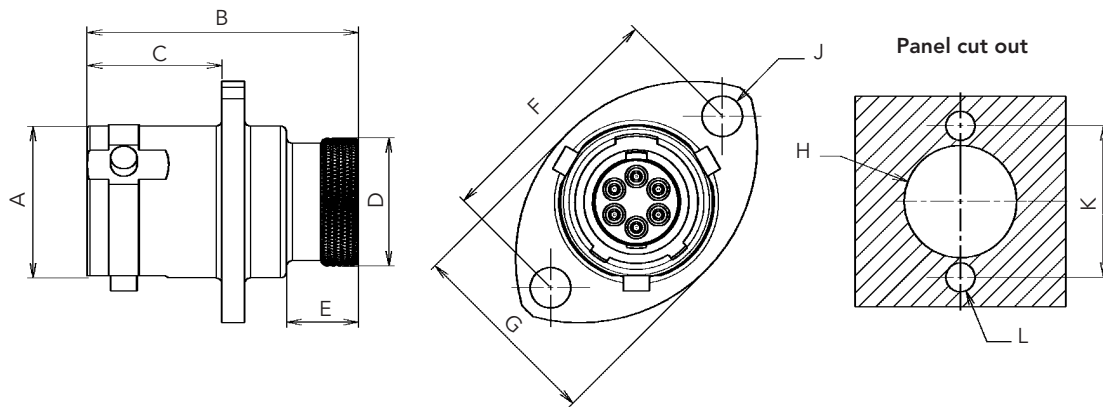
Square flange receptacle with PC tail contacts - Shell type 90



Layout	A Max.	B Max.	C Min.	C Max.	D Max.
03-05	16.4	6.35	8.75	9.49	1.65
03-35	17.7	7.75	7.40	8.19	1.65
05-06	9.25	7.85	6.54	7.34	1.80
05-35	9.25	7.85	6.47	7.19	1.80
07-09	13.05	7.35	5.80	6.62	2.35
07-35	13.05	7.35	5.53	6.52	2.35

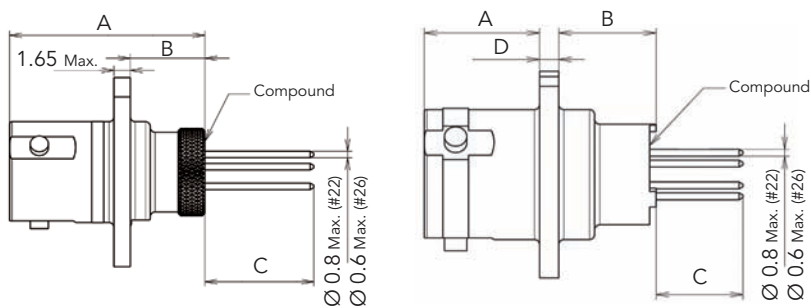
Shell design vary according to shell size.
For L contact (long PC tail) please consult us.

Oval flange receptacle - Shell type 2



Shell size		ØA Max	B Max	C Max	ØD Max	E Max	F Max	G Max	ØH Max	ØJ Max	K Max	ØL Max
3	3-05	8.3	16.2	8.7	7.2	4.6	15.3±0.2	10.5±0.1	2.8	9.3±0.1	15.3±0.2	3.1±0.1
	3-35	8.3	17.5	8.7	7.2	5.9	15.3±0.2	10.5±0.1	2.8	9.3±0.1	15.3±0.2	3.1±0.1
5		10.15	18.2	9.05	8.55	4.9	16.2±0.2	13±0.1	2.7	12±0.1	16.2±0.2	3.1±0.1
7		11.6	23.06	10.8	10.3	7.5	18±0.2	14.8±0.1	2.7	13±0.1	18±0.2	3.1±0.1

Oval flange receptacle with PC tail contacts - Shell type 92



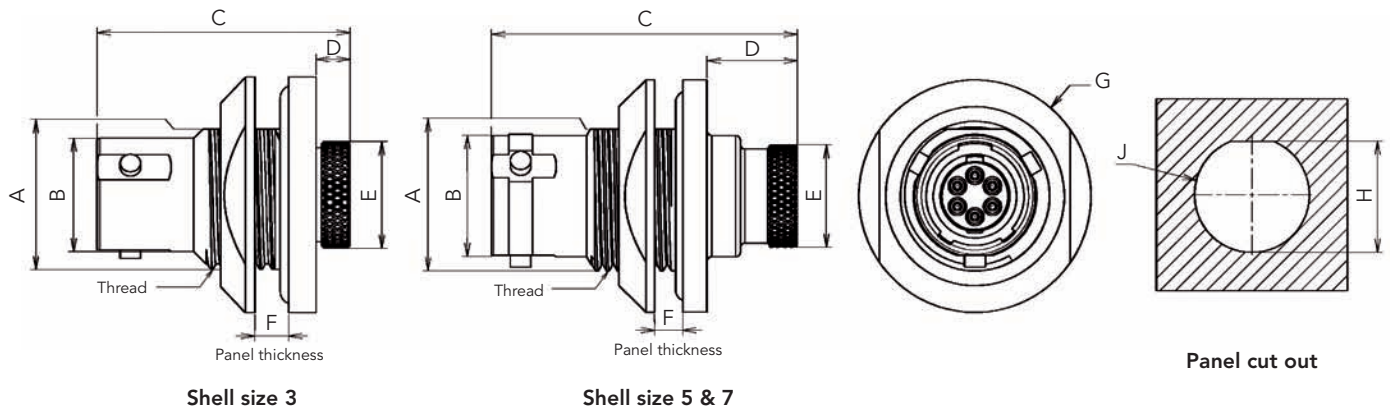
Shell size 3

Shell size 5 & 7

Layout	A Max.	B Max.	C Min.	C Max.	D Max.
03-05	16.2	6.35	8.75	9.49	-
03-35	17.5	7.75	7.4	8.19	-
05-06	9.25	7.85	6.54	7.34	1.80
05-35	9.25	7.85	6.47	7.19	1.80
07-09	13.05	7.35	5.8	6.62	2.35
07-35	13.05	7.35	5.53	6.52	2.35

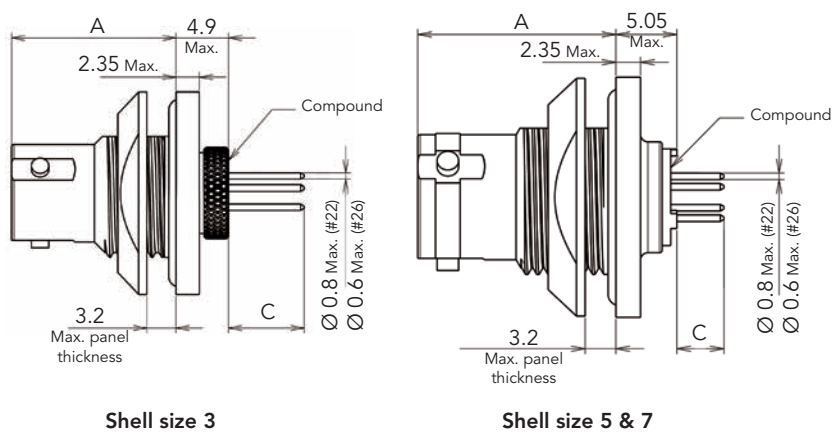
Shell design vary according to shell size.
For L contact (long PC tail) please consult us.

Jam nut receptacle - Shell type 7



Shell size		Thread	A Max	ØB Max	C Max	D Max	ØE Max	F Max	ØG Max	H Max	ØJ Max
3	3-05	7/16"28 UNEF 2A	10.3	8.3	16.2	2.6	7.8	1 to 3.2	17.3	11.3±0.1	12±0.1
	3-35	7/16"28 UNEF 2A	10.3	8.3	17.5	2.6	7.8	1 to 3.2	17.3	11.3±0.1	12±0.1
5		1/2"28 UNEF 2A	11.7	10.5	25.9	7.7	8.55	1 to 3.2	19.5	13±0.1	13.5±0.1
7		9/16"24 UNEF 2A	13.4	11.6	33.55	10.4	10.3	1 to 3.2	20.8	14.4±0.1	15.2±0.1

Jam nut receptacle with PC tail contacts - Shell type 97



Layout	A Max.	Short PC tail C		Long PC tail L	
		C Min.	C Max.	C Min.	C Max.
03-05	14.4	6.15	7.04	10.65	11.54
03-35	15.7	4.8	5.7	9.3	10.19
05-06	16.4	3.54	4.52	7.99	9.02
05-35	16.4	3.42	4.33	7.92	8.83
07-09	21.3	4.05	5.07	7.60	8.57
07-35	21.3	3.79	4.93	7.29	8.43

Shell design vary according to shell size.

micro38999 SERIES

8DA, 8BA & 8LTA Series

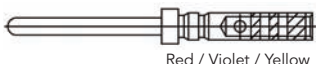
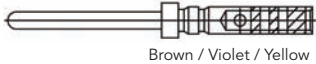
Common Section

■ Crimp contacts	30
■ Thermocouple contacts.....	30
■ Crimping tools	30
■ Insertion & extraction tools	31
■ Recommended accessories for wiring	31
■ Installation	31
■ Gaskets	32
■ Aluminum caps	32
■ Orientations	33
■ Coordinates information	33

Crimp contacts

Contact size	Shell sizes	Contact type	Part number		Contact Ø (mm)	Conductor section				External Ø over insulator (mm)	
						AWG		mm²			
			MIL-DTL-38999	SOURIAU		min	max	min	max	min	max
#26	3 to 7	Pin	-	8599-1001	0.50	30	24	0.095	0.24	0.60	0.83
		Socket	-	8599-1002							
	9 to 25	Pin	-	8599-0297	0.50	30	24	0.055	0.215	0.60	0.83
		Socket	-	8599-0298							
#22D	3 to 25	Pin	M39029/58 360	8599-0702 JJ	0.76	28	22	0.095	0.38	0.71	1.37
	3 to 7	Socket	M39029/57 354	8599-0710 900							
	9 to 25	Socket	M39029/56 348	8599-0706 900							
#20	9 to 25	Pin	M39029/58 363	8599-0703 SA	1.00	24	20	0.21	0.60	1.02	2.11
		Socket	M39029/56 351	8599-0707 900							
#16	9 to 25	Pin	M39029/58 364	8599-0704 MJ	1.60	20	16	0.60	1.34	1.65	2.77
		Socket	M39029/56 352	8599-0708 900							
#12	9 to 25	Pin	M39029/58 365	8599-0705 MJ	2.40	14	12	1.91	3.18	2.46	3.61
		Socket	M39029/56 353	8599-0709 900							
#10	9 to 25	Pin	M39029/58 528	-	3.20	Please consult us				-	2.95
		Socket	M39029/56 527	-							

Thermocouple contacts

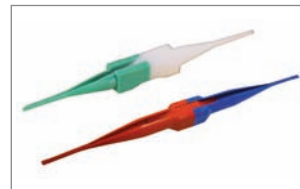
Contact size	Contact type	MIL-DTL-38999 contacts		Contact Ø (mm)	Wire section				External Ø over insulator (mm)	
		Part numbers	Profile and color code		AWG		mm²		min	max
					min	max	min	max		
#22D Chromel	Pin	M39029/87-472	 Red / Violet / Yellow	0.75	28	22	0.095	0.34	0.76	1.37
	Socket	M39029/89-496	 Yellow / White / White							
#22D Alumel	Pin	M39029/87-471	 Brown / Violet / Yellow							
	Socket	M39029/89-495	 Yellow / White / Green							

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		Locator Part number	
			MIL Spec	SOURIAU	MIL Spec	SOURIAU
#26	Pin	-	-	-	-	640-088
	Socket	-	-	-	-	640-089
#22D	Pin	8599-0702 JJ	-	-	M22520/2-09	8476-09
	Socket	8599-0706 900	-	-	M22520/2-07	8476-07
#20	Pin	8599-0703 SA	M22520/1-04	8365-04	M22520/2-10	8476-10
	Socket	8599-0707 900				
#16	Pin	8599-0704 MJ	M22520/1-04	8365-04	-	-
	Socket	8599-0708 900			-	-
#12	Pin	8599-0705 MJ	M22520/1-04	8365-04	-	-
	Socket	8599-0709 900			-	-

Insertion & extraction tools for standard contacts

Contact size	Material	Part number	Color	
			Insertion	Extraction
#26	Plastic	85990444900	Red	Blue
#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	-



Recommended accessories for wiring

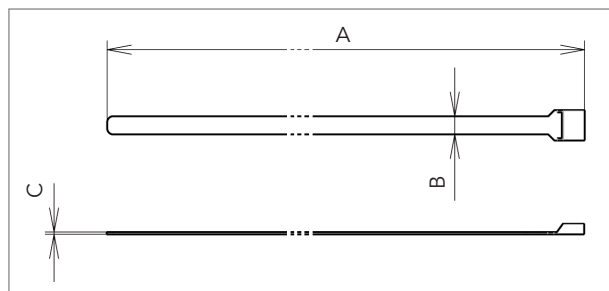
Braid, straight heat shrink boot, elbow heat shrink boot, shield band, ...

Shell size	Shield band (recommended)	Hand banding tool
3 to 21	85930337A (individually coiled) 85930338A (not individually coiled)	85930339A
23 & 25	85999344 (not individually coiled) 85999345 (individually coiled)	85999346



To order braid, boot (e.g. VG95343T type) or other accessories, please contact your SOURIAU distributor.

Shield band dimensions



Shield band	85930337A or 85930338A Shell sizes 3 to 21	85999344 or 85999345 Shell sizes 23 & 25
A	200 Min.	362.1 $\pm$ 1.5
B	3	6
C	0.4 Max.	0.5

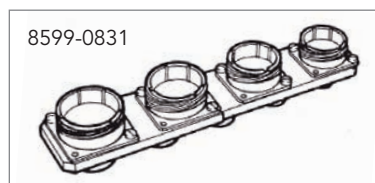
Installation

Recommended installation torque

Shell Size	Installation Torque (Inch-Pounds)
09 to 19	40
21 to 25	80

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 sizes, from 9 to 25, for all key polarisation, and secures free connectors during wiring and fitting of rear accessories.

Note: All dimensions are in millimeters (mm)

Gaskets

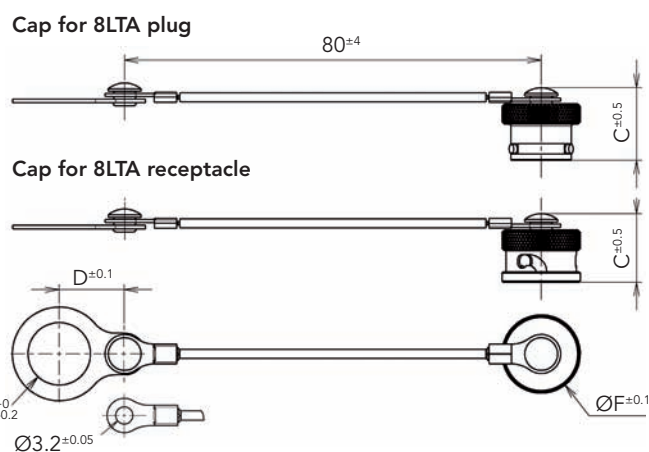
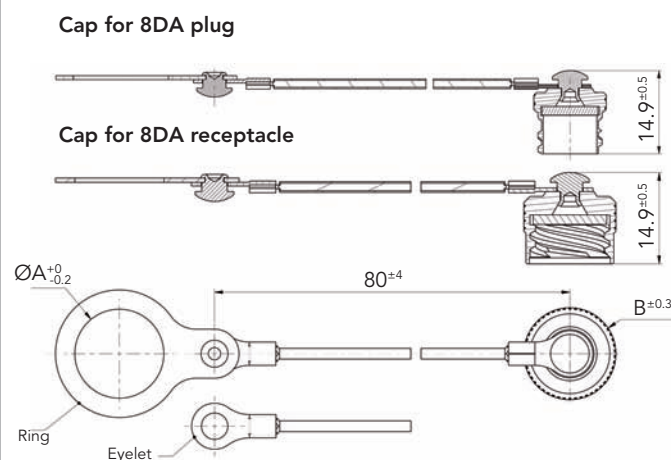
Shell size	Part number		
	8DA square flange receptacle	8LTA square flange receptacle	8LTA oval flange receptacle
3	8DA0G03	8LTA0G03	8LTA2G03
5	8DA0G05	8LTA0G05	8LTA2G05
7	8DA0G07	8LTA0G07	8LTA2G07



Aluminum caps

Basic Series: 8DAC: Cap for 8DA Series 8LTAC: Cap for 8LTA Series					
Cap type: 32: Cap for plug 33: Cap for receptacle					
Plating: Z: Black zinc nickel F: Nickel W: Olive drab cadmium					
Shell size: 03, 05, 07					
Style: N: Ring R: Eyelet					

Dimensions



Shell size	A	B		C		D	E	F
		Plug	Recep.	Plug	Recep.			
03	11.5	11	12.5	14.1	12.1	13.5	11.5	10.4
05	13.5	13	15	13.7	13.9	14.5	13	13.4
07	14.5	14	17	14	13.1	15.5	14.5	15.05

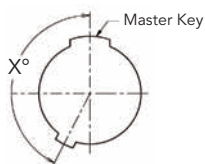
Note: for other lanyard length please consult us.

Note: All dimensions are in millimeters (mm)

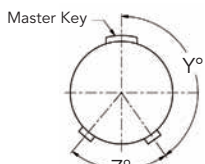
Orientations

Viewed from front face of plug

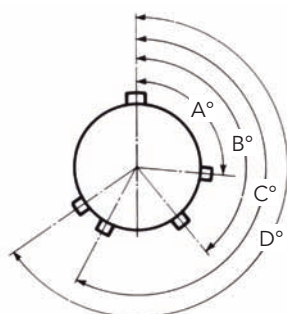
Shell size 3



Shell sizes 5 & 7



Shell sizes 9 to 25



Shell size	Angles	N	A	B	C	D	E
3	X°	153	51	102	204	255	306
5 & 7	Y°	145	130	110	155	90	90
	Z°	75	120	120	115	115	180
9	A°	105	102	80	35	64	91
	B°	140	132	118	140	155	131
	C°	215	248	230	205	234	197
	D°	265	320	312	275	304	240
11 & 15	A°	95	113	90	53	119	51
	B°	141	156	145	156	146	141
	C°	208	182	195	220	176	184
	D°	236	292	252	255	298	242
13	A°	95	113	90	53	119	51
	B°	141	156	145	156	146	141
	C°	208	182	195	220	176	184
	D°	236	292	252	255	298	242
17 & 21	A°	80	135	49	66	62	79
	B°	142	170	169	140	145	153
	C°	196	200	200	200	180	197
	D°	293	310	244	257	280	272
19, 23 & 25	A°	80	135	49	66	62	79
	B°	142	170	169	140	145	153
	C°	196	200	200	200	180	197
	D°	293	310	244	257	280	272

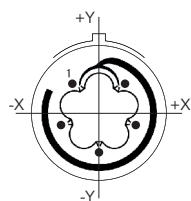
Coordinates information

8DA & 8LTA PCB hole drilling and position information.

03

05

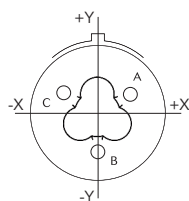
5#26



Ctc	X	Y
1	-0.85	1.18
2	0.85	1.18
3	1.38	-0.45
4	0.00	-1.45
5	-1.38	-0.45

35

3#22D

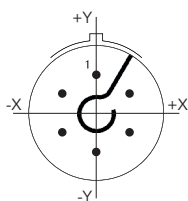


Ctc	X	Y
A	1.13	0.65
B	0.00	-1.30
C	-1.13	0.65

05

06

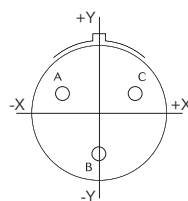
6#26



Ctc	X	Y
1	0.00	1.70
2	-1.47	0.85
3	-1.47	-0.85
4	0.00	-1.70
5	1.47	-0.85
6	1.47	0.85

35

3#22D

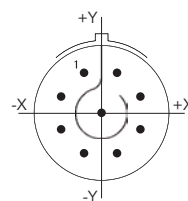


Ctc	X	Y
A	-1.24	0.72
B	0.00	-1.43
C	1.24	0.72

07

09

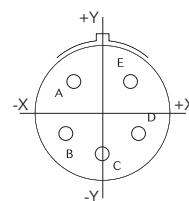
9#26



Ctc	X	Y
1	-0.85	2.05
2	-2.05	0.85
3	-2.05	-0.85
4	-0.85	-2.05
5	0.85	-2.05
6	2.05	-0.85
7	2.05	0.85
8	0.85	2.05
9	0.00	0.00

35

5#22D



Ctc	X	Y
A	-1.24	1.70
B	-2.00	-0.66
C	0.00	-2.11
D	2.00	-0.66
E	1.24	1.70

Size 3: Marking on shell.

Rear view of receptacle for male and female insulator.
Opposite marking between plug and receptacle.

Sizes 5 and 7: Marking on insulator.

Rear view of male insulator for plug and receptacle.
Opposite marking between male and female insulator.

micro38999 SERIES

8DA, 8BA & 8LTA Series

Range Extension

■ 8D integrated backshell	36
■ micro38999 with ELIO® contact	36
■ 38999 high density	37
■ <i>microComp</i> ® Series	37
■ 8STA Series	38
■ Box mount interconnect solutions	38

Products Range Extension

8D Integrated Backshell

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. Single piece backshell and connector.
- . Better electrical continuity.
- . Lighter than with standard backshell.
- . Easier supply chain.

EMI backshell:

- . Shield band compatible.
- . Overmolding best solution.

Flexibility:

- . All Series III layouts developed by **SOURIAU** available

Black zinc nickel:

- . A robust QPL 500 hour finish (RoHS) backward compatible with cadmium receptacle.
- . All other standard plating available (Ni, Cd).



micro38999 with ELIO® Contact

The SOURIAU fiber optic ELIO® is the favorite Airbus butt-joint solution and is recognized as a world-wide standard. SOURIAU commits to providing a full support to its customers to find a reliable and secured solution, from the design phase to the maintenance phase.

Rugged size 5 circular connector:

- . Threaded coupling with anti decoupling device.
- . Bayonet coupling.
- . Vibration and shock proof.
- . Harsh -55°C to +150°C.
- . User friendly ELIO® contact.

Silica fiber:

- . 9/125,50/125 or 62/125,100/140,200/230.

POF fiber:

- . 1000/1500 MOSTPOF.



Products Range Extension

38999 High Density

SOURIAU offers a robust & reliable High Density solution derived from 38999 Series I, Series III & VG96912.

3 shell sizes available:

- . Provides flexibility according to your application.

A reliable & robust solution:

- . Same well proven design as standard 38999 & VG96912.

Significant space saving:

- . Twice the number of contacts compared to size 13-35 with 22 contacts.
- . Two shell sizes smaller than a partially populated size 17-35 with 55 cavities.



See «High Density Connectors» product news on www.souriau.com

microComp® Series

To respond to miniaturization and weight saving trends in aeronautical and defense applications SOURIAU has developed an innovative high density connector range.

Very light & high density:

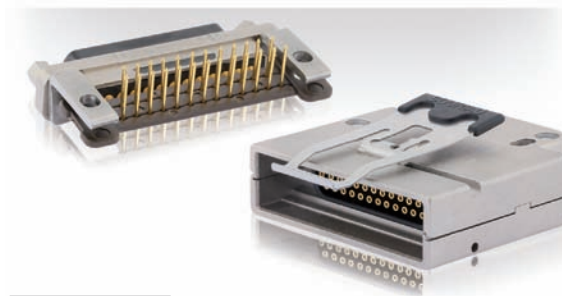
- . Shell in composite (or aluminum).
- . Up to 66% lighter than HD D-Sub.
- . Very high density up to 40% smaller than HD D-Sub.

Excellent features:

- . With crimp removable contacts for wire AWG 24 to 28
- . Temperature up to 175°C
- . High vibration and shock withstanding
- . Standard MIL-STD 83513 accessories
- . Compatible with high speed data rates (Gigabit Ethernet...)

Quick connect version for harsh environment:

- . 104 contacts push-push



See «microComp® Series - Miniature High Density» catalog on www.souriau.com

Products Range Extension

8STA Series

8STA Series circular connectors are derived from international military specifications MIL-DTL-38999 and JN1003. Dedicated to Motorsport markets, these connectors are designed to withstand high levels of shock and vibration in harsh environments.

The world smallest and most popular connector:

- . 8STA Series Size 02.
- . Miniature lightweight connector.
- . Ideal for areas where space is a premium.

Versatility:

- . Removable crimp contacts.
- . Available with PCB contacts.

User friendly:

- . Quick bayonet locking.
- . Integrated backshell
- . Visual color indication when mated.
- . Up to 7 color coded keyway orientations.



See «Compact Circular Connectors 8STA/8TA Series» catalog on www.souriau.com

Box Mount Interconnect Solutions

Box Interconnect Solutions: Inside/Outside. Anything you need - we can do !

PCB terminations:

- . with many lengths and different types of plating.

Shape of connector can be adapted:

- . to meet the board application as double flange receptacles.

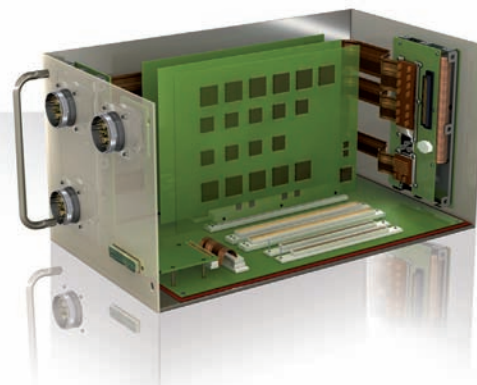
Receptacles with short shell:

- . to minimize space inside the box.

Any customized design:

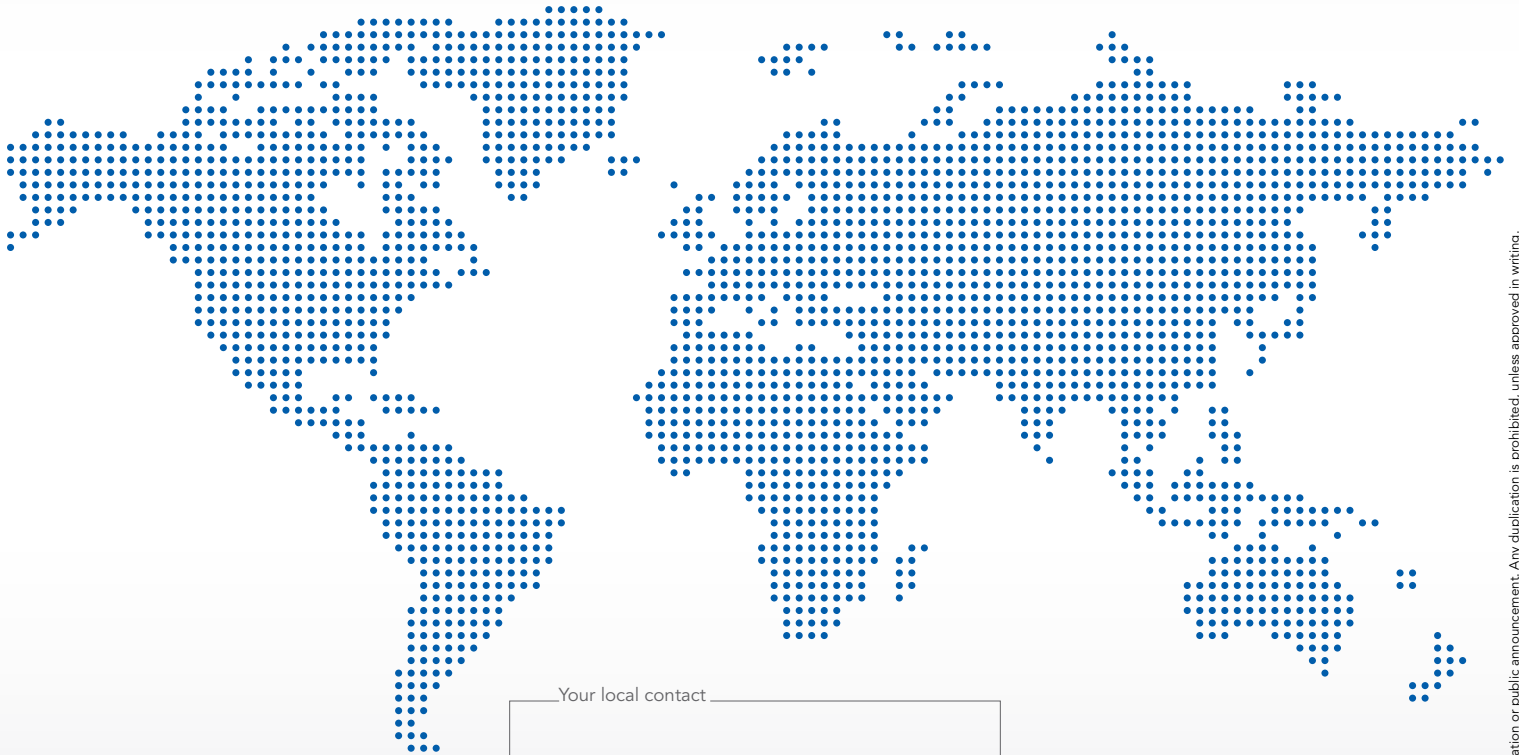
- . to make box mount easier when space is a constraint.

Blindmate/hermetic/thin panel assembly solutions...



See «Box Mount Interconnect Solutions» catalog on www.souriau.com

Reliable People, Reliable Solutions



Your local contact



Our contribution to environmental protection:
This catalog is printed on PEFC certified paper.
Advancement of sustainable wood cultivation. www.pefc.org

SOURIAU

www.souriau.com
contactmilaero@souriau.com

Esterline
Connection Technologies