

# 38999 Series II 8T Connectors



## 38999 Bayonet Circular Connector For More Compacity

With the increasing requirement for low profile and EMI shielding, Souriau has more than doubled its 8T range.

### A wide range

RoHS plating available (black zinc nickel)  
11 different shells available  
43 layouts available (from size 8 to 24)

### Lower profile design

Lightweight  
Space saving (30% shorter compared to 8LT)

**30%  
SHORTER**

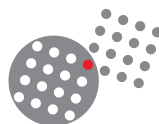


### High reliability

EMI shielding  
Excellent shock vibration & fluid resistance  
QPL approved

### High density connector

From 1 to 128 contacts



**SOURIAU**  
Connection Technology

# 38999 Series II 8T Connectors



## Description

- Low profile
- Bayonet locking system
- 11 shell types
- 43 layouts
- High density connector from 1 to 128 contacts
- An excellent shock vibration and fluid resistance
- QPL qualified
- Standards:
  - MIL-C 38999 Series II
  - NFC 93422 HE 309
  - VG 96912 series II
  - PAN 6433-1
  - BS 9522 N 003

## Applications

- Civil and military aerospace
- Communications equipments
- Ballistic missiles & weapon systems
- Medical instrumentation

## Technical Features

### Mechanical

- **Shell:** Aluminum alloy
- **Plating:**
  - Black zinc nickel (Z)
  - Nickel (F)
  - Olive green cadmium (B)
  - Hard anodized (C)
- **Insulator:** Thermoplastic
- **Grommet and seal:** Silicone elastomer
- **Contact:** Copper alloy
- **Plating:** Gold over nickel
- **Endurance:**
  - 500 mating cycles

- **Shock:** 300g, 3ms duration
- **Vibration:**
  - Random 100 to 1000Hz - 1g2/Hz
- **Contact retention (mini force in N):**
  - Size 22D: 44N    Size 16: 110N
  - Size 20: 67N    Size 12: 110N

### Electrical

- **Test voltage (Vrms):**

Service	Sea level	at 21 000 m
M	1300	800
I	1800	1000
II	2300	1000

- **Contact resistance:**
  - Size 22D: 14.6mΩ
  - Size 20: 7.3mΩ
  - Size 16: 3.8mΩ
- **Insulation resistance:**
  - ≥ 5000MΩ (at 500Vdc)
- **Contact rating:**
  - Size 22D: 5A    Size 16: 13A
  - Size 20: 7.5A    Size 12: 23A
- **Shell continuity:**
  - Black zinc nickel plating: 2.5mΩ
  - Olive green plating: 2.5mΩ
  - Nickel plating: 1mΩ

### Environmental

- **Temperature range:**
  - Zinc nickel plating (Z): -65°C + 175°C
  - Cadmium plating (B): -65°C + 175°C
  - Nickel plating (F): -65°C + 200°C
  - Hard anodized (C): -65°C + 200°C
- **Sealing (mated connectors):**
  - Differential pressure 1 bar
  - Leakage ≤ 8cm<sup>3</sup>/h
- **Salt spray to:**
  - MIL-STD 1344 method 1001:
    - 500 hours (plating B & Z)
    - 48 hours (plating F & C)
  - NFC 93422: 48 hours (plating F & C)
- **Damp heat:**
  - MIL-C 38999: 10 cycles (24 hours)
  - NFC 93422: 56 days
- **Resistance to fluids:**
  - To MIL-L 38999:
    - MIL-L 7808, MIL-L 23699, MIL-H 5606,
    - MIL-A 8243, MIL-L 25769, MIL-G 3056,
    - MIL-T 5624 (JP5); hydraulic fluids; solvents
  - To NFC 93422:
    - F 46, F 54, O/180, H 515, H 542, XH 45

# 38999 Series II 8T Connectors



## Space saving: shell size comparison 8T / 8LT

**30%  
SHORTER**



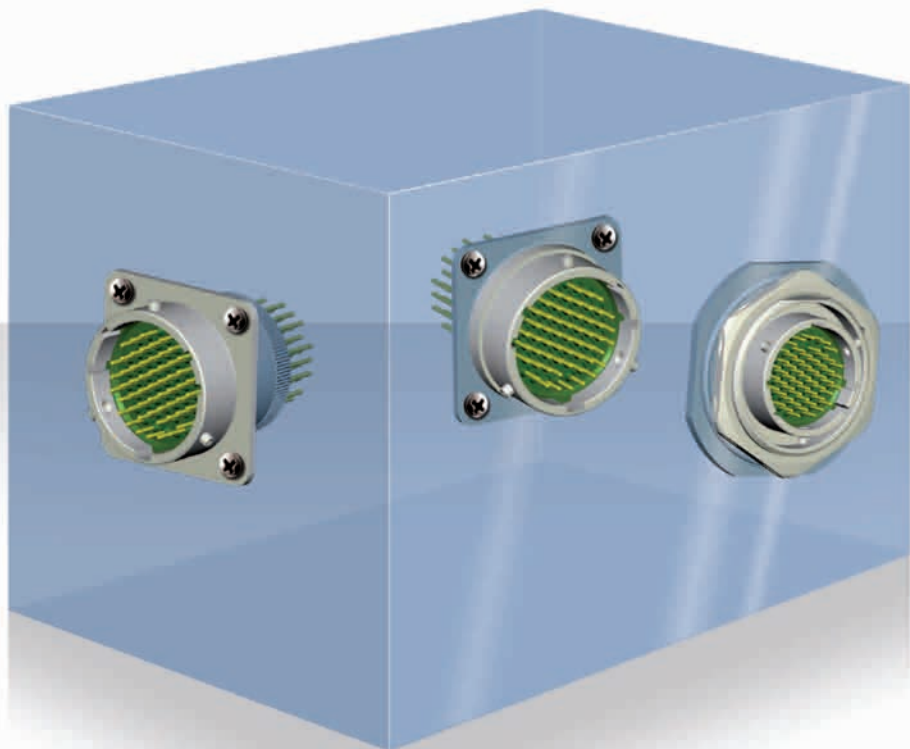
**8T**  
**38999 Series II**  
Example: 8T 15



**8LT**  
**38999 Series I**  
Example: 8LT 15

**8T shorter for all shell types compared to 8LT !**

## Box solutions



- Rear mounting
- Front mounting
- Integrated backshell
- Jam nut

# 38999 Series II 8T Connectors



## Shell types

### Plugs



**8T5**  
MS27484T

With grounding ring



**8T6**  
MS27473T

Without grounding ring



**8T15**  
MS27484E

With grounding ring



**8T16**  
MS27473E

Without grounding ring

### Receptacles

#### Front mounting



**8T0**  
MS27472T



**8T4**  
MS27499E



**8T10**  
MS27472E

#### In line receptacle



**8T1**

#### Rear mounting

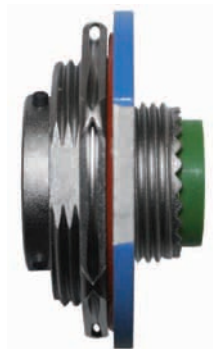


**8T3**  
MS27497T



**8T2**  
MS27508E

#### Jam nut receptacle



**8T7**  
MS27474T

# 38999 Series II 8T Connectors



## Features by shell types

**From your need ...**

<p><b>Short grommet</b></p>		<p><b>Integrated backshell</b></p>		<p><b>With accessories threads</b></p>						
Receptacle		Plug		Receptacle		Plug		Receptacle		
Square flange + Rear mounting	Square flange + Front mounting	With grounding ring	Without grounding ring	Square flange + Front mounting	With grounding ring	Without grounding ring	Square flange + Front mounting	Square flange + Rear mounting	In line	Jam nut
8T2	8T4	8T15	8T16	8T10	8T5	8T6	8T0	8T3	8T1	8T7

**... to our solution !**

**A versatile range available !**



# 38999 Series II

## 8T Connectors



### Ordering information

#### Souriau - Part numbers

Basic Series	8T	0	14	B	35	P	N
<b>Shell type:</b>							
0: Square flange receptacle (front mount with accessories threads)							
1: In line receptacle (with accessories threads)							
2: Square flange receptacle (rear mount without accessories threads)							
3: Square flange receptacle (rear mount with accessories threads)							
4: Square flange receptacle (front mount without accessories threads)							
5: Plug with RFI shielding							
6: Plug without RFI shielding							
7: Jam nut receptacle (with accessories threads)							
10: Square flange receptacle (front mount, rear knurling)							
15: Plug with RFI shielding (rear knurling)							
16: Plug without RFI shielding (rear knurling)							
<b>Type:</b>							
None: Connectors with standard crimp contacts							
L: Receptacle with long spill (male and female size #22D)							
C: Receptacle with short spill (male and female size #22D, #20, #16)							
P: Receptacle with solder cup (male size #22D)							
<b>Shell size:</b> 08 - 10 - 12 - 14 - 16 - 18 - 20 - 22 - 24							
<b>Plating:</b>							
Z: Black zinc nickel							
F: Nickel							
B: Olive drab cadmium							
C: Hard anodized							
<b>Contact layout:</b> See tables p. 7 & 8							
<b>Contact type:</b>							
P: Pin							
S: Socket							
A: Connector supplied less pin contact or with specific contacts (connector marking : A + orientation)							
B: Female connector without contact or with special contacts (connector marking : B + orientation)							
<b>Orientation:</b> N, A, B, C, D & E							
<b>Special custom:</b>							
None: Standard plastic cap							
M: Antistatic plastic cap							
L: For P and S contact type only, connector delivered without contacts, connector marking P or S (without L)							

#### MIL-C-38999 Series II

Basic Series	MS	27497T	14	B	35	P	N
<b>Shell type &amp; Class:</b>							
27472T: Square flange receptacle (front mount with accessories threads)							
27508E: Square flange receptacle (rear mount without accessories threads)							
27497T: Square flange receptacle (rear mount with accessories threads)							
27499E: Square flange receptacle (front mount without accessories threads)							
27484T: Plug with RFI shielding							
27473T: Plug without RFI shielding							
27474T: Jam nut receptacle (with accessories threads)							
27472E: Square flange receptacle (front mount, rear knurling)							
27484E: Plug with RFI shielding (rear knurling)							
27473E: Plug without RFI shielding (rear knurling)							
<b>Shell size:</b> 08 - 10 - 12 - 14 - 16 - 18 - 20 - 22 - 24							
<b>Plating:</b>							
Z: Black zinc nickel							
B: Olive drab cadmium							
F: Nickel							
<b>Contact layout:</b> See tables p. 7 & 8							
<b>Contact type:</b>							
P: Pin							
S: Socket							
A: Connector supplied less pin contact or with specific contacts (connector marking : A + orientation)							
B: Female connector without contact or with special contacts (connector marking : B + orientation)							
<b>Orientation:</b> N, A, B, C, D & E							
<b>Special custom:</b>							
None: Standard plastic cap							
M: Antistatic plastic cap							
L: For P and S contact type only, connector delivered without contacts, connector marking P or S (without L)							

Note : connectors supplied with standard contacts

# 38999 Series II 8T Connectors



## Contact layouts

**08**

<p><b>35</b></p> <p>6#22D Service M</p>	<p><b>98</b></p> <p>3#20 Service I</p>
---	--

**10**

<p><b>05*</b></p> <p>5#20 Service I</p>	<p><b>35</b></p> <p>13#22D Service M</p>	<p><b>98</b></p> <p>6#20 Service I</p>	<p><b>99</b></p> <p>7#20 Service I</p>
---	--	--	--

**12**

<p><b>03</b></p> <p>3#16 Service I</p>	<p><b>04*</b></p> <p>4#16 Service I</p>	<p><b>08**</b></p> <p>8#20 Service I</p>	<p><b>26*</b></p> <p>6#22D 2#12 Service M</p>	<p><b>35</b></p> <p>22#22D Service M</p>	<p><b>98</b></p> <p>10#20 Service I</p>
--	---	--	---	--	---

**14**

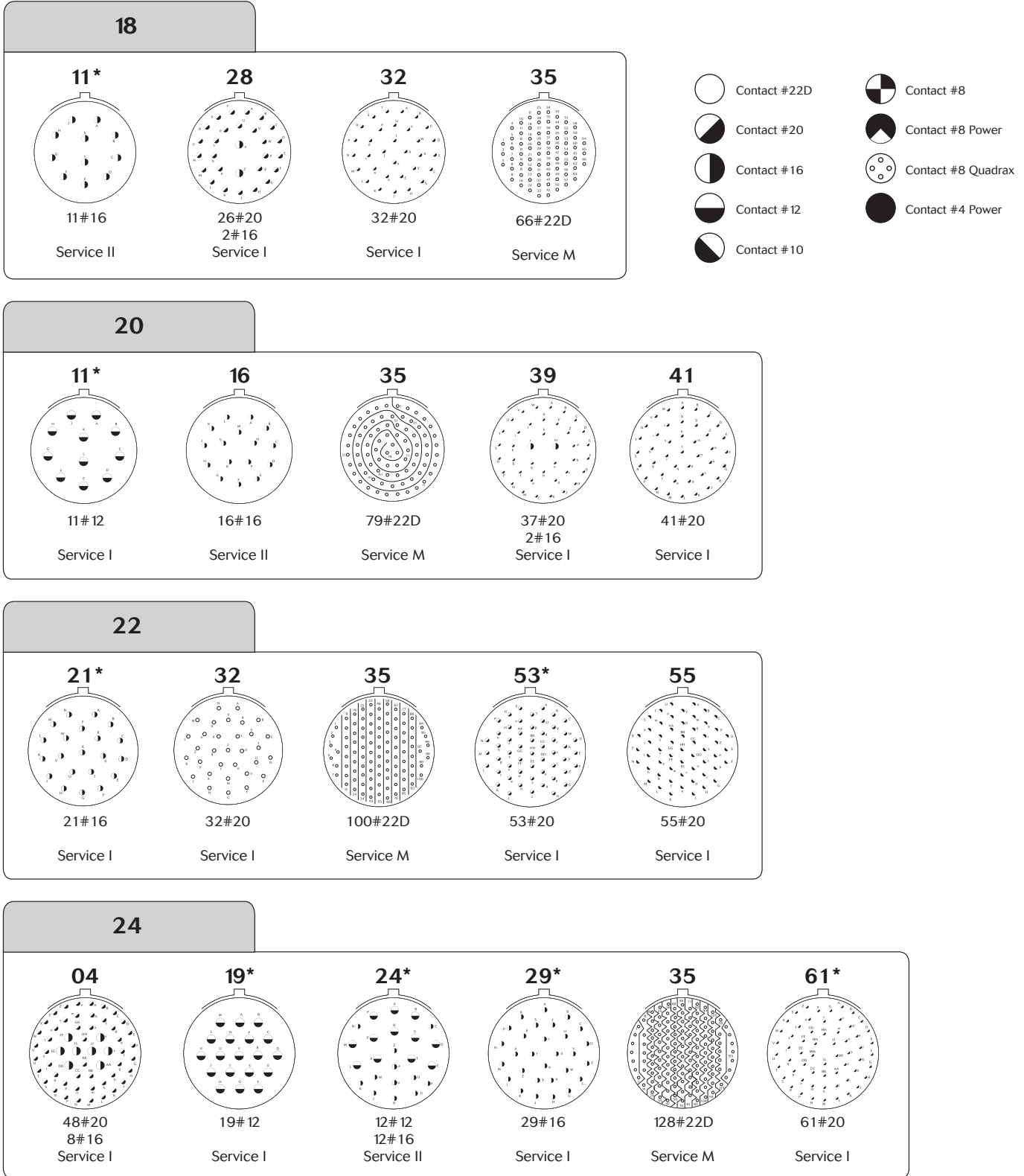
<p><b>05*</b></p> <p>5#16 Service II</p>	<p><b>15*</b></p> <p>14#20 1#16 Service I</p>	<p><b>18*</b></p> <p>18#20 Service I</p>	<p><b>19*</b></p> <p>19#20 Service I</p>	<p><b>35</b></p> <p>37#22D Service M</p>	<p><b>97*</b></p> <p>8#20 4#16 Service I</p>
--	---	--	--	--	--

**16**

<p><b>06</b></p> <p>6#12 or 6#12 Coax Service I</p>	<p><b>08*</b></p> <p>8#16 Service II</p>	<p><b>26*</b></p> <p>26#20 Service I</p>	<p><b>35</b></p> <p>55#22D Service M</p>	<p><b>99</b></p> <p>2#16 21#20 Service I</p>
---	--	--	--	--

\* Layout not available on 8T2 & 8T4 (short grommet). On demand only, please consult us.  
 \*\* Layout not available on 8T2 & 8T4 (short grommet) / Layout available on other types (long grommet) but only with male insert. For female version or short grommet, please consult us.

# 38999 Series II 8T Connectors



\* Layout not available on 8T2 & 8T4 (short grommet). On demand only, please consult us.

For further information contact us at [contactmilaero@souriau.com](mailto:contactmilaero@souriau.com)  
or visit our web site [www.souriau.com](http://www.souriau.com)