

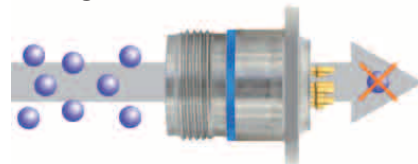


## Compact Low Profile Connectors with High Hermeticity Performance

Adapted to sensor applications under high aeronautical constraints, such as engine & landing gear environments.

**High performance solution** ■ Robust screw coupling.  
Corrosion and fire resistant connector qualified per EN2997 & ESC10.

**High hermeticity performance** ■ Glass to metal sealing:  
Helium leakage of less than  $10^{-7}$  atm.cm<sup>3</sup>/s.



**Compact profile** ■ No need for sealing accessory: 1/3 space saving.

**Special fuel tank version** ■ Specific materials to guarantee minimum 90,000 hours in fuel immersion.  
Unique crimp contact version on request.



## Description

- Glass sealed hermetic:
  - . high hermeticity performance
  - . compact low profile
- Robust screw coupling qualified per EN2997 and ESC10 standards
- Fully interchangeable with MIL 83723 hermetic connectors
- Various mounting styles:
  - . compact solder mount receptacle
  - . easy to install square flange receptacle
  - . easy to replace jam nut receptacle
- Signal and power solder cup contacts
- PCB contact version available
- Special fuel tank versions
- 230V qualified versions where higher voltage is used to reduce cable weight

## Technical features

### Mechanical

- **Shell:**
  - . Passivated Stainless steel
- **Seals:**
  - . Silicone elastomer
- **Contact:**
  - . Ferrous alloy
- **Contact plating:**
  - . Gold
- **Shock:**
  - . 300 m/s<sup>2</sup> (30g) during 3 ms
- **Endurance:**
  - . 500 mating/unmating operations
- **Vibration:**
  - . Random 5 Hz to 2000 Hz at 1G<sup>2</sup>/Hz (2 x 8 hours)

### Electrical

- **Max current rating per contact:**

Contact size	20	16	12	6	4
Rating (A)	5	10	17	46	60

- **Dielectric withstanding voltage:**

Altitude	Service I
Sea level	1500 Vrms
15 000 m	600 Vrms
21 000 m	400 Vrms
33 000 m	200 Vrms

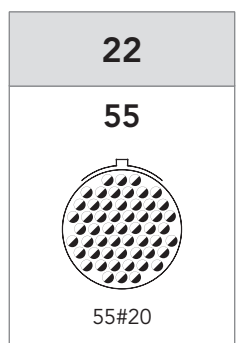
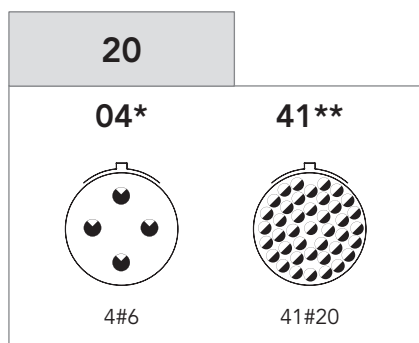
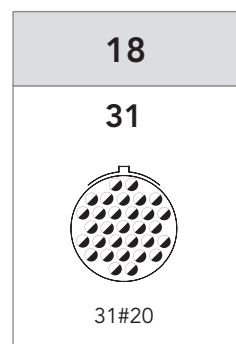
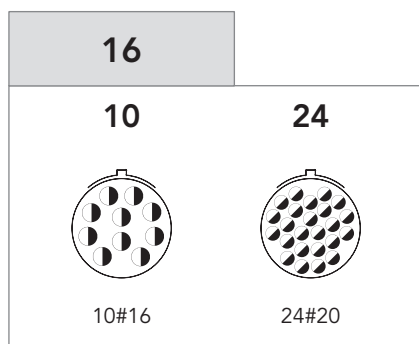
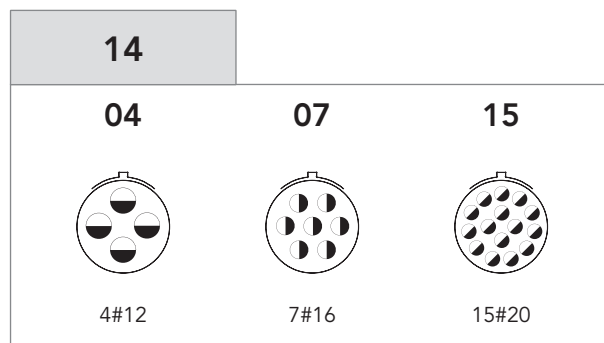
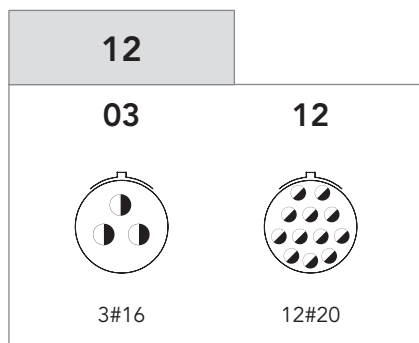
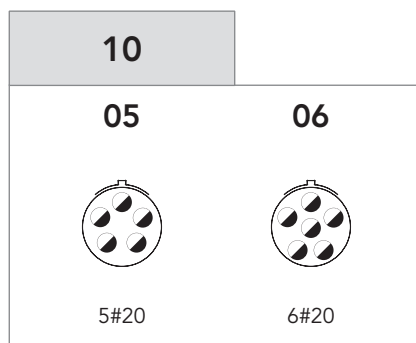
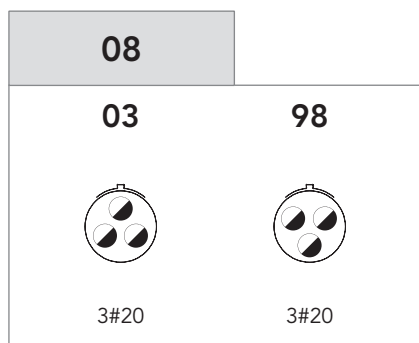
- **Contact resistance at rated current:**
  - . Maximum initial contact resistance at ambient temperature

Contact size	20	16	12	6	4
Resistance mΩ	12	8.5	5	2	2





### Environmental

- **Operating temperature:**
  - . Class Y : -65°C to 200°C
  - . Class YE : -65°C to 260°C cyclic
- **Hermeticity:**
  - . Leak rate <10<sup>-7</sup> atm.cm<sup>3</sup>/s (helium gas test)
- **Damp heat:**
  - . As per EN 2997 and NFL 54143: 10 cycles of 24h
- **Salt spray:**
  - . 500 hours
- **Resistance to fluids:**
  - . MIL-H 5606 - SKYDROL 500 B4 - LD4 - JP5 - MIL-L 7870A - MIL-L 23699 - MIL- L 7808 - MIL-C 25769 - MIL-A 8243
- **Fuel immersion version:**
  - . 105°C max
  - . As per PrEN3645

## Contact layouts



**Contact size**

-  Contact #20
-  Contact #12
-  Contact #16
-  Contact #6

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\* ABS Power correspondance.  
\*\* Under EN2997 qualification. Consult us.

## Contact layouts (matrix)

Shell size	Layout	8533 hermetic	EN2997 hermetic	8533 spec. 22	ESC10 hermetic	Number of contacts					
						#20	#16	#12	#8	#6	#4
08	08-03		Q		Q	3					
	08-98		Q		Q	3					
10	10-05		Q		Q	5					
	10-06		Q			6					
12	12-03		Q		Q		3				
	12-12		Q		Q	12					
14	14-04		Q		Q			4			
	14-07		Q		Q		7				
	14-15		Q		Q	15					
16	16-10		Q		Q		10				
	16-24		Q		Q	24					
18	18-31		Q		Q	31					
20	20-04								4		
	20-41		Q		Q	41					
22	22-55		Q		Q	55					

Souriau's layout

Q Souriau's layout & Layout according to corresponding norm

## Connector weights (in grams)

Shell size	Square flange receptacle	Jam nut receptacle	Solder mount receptacle
08	18	29	15
10	24	37	21
12	31	50	31
14	40	58	35
16	49	72	46
18	54	79	51
20	62	87	59
22	77	108	73
24	88	122	86

## Cross reference list

SOURIAU	MIL 83723
85332Y •••• P è	M83723/88Y •••• è
85337Y •••• P è	M83723/89Y •••• è
85331Y •••• P è	M83723/90Y •••• è

•••• Shell size & layout è Orientation

## Ordering information

### Souriau part numbers

<b>Basic series</b>	<b>8533</b>	<b>1</b>	<b>Y</b>	<b>10</b>	<b>05</b>	<b>P</b>	<b>N</b>	<b>-</b>
<b>Shell type:</b>								
1: Solder mount receptacle								
2: Square flange receptacle								
7: Jam nut receptacle								
<b>Class:</b>								
Y: 200°C								
YE: 260°C								
<b>Shell size: 08 - 10 - 12 - 14 - 16 - 18 - 20 - 22</b>								
<b>Contact layout:</b> See page 3								
<b>Contact type:</b>								
P: Pin								
<b>Orientation: N - 6 - 7 - 8 - 9 - T - V - Y</b> (see page 9)								
<b>Specification</b> (other specification: see page 8):								
None: Standard hermetic version (solder cup) - except for layout 20-04								
112: Standard hermetic version (solder cup) - for layout 20-04 only								
22: Hermetic fuel tank version (solder cup)								
600: 230V qualified connector, delivered with contacts (layouts 12-03, 14-04, 14-07 & 20-04 - orientation T & V)								

### EN2997 qualified products

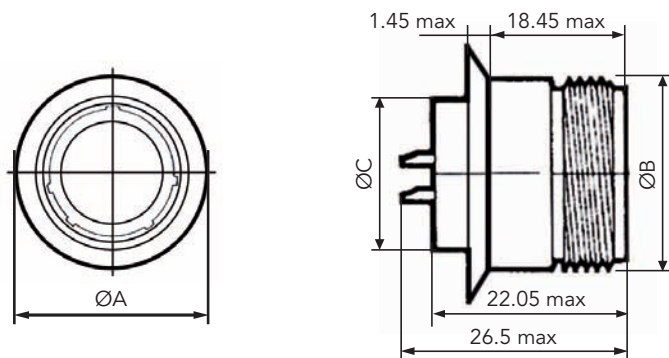
<b>Basic series</b>	<b>EN 2997</b>	<b>Y</b>	<b>0</b>	<b>08</b>	<b>03</b>	<b>M</b>	<b>N</b>
<b>Class:</b>							
Y: 200°C							
YE: 260°C							
<b>Shell type:</b>							
0: Square flange receptacle							
1: Solder mount receptable							
7: Jam nut receptable							
<b>Shell size: 08 - 10 - 12 - 14 - 16 - 18 - 20 - 22</b>							
<b>Contact layout:</b> See page 3							
<b>Contact type:</b>							
M: Pin							
<b>Orientation: N - 6 - 7 - 8 - 9 - Y</b> (see page 9)							

### ESC10 qualified products

<b>Basic series</b>	<b>ESC 10</b>	<b>YE</b>	<b>1</b>	<b>08</b>	<b>03</b>	<b>P</b>	<b>N</b>	<b>0</b>
<b>Class:</b>								
YE: 260°C								
<b>Shell type:</b>								
1: Solder mount receptacle								
2: Square flange receptacle								
3: Jam nut receptable								
<b>Shell size: 08 - 10 - 12 - 14 - 16 - 18 - 20 - 22</b>								
<b>Contact layout:</b> See page 3								
<b>Contact type:</b>								
P: Pin								
<b>Orientation: N - 6 - 7 - 8 - 9 - Y</b> (see page 9)								
0: variant identifier								

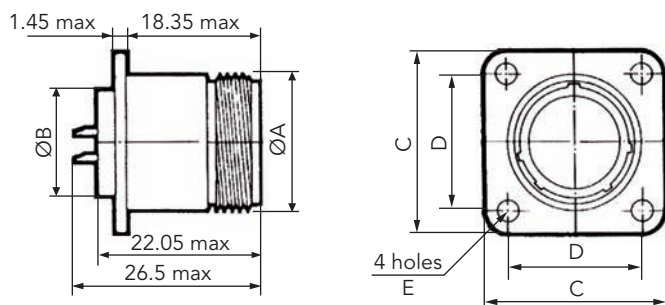
## Dimensions

### Solder mount hermetic receptacle (Class Y & YE)



Shell size	8	10	12	14	16	18	20	22	24
ØA Max	18.36	21.59	26.80	27.94	30.99	34.39	37.34	40.64	43.68
ØB Max	14.29	17.46	22.22	23.81	26.99	30.16	33.34	36.51	39.69
ØC Max	12.70	14.27	19.05	20.62	23.80	26.97	30.15	33.32	36.50
ØD Min	12.96	14.53	19.30	20.88	24.05	27.23	30.40	33.58	36.75

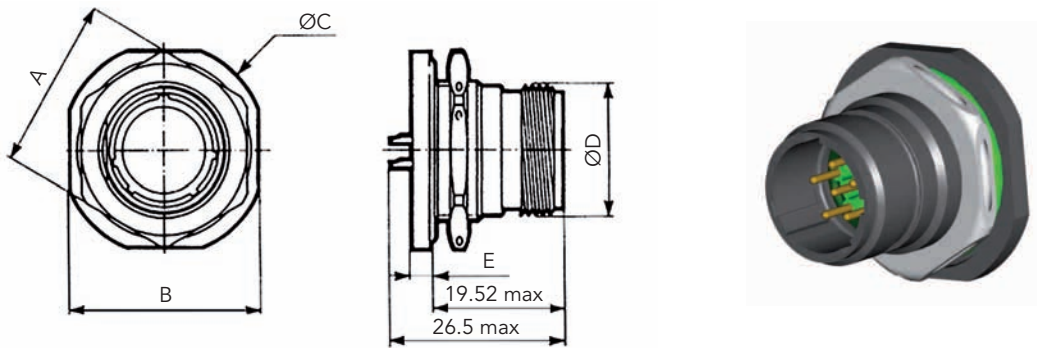
### Square flange hermetic receptacle (Class Y & YE)



Shell size	8	10	12	14	16	18	20	22	24
Ø A Max	14.27	17.67	22.22	23.77	26.97	30.15	33.32	36.49	39.67
Ø B Max	12.70	14.27	19.05	20.62	23.80	26.97	30.15	33.82	36.50
C Max	20.75	23.93	26.32	28.71	31.88	34.24	36.63	39.80	43.36
D	15.09	18.26	20.62	23.01	24.61	26.97	29.36	31.75	34.92
E Max	3.30								3.91

Note: All dimensions are in millimeters (mm)

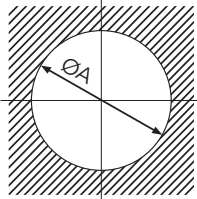
Jam nut hermetic receptacle (Class Y & YE)



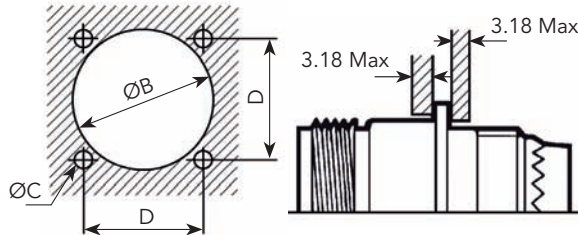
Shell size	8	10	12	14	16	18	20	22	24	
A Max	21.06	24.23	29.01	30.61	33.76	36.96	40.11	43.31	46.46	
B Max	24.89	28.04	32.79	35.33	38.51	41.68	44.86	49.63	52.81	
ØC Max	27.38	30.28	35.05	38.51	41.68	44.86	49.63	52.78	55.42	
ØD Max	14.29	17.46	22.22	23.81	26.99	30.16	33.34	36.51	39.69	
E Max	3.48							3.76		
Tightening torque of attachment nut Torque in N.m <sup>±10%</sup>	7	10	12	15	18	22	25	27	29	

Panel cut out

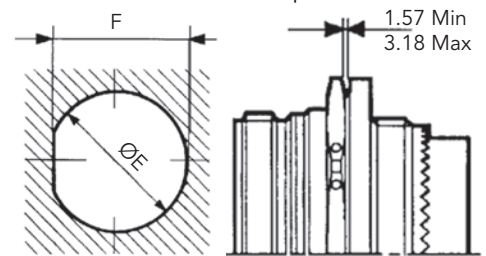
Type 1  
Solder mount  
receptacle



Type 2  
Square flange  
receptacle



Type 7  
Jam nut receptacle



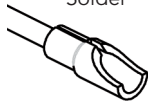
Shell size	8	10	12	14	16	18	20	22	24	28	
ØA Min	12.96	14.53	19.30	20.88	24.05	27.23	30.40	33.58	36.75	-	
B min	15.8	18.7	23.4	24.9	28.3	31.1	34.5	37.5	40.6	48	
C	3.2							3.8			
D	15.09	18.26	20.62	23.01	24.61	26.97	39.36	31.75	34.92	39.67	
E	16.00	19.17	23.92	25.52	28.70	31.87	35.05	38.22	41.40	-	
F	15.24	18.41	23.16	24.76	27.94	30.99	34.16	37.33	40.51	-	

Note: All dimensions are in millimeters (mm)

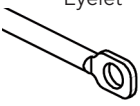
## Contact variations

**Contact variations summary**


**Contact variations**



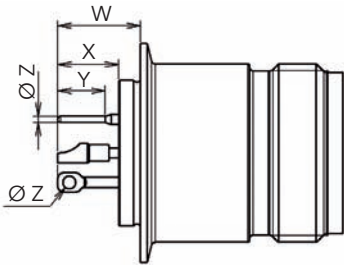
Solder



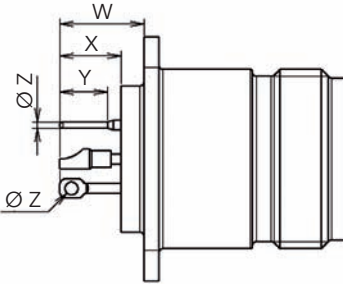
Eyelet



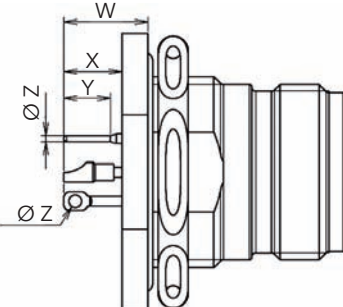
PCB



**Type 1:** Solder mount receptacle



**Type 2:** Square flange receptacle



**Type 7:** Jam nut receptacle

Type of contact	Specification	Contact size	W Max	X Min	Y Min	Ø Z Max	Designation
PCB contacts	05	20	8.78	4.78	4.50	0.65	PCB contact
	118	20	10.88	6.88	6.25	0.65	Long PCB contact
Eyelet contacts	105	20	6.98	2.98	4.05 <sup>+0.2</sup>	1.25 <sub>0.15</sub>	Eyelet contact
Solder cup contacts	Without specification or specification 22	20-16-12	7.78	2.98	-	-	Standard Solder cup contact
	112	6	9.03	5.13	-	-	
	62	20-16-12	7.78	2.98	-	-	Solder cup contact tin plated on rear part

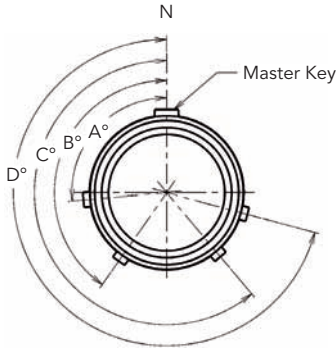
## Gaskets

Shell size	Gasket for square flange receptacle		O'ring for jam nut recep. 200°C Class		O'ring for jam nut recep. 260°C Class	
	Part number	Material	Part number	Material	Part number	Material
08	85251431	Fluoro silicone	85300455	Silicone	85227654	Silicone THT
10	85251432	Fluoro silicone	85300795	Silicone	85227655	Silicone THT
12	85251433	Fluoro silicone	85300458	Silicone	85227656	Silicone THT
14	85251434	Fluoro silicone	8530796	Silicone	85227632	Silicone THT
16	85251435	Fluoro silicone	8530797	Silicone	85227657	Silicone THT
18	85251436	Fluoro silicone	8530798	Silicone	85227658	Silicone THT
20	85251437	Fluoro silicone	85301548	Silicone	85227927	Silicone THT
22	85251438	Fluoro silicone	85300800	Silicone	85227659	Silicone THT


Note: All dimensions are in millimeters (mm)



## Orientation

Orientation										
 <p>Front face view of receptacle</p>	Shell size	Angles	N	6	7	8	9	T	V	Y
	08	A°	105	102	80	35	64	-	-	-
		B°	140	132	118	140	155	-	-	-
		C°	215	248	230	205	234	-	-	-
		D°	265	320	312	275	304	-	-	-
10	A°	105	102	80	35	64	-	-	25	
	B°	140	132	118	140	155	-	-	115	
	C°	215	248	230	205	234	-	-	220	
	D°	265	320	312	275	304	-	-	270	
12 & 14	A°	105	18	92	84	24	55	50	98	
	B°	140	149	152	152	135	145	156	152	
	C°	215	192	222	204	199	228	218	268	
	D°	265	259	342	334	240	280	290	338	
20	A°	105	18	92	84	24	45	60	98	
	B°	140	149	152	152	135	160	165	152	
	C°	215	192	222	204	199	210	235	268	
	D°	265	259	342	334	240	300	285	338	
16, 18, 22 & 24	A°	105	18	92	84	24	-	-	98	
	B°	140	149	152	152	135	-	-	152	
	C°	215	192	222	204	199	-	-	268	
	D°	265	259	342	334	240	-	-	338	

## 3D models available from the web

Tracepartsonline	
<p><a href="http://Tracepartsonline.net">Tracepartsonline.net</a> is a well-known website offering the ability to download 3D models of various components. It is used by design engineers who want to integrate purchased components in their design.</p> <p>SOURIAU 8533 hermetic 3D models are available on this website!</p> <p>Registration is quick and the downloads are free.</p> <p><a href="#">Go to website</a></p>	

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)