

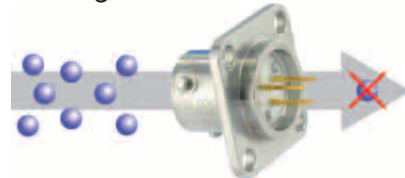


## Hermetic and Small Bayonet Connectors EN3646 Standard Qualified

Combination of pressure robustness and compactness.  
For sensors and space constrained applications.

High pressure performance ✓

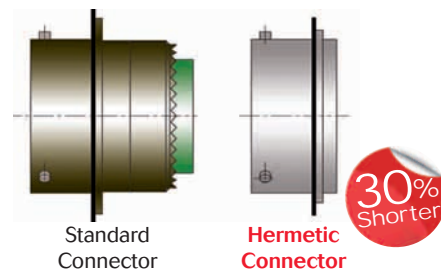
Glass to metal sealing.  
Helium leakage of less than  $10^{-7}$  atm.cm<sup>3</sup>/s.



Pressure resistant.

Compact design ✓

No rear accessory thread and no grommet.



Standard Connector

Hermetic Connector

High environmental performance ✓

Robust and corrosion resistant stainless shell.  
Rated for up to 200°C use.

# 8525 Series Hermetic Connectors



## Description

- Glass sealed hermetic
- Compact low profile - 30% shorter than the standard version
- Robust bayonet coupling according to HE302 standard, EN3646 standard qualified
- Solder cup contacts as well as PC tail contacts
- Specific fuel tank version for long term fuel immersion
- Specific large square flange to adapt an O'ring for an improved panel to connector sealing
- Other range extensions - see p.11

## Technical features

### Mechanical

- **Shell:**  
Passivated stainless steel
- **Seals:**  
Silicone elastomer
- **Contact:**  
Gold plated ferrous alloy
- **Shock:**  
As per EN3646, 100 m/s<sup>2</sup> (10g) during 6 ms in each 3 directions
- **Endurance:**  
500 mating/unmating operations
- **Vibrations:**  
5Hz to 3000Hz at constant acceleration of 10g (3 x 4 hours)

### Electrical

- **Max current rating per contact:**

Contact size	20	16	12
Rating (A)	5	10	17

- **Dielectric withstanding voltage:**

Service	Sea level	21 000 m
I	1 500 Vrms	375 Vrms
II	2 300 Vrms	500 Vrms

- **Shell continuity:**

≤ 50 mΩ

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

Contact size	20	16	12
Resistance mΩ	12	8	5

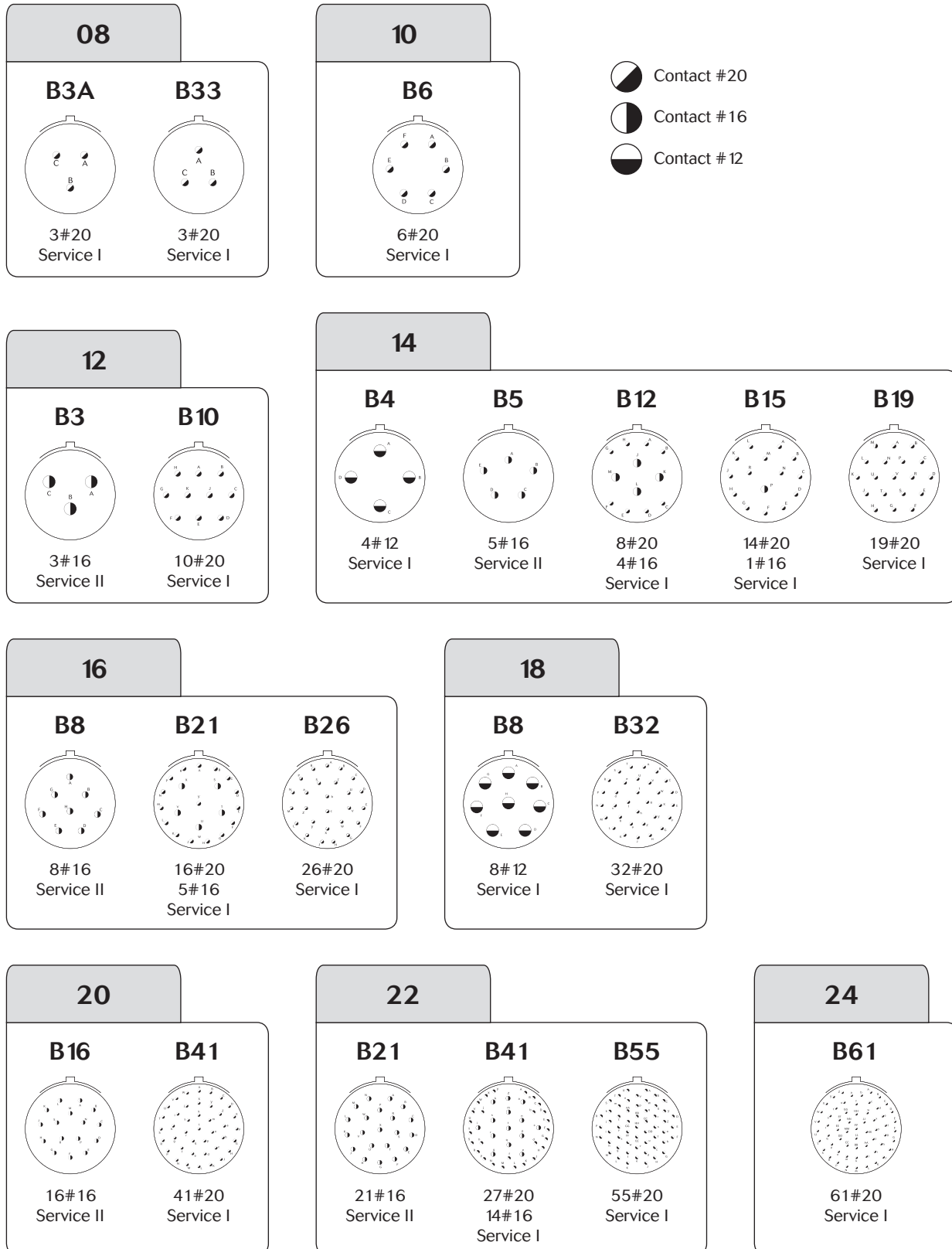
### Environmental

- **Operating temperature:**  
-55°C to 200°C
- **Hermeticity:**  
10<sup>-7</sup> atm.cm<sup>3</sup>/s (helium gas test)
- **Salt spray:**  
48 hours min. as per EN3646
- **Resistance to fluids (standard):**  
As per EN3646, including fuel, hydraulic fluids and oils
- **Fuel immersion version:**
  - . JP5 long term immersion
  - . 105°C maximum

# 8525 Series Hermetic Connectors



## Contact layouts



# 8525 Series

## Hermetic Connectors



### Contact layouts (matrix)

Shell size	Layout	Hermetic 8525	Hermetic EN3646	8525 spec. 002 Large flange	8525 spec. 022 Fuel tank	Number of contacts		
						#20	#16	#12
08	8B3A		Q			3		
	8B33		Q			3		
10	10B6		Q			6		
12	12B3		Q				3	
	12B10		Q			10		
14	14B4		Q					4
	14B5		Q				5	
	14B12		Q			8	4	
	14B15		Q			14	1	
	14B19		Q			19		
16	16B8		Q				8	
	16B21		Q			16	5	
	16B26		Q			26		
18	18B8		Q					8
	18B32		Q			32		
20	20B16		Q				16	
	20B39					37	2	
	20B41		Q			41		
22	22B21		Q				21	
	22B41		Q			27	14	
	22B55		Q			55		
24	24B61		Q			61		

Souriau's layout

Q Souriau's qualified layout

# 8525 Series Hermetic Connectors

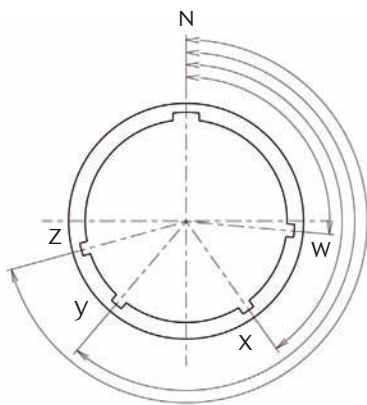


## Ordering information

<b>Basic series</b>	<b>8525</b>	<b>IH</b>	<b>18B32</b>	<b>P</b>	<b>N</b>	<b>H</b>
<b>Shell type:</b>						
<b>IH:</b> Solder mount receptacle						
<b>2H:</b> Square flange receptacle						
<b>7H:</b> Jam nut receptacle						
<b>Contact layout:</b>						
<i>See page 3</i>						
<b>Contact type:</b>						
<b>P:</b> Pin						
<b>Orientation:</b>						
<b>N, W, X, Y, Z</b> - see below						
<b>Mandatory suffix:</b>						
<b>H:</b> Hermetic						
<b>Specification:</b>						
<b>None:</b> Standard hermetic version						
<b>002:</b> Large flange - 2H version only						
<b>022:</b> Fuel tank version						
<i>Other specification (PC tail contacts): see page 10</i>						

## Orientation

Polarization code						
Shell size	Layouts	N	W	X	Y	Z
<b>08</b>	B3A	0	60	210	-	-
	B33	0	90	-	-	-
<b>10</b>	B6	0	90	-	-	-
<b>12</b>	B3	0	140	220	180	-
	B10	0	60	155	270	295
<b>14</b>	B4	0	45	-	-	-
	B5	0	40	92	184	273
	B12	0	43	90	-	-
	B15	0	17	110	155	234
	B19	0	30	165	315	-
<b>16</b>	B8	0	54	152	180	331
	B21	0	-	-	-	-
	B26	0	60	-	275	338
<b>18</b>	B8	0	180	-	-	-
	B32	0	85	138	222	265
<b>20</b>	B16	0	238	318	333	347
	B39	0	63	144	252	333
	B41	0	45	126	225	-
<b>22</b>	B21	0	16	135	175	349
	B41	0	39	135	264	-
	B55	0	30	142	226	314
<b>24</b>	B61	0	90	180	270	324



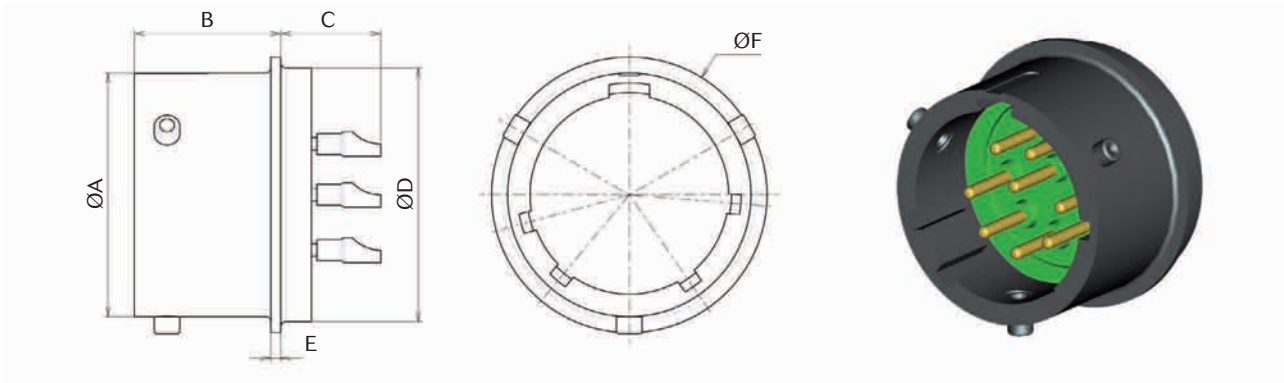
Viewed from front face of receptacle

# 8525 Series Hermetic Connectors

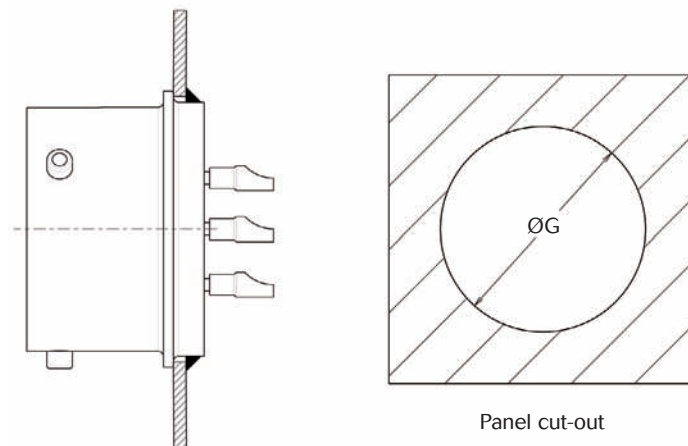


## Dimensions

### Solder mount receptacle (type IH)



Shell size	A max	B ±0.5	C max	D <sup>+0.02</sup> <sub>-0.13</sub>	E ±0.14	F max	G <sup>+0</sup> <sub>-0.3</sub>
8	12.02	11.5	10	14.27	0.8	16.1	14.7
10	14.99	11.5	10	17.07	0.8	19.3	17.5
12	19.05	11.5	10	19.84	0.8	21.7	20.2
14	22.23	11.5	10	23.01	0.8	24.9	23.4
16	25.4	11.5	10	26.19	0.8	28.1	26.6
18	28.58	11.5	10	29.36	0.8	31.2	29.8
20	31.75	13.5	10	31.75	0.8	33.8	32.1
22	34.93	13.5	11	34.92	0.8	36.8	35.3
24	38.1	13.9	11	38.1	0.8	40	38.4

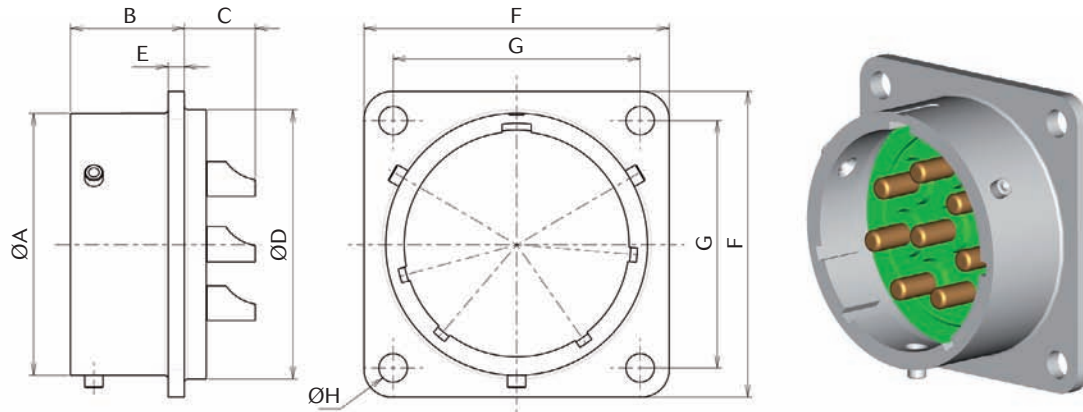


Note: All dimensions are in millimeters (mm)

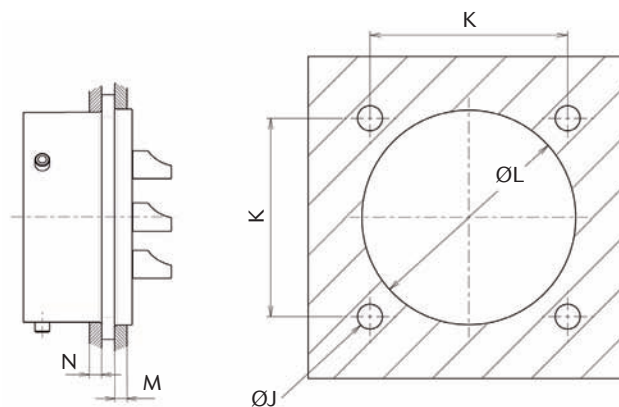
# 8525 Series Hermetic Connectors



## Square flange receptacle (type 2H)



Shell size	A max	B ±0.55	C max	D +0/-0.3	E	F max	G	H ±0.15	J ±0.15	K	L +0/-0.3	M	N max
8	12.02	12.65	8.4	14.3	1.63±0.28	21.03	15.1	3.15	3.15	15.1	14.7	3.5	2.3
10	14.99	12.65	8.4	17.1	1.63±0.28	24.23	18.26	3.15	3.15	18.26	17.5	3.5	2.3
12	19.05	12.65	8.4	19.9	1.63±0.28	26.59	20.62	3.15	3.15	20.62	20.2	3.5	2.3
14	22.23	12.65	8.4	23.05	1.63±0.28	28.98	23.01	3.15	3.15	23.01	23.4	3.5	2.3
16	25.4	12.65	8.4	26.25	1.63±0.28	31.34	24.61	3.15	3.15	24.61	26.6	3.5	2.3
18	28.58	12.65	8.4	29.4	1.63±0.28	33.73	26.97	3.15	3.15	26.97	29.8	3.5	2.3
20	31.75	14.25	9.6	31.8	1.93±0.58	36.91	29.36	3.15	3.15	29.36	32.2	3.5	5.4
22	34.93	14.25	9.6	35	1.93±0.58	40.1	31.75	3.15	3.15	31.75	35.3	3.5	5.4
24	38.1	15.05	9.6	38.2	1.93±0.58	43.27	34.92	3.73	3.73	34.92	38.4	3.5	5.4



Panel cut-out

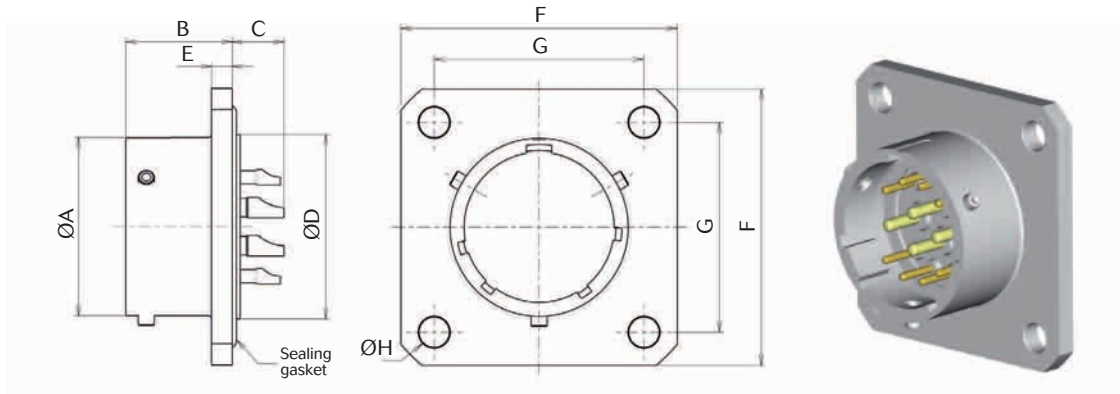
Note: All dimensions are in millimeters (mm)

# 8525 Series

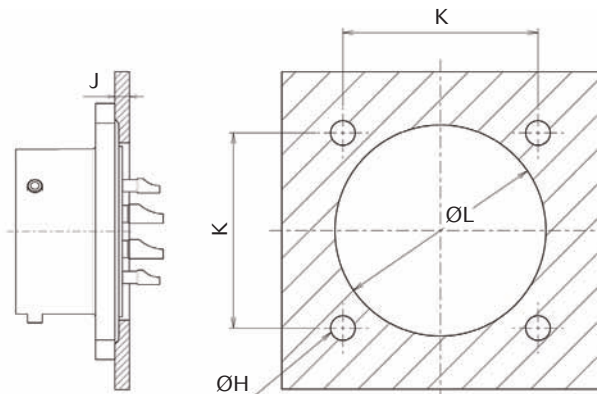
## Hermetic Connectors



### Large square flange receptacle (type 2H spec. 002)



Shell size	A max	B max	C		D max	E max	F max	G	H	J	K	L <sup>+0.3</sup> <sub>-0.3</sub>
			#20	#12/#16								
8	12.02	13.14	6.8	-	14.27	2.6	26.4	18.1	3.8	3.5	18.1	14.7
10	14.99	13.14	6.8	-	17.06	2.6	28.9	20.62	3.8	3.5	20.62	17.5
12	19.05	13.14	6.8	7.1	19.83	2.6	32.1	23.82	3.8	3.5	23.82	20.2
14	22.23	13.14	6.8	7.1	23.01	2.6	34.5	26.18	3.8	3.5	26.18	23.4
16	25.4	13.14	6.8	7.1	26.18	2.6	36.8	28.57	3.8	3.5	28.57	26.6
18	28.58	13.14	6.8	7.1	29.36	2.6	38.8	30.55	3.8	3.5	30.55	29.8
20	31.75	15.84	6	6.3	31.74	3.4	42.8	32.94	3.8	3.5	32.94	32.2
22	34.93	15.84	6	6.3	34.92	3.4	44.8	34.92	3.8	3.5	34.92	35.3
24	38.1	16.64	5.2	5.5	38.09	3.4	47.9	38.1	3.8	3.5	38.1	38.4



Panel cut-out

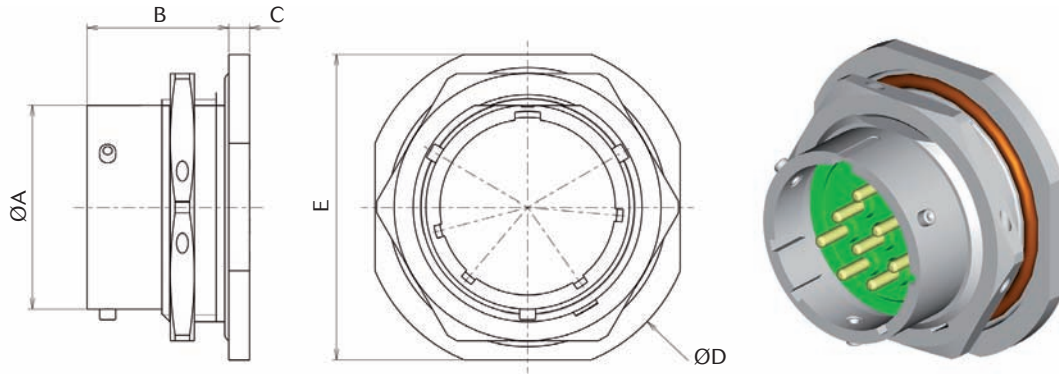
Note: All dimensions are in millimeters (mm)



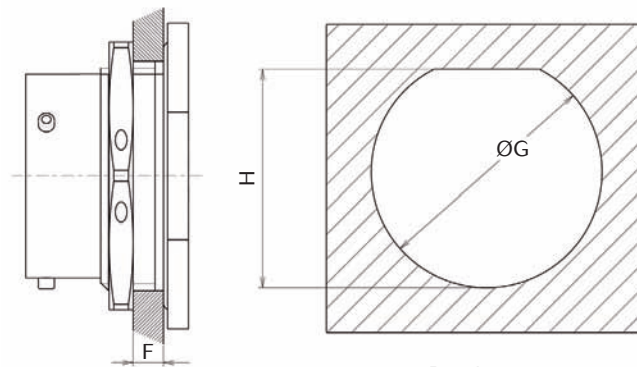
# 8525 Series Hermetic Connectors



## Jam nut receptacle (type 7H)



Shell size	A max	B max	C $\pm 0.5$	D max	E $\pm 0.25$	F		G $^{+0.25}_0$	H $^{+0.25}_0$
						min	max		
8	12.02	18.34	2.4	27.37	23.82	1.57	4.75	14.4	13.48
10	14.99	18.34	2.4	30.57	26.97	1.57	4.75	17.58	16.66
12	19.05	18.34	2.4	35.32	31.75	1.57	4.75	22.6	20.8
14	22.23	18.34	2.4	38.5	34.92	1.57	4.75	25.52	23.95
16	25.4	18.34	2.4	41.67	38.1	1.57	4.75	28.7	27.1
18	28.58	18.34	2.4	44.85	41.27	1.57	4.75	31.87	30.27
20	31.75	23.12	3.2	49.62	46.02	1.57	6.35	35.05	33.45
22	34.93	23.12	3.2	52.77	49.22	1.57	6.35	38.22	36.62
24	38.1	23.95	3.2	55.97	52.37	1.57	5.56	41.4	39.8



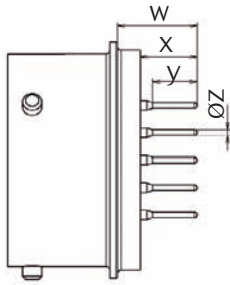
Panel cut-out

Note: All dimensions are in millimeters (mm)

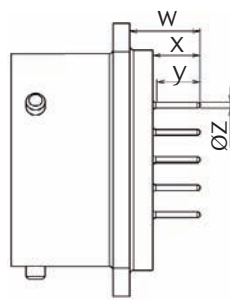
# 8525 Series Hermetic Connectors



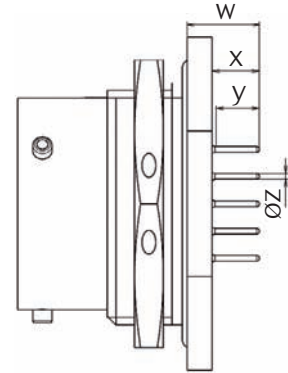
## Contact variations



Type IH: Solder mount receptacle



Type 2H: Square flange receptacle



Type 7H: Jam nut receptacle

Type of contact	Specification	Shell type	Contact size	W Max	X Min	y Min	Ø Z Max
Short PC tail contact	005	IH	20	9.1	4.55	4.5	0.65
		2H	20	8.4	3.35	4.5	0.65
		7H	20	8.05	3.75	4.5	0.65
Long PC tail contact	275	IH	20	13.87	8.5	6	0.65
		2H	20	12.9	7.3	6	0.65
		7H	20	12	7.7	6	0.65

Note: All dimensions are in millimeters (mm)

## Maximum connector weights (in grams)

Shell type \ Shell size	8	10	12	14	16	18	20	22	24
Solder mount receptacle (type IH)	7	9	13	17	21	26	32	37	43
Square flange receptacle (type 2H)	10	12	16	21	26	33	41	47	55
Large square flange receptacle (type 2H spec. 002)	16	18	24	29	34	40	56	60	70
Jam nut receptacle (type 7H)	20	25	38	45	52	63	86	96	115

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)

# 8525 Series Hermetic Connectors



## Product Range Extension

### Hermetic Connector with Removable Contacts

**A technology combining crimp contacts superiority with glass to metal perfect sealing**

**High hermetic performance:**

- . Glass to metal sealing: leakage of less than  $10^{-9}$  atm.cm<sup>3</sup>/s.

**Removable crimp contacts:**

- . RoHS: no lead used.
- . Long lifetime: superior to solder cup contacts in kerosene immersion.
- . Easy MRO: contact replacement.

**Long term fuel immersion materials:**

- . Performances guaranteed for minimum 90,000 hours in fuel immersion.

**Wide Availability:**

- . EN3646 (Airbus Qualified Products).
- . EN2997, EN3645, MIL-DTL-38999.



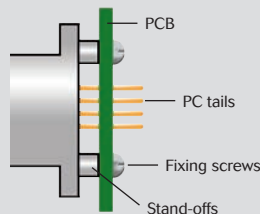
See «MIL-DTL-38999, EN3646, EN2997 Fuel Tank Connector» product news on [www.souriau.com](http://www.souriau.com)

### Hermetic Receptacles with Stand-offs

**Easy and robust PCB mount feature for hermetic receptacles.**

**User friendly - easy to assemble:**

- . 3 fixing screws.
- . No need of additional PCB fixing tool when soldering the contacts.



**Adapted to harsh environment:**

- . Stand-offs directly machined into the connector.
- . Excellent grounding of the PCB to the connector shell through the stand-offs.
- . Excellent vibration and shock resistance, leading to a longer lifetime: PC tail to PCB stresses are supported by the stand-offs.

**Compact:**

- . Hermetic receptacle compact design maintained with a profile smaller than the double flange version.



See «Hermetic Receptacles with Stand-offs» product news on [www.souriau.com](http://www.souriau.com)