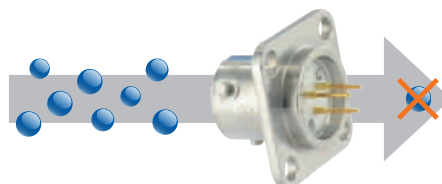




Hermetic and Small Bayonet Connectors EN3646 Standard Qualified

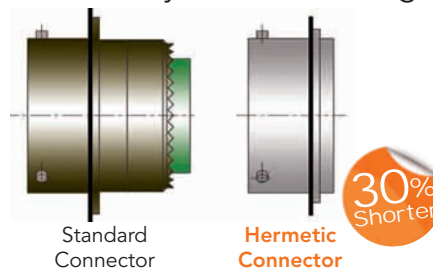
Combination of pressure robustness and compactness. For sensors and space constrained applications.

High pressure performance ■ Glass to metal sealing.
Helium leakage of less than 10^{-7} atm.cm³/s.



Pressure resistant.

Compact design ■ No rear accessory thread and no grommet.



High environmental performance ■ Robust and corrosion resistant stainless shell.
Rated for up to 200°C use.



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 PCB contacts
- Specific fuel tank version for long term fuel immersion
- Specific large square flange option to adapt an O'ring for an improved panel to connector sealing

Technical features

Mechanical

- **Shell:**
Passivated stainless steel
- **Seals:**
Silicone elastomer
- **Contact:**
Gold plated ferrous alloy
- **Shock:**
As per EN3646, 100 m/s² (10g) during 6 ms in the X, Y and Z axis
- **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

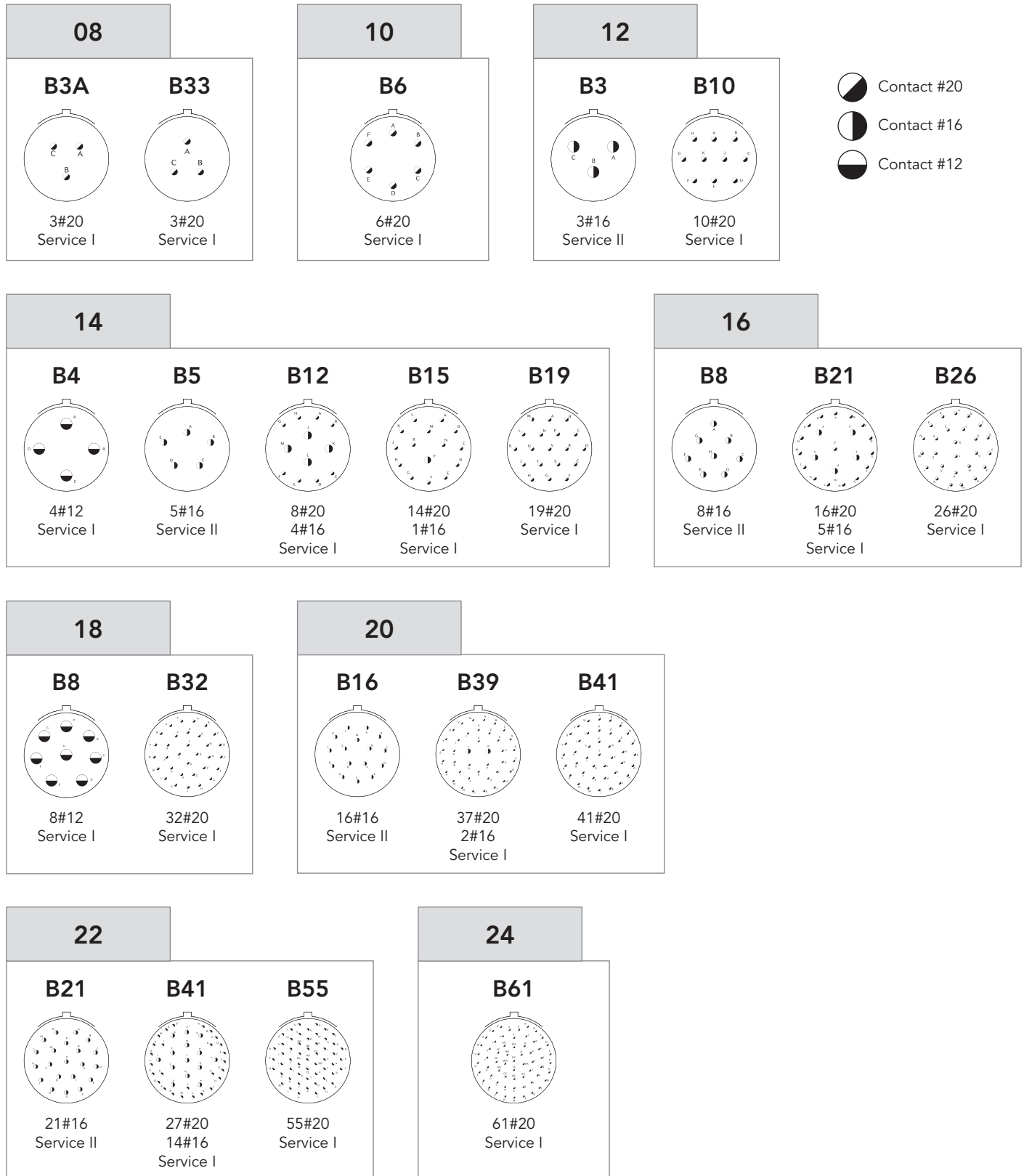
- **Contact resistance at rated current:**
Maximum initial contact resistance at ambient temperature

Contact size	20	16	12
Resistance mΩ	12	8	5

Environmental

- **Operating temperature:**
-55°C to 200°C
- **Hermeticity:**
10⁻⁷ atm.cm³/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

Contact layouts



Contact layouts (matrix)

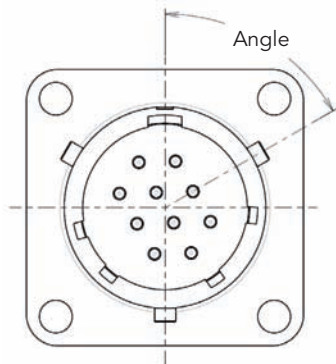
Shell size	Layout	Hermetic 8525	Hermetic EN3646	8525 spec. 002 Large flange	8525 spec. 022 Fuel tank	Number of contacts		
						#20	#16	#12
08	8B3A		Q			3		
	8B33		Q			3		
10	10B6		Q			6		
12	12B3		Q				3	
	12B10		Q			10		
14	14B4		Q					4
	14B5		Q				5	
	14B12		Q			8	4	
	14B15		Q			14	1	
	14B19		Q			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

Orientation

Polarization code



Viewed from receptacle front face.
Insulator rotated inside metal body.

Shell size	Layout	N	W	X	Y	Z
08	B3A	0	60	210	-	-
	B33	0	90	-	-	-
10	B6	0	90	-	-	-
12	B3	0	140	220	180	-
	B10	0	60	155	270	295
14	B4	0	45	-	-	-
	B5	0	40	92	184	273
	B12	0	43	90	-	-
	B15	0	17	110	155	234
	B19	0	30	165	315	-

Shell size	Layout	N	W	X	Y	Z
16	B8	0	54	152	180	331
	B21	0	-	-	-	-
	B26	0	60	-	275	338
18	B8	0	180	-	-	-
	B32	0	85	138	222	265
20	B16	0	238	318	333	347
	B39	0	63	144	252	333
	B41	0	45	126	225	-
22	B21	0	16	135	175	349
	B41	0	39	135	264	-
	B55	0	30	142	226	314
24	B61	0	90	180	270	324

Ordering information

SOURIAU part numbers

Basic series	8525	IH	18B32	P	N	H
Shell type: IH: Solder mount receptacle 02H: Square flange receptacle 07H: Jam nut receptacle						
Contact layout: See page 3						
Contact type: P: Pin						
Orientation: N, W, X, Y, Z - see previous page						
Mandatory suffix: H: Hermetic						
Specification: None: Standard hermetic version 002: Large flange - 02H version only 022: Fuel tank version Other specification (PCB contacts): see page 10						

EN3646 qualified products

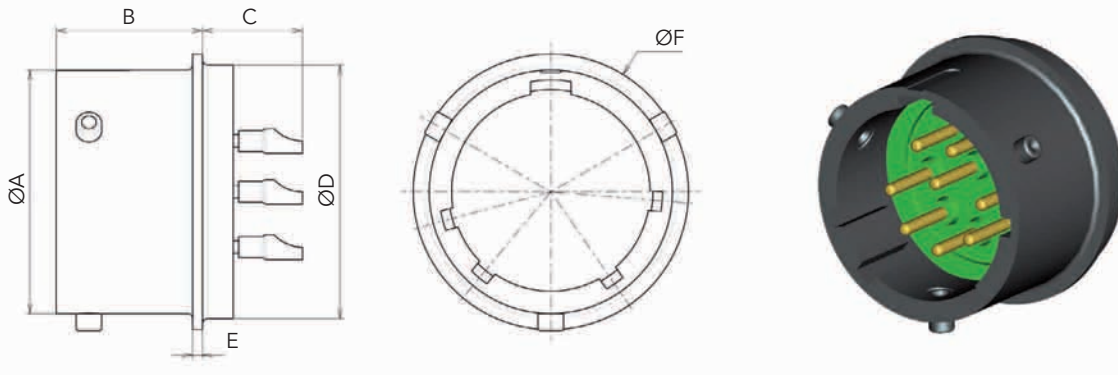
Basic series	EN3646	Y	0	08	03	M	N
Mandatory suffix: Y: Hermetic							
Shell type: 0: Square flange receptacle 1: Solder mount receptacle 7: Jam nut receptacle							
Shell size: 08, 10, 12, 14, 16, 18, 20, 22, 24							
Contact layout: See page 3							
Contact type: M: Pin							
Orientation: N, W, X, Y, Z - see previous page							

Maximum connector weights (in grams)

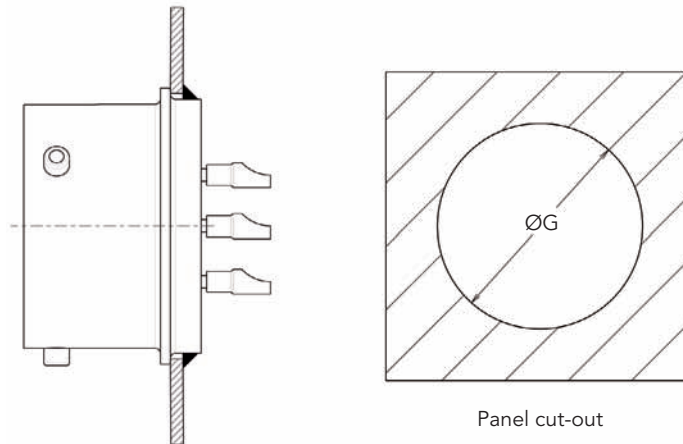
Shell type \ Shell size	8	10	12	14	16	18	20	22	24
Solder mount receptacle (type IH)	7	9	13	17	21	26	32	37	43
Square flange receptacle (type 02H)	10	12	16	21	26	33	41	47	55
Large square flange receptacle (type 02H spec. 002)	16	18	24	29	34	40	56	60	70
Jam nut receptacle (type 07H)	20	25	38	45	52	63	86	96	115

Dimensions

Solder mount receptacle (type IH)

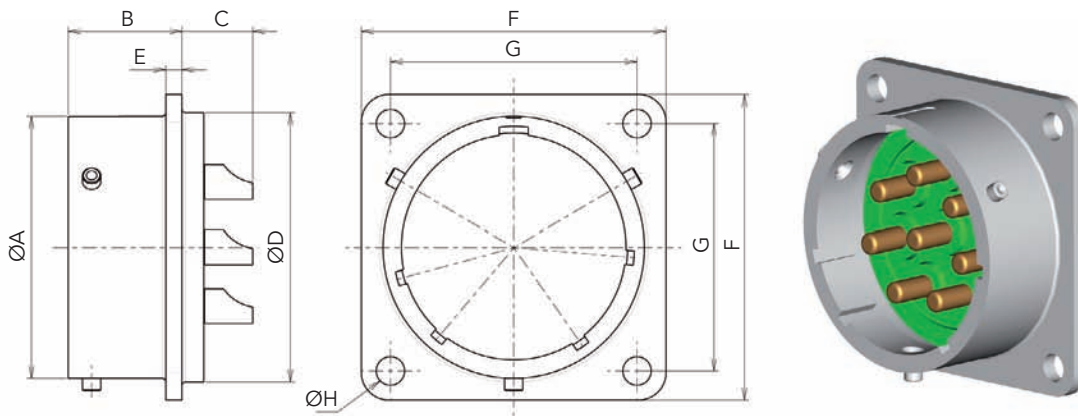


Shell size	A max	B ±0.5	C max	D $^{+0.02}_{-0.13}$	E ±0.14	F max	G $^{+0}_{-0.3}$
8	12.02	11.5	10	14.27	0.8	16.1	14.7
10	14.99	11.5	10	17.07	0.8	19.3	17.5
12	19.05	11.5	10	19.84	0.8	21.7	20.2
14	22.23	11.5	10	23.01	0.8	24.9	23.4
16	25.4	11.5	10	26.19	0.8	28.1	26.6
18	28.58	11.5	10	29.36	0.8	31.2	29.8
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

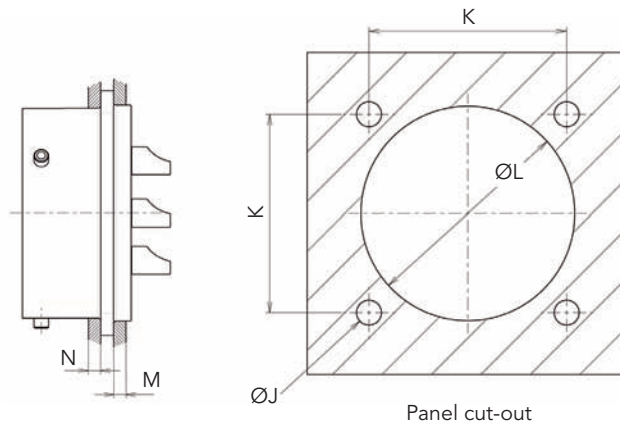


Note: All dimensions are in millimeters (mm)

Square flange receptacle (type 02H)

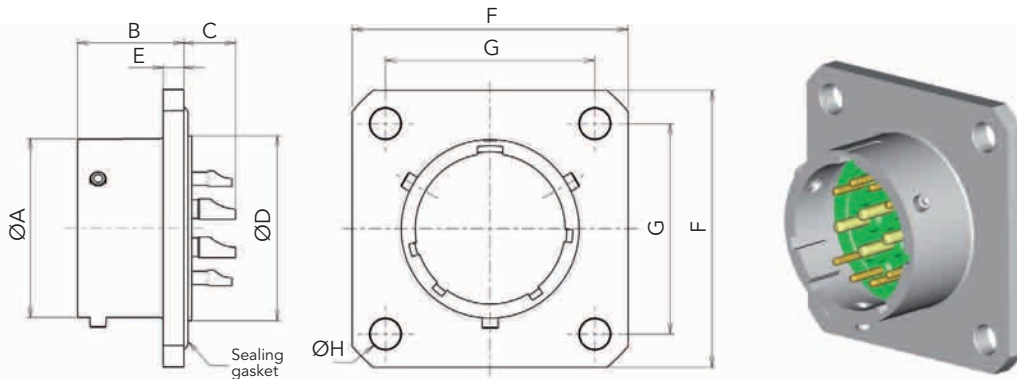


Shell size	A max	B ±0.55	C max	D ⁺⁰ _{-0.3}	E	F max	G	H ±0.15	J ±0.15	K	L ⁺⁰ _{-0.3}	M	N max
8	12.02	12.65	8.4	14.3	1.63 ^{+0.28}	21.03	15.1	3.15	3.15	15.1	14.7	3.5	2.3
10	14.99	12.65	8.4	17.1	1.63 ^{+0.28}	24.23	18.26	3.15	3.15	18.26	17.5	3.5	2.3
12	19.05	12.65	8.4	19.9	1.63 ^{+0.28}	26.59	20.62	3.15	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

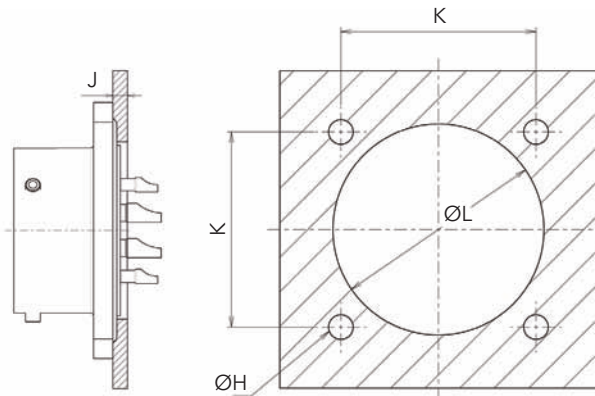


Note: All dimensions are in millimeters (mm)

Large square flange receptacle (type 02H spec. 002)



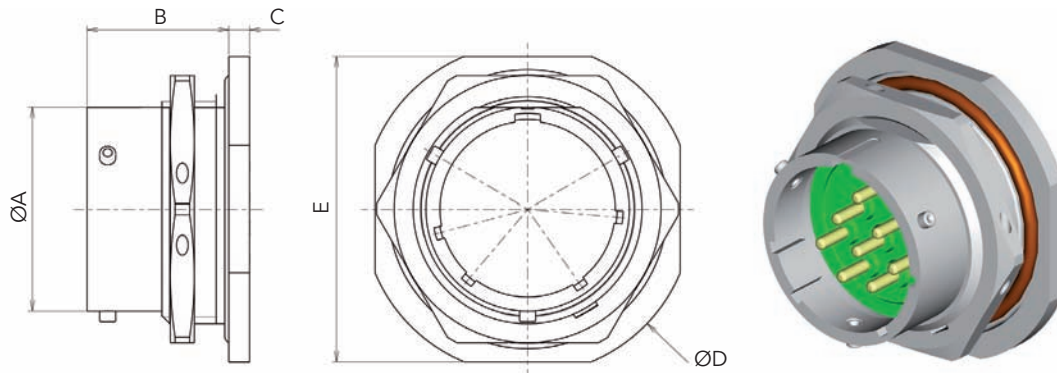
Shell size	A max	B max	C		D max	E max	F max	G	H	J	K	L $^{+0.3}$
			#20	#12/#16								
8	12.02	13.14	6.8	-	14.27	2.6	26.4	18.1	3.8	3.5	18.1	14.7
10	14.99	13.14	6.8	-	17.06	2.6	28.9	20.62	3.8	3.5	20.62	17.5
12	19.05	13.14	6.8	7.1	19.83	2.6	32.1	23.82	3.8	3.5	23.82	20.2
14	22.23	13.14	6.8	7.1	23.01	2.6	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



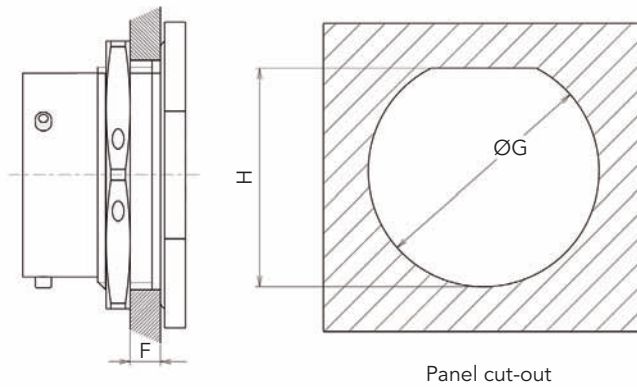
Panel cut-out

Note: All dimensions are in millimeters (mm)

Jam nut receptacle (type 07H)

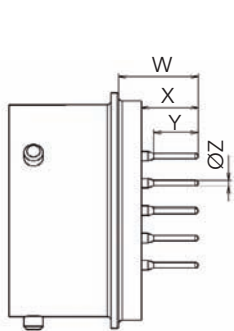


Shell size	A max	B max	C ± 0.5	D max	E ± 0.25	F		G $^{+0.25}_0$	H $^{+0.25}_0$
						min	max		
8	12.02	18.34	2.4	27.37	23.82	1.57	4.75	14.4	13.48
10	14.99	18.34	2.4	30.57	26.97	1.57	4.75	17.58	16.66
12	19.05	18.34	2.4	35.32	31.75	1.57	4.75	22.6	20.8
14	22.23	18.34	2.4	38.5	34.92	1.57	4.75	25.52	23.95
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

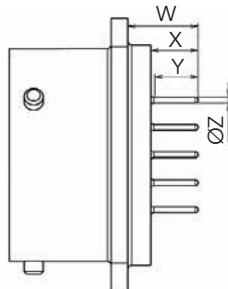


Note: All dimensions are in millimeters (mm)

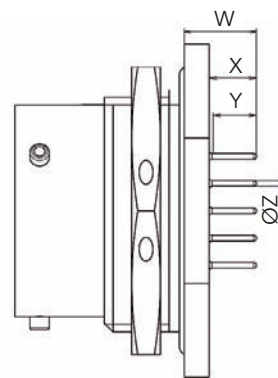
Contact variations



Type IH: Solder mount receptacle



Type 02H: Square flange receptacle



Type 07H: Jam nut receptacle

Type of contact	Specification	Shell type	Contact size	W Max	X Min	Y Min	Ø Z Max
Short PCB contact	005	IH	20	9.1	4.55	4.5	0.65
		02H	20	8.4	3.35	4.5	0.65
		07H	20	8.05	3.75	4.5	0.65
Long PCB contact	275	IH	20	13.87	8.5	6	0.65
		02H	20	12.9	7.3	6	0.65
		07H	20	12	7.7	6	0.65

Note: All dimensions are in millimeters (mm)

Gaskets

Shell size	Gasket for receptacle Type 0		O ring for receptacle Type 7	
	Part number	Material	Part number	Material
08	85251431	Fluoro silicone	AS3582-016	Silicone
10	85251432	Fluoro silicone	AS3582-018	Silicone
12	85251433	Fluoro silicone	AS3582-021	Silicone
14	85251434	Fluoro silicone	AS3582-023	Silicone
16	85251435	Fluoro silicone	AS3582-025	Silicone
18	85251436	Fluoro silicone	AS3582-027	Silicone
20	85251437	Fluoro silicone	AS3582-029	Silicone
22	85251438	Fluoro silicone	AS3582-030	Silicone
24	85251439	Fluoro silicone	AS3582-031	Silicone

For further information contact us at contactmilaero@souriau.com or visit our web site www.souriau.com

Product Range Extension

Removable Crimp 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.cm³/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.



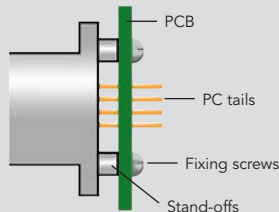
See «MIL-DTL-38999, EN3646, EN2997 Fuel Tank Connector» product news on www.souriau.com

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: PC tail to PCB stresses are eliminated 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