



Bulkhead Feedthrough Solutions

Double Ended Receptacles, Pressure Seals, Fireseals



Presentation

SOURIAU offers a full range of feedthroughs for aviation and military applications. These products enable to cross bulkheads while conveying signal or power. Whether you are looking to increase the modularity of your system, maintain pressure boundaries or convey high electrical power, we have the right solution.

Our feedthrough solutions are divided in three main categories:

- Double ended receptacles which mates with plugs from the same series
- Pressure seals which enable to perform cable routing without cutting wires
- Fireseals to prevent fire propagation

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FEEDTHROUGH SERIES

Overview

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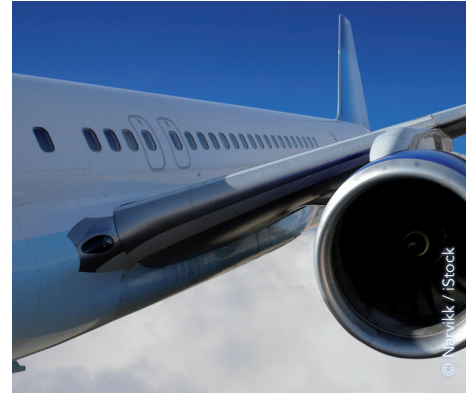
Typical applications



Aircraft Section Junctions



Landing Gear to Cabin Junction



Wing to Cabin Junction



Aircraft Fuel Tanks



Aircraft Skin



Ground Army Vehicle Junctions

Features & benefits

EXTENSIVE RANGE

Feedthroughs, Pressure and Fireseals

Ease equipment integration.
Maintain pressure boundaries.
From signal to high power.
Protect from fire.

EASY

Time Saving

Save time during design, final assembly and maintenance.

SEALED

Low Leak Rate

Reinforced sealing technology for leak rate less than 10^{-6} atm.cm³/s at up to 1 bar.

ROBUST

Rugged

Withstand harshest environments.
High vibration, temperature, fire and/or pressure differences.

TAYLOR MADE

Custom Solutions

We adapt our solutions to your equipment.

Selection guide

FEEDTHROUGH

Double ended receptacles

Cabin junction with:

- Wing
- Rear aft pressure bulkhead
- Landing gear bay

Between Aircraft compartments
Vehicle junctions

8DB Series
Page 14



For use with

MIL-DTL-38999 SIII Plugs

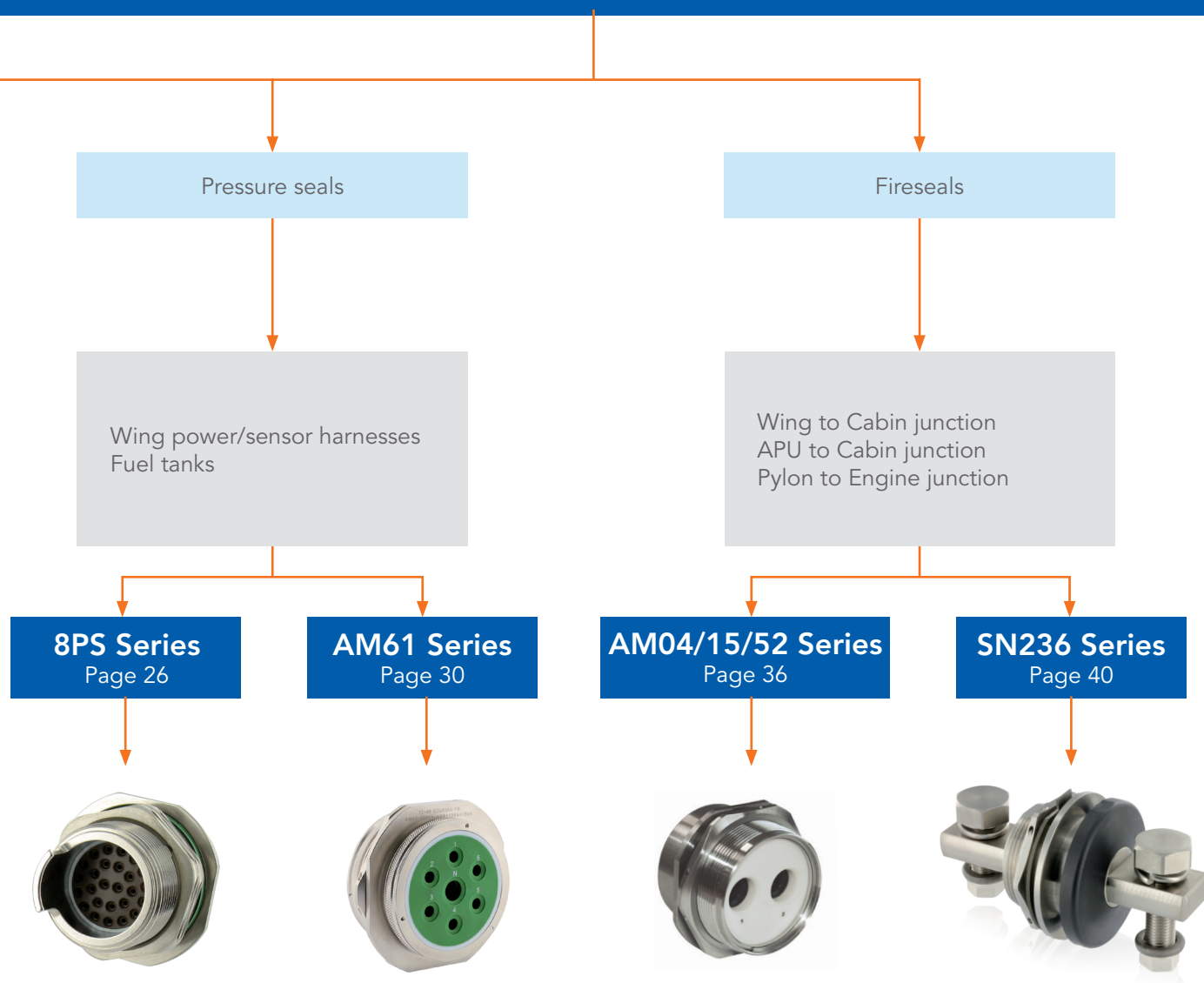
Benefits

Extensive range
Pressure delta up to 1 bar
Leak rate < 10^{-6} atm.cm³/s

Features

Thermoplastic insulator
Aluminium or stainless steel housing
Male female or male male contacts

RANGES



Cables (no connection)

Low leak rate
No attenuation loss
8PS Fuel immersible

8PS Viton® grommets
AM61: Silicone elastomer grommets
Aluminium housing

Fire resistance
High temperature

Ceramic insulator
Stainless steel
or titanium housing

Terminal lugs

Fire resistance
High temperature
Up to 350A

Ceramic insulator
Stainless steel housing
Nickel or copper bar

FEEDTHROUGH SERIES

Feedthrough Series

Double Ended Receptacles

■ 8DB.....	14
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8DB Series - features & benefits

EASY

Time Saving

Decrease electrical installation workload during design and final assembly compared with conventional non repairable potted feedthroughs: No more compound!
Reduce maintenance costs.

SEALED

Low Leak Rate

Standard Reinforced Sealing technology used in 8DB Series enables to reach leak rates lower than 10^{-6} atm.cm³/s under 1 bar.

ROBUST

MIL-DTL-38999 SIII / EN3645 Performances

Withstand harshest environments.
High vibration, temperature and/or pressure differences.
Mates with MIL-DTL-38999 SIII and EN3645 plugs.

LIGHT WEIGHT

Weight Saving

Thanks to reinforced sealing technology, aluminum shells are available.

EXTEN- SIVE RANGE

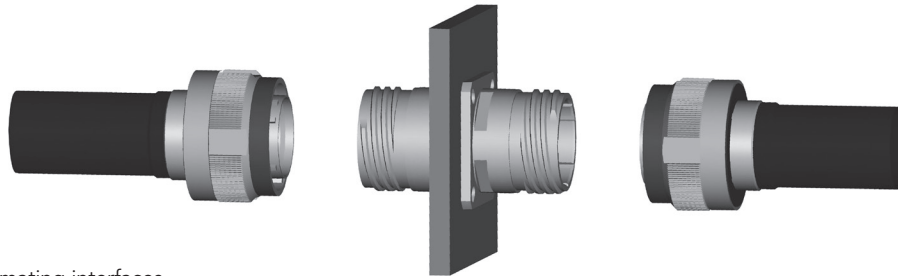
55 Available Layouts

Aluminum or stainless steel
Black Zinc Nickel available for RoHS high corrosion resistance.

Detailed features & benefits

Overview

Double Ended Receptacles mounted on panel allows cable plug connexion on both sides of the bulkhead:

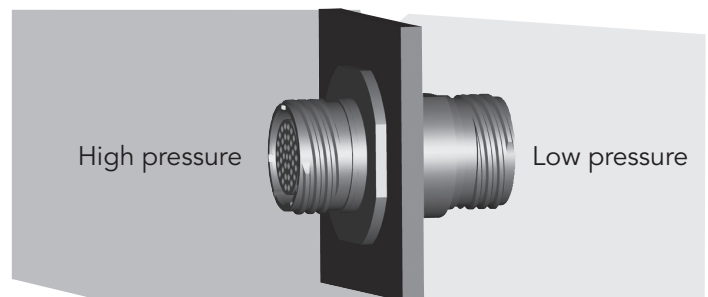


- Standard 38999 SIII mating interfaces
- Standard 38999 SIII layouts: Contacts from #22 to #8 signal and power
- Pin/Socket or Pin/Pin contacts

Pressure boundary on panel

Thanks to a special insulator design:

- Leak rate $< 10^{-6}$ atm.cm³/s under $\Delta P=1$ bar:
- 100 times higher than standard receptacle sealing at 10^{-4} atm.cm³/s
- Sealed even unmated

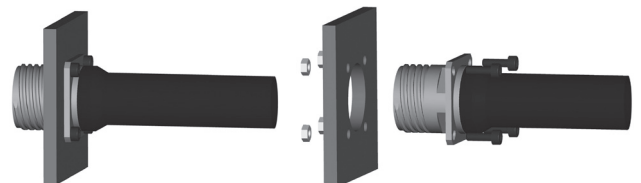


Easy integration and maintenance

Standard receptacle

Standard Receptacle configuration:

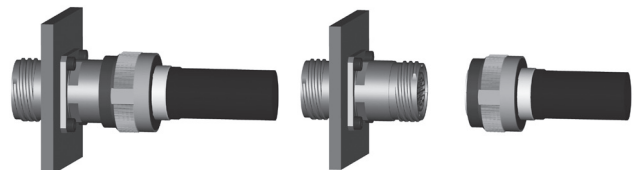
- Receptacles and harness have to be mounted onboard
- Difficult operation when limited access area
- To dismount harnesses, need to remove receptacle from panel (4 screws or fixing nut)

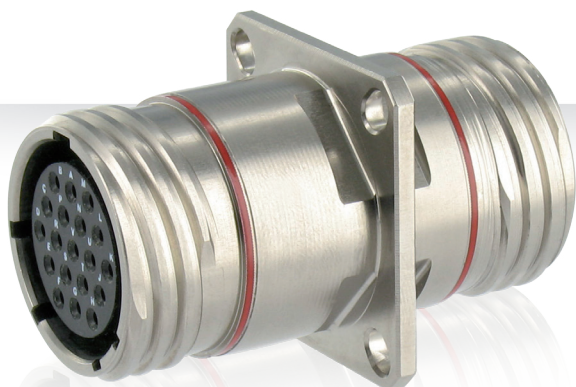


Double ended receptacle

Feedthrough premounted on panel:

- Simply mate the cabled plugs
- No fixing operations onboard
- No associated controls onboard (Torque measurement)
- Full independency between sections or areas
- To dismount harnesses, only unmate cabled plug
- No mechanical operation on panel. Ensures structure mechanical integrity





Description

- 38999 Series III performances
- Standard reinforced sealing:
Leak rate < 10⁻⁶ atm.cm³ / s
- NEW:
QPL Black Zinc Nickel on Aluminium for better corrosion resistance

Applications

- Aircraft compartments
- Wing/cabin junction
- Landing gear bay/cabin junction
- Aircraft skin
- Armored vehicles junctions

Technical features

Mechanical

- **Shell:**
Aluminum, stainless steel
- **Shell plating:**
Aluminium shell:
Nickel (F)
Olive drab cadmium (W)
Black zinc nickel (Z)
Stainless steel shell:
Passivated (K)
- **Insulator:**
Thermoplastic or thermoset
- **Grommet and interfacial seal:**
Silicone elastomer
- **Contacts:**
Copper alloy
- **Contacts plating:**
Gold over nickel plated
- **Endurance:**
500 mating/unmating operations
- **Shock:**
300g, 3ms half sine wave according to MIL-DTL-38999 SIII
- **Vibration:**
Sinus:
10 to 2000Hz, 3 x 12hrs
(60g, 140-2000Hz) at low, ambient and hightemperature according to MIL-DTL-38999 SIII

Random:
10 to 2000Hz, 2 x 8 hrs at T° ambient and T° max according to MIL-DTL-38999 SIII

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
- **LD4 (SAE AS 1241):**
 - . Mineral lubricating:
MIL-L-7870A (OTAN 0142)
 - . Synthetic lubricating:
MIL-L-23699 (OTAN 0156), MIL-L-7808
 - . Cleaning fluid: MIL-C-87936 diluted
 - . De-icing fluid: MIL-A-8243
 - . Extinguishing fluid: Bromochloromethane
 - . Cooling fluid: Coolanol

Electrical

- Test Voltage rating (Vrms)

Service	Sea level	At 21 000 m
M	1300 V	800 V
N	1 000 V	600 V
I	1 800 V	1 000 V
II	2 300 V	1 000 V

- **Insulation resistance:**
> 5000 MΩ (at 500 Vdc)
- Total contact resistance with 1 mated plug on each side

Size	Sea level
22D	29.2 mΩ
20	15 mΩ
16	7.6 mΩ
12	7 mΩ
8	6 mΩ

- Contact rating

Size	Sea level
22D	5 A
20	7.5 A
16	13 A
12	23 A
8	45 A

8DB Series | Double Ended Receptacles

- **Shell continuity:**

Aluminum shell:

Cadmium olive drab (W): 2.5 mΩ

Nickel (F): 1 mΩ

Black zinc nickel (Z): 2.5 mΩ

Stainless steel shell:

Passivated (K): 10 mΩ

Nickel (S): 1 mΩ

- **Shielding:**

Aluminum shell:

F: 65 db at 10 GHz

Z, F & W: 85 db at 1 GHz

Z & W: 50 db at 10 GHz

Stainless steel shell:

K: 45 db at 10 GHz

S: 65 db at 10 GHz

Climatics

- **Sealing:**

10⁻⁶ atm.cm³/s unmated (helium gas test)

- **Temperature range:**

Aluminum shell:

W: -65°C +175°C

F and Z: -65°C +200°C

Stainless steel shell:

K and S: -65°C +200°C

- **Salt spray:**

Aluminum shell:

W and Z: 500 Hrs

F: 48 Hrs

Stainless steel shell:

K and S: 500 Hrs

- **Damp heat:**

MIL-DTL 38999 (10 cycles of 24 hours)

Connector weight (g)

Shell Size	Aluminium shell		Stainless steel shell	
	Square flange (Type 0)	Jam nut (Type 7)	Square flange (Type 0)	Jam nut (Type 7)
9	20	27	55	75
11	28	33	65	92
13	36	45	95	133
15	45	54	105	144
17	59	67	145	194
19	69	79	156	217
21	78	90	175	227
23	95	110	198	249
25	108	124	230	289

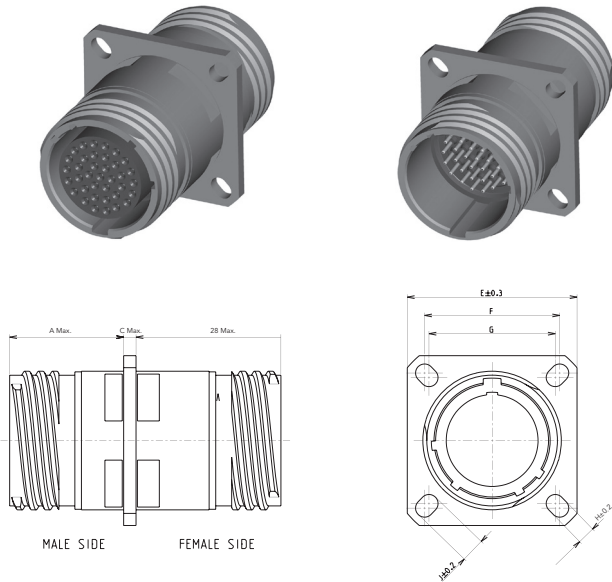
Ordering information

Basic Series	8DB	0	15	W	35	PS	N	...
Style 0: Square Flange 7: Jam nut								
Shell size 09, 11, 13, 15, 17, 19, 21, 23, 25								
Plating and shell material Aluminium shell: W: Olive drab cadmium F: Nickel Z: Black zinc nickel Stainless steel shell: K: Passivated (High corrosion resistance) S*: Nickel								
Contact layout See Contacts layouts tables								
Contact type PS: Pin - Socket PP*: Pin - Pin SP*: Socket - Pin (Inverted gender compared with PS)								
Key polarisation N: Normal A - B - C - D - E (see table Key Polarisation)								
Specification 251: Connector with power contacts (layouts with contact #8)								

* Please consult us

Physical dimensions

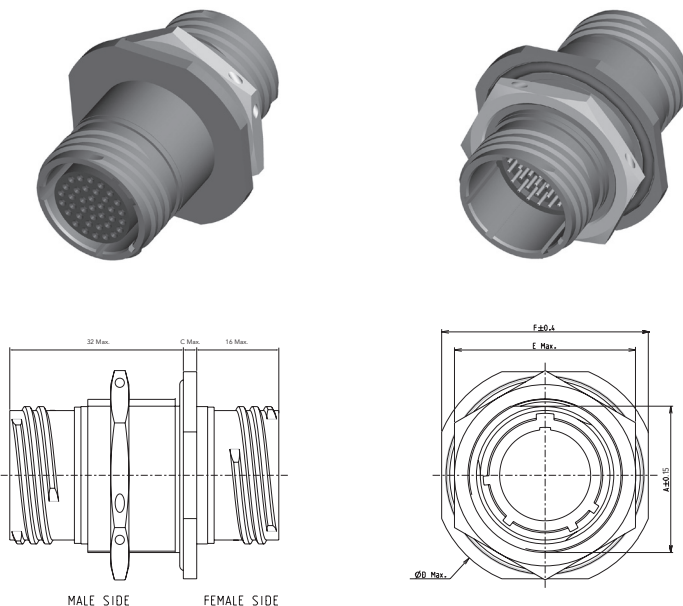
Square flange version*



Shell size	A Max	C Max	E ± 0.30	F	G	H ± 0.20	J ± 0.20
9 (A)	20.90	2.50	23.80	18.26	15.09	3.25	5.49
11 (B)	20.90	2.50	26.20	20.62	18.26	3.25	4.93
13 (C)	20.90	2.50	28.60	23.01	20.62	3.25	4.93
15 (D)	20.90	2.50	31.00	24.61	23.01	3.25	4.93
17 (E)	20.90	2.50	33.30	26.97	24.61	3.25	4.93
19 (F)	20.90	2.50	36.50	26.36	26.97	3.25	4.93
21 (G)	20.10	3.20	39.70	31.75	29.36	3.25	4.93
23 (H)	20.10	3.20	42.90	34.93	31.75	3.91	6.15
25 (J)	20.10	3.20	46.00	38.10	34.93	3.91	6.15

* Drawings for PS contact type

Jam nut version*

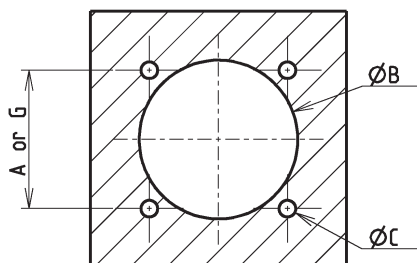


Shell size	A ± 0.15	C Max	D Max	E Max	F ± 0.40
9 (A)	16.53	2.80	30.50	23.00	27.00
11 (B)	19.07	2.80	35.20	26.00	31.80
13 (C)	23.82	2.80	38.40	31.00	34.90
15 (D)	26.97	2.80	41.60	34.00	38.10
17 (E)	30.15	2.80	44.80	37.00	41.30
19 (F)	33.32	3.50	49.50	41.00	46.00
21 (G)	36.50	3.50	52.70	46.00	49.20
23 (H)	39.67	3.50	55.90	47.00	52.40
25 (J)	42.85	3.50	59.00	52.00	55.60

* Drawings for PS contact type
Note: All dimensions are in millimeters (mm)

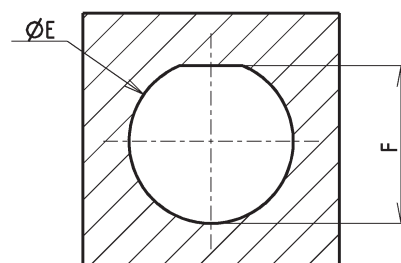
Mounting information

Panel cut-out*



Square Flange version

Shell size	A ± 0.25	G	B min.	C ± 0.13
9 (A)	18.26	15.09	16.66	3.25
11 (B)	20.62	18.26	20.22	3.25
13 (C)	23.01	20.62	23.42	3.25
15 (D)	24.61	23.01	26.59	3.25
17 (E)	26.97	24.61	30.96	3.25
19 (F)	29.36	26.97	32.94	3.25
21 (G)	31.75	29.36	36.12	3.25
23 (H)	34.93	31.75	39.29	3.91
25 (J)	38.10	34.94	42.47	3.91

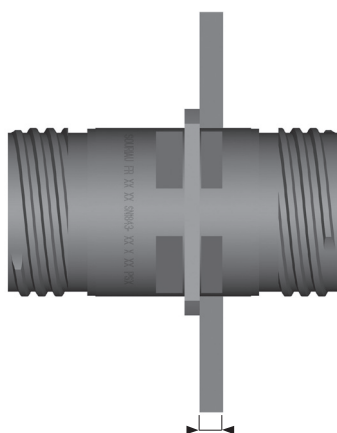


Jam Nut version

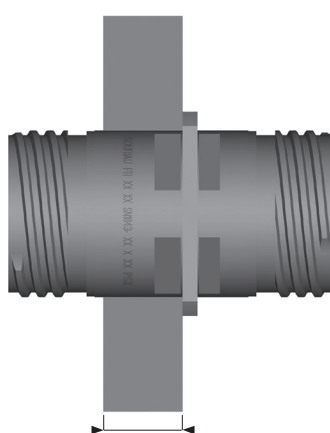
Shell size	E + 0.25	F
9 (A)	17.78	17.02
11 (B)	20.96	19.59
13 (C)	25.65	24.26
15 (D)	28.83	27.56
17 (E)	32.01	30.73
19 (F)	35.18	33.91
21 (G)	38.35	37.08
23 (H)	41.53	40.26
25 (J)	44.70	43.43

* According to MIL-DTL 38999 SIII

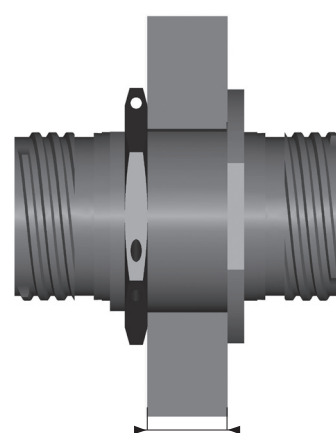
Maximum wall thickness



Square Flange:
Rear mounting



Square Flange:
Front mounting

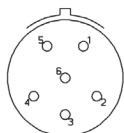


Jam Nut

Available layouts

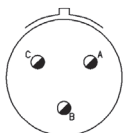
09 (A)

35

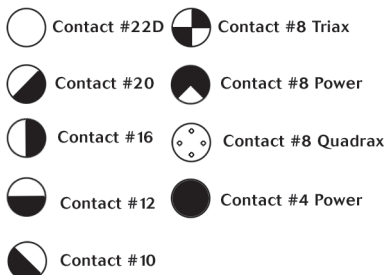


6#22D
Service M

98

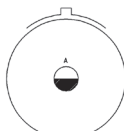


3#20
Service I



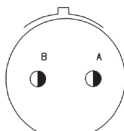
11 (B)

01



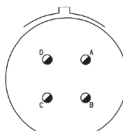
1#12
Service II

02



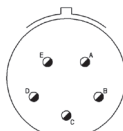
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Service I

04



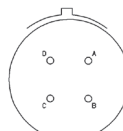
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Service I

05



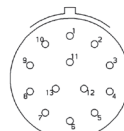
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Service I

22



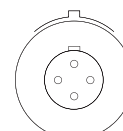
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Service M

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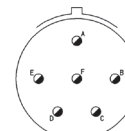
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Service M

81*



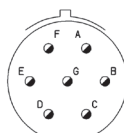
1#8 Quadrax

98



6#20
Service I

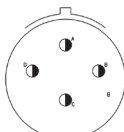
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7#20
Service I

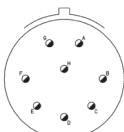
13 (C)

04



4#16
Service I

08



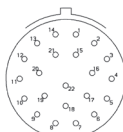
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Service I

26



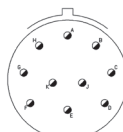
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6#22D
Service M

35



22#22D
Service M

98



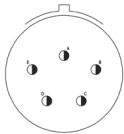
10#20
Service I

* Not sealed unmated

8DB Series | Double Ended Receptacles

15 (D)

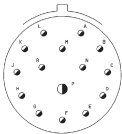
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5#16

Service II

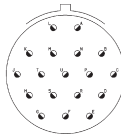
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1#16
14#20

Service I

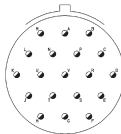
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18#20

Service I

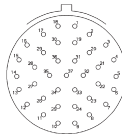
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19#20

Service I

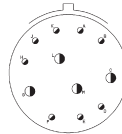
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37#22D

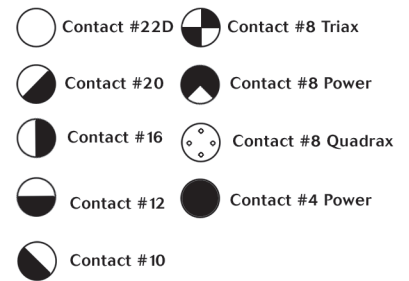
Service M

97



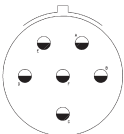
4#16
8#20

Service I



17 (E)

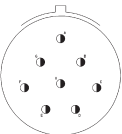
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6#12

Service I

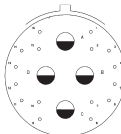
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8#16

Service II

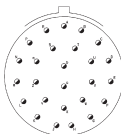
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4#12
16#22D

Service M

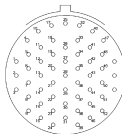
26



26#20

Service II

35



55#22D

Service M

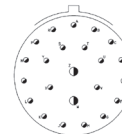
75
spec 251



2#8 power

Service M

99

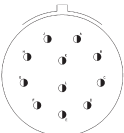


2#16
21#20

Service I

19 (F)

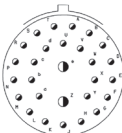
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11#16

Service II

28



26#20
2#16

Service I

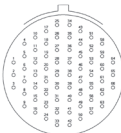
32



32#20

Service I

35

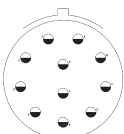


66#22D

Service M

21 (G)

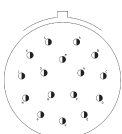
11



11#12

Service I

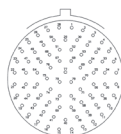
16



16#16

Service II

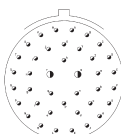
35



79#22D

Service M

39



2#16
37#20

Service II

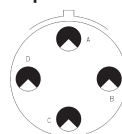
41



41#20

Service I

48
spec 251



4#8 Power

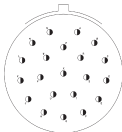
Service I

* Not sealed unmated

8DB Series | Double Ended Receptacles

23 (H)

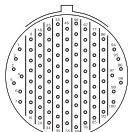
21



21#16

Service II

35



100#22D

Service M

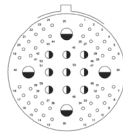
53



53#20

Service I

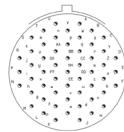
54



4#12
9#16
40#22D

Service M

55



55#20

Service I



Contact #22D



Contact #8 Triax



Contact #20



Contact #8 Power



Contact #16



Contact #8 Quadrax



Contact #12



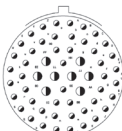
Contact #4 Power



Contact #10

25 (J)

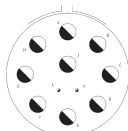
04



8#16
48#20

Service I

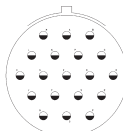
11



2#20
9#10

Service N

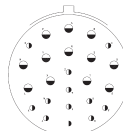
19



19#12

Service I

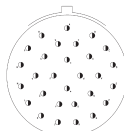
24



12#16
12#12

Service I

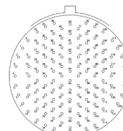
29



29#16

Service I

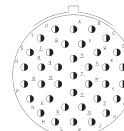
35



128#22D

Service M

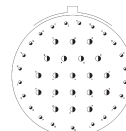
37



37#16

Service I

43



23#20
20#16

Service I

61



61#20

Service I

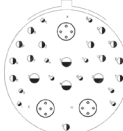
46*



40#20
4#16

2#8 Coax
Service I

80*



10#20
13#16

4#12 Coax
3#8 Quadrax

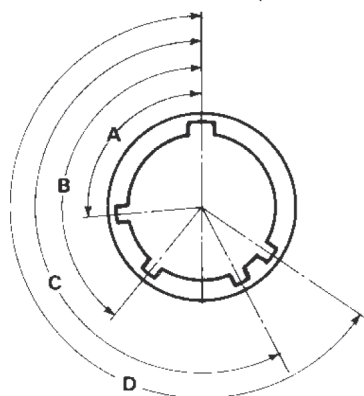
* Not sealed unmated

Contact layouts matrix

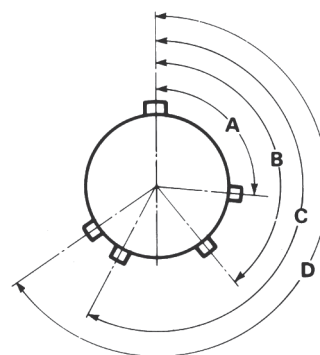
Shell size	Layout	Service	Number of contact	#22D	#20	#16	#12	#10	#8
9 (A)	09 - 35	M	6	6					
	09 - 98	I	3		3				
11 (B)	11 - 01	II	1				1		
	11 - 02	I	2			2			
	11 - 04	I	4		4				
	11 - 05	I	5		5				
	11 - 35	M	13	13					
	11 - 81		1						1 quadrax
	11 - 98	I	6		6				
13 (C)	11 - 99	I	7		7				
	13 - 04	I	4			4			
	13 - 08	I	8		8				
	13 - 26	M	8	6			2		
	13 - 35	M	22	22					
15 (D)	13 - 98	I	10		10				
	15 - 05	II	5			5			
	15 - 15	I	15		14	1			
	15 - 18	I	18		18				
	15 - 19	I	19		19				
	15 - 35	M	37	37					
	15 - 97	I	12		8	4			
17 (E)	17 - 06	I	6				6		
	17 - 08	II	8			8			
	17 - 20	M	20	16			4		
	17 - 26	I	26		26				
	17 - 35	M	55	55					
	17 - 75	M	2						2
	17 - 99	I	23		21	2			
19 (F)	19 - 11	II	11			11			
	19 - 28	I	28		26	2			
	19 - 32	I	32		32				
	19 - 35	M	66	66					
21 (G)	21 - 11	I	11				11		
	21 - 16	II	16			16			
	21 - 35	M	79	79					
	21 - 39	I	39		37	2			
	21 - 41		41		41				
	21 - 48	I	4						4 power
23 (H)	23 - 21	II	21			21			
	23 - 35	M	100	100					
	23 - 53	I	53		53				
	23 - 54	M	53	40		9	4		
	23 - 55	I	55		55				
25 (J)	25 - 04	I	56		48	8			
	25 - 11	N	11		2			9	
	25 - 19	I	19				19		
	25 - 24	I	24			12	12		
	25 - 29	I	29			29			
	25 - 35	M	128	128					
	25 - 37	I	37			37			
	25 - 43	I	43		23	20			
	25 - 46	I	46		40	4			2 coax
	25 - 61	I	61		61				
	25 - 80		30		10	13	4 coax		3 quadrax

Key polarization

Viewed from front face of receptacle



Viewed from front face of plug



Standard 38999 corresponding plug
(SOURIAU part number 8D5*****)

Shell size	Angles	N	A	B	C	D	E
9 (A)	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 (B)	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 (C)	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
15 (D)	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 (E)	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 (F)	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
21 (G)	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
23 (H)	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
25 (J)	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

FEEDTHROUGH SERIES

Feedthrough Series

Pressure Seals

■ 8PS Series.....	26
■ AM Series	30





Description

- Reinforced sealing**
 From smaller to higher cable diameter (0.9 to 1.9 mm), each cable is individually sealed
- Easy and safe cable routing**
 Easy wiring, no potting required
 8PS can be premounted on harness, saving time in final assembly
 Possible multiple bulkhead crossing
 Tie rap backshell integrated in the design for enhanced vibrations and tensions resistance
- No signal attenuation**
 No contact attenuation for fiber optic thanks to no cable to contact termination
 Maximum continuity for copper cables
- Suitable for fuel tank applications**
 Fluorocarbon materials compatible with fuel immersion
 No leak in kerosene under $\Delta P=2$ bar

Technical features

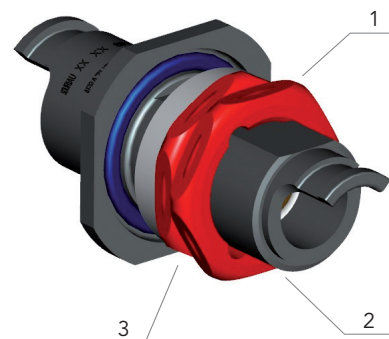
Mechanical

- Shell:**
 Shell and mounting nut:
 Aluminium alloy
- Shell plating:**
 Nickel
- Grommet and O-ring:**
 Fluoroelastomer or VITON
 (for fuel resistance)

Environmental

- Operating Temperature:**
 - 55 to +85°C (-67 to +185°F) for fuel immersion
- Corrosion resistance as per MIL-STD-202 F:**
 Method 101D. condition B
 Salt spray: 48h
- Fuel leaktightness under $\Delta P=2$ bars:**
 No leak after one hour
- Suitable for operation in kerosene and high flash kerosene fuels**

Shell size	Mass (g)
09	17
11	21
17	48



Item n	Description
1	Locking nut
2	Tie rap backshell
3	Panel protection spacer

Dimensions

Technical drawings of the connector showing front, side, and rear views with dimensions:

- Front View:** Shows the connector face with a square mounting flange of width B . The central port has a diameter of $\varnothing A$.
- Side View:** Shows the profile of the connector. Key dimensions include:
 - Overall width: 28.5 MAX
 - Port diameter: 6 mini
 - Mounting flange thickness: 3.5
 - Internal spacing: 2.4
 - Overall depth: 21.5 MAX
 - Spacer thickness: 1.6 to 8 (Panel Thickness)
 - Nuts and Spacers are indicated.
- Rear View:** Shows the back of the connector with a square mounting flange of width C .
- Detail View:** Shows the internal assembly with dimensions:
 - Panel diameter: $\varnothing E$
 - Panel thickness: 1 ± 0.5
 - Mounting flange thickness: 4 ± 0.5
 - Spacer thickness: 7 ± 0.5
 - O ring is indicated.

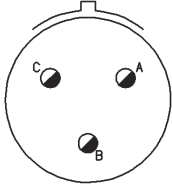
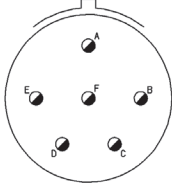
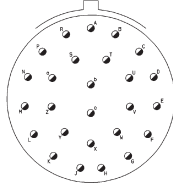
PANEL CUTOUT

Panel cutout diagram showing dimensions:

- Panel diameter: $\varnothing D_{-0.3}^0$
- Panel thickness: $E_{-0.3}^0$

Shell size		9	11	17
Tightening Torque N.m	min	3.3	3.8	9.6
	max	3.4	4.4	10.7
A MAX		26	28	41
B MAX		23.1	27.1	38.1
C MAX		19.4	22.25	33.65
D MAX		14.7	18	29.1
E MAX		13.8	17.1	27.5
F MAX		14.25	17.45	28.55

Layouts

Layouts		
09-98  3#20	11-98  6#20	17-26  26#20

*For other configurations, please consult us.

Ordering information

Basic Series	8PS	7	V	A	09	F	98	001
Feedthrough type 7: Jam nut								
Grommet and O-ring material V: Viton (Fluoroelastomer) S: Silicone (Please consult us)								
Shell material A: Aluminium alloy								
Shell size 09, 11, 17 For other sizes, please consult us								
Plating F: Nickel								
Layout See above For other layouts, please consult us								
Specification 001: Tie rap 002*: 360° lip for shrink boot 003: Tie rap + double locking nut + spacer 004*: 360° lip + double locking nut + spacer								

*For other configurations, please consult us.

Accessories

Bundle attachment

Harness bundle is fastened by cable ties at both entrance and exit of the feedthrough.
Cable tie to be used as per NSA935401-03.

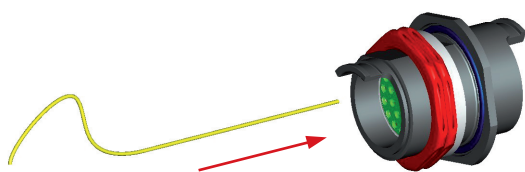
Filler plugs

Filler plugs are available for non populated holes
Filler plug part number: 8522-8553

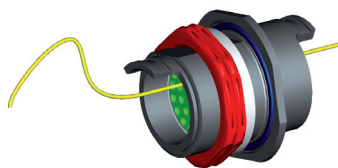
Easy wiring

Wire external diameter=Ø0.9 mm to Ø1.3 mm

Simply insert wires into grommet without tool



1 Set the cable in front of the grommet



2 Insert the cable through the grommet

Wire external diameter = Ø1.3 mm to Ø2 mm

Insert wires into grommet with tools (Needle + tip)

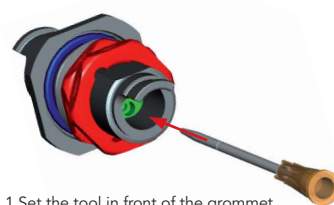
Needle (PN: 8S30001PM0002A)



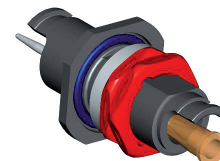
Needle + tip



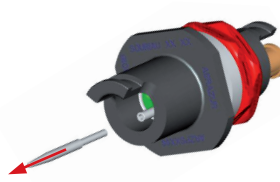
Tip (PN: 8S30001PM0001A)



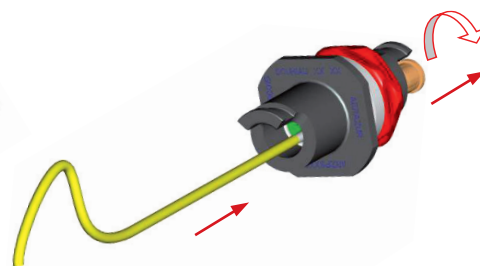
1 Set the tool in front of the grommet



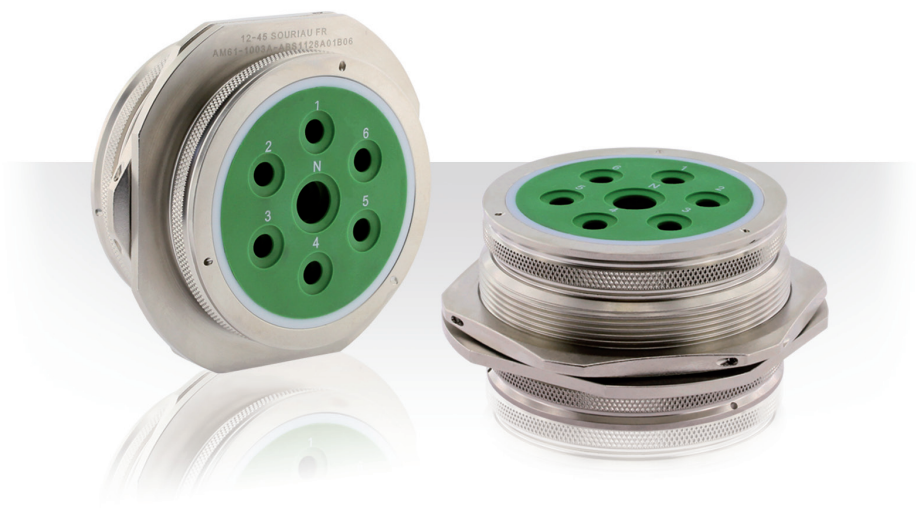
2 Insert the tool



3 Remove the tip from the tool



4 Insert the cable through the tool



Description

- Cable routing pressure resistant feedthrough
- All version ABS (Airbus) Qualified
- Avoid cable movement under vibrations
- Available in 6, 7 & 9 ways with various cables sizes
- Two shell sizes available (code 01 & 02)
- Jam nut version only

Technical features

Mechanical

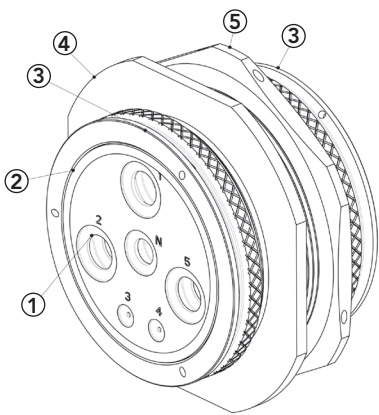
- **Shell:**
Aluminium alloy
Nickel plated
- **Jam nut:**
Aluminium alloy
Nickel plated
- **Backshell nut:**
Aluminium alloy
Nickel plated
- **Insert:**
Thermoplastic
- **Cable seal:**
Silicone
- **O'ring:**
Fluorosilicone
- **Compression ring:**
PTFE or Thermoplastic

Climatics

- **Operating temperature range:**
-55°C to +200°C

Conformity

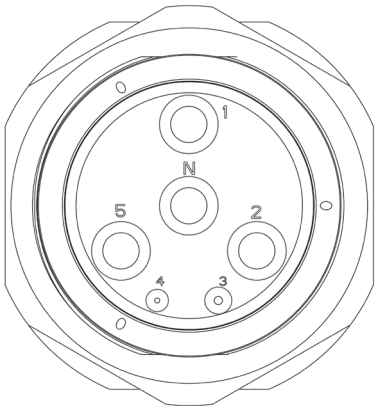
- **In accordance with:**
ABS1128
EN3909



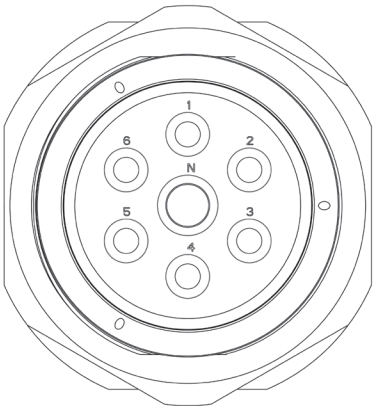
Item n	Description	Quantity
1	Cable seal	2
2	Compression ring	2
3	Backshell nut	2
4	Body / Shell	1
5	Jam nut	1

LAYOUTS

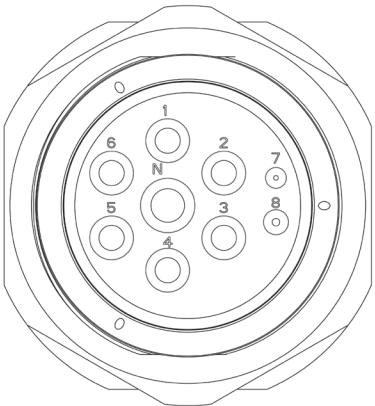
Shell size code 01 (largest size)



AM61-1006A
6 ways

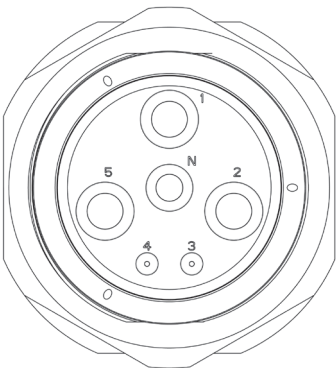


AM61-1003A
7 ways

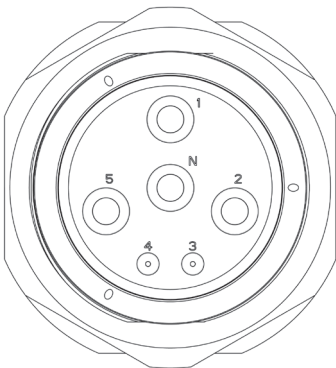


AM61-1001A
9 ways

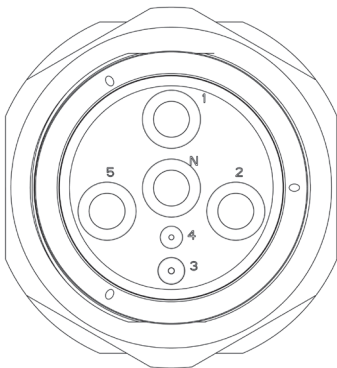
Shell size code 02 (smallest size)



AM61-1002A
6 ways



AM61-1005A
6 ways



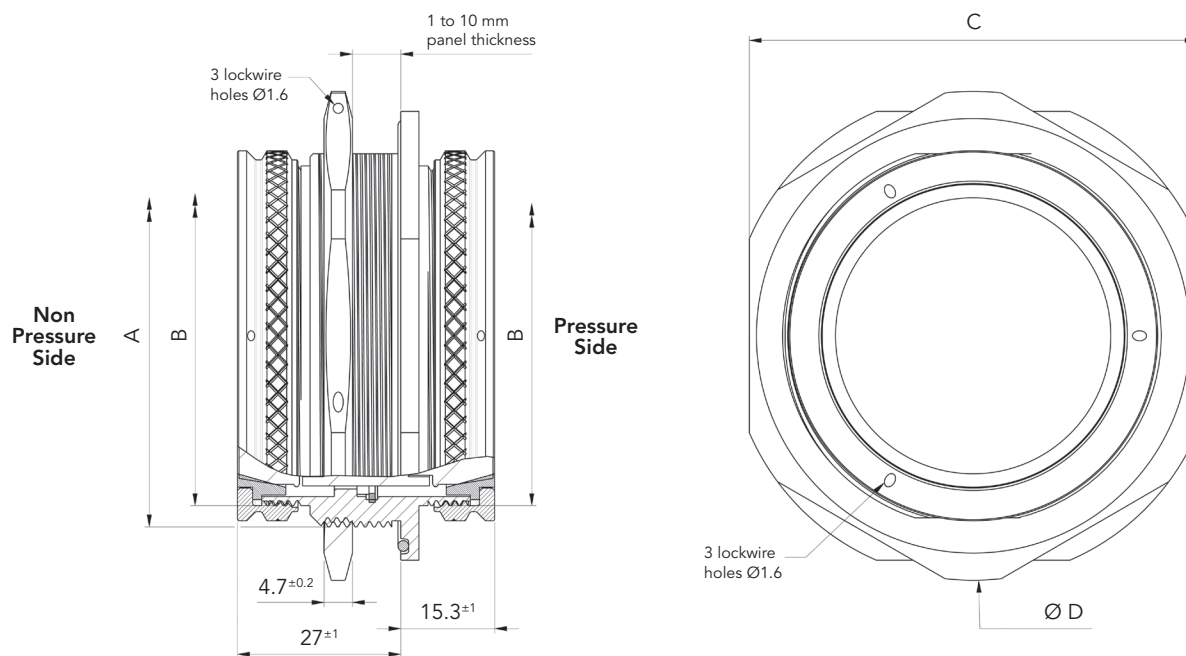
AM61-1007A
6 ways

Connector weight (g)

Shell size	Code 01			Code 02		
Layout	AM61-1006A	AM61-1003A	AM61-1001A	AM61-1002A	AM61-1005A	AM61-1007A
Maximum weight	270	270	270	270	240	235

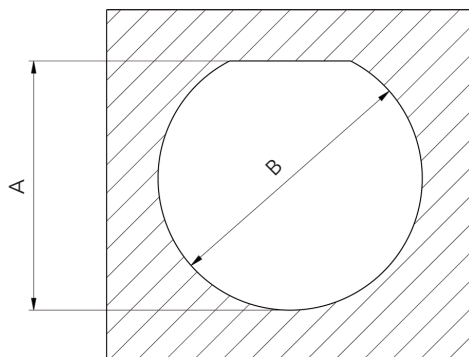
Physical dimensions

Shell size code 01 & 02



Shell size	A	B	C	Ø D
Code 01	M72x1.5 Tightening torque 50 N.m	M65x1.5 Tightening torque 40 N.m	82 ± 0.1	89.6 ± 0.4
Code 02	M63x1.5 Tightening torque 40 N.m	M56x1.5 Tightening torque 35 N.m	74 ± 0.1	80.6 ± 0.4

Panel cut-out



Shell size	A $\begin{smallmatrix} +0.3 \\ -0 \end{smallmatrix}$	B $\begin{smallmatrix} +0.3 \\ -0 \end{smallmatrix}$
Code 01	69.60	72.10
Code 02	62.40	63.80

Shell size code 01 as per **NSA937801 - 144**
 Shell size code 02 as per **NSA937801 - 137**

Note: All dimensions are in millimeters (mm)

Ordering and cable information

SOURIAU Part Number	Airbus ABS Part Number	Shell size code	Ways	Layout	Cavity name	Cable Ø (mm)	Recommended cable
AM61-1002A	ABS1128A02B07	Code 02 smallest size	6		N	7.50 to 8.40	EN4681 - 005A280
					1, 2, 5	9.30 to 10.20	EN4681 - 005A420
					3	4.00 max	EN2714 - 013C010F
					4	3.71 max	EN2714 - 013B010F
AM61-1005A	-		6		N, 1, 2, 5	7.28 to 7.74	ABS0949AD3
					3	4.00 max	EN2714 - 013C010F
					4	3.71 max	EN2714 - 013B010F
AM61-1007A	ABS1128A02B08		6		N	8.94 to 9.50	ABS0949AD1
					1, 2, 5	9.30 to 10.20	EN4681 - 005A420
					3	4.73 max	EN2714 - 013C012F
					4	3.71 max	EN2714 - 013B010F
AM61-1006A	ABS1128A01B08	Code 01 largest size	6		N	8.94 to 9.50	ABS0949AD1
					1, 2, 5	9.30 to 10.20	EN4681 - 005A420
					3	4.73 max	EN2714 - 013C012F
					4	3.71 max	EN2714 - 013B010F
AM61-1003A	ABS1128A01B06		7		N	11.65 to 12.37	ABS0949AD0
					1, 2, 3, 4, 5, 6	7.20 to 8.50	ABS0949AD3 or EN4681 - 005A280
AM61-1001A	ABS1128A01B05		9		N	8.94 to 9.50	ABS0949AD1
					1, 2, 3, 4, 5, 6	7.50 to 8.40	EN4681 - 005A280
					7	3.71 max	EN2714 - 013B010F
					8	4.73 max	EN2714 - 013C012F

FEEDTHROUGH SERIES

Feedthrough Series

Fireseals

■ AM15/52/04 Series	36
■ SN236 Series	40





Description

- Cable routing fire resistant feedthrough
- Ceramic insulator in high temperature silicon to enable 1100°C during 20 min
- Avoid cable movement under vibrations
- Available in 2, 4 & 7 ways
- Available in rectangular version with floating nuts for blind mating
- Boeing and Airbus qualified variants available

Technical features

Mechanical

- **Shell:**
Circular version: Stainless steel
Rectangular low weight version: Titanium
- **Insulator:** Ceramic
- **Grommet:** Silicone
- **Shock:**
300 m/s² (30g) during 3 ms
- **Vibration:**
Random 8 hours per axis
5 Hz to 2000 Hz at 1G²/Hz

Climatics

- **Operating temperature range:**
-65°C to +260°C
- **Resistance to fluids:**
According to ABS1091

Conformity

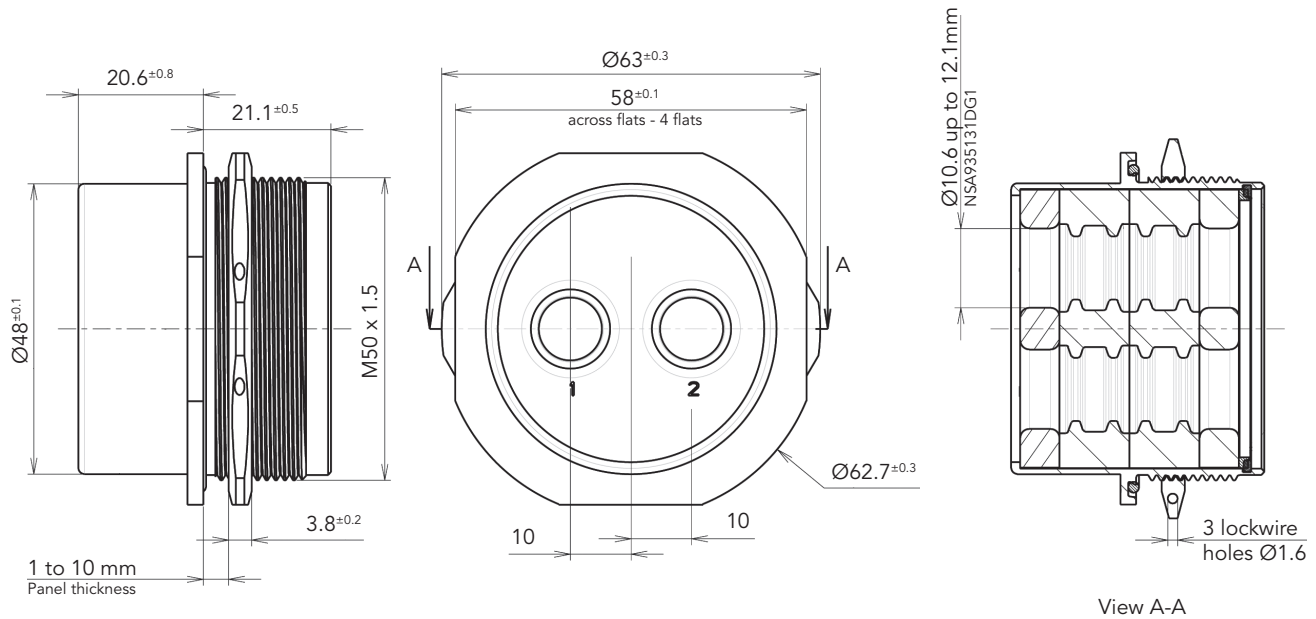
- **Circular jam nut version:**
In accordance with ABS0681
- **Circular square flange version:**
In accordance with 5D0684QTP
- **Rectangular low weight version:**
In accordance with ABS1536

Ordering information & weights

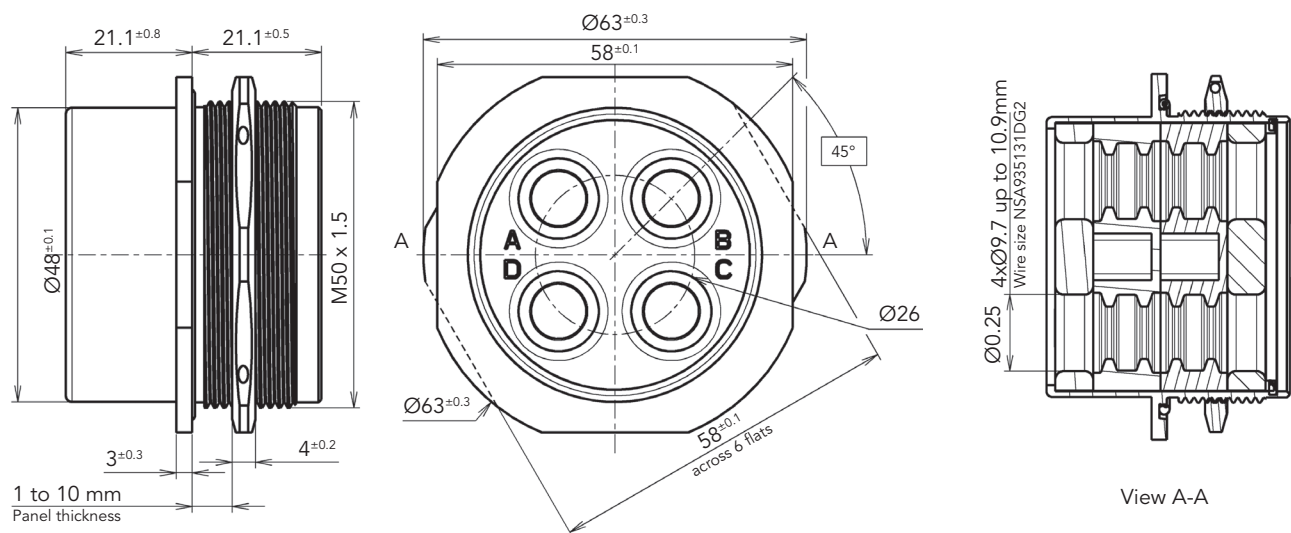
Cable routing style		Number of ways	SOURIAU Part Number	Airbus ABS Part Number	Boeing Part Number	Mass max. (gram)
Circular	Jam nut	2	AM15-1002A	ABS0681-07	-	210
		4	AM15-1013A	ABS0681-08	-	200
		7	AM15-1001A	ABS0681-06	-	410
	Square flange	4	AM52-1001A	-	SD0684-1	330
Rectangular low weight		2	AM04-1002A	ABS1536-003-01	-	54

Physical dimensions

Circular jam nut version - 2 ways

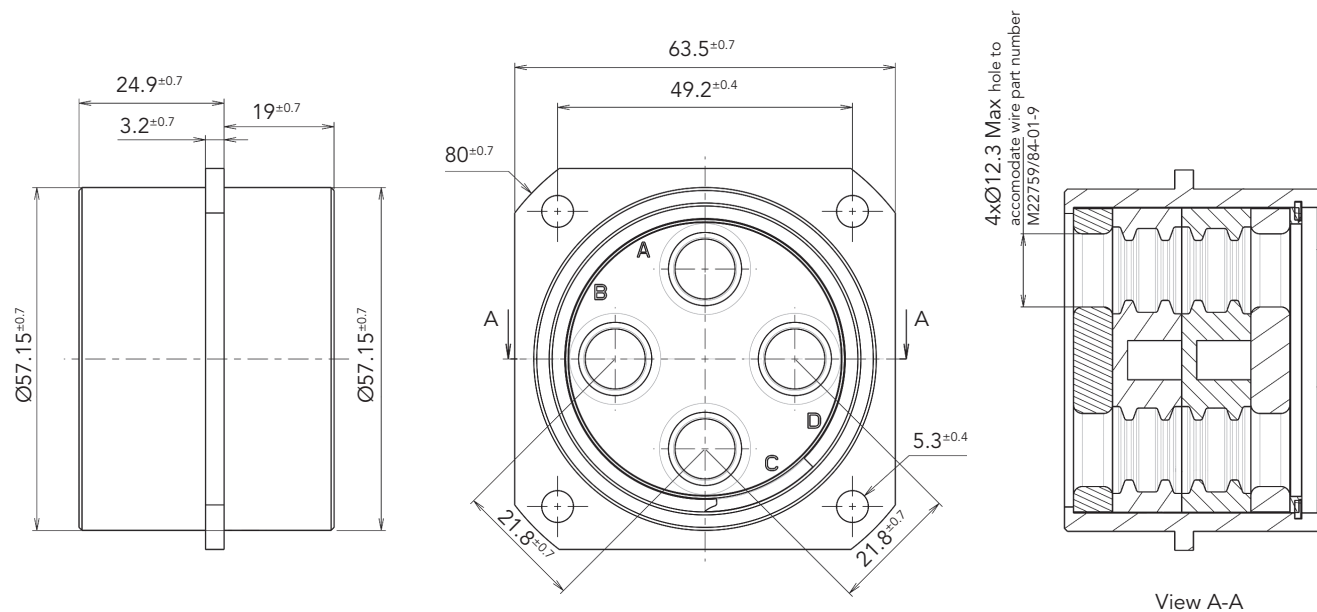


Circular jam nut version - 4 ways

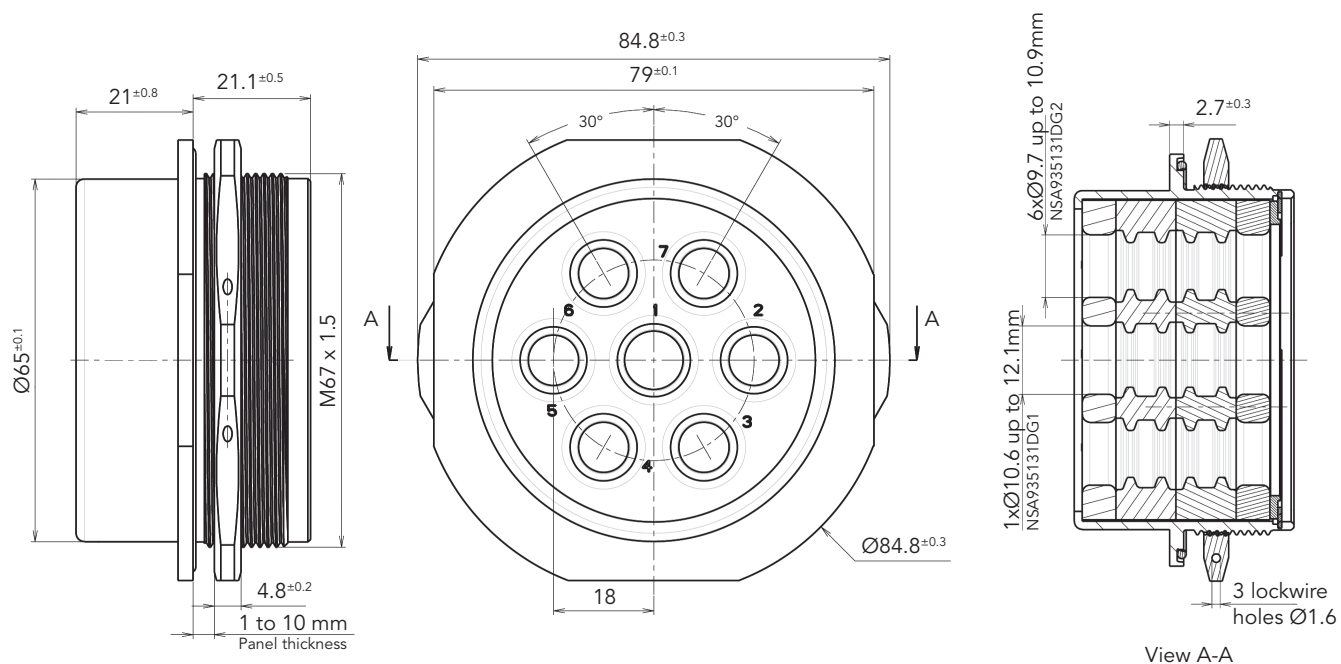


Note: All dimensions are in millimeters (mm)

Circular square flange version - 4 ways

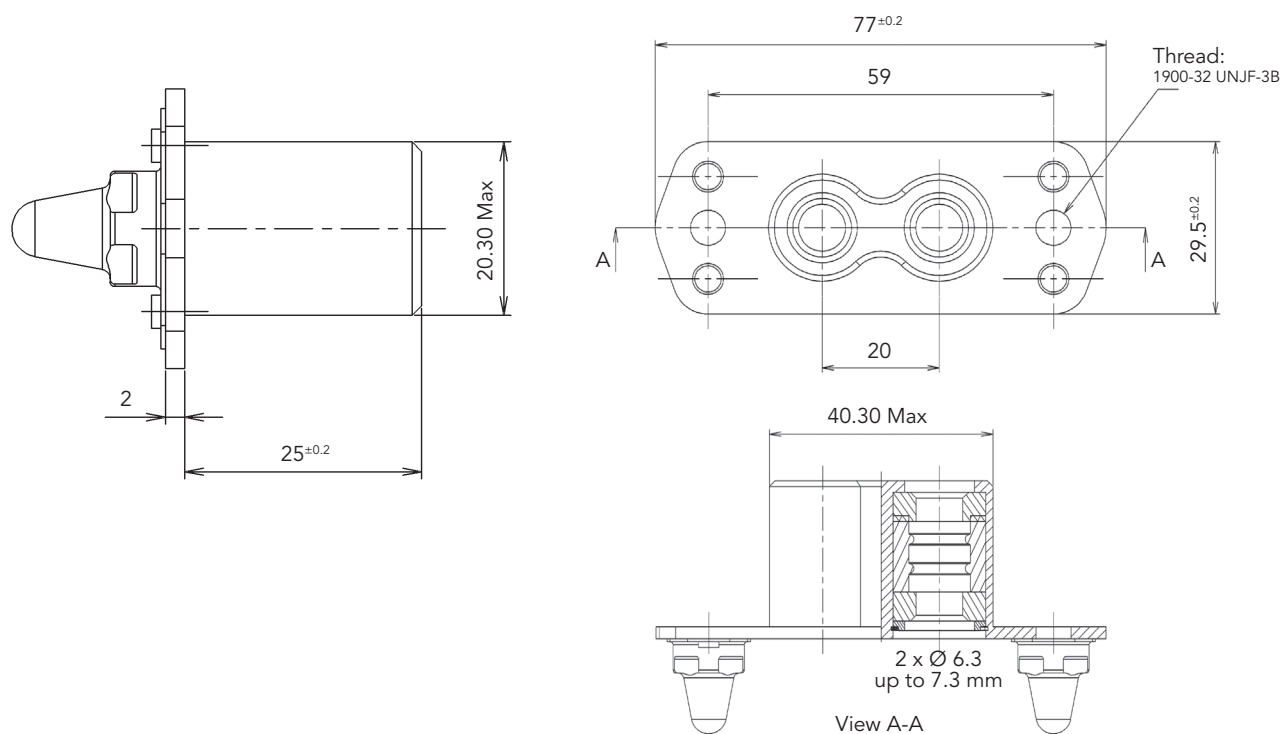


Circular jam nut version - 7 ways

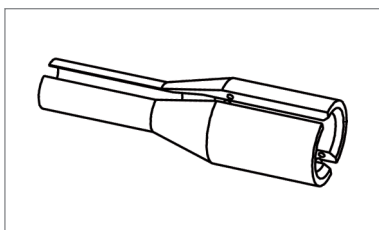


Note: All dimensions are in millimeters (mm)

Rectangular low weight version - 2 ways



Tooling



Optional specific metallic tool to use during wiring.
Two tool parts.

Part number:
AM15-1004A for NSA935131DG1
AM15-1005A for NAS935131DG2



Description

- **Ideal for engine and APU applications**

Fire protective power Feedthrough:
Prevent from fire propagation thanks to its ceramic insulator resisting to 1100°C during 15 min

High temperatures resistant:
Can operate up to 200°C continuous

High power lug terminations:
. For aluminium or copper cables, up to 350 A at 600 Vrms
. Specific « umbrella » design to prevent condensation to cause arching

Pressure resistant:
. Maintain pressure boundaries
. Leak rate < 10^{-6} atm.cm³/s at 1 bar pressure difference

- **Taylor made design can be done to adapt your specific current, contacts orientation or temperature.**

Technical features

Mechanical

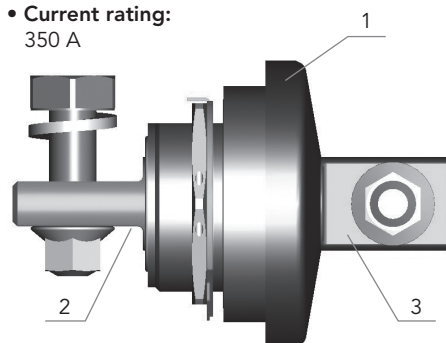
- **Shell:**
Stainless steel
- **Insulator and sleeve:**
Alumina and Peek 50% glass fiber
- **Central bar contact:**
Nickel
- **Tightening torque of screws:**
1.4 M.DaN
- **Terminal lugs:**
AWG #0 , #00, #000

Climatic

- **Operating Temperature:**
-55°C / +200°C
- **Fire resistance:**
1100°C during 15 minutes without flame penetration
- **Salt spray:**
48 h
- **Sealing:**
Leak rate < 10^{-6} atm.cm³/s with Delta P=1bar (helium test)

Electrical

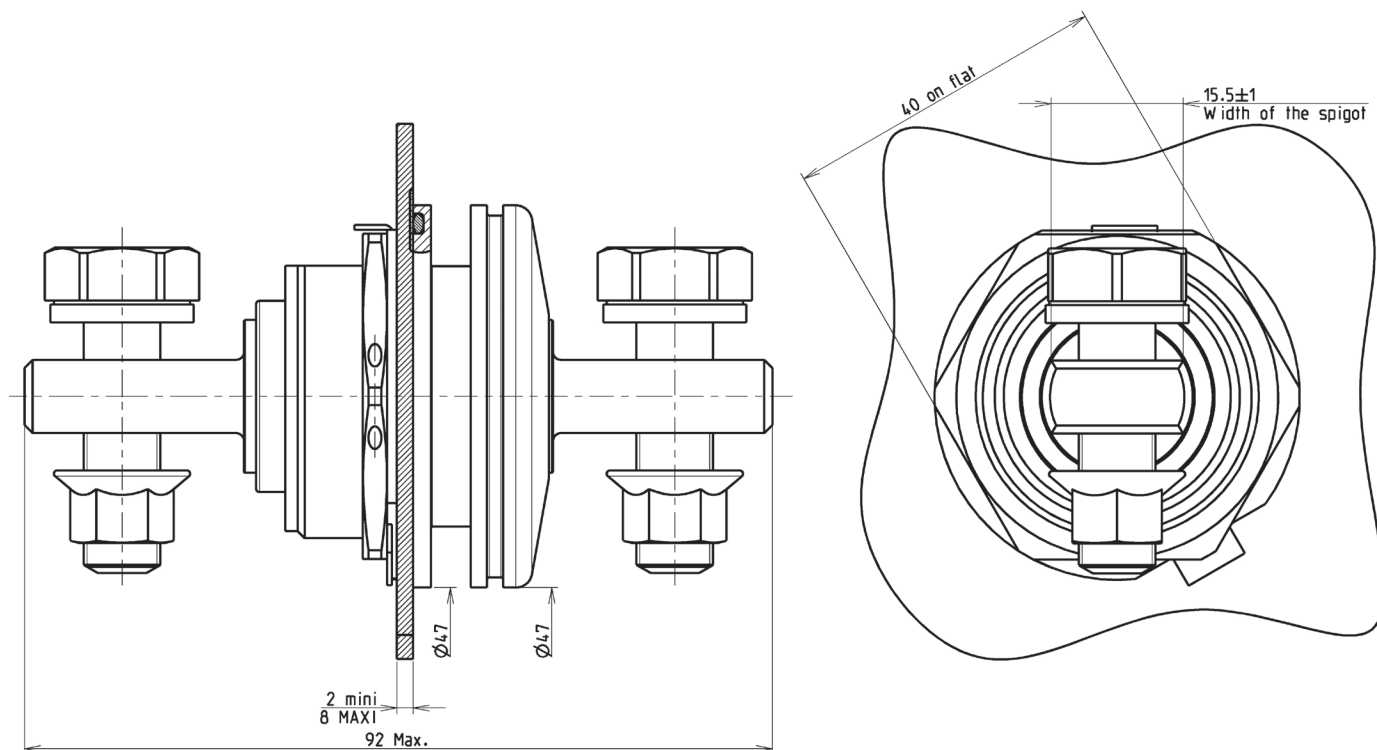
- **Operating voltage:**
600 Vrms
- **Insulation resistance ≥ 5000 M Ω under 500 VDC**
- **Current rating:**
350 A



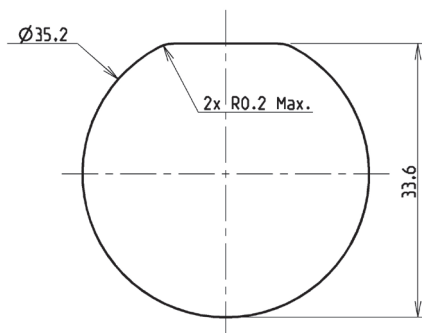
Item n	Description
1	Anti arching umbrella
2	Firewall side
3	Central bar

Physical dimensions

Dimensions and panel cut out



PANEL CUT OUT



* Dimensions are for information only. Please consult us for customer drawings

FEEDTHROUGH SERIES

Feedthrough Series

Range Extension

■ D-Sub & all circular series panel bulkhead	44
■ Solder contacts on both sides of bulkhead	45

Double ended receptacle

D-Sub & All Circular Series Panel Bulkhead

Glass fused hermetic through bulkhead.
Connector derivatives from the bulkhead feedthrough range.

Simplified use. Quick and easy:

- . Each face of the receptacle mates to a plug.
- . Quick cable integration.
- . Easy maintenance.

Secured pressure differential:

- . Glass fused insert enables it to resist high pressure differences, even when unmated.
- . Leakage 1,000 times lower than standard connectors.

Male/male interface:

- . Each side of the receptacle is populated with male contacts.
- . For male/female options, see the reinforced sealing bulkhead range.



See «Hermetic Feedthrough» datasheet on
www.souriau.com

AM44 Series + 8STA Series

Solder Contacts on Both Sides of Bulkhead

8STA connector designed for high vibration environment. Wire soldered on both sides of the feedthrough: no plugs needed.

Cost and space saving:

- . Adapted to space-constrained area.
- . No plugs necessary.

Easy to solder:

- . Contacts fully tin plated.
- . Different contact sizes available.

High performance sealing:

- . $< 1.10^{-7}$ atm.cm³/s.

Heat shrink boot version:

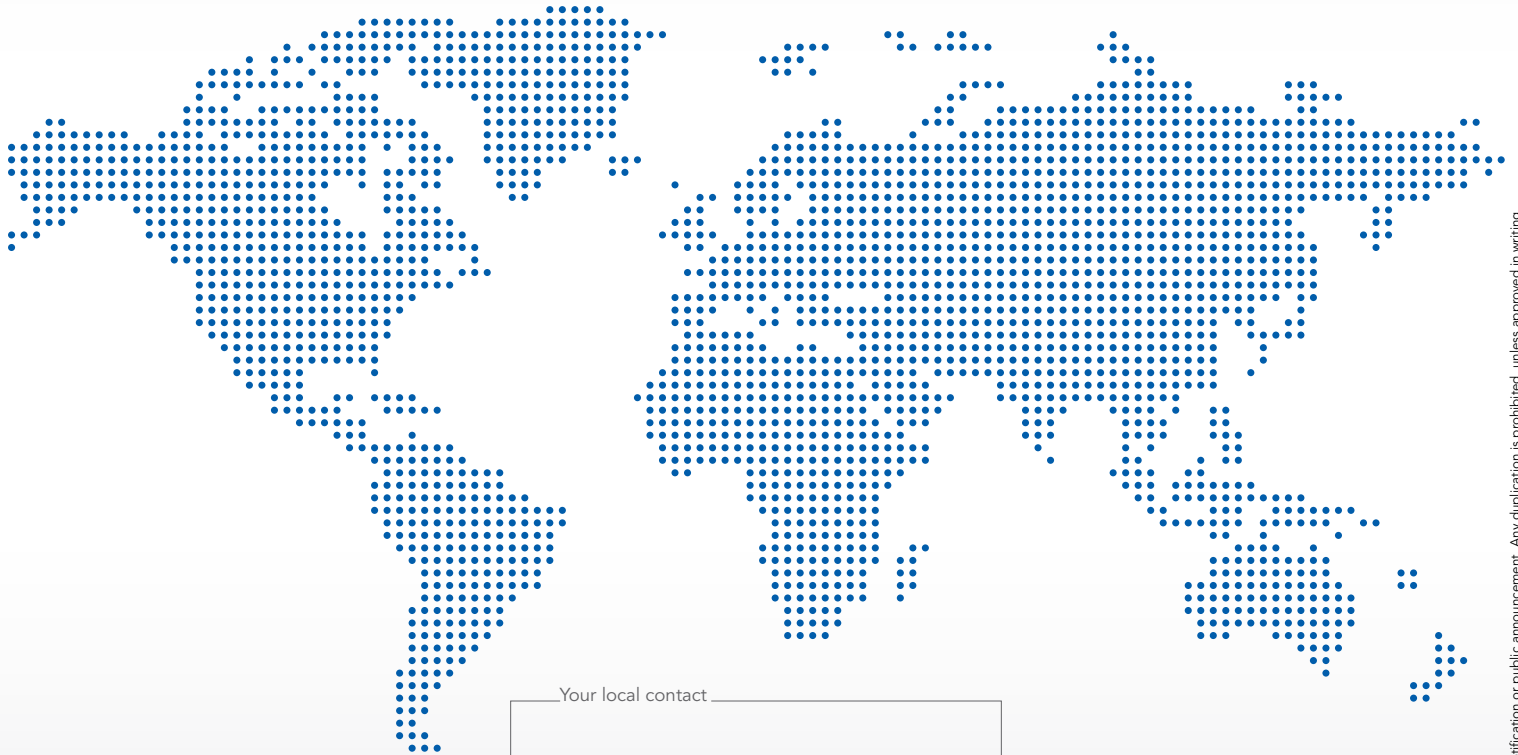
- . AM44 connector with specific shell:



See «8STA Series Hermetic Feedthrough» datasheet on www.souriau.com

Notes

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Your local contact



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