AML Series

Description:

- Specially applied in power supply
- Rated current range 5A~300A
- Hyperboloid sockets
- Many types of termination
- 5 polarizations
- Plug and receptacle loaded with either pins or sockets
- Standard: 21E0.204.086JT

Main technical characteristics

[Mechanical]

——shell: high strength aluminum alloy, stainless steel

——Insulator: thermosetting plastic

——Contact: copper alloy, gold plating

——vibration: frequency 10~2000Hz, acceleration: 196m/s^2

——shock: acceleration 980m/s^2

——constant acceleration : 980m/s^2

——endurance: 1000 cycles

[Environmental]

——temperature: -55℃~+200℃

——relative humidity: 95% at 40℃

——working altitude: 30000m

——salt spray: electroless nickel plating and zinc plating 96h
stainless steel passive 1000h

——excellent moisture proof, fungus proof, rain proof and sand proof functions.

[Electrical]

——Contact resistance and rated current：

Contact size (mm)	**Contact resistance** (mΩ)	**Rated current** (A)
Φ1.0	≤10	5
Φ1.5	≤5	10
Φ2.5	≤2	25
Φ3.5	≤1	40
Φ4.5	≤0.82	60
Φ5.5	≤0.6	100
Φ7.5	≤0.4	150
Φ9.0	≤0.34	200
Φ10	≤0.4	200
Φ12	≤0.3	250
Φ14	≤0.24	300

——Rated voltage, withstanding voltage and insulation resistance：

Operation condition	Rated voltage (V)	Withstanding voltage (V)	Insulation resistance (MΩ)
Normal temperature	500	1500	≥5000
Damp & Heat	500	750	≥100

——shell continuity: aluminum alloy shell ≤5mΩ

Plug and receptacle designation

Basic series	**AML**	**36**	**T**	**4**	**K1**	**P1**	**…**	**…**
XCD-hyperboloid power connectors								
Shell size 22-24-27-33-36-39-45-85								
Shell T-Plug F-Square flange Receptacle L-jam nut receptacle								
Insert arrangement please see the insert arrangement figure								
Contact type Z1-gold plated pin K1-gold plated socket								
Identification D1 rear end without thread，aluminum shell，electroless nickel plating P1 rear end with thread，aluminum shell，electroless nickel plating D3 rear end without thread，aluminum shell，olive green zinc plating passive P40 rear end with thread，aluminum shell，olive green zinc plating passive D40 rear end without thread，stainless steel passive P40 rear end with thread，selected back shell, stainless steel passive								
Polarization blank-N polarization, (W)-W polarization, (X)-X polarization, (Y)-Y polarization, (Z)-Z polarization								
Modification 01—connected with wires by thread								

[Part number designation]

AML36T4S1P1(W)

AML series plug; shell size 36, 4-pole, silver plated contact, thread at rear end, electroless nickel plated shell, W polarization

[Bulkhead sealing adaptor designation]

Basic series	**AML**	**27**	**S**	**1**	**M1**	**D1**
Shell size **22-24-27-33-36-39-45**						
Product type S Jam nut bulkhead sealing adaptor，Sockets on the outside of panel and pins on the inside S（0） Jam nut bulkhead sealing adaptor，Pins on the outside of panel and sockets on the inside S（1） Square flange mounting bulkhead sealing adaptor，Sockets on the outside of panel and pins on the inside S（2） Square flange mounting bulkhead sealing adaptor，Pins on the outside of panel and sockets on the inside						
Number of contacts **1~6** (please see the insert arrangement figure)						
Identification mark M1 potting sealing, gold plated contact						

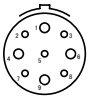
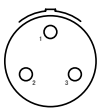
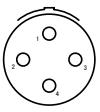
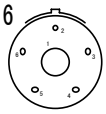
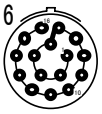
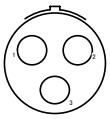
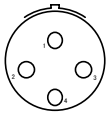
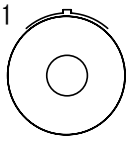
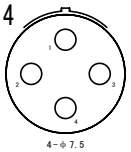
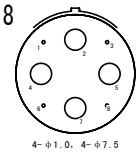
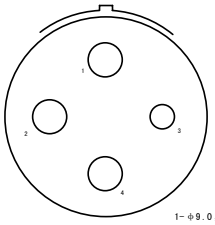
Shell plating D1 electroless nickel plating D40 stainless steel passive
Polarization blank-N polarization, (W)-W polarization, (X)-X polarization, (Y)-Y polarization, (Z)-Z polarization

[Part number designation]

AMLF27S4M1P1(W)

AML series jam nut bulkhead sealing adaptor; sockets on the outside of panel and pins on the inside; shell size 27，1-pole，potting sealing, gold plated contact, nickel plated shell, W polarization

Insert arrangement（mating view of insulator with pin）

Shell number				
22	1  1-φ10	3  3-φ3	4  4-φ3	
24	14  6-φ1，8-φ2			
27	1  1-φ12	6  4-φ1.5，2-φ3.5	22  10-φ1.6，6-φ1.5， 6-φ2	
33	9  5-φ2.5，4-φ3.5			
36	2  2-φ10	3  3-φ4.5	4  4-φ4.5	6  5-φ2.0，1-φ10	16  16-φ3
39	3  3-φ10	4  4-φ5.5		
45	1  1-φ14	4  4-φ7.5	8  4-φ1.0，4-φ7.5	
85	4  1-φ9.0，3-φ12			

Dimensions for crimp and solder contacts（mm）

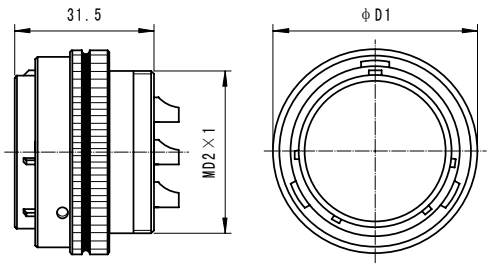
Size (mm)	Solder cup or crimp bucket ID	Solder cup or crimp bucket OD	Extrusion length from shell
Φ1.5	Φ2.0	Φ2.5	6.2
Φ2.0	Φ2.5	Φ3.1	3.5
Φ2.5	Φ2.5	Φ3.1	6.2
Φ3.5	Φ4.8	Φ5.8	6.2
Φ4.5	Φ5.5	Φ6.5	8.0
Size (mm)	Solder cup or crimp	Solder cup or crimp	Extrusion length

	bucket ID	bucket OD	from shell
Φ5.5	Φ6.5	Φ7.5	10.0
Φ7.5	Φ9.0	Φ10.5	11.5
Φ9.0 crimp	Φ12.0	Φ17.0	——
Φ10.0	Φ10.0	Φ12.0	10.0
Φ12.0 crimp	Φ15.0	Φ20.0	10.5

Outline dimensions

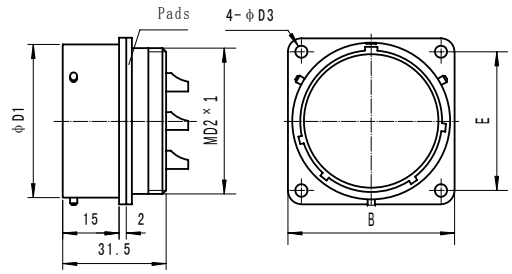
[Ⅰ connected with wires by soldering]

Plug



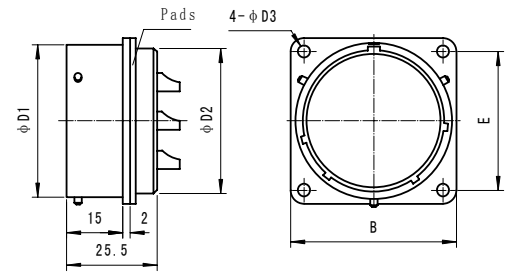
Insert arrangement code	D1	D2
22-1 22-5	32	22
24-14	34	24
27-1 27-6 27-22	37	27
33-9	43	33
36-2 36-3 36-4 36-6 36-16	46	36
39-3 39-4	49	39
45-4 45-8	56	45

Square flange Receptacle （rear end with thread）



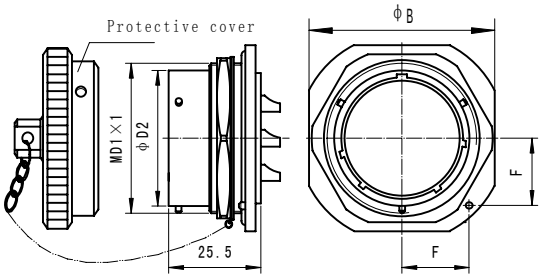
Insert arrangement code	D1	D2	D3	B	E
22-5	23.7	22	3.2	30.0	24.0
24-14	25.7	24	3.2	32.0	26.0
27-6 27-22	28.7	27	3.2	34.5	28.0
33-9	34.7	33	3.2	39.5	32.5
36-3 36-4 36-16	37.7	36	3.2	41.0	34.0
39-4	40.7	39	3.2	43.0	36.0
45-4 45-8	46.7	45	3.7	49.0	42.0

Square flange Receptacle （rear end without thread）



Insert arrangement code	D1	D2	D3	B	E
22-1 22-5	23.7	22	3.2	30.0	24.0
24-14	25.7	24	3.2	32.0	26.0
27-1 27-6 27-22	28.7	27	3.2	34.5	28.0
33-9	34.7	33	3.2	39.5	32.5
36-2 36-6 36-16	37.7	36	3.2	41.0	34.0
39-3	40.7	39	3.2	43.0	36.0

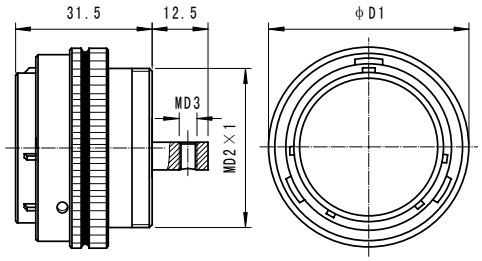
Jam nut receptacle



Insert arrangement code	D1	D2	B	F
36-4	42	37.7	54	19.0
39-4	45	40.7	56	20.0
45-4	51	46.7	62	22.5

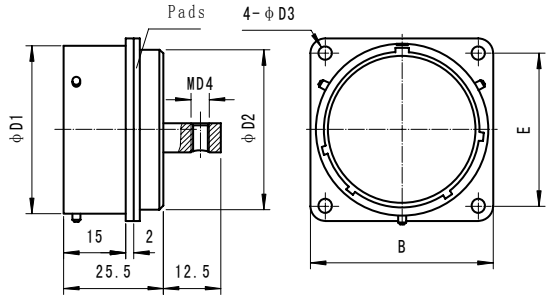
[Ⅱ connected with wires by thread]

Plug

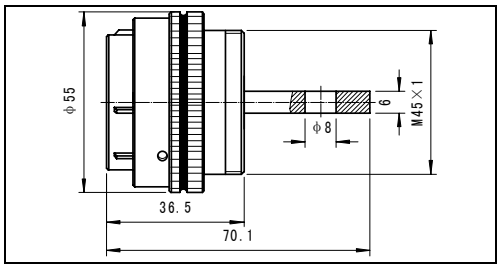
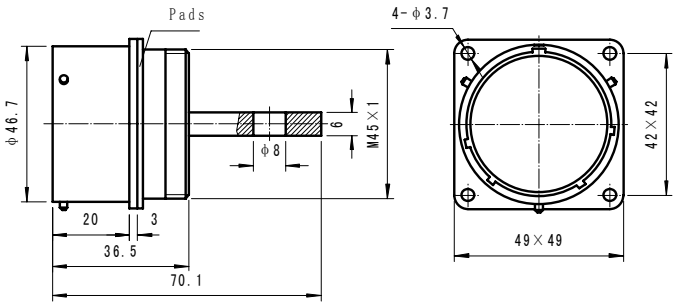


Insert arrangement code	D1	D2	D3
22-1	32	22	5
27-1	37	27	6
36-2 36-6	46	36	5

Square flange receptacle

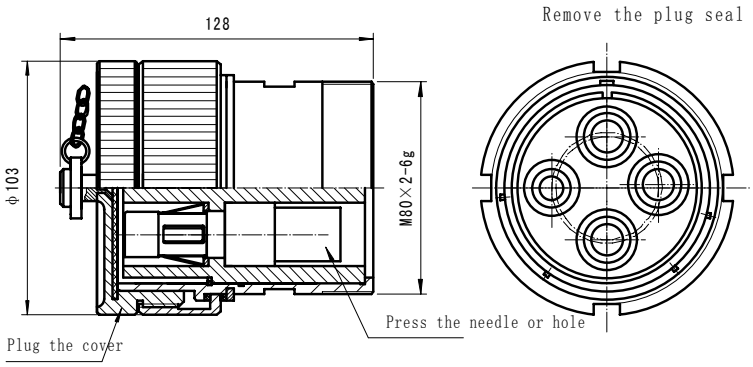
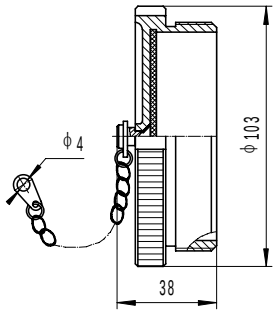
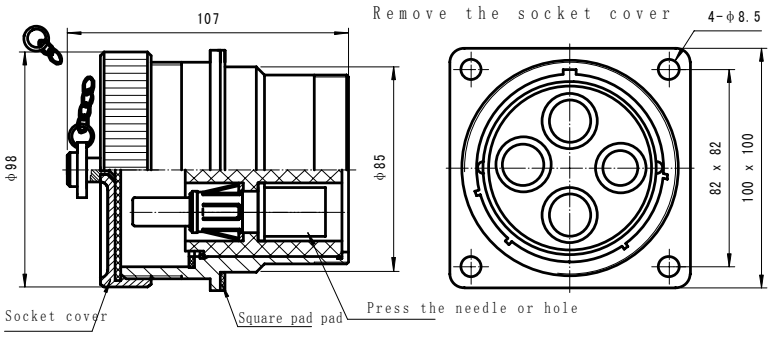
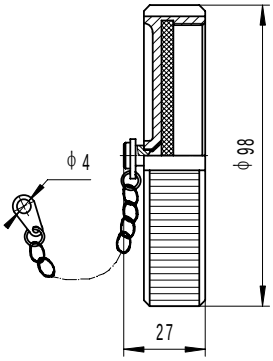


Insert arrangement code	D1	D2	D3	D4	B	E
22-1	23.7	22	3.2	5	30.0	24.0
27-1	28.7	27	3.2	6	34.5	28.0
36-2 36-6	37.7	36	3.2	5	41.0	34.0

Plug AML45T1Z1（K1）P1	Receptacle AML45F1 K1（Z1）P1
	

This contact is connected with wire by screw or stud. First of all, crimp the wire into crimping wire terminal. Then align the open hold of the terminal with contact rear end opening. Finally tighten the crimping terminal and contact by applicable screw or stud. Crimping terminal sizes can be selected from QJ1721.3-1993.

[Ⅲ connected with wires by crimping]

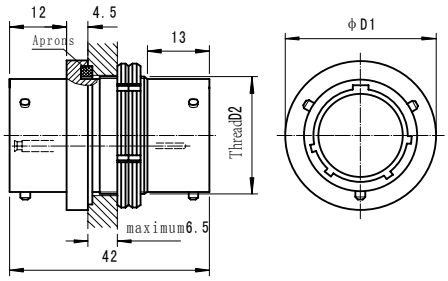
Plug AML85T4Z1（K1）P1	Plug sealing cap ZE85FJEP1
	
Receptacle AML85F4 K1（Z1）P1	Receptacle sealing cap ZE85FJBP1 -01
	

AML85 has 4 poles of crimp contacts. 3 φ12mm contacts and 1φ9mm contact. Crimp tool and applicable wire size for each contact size:

Contact size`	Hydraulic crimp tool P/N	Hex module size	Recommended applicable wire gauge
φ12mm	YTQ	95#	105mm^2
φ9mm	YTQ	70#	75mm^2

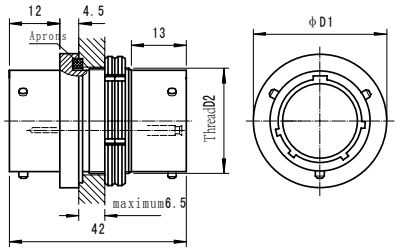
AML Series bulkhead sealing adaptor

AML-S-M Jam nut bulkhead sealing adaptor（Sockets on the outside of panel and pins on the inside）



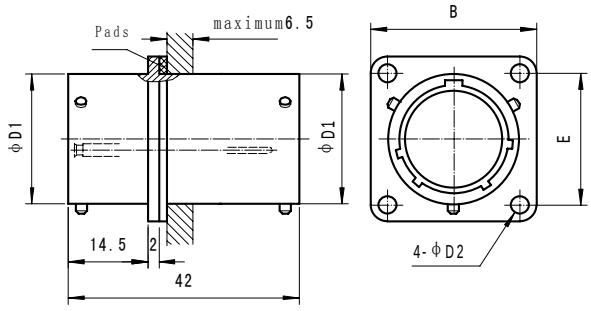
Shell size	D1	D2
22	36	M27×1
27	39	M30×1
33	45	M36×1
36	48	M39×1
39	51	M42×1
45	62	M52×1.5

AML-S(0)-M Jam nut bulkhead sealing adaptor（Pins on the outside of panel and sockets on the inside）



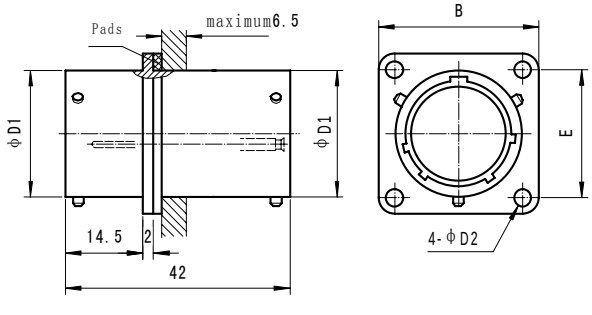
Shell size	D1	D2
22	36	M27×1
27	39	M30×1
33	45	M36×1
36	48	M39×1
39	51	M42×1
45	62	M52×1.5

AML-S(1)-M Square flange mounting bulkhead sealing adaptor（Sockets on the outside of panel and pins on the inside）



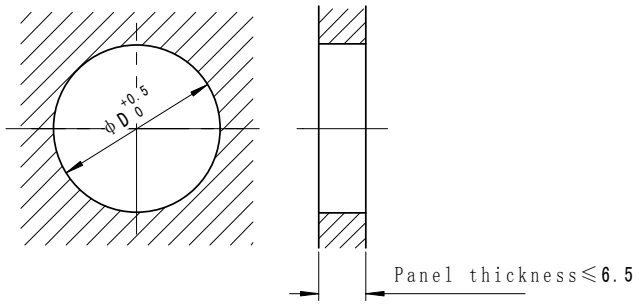
Shell size	D1	D2	B	E
22	23.7	3.2	30	24
27	28.7	3.2	34.5	28
33	34.7	3.2	39.5	32.5
36	37.7	3.2	44	34
39	40.7	3.2	46	36
45	46.7	3.7	49	42

AML-S(2)-M Square flange mounting bulkhead sealing adaptor（Pins on the outside of panel and sockets on the inside）



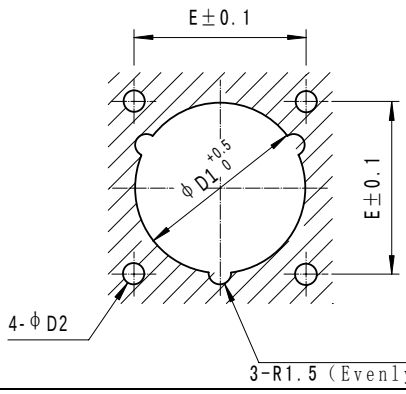
Shell size	D1	D2	B	E
22	23.7	3.2	30	24
27	28.7	3.2	34.5	28
33	34.7	3.2	39.5	32.5
36	37.7	3.2	44	34
39	40.7	3.2	46	36
45	46.7	3.7	49	42

AML-S-M, AML- S(0)-M recommended receptacle panel cutout dimensions



Shell size	D
22	27.5
27	31.2
33	37.2
36	40.2
39	43.2
45	52.5

AML-S(1)-M, AML-S(2)-M recommended receptacle panel cutout dimensions



Shell size	D1	D2	E
22	24	3.2	24
27	29	3.2	28
33	35	3.2	32.5
36	38	3.2	34
39	41	3.2	36
45	47	3.7	42