

R255 Series Hermetically Sealed Connector

Description

R255 I, II and III series sealed connectors are designed according to L711A (MIL-DTL-38999K) and the relevant specification sheet in order to meet the hermetic performance. They are composed of hermetic electrical connector and thru-bulkhead sealed connector. The contact is sintered and adapted to the shell of receptacle, therefore the connector has the excellent hermetic performance. The matching plug is the common un-sealed plug,

R255 series hermetic receptacle and thru-bulkhead receptacle are composed of:

Receptacle type	Mounting type	Mark	Feature
R255 I series sealed receptacle	square flange mounting	LA27469Y- ^P _S	stainless steel shell; quick bayonet coupling; contact: soldered pin, soldered socket
	jam nut mounting	LA27470Y- ^P _S	
	solder mounting	LA27471Y- ^P _S	
R255 I series thru-bulkhead sealed receptacle	square flange mounting	LA27466Y-C	stainless steel shell; quick bayonet coupling; contact: thru-bulkhead pin
	jam nut mounting	LA27468Y-C	
R255 II series sealed receptacle	wall square flange mounting (With thread on the rear)	LA27475Y-P	stainless steel shell; quick bayonet coupling; contact: soldered pin
	box square flange mounting (without thread on the rear)	LA27476Y-P	
	jam nut mounting	LA27477Y-P	
	solder mounting	LA27478Y-P	
R255 III series sealed receptacle	square flange mounting	R255/43 ^Y _{N-S} ^P	stainless steel shell; thread quick coupling ; contact: soldered pin, soldered socket
	jam nut mounting	R255/45 ^Y _{N-S} ^P	
	solder mounting	R255/47 ^Y _{N-S} ^P	
	weld mounting		
R255 III series thru-bulkhead sealed receptacle	square flange mounting	R255/49 ^Y _{N-S} ^P	stainless steel shell; thread quick coupling; contact: thru-bulkhead pin
	jam nut mounting	R255/42 ^Y _{N-C}	
		R255/46 ^Y _{N-C}	

Main technical characteristics

[Mechanical]

- Shell: Stainless steel
- Plating: I、II series: E class stainless steel passivated
N class nickel electroplating
III series: Y class stainless steel passivated
N class nickel electroplating
- Insulator: Fused glass material for the insulator with pin;
Glass sealed and hard insulator material for the insulator with socket
- Sealing ring and grommet: Silicon rubber
- Contact: Fe-Ni-Co sealing copper, gold plating over

[Electrical]

- Withstanding voltage: V

- nickel, solder termination
- Durability: 500 cycles
- Shock: 3ms half-sine wave acceleration peak value 300g
- Vibration : Sine : frequency 10~2000Hz
acceleration 294m/s²
Random: frequency 100~1000Hz power spectral density 1g²/Hz

Work level	M	N	I	II
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Sea level	1300	1000	1800	2300
21000m	800	600	1000	1000

- Note: Different insert arrangements have different service rating. Please see the insert arrangements.

—EMI shielding:

The minimum attenuation is 85dB at 100MHz ~ 1GHz

The minimum attenuation is 50dB at 1GHz ~ 10GHz

[Environmental]

—Temperature: -65°C~+200°C

—Hermetic: Air leakage rate $\leq 1 \times 10^{-3}$ Pa cm³/s at a pressure differential of 1atmospheres

—Contact resistance and rated current:

Contact size	Diameter mm	Contact resistance mΩ	Rated current A
22D#	Φ0.76	≤28	5
20#	Φ1.00	≤12	7.5
16#	Φ1.60	≤8.5	13
12#	Φ2.40	≤5.0	23

—Insulation resistance: normal ≥5000MΩ

Ordering information

[R255 I Series

] Basic series	LA	27469	Y	17	N	35	P	N
Type	27469—square flange mounting sealed receptacle 27470—jam nut mounting sealed receptacle 27471—solder mounting sealed receptacle (only N plating) 27466—thru-bulkhead square flange sealed receptacle 27468—thru-bulkhead jam nut sealed receptacle							
Shell type	Y—hermetic type							
Shell size	09—11—13—15—17—19—21—23—25							
Plating	E—stainless steel passivated N—nickel electroplating							
Insert arrangement	See the insert arrangement							
Contact	For hermetic receptacle: P—pin S—socket For thru-bulkhead sealed receptacle: C—thru-bulkhead pin							
Polarization	N—Normal; A、B、C、D—Alternative							

Note:

- L711A and MIL-DTL-38999K series ordering information are same except their basic series. LA is for L711A and MS is for MIL-DTL-38999K. They can be interchangeable
- The two corresponding plugs should be loaded with sockets, one is left plug and the other is right plug, -U should be marked at the P/N of the left plug. The right plug should be marked in the normal manner.

[LA27469Y17N35PN]

LA series square flange mounting receptacle, sealed, 17# shell, nickel electroplating, 35 insert arrangement, pin contact, N polarization



[R255 II Series

] Basic series		LA	27475	Y	16	N	35	P	N
▮	27475—wall mounting square flange sealed receptacle 27476—box mounting square flange sealed receptacle 27477—jam nut mounting sealed receptacle 27478—solder mounting sealed receptacle (only N plating)								
Shell type	Y—hermetic type								
Shell size	08—10—12—14—16—18—20—22—24								
Plating	E—stainless steel passivated N—nickel electroplating								
Insert arrangement	See the insert arrangement								
Contact	P—Pin								
Polarization	N—Normal; A、B、C、D—Alternative								

Note: L711A and MIL-DTL-38999K series ordering information are same except their basic series. LA is for L711A and MS is for MIL-DTL-38999K. They can be interchangeable.

**[Part number identification example]****LA27475Y16N35PN**

LA series wall mounting square flange sealed receptacle, sealed, 16# shell, nickel electroplating, 35 insert arrangement, pin contact, N polarization

[R255 III

Series] Basic	R255/	21	Y	E	35	P	N			
Type	21—square flange mounting sealed receptacle 23—jam nut mounting sealed receptacle 25—solder mounting sealed receptacle (only N plating) 27—weld mounting sealed receptacle 20—thru-bulkhead square flange sealed receptacle 24—thru-bulkhead jam nut sealed receptacle									
Plating	Y—stainless steel passivated N—stainless steel nickel electroplating									
Shell size	A through J	<u>09</u>	<u>11</u>	<u>13</u>	<u>15</u>	<u>17</u>	<u>19</u>	<u>21</u>	<u>23</u>	<u>25</u>
Shell code		A	B	C	D	E	F	G	H	J
Insert arrangement	See the insert arrangement									
Contact	For hermetic receptacle: P—pin S—socket For thru-bulkhead sealed receptacle: C—thru-bulkhead pin									
Polarization	N—Normal; A、B、C、D—Alternative									

Note:

1. L711A and MIL-DTL-38999K series ordering information are same except their basic series. **R255** is for L711A and **D38999** is for MIL-DTL-38999K. They can be interchangeable.
2. The two corresponding plugs should be loaded with sockets, one is left plug and the other is right plug, -U should be marked at the P/N of the left plug. The right plug should be marked in the normal manner.

[Part number identification example]**R255/21YE35PN**

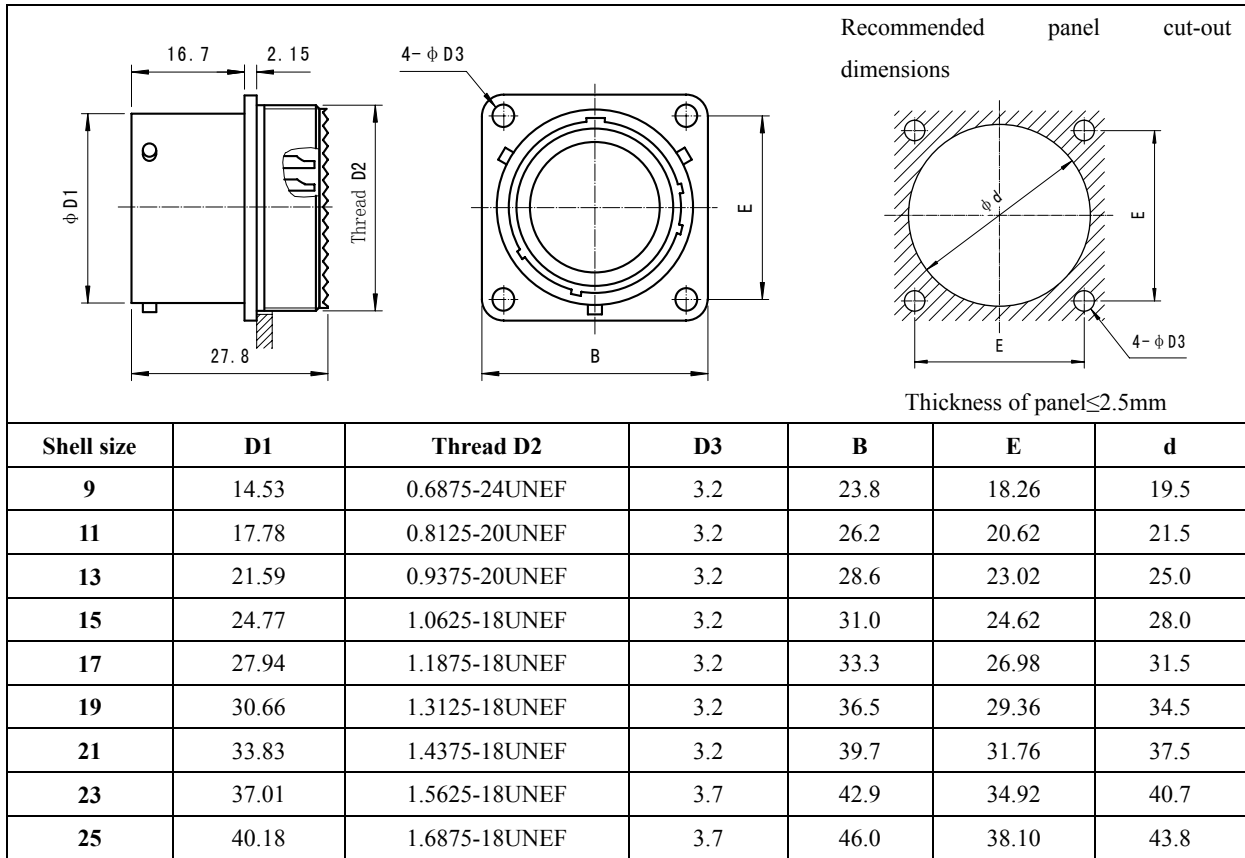
R255 series square flange mounting sealed receptacle, stainless steel passivated, E shell code, pin contact, N polarization



Outline dimension

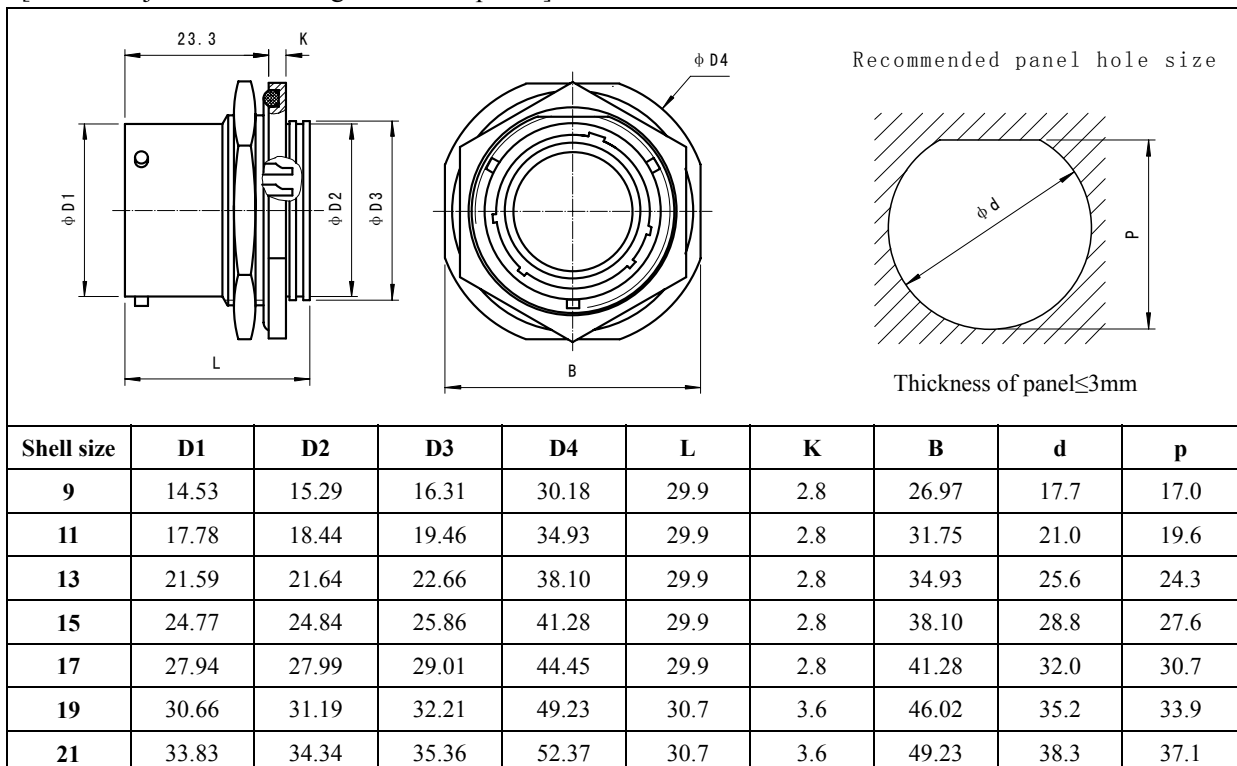
R255 I series sealed receptacle

[LA27469 wall mounting sealed receptacle]



Note: The shell size of the accessory should be two sizes more than that of the receptacle during selecting the accessory

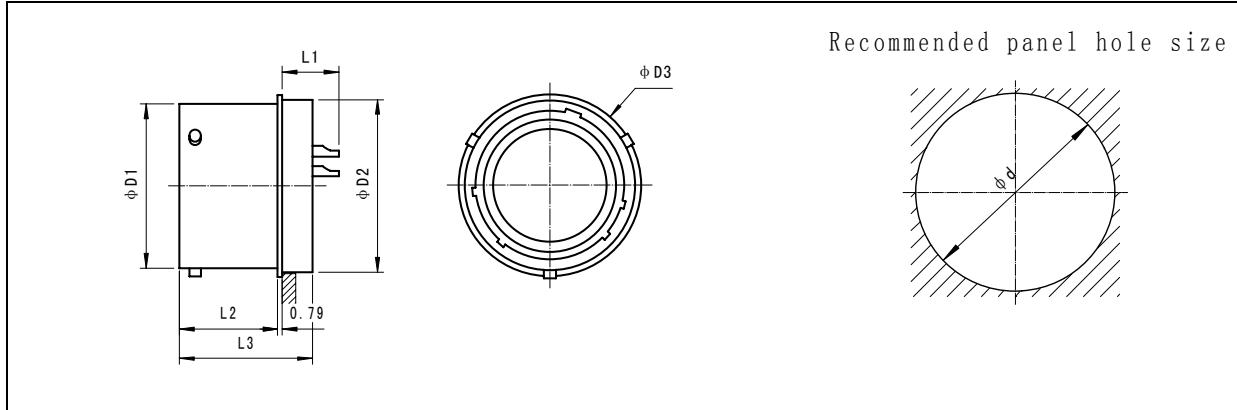
[LA27470 jam nut mounting sealed receptacle]





23	37.01	37.54	38.56	55.58	30.7	3.6	52.37	41.5	40.0
25	40.18	40.69	41.71	58.72	30.7	3.6	55.58	44.7	43.4

[LA27471 solder mounting sealed receptacle]

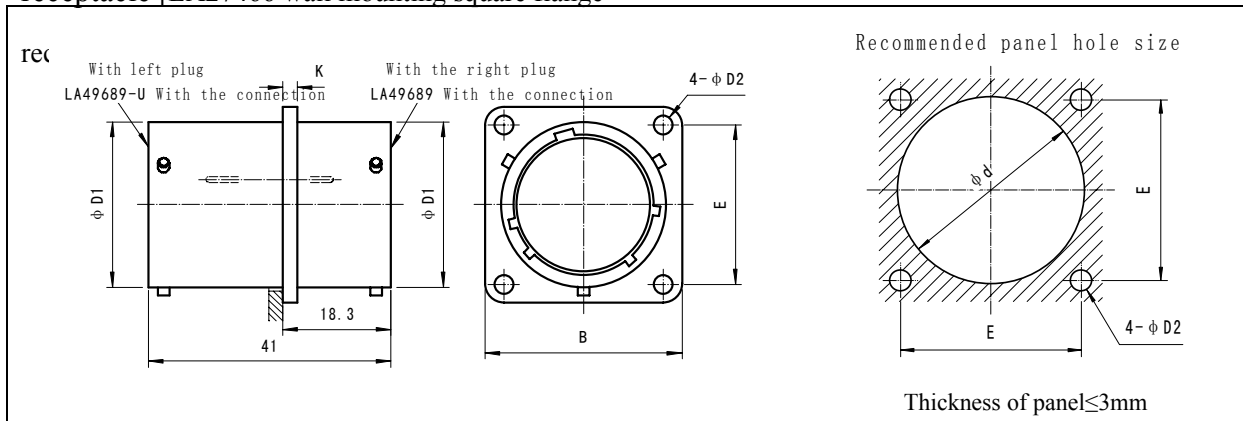


Shell size	D1	D2	D3	d	L1 max		L2		L3	
					With pin	With socket	With pin	With socket	With pin	With socket
9	14.53	17.07	19.05	17.6	9.6	10.09	16.7	18.97	22.3	25
11	17.78	19.84	21.44	20.3	9.6	10.09	16.7	18.97	22.3	25
13	21.59	23.01	24.61	23.5	9.6	10.09	16.7	18.97	22.3	25
15	24.77	26.19	27.79	26.7	9.6	10.09	16.7	18.97	22.3	25
17	27.94	29.36	30.94	29.9	9.6	10.09	16.7	18.97	22.3	25
19	30.66	31.75	33.32	32.3	9.6	10.09	16.7	18.97	22.3	25
21	33.83	34.93	36.53	35.4	9.6	10.09	16.7	18.97	22.3	25
23	37.01	38.10	39.70	38.6	9.6	10.85	16.7	18.97	23.1	25.8
25	40.18	41.28	42.88	41.8	9.6	9.55	16.7	18.97	23.1	25.8



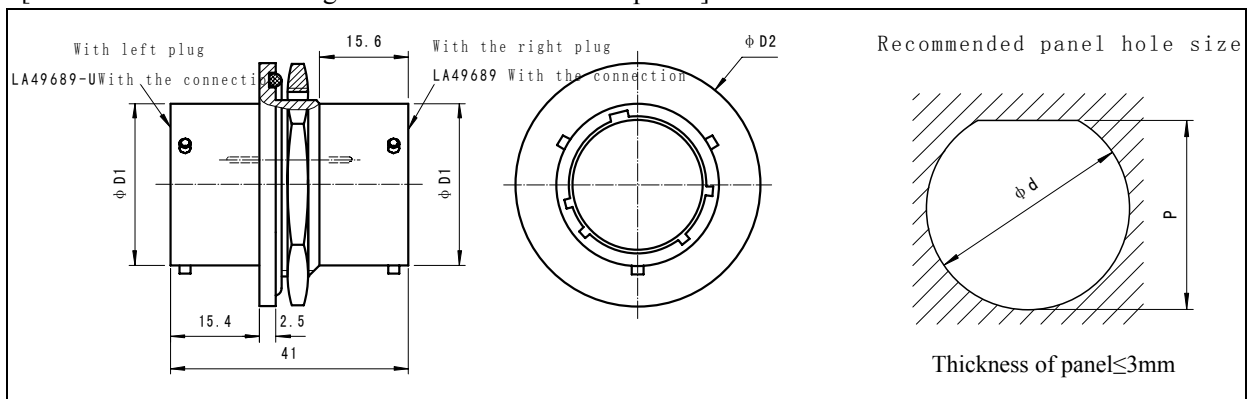
R255 I Series Thru-bulkhead sealed

receptacle [LA27466 wall mounting square flange



Shell size	D1	K	D2	B	E	d
9	14.53	2.16	3.2	23.8	18.26	16.7
11	17.78	2.16	3.2	26.2	20.62	20.2
13	21.59	2.16	3.2	28.6	23.02	24.5
15	24.77	2.16	3.2	31.0	24.62	27.7
17	27.94	2.16	3.2	33.3	26.98	30.9
19	30.66	2.16	3.2	36.5	29.36	32.9
21	33.83	2.92	3.2	39.7	31.76	36.2
23	37.01	2.92	3.7	42.9	34.92	39.3
25	40.18	2.92	3.7	46.0	38.10	42.5

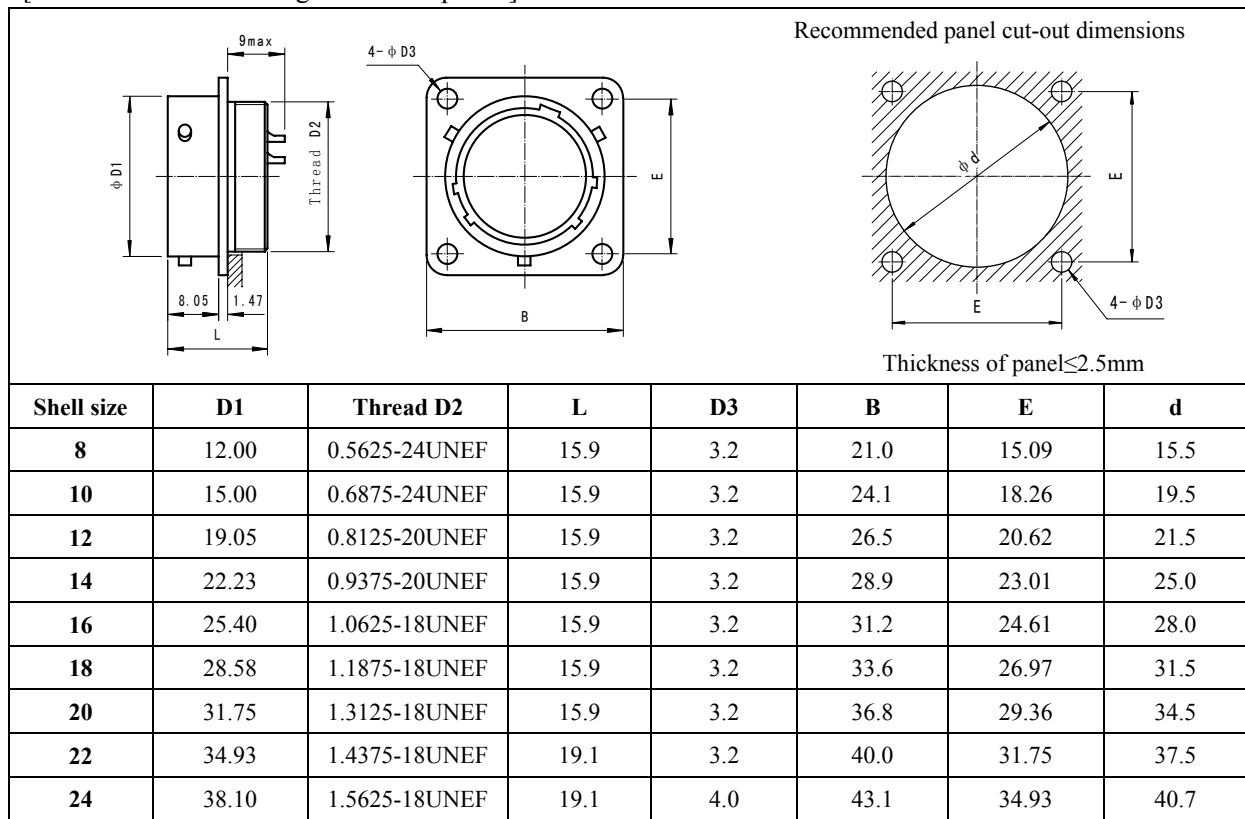
[LA27468 am nut mounting thru-bulkhead sealed receptacle]



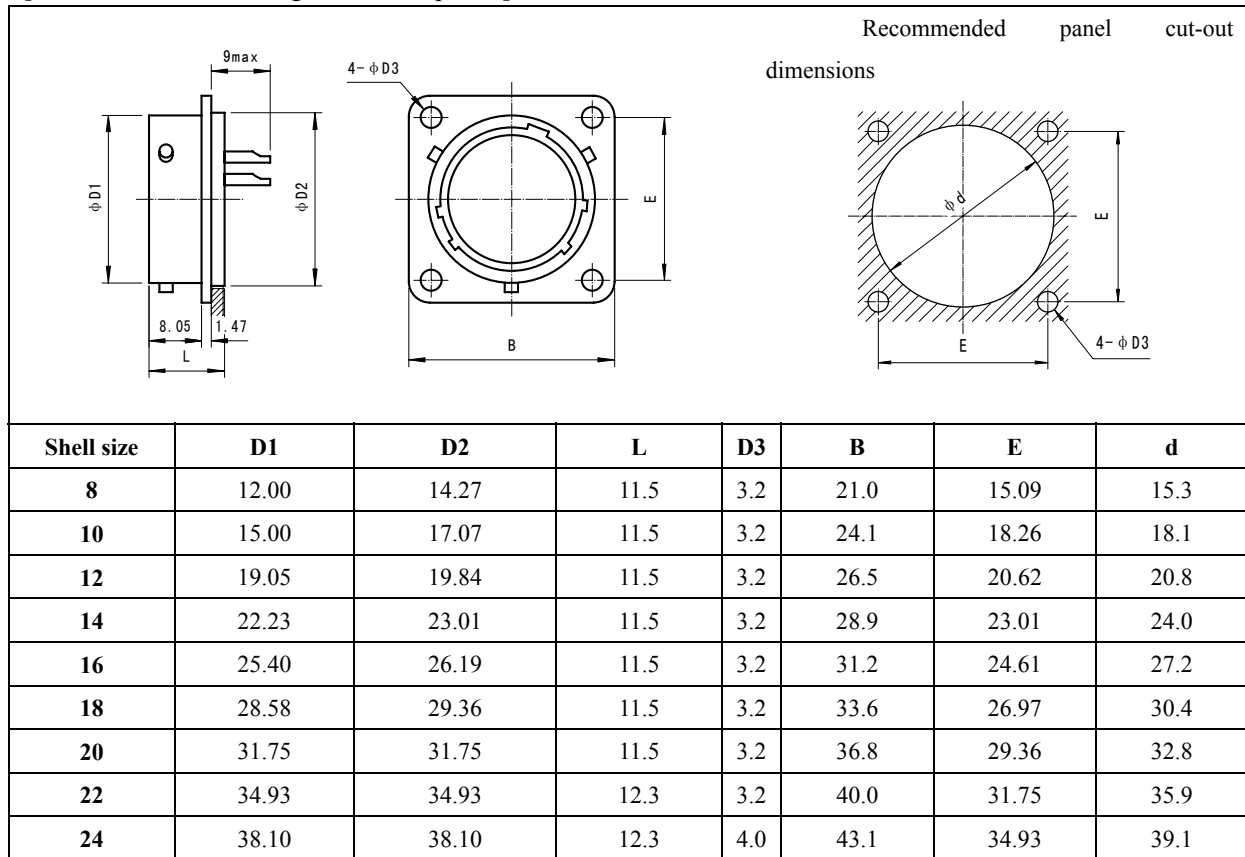
Shell size	D1	D2	d	p
9	14.53	26.97	17.7	17.0
11	17.78	29.53	21.0	19.6
13	21.59	34.92	25.6	24.3
15	24.77	38.50	28.8	27.6
17	27.94	42.00	32.0	30.7
19	30.66	46.02	35.2	33.9
21	33.83	49.6	38.3	37.1
23	37.01	53.16	41.5	40.0
25	40.18	59.82	44.7	43.4

R255 II Series Sealed Receptacle

[LA27475 wall mounting sealed receptacle]

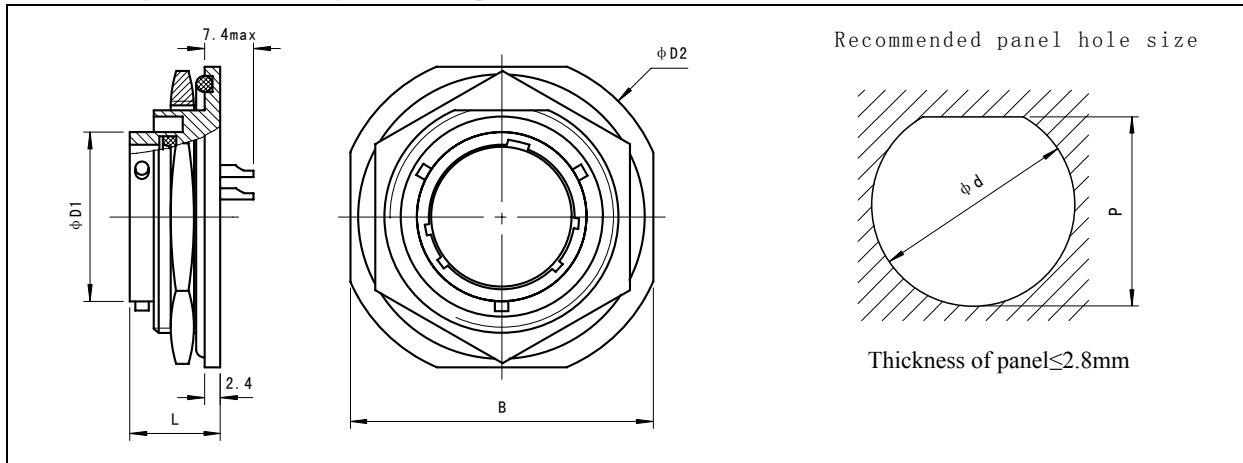


[LA27476 box mounting sealed receptacle]



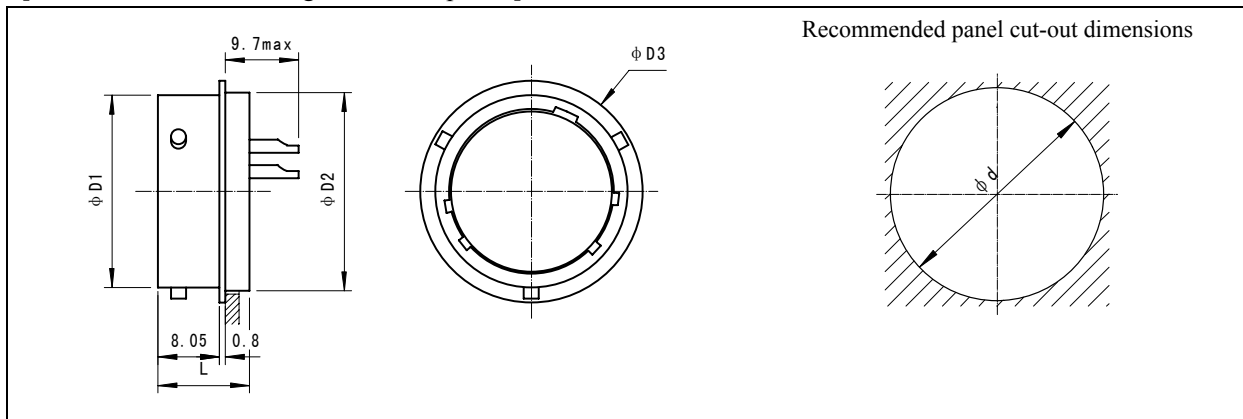


[LA27477 jam nut mounting sealed receptacle]



Shell size	D1	D2	L	B	d	p
8	12.00	34.95	13.5	31.75	22.46	21.08
10	15.00	38.10	13.5	34.95	25.58	24.26
12	19.05	41.28	13.5	38.10	28.80	27.53
14	22.23	44.45	13.5	41.28	31.98	30.68
16	25.40	49.23	13.5	45.24	35.15	33.86
18	28.58	51.21	13.5	48.00	38.28	37.06
20	31.75	54.38	14.2	51.21	41.50	40.03
22	34.93	57.53	14.2	54.36	44.68	43.21
24	38.10	60.71	14.2	57.53	47.85	46.38

[LA27478 older mounting sealed receptacle]

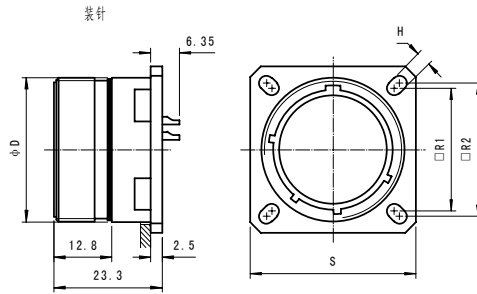


Shell size	D1	D2	D3	L	d
8	12.00	14.27	17.45	12.0	14.8
10	15.00	17.07	20.24	12.0	17.6
12	19.05	19.84	23.01	12.0	20.3
14	22.23	23.01	26.19	12.0	23.5
16	25.40	26.19	29.36	12.0	26.7
18	28.58	29.36	32.54	12.0	29.9
20	31.75	31.75	34.93	12.0	32.3
22	34.93	34.93	38.10	12.8	35.4
24	38.10	38.10	41.28	12.8	38.6

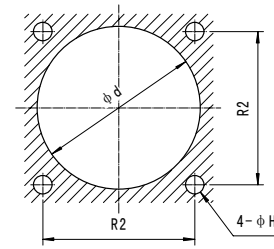
R255 III Series Sealed Receptacle

[R255/21 square flange mounting sealed

receptacle]



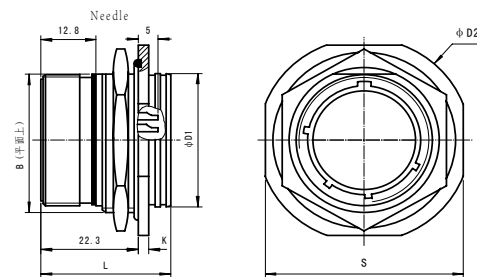
Recommended panel cut-out dimensions



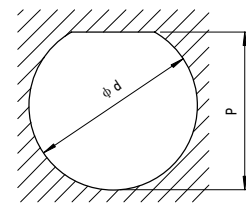
Thickness of panel $\leq 2.5\text{mm}$

Shell size	Shell code	D	R1	R2	S	H	d
9	A	15.88	15.09	18.26	23.8	3.25	16.66
11	B	19.05	18.26	20.62	26.2	3.25	20.22
13	C	22.23	20.62	23.01	28.6	3.25	23.42
15	D	25.40	23.01	24.61	31.0	3.25	26.59
17	E	30.16	24.61	26.97	33.3	3.25	30.96
19	F	31.80	26.97	29.36	36.5	3.25	32.94
21	G	34.73	29.36	31.75	39.7	3.25	36.12
23	H	38.10	31.75	34.93	42.9	3.90	39.29
25	J	41.20	34.93	38.10	46.0	3.90	42.47

[R255/23 jam nut mounting sealed receptacle]



Recommended panel hole size

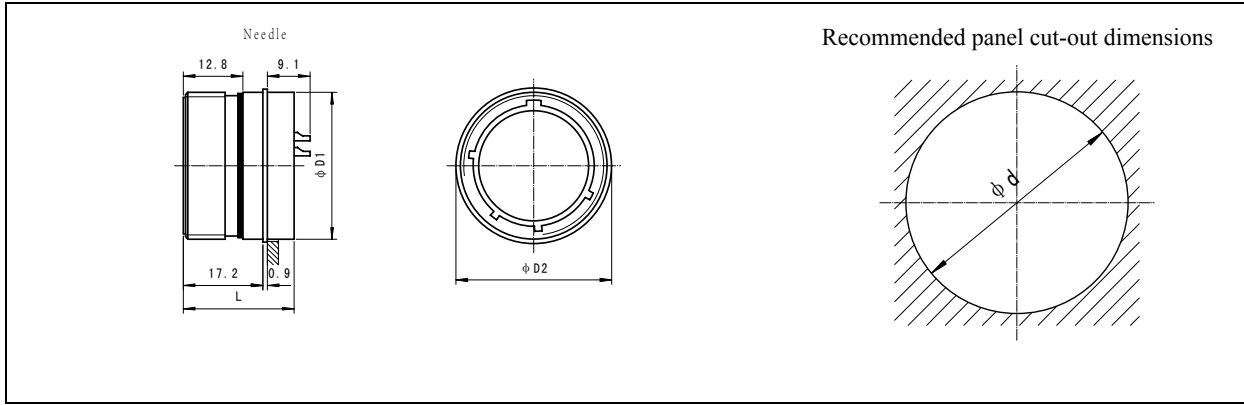


Thickness of panel $\leq 3\text{mm}$

Shell size	Shell code	D1	D2	S	B	L	K	d	p
9	A	16.6	30.5	27.0	16.5	29.2	2.6	17.70	16.99
11	B	19.7	35.2	31.8	19.3	29.2	2.6	20.88	19.53
13	C	23.0	38.4	34.9	24.0	29.3	2.6	25.58	24.26
15	D	26.2	41.6	38.1	27.2	29.3	2.6	28.80	27.53
17	E	29.3	44.8	41.3	30.4	29.3	2.6	31.98	30.68
19	F	32.5	49.3	46.0	33.4	30.1	3.4	35.15	33.86
21	G	35.7	52.7	49.2	36.5	30.1	3.4	38.28	37.06
23	H	38.9	55.9	52.4	39.7	30.1	3.4	41.50	40.24
25	J	42.0	59.0	55.6	42.8	30.1	3.4	44.68	43.41

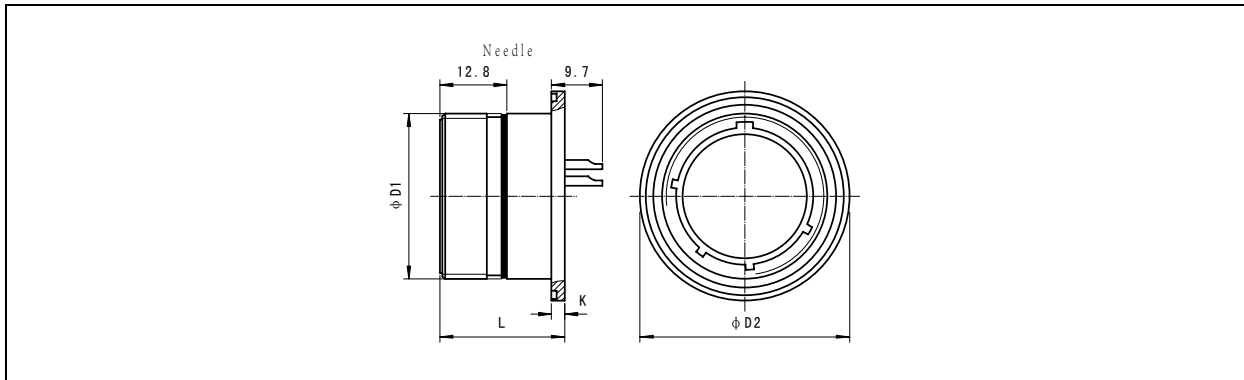


[R255/25 solder mounting sealed receptacle]



Shell size	Shell code	D1	D2	L	d
9	A	17.1	19.4	23.8	17.6
11	B	19.9	21.8	23.8	20.4
13	C	23.1	24.9	23.8	23.6
15	D	26.2	28.1	23.8	26.7
17	E	29.4	31.3	23.8	29.9
19	F	31.8	33.6	23.8	32.3
21	G	35.0	36.8	23.8	35.5
23	H	38.2	40.0	24.6	38.7
25	J	41.3	43.2	24.6	41.8

[R255/27 weld mounting sealing receptacle]

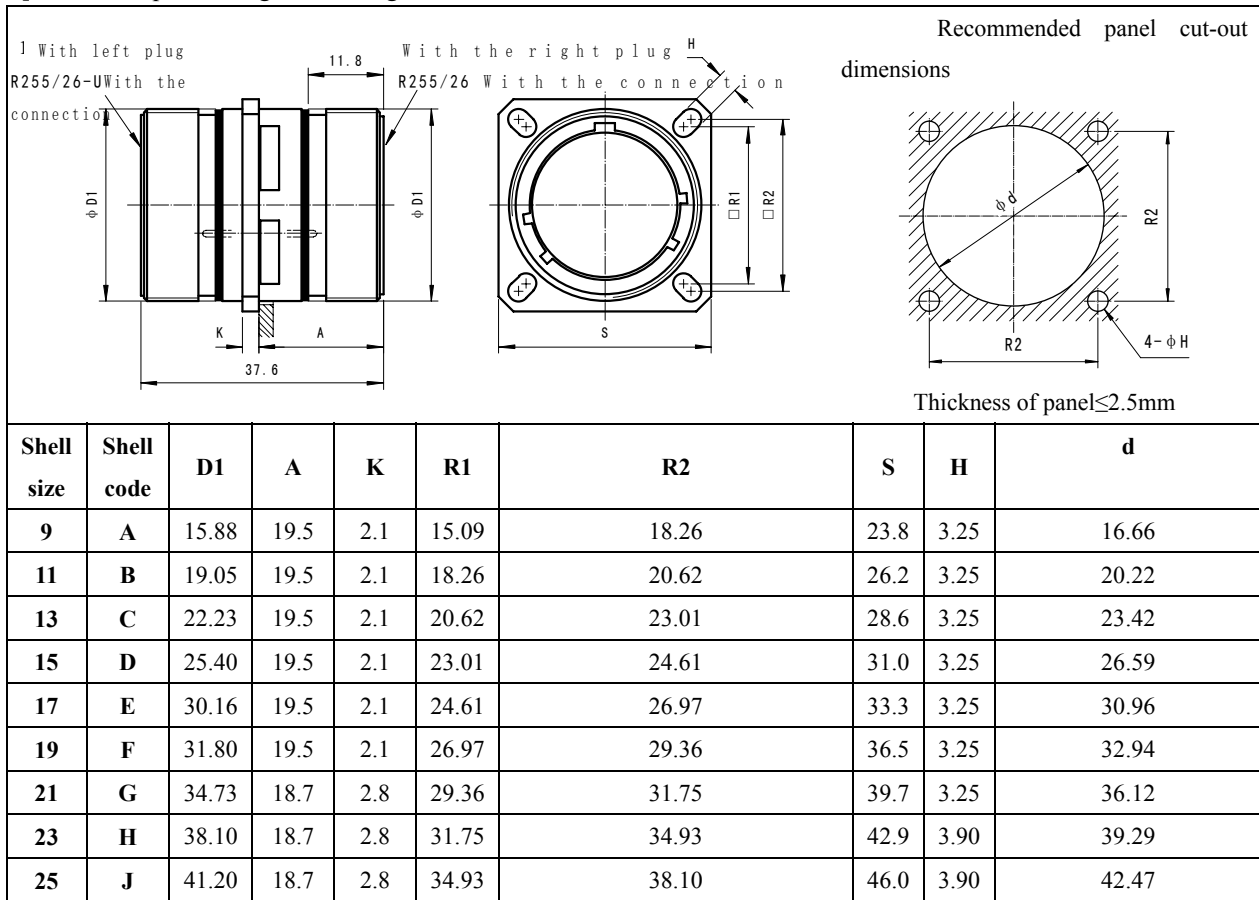


Shell size	Shell size	D1	D2	L	K
9	A	15.88	25.0	24.1	3.2
11	B	19.05	28.1	24.1	3.2
13	C	22.23	31.3	24.1	3.2
15	D	25.40	34.5	24.1	3.2
17	E	30.16	36.7	24.1	3.2
19	F	31.80	40.4	24.1	3.2
21	G	34.73	44.0	24.1	3.2
23	H	38.10	48.2	24.9	4.0
25	J	41.20	50.4	24.9	4.0

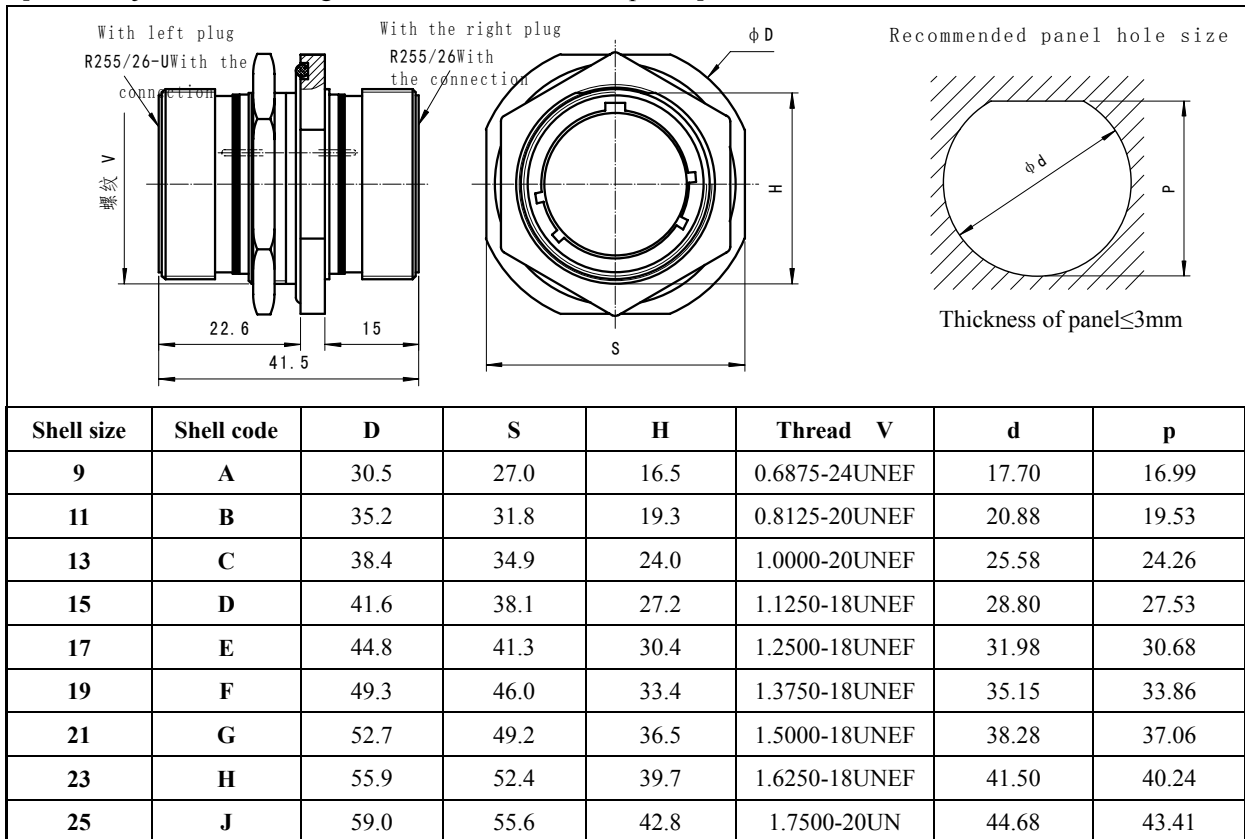


R255 III Series Thru-bulkhead Sealed Receptacle

[R255/20 square flange mounting thru-bulkhead sealed]



[R255/46 jam nut mounting thru-bulkhead sealed receptacle]

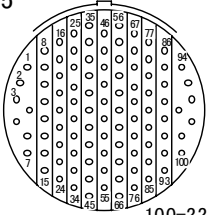
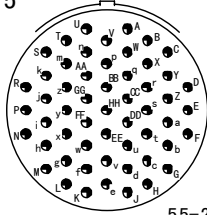
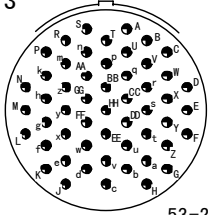
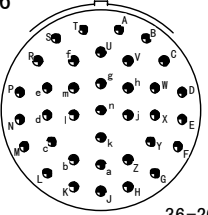
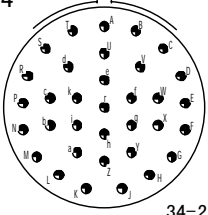
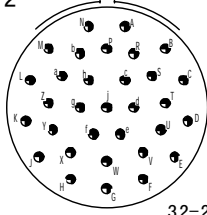
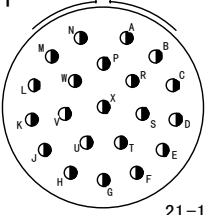
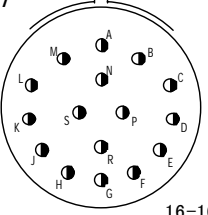
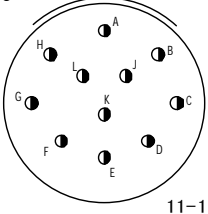
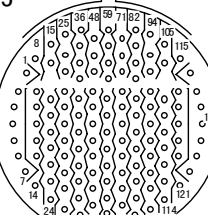
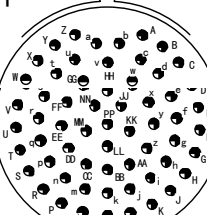
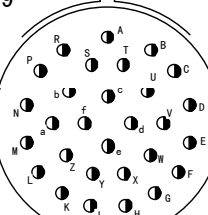
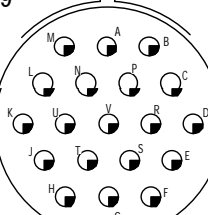
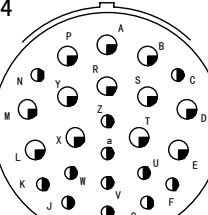
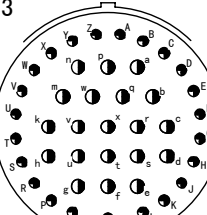
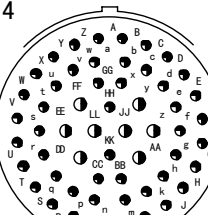


R255 Series Sealed Connector Insert Arrangement (front face of pin insert)

Shell number	35	M	98	I										
09 08 A		6-22D#		3-20#										
11 10 B		13-22D#		6-20#		5-20#		4-20#		1-12#		7-20#		2-16#
13 12 C		22-22D#		10-20#		8-20#		4-16#						
15 14 D		37-22D#		19-20#		18-20#		5-16#		8-20#		14-20#		1-16#
17 16 E		55-22D#		26-20#		6-12#		8-16#		21-20#		2-16#		
19 18 F		66-22D#		32-20#		11-16#		26-20#		29-20#		1-16#		
		67-22D#												
21 20 G		79-22D#		41-20#		16-16#		37-20#		11-12#				
		27-20#		25-20#		24-20#								



Contact specifications 22D# 20# 16# 12#

Shell number														
series	series	series	series	series	series	series	series							
23	22	H	35	M		55	I		53	I		36	I	
			34	I		32	I		21	II		97	I	
			99	II										
25	24	J	35	M		61	I		29	I		19	I	
			24	I		43	I		04	I				






Contact specifications 22D# 20# 16# 12#