

## L711/3 Series Lanyard Release Electrical Connectors

### Brief introduction

- Compliant with matching standard electrical connectors specified by GJB1188A , including 2 standard types of insert arrangements 25-20 and 25-11
- In order to meet customer's requirements, extend to all insert arrangements of 711 III Series shell sizes 11 to 23
- Mainly applied in electrical connection between airborne launching rack and missiles. Applicable for various severe conditions
- With excellent EMI shielding effect and compliant with IL711A III Series and GJB1188A ● Interchangeable and intermateable with the corresponding connectors of American Military standard

### Main features

- Aluminum alloy shells with passive olive green cadmium plating, electroless nickel plating and stainless steel passive provide excellent environmental resistant performance.
- Rapid coupling via a triple-start thread. Ratchet gear anti-loosening structure with quick coupling and reliable latching.
- Plugs with grounding fingers ensure reliable electrical continuity after mating with receptacles to achieve excellent EMI shielding.
- Connectors (insert arrangement 25-20) use high and low frequencies hybrid method to achieve electrical signals and data bus transmission per GJB289A and keep 2 optic fiber signal transmission ports.
- Electrical contacts are crimped and supplied with new designed crimp tool and extraction tool.
- With 12# shielding, 12# coaxial and 8# twin axial contacts optional. Interchangeable with contacts of the same size.
- Various shielding cable clamps with wire clamping function and good integrated EMI shielding effect.
- Vibration and shock resistant functions with stable pull and separation force and reliable separation.

### Main performances

[Electrical port performances]

[Electrical performances]

——operation voltage: 420 V DC, 300 V AC (rms)

——Rated current and contact resistance:

Table 1-1

contact size	Rated current (A)	Contact resistance (Ω)
22D	5	≤0.012
20#	7.5	≤0.005
16#	13	≤0.0025
10#	40	≤0.001

——Contact resistance:

Table 1-2

Room temperature	Elevated temperature	Humidity
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5000 MΩ	1000 MΩ	100 MΩ
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—withstanding voltage:

Table 1-3

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

—EMI shielding:

Table 1-4

Frequency MHz	Leakage attenuation (dB) min
100	90
200	88
300	88
400	87
800	85
1000	85
1500	69
2000	65
3000	61
4000	58
6000	55
10000	50

—Conductivity between shells:

Class F: ≤1mΩ

Class W: ≤2.5mΩ

Class K: ≤5mΩ

[Environmental performances]

—operation temperature: Class W: -65°C~+175°C; Class F and Class K: -65°C~+200°C

—RH: 40°C, 98%

—service altitude: ≤30480m

—Salt spray: Class F: 48h; Class W: 500h; Class K: 500h

—Fungus resistant: meet Grade 2 in GJB150.10

—heat damp: per GJB599A, 24h for 10 cycles

—others: moisture proof, sand proof and fluid immersion proof

[Mechanical performances]

—vibration:

Table 1-5

Sine vibration	10~2000Hz, acceleration 300m/s <sup>2</sup> , for 12h
Random vibration	10~2000Hz, power spectrum density 1.0G <sup>2</sup> /Hz, for 16h

—shock: acceleration 2940 m/s<sup>2</sup>

—endurance: 500 cycles (200 cycles of separation, 50 cycles of tension breakaway, then 200 cycles of separation and 50 cycles of tension breakaway)

—tensile strength:

Table 1-6

Shell size	tensile strength N	
	Normal axis	15 ° with normal axis
11	90≤tensile strength<200	90≤tensile strength<245
13, 15	tensile strength<200	tensile strength<245
17, 19, 21, 23, 25	tensile strength<400	tensile strength<445

[Twin axial and coaxial contact performances]

8#twinax contact J1216/90(M39029/90), J1216/91(M39029/91) performances

—contact resistance:

Table 1-7

	Center contact	Middle contact	Outer contact
Normal	55	55	6.25
After test	66	66	7.5
After elevated temperature aging (175°C)	94	94	10.67

mΩ

—Low level contact resistance (only for center and middle contacts): Initial value 55 mΩ; After test 66 mΩ

—withstanding voltage:

Table 1-8

	Center to middle contact	Middle to outer contact
Sea level	1000 V	500 V
15240m	250 V	125 V

—operation frequency: 0~20 MHz

—rated voltage: 500V, at 21336m (4.39KPa) , 125V

—J1216/90(M39029/90) contact insertion force and separation force:

Table 1-9

Nominal gauge pin diameter mm	Min separation force		Max insertion force	
	Initial value	After test	Initial value	After test
Φ2.896	---	---	5	6.12
Φ2.845	0.14	0.11	---	---

N

—J1216/91(M39029/91)contact insertion force and separation force:

Table 1-10

Nominal gauge pin diameter mm	Min separation force		Max insertion force	
	Initial value	After test	Initial value	After test
Φ5.563	---	---	13.36	16.7

N

Φ5.512	0.83	0.56	---	---
Φ0.622	---	---	3.34	3.90
Φ0.597	0.14	0.11	---	---

—tensile strength:

Table 1-11

N

Applicable cable	Center contact	Middle contact	Outer contact
SEFF-78-1-51	35.59	35.59	111.21

—Vibration: 10~2000Hz, power spectrum density 1.0 G<sup>2</sup>/Hz

—shock: acceleration 2940 m/s<sup>2</sup>

—operation temperature: -65°C~+175°C

12#coaxial contact J1216/102(M39029/102), J1216/103(M39029/103) performances

—contact resistance:

Table 1-12

mΩ

Applicable cable	Inner contact		Outer contact	
	Normal	After test	Normal	After test
SFF-50-2-51	55	66	6.25	7.5
SFF-75-1.6-51	120	144	5.83	7.0

—Low level contact resistance (only for Inner contact, max value):

Table 1-13

mΩ

Applicable cable	Initial value	After test
SFF-50-2-51	55	66
SFF-75-1.6-51	120	144

—withstanding voltage: sea level: 1000V; 15240m (11.59KPa) : 250V

—VSWR: 500MHz~3GHz, not more than 1.20+0.04f

 —Insertion loss: dBmax=0.11 $\sqrt{f}$ , not more than 0.2dB at 3GHz

—Impedance: 50Ω

—tensile strength:

Table 1-14

N

Applicable cable	Axial loading	
	Inner contact	Outer contact
SFF-50-2-51	44.48	66.72
SFF-75-1.6-51	15.57	66.72

—J1216/102(M39029/102)contact insertion force and separation force:

Table 1-15

N

Nominal gauge pin diameter mm	Min separation force		Max insertion force	
	Initial value	After test	Initial value	After test
Φ0.52	---	---	3.34	3.90
Φ0.50	0.14	0.11	---	---

—J1216/103(M39029/103)contact insertion force and separation force:

Table 1-16

N

Nominal gauge pin diameter mm	Min separation force		Max insertion force	
	Initial value	After test	Initial value	After test
Φ2.41	---	---	8.35	10.02
Φ2.36	0.83	0.70	---	---

 —vibration: 10~2000Hz, power spectrum density 1.0G<sup>2</sup>/Hz

12# shielding contact J1216/28(M39029/28), J1216/75(M39029/75) performances

—contact resistance:

Table 1-17

mΩ

Inner contact		Outer contact	
Initial value	After test	Initial value	After test
120	144	5	6

- Low level contact resistance (only for Inner contact) : Initial value 120 mΩ, after test 144 mΩ
- withstanding voltage: sea level: 1000V; 15240m (11.59KPa) : 250V
- tensile strength: inner contact 15.57 N, outer contact 88.96 N
- J1216/28(M39029/28) contact insertion force and separation force:

Table 1-18

N

Nominal gauge pin diameter mm	Min separation force		Max insertion force	
	Initial value	After test	Initial value	After test
Φ0.521	---	---	3.34	3.90
Φ0.495	0.14	0.11	---	---

- J1216/75(M39029/75) contact insertion force and separation force:

Table 1-19

N

Nominal gauge pin diameter mm	Min separation force		Max insertion force	
	Initial value	After test	Initial value	After test
Φ2.413	---	---	8.35	10.02
Φ2.362	0.83	0.70	---	---

- vibration: 10~2000Hz, power spectrum density 1.0G<sup>2</sup>/Hz
- shock: acceleration 2940 m/s<sup>2</sup>

### Designation

[25 (J) shell size lanyard breakaway plug (compliant with GJB1188A) designation]

Basic series	L711/53	Y	E	20	N	1
Shell plating	Y—Aluminum alloy olive green cadmium plating H—Aluminum alloy electroless nickel plating M—Stainless steel passive					
Lanyard length	E-153mm F-166mm G-178mm H-191mm I-203mm J-216mm K-229m L-242mm					
Insert arrangement	See "Insert arrangement"					
Contact type <sup>2)</sup>	Blank—Pin S—Socket					
Polarization	N—normal; A/B/C/D/E—alternative					
Type number	1-1 type					

Note: Shell size in P/N is defaulted as 25 (J) shell and contact is defaulted as pin.

[11~23(B~H)shell size lanyard breakaway plug designation]

Basic series	J711/53	Y	F	93		E	N	1
Shell plating	Y—Aluminum alloy olive green cadmium plating							
	H—Aluminum alloy electroless nickel plating							
	M—Stainless steel passive							
Shell size <sup>1)</sup>	B-11	C-13	D-15	E-17				
	F-19	G-21	H-23					
Insert arrangement	See “Insert arrangement”							
Contact type <sup>2)</sup>	Blank—Pin S—Socket							
Lanyard length	E-153mm	F-166mm	G-178mm	H-191mm				
	I-203mm	J-216mm	K-229m	L-242mm				
Polarization	N—normal; A/B/C/D/E—alternative							
Type number	1-1 type							
Modification code	-01.....							

Note: 1) shell sizes from 11 to 23 (B~H) are for GJB1188A non-specified lanyard release connectors. Indicate the shell size in the P/N;

2) In several part numbers, “P” stands for pin. Please contact us when ordering this. This series lanyard release plugs mate with ILD711III series receptacles which are designated per ILD711III series.

[Examples]

Military 711 series jam nut receptacle, aluminum alloy shell with olive green cadmium plating, 25# shell, insert arrangement 20, with sockets, normal polarization, its part number is: L711/46YJ20SN.


Military 711 series lanyard release plug, aluminum alloy shell with olive green cadmium plating, 25# shell, insert arrangement 20, with pins, lanyard length 153mm, normal polarization, type 1, its part number is: L711/53WE20N1.

The matching connectors P/N: L711/46YJ20SN/L711/31YE20N1.

### Insert arrangement

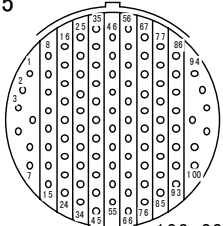
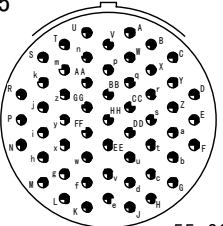
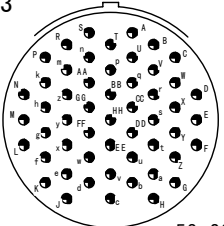
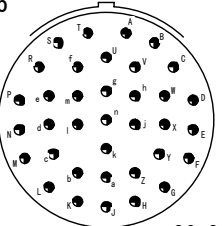
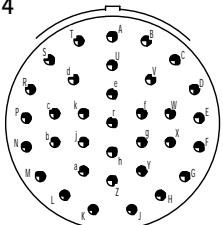
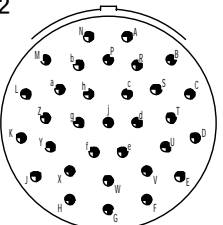
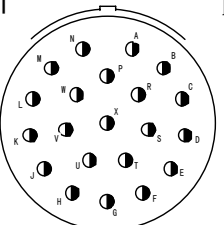
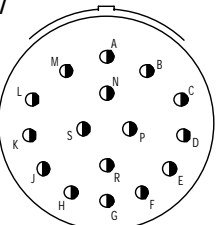
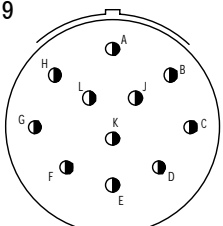
Insert arrangement figures with front face of pin inserts illustrated:

11 (B)	35 M  13-22D#	98 I  6-20#	05 I  5-20#	04 I  4-20#	01 I  1-12#	99 I  7-20#	02 I  2-16#
	35 M  22-22D#	98 I  10-20#	08 I  8-20#	04 I  4-16#	12 N  1-12# 11-22D#	50 M  4-20# 1-10#	60 I  4-16# 2-20#
15 (D)	35 M  37-22D#	19 I  19-20#	18 I  18-20#	05 II  5-16#	97 I  8-20# 4-16#	15 I  14-20# 1-16#	
	35 M  55-22D#	26 I  26-20#	06 I  6-12#	08 II  8-16#	99 I  21-20# 2-16#		
17 (E)	35 M  66-22D#	32 I  32-20#	11 II  11-16#	28 I  26-20# 2-16#	30 I  29-20# 1-16#		

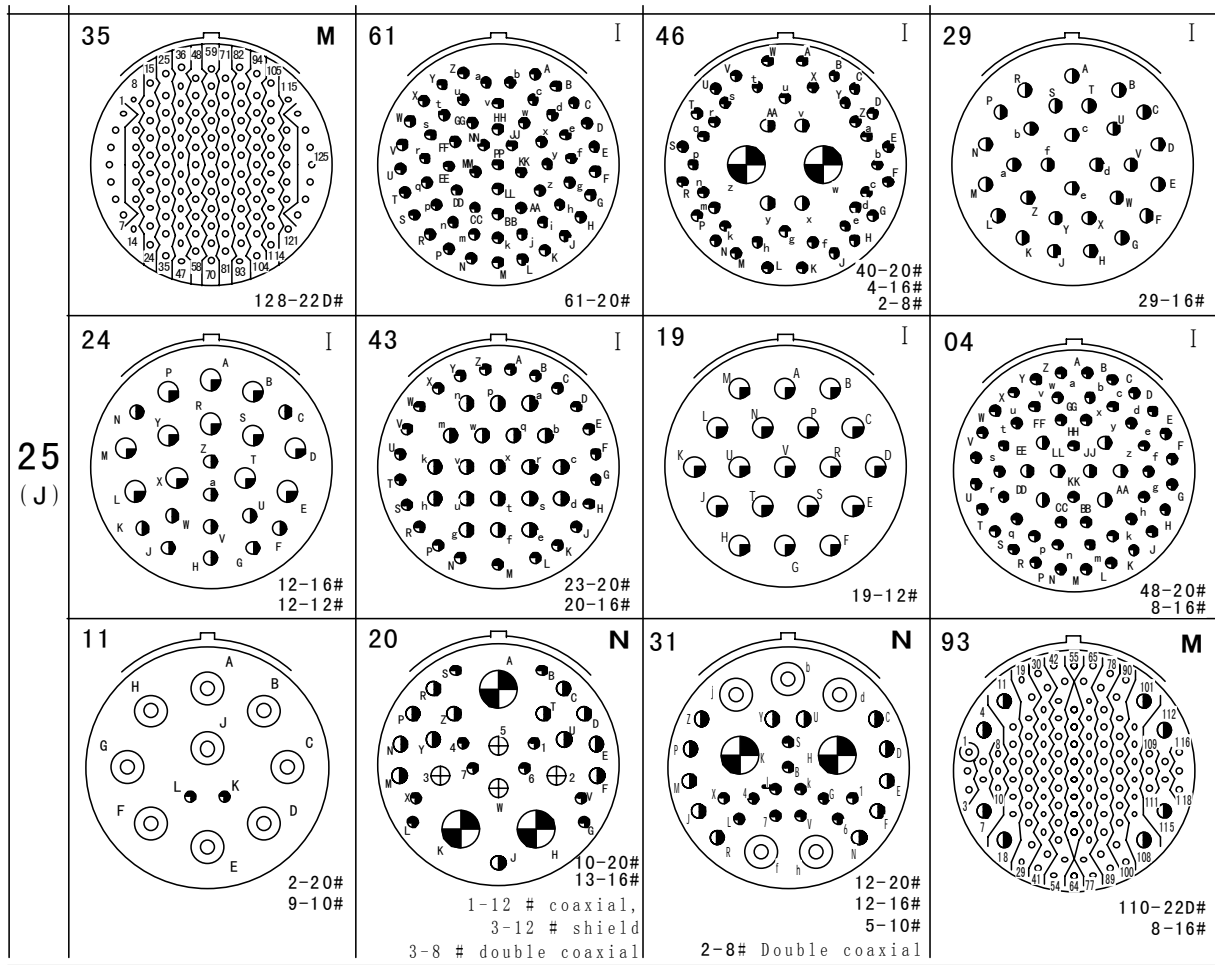

 Contact specifications 22D# 20# 16# 12# 12#coaxial 10# 8# double coaxial

19 (F)	45 M  67-22D#	18 M  14-22D# 4-8# 同轴	05 I  1-20# 4-10#	93 I  24-22D# 6-20#, 2-10#	
	35 M  79-22D#	41 I  41-20#	16 II  16-16#	39 I  37-20# 2-16#	11 II  11-12#
21 (G)	27 I  27-20#	25 I  25-20#	24 I  24-20#	29 I  26-20# 3-12# 同轴	



23 (H)	<b>35</b> <span style="float: right;">M</span>  <b>100-22D#</b>	<b>55</b> <span style="float: right;">I</span>  <b>55-20#</b>	<b>53</b> <span style="float: right;">I</span>  <b>53-20#</b>	<b>36</b> <span style="float: right;">I</span>  <b>36-20#</b>
	<b>34</b> <span style="float: right;">I</span>  <b>34-20#</b>	<b>32</b> <span style="float: right;">I</span>  <b>32-20#</b>	<b>21</b> <span style="float: right;">II</span>  <b>21-16#</b>	<b>97</b> <span style="float: right;">I</span>  <b>16-16#</b>
	<b>99</b> <span style="float: right;">II</span>  <b>11-16#</b>			

  
 Contact specifications    22D#    20#    16#    12#    12#Coaxial    10 #    8 #    double coaxial




  
 Contact specifications    22D#    20#    16#    12#    12#Coaxial    10 #    8 # double coaxial

### Contact configuration requirements

[25-20 contact configuration requirements]

Table 1-20

Function	Signal direction	Contact position	Contact size	Signal name	Remark
Signal line	Bi-directional	A	8#twinax	Low bandwidth	Audio
	Bi-directional	K, H	8#twinax	Mux A/B	
	Bi-directional	5	12# coaxial	High bandwidth 1	20Hz~1.6GHz
	Bi-directional	W, 3, 2	12# coaxial	High bandwidth 2/3/4	20Hz~20MHz
	Bi-directional	Y, U	16#	Fiber optic channel1/2	Keep for reservation
Disperse line	Aircraft output	1	20#	Breakaway permitted	
	Aircraft output	B	20#	Interlocked	
	To aircraft	S	20#	Interlocked loop	

	Aircraft output	L	20#	Address bit A0	
	Aircraft output	X	20#	Address bit A1	
	Aircraft output	7	20#	Address bit A2	
	Aircraft output	4	20#	Address bit A3	
	Aircraft output	V	20#	Address bit A4	
	Aircraft output	G	20#	Address even and odd check	
	To aircraft	6	20#	Address loop	
	To aircraft	T	16#	Configuration ground	
Power line	Aircraft output	C	16#	28 VDCpower1	
	To aircraft	D	16#	28 VDCpower1 loop	
	Aircraft output	E	16#	28 VDCpower2	
	To aircraft	F	16#	28 VDCpower2 loop	
	Aircraft output	P	16#	115 VAC A phase	
	Aircraft output	M	16#	115 VAC B phase	
	Aircraft output	J	16#	115 VAC C phase	
	To aircraft	Z	16#	115 VAC center line	
	Aircraft output	R	16#	270 VDC power	
	To aircraft	N	16#	270 VDC power loop	

[Receptacle contacts]

Table 1-21

Size	Contact P/N	Contact position	Name	Sealing plug
20	J1216/56-351 (M39029/56-351)	B,G,L,S,V,X,1,4,6,7	Socket	JY27488-20Red
16	J1216/56-352 (M39029/56-352)	C,D,E,F,J,M,N,P,R,T,Z	Socket	JY27488-16 blue
12	J1216/75-422 (M39029/75-422)	2,3,W	Shielding Socket	J1784/80-12Yellow
12	J1216/103-559 (M39029/103-559)	5	Coaxial Socket	J1784/80-12Yellow
8	J1216/91-530 (M39029/91-530)	A,H,K	Twin axial Shielding Socket	J1784/80-8Red

16	16# optic socket	U,Y	Socket end	JY27488-16 blue
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[Plug contacts]

Table 1-22

Size	Contact P/N	Contact position	Name	Sealing plug
20	J1216/58-363 (M39029/58-363)	B,G,L,S,V,X,1,4,6,7	Pin	JY27488-20Red
16	J1216/58-364 (M39029/58-364)	C,D,E,F,J,M,N,P,R,T,Z	Pin	JY27488-16 blue
12	J1216/28-412 (M39029/28-412)	2,3,W	Shielding Pin	J1784/80-12Yellow
12	J1216/102-558 (M39029/102-558)	5	Coaxial Pin	J1784/80-12Yellow
8	J1216/90-529 (M39029/90-529)	A,H,K	Twin axial Shielding Pin	J1784/80-8Red
16	16#光纤 Pin	U,Y	Pin end	JY27488-16 blue

[25-11 contact configuration requirements]

Table 1-23

Function	Signal direction	Contact position	Contact size	Signal name	Remark
Power line	Aircraft output	B	10#	28 VDC power	
	To aircraft	D	10#	28 VDC loop	
	Aircraft output	A	10#	115 VAC A phase	
	Aircraft output	C	10#	115 VAC B phase	
	Aircraft output	E	10#	115 VAC C phase	
	To aircraft	G	10#	115 VAC center line	
	Aircraft output	F	10#	270 VDC power	
Disperse line	To aircraft	H	10#	270 VDC loop	
	Aircraft output	K	20#	Interlocked	
	To aircraft	L	20#	Interlocked loop	
	To aircraft	J	10#	Configuration ground	

[Receptacle contacts]

Table 1-24

Size	Contact P/N	Contact position	Name	Sealing plug
20	J1216/56-351 (M39029/56-351)	K,L	Socket	JY27488-20 Red
10	J1216/56-527 (M39029/56-527)	A,B,C,D,E,F,G,H,J	Socket	J1784/81-10 Green

[Plug contacts]

Table 1-25

Size	Contact P/N	Contact position	Name	Sealing plug
20	J1216/58-363 (M39029/58-363)	K,L	Pin	JY27488-20 Red
10	J1216/58-528 (M39029/58-528)	A,B,C,D,E,F,G,H,J	Pin	J1784/81-10 Green

[25-31 contact configuration requirements]

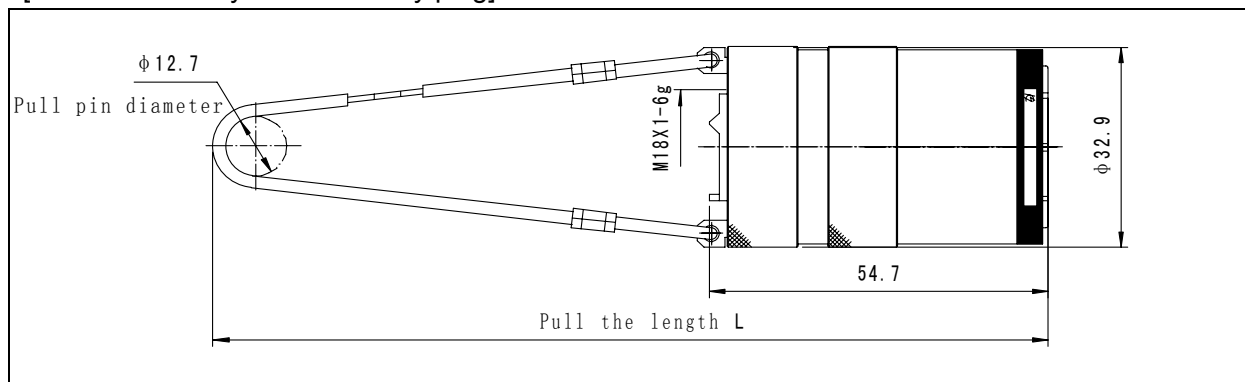
Table 1-26

Function	Signal direction	Contact position	Contact size	Signal name	Remark
Signal line	Bi-directional	K, H	8#twinax	Mux A/B	
	Bi-directional	Y, U	16#	Fiber optic channel1/2	Keep for reservation
Disperse line	Aircraft output	1	20#	Breakaway permitted	
	Aircraft output	B	20#	Interlocked	
	To aircraft	S	20#	Interlocked loop	
	Aircraft output	L	20#	Address bit A0	
	Aircraft output	X	20#	Address bit A1	
	Aircraft output	7	20#	Address bit A2	
	Aircraft output	4	20#	Address bit A3	
	Aircraft output	V	20#	Address bit A4	
	Aircraft output	G	20#	Address even and odd check	
	To aircraft	6	20#	Address loop	
Power line	Aircraft output	C	16#	28 VDC power 1	
	To aircraft	D	16#	28 VDC power 1 loop	
	Aircraft output	E	16#	28 VDC power 2	
	To aircraft	F	16#	28 VDC power 2 loop	
	Aircraft output	P	16#	115 VAC A phase	
	Aircraft output	M	16#	115 VAC B phase	

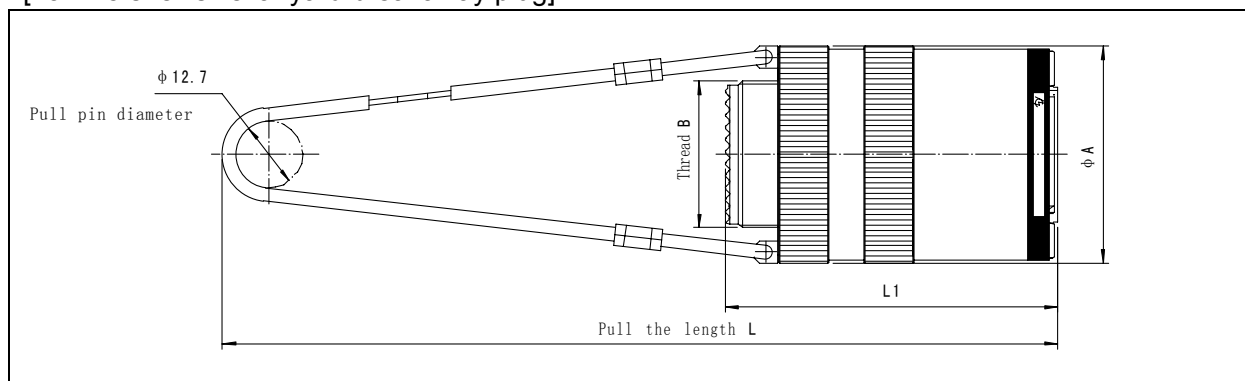
	Aircraft output	J	16#	115 VAC C phase	
	To aircraft	Z	16#	115 VAC center line	
	Aircraft output	R	16#	270 VDC power	
	To aircraft	N	16#	270 VDC power loop	
Power line	Aircraft output	b	10#	28 VDC power	
	To aircraft	d	10#	28 VDC loop	
	Aircraft output	f	10#	270 VDC power	
	To aircraft	h	10#	270 VDC loop	
Disperse line	Aircraft output	k	20#	Interlocked	
	To aircraft	l	20#	Interlocked loop	
	To aircraft	j	10#	Configuration ground	

### Outline and mounting dimensions

[11 shell size lanyard breakaway plug]



[13~25 shell size lanyard breakaway plug]



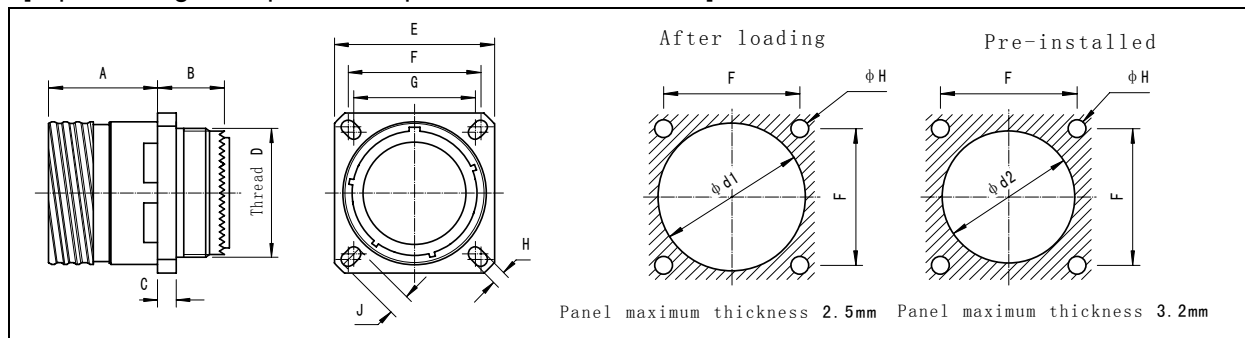
Shell size	A	Thread B	L1
13 (C)	32.9	M18×1-6g	54.7
15 (D)	36.5	M22×1-6g	54.7
17 (E)	39.8	M25×1-6g	54.7
19 (F)	43.3	M28×1-6g	63.2
21 (G)	44.9	M31×1-6g	63.2

23 (H)	48.4	M34×1-6g	63.2
25 (G)	51.2	M37×1-6g	63.2

List for lanyard length L codes

Letter code	lanyard length L	Letter code	lanyard length L	Letter code	lanyard length L	Letter code	lanyard length L
E	153	F	166	G	178	H	191
I	203	J	216	K	229	L	242

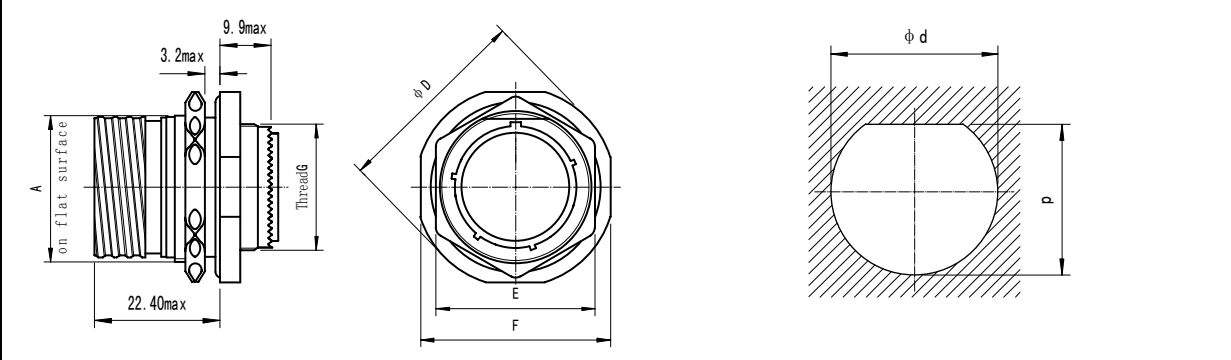
[Square flange receptacle and panel cutout dimensions]



Shell size	MS Shell size	A Max	B Max	C Max	Thread D	E	F	G	H	J	d1 Min	d2 Min
11	B	20.9	10.6	2.5	M15×1-6g	26.2	20.62	18.26	3.25	4.93	20.22	15.88
13	C	20.9	10.6	2.5	M18×1-6g	28.6	23.01	20.62	3.25	4.93	23.42	19.05
15	D	20.9	10.6	2.5	M22×1-6g	31.0	24.61	23.01	3.25	4.93	26.59	23.01
17	E	20.9	10.6	2.5	M25×1-6g	33.3	26.97	24.61	3.25	4.93	30.96	25.81
19	F	20.9	10.6	2.5	M28×1-6g	36.5	29.36	26.97	3.25	4.93	32.94	28.98
21	G	20.1	11.4	3.2	M31×1-6g	39.7	31.75	29.36	3.25	4.93	36.12	32.18
23	H	20.1	11.4	3.2	M34×1-6g	42.9	34.93	31.75	3.91	6.15	39.29	34.93
25	J	20.1	11.4	3.2	M37×1-6g	46.0	38.10	34.93	3.91	6.15	42.47	37.69

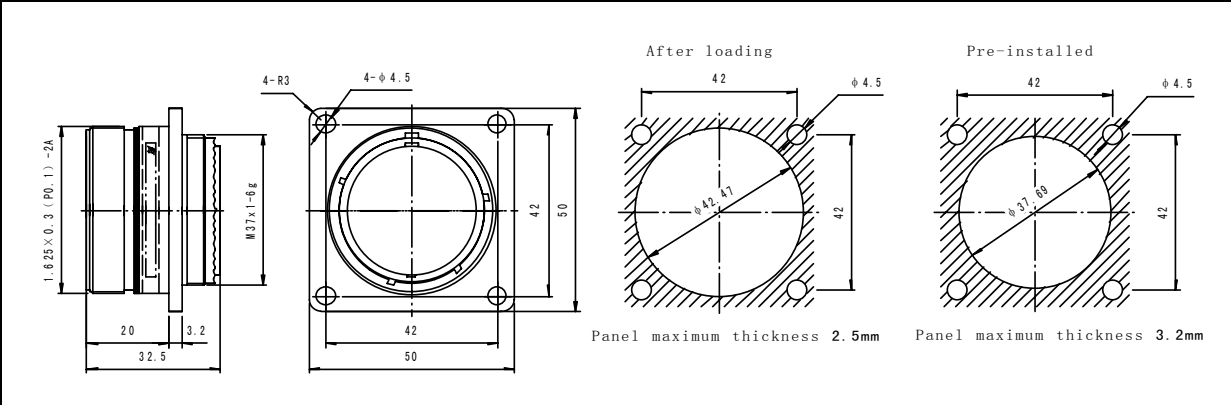
Note: L711/20YP31SN is excepted, and its outline and mounting dimensions are in the next page.

[Jam nut receptacle and panel cutout dimensions]



Shell size	MS Shell size	A	D max	E max	F	Thread G	d	p
11	B	19.3	35.2	27.0	31.8	M15×1-6g	20.88	19.53
13	C	24.0	38.4	32.0	34.9	M18×1-6g	25.58	24.26
15	D	27.2	41.6	36.0	38.1	M22×1-6g	28.80	27.53
17	E	30.4	44.8	37.0	41.3	M25×1-6g	31.98	30.68
19	F	33.4	49.3	41.0	46.0	M28×1-6g	35.15	33.86
21	G	36.5	52.7	46.0	49.2	M31×1-6g	38.28	37.06
23	H	39.7	55.9	50.0	52.4	M34×1-6g	41.50	40.24
25	J	42.8	59.0	51.2	55.6	M37×1-6g	44.68	43.41

[Receptacle L711/20YP31SN]



Panel maximum thickness 2.5mm      Panel maximum thickness 3.2mm



**Contact applicable wires**

Contact size	Contact type	Color band marks			Pin operation diameter	Applicable domestic made wire section mm <sup>2</sup>	Applicable American wire gauge AWG	Insulation diameter of applicable wires mm
		The first color band	The second color band	The third color band				
20#	Pin	Orange	Blue	Orange	1.04	0.2	24	1.02~2.11
						0.3	22	
						0.5	20	
	Socket	Orange	Green	Brown		0.2	24	
						0.3	22	
						0.5	20	
16#	Pin	Orange	Blue	Yellow	1.61	0.5	20	1.65~2.77
						0.8	—	
						1.0	18	
						1.2	16	
	Socket	Orange	Green	Red		0.5	20	
						0.8	—	
						1.0	18	
						1.2	16	
10#	Pin	Green	Red	White	3.0	5.26	10	3.42~4.12
						3.31	12	
	Socket	Green	Orange	Black		5.26	10	
						3.31	12	
12# Coaxial	Pin	Red	Brown	Brown	—	—	M17/119- RG174	3.43~3.94
	Socket	Yellow	Brown	Blue	—	—		
8# Twin axial	Pin	Green	Red	White	—	—	M17/176- 0002	3.15~3.40
	Socket	Green	Orange	Black				

Connector types and intended use  
 [Main port connector (25-20, 25-31) ]

Table 1-28

Connector type	P/N	Name	Intended use
Plug	L711/53YE20(31)N1	Lanyard breakaway plug	For launching devices
Receptacle	L711/42YP20(31)SN L711/46YP20(31)SN	Square flange mounting receptacle Jam nut receptacle	For missile or other hanging
Plug	L711/48YP20(31)PN	Straight free end plug	For connection between ground test or launching device and aircraft

[Assistant power port connector (25-11) ]

Table 1-29

Connector type	P/N	Name	Intended use
Plug	L711/53YE11A1	Lanyard breakaway plug	For launching devices
Receptacle	L711/42YP11SA L711/46YP11SA	Square flange mounting receptacle Jam nut receptacle	For missile or ground test
Plug	L711/48YP11PA	Straight free end plug	For connection between ground test or launching device and aircraft

Note: only applicable for standard ports (25-20, 25-31 and 25-11) , other intended application please refer the specification above.

### Electrical connectors operation instruction

[Electrical connectors operation]

[Cable connection]

Firstly crimp pins and sockets according to requirements, put back shell over the cable, and then assemble pins and sockets into the corresponding plug or receptacle per insert arrangements. After this, couple back shell and product through thread rotation and clamp cable by appropriate method.

[Coupling and separation]

Fix the receptacle on the panel by 4 M3 screws (for square flange mounting) or by jam nuts (jam nut mounting). Connect plug and receptacle and don't worry about bending pins due to the blind mating functions of plug and receptacle. Firstly insert the guiding portion of plug into receptacle, and then rotate plug shell until the correct locating of 5 keyways. Rotate plug clockwise to engage the threads of plug and receptacle. When the coupling is in place, plug cannot be rotated forwardly, red ribbon on receptacle is covered and latching mechanism in plug automatically achieves locking.

When separate connectors, forcibly rotate plug shell counter-clockwisely to separate plug and receptacle. Or directly pull the lanyard on plug to break away the connector.

[Application cautions]

- 1) When connector is cabled, wires must be cabled per corresponding contact sequence.
- 2) Electricity is prohibited before connector locking. Hot plugging is not allowed.
- 3) When use 25-20 connectors, select recommended Ti-Ni ring as back shell for better 360° shielding effects at rear end.

- 4) When connector cavities are not used, insert the unwired contacts of appropriate sizes firstly, and then seal the end by sealing plug to avoid entrance of moisture, rain, dust, etc.

- 5) When plug and receptacle are separated, cap the ends by dust cover to avoid entrance of dust or other foreign matters, especially for 25-20 connectors.

- 6) When use straight free end plug L711/48YP20PN or lanyard breakaway plug, if end cable harness is directly clamped near plug end, twin axial and coaxial contacts are easy to be skew, which affects its transmission reliability. So we recommend support bracket and accessories.

- 7) When use 25-20 main port connectors (lanyard breakaway plugs), especially take care about assembling 8# twin axial contacts and 12# coaxial contacts to ensure the alignment.

## Storage

1) Packed electrical connectors can be stored for 3 months in outdoor field without direct contact with rain and snow.

2) Plug and receptacle should be maintained at a temperature of  $-5\sim 35^{\circ}\text{C}$ , the relative humidity is not more than 80%. Product should be stored in the warehouse without acid, alkaline and corrosive gas.

## Ordering instruction

1) When customers order the connectors, please indicate product name, part number and amount in contract or order.

2) Crimp tools need to be ordered separately.

3) Twin axial, coaxial, shielding and optical contacts need to be ordered separately.