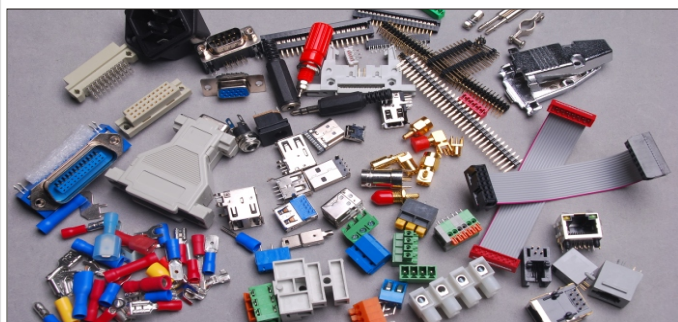


KLS

1-Connectors & Connector Components-Разъемы, соединители и их узлы



- 1-1 Wire to Board connectors
- 1-2 Board to Board connectors
- 1-3 Input/Output (Box to Box)
- 1-4 Socket & Card connectors
- 1-5 Power connectors
- 1-6 Audio & Video connectors
- 1-7 RF & Coax
- 1-8 Terminal Blocks & Strips
- 1-9 Terminals & Splices
- 1-10 **Circular connector**

More . . .



Connectors Industrial Circular Series

KLS15-226-FQ Connectors Industrial Circular Series

Introduction

FQ series waterproof round electric connector accord with Ministry of the Electronics Industry components and parts industrial administration bureau office criticize standard DZ4Q/RE008-84 make, advanced structure of producing etc., high dependability have, jack is it adopt high reliable squirrel-cage elasticity exposed to replacing the traditional line reed structure to exposed to, the products have the resistance of contacting low, anti-vibration, shock-resistant, such characteristics as the sealing is strong, the seat connection of the plug is joined fast for the mouth type of the card, simple to use, easy to operate, widely used in the electric connection among various kinds of electronic equipment.

TECHNICAL CHARACTERISTICS

Temperature: -55°C ~ +105°C
Relative humidity: 98±3% at 40°C
Vibration: 10-2000HZ, 150m/s²
Shock: 500m/s²
Atmospheric: 1 KPa
Resistance: 0.1Ω Min.
Endurance: 500 cycles



Experimental voltage (50HZ)

Exposed to the centre-to-centre spacing correctly	Under the normal condition	After test moistly
≥ 3.5mm	1500V	1000V
2.8mm	1200V	800V

Experimental voltage (50HZ) under the low pressure condition

Atmospheric pressure	Exposed to the centre-to-centre spacing correctly	
	≥ 3.5mm	2.8mm
46.7	1000V	730V
8.5	500V	400V
4.4	400V	300V

Insulating resistance

Under the normal condition	Under the high-temperature condition	After test moistly
≥ 5000MΩ	≥ 500MΩ	≥ 100MΩ

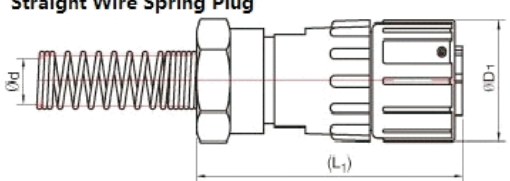
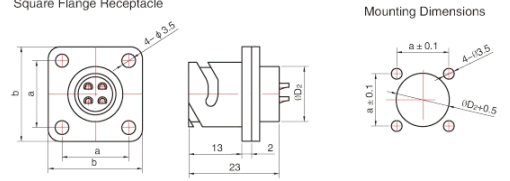
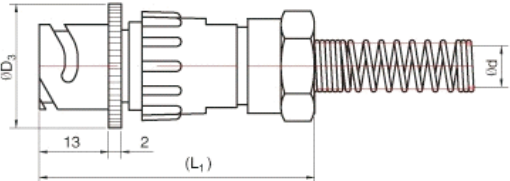
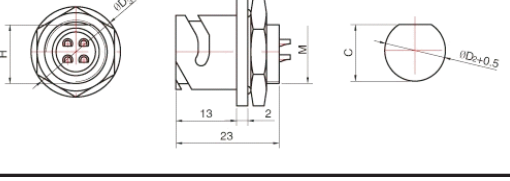
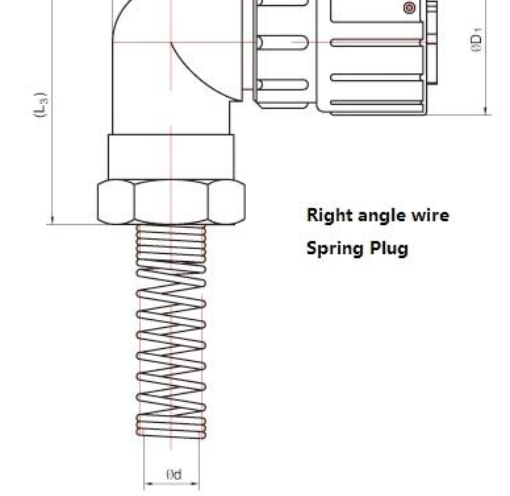
ORDER INFORMATION

Product NO.: KLS15-226- FQ 14-4 T K - 6 S

Pos. NO.		Dust Cover: C-Metal dustproof cover S-Plastic dustproof cover X-Rubber dustproof cover
FQ: Series Prefix Bayonet waterproof circular connectors		
Type: mounting diameter of receptacle: 14,18,24,30		Diameter of matching cable: FQ14: Φ5、Φ6、Φ7、Φ8mm FQ18: Φ6、Φ8、Φ9、Φ10mm FQ24: Φ6、Φ10、Φ12、Φ14mm Fq30: Φ14、Φ16、Φ18mm
Number of contacts: FQ14: 2,3,4,5,6,7,9 FQ18: 3,4,5,6,7,12 FQ24: 4,5,6,10,19,26 FQ30: 9,32,42,55		Type of contact: J-pin K-socket
Type of plug or receptacle: T- Straight wire Spring Plug TR-Right angle wire Spring Plug ZP-Cable Receptacle Z- Square Flange Receptacle YZ- Circular Receptacle		

Connectors Industrial Circular Series

KLS15-226-FQ Connectors Industrial Circular Series

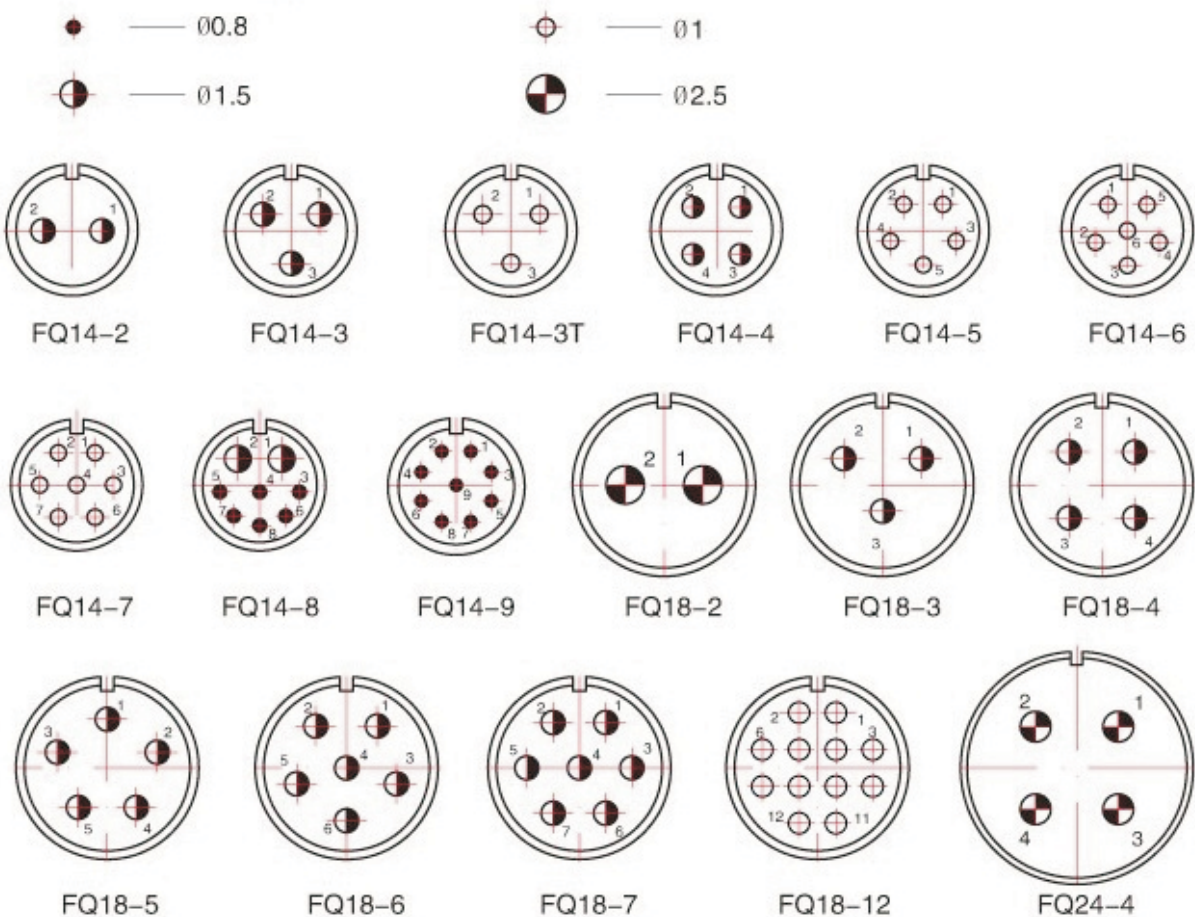
Straight Wire Spring Plug 	Type	ΦD1	L1	Φd Cable sealing shroud		
	FQ14	Φ 21	47/50	Φ 5、Φ 6、Φ 7、Φ 8		
	FQ18	Φ 27	53	Φ 6、Φ 8、Φ 9、Φ 10		
	FQ24	Φ 33	61	Φ 6、Φ 10、Φ 12、Φ 14		
	FQ30	Φ 39.5	68	Φ 14、Φ 16、Φ 18		
Square Flange Receptacle 	Type	a	b	ΦD2		
	FQ14	17± 0.2	24	Φ 14		
	FQ18	20± 0.2	27	Φ 18		
	FQ24	26± 0.2	33	Φ 24		
	FQ30	31± 0.1	38	Φ 30		
Cable Receptacle 	Type	ΦD3	L1	Φd Cable sealing shroud		
	FQ14	19.7	47/50	Φ 5、Φ 6、Φ 7、Φ 8		
	FQ18	23.8	53	Φ 6、Φ 8、Φ 9、Φ 10		
	FQ24	30	61	Φ 6、Φ 10、Φ 12、Φ 14		
	FQ30	36	68	Φ 14、Φ 16、Φ 18		
Circular Receptacle: 	Type	ΦD3	M	ΦD2	H	C
	FQ14	19.7	M14x1	Φ 14	13	13.2
	FQ18	23.8	M18x1	Φ 18	17	17.2
	FQ24	30	M24x1	Φ 24	23	23.2
	FQ30	36	M30x1	Φ 30	29	29.2
Right angle wire Spring Plug 	Type	ΦD1	L2	L3	Φd Cable sealing shroud	
	FQ14	Φ 21	38.3	37	Φ 6、Φ 7、Φ 8	
	FQ18	Φ 27	43.8	38	Φ 6、Φ 8、Φ 9、Φ 10	
	FQ24	Φ 33	55.8	45	Φ 6、Φ 10、Φ 12、Φ 14	
	FQ30	Φ 39.5	57.5	50	Φ 14、Φ 16、Φ 18	

Connectors Industrial Circular Series

KLS15-226-FQ Connectors Industrial Circular Series

Exposed to a diameter	Electric current	Voltage ($\leq 40\text{Hz}$)		Exposed to the resistance
0.8mm	2A	Contact centre-to-centre spacing $\geq 3.5\text{mm}$	Contact centre-to-centre spacing 2.8mm	0.01 Ω
1.0mm	3A			
1.5mm	10A	500v	400v	0.005 Ω
2.5mm	25A			0.0025 Ω
				0.001 Ω

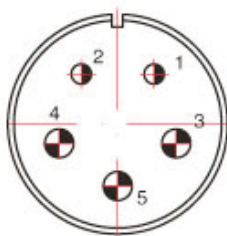
The Number and Arrangement of Contacts



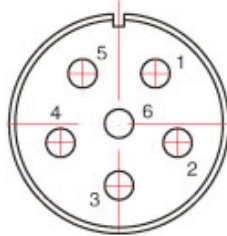
Connectors Industrial Circular Series

KLS15-226-FQ Connectors Industrial Circular Series

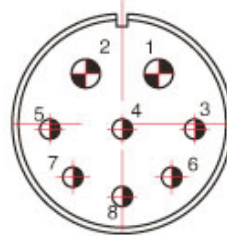
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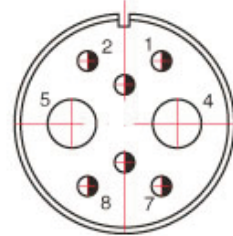
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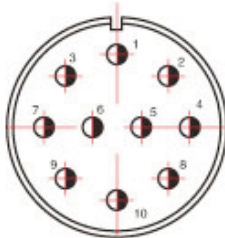
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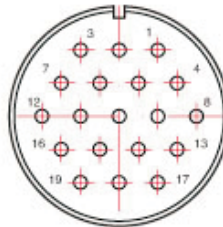
FQ24-8



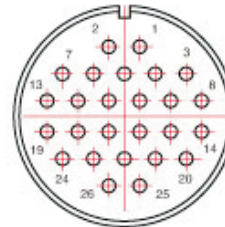
FQ24-8T



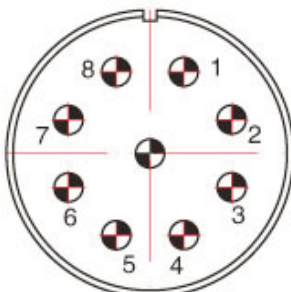
FQ24-10



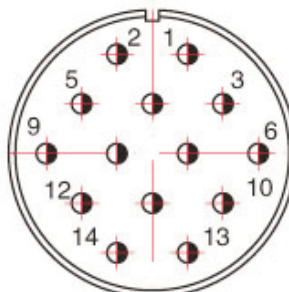
FQ24-19



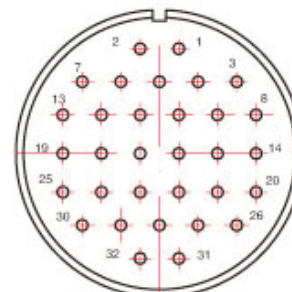
FQ24-26



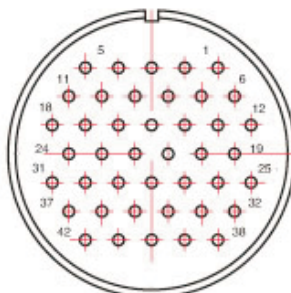
FQ30-9



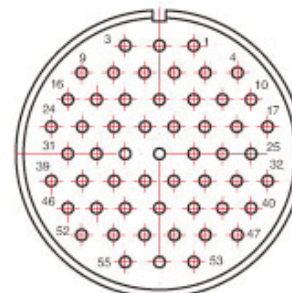
FQ30-14



FQ30-32



FQ30-42



FQ30-55

Circular Connector

Russia Standard PC Type

KLS15-RCS01-PC4 type small connector

KLS15-RCS01-PC series are used widely in all kinds of electronic equipment. This connect is small in size and light in weight. The flange are round and square.

Technical characteristics

Operating voltage: 250V

Rated current: 5A

Contact Resistance: $<5\text{M}\Omega$

Insulation resistance: $<3000\text{M}\Omega$

Temperature: $-55^{\circ}\text{C}\sim+125^{\circ}\text{C}$

Relative Humidity: 93% at $40\pm2^{\circ}\text{C}$

Atmospheric pressure: 101.33~6.7kpa

Vibration, the peak impact acceleration: 10~2000Hz 196m/s²

Mechanical shock, the peak impact acceleration: 196m/s²

Endurance: 500cycles

Water proof: IP $\geq$ 68

The connect is water-repellent in one meter deep water for 30 minutes



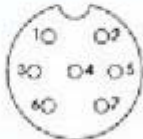
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Structure of Insulator

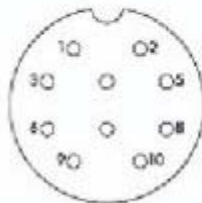
PC4



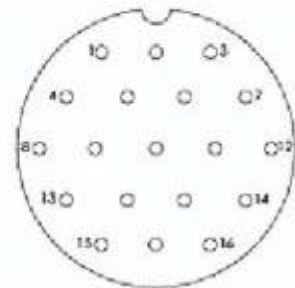
PC7



PC10



PC19



ORDER INFORMATION

Product NO.: KLS15-RCS01-PC4 T B

Pins: 4, 7, 10, 19pin

Type: T-Plug (Female+Cover)
B-Flange Receptacle
F-Female Plug
C-Cover



T-Plug (Female+Cover)



B-Flange Receptacle



C-Cover

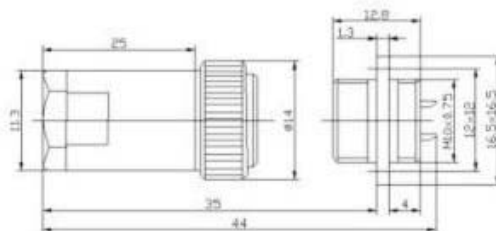
Circular Connector

Russia Standard PC Type

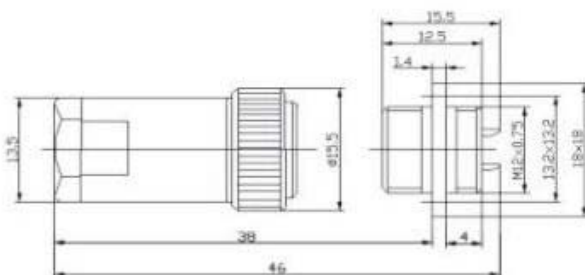
KLS15-RCS01-PC4 type small connector

Dimension: (mm)

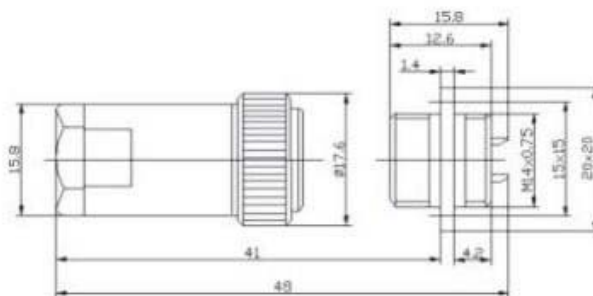
PC4-T/B



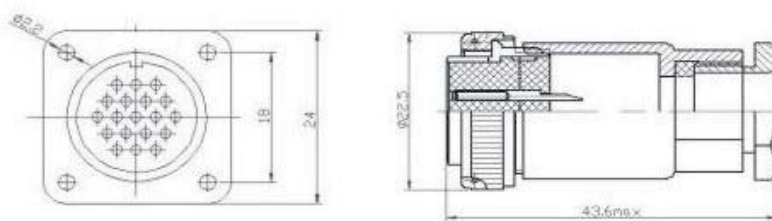
PC7-T/B



PC10-T/B



PC19-T/B



ORDER INFORMATION

Product NO.: KLS15-RCS01-PC4 T B

Pins: 4, 7, 10, 19pin

Type: T-Plug (Female+Cover)
B-Flange Receptacle
F-Female Plug
C-Cover



T-Plug (Female+Cover)



B-Flange Receptacle



C-Cover

Circular Connector

Russia Standard 2PM Type

KLS15-RCS02-2PM type military connector

KLS15-RCS02-2PM Russian type military connector, which is made according to the Russian Military Standard, widely used for the electricity connection and signal transfer, it's special structure and design can avoid the shortage of other similar connectors, for example, the screw & hole for the wire on the outer shell, it can used more convenient. The inner insulation and pins structure are also enhance its stability and reliability, this series of connectors can also be waterproof, so it can used on outdoor equipments, Its special design and characteristics have got good reputation from the market.

Technical characteristics

Operating voltage: 400V AC

Rated current: $\phi 1.0-5A$ $\phi 1.5-10A$

Contact Resistance: $\phi 1.0-0.005\Omega$ $\phi 1.5-0.0025\Omega$

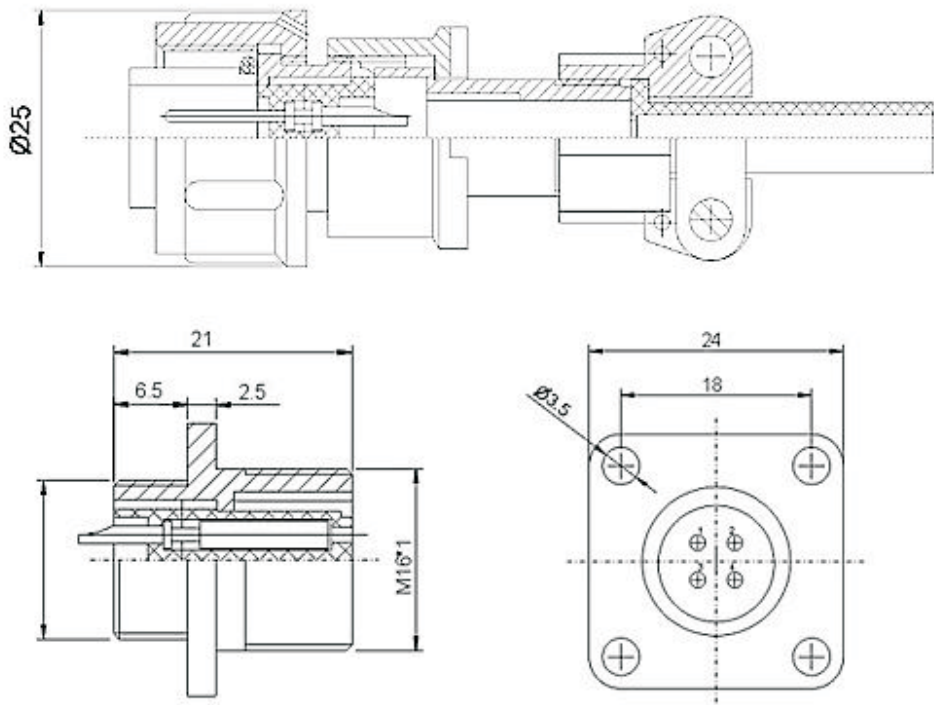
Insulation resistance: Normal: $20M\Omega$ Min. Moistheat: $2M\Omega$ Min.

Temperature: $-60\text{ C}\sim+150\text{ C}$

Atmosphere: 133.37 10-12 Pa

Vibration: 10~200Hz 10g

Endurance : 500cycles



ORDER INFORMATION

Product NO.: KLS15-RCS02-2PM-14-4 T K 2

Type: mounting diameter of receptacle : 14,18,22,24

Number of contacts:

2PM-14	2PM-18	2PM-22	2PM-24
4	4	4	10

1-gold plated pin
2-silver plated pin

K-socket J-pin

T-Plug Z-Flange Receptacle

Circular Connector

Russia Standard P Type

KLS15-RCS03-P type connector

P type common round linker, accords with SJ/T1049694, 8 varieties of P16, P60 screw thread, more than 1800 pieces specification, include: vertical, curve, shield, non-shield, airproof, and non-airproof, etc.

the diameter of contact pieces is $\Phi 1.5$ 、 $\Phi 2.5$ 、 $\Phi 3.5$ 、 $\Phi 5.5$ mm, gilt and silver-plated .

Technical characteristics

Relative humidity:it can reaches 93% at 40 C

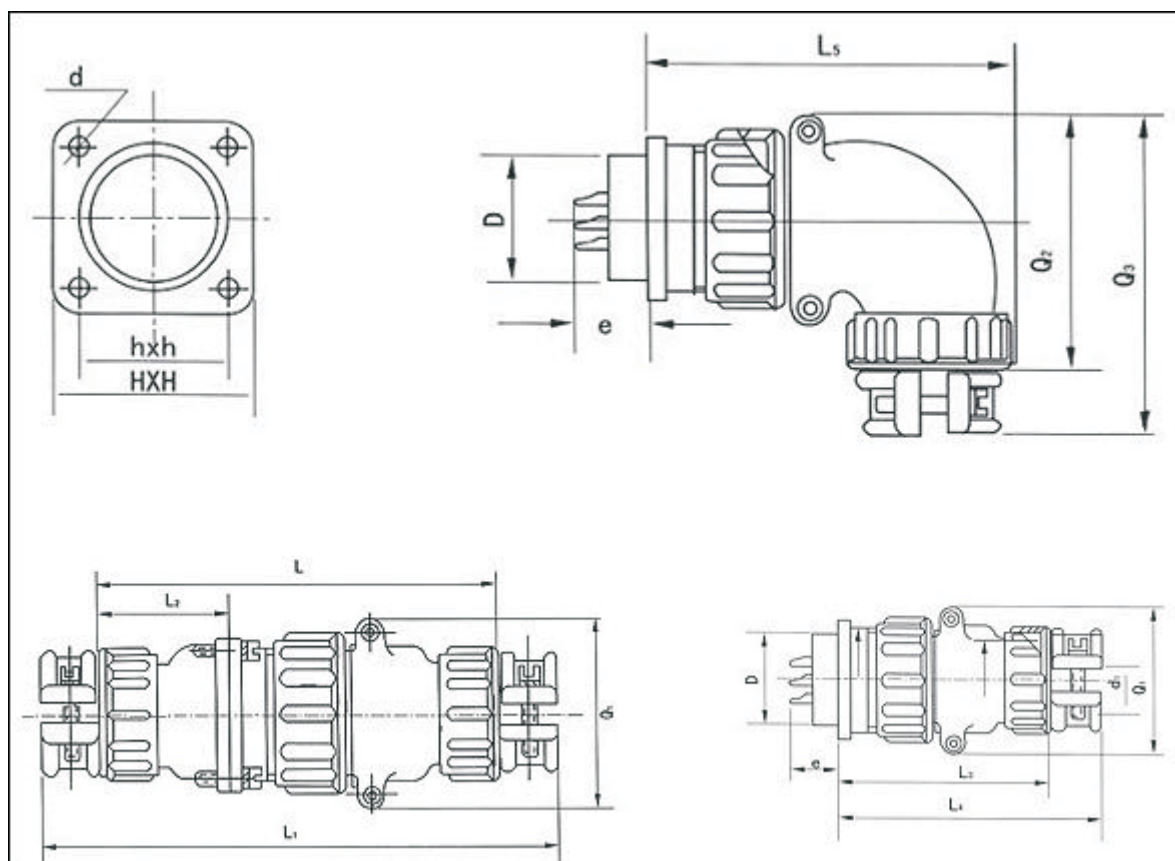
Ambient temperature: -60 C~+50 C

Vibration:10 ~ 200Hz , 95m/S2

Insulated resistance:normal temperature: 20M Ω Min.

Wet heat: 20M Ω Min.

Life duration: 500cycles



ORDER INFORMATION

Product NO.: KLS15-RCS03-P 20-4 T K-1 M

P series connector

Type:mounting diameter
of receptacle : 16,20,28,32,40,48,55

Number of contacts:2,3,4,5,6,7,8,9,
10,12,14,15,16,20,26,30,35

T-Plug Z-Flange Receptacle

K-socket J-pin

M - Airproof Receptacle

A -Non-airproof Receptacle

P - Straight Screen Plug

Q - Straight Non-Screen Plug

R - Syphon Screen Plug

S - Syphon Non-Screen Plug

Contact assembled code

Circular Connector

Russia Standard P Type

Exterior and fixing dimension of socket

Code	P16	P20	P28	P32	P36	P40	P48	P55
D	16	20	28	32	36	40	48	55
L1	106	114	128	134	140	142	146	146
L	86	92	100	106	112	114	118	118
L2	28	32	36	40	42	42	44	44
L3	58	60	64	66	70	72	74	74
L4	68	71	78	80	84	86	88	88
L5	64	71	81	81	84	88	98	106
Q1	28.5	36	48	52	54	60	68	74
Q2	40	48	62	66	67	72	81	88
Q3	50	59	76	80	81	86	95	102
h	19	22	30	32	34	40	48	52
H	25	30	38	40	42	48	58	64

Contacts compages code list

Diameter of socket (mm)	Number of contact					Assembled code
	Pin s	According the diameter grouping (mm)				
		1.5	2.5	3.5	5.5	
16	2	2				1
	3	3				2
	4	4				3
20	2	2				1
	2		2			2
	3		3			3
	3	1	3			4
	4		4			5
	4	4				7
	4	2	2			8
	5		5			9
	5	5				10
28	7	7				11
	2			2		1
	4	4				7
	4	2	2			8
	4		4			9
	4		2	2		2
	4	2		2		10
	6	4	2			3
	6	6				11
	7		7			4
	7	7				12
	7	5	2			13
	7	4	3			14
	7	3	4			15

Diameter of socket (mm)	Number of contact					Assembled code
	Pin s	According the diameter grouping (mm)				
		1.5	2.5	3.5	5.5	
32	8		8			2
	8	8				7
	8	7	1			8
	8	4	4			9
	10	10				10
	10	6	4			11
	12	6	6			3
	12	12				12
40	14	14				4
	3				3	1
	9		5	4		3
	14	8	6			3
	14	12	2			4
	14	14				5
	15	15				6
	15	13	2			7
48	16	14	2			8
	16	16				9
	20	14	6			5
	26		26			6
55	30	22	8			3
	30	30				4
	30	24	6			5
	35	23	10	2		7
	35	33		2		8

Contact arrangement

No. of pin	2芯	3芯	4芯	2芯	3芯	4芯
Type	P16	P16	P16	P20	P20	P28
Assembled code	1	2	3	1	2	1
Contact diameter and quantity	φ1.5X2	φ1.5X3	φ1.5X4	φ1.5X2	φ2.5X2	φ3.5X2
No. of pin	3芯	4芯	5芯	6芯	7芯	8芯
Type	P20	P20	P20	P40	P20	P20
Assembled code	3	4	5	1	6	7
Contact diameter and quantity	φ2.5X3	φ1.5X3	φ1.5X1 φ2.5X2	φ5.5X3	φ2.5X4	φ1.5X4
No. of pin	4芯	5芯	6芯	7芯	8芯	9芯
Type	P20	P28	P28	P28	P28	P28
Assembled code	8	7	8	9	2	10
Contact diameter and quantity	φ1.5X1 φ2.5X2	φ1.5X4	φ1.5X2 φ2.5X2	φ2.5X4	φ2.5X2 φ3.5X2	φ1.5X2 φ3.5X2
No. of pin	5芯	6芯	7芯	8芯	9芯	10芯
Type	P20	P20	P28	P28	P20	P28
Assembled code	9	10	3	11	11	4
Contact diameter and quantity	φ2.5X5	φ1.5X5	φ1.5X1 φ3.5X2	φ1.5X6	φ1.5X7	φ2.5X7
No. of pin	7芯	8芯	9芯	10芯	11芯	12芯
Type	P28	P28	P28	P28	P32	P32
Assembled code	12	13	14	15	2	7
Contact diameter and quantity	φ1.5X7	φ1.5X5 φ2.5X2	φ1.5X3 φ2.5X4	φ1.5X3 φ2.5X4	φ2.5X8	φ1.5X8
No. of pin	6芯	9芯	10芯	12芯	13芯	14芯
Type	P32	P32	P40	P32	P32	P32
Assembled code	8	9	2	10	11	3
Contact diameter and quantity	φ1.5X7 φ2.5X1	φ1.5X4 φ2.5X4	φ2.5X5 φ3.5X4	φ1.5X10	φ1.5X6 φ2.5X4	φ1.5X6 φ2.5X6
No. of pin	12芯	14芯	15芯	16芯	18芯	20芯
Type	P32	P32	P40	P40	P40	P40
Assembled code	12	4	3	4	5	6
Contact diameter and quantity	φ1.5X12	φ1.5X14	φ1.5X8 φ2.5X6	φ1.5X12 φ2.5X2	φ1.5X14	φ1.5X15
No. of pin	16芯	18芯	20芯	26芯	30芯	35芯
Type	P40	P40	P40	P48	P48	P48
Assembled code	7	8	9	5	6	
Contact diameter and quantity	φ1.5X13 φ2.5X2	φ1.5X14 φ2.5X2	φ1.5X16	φ1.5X14 φ2.5X6	φ1.5X26	
No. of pin	30芯	35芯	40芯	45芯	50芯	55芯
Type	P55	P55	P55	P55	P55	P55
Assembled code	3	4	5	7	8	
Contact diameter and quantity	φ1.5X22 φ2.5X8	φ1.5X30	φ1.5X24 φ2.5X6	φ1.5X33 φ2.5X10 φ3.5X2	φ1.5X33	φ1.5X33

Circular Connector

Russia Standard PB Type

KLS15-229-PB type connector

KLS15-229-PB series circular connectors are used extensively in line connections between electrical equipment, various instruments and meters. These connectors have the features of small volume, light weight, convenient application, high durability of plugging and unplugging, threaded coupling, good sealing performance, high conductivity and high dielectric strength. They are made according to the standard SJ/T10496. They are for military and industrial applications.

Working condition:

Environment temperature: sealed: -55°C~+70°C
non-sealed: -55°C~+50°C

Relative humidity: 98% at +40°C

Atmospheric pressure: 2Kpa

Vibration: frequency: 100M/S² at 10~200Hz

Impact: frequency: 250M/S² at 40~100Hz

Centrifugal: 250 M/S²

Life span: 500 cycles



XV

Technical conditions

Rated voltage

Atmospheric pressure(Kpa)	100	8.5	4.4	2
Working voltage(V)	500	250	175	150

Rated current

Rated current (mm)	1.5	2.5	3.5	5.5
Contact pairs diameter(A)	10	25	50	100

Contact resistance

Contact of diameter (mm)	1.5	2.5	3.5	5.5
Contact resistance (Ω)	0.0025	0.001	0.0005	0.0003

Single separative power

Diameter of contacts (mm)	1.5	2.5	3.5	5.5
Separating force(N)	3~6	4~8	6~10	10~12

Contact pairs is 1-20: 100% Current

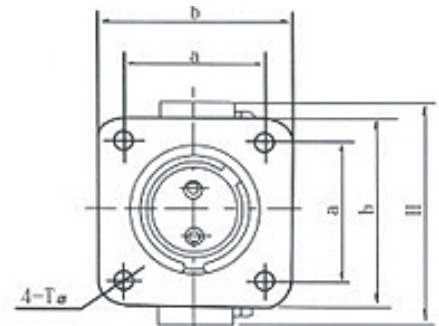
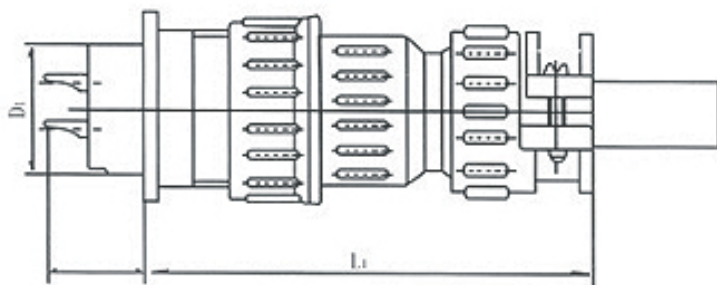
Contact pairs is 21-30: 80% Current

Insulation resistance: 500MΩ Min. Normal
2MΩ Min. At constant moisture test,

The total resistance of the socket: 0.002Ω Max.

Normal condition :1500V

1000V at constant moisture test



Straight non-screen and non seal plug/receptacle

Straight non-screen and airproof plug/receptacle

ORDER INFORMATION

Product NO.: KLS15-229-PB 20-4 T K-1 M

PB series connector

Type: mounting diameter
of receptacle : 20,28,32,40,48

Number of contacts: 2,3,4,5,6,7,8,9,
10,12,13,14,15,16,17,19,20,26,31,42

T- Plug

TR- Right angle wire spring plug

Z- Flange Receptacle

ZP- cable receptacle

K-socket J-pin

M- Airproof Receptacle

A- Non-airproof Receptacle

P- Straight Screen Plug

Q- Straight Non-Screen Plug

R- Syphon Screen Plug

S- Syphon Non-Screen Plug

Contact assembled code

Russia Standard PB Type
Exterior and fixing dimension of socket

Type		D 1	b	a	T φ	d 1	d 2	L	L 1	H 1	H 2
20	A	20	30	22 ± 0.2	3.5	18	14	60	71	36	20.5
20	M	20	32	22 ± 0.2	4.5	18	14	64	75	36	20.5
28	A	28	38	30 ± 0.2	3.5	25	21	64	78	48	28.5
28	M	28	40	30 ± 0.2	4.5	25	21	68	82	48	28.5
32	A	32	40	32 ± 0.2	3.5	25	21	66	80	52	32.5
32	M	32	44	32 ± 0.2	4.5	25	21	70	84	52	32.5
40	A	40	48	40 ± 0.2	3.5	32	24	72	86	60	40.5

XV

Contacts compages code list

Diameter of socket (mm)	Number of contact					Assembled code
	Pins	According the diameter grouping (mm)				
		1.5	2.5	3.5	5.5	
20	2	2				1
20	2		2			2
20	3		4			3
20	3	3				4
20	3	1	2			5
20	4		4			6
20	4	4				7
20	4	2	2			8
20	5		5			9
20	5	5				10
20	7	7				11
28	2			2		1
28	4	4				7
28	4	2	2			8
28	4		4			9
28	4		2	2		2
28	4	2		2		10
28	6	4		2		3
28	6	6				11
28	7		7			4
28	7	7				12
28	7	5	2			13
28	7	4	3			14
28	7	3	4			15
28	17	17				16

Diameter of socket (mm)	Number of contact					Assembled code
	Pins	According the diameter grouping (mm)				
		1.5	2.5	3.5	5.5	
32	8		8			2
32	8	8				7
32	8	7	1			8
32	8	4	4			9
32	10	10				10
32	10	5	5			16
32	10	6	4			11
32	12	6	6			3
32	12	12				12
32	13	9	4			15
32	14	14				4
32	19	19				17
40	3				3	1
40	5			5		10
40	9		5	4		2
40	14	8	6			3
40	14	12	2			4
40	14	14				5
40	15	15				6
40	15	13	2			7
40	16	14	2			8
40	16	16				9
40	26	22	4			11
40	31	31				12
48	5				5	10
48	7			7		9
48	13		13			8
48	20	14	6			5
48	26	26				6
48	26	25	1			7
48	42	42				11

Circular Connector

Russia Standard PB Type

Contact arrangement

No. of pin	2芯			3芯		
						
Type	PB20	PB20	PB28	PB20	PB20	PB20
Assembled code	1	2	1	3	4	5
Contact diameter and quantity	1.5X2	2.5X2	3.5X2	2.5X3	1.5X3	1.5X1 2.5X2
No. of pin	3芯			4芯		
						
Type	PB40	PB20	PB20	PB20	PB28	PB28
Assembled code	1	6	7	8	7	8
Contact diameter and quantity	5.5X3	2.5X4	1.5X4	1.5X2 2.5X2	1.5X4	1.5X2 2.5X2
No. of pin	4芯			5芯		
						
Type	PB28	PB28	PB28	PB20	PB20	PB40
Assembled code	9	2	10	9	10	10
Contact diameter and quantity	2.5X4	2.5X2 3.5X2	1.5X2 3.5X2	2.5X5	1.5X5	3.5X5 5.5X5
No. of pin	6芯			7芯		
						
Type	PB28	PB28	PB20	PB28	PB28	PB28
Assembled code	3	11	11	4	12	13
Contact diameter and quantity	1.5X4 3.5X2	1.5X6	1.5X7	2.5X7	1.5X7	1.5X5 2.5X2
No. of pin	7芯			8芯		
						
Type	PB28	PB28	PB48	PB55	PB32	PB32
Assembled code	14	15	9	7	2	7
Contact diameter and quantity	1.5X4 2.5X3	1.5X3 2.5X4	3.5X7	5.5X6 2.5X1	2.5X8	1.5X8
No. of pin	8芯			9芯		
						
Type	PB32	PB32	PB40	PB32	PB32	
Assembled code	8	9	2	10	11	
Contact diameter and quantity	1.5X7 2.5X1	1.5X4 2.5X4	2.5X6 3.5X4	1.5X10	1.5X8 2.5X4	
No. of pin	10芯			12芯		
						
Type	PB32	PB32	PB32	PB32	PB48	
Assembled code	16	3	12	15	8	
Contact diameter and quantity	1.5X5 2.5X5	1.5X6 2.5X6	1.5X12	1.5X9 2.5X4	2.5X13	

No. of pin	14芯			
				
Type	PB32	PB40	PB40	PB40
Assembled code	4	3	4	5
Contact diameter and quantity	φ 1.5X14	φ 1.5X8 φ 2.5X6	φ 1.5X12 φ 2.6X2	φ 1.5X14
No. of pin	15芯		16芯	
				
Type	PB40	PB40	PB40	PB40
Assembled code	6	7	8	9
Contact diameter and quantity	φ 1.5X15	φ 1.5X13 φ 2.5X2	φ 1.5X14 φ 2.5X2	φ 1.5X16
No. of pin	17芯	19芯	20芯	26芯
				
Type	PB28	PB32	PB48	PB48
Assembled code	16	17	5	6
Contact diameter and quantity	φ 1.5X17	φ 1.5X19	φ 1.5X14 φ 3.5X6	φ 1.5X26
No. of pin	26芯			
				
Type	PB48		PB40	
Assembled code	7		11	
Contact diameter and quantity	φ 1.5X25 φ 2.6X1		φ 1.5X22 φ 2.6X4	
No. of pin	31芯		42芯	
				
Type	PB40		PB48	
Assembled code	12		11	
Contact diameter and quantity	φ 1.5X31		φ 1.5X42	

XV