



PK series

Description

- Modified product of N series
- The polarization and installation are same as those of N series
- Ten shell sizes and five contact sizes
- Quick bayonet coupling
- Five polarization for blind mating
- Five key orientation to avoid mis-mating
- Reliable hyperboloid wire spring socket
- Fully sealed elbow cable clamp for rotation proof
- Plug and receptacle with pin or socket
- Patent No.: PK 01 2 32071.4
- Company standard: 21E0.204.116JT



Main technical characteristic

[Mechanical]

—Shell:

1) Plating of shielding: Olive-green zinc plate, passive, electroless nickel plating

Plating of non-shielding: black anodized

2) Sintered glass sealing type: Steel

Plating of shielding: nickel plating

—Insulator:

1) Common environment resistant type:

Thermosetting material

2) Sintered glass sealing type: Glass

—Contact material: copper alloy with gold plating or silver plating, soldering termination

—Vibration: frequency 10~2000Hz

Acceleration: 196 m/s²

—Shock: acceleration 588 m/s²

—Constant acceleration : 588 m/s²

—Endurance: 1000 cycles

[Electrical]

—Contact resistance and rated current

Size (mm)	Contact resistance (mΩ)	Rated current (A)
φ1.5	≤2.5	10
φ2.5	≤1.0	25
φ3.5	≤0.5	50
φ5.5	≤0.3	100
φ9.0	≤0.15	200

—Rated voltage and withstanding voltage:

Operation condition	Sealed connector		Un-sealed connector	
	Rated voltage (V)	Withstanding voltage (V)	Rated voltage (V)	Withstanding voltage (V)
Normal	600	1500	600	1500
Damp & heat	600	750	600	1000
Altitude (1kPa)	150	375	250	375

—Insulation resistance: normal≥5000MΩ, damp & heat≥100 MΩ

—Continuity between shells

Aluminum alloy shells ≤2.5mΩ

Steel shells ≤50mΩ

[Environmental]

—Operating temperature: -55℃ ~ +200℃

—Relative humidity: 95% at 40℃

—Hermetic: Thru-bulkhead sealed receptacle 50.7kPa, Square flange sealed receptacle 152 kPa

Corrosion resistance, fungus resistance, dust proof



Ordering information

[Unsealed plug and receptacle]

Basic series	PK	36	J₁	4	A	S
Shell size	16-20-28-32-36-40-48-55-60-63					
Contact	J pin, silver plating		J ₁ pin, gold plating			
	K socket, silver plating		K ₁ socket, gold plating			
Contact code	See the insert arrangement					
Type	(Blank) Plug					
	A Square flange unsealed receptacle					
	G Jam nut receptacle					
Plating and back shell	Plating of shielding:					
	P ₁ Straight cable clamp, electroless nickel plating					
	P ₃ Straight cable clamp, olive green zinc plating, passive					
	D ₁ No thread termination, without back shell, electroless nickel plating					
	D ₃ No thread termination, without back shell, olive green zinc plating, passive					
	R ₁ Elbow cable clamp, electroless nickel plating					
	R ₃ Elbow cable clamp, olive green zinc plating, passive					
	L ₁ Thread termination, with back shell, electroless nickel plating					
	L ₃ Thread termination, with back shell, olive green zinc plating, passive					
	Plating of non-shielding:					
	Q Straight cable clamp, anodized					
	S Elbow cable clamp, anodized					
	E Thread termination, with back shell, anodized					
	(Blank) No thread termination, without back shell, anodized					
Polarization	Blank-N (W) -W (X) -X (Y) -Y (Z) -Z					

Note: thread termination on the rear of plug and no thread termination on the rear of jam nut receptacle

[Square flange sealed receptacle]

Basic series	PK	36	P₁	4	O
Shell size	16-20-28-32-36-40-48-55-60-63				
Contact	P ₁ pin, gold plating				
Contact code	See the insert arrangement				
Type	O-Sintered glass square flange sealed receptacle, nickel electroless plating				
Termination	(Blank) No thread termination				
	P ₁ Straight cable clamp,				
	R ₁ Elbow cable clamp				
	L ₁ Thread termination, with back shell				
Polarization	Blank-N (W) -W (X) -X (Y) -Y (Z) -Z				

[Thru-bulkhead sealed adapter]

Basic series	PK	36	J₁	4	C	D₁
Shell size	16-20-28-32-36-40-48-55-60-63					
Contact	J-silver plating		J ₁ -gold plating			
Contact code	See the insert arrangement					
Type	C Thru-bulkhead sealed adapter					
Plating	Plating of shielding: D ₁ Electroless nickel plating					
	D ₃ olive green zinc plating, passive					
	Plating of non-shielding: (blank) anodized					
Polarization	Blank-N (W) -W (X) -X (Y) -Y (Z) -Z					



PK series plug and receptacle catalog

Type	Mark	Structure and feature	Note
Plug	Blank	Plating of shielding or non-shielding of the aluminum alloy shell Copper contact with silver or gold plating; With pin or socket; Un-sealed	Plug can mate with any kind of the following receptacle
Square flange unsealed receptacle	A	Plating of shielding or non-shielding of the aluminum alloy shell Copper contact with silver or gold plating; With pin or socket; Square flange mounting; Un-sealed	Thread termination (with back shell) and without thread termination. The structure and outline are same. There are no teeth on rear without the thread.
Square flange sealed receptacle (Sintered glass)	M	Steel shell, nickel electroplating; Iron contact with gold plating; With pin; Square flange mounting; Sealed	
Jam nut receptacle	G	Plating of shielding or non-shielding of the aluminum alloy shell Copper contact with silver or gold plating; With pin or socket; Jam nut mounting; Un-sealed	No thread termination
Thru-bulkhead adapter (Potting and sealing)	C	Plating of shielding or non-shielding of the aluminum alloy shell Copper contact with silver or gold plating; Pin on one end and socket on the other end; Jam nut mounting; Sealed	Socket outside the panel, pin inside the panel

Polarization

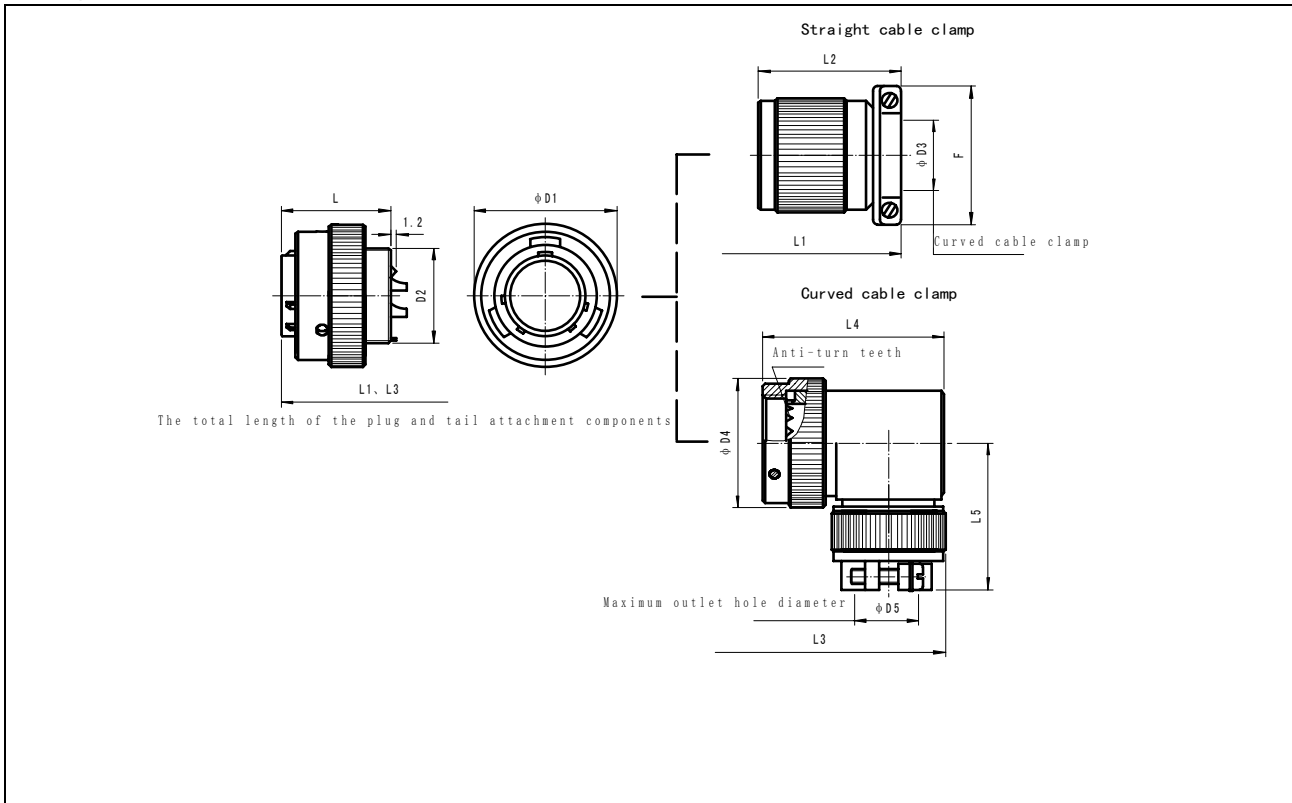
Socket key pitch	Plug key pitch	Key	Color	Angle			
				A	B	C	D
		N	Light blue	105°	140°	215°	265°
		W	Green	100°	142°	220°	260°
		X	Yellow	110°	145°	208°	250°
		Y	Black	95°	135°	210°	255°
		Z	Red	90°	130°	224°	270°

Inner and outer diameter of soldered hole and protrusion length (mm)

Contact size	Inner diameter	Outer diameter	protrusion length
Φ1.5	Φ2.0	Φ2.5	3.9
Φ2.5	Φ2.5	Φ3.1	3.9
Φ3.5	Φ4.8	Φ5.8	3.9
Φ5.5	Φ8.0	Φ9.5	10.0
Φ9.0	Φ13.0	Φ15.0	15.0

Outline dimensions

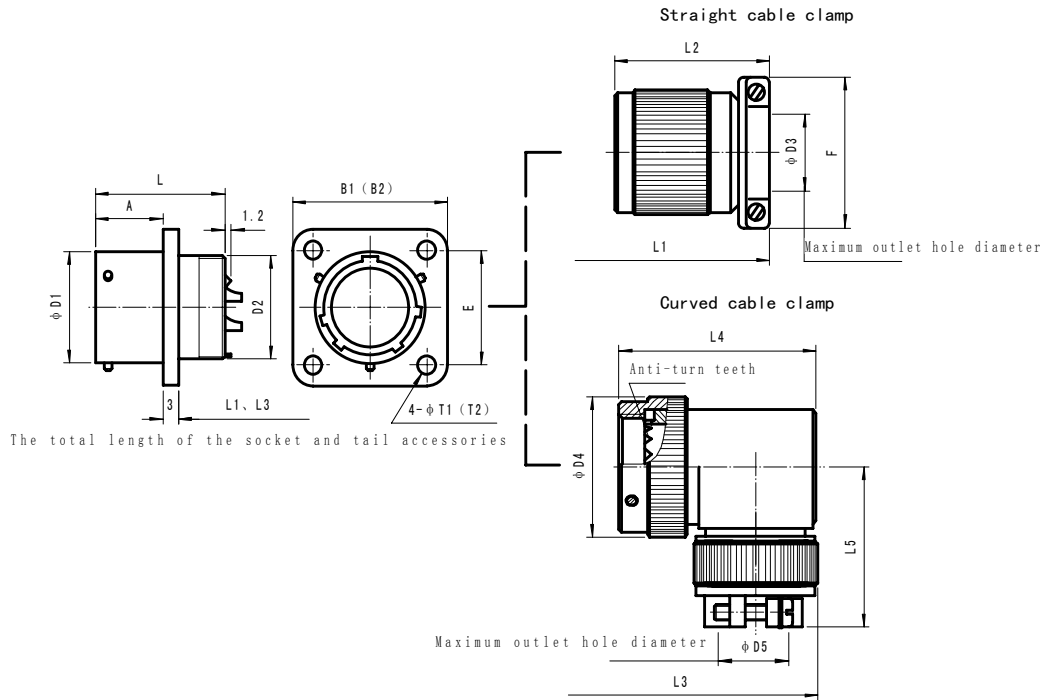
[Plug]



Type	L	D1	Thread D2	L1	L2	D3	F	L3	L4	L5	D4	D5
16	25	26	M16×1	50	30	7	22	55	35	30	22	7
20	25	30	M20×1	50	30	14	27	59	39	31	27	14
28	25	38	M28×1	52	32	21	38	65	45	36	35	21
32	25	42	M32×1.5	54	34	21	38	65	45	40	38	21
32-1*	30	42	M32×1.5	59	34	21	38	70	45	40	38	21
36	25	46	M36×1	60	40	24	43	68	48	42	43	24
36-1*	30	46	M36×1	65	40	24	43	73	48	42	43	24
40	30	50	M40×1.5	69	43	24	45	75	50	44	47	24
48	30	58	M48×1.5	71	46	32	51	81	56	47	55	32
55	30	65	M55×1.5	77	52	40	64	96	71	54	63	40
60	30	71	M60×1	82	57	48	69	104	79	57	68	48
63	30	73	M62×1.5	82	57	48	69	104	79	59	71	48

* Note: 32-1 and 36-1 designate 32# shell with $\Phi 9$ contacts and 36# shell with $\Phi 9$ contacts

[Square flange receptacle]



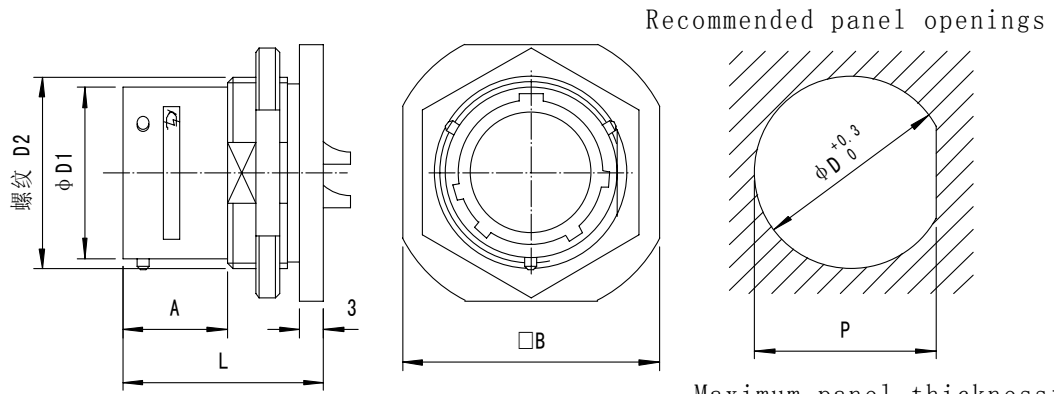
Note: B1 and T1 in the drawing are applicable to square flange unsealed receptacle; B2 and T2 are applicable to square flange sealed receptacle.

Type	L	A	B1	B2	T1	T2	E	D1	Thread D2	L1	L2	D3	F	L3	L4	L5	D4	D5
16	25	13	25	25	3.2	3.2	19	17.4	M16×1	34	30	7	22	39	35	30	22	7
20	25	13	30	32	3.2	4.5	22	21.4	M20×1	34	30	14	27	43	39	31	27	14
28	25	13	38	40	3.5	4.5	30	27.4	M28×1	36	32	21	38	49	45	36	35	21
32	25	13	40	44	3.5	4.5	32	31.8	M32×1.5	38	34	21	38	49	45	40	38	21
32-1*	30	18	40	44	3.5	4.5	32	31.8	M32×1.5	38	34	21	38	49	45	40	38	21
36	25	13	42	46	3.5	4.5	34	35.8	M36×1	44	40	24	43	52	48	42	43	24
36-1*	30	18	42	46	3.5	4.5	34	35.8	M36×1	44	40	24	43	52	48	42	43	24
40	30	18	48	52	3.5	4.5	40	39.8	M40×1.5	48	43	24	45	54	50	44	47	24
48	30	18	58	60	4.5	4.5	48	49.4	M48×1.5	50	46	32	51	60	56	47	55	32
55	30	18	64	68	4.5	4.5	52	56.4	M55×1.5	56	52	40	64	75	71	54	63	40
60	30	18	68	72	4.5	4.5	54	61.4	M60×1	61	57	48	69	85	79	57	68	48
63	30	18	70	70	4.5	4.5	58	64.4	M62×1.5	61	57	48	69	85	79	59	71	48

* Note: 32-1 and 36-1 designate 32# shell with φ9 contacts and 36# shell with φ9 contacts

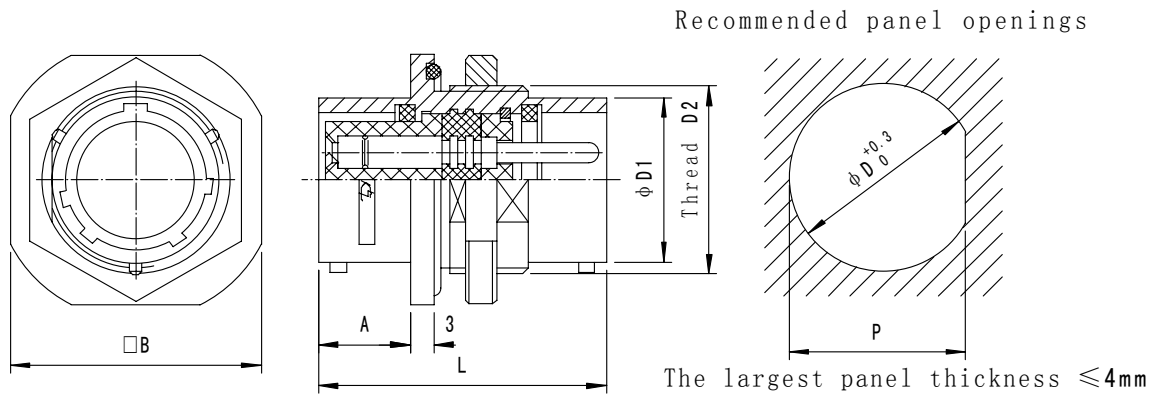


[Jam nut receptacle]



Maximum panel thickness ≤ 4mm

[Thru-bulkhead sealed receptacle]

















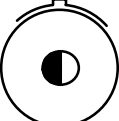
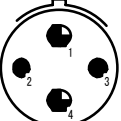
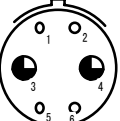
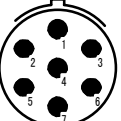
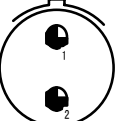
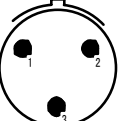
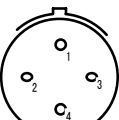
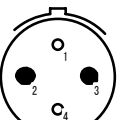
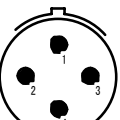
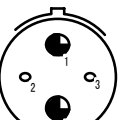
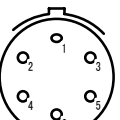
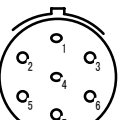

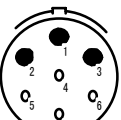
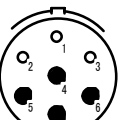
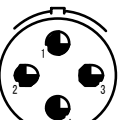
The largest panel thickness ≤ 4mm

Type	LL	LC	A	D1	Thread D2	B	D	P
16	25	40	13	17.4	M20×1	27	20.5	19.0
20	25	40	13	21.4	M24×1	32	24.5	23.0
28	25	40	13	27.4	M32×1.5	40	32.5	30.0
32	25	40	13	31.8	M36×1	48	36.5	34.2
32-1*	30	50	18	31.8	M36×1	48	36.5	34.2
36	25	40	13	35.8	M40×1.5	52	40.5	38.2
36-1*	30	50	18	35.8	M40×1.5	52	40.5	38.2
40	30	50	18	39.8	M45×1.5	56	45.5	42.7
48	30	50	18	49.4	M55×1.5	66	55.5	52.5
55	30	50	18	56.4	M60×1.5	71	60.5	58.5
60	30	50	18	61.4	M65×1.5	76	65.5	63.5
63	30	50	18	64.4	M68×1.5	79	68.5	66.5

* Note: 32-1 and 36-1 designate 32# shell with Φ9 contacts and 36# shell with Φ9 contacts

PK Series Insert Arrangement (Front face of socket inserts)

Shell number

16	16-1  1-Φ3.5	16-2  1-Φ2.5	16-3  2-Φ2.5	16-4  2-Φ1.5			
	20-1  2-Φ1.5	20-2  2-Φ2.5	20-3  3-Φ2.5	20-4  3-Φ1.5	20-5  1-Φ1.5, 2-Φ2.5	20-6  4-Φ2.5	
	20-7  4-Φ1.5	20-8  2-Φ1.5, 2-Φ2.5	20-9  5-Φ2.5	20-10  5-Φ1.5			
	28-1  1-Φ5.5	28-2  2-Φ2.5, 2-Φ3.5	28-3  4-Φ1.5, 2-Φ3.5	28-4  7-Φ2.5	28-5  2-Φ3.5	28-6  3-Φ2.5	
28	28-7  4-Φ1.5	28-8  2-Φ1.5, 2-Φ2.5	28-9  4-Φ2.5	28-10  2-Φ1.5, 2-Φ3.5	28-11  6-Φ1.5	28-12  7-Φ1.5	
	28-13  5-Φ1.5, 2-Φ2.5	28-14  4-Φ1.5, 3-Φ2.5	28-15  3-Φ1.5, 4-Φ2.5	28-18  4-Φ3.5			

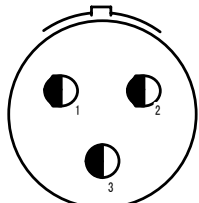
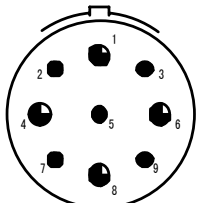
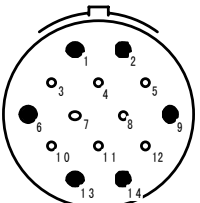
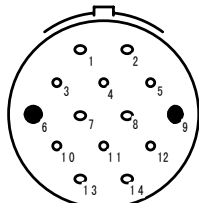
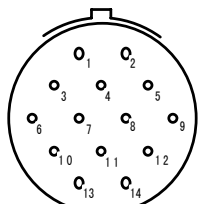
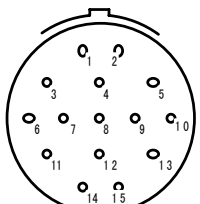
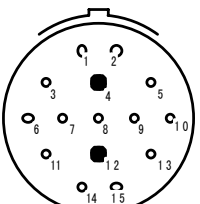
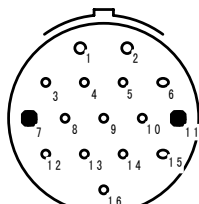
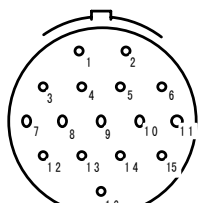
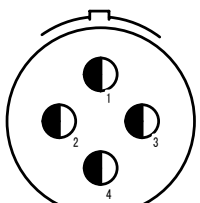
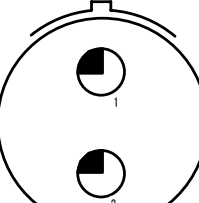
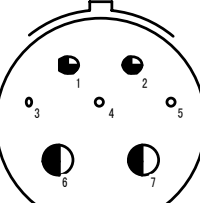
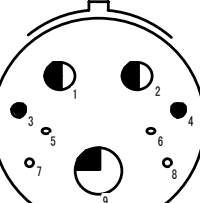
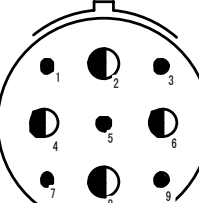
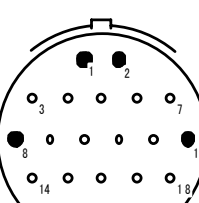
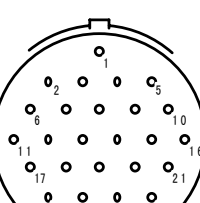
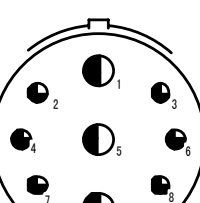


 Φ1.5 Contact pieces Φ2.5 Contact pieces Φ3.5 Contact pieces Φ5.5 Contact pieces Φ9.0 Contact pieces



32	32-1 1-Φ9.0	32-2 8-Φ2.5	32-3 12-Φ2.5	32-4 14-Φ1.5	32-5 3-Φ1.5, 4-Φ2.5
	32-6 7-Φ2.5	32-7 8-Φ1.5	32-8 7-Φ1.5, 1-Φ2.5	32-9 6-Φ1.5, 2-Φ2.5	32-10 10-Φ1.5
	32-11 6-Φ1.5, 4-Φ2.5	32-12 12-Φ1.5			
36	36-1 3-Φ2.5, 1-Φ9.0	36-2 5-Φ3.5	36-3 3-Φ1.5, 3-Φ2.5, 1-Φ3.5	36-4 6-Φ1.5, 4-Φ2.5	36-5 10-Φ1.5
	36-6 13-Φ1.5, 2-Φ2.5	36-7 15-Φ1.5			

Φ1.5 Contact pieces
 Φ2.5 Contact pieces
 Φ3.5 Contact pieces
 Φ5.5 Contact pieces
 Φ9.0 Contact pieces

40	40-1	40-2	40-3	40-4
				
	3- Φ 5.5	5- Φ 2.5, 4- Φ 3.5	8- Φ 1.5, 6- Φ 2.5	12- Φ 1.5, 2- Φ 2.5
	40-5	40-6	40-7	40-8
				
	14- Φ 1.5	15- Φ 1.5	13- Φ 1.5, 2- Φ 2.5	14- Φ 1.5, 2- Φ 2.5
	40-9	40-11		
				
	16- Φ 1.5	4- Φ 5.5		
48	48-1	48-2	48-3	48-4
				
	2- Φ 9.0	3- Φ 1.5, 2- Φ 3.5, 2- Φ 5.5	4- Φ 1.5, 2- Φ 2.5, 2- Φ 5.5, 1- Φ 9.0	5- Φ 2.5, 4- Φ 5.5
	48-5	48-6	48-9	
				
14- Φ 1.5, 6- Φ 2.5	26- Φ 1.5	6- Φ 3.5, 3- Φ 5.5		

 Φ 1.5 Contact pieces
  Φ 2.5 Contact pieces
  Φ 3.5 Contact pieces
  Φ 5.5 Contact pieces
  Φ 9.0 Contact pieces



55	<p>55-1</p> <p>3-Φ2.5, 3-Φ9.0</p>	<p>55-2</p> <p>16-Φ1.5, 2-Φ2.5, 3-Φ3.5, 2-Φ5.5</p>	<p>55-3</p> <p>22-Φ1.5, 8-Φ2.5</p>	<p>55-5</p> <p>24-Φ1.5, 6-Φ2.5</p>	
	<p>55-6</p> <p>12-Φ1.5, 16-Φ2.5, 3-Φ3.5</p>	<p>55-7</p> <p>23-Φ1.5, 10-Φ2.5, 2-Φ3.5</p>	<p>55-8</p> <p>33-Φ1.5, 2-Φ3.5</p>		
	<p>60-1</p> <p>14-Φ1.5, 14-Φ2.5, 2-Φ3.5, 1-Φ5.5</p>	<p>60-2</p> <p>35-Φ1.5, 10-Φ2.5</p>	<p>60-3</p> <p>45-Φ1.5</p>		
60	<p>60-4</p> <p>26-Φ1.5, 21-Φ2.5</p>	<p>60-5</p> <p>40-Φ1.5, 7-Φ2.5</p>	<p>63-1</p> <p>38-Φ2.5, 10-Φ3.5</p>		
63					

Φ 1.5 Contact pieces
 Φ 2.5 Contact pieces
 Φ 3.5 Contact pieces
 Φ 5.5 Contact pieces
 Φ 9.0 Contact pieces