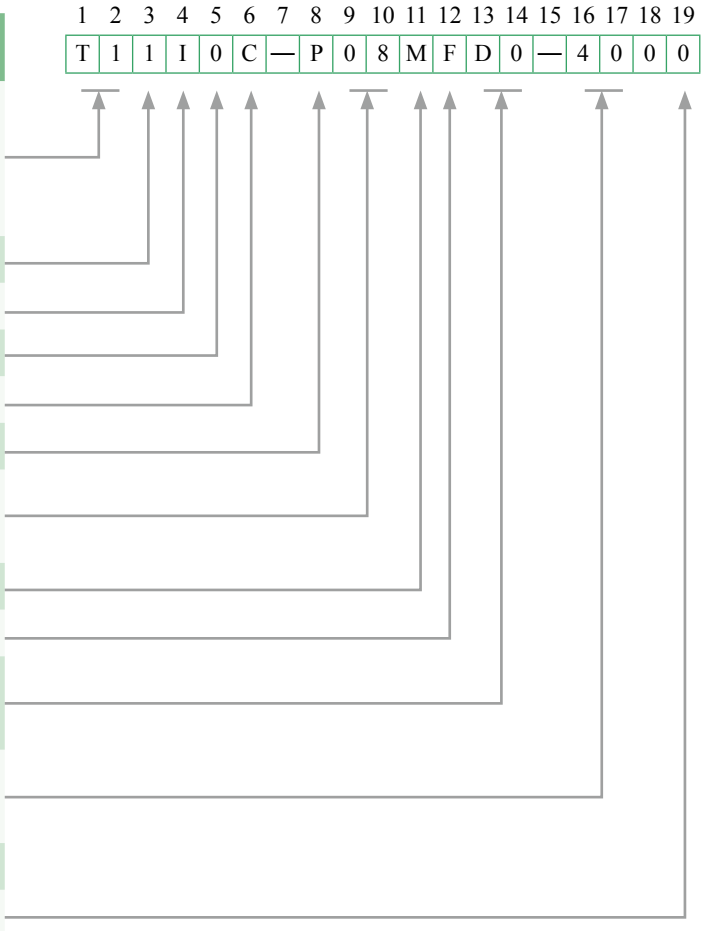
Series I, IP68
FP locking
Block and groove coding

Part Description of Series I

SN	Description
1 2	Type: Straight plug T1, T2 Receptacles Z1, Z3, Z8
3	Size：0、1、2、3
4	Series: I
5	Coding
6	Housing material and plating
8	Insulator material
9 10	Number of pins
11	Terminal and surface processing
12	Pin/socket diameter (M: mixed)
13 14	Terminal cross-section area Special terminals are represented as 9
16 17	Cable clamp size (PCB right angled number:A0)
18	0
19	Back nut



Note:

The 18th and 19th bits are 00, representing the standard back nut; OS can be installed with silicone bend relief back nuts

When the second style is X as other figures, it indicates the version number. For different version numbers, it indicates that certain accessories adopted vary

Example: Plug

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
T	1	1	I	0	S	—	P	0	8	M	F	D	0	—	4	0	0	0

Plug - Style 1- Housing size1 - Series I –Coding 0 - Copper alloy housing, surface black black chrome plating - PEEK insulator - 8-contact - Gold-plated solderingcontact - Contact diameter Φ0.7 - For 26AWG, gauge cross-section area - Applicable to the cable of 3.5~4.0mm - Standard Back nut

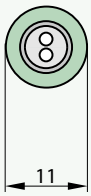
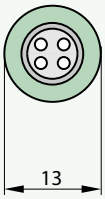
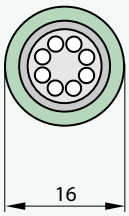
Example: Receptacle

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Z	1	1	I	0	S	—	P	0	8	Q	F	0	0	—	0	0	0	0

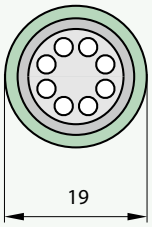
Receptacle - Style 1-Housing size1 - Series I –Coding 0 - Copper alloy housing, surface black black chrome plating - PEEK insulator - 8-contact - Gold-plated PCB socket - Socket contact diameter Φ0.7

Housing size (scale 1:1)

OD = Outer diameter of the plug (unit: mm)
S=Size

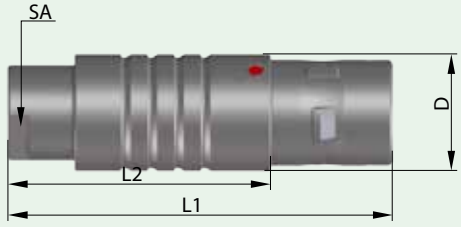
OD			
S	0	1	2
No.	0	1	2

OD = Outer diameter of the plug (unit: mm)
S=Size

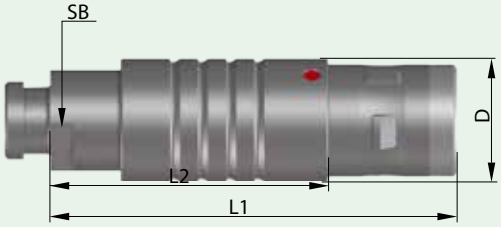
OD			
S	3		
No.	3		

Straight plug(T1, T2)

T | 1 IP68, standard back nut



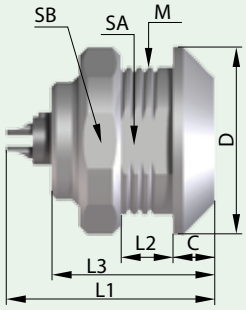
T | 2 IP68, for bend reliefi or over molding



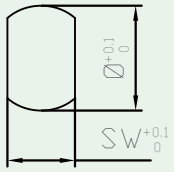
Size	Unit: mm				
	L1	L2	D	SA	SB
0	~37.0	~26.0	11.0	7	7
1	~44.0	~30.0	13.0	10	10
2	~50.0	~34.0	16.0	12	13
3	~60.0	~40.0	19.0	14	15

Receptacle (Z1, Z3)

Z 1 IP68, install from rear of panel

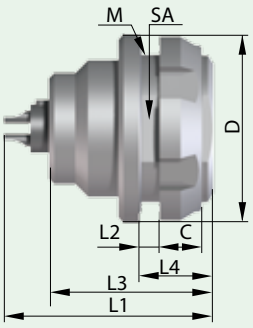


Panel cut-out

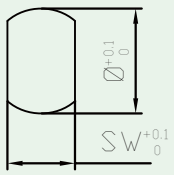


Size	Unit: mm								Panel hole size	
	L1	L2	L3	M	D	SA	SB	C	SW	Φ
0	~21.0	~5.5	15.5	14×1	18.0	12.5	17.0	4.0	12.6	14.1
1	~28.0	~9.0	20.5	16×1	20.0	14.5	19.0	4.5	14.6	16.1
2	~31.0	~9.0	23.0	20×1	25.0	18.5	24.0	5.0	18.6	20.1
3	~36.0	~11.0	28.0	24×1	31.0	22.5	30.0	6.0	22.6	24.1

Z 3 IP68, slotted nut, install from rear of panel



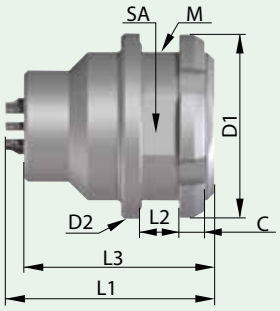
Panel cut-out



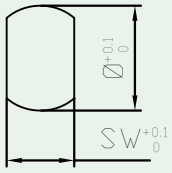
Size	Unit: mm								Panel hole size	
	L1	L2	L3	L4	M	D	C	SA	SW	Φ
0	~ 21.0	~ 3.0	15.5	7.0	14×1	18.0	4.0	12.5	12.6	14.1
1	~ 28.0	~ 6.0	20.5	10.0	16×1	20.0	3.5	14.5	14.6	16.1
2	~ 31.0	~ 6.0	23.0	10.0	20×1	25.0	3.5	18.5	18.6	20.1
3	~ 36.0	~ 7.5	28.0	12.0	24×1	31.0	4.5	22.5	22.6	24.1

Receptacle (Z8)

Z | 8 IP68, slotted nut, install from front of panel



Panel cut-out



Size	Unit: mm								Panel hole size	
	L1	L2	L3	M	D1	D2	C	SA	SW	Φ
1	~ 32.0	~ 6.0	26.6	16×1	20.0	20.0	3.5	14.5	14.6	16.1
2	~ 34.0	~ 6.0	27.0	20×1	25.0	25.0	3.5	18.5	18.6	20.1
3	~ 39.0	~ 7.0	32.7	24×1	30.0	31.0	4.5	22.5	22.6	24.1

Codinging, housing materials and surface plating

Coding

Angle	Coding	Front view of the receptacle	Size			
			0	1	2	3
0°	0		●	●	●	●
30°	A		●	●	●	○
45°	C		●	●	●	○
60°	F		●	●	●	○
75°	H		○	○	○	○
95°	K		○	○	○	○
120°	Q		○	○	○	○
145°	W		○	○	○	○

● Standard
○ Special

Housing material and surface plating

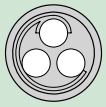
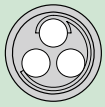
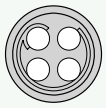
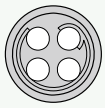
No.	Housing material and surface plating
C	Standard type Copper alloy/surface chrome plating
S	Copper alloy/surface black chrome plating

Insulator material

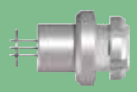
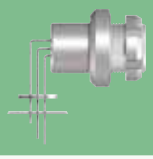
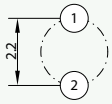
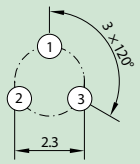
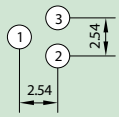
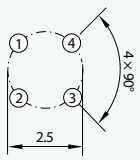
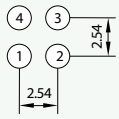
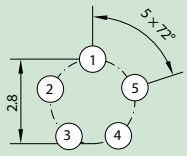
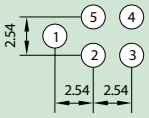
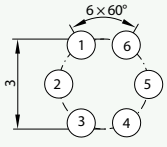
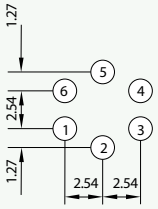
PEEK material, turned contact

No.	Termination method	PEEK
P	Soldering	●
	PCB	●

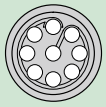
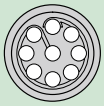
Number of contacts
Size 0 (Part I)

Size	Insulator material	Number of pins	Pin diameter mm	Single-pin load current	Creepage distance		Test voltage acc.SAE 13441 KV	Operating voltage KV	Termination method		View on the termination side	
					Pin and pin mm	Pin and housing mm			Soldering	PCB	Pin	Socket
0	P	02	0.9	10	1.0	0.9	1.500	0.500	●	●		
0	P	03	0.9	10	0.8	0.8	1.200	0.400	●	●		
0	P	04	0.7	7	0.8	0.8	0.900	0.300	●	●		
0	P	05	0.7	7	0.7	0.7	1.100	0.366	●	●		
0	P	06	0.5	5	0.9	0.7	0.900	0.300	●	●		

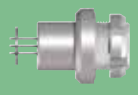
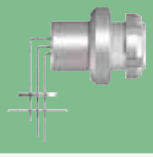
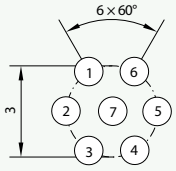
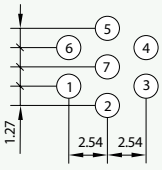
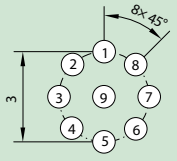
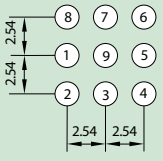
PCB layout
Size 0 (Part I)

Number of pins	PCB straight	90°
		
2	Hole diameter: 0.8mm 	Hole diameter: 0.7mm 
3	Hole diameter: 0.8mm 	Hole diameter: 0.7mm 
4	Hole diameter: 0.6mm 	Hole diameter: 0.7mm 
5	Hole diameter: 0.6mm 	Hole diameter: 0.7mm 
6	Hole diameter: 0.6mm 	Hole diameter: 0.7mm 

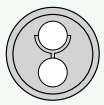
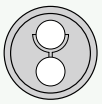
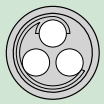
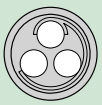
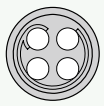
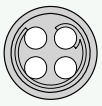
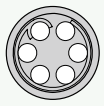
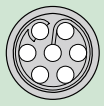
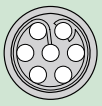
Number of contacts
Size 0 (Part II)

Size	Insulator material	Number of pins	Pin diameter mm	Single-pin load current	Creepage distance		Test voltage acc.SAE 13441 KV	Operating voltage KV	Termination method		View on the termination side	
					Pin and pin mm	Pin and housing mm			Soldering	PCB	Pin	Socket
0	P	07	0.5	5	0.7	0.7	0.900	0.300	●	●		
0	P	09	0.5	5	0.4	0.7	0.600	0.200	●	●		
0	P	10	0.5	5	0.3	0.5	0.600	0.200	●	●		

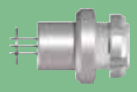
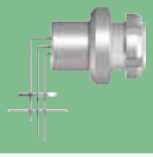
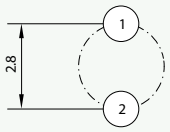
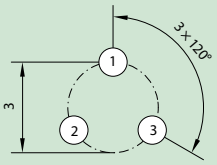
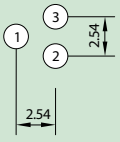
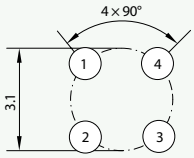
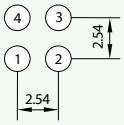
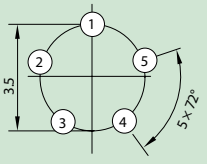
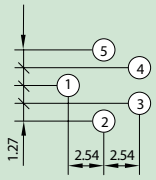
PCB layout
Size 0 (Part II)

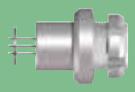
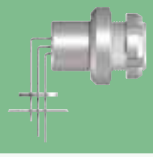
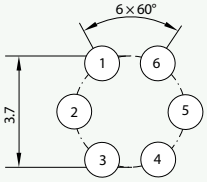
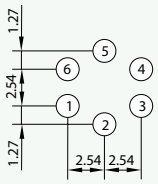
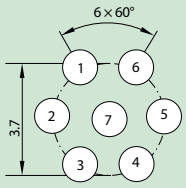
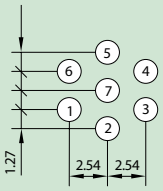
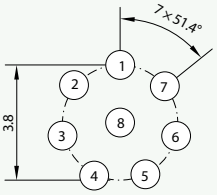
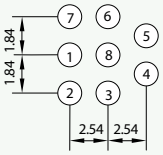
Number of pins	PCB straight	90°
		
7	Hole diameter: 0.6mm 	Hole diameter: 0.7mm 
9	Hole diameter: 0.6mm 	Hole diameter: 0.6mm 

Number of contacts
Size 1 (Part I)

Size	Insulator material	Number of pins	Pin diameter mm	Single-pin load current	Creepage distance		Test voltage acc.SAE 13441 KV	Operating voltage KV	Termination method		View on the termination side	
					Pin and pin mm	Pin and housing mm			Soldering	PCB	Pin	Socket
1	P	02	1.3	14	1.3	1.0	1.650	0.550	●	●		
1	P	03	1.3	14	1.1	0.9	1.500	0.500	●	●		
1	P	04	0.9	10	1.0	1.1	1.500	0.500	●	●		
1	P	05	0.9	10	0.9	0.9	1.350	0.450	●	●		
1	P	06	0.7	7	0.9	0.9	1.200	0.400	●	●		
1	P	07	0.7	7	0.9	0.9	1.200	0.400	●	●		
1	P	08	0.7	7	0.6	0.8	1.000	0.333	●	●		

PCB layout
Size 1 (Part I)

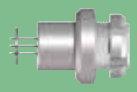
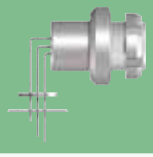
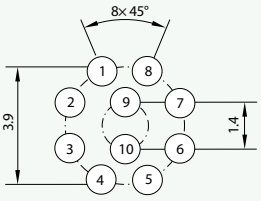
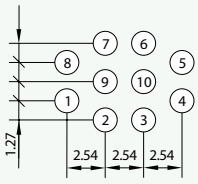
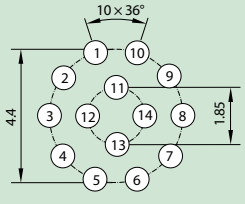
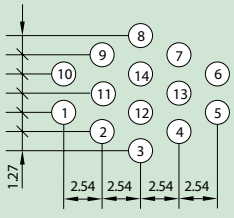
Number of pins	PCB straight	90°
		
2	Hole diameter: 0.8mm 	Hole diameter: 0.9mm 
3	Hole diameter: 0.8mm 	Hole diameter: 0.9mm 
4	Hole diameter: 0.8mm 	Hole diameter: 0.8mm 
5	Hole diameter: 0.8mm 	Hole diameter: 0.8mm 

Number of pins	PCB straight	90°
		
6	Hole diameter: 0.6mm 	Hole diameter: 0.7mm 
7	Hole diameter: 0.6mm 	Hole diameter: 0.7mm 
8	Hole diameter: 0.6mm 	Hole diameter: 0.7mm 

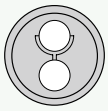
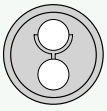
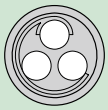
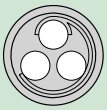
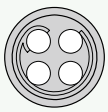
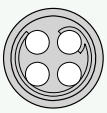
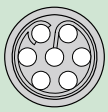
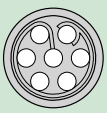
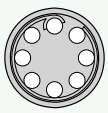
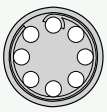
Number of contacts
Size 1 (Part II)

Size	Insulator material	Number of pins	Pin diameter mm	Single-pin load current	Creepage distance		Test voltage acc.SAE 13441 KV	Operating voltage KV	Termination method		View on the termination side	
					Pin and pin mm	Pin and housing mm			Soldering	PCB	Pin	Socket
1	P	10	0.5	5	0.5	0.9	1.000	0.333	●	●		
1	P	14	0.5	5	0.5	0.6	0.900	0.300	●	●		
1	P	16	0.5	5	0.4	0.6	0.900	0.300	●	●		

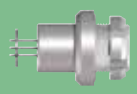
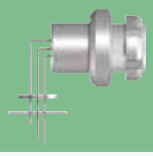
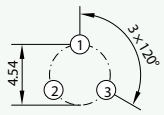
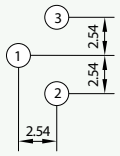
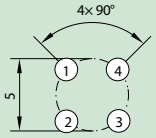
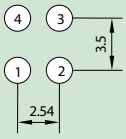
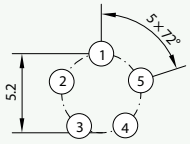
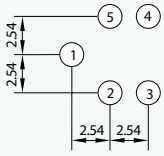
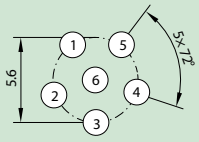
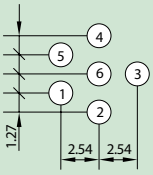
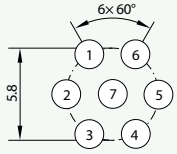
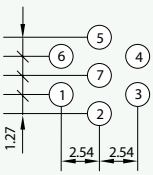
PCB layout
Size 1 （Part II）

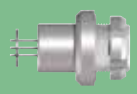
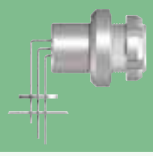
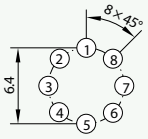
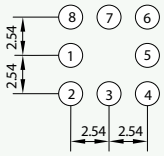
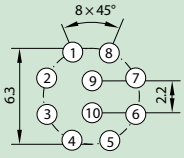
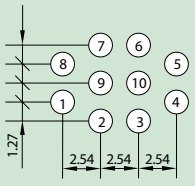
Number of pins	PCB straight	90°
		
10	Hole diameter: 0.6mm 	Hole diameter: 0.7mm 
14	Hole diameter: 0.6mm 	Hole diameter: 0.7mm 

Number of contacts
Size 2 (Part II)

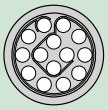
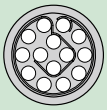
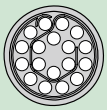
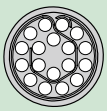
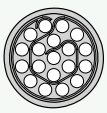
Size	Insulator material	Number of pins	Pin diameter mm	Single-pin load current	Creepage distance		Test voltage acc.SAE 13441 KV	Operating voltage KV	Termination method		View on the termination side	
					Pin and pin mm	Pin and housing mm			Soldering	PCB	Pin	Socket
2	P	02	2.0	22	2.0	1.4	2.100	0.700	●	●		
2	P	03	1.6	17	1.9	1.5	2.100	0.700	●	●		
2	P	04	1.3	14	2.0	1.4	1.950	0.650	●	●		
2	P	05	1.3	14	1.6	1.3	1.800	0.600	●	●		
2	P	06	1.3	14	1.3	1.1	1.500	0.500	●	●		
2	P	07	1.3	14	1.3	1.0	1.800	0.600	●	●		
2	P	08	0.9	10	1.3	0.9	1.500	0.500	●	●		
2	P	10	0.9	10	1.0	0.9	1.500	0.500	●	●		

PCB layout
Size 2 (Part I)

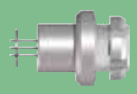
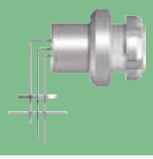
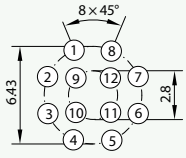
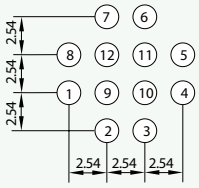
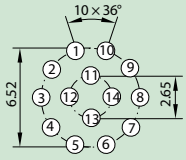
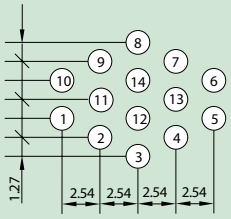
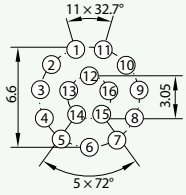
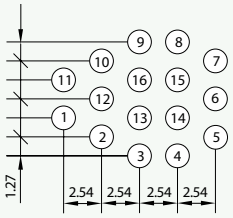
Number of pins	PCB straight	90°
		
3	Hole diameter: 0.8mm 	Hole diameter: 0.9mm 
4	Hole diameter: 0.8mm 	Hole diameter: 0.9mm 
5	Hole diameter: 0.8mm 	Hole diameter: 0.9mm 
6	Hole diameter: 0.8mm 	Hole diameter: 0.9mm 
7	Hole diameter: 0.8mm 	Hole diameter: 0.9mm 

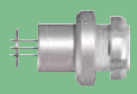
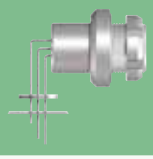
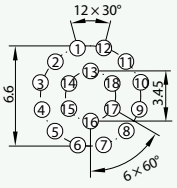
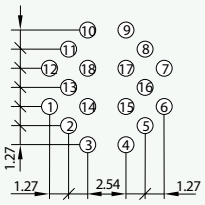
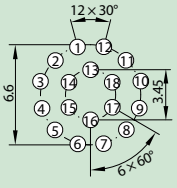
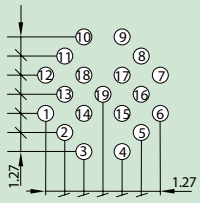
Number of pins	PCB straight	90°
		
8	Hole diameter: 0.8mm 	Hole diameter: 0.9mm 
10	Hole diameter: 0.8mm 	Hole diameter: 0.7mm 

Number of contacts
Size 2 (Part II)

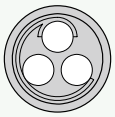
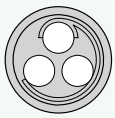
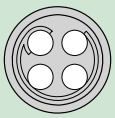
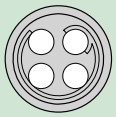
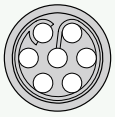
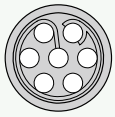
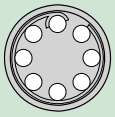
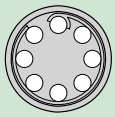
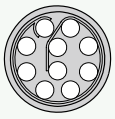
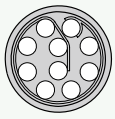
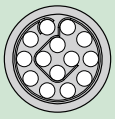
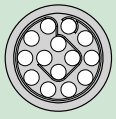
Size	Insulator material	Number of pins	Pin diameter mm	Single-pin load current	Creepage distance		Test voltage acc.SAE 13441 KV	Operating voltage KV	Termination method		View on the termination side	
					Pin and pin mm	Pin and housing mm			Soldering	PCB	Pin	Socket
2	P	12	0.7	7	1.0	1.0	1.350	0.450	●	●		
2	P	14	0.7	7	0.9	0.9	1.200	0.400	●	●		
2	P	16	0.7	7	0.8	0.9	1.100	0.366	●	●		
2	P	18	0.7	7	0.7	0.9	0.900	0.300	●	●		
2	P	19	0.7	7	0.7	0.9	1.000	0.333	●	●		
2	P	26	0.5	5	0.6	0.8	0.900	0.300	●	●		

PCB layout
Size 2 (Part II)

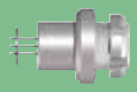
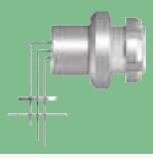
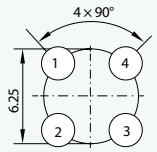
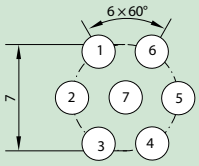
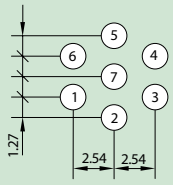
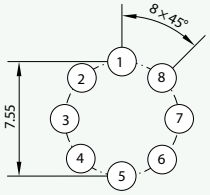
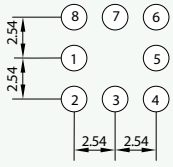
Number of pins	PCB straight	90°
		
12	Hole diameter: 0.6mm 	Hole diameter: 0.7mm 
14	Hole diameter: 0.6mm 	Hole diameter: 0.7mm 
16	Hole diameter: 0.6mm 	Hole diameter: 0.7mm 

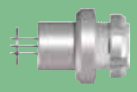
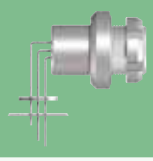
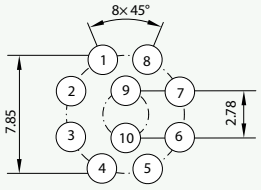
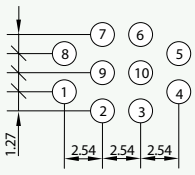
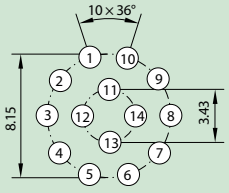
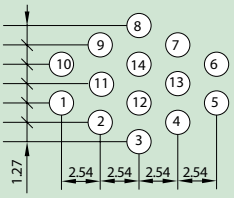
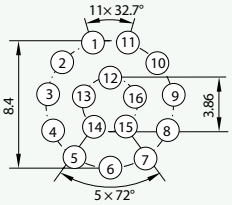
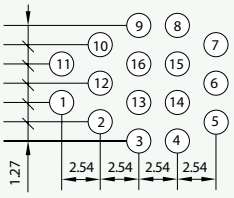
Number of pins	PCB straight	90°
		
18	Hole diameter: 0.6mm 	Hole diameter: 0.7mm 
19	Hole diameter: 0.6mm 	Hole diameter: 0.7mm 

Number of contacts
Size 3 （Part I）

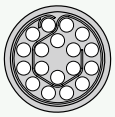
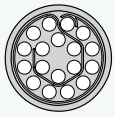
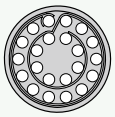
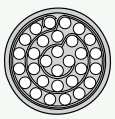
Size	Insulator material	Number of pins	Pin diameter mm	Single-pin load current	Creepage distance		Test voltage acc.SAE 13441 KV	Operating voltage KV	Termination method		View on the termination side	
					Pin and pin mm	Pin and housing mm			Soldering	PCB	Pin	Socket
3	P	03	2.0	22	2.4	1.8	1.800	0.600	●	●		
3	P	04	2.0	22	2.0	1.5	1.650	0.550	●	●		
3	P	07	1.6	17	1.5	1.3	1.800	0.600	●	●		
3	P	08	1.3	14	1.4	1.2	1.650	0.550	●	●		
3	P	10	1.3	14	1.2	1.0	1.350	0.450	●	●		
3	P	14	0.9	10	1.2	1.1	1.350	0.450	●	●		
3	P	16	0.9	10	1.1	1.0	1.350	0.450	●	●		

PCB layout
Size 3 （Part I）

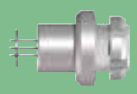
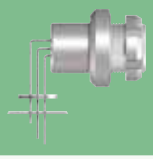
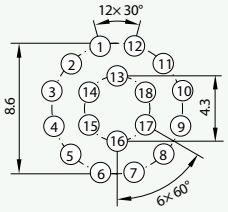
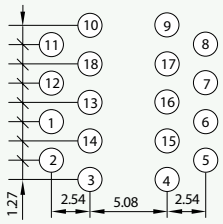
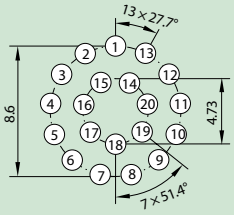
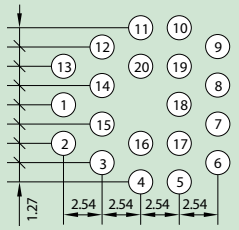
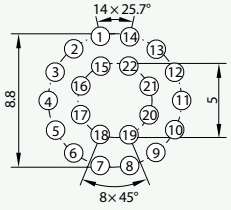
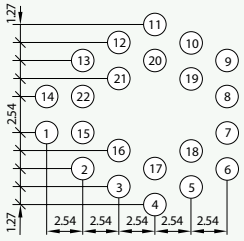
Number of pins	PCB straight	90°
		
4	Hole diameter: 0.8mm 	
7	Hole diameter: 0.8mm 	Hole diameter: 0.9mm 
8	Hole diameter: 0.8mm 	Hole diameter: 0.9mm 

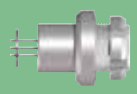
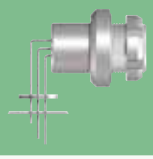
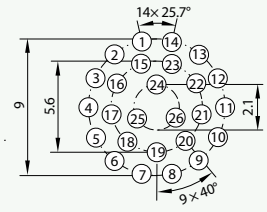
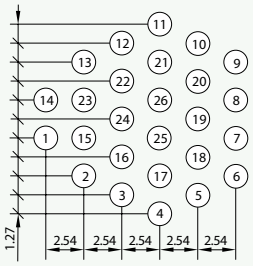
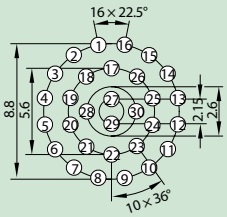
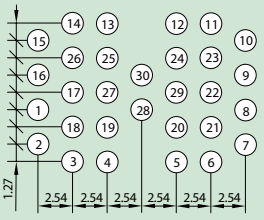
Number of pins	PCB straight	90°
		
10	Hole diameter: 0.8mm 	Hole diameter: 0.9mm 
14	Hole diameter: 0.8mm 	Hole diameter: 0.7mm 
16	Hole diameter: 0.8mm 	Hole diameter: 0.7mm 

Number of contacts
Size 3 (Part II)

Size	Insulator material	Number of pins	Pin diameter mm	Single-pin load current	Creepage distance		Test voltage acc.SAE 13441 KV	Operating voltage KV	Termination method		View on the termination side	
					Pin and pin mm	Pin and housing mm			Soldering	PCB	Pin	Socket
3	P	18	0.9	10	1.0	0.9	1.350	0.450	●	●		
3	P	20	0.7	7	0.9	1.0	1.100	0.366	●	●		
3	P	22	0.7	7	0.9	1.9	1.100	0.366	●	●		
3	P	26	0.7	7	0.7	0.8	1.000	0.333	●	●		
3	P	30	0.7	7	0.6	0.9	0.900	0.300	●	●		

PCB layout
Size 3 (Part II)

Number of pins	PCB straight	90°
		
18	Hole diameter: 0.8mm 	Hole diameter: 0.7mm 
20	Hole diameter: 0.6mm 	Hole diameter: 0.7mm 
22	Hole diameter: 0.6mm 	Hole diameter: 0.7mm 

Number of pins	PCB straight	90°
		
26	Hole diameter: 0.6mm 	Hole diameter: 0.7mm 
30	Hole diameter: 0.6mm 	Hole diameter: 0.7mm 

Contact/socket type, surface plating and contact/socket diameter

Contact/socket type, surface plating

Type	No.	Surface plating
Socket	L	L-1 μm Au (min.)
Pin	M	L-1 μm Au (min.)
Socket	Q	P-1 μm Au (min.)
Pin	R	P-1 μm Au (min.)

L=Soldering
P=PCB

Contact/socket contact diameter

Contact/socket contact diameter	No.
0.50	C
0.70	F
0.90	J
Mixed	M
1.30	P

Contact/socket diameter and termination cross section

Soldering

Contact/ socket contact diameter	Termination diameter	Contact/ socket contact diameterNo.	Termination cross section No.		Termination cross section	
					AWG	mm^2
0.5	0.4	C	C	0	28	0.08
0.7	0.6	F	D	0	26	0.15
0.7	0.85	F	G	0	22	0.38
0.9	0.85	J	G	0	22	0.38
1.3	1.1	P	H	0	20	0.5
1.6	1.4	S	N	0	18	1.00
2.0	1.85	T	Q	0	14	1.5
2.0	2.4	T	S	0	12	2.5
5.0	2.7	V	T	0	10	4.0

PCB

Contact/ socket contact diameter	Termination diameter	No. of contact/ socket diameter	No. of termination cross section	
0.5	0.5	C	C	0
0.7	0.5	F	0	0
0.9	0.7	J	0	0
1.3	0.7	P	0	0
1.6	0.7	S	0	0
2.0	0.7	T	0	0

Cable clamp

Cable outer diameter mm	Housing sizeSize				No.	
	0	1	2	3		
> 1.0-1.5		●			1	5
> 1.5-2.0	●	●			2	0
> 2.0-2.5	●	●			2	5
> 2.5-3.0	●	●	●		3	0
> 3.0-3.5	●	●	●	●	3	5
> 3.5-4.0	●	●	●	●	4	0
> 4.0-4.5	●	●	●	●	4	5
> 4.5-5.0	●	●	●	●	5	0
> 5.0-5.5		●	●	●	5	5
> 5.5-6.0		●	●	●	6	0
> 6.0-6.5		●	●	●	6	5
> 6.5-7.0		●	●	●	7	0
> 7.0-7.5			●	●	7	5
> 7.5-8.0			●	●	8	0
> 8.0-8.5			●	●	8	5
> 8.5-9.0			●	●	9	0
> 9.0-9.5				●	9	5
> 9.5-10.0				●	0	1
> 10.0-10.5				●	0	2
Without a cable clamp					0	0

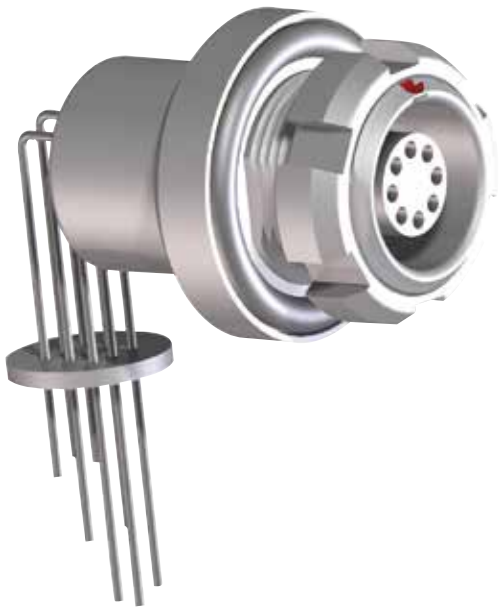
Applicable to all plugs and floating receptacles. The cable clamp is used for protecting soldering spots.

Schematic diagram of cable clamp

PCB right-angled receptacle

Series I receptacles can off PCB right-angled receptacles, regardless of the water-proof level, number of contacts and housing size.

PCB right angled



Back Nut

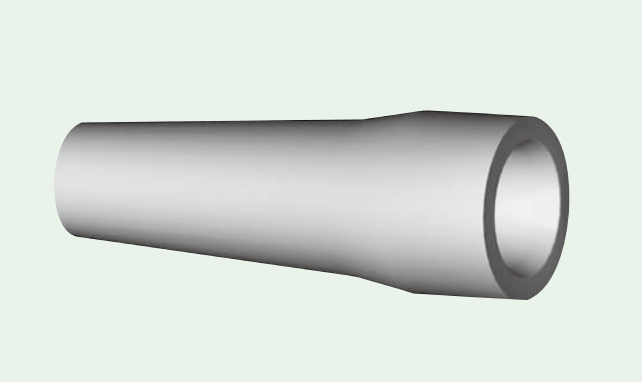
Back Nut

For cable bend relief or overmoulding

Cable bend relief

Color

No.	Color/RAL-No. (Similar)	
A	Red	RAL 3020
B	White	RAL 9010
C	Yellow	RAL 1016
D	Green	RAL 6029
E	Blue	RAL 5002
F	Gray	RAL 7005
G	Black	RAL 9005
0	Without a bend relief	



Material

No.	Material
S	Silicon rubber
0	Without a bend relief

Silicon rubber
Operating temperature: -50℃ ~ +200℃
Up to +230℃ within a short time
High temperature disinfection