MIL-DTL-5015 SERIES CONNECTOR



This series connectors are designed, manufactured and tested to MIL-DTL-5015, the military detailed specification. The connectors used in wide ranges of both military and general industrial applications.



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Introduction

KD MIL-DTL-5015 series Connectors were designed for the connection of electric and electronic device and KD connectors are used in wide ranges of both military and general industrial applications. With advantages of high quality, intermatability, reliability and low price, KD5015 connectors are designed, manufactured and tested to MIL-DTL-5015, the Military Detailed Specification.

Applications

- Railroad Equipment
- Industrial Machinery
- Engines
- Battery Systems

- Motion Control
- Power Generators
- Mobile Equipments
- Earth Moving Equipment

Connector design

MIL-DTL-5015 series applies to the circular threaded electrical solder-contact connectors. Shell is made through aluminum alloy diecasting with zinc plating and olive drab chromate finish protecting the shell against environmental influences.

These connectors operate in temperatures of -55° C to $+125^{\circ}$ C(-67° F to $+257^{\circ}$ F) under the harshest possible conditions.

The various classes and types of KD connectors are intended for application as follows.

- a. KD3100 : Receptacle intended for wall or bulkhead mounting and for use with conduit or cable clamp.
- b. KD3101 : Plug intended for use at the end of a cable where mounting provisions are not required.
- c. KD3102 : Receptacle intended for mounting on shielding boxes and equipment cases.

 They have no fittings and are for use with open wiring. They are nonenvironmental and are intended for use on boxes where environmental seal is achieved by some other means.
- d. KD3106 : Plug intended for use at the end of a cable to be mated with a receptacle.
- e. KD3108 : 90° plug intended for use at the end of a cable where space does not permit the use of a straight plug.
- f. KD25183: Plug intended for use in applications where a potted seal around wires is required.
- g. Class A connectors are solid shell connectors intended for nonenvironmental applications.
- h. Class B connectors have split shell connectors intended for nonenvironmental applications. The split shell provides greater accessibility to solder connections, as may be needed if the cable is contained in conduit.
- i. If air leakage requirements are critical, a resilient insert receptable should be used or the connector should be potted.

Technical Data

Electrical Data Contact rating (Assembled in insulator)

Contact size	Current [A]
16	13
12	23
8	46
4	80
0	150

Insulation resistance

The insulation resistance to be tested per EIA364.21 and MIL-DTL-5015 3.18 test condition B; DC500V/5000™ min

Operating & Test voltage

The dielectric withstanding voltage to be tested per EIA364.20 and MIL-DTL-5015 3.11

Service	Test Voltag	ge AC(rms)	Operating Voltage			
rating	sea level	70,000ft	DC	AC(rms)		
Inst	1000	260	250	200		
А	2000	360	700	500		
D	2800	400	1250	900		
E	3500	440	1750	1250		
В	4500	480	2450	1750		
С	7000	560	4200	3000		

Contact resistance

Voltage drops to be tested with the coupling ring removed per EIA364.06 and MIL-DTL-5015 3.15

Contact size	Test current	Potential drop max.mV	Contact resistance max.mΩ
16	13	49	6
12	23	42	3
8	46	26	1
4	80	23	0.5
0	150	21	0.2

Mechanical Features Ambient temperature

-55°C/+125°C

Humidity

14-day 71°C±2°C to 95%±3% humidity testing per EIA364.31 Method I and MIL-DTL-5015 3 14

Durability

Test mating / unmating 100 times at the speed of max 60 times / hour.

Per EIA364. 09 and MIL-DTL-5015 3.16

Salt spray

Unmated connectors and contacts meet 48hour exposure per EIA364.26 test condition letter B and MIL-DTL-5015 3.17

Sine vibration

 $10\mu s$ max at 10 to 500Hz(15g) discontinuity per EIA364.28 test condition II and MIL-DTL-5015 3.12.1

Shock

50g's/11ms duration, three major axes 10 $\mu\rm S$ max discontinuity per EIA364.27 test condition A and MIL-DTL-5015 3.13

Contact retention

The contact retention to be tested per EIA364.29 and MIL-DTL-5015 3.10

Contact size	Test force N (lbs)
16	44.5 (10)
12	66.7 (15)
8	89.0 (20)
4	89.0 (20)
0	111.2 (25)

Contact engagement and separation forces

The Contact engagement and separartion forces to be tested per EIA364.37 and MIL-DTL 5015 3.25

Contact	Contact engagement and separartion force									
mating end size	Min N (lbs)	Average N (lbs)	MAX N (lbs)							
16	0.6 (0.13)	2.06(0.46)	13.3 (3)							
12	0.8 (0.18)	3.50(0.79)	22.2 (5)							
8	1.4 (0.31)	_	44.5 (10)							
4	2.8 (0.63)	_	66.7 (15)							
0	4.2 (0.94)	-	89.0 (20)							

Materials

Shell

Material Aluminum alloy Die Castings &

Aluminum alloy

Finish Olive drab chromate coating over

zinc plating

Alternative finish Black coating over zinc plating(RoHS)

Electroless nickel

Insulator and grommet

Insulator Synthetic rubber & polychloroprene

Synthetic plastic

Grommet Synthetic rubber & polychloroprene

Contact size

Contact size	Pin O.D [mm]	Solder pot [mm]
16	1.6	2.0
12	2.4	3.0
8	3.6	5.4
4	5.7	8.5
0	9.1	12.0

Contact

Material Copper alloy

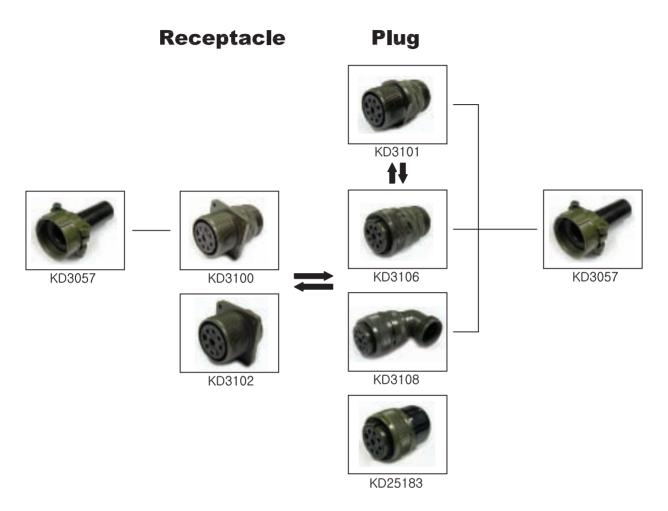
Finish Silver plating

Gold plating

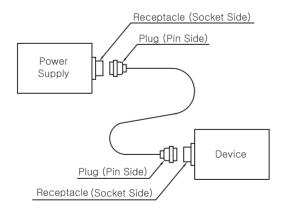
Wire sealing range

0	Wire range accommodations										
Contact size	Insulation O.D limit	Wire size	Metric [mm²]	Condutor [mm]							
16	1.6~3.3	16~20	1.3max	1.25~1.7							
12	2.9~4.3	2.9~4.3 12~14		1.95~2.4							
8	4.2~6.5	8~10	8.0max	4.3~4.8							
4	6.9~9.4	4~6	22.0max	5.2~6.0							
0	10.5~14.0	0~2	50.0max	9.6~10.7							

Matching Guide



Pin or Socket Inserts



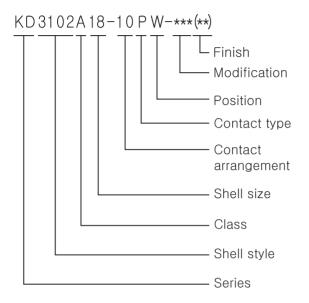
Connector combinations are formed with plugs and receptacles that are connected with pin and socket contacts.

Either the receptacle or the plug can be provided with pin inserts or socket inserts.

However, if one side is a pin insert, the mating side should be a socket insert.

The type to use will be determined by the state of the equipment but it is generally recommended to use the socket on the output side of the equipment and pin on the input side.

How to order **KD Order Reference**



Series

Kd circular connectors with threaded coupling MS Military Standard to latest MIL-DTL-5015 revision

Shell style

3100 Wall mounting receptacle 3101 Cable connecting plug 3102 Box mounting receptacle Straight plug 3106

3108 90° plug

25183 Potting seal plug

Class

Solid shell solder contact connectors.

Split shell solder contact connectors.

E/F Environmental with resilient insulators and integral cable clamp.

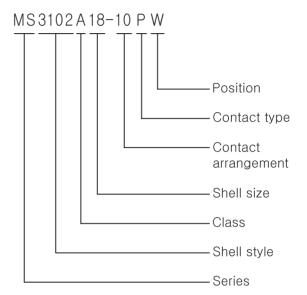
Environment resistant potted solder contact connectors.

Environmental with resilient insulators and shortened lightweight endbell.

Shell size

10SL, 12s, 12, 14s, 16s, 16, 18 20, 22, 24, 28, 32, 36, 40

MS Order Reference



Contact arrangement

See page 7~19

Contact type

P - Pin contact S - Socket contact

Position

Alternate insert position(W,X,Y or Z) Leave Blank for Normal position See page 7~9

Modification

No code Threaded Coupling Nut (with Solder contacts) Bayonet Coupling Nut (with Solder contacts) В F80 Threaded Coupling Nut (with Crimp AWG contacts) Bayonet Coupling Nut (with Crimp AWG contacts) B-F80

Finish

Z3

No code	Olive drab over zinc plating (standard)
D1	Electro-deposition coating, olive drab (RoHS)
D2	Electro-deposition coating, black (RoHS)
B4	Cadmium chromate over zinc plating
R	Electroless nickel plating
Ν	Nickel plating
Z2	Black over zinc plating
Z21	Black trivalent chromate over zinc plating (RoHS)

iridescent yellow over zinc plating

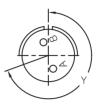
Contact Arrangements [For Class A, E/F, P, R] **Alternate Insert Positions**

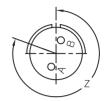
※ View shows pin front side or socket rear side











Alternate pos.

Shell	Insert			C	onta	cts			Alternate pos.			
Size Number	Tot	20	16	12	8	4	0	W	X	Υ	Z	
10SL	10SL-3	3		3								
	10SL-4	2		2								
12s	12s-3	2		2					70	145	215	290
	12s-4	1		1								
	12SA10	4		4								
12	12-5	1			1							
14s	14s-1	3		3								
	14s-2	4		4						120	240	
	14s-4	1		1								
	14s-5	5		5						110		
	14s-6	6		6								
	14s-7	3		3					90	180	270	
	14s-9	2		2					70	145	215	290
	14SA7	7		7								
	14SA10	10	10									
14	14-3	1				1						
16s	16s-1	7		7					80			280
	16s-4	2		2					35	110	250	325
	16s-5	3		3					70	145	215	290
	16s-8	5		5						170	265	
	16s-01	8	8									
16	16-9	4		2	2				35	110	250	325
	16-10	3			3				90	180	270	
	16-11	2			2				35	110	250	325
18	18-1	10		10					70	145	215	290
	18-3	2			2				35	110	250	325
	18-4	4		4					35	110	250	325
	18-5	3		1	2				80	110	250	280
	18-8	8		7	1				70			290
	18-9	7		5	2				80	110	250	280

Shell	Contacts								Alternate pos.			
Size	Number	Tot	20	16	12	8	4	0	W	X	Υ	Z
18	18-10	4			4					120	240	
	18-11	5			5					170	265	
	18-12	6		6					80			280
	18-19	10		10						120	240	
	18-20	5		5					90	180	270	
	18-21	3			3							
	18-22	3		3					70	145	215	290
20	20-2	1						1				
	20-3	3			3				70	145	215	290
	20-4	4			4				45	110	250	
	20-7	8		8					80	110	250	280
	20-11	13		13								
	20-15	7			7				80			280
	20-16	9		7	2				80	110	250	280
	20-17	6		1	5				90	180	270	
	20-18	9		6	3				35	110	250	325
	20-19	3				3			90	180	270	
	20-22	6		3		3			80	110	250	280
	20-23	2				2			35	110	250	325
	20-24	4		2		2			35	110	250	325
	20-27	14		14					35	110	250	325
	20-29	17		17					80			280
	20-33	11		11								
	20-01	10		10								
	20A24	24	24									
	20A48	19		19						80	280	
22	22-1	2				2			35	110	250	325
	22-2	3				3			70	145	215	290
	22-5	6		4	2				35	110	250	325
	22-7	1						1				

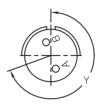
Contact Arrangements [For Class A, E/F, P, R] Alternate Insert Positions

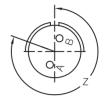
※ View shows pin front side or socket rear side











Shell	Insert		Contacts								Alternate pos.			
Size Numb	Number	Tot	20	16	12	8	4	0	W	X	Υ	Z		
22	22-8	2			2				35	110	250	325		
	22-9	3			3				70	145	215	290		
	22-10	4		4					35	110	250	325		
	22-14	19		19					80	110	250	280		
	22-19	14		14					80	110	250	280		
	22-22	4				4				110	250			
	22-23	8			8				35		250			
24	24-2	7			7				80			280		
	24-5	16		16					80	110	250	280		
	24-7	16		14	2				80	110	250	280		
	24-9	2					2		35	110	250	325		
	24-10	7				7			80			280		
	24-11	9			6	3			35	110	250	325		
	24-12	5			3		2		80	110	250	280		
	24-20	11		9	2				80	110	250	280		
	24-21	10		9		1			80	110	250	280		
	24-22	4				4			45	110	250			
	24-28	24		24					80	110	250	280		
	24-67	19			19				80			335		
	24B24	12			12									
28	28-2	14		12	2				35	110	250	325		
	28-3	3				3			70	145	215	290		
	28-5	5		2	1		2		35	110	250	325		
	28-6	3					3		70	145	215	290		
	28-9	12		6	6				80	110	250	280		
	28-10	7			3	2	2		80	110	250	280		
	28-11	22		18	4				80	110	250	280		
	28-12	26		26					90	180	270			
	28-15	35		35					80	110	250	280		
	28-16	20		20					80	110	250	280		

Shell	Insert			С	onta	cts			Alt	erna	ite p	os.
Size	Number	Tot	20	16	12	8	4	0	W	X	Υ	Z
28	28-17	15		15					80	110	250	280
	28-19	10		6	4				80	110	250	280
	28-20	14		4	10				80	110	250	280
	28-21	37		37					80	110	250	280
	28-22	6		3			3		70	145	215	290
	28-51	12			12				80	135	195	
	28-72	72	72						72	144	216	288
	28A16	9		5			4					
32	32-1	5			3			2	80	110	250	280
	32-3	9		4	2		2	1	80	110	250	280
	32-5	2						2	35	110	250	325
	32-6	23		16	2	3	2		80	110	250	280
	32-7	35		28	7				80	125	235	280
	32-8	30		24	6				80	125	235	280
	32-15	8			6			2	35	110	250	280
	32-17	4					4		45	110	250	
	32-59	42		40		2						
	32-63	5					5					
	32-101	101	101						30	142		
	32A10	54		54								
36	36-1	22		18	4				80	110	250	280
	36-3	6			3			3	70	145	215	290
	36-4	3						3	70	145	215	290
	36-5	4						4		120	240	
	36-8	47		46	1				80	110	250	280
	36-9	31		14	14	2	1		80	125	235	280
	36-10	48		48					80	125	235	280
	36-77	7					7					
	36-78	14		2		12			35	106	254	325
40	40-56	85		85					72	144	216	288

Contact Arrangements [For Class B]

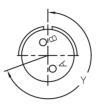
Alternate Insert Positions

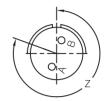
※ View shows pin front side or socket rear side







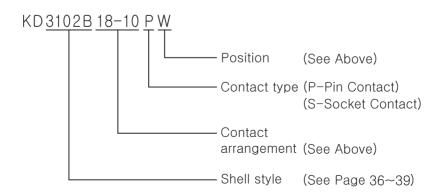




Shell	Shell Insert			Contacts						Alternate pos.		
Size	Number	Tot	20	16	12	8	4	0	W	X	Υ	Z
14s	14s-2	4		4						120	240	
	14s-5	5		5						110		
	14s-6	6		6								
16	16-10	3			3				90	180	270	
18	18-1	10		10					70	145	215	290
	18-8	8		7	1				70			290
	18-10	4			4					120	240	
	18-12	6		6					80			280
	18-19	10		10						120	240	
20	20-4	4			4				45	110	250	
	20-7	8		8					80	110	250	280
	20-15	7			7				80			280
	20-16	9		7	2				80	110	250	280
	20-18	9		6	3				35	110	250	325
	20-27	14		14					35	110	250	325
	20-29	17		17					80			280

Shell	Insert	Contacts					Alt	Alternate pos.				
Size	Size Number		20	16	12	8	4	0	W	X	Υ	Z
22	22-14	19		19					80	110	250	280
	22-19	14		14					80	110	250	280
	22-22	4				4				110	250	
	22-23	8			8				35		250	
24	24-2	7			7				80			280
	24-5	16		16					80	110	250	280
	24-10	7				7			80			280
	24-11	9			6	3			35	110	250	325
	24-28	24		24					80	110	250	280
28	28-2	14		12	2				35	110	250	325
	28-11	22		18	4				80	110	250	280
	28-15	35		35					80	110	250	280
	28-16	20		20					80	110	250	280
	28-20	14		4	10				80	110	250	280
	28-21	37		37					80	110	250	280
32	32-7	35		28	7				80	125	235	280
	32-17	4					4		45	110	250	
	32-22	54		54								
36	36-10	48		48					80	125	235	280

NOTE: class B of Split type



Contact Arrangements

Contact Size











1 CONTACT









Insert number	12S-4	12-5	14-3	14S-4
No. of contacts	1	1	1	1
Contact size	16	12	8	16
Service rating	D	D	А	D







Insert number	16-12	20-2	22-7	
No. of contacts	1	1	1	
Contact size	4	0	0	
Service rating	А	D	E	









Insert number	10SL-4	12S-3	148-9	16S-4
No. of contacts	2	2	2	2
Contact size	16	16	16	16
Service rating	А	А	А	D









Insert number	16-11	18-3	20-23	22-1
No. of contacts	2	2	2	2
Contact size	12	12	8	8
Service rating	A	D	A	D

Contact Size





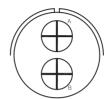












Insert number	22-8	24-9	32-5	
No. of contacts	2	2	2	
Contact size	12	4	0	
Service rating	E	А	D	









Insert number	10SL-3	148-1	16S-5	16-10
No. of contacts	3	3	3	3
Contact size	16	16	16	12
Service rating	А	А	А	А







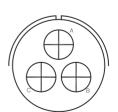


Insert number	18-21	18-22	20-3	20-19
No. of contacts	3	3	3	3
Contact size	12	16	12	8
Service rating	А	D	D	А









Insert number	22-2	28-3	28-6	36-4
No. of contacts	3	3	3	3
Contact size	8	8	4	0
Service rating	D	E	D	D(A) A(B,C)

Contact Size











4 CONTACT









Insert number	12SA10	14S-2	16-9	18-4
No. of contacts	4	4	4	4
Contact size	16	16	2-16, 2-12	16
Service rating	INST	INST	А	D









Insert number	18-10	20-4	20-24	22-22
No. of contacts	4	4	4	4
Contact size	12	12	2-16, 2-8	8
Service rating	A	D	A	А







Insert number	24-22	32-17	36-5	
No. of contacts	4	4	4	
Contact size	8	4	0	
Service rating	D	D	А	









Insert number	14s-5	16s-8	18-11	18-20
No. of contacts	5	5	5	5
Contact size	16	16	12	16
Service rating	INST	A	A	А

Contact Size



















Insert number	24-12	32-1	32-63	32A5
No. of contacts	5	5	5	5
Contact size	3-12, 2-4	3-12, 2-0	4	4
Service rating	А	E(A) D(B,C,D,E)	D	D

6 CONTACT





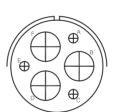




Insert number	14S-6	18-12	20-8	20-17
No. of contacts	6	6	6	6
Contact size	16	16	4-16, 2-8	1-16, 5-12
Service rating	INST	А	INST	А







Insert number	20-22	28-22	36-3	
No. of contacts	6	6	6	
Contact size	3-16, 3-8	3-16, 3-4	12-3, 3-0	
Service rating	А	D	D	









Insert number	14SA7	16s-1	18-9	20-15
No. of contacts	7	7	7	7
Contact size	16	16	5-16, 2-12	12
Service rating	INST	A	INST	А

Contact Size











Insert number	24-2	24-10	28-10	36-77
No. of contacts	7	7	7	7
Contact size	12	8	3-12, 2-8, 2-4	4
Service rating	D	А	D(G) A(A,B,C,D,E,F)	D

8 CONTACT









Insert number	18-8	20-7	22-18	22-23
No. of contacts	8	8	8	8
Contact size	7-16, 1-12	16	16	12
Service rating	А	D(A,B,G,H) A(All others)	D(All others) A(C.D.E)	D(H) A(All others)





Insert number	24-6	32-15	
No. of contacts	8	8	
Contact size	12	6-12, 2-0	
Service rating	D(A,G,H) A(All others)	D	









Insert number	20-16	20-18	22-20	24-11
No. of contacts	9	9	9	9
Contact size	7-16, 2-12	6-16, 3-12	16	6-12, 3-8
Service rating	Α	А	А	А

Contact Size







Insert number	28A16	32-3	
No. of contacts	9	9	
Contact size	5-16, 4-4	4-16, 2-12, 2-4, 1-0	
Service rating	A(E) INST(All others)	D	

10 CONTACT









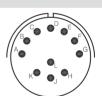
Insert number	14SA10	18-1	18-19	28-19
No. of contacts	10	10	10	10
Contact size	20	16	16	6-16, 4-12
Service rating	INST	A(B,C,F,G) INST(All others)	А	D(A,B) B(H,M) A(All others)

11 CONTACT



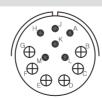


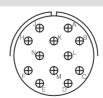




Insert number	20-31	20-33	24-20	28-14
No. of contacts	11	11	11	6
Contact size	16	16	9-16, 2-12	16
Service rating	А	А	D	D







Insert number	24B24	28-9	28-51	
No. of contacts	12	12	12	
Contact size	12	6-16, 6-12	12	
Service rating	А	D	D	

Contact Size











13 CONTACT

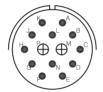
14 CONTACT







Insert number	20-11	20-27	22-19
No. of contacts	13	14	14
Contact size	16	16	16
Service rating	INST	А	A







Insert number	28-2	28-20	36-78
No. of contacts	14	14	14
Contact size	12-16, 2-12	4-16, 10-12	2-16, 12-8
Service rating	D	А	D

15 CONTACT







Insert number	28-17	24-5	24-7
No. of contacts	15	16	16
Contact size	16	16	14-16, 2-12
Service rating	B(R) D(M,N,P) A(All others)	А	А

Contact Size











17 CONTACT

19 CONTACT

20 CONTACT





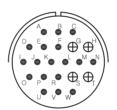


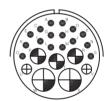
Insert number	20-29	22-14	28-16
No. of contacts	17	19	20
Contact size	16	16	16
Service rating	Α	A	A

22 CONTACT

23 CONTACT





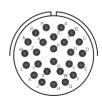


Insert number	28-11	36-1	32-6
No. of contacts	22	22	23
Contact size	18-16, 4-12	18-16, 4-12	16-16, 2-12, 3-8, 2-4
Service rating	Α	D	А

24 CONTACT







Insert number	20A24	24-28	28-12
No. of contacts	24	24	26
Contact size	20	16	16
Service rating	INST	INST	А

Contact Size









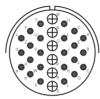


28 CONTACT

30 CONTACT

31 CONTACT





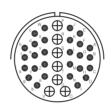


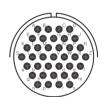
land and according to			22.2
Insert number	24A28	32-8	36-9
No. of contacts	28	30	31
Contact size	16	24-16. 6-12	14-16, 14-12, 2-8, 1-4
Service rating	INST	A	А

35 CONTACT

37 CONTACT





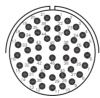


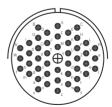
Insert number	28-15	32-7	28-21
No. of contacts	35	35	37
Contact size	16	28-16, 7-12	16
Service rating	А	A(all others) INST(A,B,h,j)	А

43 CONTACT

46 CONTACT 47 CONTACT







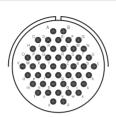
Insert number	28A51	32-73	36-8
No. of contacts	43	46	47
Contact size	16	16	46-16, 1-12
Service rating	А	А	A

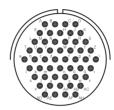
Contact Size



48 CONTACT

52 CONTACT

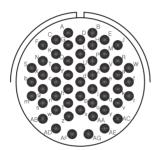


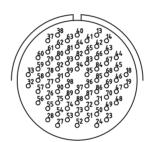


Insert number	36-10	36-52
No. of contacts	48	52
Contact size	16	16
Service rating	А	А

54 CONTACT

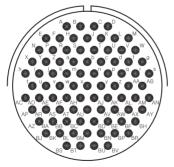
72 CONTACT

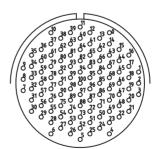




Insert number	32A10 & 32-22	28-72
No. of contacts	54	72
Contact size	16	20
Service rating	А	INST

85 CONTACT



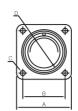


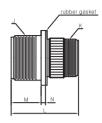
Insert number	40-56	32-101
No. of contacts	16	101
Contact size	85	20
Service rating	A	INST

Connector Dimensions

KD3100 Class A MS3100 Class A Wall mounting receptacle

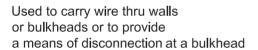






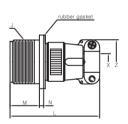
Shell	ΠA	□В	ΦC	ØD	J	К	L	М	١	٧
size	±0.79	±0.13	+0.25 -0.13	+0.38	THD-2A	THD-2A	max	+0.79	max	min
10SL	25.40	18.26	3.05	11.38	5/8-24UNEF	5/8-24UNEF	38.89	14.27	3.96	1.57
12s	27.79	20.62	3.05	14.15	3/4-20UNEF	5/8-24UNEF	42.88	14.27	3.96	1.57
12	27.79	20.62	3.05	14.15	3/4-20UNEF	5/8-24UNEF	52.37	19.05	3.96	1.57
14s	30.18	23.01	3.05	17.32	7/8-20UNEF	3/4-20UNEF	42.88	14.27	3.96	1.57
14	30.18	23.01	3.05	17.32	7/8-20UNEF	3/4-20UNEF	52.37	19.05	3.96	1.57
16s	32.54	24.61	3.05	20.50	1 -20UNEF	7/8-20UNEF	42.88	14.27	3.96	1.57
16	32.54	24.61	3.05	20.50	1 -20UNEF	7/8-20UNEF	52.37	19.05	3.96	1.57
18	34.93	26.97	3.05	23.67	1 1/8-18UNEF	1 -20UNEF	52.37	19.05	5.16	2.39
20	38.10	29.36	3.05	26.87	1 1/4-18UNEF	1 3/16-18UNEF	55.58	19.05	5.16	2.39
22	41.28	31.75	3.05	30.02	1 3/8-18UNEF	1 3/16-18UNEF	55.58	19.05	5.16	2.39
24	44.45	34.93	3.73	33.20	1 1/2-18UNEF	1 7/16-18UNEF	58.72	20.62	5.16	2.39
28	50.80	39.67	3.73	38.76	1 3/4-18UNS	1 7/16-18UNEF	58.72	20.62	5.16	2.39
32	57.15	44.45	4.39	45.11	2 -18UNS	1 3/4-18UNS	61.93	22.23	9.12	3.18
36	63.50	49.23	4.39	50.67	2 1/4-16UN	2 -18UNS	61.93	22.23	9.12	3.18
40	69.85	55.58	4.39	57.02	2 1/2-16UN	2 1/4-16UN	61.93	22.23	9.12	3.18

KD3100 Class E, F MS3100 Class E, F Wall mounting receptacle with integral cable clamp (grommet included)









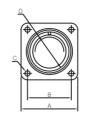
Shell	ΠA	□В	φC	ΦD	J	L	М	١	1	X	Z
size	±0.79	±0.13	+0.25 -0.13	+0.38	THD-2A	max	+0.79	max	min	min	±0.79
10SL	25.40	18.26	3.05	11.38	5/8-24UNEF	57.15	14.27	3.96	1.98	7.14	22.23
12s	27.79	20.62	3.05	14.15	3/4-20UNEF	57.15	14.27	3.96	1.98	7.14	22.23
12	27.79	20.62	3.05	14.15	3/4-20UNEF	66.68	19.05	3.96	1.98	7.14	22.23
14s	30.18	23.01	3.05	17.32	7/8-20UNEF	57.15	14.27	3.96	1.98	10.31	26.97
14	30.18	23.01	3.05	17.32	7/8-20UNEF	66.68	19.05	3.96	1.98	10.31	26.97
16s	32.54	24.61	3.05	20.50	1 -20UNEF	57.15	14.27	3.96	1.98	12.70	29.36
16	32.54	24.61	3.05	20.50	1 -20UNEF	66.68	19.05	3.96	1.98	12.70	29.36
18	34.93	26.97	3.05	23.67	1 1/8-18UNEF	68.28	19.05	5.16	2.39	13.49	31.75
20	38.10	29.36	3.05	26.87	1 1/4-18UNEF	69.85	19.05	5.16	2.39	16.66	37.31
22	41.28	31.75	3.05	30.02	1 3/8-18UNEF	69.85	19.05	5.16	2.39	19.05	37.31
24	44.45	34.93	3.73	33.20	1 1/2-18UNEF	75.41	20.62	5.16	2.39	19.84	42.88
28	50.80	39.67	3.73	38.76	1 3/4-18UNS	76.99	20.62	5.16	2.39	23.42	42.88
32	57.15	44.45	4.39	45.11	2 -18UNS	76.99	22.23	9.12	3.18	29.36	51.59
36	63.50	49.23	4.39	50.67	2 1/4-16UN	83.34	22.23	9.12	3.18	31.75	57.94

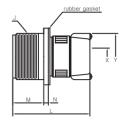
Connector Dimensions

KD3100 Class R MS3100 Class R Wall mounting receptacle (grommet included)

R type has a shorter and lightweight endbell than E, F type



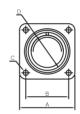


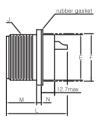


Shell	ΠA	□В	ΦC	ΦD	J	L	М	1	٧	Х	Υ
size	±0.79	±0.13	+0.25 -0.13	+0.38	THD-2A	max	+0.79	max	min	min	±0.25
10SL	25.40	18.26	3.05	11.38	5/8-24UNEF	46.69	14.27	3.96	1.98	7.14	23.83
12s	27.79	20.62	3.05	14.15	3/4-20UNEF	46.69	14.27	3.96	1.98	7.14	23.83
12	27.79	20.62	3.05	14.15	3/4-20UNEF	55.40	19.05	3.96	1.98	7.14	23.83
14s	30.18	23.01	3.05	17.32	7/8-20UNEF	46.69	14.27	3.96	1.98	10.31	28.58
14	30.18	23.01	3.05	17.32	7/8-20UNEF	55.40	19.05	3.96	1.98	10.31	28.58
16s	32.54	24.61	3.05	20.50	1 -20UNEF	46.69	14.27	3.96	1.98	12.70	30.96
16	32.54	24.61	3.05	20.50	1 -20UNEF	55.40	19.05	3.96	1.98	12.70	30.96
18	34.93	26.97	3.05	23.67	1 1/8-18UNEF	57.94	19.05	5.16	2.39	13.49	35.71
20	38.10	29.36	3.05	26.87	1 1/4-18UNEF	57.94	19.05	5.16	2.39	16.66	38.10
22	41.28	31.75	3.05	30.02	1 3/8-18UNEF	57.94	19.05	5.16	2.39	19.05	39.67
24	44.45	34.93	3.73	33.20	1 1/2-18UNEF	57.94	20.62	5.16	2.39	19.84	46.84
28	50.80	39.67	3.73	38.76	1 3/4-18UNS	57.94	20.62	5.16	2.39	23.42	46.84
32	57.15	44.45	4.39	45.11	2 -18UNS	58.98	22.23	9.12	3.18	29.36	53.98
36	63.50	49.23	4.39	50.67	2 1/4-16UN	58.98	22.23	9.12	3.18	31.75	58.72

KD3102 Class A MS3102 Class A Box mounting receptacle







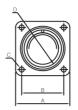
Shell	ΠA	□В	ΦC	ΦD	ΦE	ΦF	J	L	М	1	V
size	±0.79	±0.13	+0.25 -0.13	+0.38	-4.78	Mounting Hole	THD-2A	max	+0.79	max	min
10SL	25.40	18.26	3.05	11.38	19.86	20.62	5/8-24UNEF	30.25	14.27	3.96	1.98
12s	27.79	20.62	3.05	14.15	19.86	20.62	3/4-20UNEF	30.25	14.27	3.96	1.98
12	27.79	20.62	3.05	14.15	19.86	20.62	3/4-20UNEF	43.51	19.05	3.96	1.98
14s	30.18	23.01	3.05	17.32	23.01	23.83	7/8-20UNEF	30.25	14.27	3.96	1.98
14	30.18	23.01	3.05	17.32	23.01	23.83	7/8-20UNEF	43.51	19.05	3.96	1.98
16s	32.54	24.61	3.05	20.50	26.21	26.97	1 -20UNEF	30.25	14.27	3.96	1.98
16	32.54	24.61	3.05	20.50	26.21	26.97	1 -20UNEF	44.45	19.05	3.96	1.98
18	34.93	26.97	3.05	23.67	29.36	30.18	1 1/8-18UNEF	49.23	19.05	5.16	2.39
20	38.10	29.36	3.05	26.87	32.56	33.32	1 1/4-18UNEF	49.23	19.05	5.16	2.39
22	41.28	31.75	3.05	30.02	35.71	36.53	1 3/8-18UNEF	49.23	19.05	5.16	2.39
24	44.45	34.93	3.73	33.20	38.91	39.97	1 1/2-18UNEF	49.23	20.62	5.16	2.39
28	50.80	39.67	3.73	38.76	45.26	46.02	1 3/4-18UNS	49.23	20.62	5.16	2.39
32	57.15	44.45	4.39	45.11	51.61	52.37	2 -18UNS	49.23	22.23	9.12	3.18
36	63.50	49.23	4.39	50.67	57.96	58.72	2 1/4-16UN	49.23	22.23	9.12	3.18
40	69.85	55.58	4.39	57.02	64.31	65.07	2 1/2-16UN	49.23	22.23	9.12	3.18

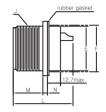
Connector Dimensions

KD3102 Class R MS3102 Class R Box mounting receptacle

Used in junction boxes or as an integral part of equipment



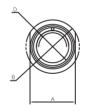


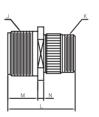


Shell	□A	□В	ΦC	ΦD	ΦE	φF	J	L	М	1	N
size	±0.79	±0.13	+0.25 -0.13	+0.38	-4.78	Mounting Hole	THD-2A	max	+0.79	max	min
10SL	25.40	18.26	3.05	11.38	19.86	20.62	5/8-24UNEF	30.18	14.27	3.96	1.98
12s	27.79	20.62	3.05	14.15	19.86	20.62	3/4-20UNEF	30.18	14.27	3.96	1.98
12	27.79	20.62	3.05	14.15	19.86	20.62	3/4-20UNEF	41.28	19.05	3.96	1.98
14s	30.18	23.01	3.05	17.32	23.01	23.83	7/8-20UNEF	30.18	14.27	3.96	1.98
14	30.18	23.01	3.05	17.32	23.01	23.83	7/8-20UNEF	41.28	19.05	3.96	1.98
16s	32.54	24.61	3.05	20.50	26.21	26.97	1 -20UNEF	30.18	14.27	3.96	1.98
16	32.54	24.61	3.05	20.50	26.21	26.97	1 -20UNEF	41.28	19.05	3.96	1.98
18	34.93	26.97	3.05	23.67	29.36	30.18	1 1/8-18UNEF	49.23	19.05	5.16	2.39
20	38.10	29.36	3.05	26.87	32.56	33.32	1 1/4-18UNEF	49.23	19.05	5.16	2.39
22	41.28	31.75	3.05	30.02	35.71	36.53	1 3/8-18UNEF	49.23	19.05	5.16	2.39
24	44.45	34.93	3.73	33.20	38.91	39.97	1 1/2-18UNEF	49.23	20.62	5.16	2.39
28	50.80	39.67	3.73	38.76	45.26	46.02	1 3/4-18UNS	49.23	20.62	5.16	2.39
32	57.15	44.45	4.39	45.11	51.61	52.37	2 -18UNS	49.23	22.23	9.12	3.18
36	63.50	49.23	4.39	50.67	57.96	58.72	2 1/4-16UN	49.23	22.23	9.12	3.18

KD3101 Class A MS3101 Class A Cable connecting plug





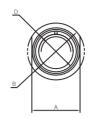


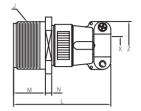
Shell	А	ØΒ	ΦD	J	К	L	М	N	
size	max	max	+0.38	THD-2A	THD-2A	max	+0.79	max mir	n
10SL	16.26	24.61	11.38	5/8-24UNEF	5/8-24UNEF	38.89	14.27	3.96 1.9	18
12s	19.43	26.97	14.15	3/4-20UNEF	5/8-24UNEF	42.88	14.27	3.96 1.9	18
12	19.43	26.97	14.15	3/4-20UNEF	5/8-24UNEF	52.37	19.05	3.96 1.9	18
14s	22.61	29.36	17.32	7/8-20UNEF	3/4-20UNEF	42.88	14.27	3.96 1.9	18
14	22.61	29.36	17.32	7/8-20UNEF	3/4-20UNEF	52.37	19.05	3.96 1.9	18
16s	25.78	31.75	20.50	1 -20UNEF	7/8-20UNEF	42.88	14.27	3.96 1.9	18
16	25.78	31.75	20.50	1 -20UNEF	7/8-20UNEF	52.37	19.05	3.96 1.9	8
18	28.96	34.14	23.67	1 1/8-18UNEF	1 -20UNEF	52.37	19.05	5.16 2.3	39
20	32.13	37.31	26.87	1 1/4-18UNEF	1 3/16-18UNEF	55.58	19.05	5.16 2.3	39
22	35.31	40.49	30.02	1 3/8-18UNEF	1 3/16-18UNEF	55.58	19.05	5.16 2.3	39
24	38.48	43.66	33.20	1 1/2-18UNEF	1 7/16-18UNEF	58.72	20.62	5.16 2.3	39
28	44.83	50.01	38.76	1 3/4-18UNS	1 7/16-18UNEF	58.72	20.62	5.16 2.3	39
32	51.18	56.36	45.11	2 -18UNS	1 3/4-18UNS	61.93	22.23	9.12 3.1	8
36	57.53	62.71	50.67	2 1/4-16UN	2 -18UNS	61.93	22.23	9.12 3.1	8
40	63.88	69.06	57.02	2 1/2-16UN	2 1/4-18UN	61.93	22.23	9.12 3.1	8

Connector Dimensions

KD3101 Class E, F MS3101 Class E, F Cable connecting plug (grommet included)







Used for cable extension requirements, where mounting provisions are unnecessary

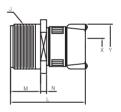
Shell	А	ØΒ	ΦD	J	L	М	١	1	X	Z
size	max	max	+0.38	THD-2A	max	+0.79	max	min	min	±0.79
10SL	16.26	26.97	11.38	5/8-24UNEF	57.15	14.27	3.96	1.57	7.14	22.23
12s	19.43	26.97	14.15	3/4-20UNEF	57.15	14.27	3.96	1.57	7.14	22.23
12	19.43	26.97	14.15	3/4-20UNEF	66.68	19.05	3.96	1.57	7.14	22.23
14s	22.61	29.36	17.32	7/8-20UNEF	57.15	14.27	3.96	1.57	10.31	26.97
14	22.61	29.36	17.32	7/8-20UNEF	66.68	19.05	3.96	1.57	10.31	26.97
16s	25.78	32.54	20.50	1 -20UNEF	57.15	14.27	3.96	1.57	12.70	29.36
16	25.78	32.54	20.50	1 -20UNEF	66.68	19.05	3.96	1.57	12.70	29.36
18	28.96	34.14	23.67	1 1/8-18UNEF	68.28	19.05	5.16	2.39	13.49	31.75
20	32.13	38.10	26.87	1 1/4-18UNEF	69.85	19.05	5.16	2.39	16.66	37.31
22	35.31	41.28	30.02	1 3/8-18UNEF	69.85	19.05	5.16	2.39	19.05	37.31
24	38.48	44.45	33.20	1 1/2-18UNEF	75.41	20.62	5.16	2.39	19.84	42.88
28	44.83	50.80	38.76	1 3/4-18UNS	76.99	20.62	5.16	2.39	23.42	42.88
32	51.18	57.15	45.11	2 -18UNS	76.99	22.23	9.12	3.18	29.36	51.59
36	57.53	63.50	50.67	2 1/4-16UN	83.34	22.23	9.12	3.18	31.75	57.94

KD3101 Class R MS3101 Class R Cable connecting plug (grommet included)

R type has a shorter and lightweight endbell than E, F type







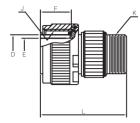
Shell	А	ØΒ	ΦD	J	L	М	N	1	X	Y
size	max	max	+0.38	THD-2A	max	+0.79	max	min	min	±0.25
10SL	16.26	26.97	11.38	5/8-24UNEF	46.69	14.27	3.96	1.57	7.14	23.83
12s	19.43	26.97	14.15	3/4-20UNEF	46.69	14.27	3.96	1.57	7.14	23.83
12	19.43	26.97	14.15	3/4-20UNEF	55.40	19.05	3.96	1.57	7.14	23.83
14s	22.61	29.36	17.32	7/8-20UNEF	46.69	14.27	3.96	1.57	10.31	28.58
14	22.61	29.36	17.32	7/8-20UNEF	55.40	19.05	3.96	1.57	10.31	28.58
16s	25.78	32.54	20.50	1 -20UNEF	46.69	14.27	3.96	1.57	12.70	30.96
16	25.78	32.54	20.50	1 -20UNEF	55.40	19.05	3.96	1.57	12.70	30.96
18	28.96	34.14	23.67	1 1/8-18UNEF	57.94	19.05	5.16	2.39	13.49	35.71
20	32.13	38.10	26.87	1 1/4-18UNEF	57.94	19.05	5.16	2.39	16.66	38.10
22	35.31	41.28	30.02	1 3/8-18UNEF	57.94	19.05	5.16	2.39	19.05	39.67
24	38.48	44.45	33.20	1 1/2-18UNEF	57.94	20.62	5.16	2.39	19.84	46.84
28	44.83	50.80	38.76	1 3/4-18UNS	57.94	20.62	5.16	2.39	23.42	46.84
32	51.18	57.15	45.11	2 -18UNS	58.98	22.23	9.12	3.18	29.36	53.98
36	57.53	63.50	50.67	2 1/4-16UN	58.98	22.23	9.12	3.18	31.75	58.72

Connector Dimensions

KD3106 Class A MS3106 Class A Straight plug





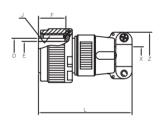


Shell	ΦA	ΦD	ΦE	F	J	К	L
size	max	-0.38	min	±0.13	THD-2B	THD-2A	max
10SL	24.61	11.33	10.20	13.49	5/8-24UNEF	5/8-24UNEF	38.89
12s	26.97	14.10	11.43	13.49	3/4-20UNEF	5/8-24UNEF	42.88
12	26.97	14.10	11.43	18.26	3/4-20UNEF	5/8-24UNEF	52.37
14s	29.36	17.15	13.36	13.49	7/8-20UNEF	3/4-20UNEF	42.88
14	29.36	17.15	13.36	18.26	7/8-20UNEF	3/4-20UNEF	52.37
16s	31.75	20.45	16.54	13.49	1 -20UNEF	7/8-20UNEF	42.88
16	31.75	20.45	16.54	18.26	1 -20UNEF	7/8-20UNEF	52.37
18	34.14	23.62	19.71	18.26	1 1/8-18UNEF	1 -20UNEF	52.37
20	37.31	26.67	23.67	18.26	1 1/4-18UNEF	1 3/16-18UNEF	55.58
22	40.49	29.85	26.06	18.26	1 3/8-18UNEF	1 3/16-18UNEF	55.58
24	43.66	33.02	29.24	18.26	1 1/2-18UNEF	1 7/16-18UNEF	58.72
28	50.01	38.61	34.80	18.26	1 3/4-18UNS	1 7/16-18UNEF	58.72
32	56.36	44.96	41.15	18.26	2 -18UNS	1 3/4-18UNS	61.93
36	62.71	50.29	46.69	18.26	2 1/4-16UN	2 -18UNS	61.93
40	69.06	56.64	52.25	18.26	2 1/2-16UN	2 1/4-18UN	61.93

KD3106 Class E, F MS3106 Class E, F Straight plug with Integral cable clamp and grommet







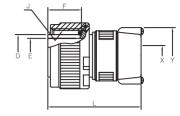
Shell	ΦA	ØD.	ØΕ	F	J	L	X	Z
size	max	-0.38	min	±0.13	THD-2B	max	min	±0.79
10SL	24.61	11.33	10.20	13.49	5/8-24UNEF	57.15	7.14	22.23
12s	26.97	14.10	11.43	13.49	3/4-20UNEF	57.15	7.14	22.23
12	26.97	14.10	11.43	18.26	3/4-20UNEF	66.68	7.14	22.23
14s	29.36	17.15	13.36	13.49	7/8-20UNEF	57.15	10.31	26.97
14	29.36	17.15	13.36	18.26	7/8-20UNEF	66.68	10.31	26.97
16s	31.75	20.45	16.54	13.49	1 -20UNEF	57.15	12.70	29.36
16	31.75	20.45	16.54	18.26	1 -20UNEF	66.68	12.70	29.36
18	34.14	23.62	19.71	18.26	1 1/8-18UNEF	68.28	13.49	31.75
20	37.31	26.67	23.67	18.26	1 1/4-18UNEF	69.85	16.66	37.31
22	40.49	29.85	26.06	18.26	1 3/8-18UNEF	69.85	19.05	37.31
24	43.66	33.02	29.24	18.26	1 1/2-18UNEF	75.41	19.84	42.88
28	50.01	38.61	34.80	18.26	1 3/4-18UNS	76.99	23.42	42.88
32	56.36	44.96	41.15	18.26	2 -18UNS	76.99	29.36	51.59
36	62.71	50.29	46.69	18.26	2 1/4-16UN	83.34	31.75	57.94

Connector Dimensions

KD3106 Class R MS3106 Class R Straight plug with grommet Indentical in purpose to the MS3106F



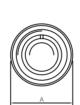


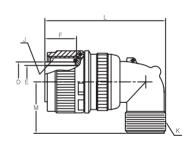


Shell	ФΑ	ΦD	ΦE	F	J	L	X	Υ
size	max	-0.38	min	±0.13	THD-2B	max	min	±0.25
10SL	24.61	11.33	10.20	13.49	5/8-24UNEF	46.69	7.14	23.83
12s	26.97	14.10	11.43	13.49	3/4-20UNEF	46.69	7.14	23.83
12	26.97	14.10	11.43	18.26	3/4-20UNEF	55.40	7.14	23.83
14s	29.36	17.15	13.36	13.49	7/8-20UNEF	46.69	10.31	28.58
14	29.36	17.15	13.36	18.26	7/8-20UNEF	55.40	10.31	28.58
16s	31.75	20.45	16.54	13.49	1 -20UNEF	46.69	12.70	30.96
16	31.75	20.45	16.54	18.26	1 -20UNEF	55.40	12.70	30.96
18	34.14	23.62	19.71	18.26	1 1/8-18UNEF	57.94	13.49	35.71
20	37.31	26.67	23.67	18.26	1 1/4-18UNEF	57.94	16.66	38.10
22	40.49	29.85	26.06	18.26	1 3/8-18UNEF	57.94	19.05	39.67
24	43.66	33.02	29.24	18.26	1 1/2-18UNEF	57.94	19.84	46.84
28	50.01	38.61	34.80	18.26	1 3/4-18UNS	57.94	23.42	46.84
32	56.36	44.96	41.15	18.26	2 -18UNS	58.98	29.36	53.98
36	62.71	50.29	46.69	18.26	2 1/4-16UN	58.98	31.75	58.72

KD3108 Class A MS3108 Class A 90° Angle plug







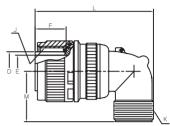
Shell	ΦA	ΦD	ΦE	F	J	К	L	М
size	max	-0.38	min	±0.13	THD-2B	THD-2A	max	max
10SL	24.61	11.33	10.20	13.49	5/8-24UNEF	5/8-24UNEF	46.02	25.40
12s	26.97	14.10	11.43	13.49	3/4-20UNEF	5/8-24UNEF	50.80	26.97
12	26.97	14.10	11.43	18.26	3/4-20UNEF	5/8-24UNEF	57.15	26.97
14s	29.36	17.15	13.36	13.49	7/8-20UNEF	3/4-20UNEF	53.98	28.58
14	29.36	17.15	13.36	18.26	7/8-20UNEF	3/4-20UNEF	58.72	28.58
16s	31.75	20.45	16.54	13.49	1 -20UNEF	7/8-20UNEF	60.33	30.18
16	31.75	20.45	16.54	18.26	1 -20UNEF	7/8-20UNEF	65.07	30.18
18	34.14	23.62	19.71	18.26	1 1/8-18UNEF	1 -20UNEF	68.28	33.32
20	37.31	26.67	23.67	18.26	1 1/4-18UNEF	1 3/16-18UNEF	76.99	34.93
22	40.49	29.85	26.06	18.26	1 3/8-18UNEF	1 3/16-18UNEF	76.99	34.93
24	43.66	33.02	29.24	18.26	1 1/2-18UNEF	1 7/16-18UNEF	86.51	39.67
28	50.01	38.61	34.80	18.26	1 3/4-18UNS	1 7/16-18UNEF	86.51	39.67
32	56.36	44.96	41.15	18.26	2 -18UNS	1 3/4-18UNS	95.25	47.63
36	62.71	50.29	46.69	18.26	2 1/4-16UN	2 -18UNS	100.03	52.37

Connector Dimensions

KD3108 Class E, R MS3108 Class E, R 90° Angle plug (grommet included)





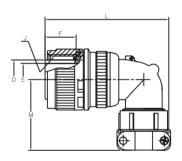


Shell	ΦA	ΦD	ΦE	F	J	К	L	М
size	max	-0.38	min	±0.13	THD-2B	THD-2A	max	max
10SL	24.61	11.33	10.20	13.49	5/8-24UNEF	5/8-24UNEF	46.02	25.40
12s	26.97	14.10	11.43	13.49	3/4-20UNEF	5/8-24UNEF	50.80	26.97
12	26.97	14.10	11.43	18.26	3/4-20UNEF	5/8-24UNEF	57.15	26.97
14s	29.36	17.15	13.36	13.49	7/8-20UNEF	3/4-20UNEF	53.98	28.58
14	29.36	17.15	13.36	18.26	7/8-20UNEF	3/4-20UNEF	58.72	28.58
16s	31.75	20.45	16.54	13.49	1 -20UNEF	7/8-20UNEF	60.33	30.18
16	31.75	20.45	16.54	18.26	1 -20UNEF	7/8-20UNEF	65.07	30.18
18	34.14	23.62	19.71	18.26	1 1/8-18UNEF	1 -20UNEF	68.28	33.32
20	37.31	26.67	23.67	18.26	1 1/4-18UNEF	1 3/16-18UNEF	76.99	34.93
22	40.49	29.85	26.06	18.26	1 3/8-18UNEF	1 3/16-18UNEF	76.99	34.93
24	43.66	33.02	29.24	18.26	1 1/2-18UNEF	1 7/16-18UNEF	86.51	39.67
28	50.01	38.61	34.80	18.26	1 3/4-18UNS	1 7/16-18UNEF	86.51	39.67
32	56.36	44.96	41.15	18.26	2 -18UNS	1 3/4-18UNS	95.25	47.63
36	62.71	50.29	46.69	18.26	2 1/4-16UN	2 -18UNS	100.03	52.37

KD3108 Class F MS3108 Class F 90° Angle plug with M85049/41 cable clamp and grommet







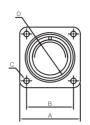
Shell	φA	ΦD	ØΕ	F	J	L	М
size	max	-0.38	min	±0.13	THD-2B	max	max
10SL	24.61	11.33	10.20	13.49	5/8-24UNEF	55.58	38.10
12s	26.97	14.10	11.43	13.49	3/4-20UNEF	55.58	38.10
12	26.97	14.10	11.43	18.26	3/4-20UNEF	64.29	38.10
14s	29.36	17.15	13.36	13.49	7/8-20UNEF	58.72	40.49
14	29.36	17.15	13.36	18.26	7/8-20UNEF	68.28	40.49
16s	31.75	20.45	16.54	13.49	1 -20UNEF	61.11	42.88
16	31.75	20.45	16.54	18.26	1 -20UNEF	70.64	42.88
18	34.14	23.62	19.71	18.26	1 1/8-18UNEF	72.24	45.24
20	37.31	26.67	23.67	18.26	1 1/4-18UNEF	82.55	50.01
22	40.49	29.85	26.06	18.26	1 3/8-18UNEF	82.55	50.80
24	43.66	33.02	29.24	18.26	1 1/2-18UNEF	94.46	53.98
28	50.01	38.61	34.80	18.26	1 3/4-18UNS	94.46	55.58
32	56.36	44.96	41.15	18.26	2 -18UNS	106.38	65.89
36	62.71	50.29	46.69	18.26	2 1/4-16UN	109.14	69.06

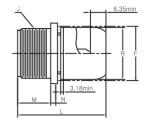
Connector Dimensions

KD3103 MS3103 Potting seal box mounting receptacle

Supplied with a resilient insulator and nylon potting cup with a threaded attachment ring





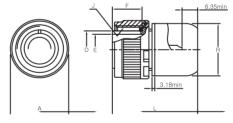


Shell	ΠA	□В	ΦC	ΦD	R	φF	J	L	М	١	١
size	±0.79	±0.13	+0.25 -0.13	+0.38	max	Mounting Hole	THD-2A	max	+0.79	max	min
10SL	25.40	18.26	3:05	11.38	21.92	20.62	5/8-24UNEF	38.89	14.27	3.96	1.65
128	27.79	20.62	3 05	14.15	21.92	20.62	3/4-20UNEF	38.89	14.27	3.96	1.65
12	27.79	20.62	3.05	14.15	21.92	20.62	3/4-20UNEF	49.99	19.05	3.96	3.58
148	30.18	23.01	3.05	17.32	23.90	23.83	7/8-20UNEF	38.89	14.27	3.96	1.65
14	30.18	23.01	3.05	17.32	23.90	23.83	7/8-20UNEF	49.99	19.05	3.96	3.58
168	32.54	24.61	3.05	20.50	27.08	26.97	1 -20UNEF	38.89	14.27	3.96	1.65
16	32.54	24.61	3.05	20.50	27.08	26.97	1 -20UNEF	49.99	19.05	3.96	3.58
18	34.93	26.97	3.05	23.67	30.66	30.18	1 1/8-18UNEF	49.99	19.05	5.16	3.58
20	38.10	29.36	3.05	26.87	33.83	33.32	1 1/4-18UNEF	55.58	19.05	5.16	3.58
22	41.28	31.75	3.05	30.02	37.01	36.53	1 3/8-18UNEF	55.58	19.05	5.16	3.58
24	44.45	34.93	3.73	33.20	40.18	39.97	1 1/2-18UNEF	55.58	20.62	5.16	5.74
28	50.80	39.67	3.73	38.76	46.53	46.02	1 3/4-18UNS	55.58	20.62	5.16	5.74
32	57.15	44.45	4.39	45.11	52.88	52.37	2 -18UNS	55.58	22.23	9.12	5.74
36	63.50	49.23	4.39	50.67	60.83	58.72	2 1/4-16UN	55.58	22.23	9.12	5.74
40	69.85	55.58	4.39	57.02	65.89	65.07	2 1/2-16UN	55.58	22.23	9.12	5.74

KD25183 MS25183 Potting seal plug

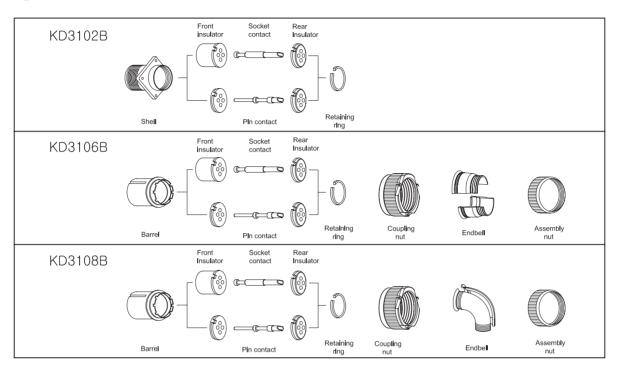
Supplied with a resilient insulator and nylon potting cup with a threaded attachment ring





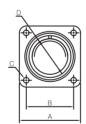
Shell	ΦA	ΦD	φE	F	J	L	R
size	max	-0.38	min	±0.13	THD-2B	max	max
10SL	24.61	11.33	10.20	13.49	5/8-24UNEF	38.10	21.92
128	26.97	14.10	11.43	13.49	3/4-20UNEF	38.10	21.92
12	26.97	14.10	11.43	18.26	3/4-20UNEF	48.41	21.92
14S	29.36	17.15	13.36	13.49	7/8-20UNEF	38.10	23.90
14	29.36	17.15	13.36	18.26	7/8-20UNEF	48.41	23.90
168	31.75	20.45	16.54	13.49	1 -20UNEF	38.10	27.08
16	31.75	20.45	16.54	18.26	1 -20UNEF	48.41	27.08
18	34.14	23.62	19.71	18.26	1 1/8-18UNEF	48.41	30.66
20	37.31	26.67	23.67	18.26	1 1/4-18UNEF	55.58	33.83
22	40.49	29.85	26.06	18.26	1 3/8-18UNEF	55.58	37.01
24	43.66	33.02	29.24	18.26	1 1/2-18UNEF	55.58	40.18
28	50.01	38.61	34.80	18.26	1 3/4-18UNS	55.58	46.53
32	56.36	44.96	41.15	18.26	2 -18UNS	55.58	52.88
36	62.71	50.29	46.69	18.26	2 1/4-16UN	55.58	60.83
40	69.06	56.64	52.25	18.26	2 1/2-16UN	55.58	65.89

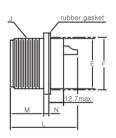
Exploded view



KD3102B MS3102B Box mounting receptacle







Shell	ΠA	□В	φC	ΦD	ØΕ	ΦF	J	L	М	١	١
size	±0.79	±0.13	+0.25 -0.13	+0.38	-0.78	Mounting Hole	THD-2B	max	+0.79	max	min
14s	30.18	23.01	3.05	17.32	23.01	23.83	7/8-20UNEF	30.25	14.27	3.96	1.57
16	32.54	24.61	3.05	20.50	26.21	26.97	1 -20UNEF	44.45	19.05	3.96	1.98
18	34.93	26.97	3.05	23.67	29.36	30.18	1 1/8-18UNEF	49.23	19.05	5.16	2.39
20	38.10	29.36	3.05	26.87	32.56	33.32	1 1/4-18UNEF	49.23	19.05	5.16	2.39
22	41.28	31.75	3.05	30.02	35.71	36.53	1 3/8-18UNEF	49.23	19.05	5.16	2.39
24	44.45	34.93	3.73	33.20	38.91	39.97	1 1/2-18UNEF	49.23	20.62	5.16	2.39
28	50.80	39.67	3.73	38.76	45.26	46.02	1 3/4-18UNS	49.23	20.62	5.16	2.39
32	57.15	44.45	4.39	45.11	51.61	52.37	2 -18UNS	49.23	22.23	5.16	2.39
36	63.50	49.23	4.39	50.67	57.96	58.72	2 1/4-16UN	49.23	22.23	5.16	2.39

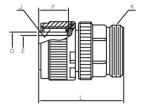
Connector Dimensions

KD3106B MS3106B Straight plug and split endbell

Wire soldering and maintenance simplified with a split type endbell





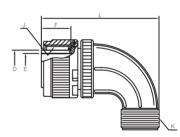


Shell	ØΑ	ΦD	ΦE	F	L	J	К
size	max	-0.38	min	±0.13	max	THD-2B	THD-2A
14s	29.36	17.15	13.36	13.49	42.88	7/8-20UNEF	3/4-20UNEF
16	31.75	20.45	16.54	18.26	52.37	1 -20UNEF	7/8-20UNEF
18	34.14	23.62	19.71	18.26	52.37	1 1/8-18UNEF	1 -20UNEF
20	37.31	26.67	23.67	18.26	55.58	1 1/4-18UNEF	1 3/16-18UNEF
22	40.49	29.85	26.06	18.26	55.58	1 3/8-18UNEF	1 3/16-18UNEF
24	43.66	33.02	29.24	18.26	58.72	1 1/2-18UNEF	1 7/16-18UNEF
28	50.01	38.61	34.80	18.26	58.72	1 3/4-18UNS	1 7/16-18UNEF
32	56.36	44.96	41.15	18.26	61.93	2 -18UNS	1 3/4-18UNS
36	62.71	50.29	46.69	18.26	61.93	2 1/4-16UN	2 -18UNS

KD3108B MS3108B 90° Angle plug and split endbell Convenient for use in narrow places





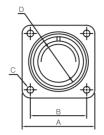


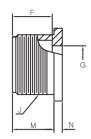
Shell	ØΑ	ΦD	ØΕ	F	L	J	К
size	max	-0.38	min	±0.13	max	THD-2B	THD-2A
14s	29.36	17.15	13.36	13.49	53.98	7/8-20UNEF	3/4-20UNEF
16	31.75	20.45	16.54	18.26	65.07	1 -20UNEF	7/8-20UNEF
18	34.14	23.62	19.71	18.26	68.28	1 1/8-18UNEF	1 -20UNEF
20	37.31	26.67	23.67	18.26	76.99	1 1/4-18UNEF	1 3/16-18UNEF
22	40.49	29.85	26.06	18.26	76.99	1 3/8-18UNEF	1 3/16-18UNEF
24	43.66	33.02	29.24	18.26	86.51	1 1/2-18UNEF	1 7/16-18UNEF
28	50.01	38.61	34.80	18.26	86.51	1 3/4-18UNS	1 7/16-18UNEF
32	56.36	44.96	41.15	18.26	95.25	2 -18UNS	1 3/4-18UNS
36	62.71	50.29	46.69	18.26	100.03	2 1/4-16UN	2 -18UNS

Accessories

KD3105 MS3105 Dummy stowage receptacle







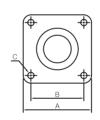
Shell	ΠA	□В	ΦC	ΦD	F	G	J	М	1	٧
size	±0.79	±0.13	+0.25 -0.13	+0.38	+0.79	±0.79	THD-2A	+0.79	max	min
10SL	25.40	18.26	3.05	11.38	14.28	11.43	5/8-24UNEF	14.27	3.96	1.98
12S	27.79	20.62	3.05	14.15	14.28	11.43	3/4-20UNEF	14.27	3.96	1.98
12	27.79	20.62	3.05	14.15	19.05	11.43	3/4-20UNEF	19.05	3.96	1.98
14S	30.18	23.01	3.05	17.32	14.28	13.36	7/8-20UNEF	14.27	3.96	1.98
14	30.18	23.01	3.05	17.32	19.05	13.36	7/8-20UNEF	19.05	3.96	1.98
16S	32.54	24.61	3.05	20.50	14.28	16.41	1 -20UNEF	14.27	3.96	1.98
16	32.54	24.61	3.05	20.50	19.05	16.41	1 -20UNEF	19.05	3.96	1.98
18	34.93	26.97	3.05	23.67	19.05	19.58	1 1/8-18UNEF	19.05	5.16	2.39
20	38.10	29.36	3.05	26.87	19.05	23.55	1 1/4-18UNEF	19.05	5.16	2.39
22	41.28	31.75	3.05	30.02	19.05	25.93	1 3/8-18UNEF	19.05	5.16	2.39
24	44.45	34.93	3.73	33.20	19.05	29.21	1 1/2-18UNEF	20.62	5.16	2.39
28	50.80	39.67	3.73	38.76	19.05	34.67	1 3/4-18UNS	20.62	5.16	2.39
32	57.15	44.45	4.39	45.11	19.05	41.15	2 -18UNS	22.23	9.12	3.18
36	63.50	49.23	4.39	50.67	19.05	46.56	2 1/4-16UN	22.23	9.12	3.18
40	69.85	55.58	4.39	57.02	19.05	52.12	2 1/2-16UN	22.23	9.12	3.18

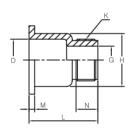
KD2120

Junction shell

Attached to the panel on the rearside to protect the cable



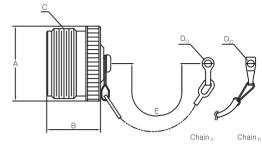




Shell	ΠA	□В	ΦC	ΦD	øG	ØΗ	К	L	М	N
size	±0.79	±0.13	+0.25 -0.13	±0.41	±0.41	±0.41	THD-2A	max	±0.41	min
10SL	25.40	18.26	3.05	16.31	11.10	19.00	5/8-24UNEF	21.01	1.70	9.50
128	27.79	20.62	3.05	16.31	11.10	19.00	5/8-24UNEF	21.01	1.70	9.50
12	27.79	20.62	3.05	16.31	11.10	19.00	5/8-24UNEF	21.01	1.70	9.50
148	30.18	23.01	3.05	19.20	14.30	21.79	3/4-20UNEF	21.01	1.70	9.50
14	30.18	23.01	3.05	19.20	14.30	21.79	3/4-20UNEF	21.01	1.70	9.50
16S	32.54	24.61	3.05	22.40	17.50	24.99	7/8-20UNEF	23.01	1.70	9.50
16	32.54	24.61	3.05	22.40	17.50	24.99	7/8-20UNEF	23.01	1.70	9.50
18	34.93	26.97	3.05	25.10	20.19	28.40	1 -20UNEF	29.01	2.21	9.50
20	38.10	29.36	3.05	29.79	23.01	32.51	1 3/16-18UNEF	32.99	2.21	9.50
22	41.28	31.75	3.05	32.31	23.19	35.71	1 3/16-18UNEF	32.00	2.21	9.50
24	44.45	34.93	3.73	35.51	29.49	38.89	1 7/16-18UNEF	35.00	2.21	9.50
28	50.80	39.67	3.73	42.09	29.79	45.11	1 7/16-18UNEF	34.01	2.21	9.50
32	57.15	44.45	4.39	48.11	37.49	51.51	1 3/4-18UNS	35.00	3.20	11.10
36	63.50	49.23	4.39	54.51	43.79	57.81	2 -18UNS	35.00	3.20	12.70

KD25042 MS25042 Dust protective caps for plug Used with MS3106 and MS3108 plugs

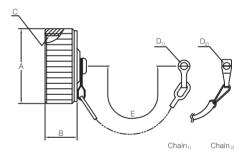




	Shell	ØΑ	В	С	ØD ₀	Εn	Ø D ₂₎	ØE₂;
Order No.	size	max	max	THD-2B	+0.15 -0.05	±10.0	+0.25 -0.13	±ONE LINK
KD25042-10D	10SL	17.45	16.66	5/8-24UNEF	3.80	125.0	3.96	101.6
KD25042-12D	12s & 12	20.62	21.44	3/4-20UNEF	3.80	125.0	3.96	114.3
KD25042-14D	14s & 14	23.80	21.44	7/8-20UNEF	3.80	125.0	3.96	114.3
KD25042-16D	16s & 16	26.97	21.44	1 -20UNEF	3.80	125.0	3.96	114.3
KD25042-18D	18	30.15	21.44	1 1/8-18UNEF	3.80	173.0	3.96	114.3
KD25042-20D	20	33.32	21.44	1 1/4-18UNEF	3.80	173.0	4.75	127.0
KD25042-22D	22	36.50	21.44	1 3/8-18UNEF	3.80	173.0	4.75	139.7
KD25042-24D	24	39.67	21.44	1 1/2-18UNEF	3.80	173.0	4.75	196.9
KD25042-28D	28	46.02	21.44	1 3/4-18UNS	3.80	173.0	4.75	196.9
KD25042-32D	32	52.37	21.44	2 -18UNS	3.80	173.0	5.54	196.9
KD25042-36D	36	58.72	21.44	2 1/4-18UNS	3.80	173.0	5.54	196.9
KD25042-40D	40	65.07	21.44	2 1/2-16UN	3.80	173.0	5.54	196.9

KD25043 MS25043 Dust protective caps for receptacle Used with MS3100, MS3101 and MS3102 receptacles





	Shell	ΦA	В	С	ØD _{ij}	E ₁₎	ØD₂	Ø E _{2}}
Order No.	size	max	max	THD-2B	+0.15 -0.05	±10.0	+0.25 -0.13	±ONE LINK
KD25043-10D	10SL	20.70	11.91	5/8-24UNEF	3.80	125.0	3.56	101.6
KD25043-12D	12s & 12	25.40	11.91	3/4-20UNEF	3.80	125.0	3.56	114.3
KD25043-14D	14s & 14	28.58	11.91	7/8-20UNEF	3.80	125.0	3.56	114.3
KD25043-16D	16s & 16	30.18	11.91	1 -20UNEF	3.80	125.0	3.56	114.3
KD25043-18D	18	34.14	11.91	1 1/8-18UNEF	3.80	173.0	3.56	114.3
KD25043-20D	20	37.31	11.91	1 1/4-18UNEF	3.80	173.0	3.56	127.0
KD25043-22D	22	40.49	11.91	1 3/8-18UNEF	3.80	173.0	3.56	139.7
KD25043-24D	24	43.66	11.91	1 1/2-18UNEF	3.80	173.0	4.34	196.9
KD25043-28D	28	50.01	13.49	1 3/4-18UNS	3.80	173.0	4.34	196.9
KD25043-32D	32	56.36	13.49	2 -18UNS	3.80	173.0	4.75	196.9
KD25043-36D	36	62.71	13.49	2 1/4-18UNS	3.80	173.0	4.75	196.9
KD25043-40D	40	69.06	13.49	2 1/2-16UN	3.80	173.0	4.75	196.9

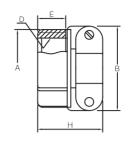
Note: Chain 1) - Kd standard (material - copper alloy)

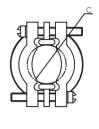
Chain 2) - Customer's option (material - stainless steel)

KD85049 / 41 M85049 / 41 Cable clamp

For plugs and receptacles that have an endbell with external conduit threads





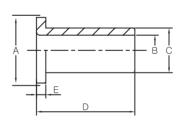


Order No.	Shell	А	В	ØC	D	E	Н
Order No.	size	±0.79	±0.79	max	THD-2B	±0.41	±0.79
KD85049 / 41-4A	10SL,12s & 12	20.62	22.23	7.92	5/8-24UNEF	10.31	20.62
KD85049 / 41-6A	14s & 14	24.61	26.97	11.13	3/4-20UNEF	10.31	22.23
KD85049 / 41-8A	16s & 16	27.79	29.36	14.27	7/8-20UNEF	10.31	23.83
KD85049 / 41-10A	18	30.18	31.75	15.88	1 -20UNEF	10.31	23.83
KD85049 / 41-12A	20, 22	34.93	37.31	19.05	1 3/16-18UNEF	10.31	23.83
KD85049 / 41-16A	24, 28	42.06	42.88	23.83	1 7/16-18UNEF	10.31	26.19
KD85049 / 41-20A	32	51.59	51.59	31.75	1 3/4-18UNS	11.91	27.79
KD85049 / 41-24A	36	56.36	57.94	34.93	2 -18UNS	13.49	29.36

KD3420 MS3420 Bushing for cable clamps







Order No.	Shell	ΦA ₀	ØΑ _e	ØΒ	ΦC	D	E,	E ₂₎
	size	±0.41	±0.41	±0.41	±0.41	±0.79	±0.41	±0.41
KD3420-4	10SL,12s & 12	14.66	12.83	5.59	7.67	69.85	1.60	1.57
KD3420-6	14s & 14	17.76	15.72	7.92	10.85	66.68	1.60	1.57
KD3420-8	16s & 16	20.96	18.90	11.10	14.02	63.50	1.60	1.57
KD3420-10	18	24.09	22.58	14.27	15.62	60.33	1.60	1.57
KD3420-12	20, 22	27.75	27.53	15.88	18.80	57.15	1.60	1.57
KD3420-16	24, 28	34.79	33.38	19.05	23.55	53.98	1.60	1.57
KD3420-20	32	42.93	40.59	23.80	31.50	50.80	1.60	1.57
KD3420-24	36	49.26	46.91	31.75	34.67	47.63	1.60	1.57

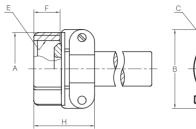
Note: 1) - Kd standard.

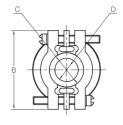
2) - Customer's option

KD3057 MS3057 Cable clamp

For plugs and receptacles that have an endbell with external conduit threads



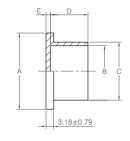


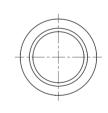


Order No.	Shell	А	В	ØC	ΦD	E	F	Н
Order No.	size	±0.79	±0.79	±0.41	±0.41	THD-2B	±0.41	±0.79
KD3057-4A	10SL,12s & 12	20.62	22.23	7.67	5.59	5/8-24UNEF	10.31	20.62
KD3057-6A	14s & 14	24.61	26.97	10.85	7.92	3/4-20UNEF	10.31	22.23
KD3057-8A	16s & 16	27.79	29.36	14.02	11.10	7/8-20UNEF	10.31	23.83
KD3057-10A	18	30.18	31.75	15.62	14.27	1 -20UNEF	10.31	23.83
KD3057-12A	20, 22	34.93	37.31	18.80	15.88	1 3/16-18UNEF	10.31	23.83
KD3057-16A	24, 28	42.06	42.88	23.55	19.05	1 7/16-18UNEF	10.31	26.19
KD3057-20A	32	51.59	51.59	31.50	23.80	1 3/4-18UNS	11.91	27.79
KD3057-24A	36	56.36	57.94	34.67	31.75	2 -18UNS	13.49	29.36

KD90376 MS90376 The polyethylene dust cap







Order No.	Shell	А	В	С	D	E
CIGOTIVO.	size	±0.79	±0.25	±0.25	±0.79	±0.25
KD90376-10	10SL	21.34	15.37	16.89	12.70	1.02
KD90376-12	12s & 12	24.64	18.29	19.69	12.70	1.02
KD90376-14	14s & 14	28.58	21.59	22.99	12.70	1.14
KD90376-16	16s & 16	30.99	24.71	26.29	12.70	1.14
KD90376-18	18	33.78	27.76	29.34	14.27	1.14
KD90376-20	20	37.21	31.27	33.05	14.27	1.27
KD90376-22	22	40.39	34.03	35.81	14.27	1.27
KD90376-24	24	43.18	37.16	38.94	14.27	1.27
KD90376-28	28	49.53	43.56	45.47	14.27	1.40
KD90376-32	32	56.39	49.91	51.82	14.27	1.40
KD90376-36	36	61.85	56.26	58.17	15.24	1.40

Components

	KD3106R Straight Plug	KD3106E/F Straight Plug	KD3108E/R 90° Plug	KD3108F 90° Plug	KD25183
Endbell					
Ferrule					
Grommet			000		
Coupling Nut					
Pin Contacts	D	D	D	C	
Insulator					
Barrel	<i>200</i> 22200	65000000	agopphop.	200000a	65000000
O-Ring		*		*	

[★] O-Ring is also applied in KD3106E/F & KD3108F