

CE05 Series

Connectors Conforming to European Safety Standards



As of January 1995 all industrial machinery, including machine tools, which are exported to Europe must conform with European safety standards. The CE05 series connectors, which offer full compatibility with DMS connectors in Factory Automation applications, were developed to comply with this demand.



TUV Rheinland

FEATURE

- **Conformity with European Safety Standards**

CE05 series connectors fully conform with the following European safety standards : EN60204-1 (electric machinery parts) and DIN VDE 0627 (connectors). They have been approved by TUV Rheinland.

- **Sequence Structure with Protective Circuitry (First-make, Last-break contact design)**

Connectors are provided with a premating and grounding contact, consisting of a shell having conductivity with the shell to serve as protective circuitry. When making connections, the contact of the CE05 connector is connected first before other contacts, and detached last.

- **Conformity with MIL-C-5015**

CE05 connectors fully comply with MIL-C-5015 standards and can be mated with conventional DMS connectors.

- **Water/Oil/Dustproof Structure : Class IP67 Protection**

Once connected, full protection is provided against ingress of water droplets, cutting fluid, dust particles, etc. Use of a synthetic rubber insert ensures protection against water and dust even in the unconnected state in the case of the receptacle with male contacts.

- **Plug Connector Accessories**

Available accessories include waterproof straight-backshells, waterproof angle-backshells and waterproof cable clamps (with rubber bushing). Plug connectors are also available for conduit applications.

- **Solder Wire**

Like DMS connectors, CE05 connectors have solder buckets.

Note : CE05 connectors offer full compatibility with DMS series connectors.

MATERIAL/FINISH

Contact	Copper alloy/Silver plating
Pin front insert	Synthetic rubber/Black
Pin rear insert	Synthetic resin/Black
Socket insert	Synthetic resin/Black
Shell	Aluminum alloy/Zinc plating, Black chromate finish
Coupling ring	Aluminum alloy/Zinc plating, Black chromate finish
Retaining ring	Copper alloy/Zinc plating, Olive drab chromate finish
Ground tab	Copper alloy/Silver plating
Gasket	Synthetic rubber/Black

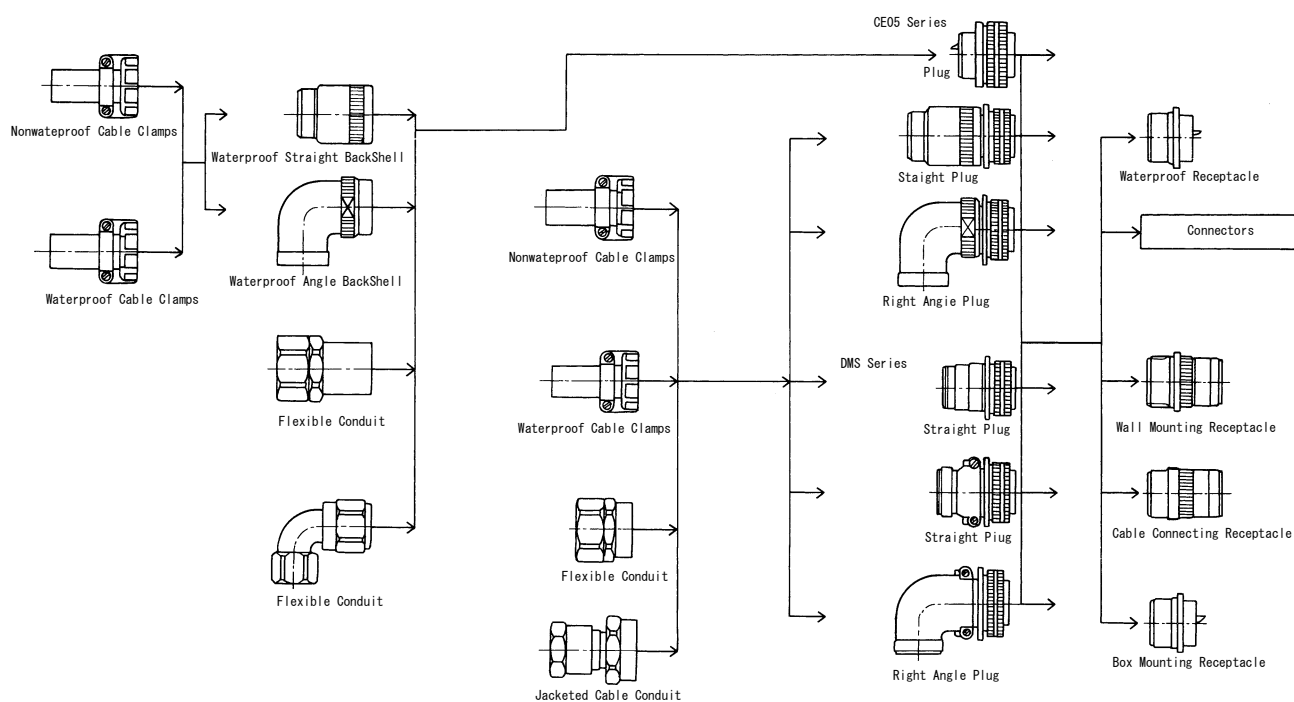
Wire Size

Contact Size	Wire Size
#16	AWG#22-#16
#12	AWG#14-#12
#8	AWG#10-#8
#4	AWG#6-#4

Specification

Current rating	Contact size	#16	#2	#8	#4
	Max. value per contact	13A	23A	46A	80A
Dielectric withstanding voltage	AC (rms), 1minute	2000V, 2800V or 3000V			
Insulation resistance	5000M Ω Min. at 500V DC				
Operating temperature	-55°C to +125°C				

Connection

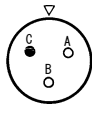
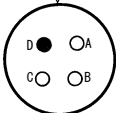
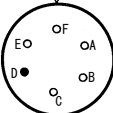
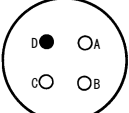
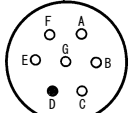


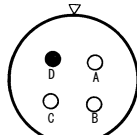
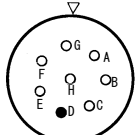
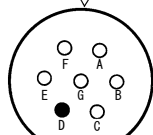
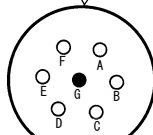
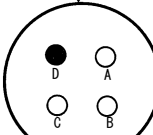
CE05 Series

List of CE05 Series

Insert No.	Receptacle	Plug	Note	Waterproof Cable Clamp or Conduit
10SL-3	CE05-2A10SL-3PC-B	CE05-6A10SL-3SC-B	Without BackShell Type	For Conduit
		CE05-6A10SL-3SC-B-BSS	Straight BackShell Type	CE3057-4A-1 (D265)
		CE05-8A10SL-3SC-B-BAS	Angle BackShell Type	
18-10	CE05-2A18-10PD-B	CE05-6A18-10SD-B	Without BackShell Type	For Conduit
		CE05-6A18-10SD-B-BSS	Straight BackShell Type	CE3057-10A-□ (D265)
		CE05-8A18-10SD-B-BAS	Angle BackShell Type	
18-12	CE05-2A18-12PD-B	CE05-6A18-12SD-B	Without BackShell Type	For Conduit
		CE05-6A18-12SD-B-BSS	Straight BackShell Type	CE3057-10A-□ (D265)
		CE05-8A18-12SD-B-BAS	Angle BackShell Type	
20-4	CE05-2A20-4PD-B	CE05-6A20-4SD-B	Without BackShell Type	For Conduit
		CE05-6A20-4SD-B-BSS	Straight BackShell Type	CE3057-12A-□ (D265)
		CE05-8A20-4SD-B-BAS	Angle BackShell Type	
20-15	CE05-2A20-15PD-B	CE05-6A20-15SD-B	Without BackShell Type	For Conduit
		CE05-6A20-15SD-B-BSS	Straight BackShell Type	CE3057-12A-□ (D265)
		CE05-8A20-15SD-B-BAS	Angle BackShell Type	
22-22	CE05-2A22-22PD-B	CE05-6A22-22SD-B	Without BackShell Type	For Conduit
		CE05-6A22-22SD-B-BSS	Straight BackShell Type	CE3057-12A-□ (D265)
		CE05-8A22-22SD-B-BAS	Angle BackShell Type	
22-23	CE05-2A22-23PD-B	CE05-6A22-23SD-B	Without BackShell Type	For Conduit
		CE05-6A22-23SD-B-BSS	Straight BackShell Type	CE3057-12A-□ (D265)
		CE05-8A22-23SD-B-BAS	Angle BackShell Type	
24-10 (D)	CE05-2A24-10PD-B	CE05-6A24-10SD-B	Without BackShell Type	For Conduit
		CE05-6A24-10SD-B-BSS	Straight BackShell Type	CE3057-16A-□ (D265)
		CE05-8A24-10SD-B-BAS	Angle BackShell Type	
24-10 (G)	CE05-2A24-10PG-B	CE05-6A24-10SG-B	Without BackShell Type	For Conduit
		CE05-6A24-10SG-B-BSS	Straight BackShell Type	CE3057-16A-□ (D265)
		CE05-8A24-10SG-B-BAS	Angle BackShell Type	
32-17	CE05-2A32-17PD-B	CE05-6A32-17SD-B	Without BackShell Type	For Conduit
		CE05-6A32-17SD-B-BSS	Straight BackShell Type	CE3057-20A-1 (D265)
		CE05-8A32-17SD-B-BAS	Angle BackShell Type	

Insert Arrangements

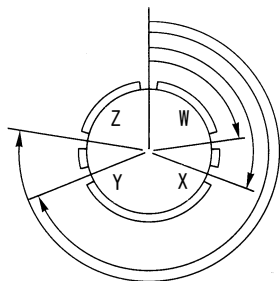
Insert No.	10SL-3	18-10	18-12	20-4	20-15
Arrangements					
Contact Size	#16	#12	#16	#12	#12
No. of Contacts	3	4	6	4	7
Premating Contact Position	C Terminal	D Terminal	D Terminal	D Terminal	D Terminal
Voltage Rating	200V AC (rms)	250V AC (rms)	250V AC (rms)	250V AC (rms)	250V AC (rms)
Withstanding Voltage	2000V AC (rms)	3000V AC (rms)	2000V AC (rms)	2800V AC (rms)	2000V AC (rms)
Current Capacity	13A (29.2A)	23A (62.5A)	13A (43.6A)	23A (62.5A)	23A (83.7A)

Insert No.	22-22	22-23	24-10 (D)	24-10 (G)	32-17
Arrangements					
Contact Size	#8	#12	#8	#8	#4
No. of Contacts	4	8	7	7	4
Premating Contact Position	D Terminal	D Terminal	D Terminal	G Terminal	D Terminal
Voltage Rating	250V AC (rms)	250V AC (rms)	250V AC (rms)	250V AC (rms)	250V AC (rms)
Withstanding Voltage	3000V AC (rms)	2000V AC (rms)	2000V AC (rms)	2000V AC (rms)	2800V AC (rms)
Current Capacity	46A (125.1A)	23A (90.1A)	46A (167.4A)	46A (167.4A)	80A (217.6A)

Note 1) The above figures show the views from solder cup side of CE02-6A plug connectors (socket insert).
 2) Current capacities show the maximum permitted current values per contact.

CE05 Series

Alternate Insert Positions



Front View of Socket Insert

Insert No.	Contact size/ Number	W	X	Y	Z
10SL-3	#16/3	—	—	—	—
18-10	#12/4	—	120°	240°	—
18-12	#16/6	80°	—	—	280°
20-4	#12/4	45°	110°	250°	—
20-15	#12/7	80°	—	—	280°
22-22	#8/4	—	110°	250°	—
22-23	#12/8	35°	—	250°	—
24-10	#8/7	80°	—	—	280°
32-17	#4/4	45°	110°	250°	—

■ Receptacle

CE05-2A18-10PDYS-B

SHELL STYLE

2A : Box Mounting Receptacle

SHELL SIZE

10SL, 18, 20, 22, 24, 32

INSERT ARRANGEMENT

See page 4

CONTACT STYLE

P : Pin

SHELL COLOR

B : Black

FLANGE GASKET

Omit : Less Gasket

S : With Gasket

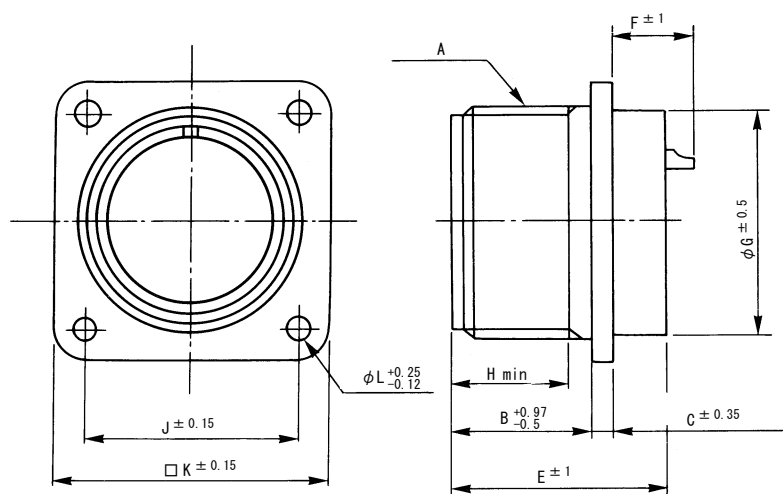
ALTERNATE INSERT POSITION

Omit : Standard position

W,X,Y,Z : Alternate position

PREMATING CONTACT POSITION

Refer to insert arrangements



Part Number	Thread A	B	C	E	F	G	H	J	K	L			
CE05-2A10SL-3PC-B	5⁄8-24UNEF-2A	14.27	2.15	23.50	12.4	16	9.53	18.26	25.4	3.05			
CE05-2A18-10PD-B	1 1⁄8-18UNEF-2A	19.05	2.75	30.50	14.2	27	15.88	26.97	34.9				
CE05-2A18-12PD-B					13.3								
CE05-2A20-4PD-B	1 1⁄4-18UNEF-2A			30.60	14.2	32		29.36	38.1				
CE05-2A20-15PD-B					17.2						33		31.75
CE05-2A22-22PD-B	1 3⁄8-18UNEF-2A			31.50	14.3	34.92		44.4					
CE05-2A22-23PD-B					33.85				15.6		36	44.45	57.2
CE05-2A24-10PD-B	1 1⁄2-18UNEF-2A			20.63									3.74
CE05-2A24-10PG-B													
CE05-2A32-17PD-B	2-18UNS-2A	22.23	3.35	38.15	20.2	48		44.45	57.2	4.40			

CE05 Series

Plug

CE05-6A 18-10SDY-B-BSS

SHELL STYLE
6A: Straight plug

SHELL SIZE
10SL, 18, 20, 22, 24, 32

INSERT ARRANGEMENT
See page 4

CONTACT STYLE
S: Socket

CONNECTOR STYLE
Omit: Without BackShell (For Conduit)
BSS: Straight Plug
(With Straight BackShell)
BAS: Right Angle Plug
(With Right Angle BackShell)

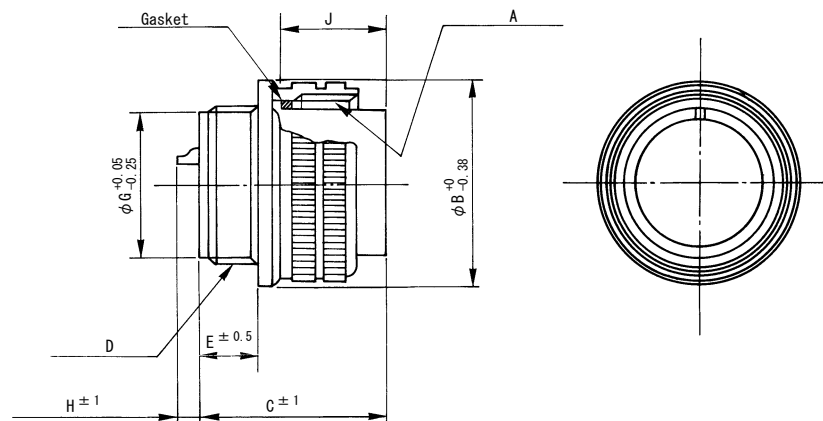
SHELL COLOR
B : Black

ALTERNATE INSERT POSITION
Omit: Standard position
W, X, Y, Z: Alternate Position

PREMATING CONTACT POSITION
Refer to insert arrangements

Plug

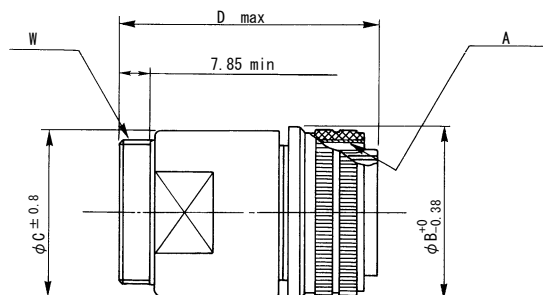
CE05-6A□□-□□S□-B



Part Number	Coupling Threads A	B	C	Pear Threads D	E	G	H	J
CE05-6A10SL-3SC-B	$\frac{5}{8}$ -24UNEF-2B	22.22	23.3	$\frac{9}{16}$ -24UNEF-2A	7.50	12.5	5.6	13.2
CE05-6A18-10SD-B	$1 \frac{1}{8}$ -18UNEF-2B	34.13	33.7	1-20UNEF-2A	11.74	23.5	6.4	19.0
CE05-6A18-12SD-B	$1 \frac{1}{8}$ -18UNEF-2B	34.13	33.7	1-20UNEF-2A	11.74	23.5	5.6	
CE05-6A20-4SD-B	$1 \frac{1}{4}$ -18UNEF-2B	37.28	34.1	$1 \frac{1}{8}$ -18UNEF-2A	12.16	26.8	6.0	
CE05-6A20-15SD-B	$1 \frac{1}{4}$ -18UNEF-2B	37.28	34.1	$1 \frac{1}{8}$ -18UNEF-2A	12.16	26.8	6.0	
CE05-6A22-22SD-B	$1 \frac{3}{8}$ -18UNEF-2B	40.48	34.1	$1 \frac{1}{4}$ -18UNEF-2A	14.65	29.9	9.3	
CE05-6A22-23SD-B	$1 \frac{3}{8}$ -18UNEF-2B	40.48	34.1	$1 \frac{1}{4}$ -18UNEF-2A	14.65	29.9	6.1	19.4
CE05-6A24-10SD-B	$1 \frac{1}{2}$ -18UNEF-2B	43.63	36.6	$1 \frac{3}{8}$ -18UNEF-2A	13.42	32.9	6.8	
CE05-6A24-10SG-B	$1 \frac{1}{2}$ -18UNEF-2B	43.63	36.6	$1 \frac{3}{8}$ -18UNEF-2A	13.42	32.9	6.8	
CE05-6A32-17SD-B	2-18UNS-2B	56.33	37.0	$1 \frac{7}{8}$ -16UN-2A	13.14	45.3	9.2	

Straight Plug

CE05-6A□□-□□S□-B-BSS



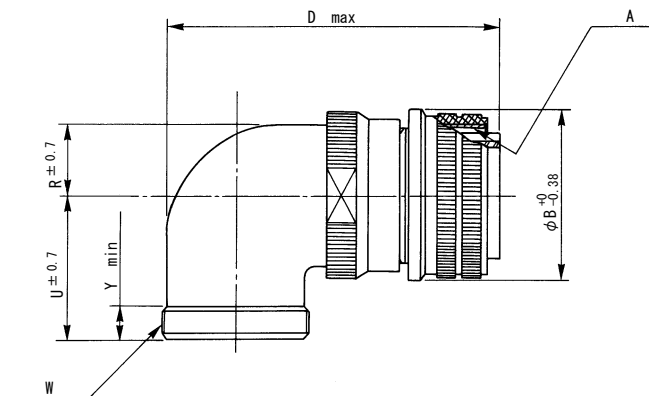
Part Number	Coupling Threads A	B	C	D	Rear Threads W
CE05-6A10SL-3SC-B-BSS	$\frac{5}{8}$ -24UNEF-2B	22.22	18.6	40	$\frac{5}{8}$ -24UNEF-2A
CE05-6A18-10SD-B-BSS	$1 \frac{1}{8}$ -18UNEF-2B	34.13	32.1	57	1-20UNEF-2A
CE05-6A18-12SD-B-BSS					
CE05-6A20-4SD-B-BSS	$1 \frac{1}{4}$ -18UNEF-2B	37.28	35.2	61	$1 \frac{3}{16}$ -18UNEF-2A
CE05-6A20-15SD-B-BSS					
CE05-6A22-22SD-B-BSS	$1 \frac{3}{8}$ -18UNEF-2B	40.48	38.3	68	$1 \frac{7}{16}$ -18UNEF-2A
CE05-6A22-23SD-B-BSS					
CE05-6A24-10SD-B-BSS	$1 \frac{1}{2}$ -18UNEF-2B	43.63	42.0	79	$1 \frac{3}{4}$ -18UNS-2A
CE05-6A24-10SG-B-BSS					
CE05-6A32-17SD-B-BSS	2-18UNS-2B	56.33	54.2	79	$1 \frac{3}{4}$ -18UNS-2A

CE05 Series

Unit : mm

Right Angle Plug

CE05-8A□□-□□S□-B-BAS



Part Number	Coupling Threads A	B	D	Rear Threads W	R	U	Y
CE05-8A10SL-3SC-B-BAS	5/8-24UNEF-2B	22.22	47.8	5/8-24UNEF-2A	7.9	21.0	7.5
CE05-8A18-10SD-B-BAS	1 1/8-18UNEF-2B	34.13	69.5	1-20UNEF-2A	13.2	30.2	
CE05-8A18-12SD-B-BAS							
CE05-8A20-4SD-B-BAS	1 1/4-18UNEF-2B	37.28	75.5	1 3/16-18UNEF-2A	15.0	33.3	
CE05-8A20-15SD-B-BAS							
CE05-8A22-22SD-B-BAS	1 3/8-18UNEF-2B	40.48			16.3		
CE05-8A22-23SD-B-BAS							
CE05-8A24-10SD-B-BAS	1 1/2-18UNEF-2B	43.63	86.3	1 7/16-18UNEF-2A	18.2	36.5	
CE05-8A24-10SG-B-BAS							
CE05-8A32-17SD-B-BAS	2-18UNS-2B	56.33	93.5	1 3/4-18UNS-2A	24.6	44.5	8.5

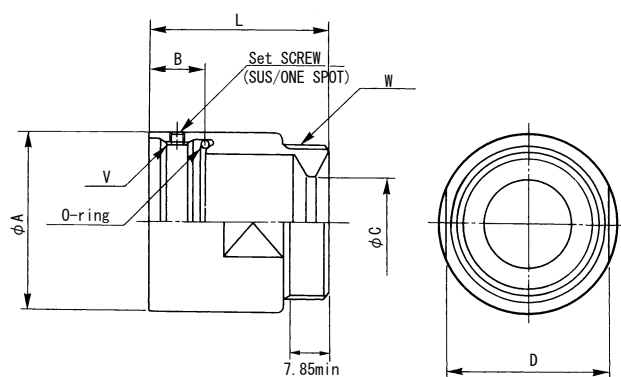
■ Accessories

Waterproof Straight BackShell

CE05-□□BS-S-B

Material/Finish···Aluminum alloy/Black chromate finish

CE05-□□BS-S-B is a waterproof backshell to hold a length of cable when no conduit is used.



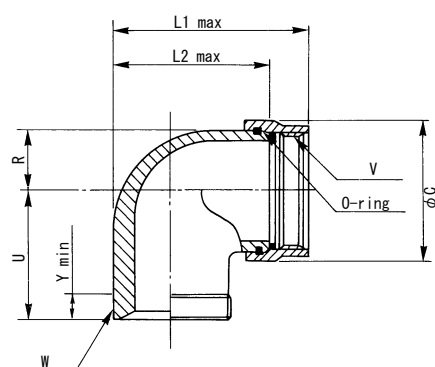
Shell Size	Part Number	L	A	B	C	D	Threads V	Threads W
10SL	CE05-10SLBS-S-B	20.0	18.6	6.5	6.6	17.9	$\frac{9}{16}$ -24UNEF-2B	$\frac{5}{8}$ -24UNEF-2A
18	CE05-18BS-S-B	31.0	32.1	10.5	16.3	26.7	1-20UNEF-2B	1-20UNEF-2A
20	CE05-20BS-S-B	35.0	35.2	10.9	17.8	31.6	1 $\frac{1}{8}$ -18UNEF-2B	1 $\frac{3}{16}$ -18UNEF-2A
22	CE05-22BS-S-B	35.0	38.3	10.9	17.8	32.4	1 $\frac{1}{4}$ -18UNEF-2B	1 $\frac{3}{16}$ -18UNEF-2A
24	CE05-24BS-S-B	40.5	42.0	12.2	21.0	36.6	1 $\frac{3}{8}$ -18UNEF-2B	1 $\frac{7}{16}$ -18UNEF-2A
32	CE05-32BS-S-B	46.0	54.2	11.7	25.8	47.3	1 $\frac{7}{8}$ -16UN-2B	1 $\frac{3}{4}$ -18UNS-2A

Waterproof Angle BackShell

CE-□□BA-S (D265)

Material/Finish···Aluminum alloy/Black chromate finish

CE-□□BA-S (D265) is a waterproof backshell to hold a length of cable at right angle when no conduit is used.



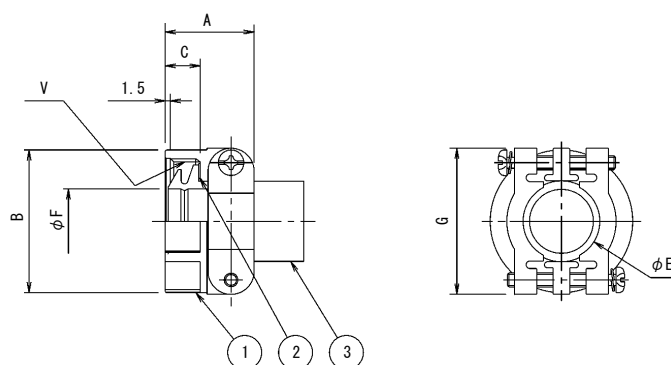
Shell Size	Part Number	L1	L2	C	R	U	Threads V	Threads W	Y
10SL	CE-10SLBA-S (D265)	30.6	22.5	21.7	7.9	21.0	$\frac{9}{16}$ -24UNEF-2B	$\frac{5}{8}$ -24UNEF-2A	7.5
18	CE-18BA-S (D265)	44.6	34.0	32.4	13.2	30.2	1-20UNEF-2B	1-20UNEF-2A	7.5
20	CE-20BA-S (D265)	50.5	39.6	36.0	15.0	33.3	1 $\frac{1}{8}$ -18UNEF-2B	1 $\frac{3}{16}$ -18UNEF-2A	7.5
22	CE-22BA-S (D265)	50.5	39.6	38.6	16.3	33.3	1 $\frac{1}{4}$ -18UNEF-2B	1 $\frac{3}{16}$ -18UNEF-2A	7.5
24	CE-24BA-S (D265)	60.1	47.9	42.4	18.2	36.5	1 $\frac{3}{8}$ -18UNEF-2B	1 $\frac{7}{16}$ -18UNEF-2A	7.5
32	CE-32BA-S (D265)	69.1	55.1	55.3	24.6	44.5	1 $\frac{7}{8}$ -16UN-2B	1 $\frac{3}{4}$ -18UNS-2A	8.5

Waterproof Cable Clamps

CE3057-□□A-□ (D265)

Material/Finish ·····Aluminium alloy/Zinc Plating.
Black chromate finish

CE3057-□□A-□ (D265) is a waterproof cable clamp for use with a plug. The cable clamp body is the DMS3057-□□A that has a waterproof rubber bushing. Therefore, be sure to use a jacketed cable meeting one of the applicable cable size ranges as shown. The cable clamp should be used together with a waterproof backshell.



Part Number	Shell Size	A	B	F	G	Threads V	Bushing Part Number	Cable Outer Diameter
CE3057-4A-1 (D265)	10SL	20.6	20.6	5.6	22.2	$\frac{5}{8}$ -24UNEF-2B	CE3420-4-1	3.6~ 5.6
CE3057-10A-1 (D265)	18	23.8	30.1	14.1	31.7	1-20UNEF-2B	CE3420-10-1	10.5~14.1
CE3057-10A-2 (D265)				11.0			CE3420-10-2	8.5~11.0
CE3057-10A-3 (D265)				8.7			CE3420-10-3	5.5~ 9.7
CE3057-12A-1 (D265)	20, 22	23.8	35.0	16.0	37.3	$1\frac{3}{16}$ -18UNEF-2B	CE3420-12-1	12.5~16.0
CE3057-12A-2 (D265)				13.0			CE3420-12-2	9.5~13.0
CE3057-12A-3 (D265)				10.0			CE3420-12-3	6.8~10.0
CE3057-16A-1 (D265)	24	26.2	42.1	19.1	42.9	$1\frac{7}{16}$ -18UNEF-2B	CE3420-16-1	15.0~19.1
CE3057-16A-2 (D265)				15.5			CE3420-16-2	13.0~15.5
CE3057-20A-1 (D265)	32	27.8	51.6	23.8	51.6	$1\frac{3}{4}$ -18UNEF-2B	CE3420-20-1	22.0~23.8

CE05 Series

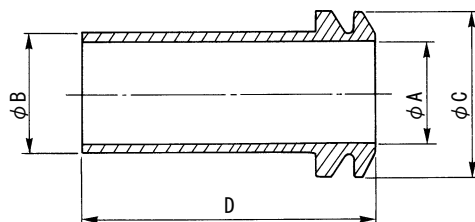
Unit : mm

Bushing

CE3420-□□-□

Material/Finish·····Synthetic rubber (Black)

CE3420-□□-□ is the bushing used on cable clamp part number CE3057-□□A-□ (D265)



Bushing Part Number	A	B	C	D	Applicable Washer
CE3420-4-1	5.6	7.5	11.8	38.4	DMS3057-4W
CE3420-10-1	14.1	15.5	21.6	38.5	DMS3057-10W
CE3420-10-2	11.6				
CE3420-10-3	8.7				
CE3420-12-1	16.0	18.6	25.1	39.3	DMS3057-12W
CE3420-12-2	13.0				
CE3420-12-3	10.0				
CE3420-16-1	19.1	23.4	30.5	40.0	DMS3057-16W
CE3420-16-2	15.5				
CE3420-20-1	23.8	31.4	38.2	41.0	DMS3057-20W

NOTE : Please place an order for a washer separately from a bushing.

Cap and Chain Assembly (Not Waterproof)

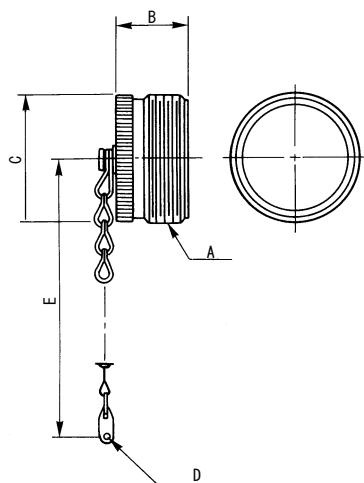
Material/Finish

Cap Aluminum alloy/Black chromate finish

Chain ... Stainless steel

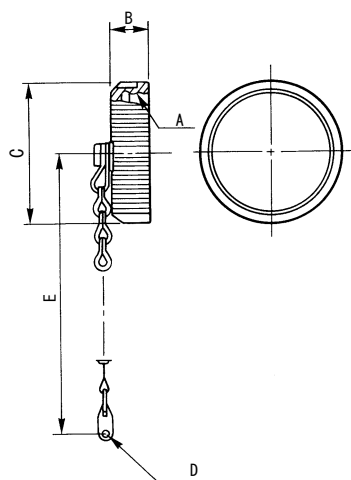
The cap and chain assembly protects the connector joint by preventing the intrusion of dust or other foreign substances that may impair the electrical connection. The cap for the receptacle (DMS25043) comes with a drip-resistant gasket.

DMS25042-□□D (D265) (For Plug)



Part Number	Shell Size	Threads A	B	C	D	E
DMS25042-10D (D265)	10SL	$\frac{5}{8}$ -24UNEF	15.9	15.9	3.9	101
DMS35042-18D (D265)	18	1 $\frac{1}{8}$ -18UNEF	20.7	28.6	3.9	114
DMS25042-20D (D265)	20	1 $\frac{1}{4}$ -18UNEF	20.7	31.8	4.7	127
DMS25042-22D (D265)	22	1 $\frac{3}{8}$ -18UNEF	20.7	34.9	4.7	127
DMS25042-24D (D265)	24	1 $\frac{1}{2}$ -18UNEF	20.7	38.1	4.7	139
DMS25042-32D (D265)	32	2-18UNS	20.7	50.8	5.5	190

DMS25043-□□D (D265) (For Receptacle)



Part Number	Shell Size	Threads A	B	C	D	E
DMS25043-10D (D265)	10SL	$\frac{5}{8}$ -24UNEF	11.1	19.1	3.3	101
DMS35043-18D (D265)	18	1 $\frac{1}{8}$ -18UNEF	11.1	31.8	3.5	114
DMS25043-20D (D265)	20	1 $\frac{1}{4}$ -18UNEF	11.1	34.9	3.5	127
DMS25043-22D (D265)	22	1 $\frac{3}{8}$ -18UNEF	11.1	38.1	3.5	127
DMS25043-24D (D265)	24	1 $\frac{1}{2}$ -18UNEF	11.1	42.9	4.3	139
DMS25043-32D (D265)	32	2-18UNEF	12.7	55.6	4.7	190