

# 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 pre-mating 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.

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### 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

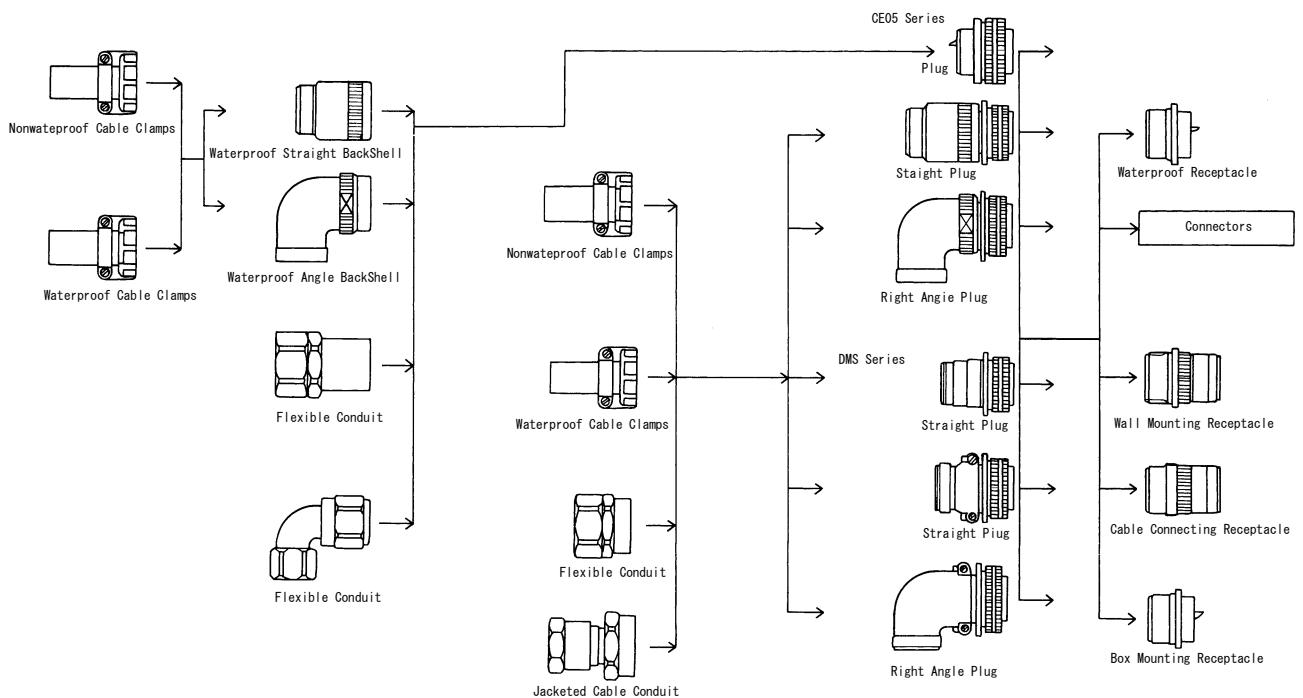
Contact Size	Wire Size
#16	AWG#22-#16
#12	AWG#14-#12
#8	AWG#10-#8
#4	AWG#6-#4

## Specification

Current rating	Contact size	#16	#2	#8	#4
	Max. value per contact		13A	23A	46A
Dielectric withstanding voltage	AC (rms), 1minute	1000V, 2000V, 2800V or 3000V			
Insulation resistance	5000M $\Omega$ Min. at 500V DC				
Operating temperature	-55 $^{\circ}$ C to +125 $^{\circ}$ C				

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## 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 Back Shell Type	For Conduit
		CE05-6A10SL-3SC-B-BSS	Straight Back Shell Type	CE3057-4A-1 (D265)
		CE05-8A10SL-3SC-B-BAS	Angle Back Shell Type	
18-10	CE05-2A18-10PD-B	CE05-6A18-10SD-B	Without Back Shell Type	For Conduit
		CE05-6A18-10SD-B-BSS	Straight Back Shell Type	CE3057-10A-□ (D265)
		CE05-8A18-10SD-B-BAS	Angle Back Shell Type	
18-12	CE05-2A18-12PD-B	CE05-6A18-12SD-B	Without Back Shell Type	For Conduit
		CE05-6A18-12SD-B-BSS	Straight Back Shell Type	CE3057-10A-□ (D265)
		CE05-8A18-12SD-B-BAS	Angle Back Shell Type	
20-4	CE05-2A20-4PD-B	CE05-6A20-4SD-B	Without Back Shell Type	For Conduit
		CE05-6A20-4SD-B-BSS	Straight Back Shell Type	CE3057-12A-□ (D265)
		CE05-8A20-4SD-B-BAS	Angle Back Shell Type	
20-15	CE05-2A20-15PD-B	CE05-6A20-15SD-B	Without Back Shell Type	For Conduit
		CE05-6A20-15SD-B-BSS	Straight Back Shell Type	CE3057-12A-□ (D265)
		CE05-8A20-15SD-B-BAS	Angle Back Shell Type	
22-22	CE05-2A22-22PD-B	CE05-6A22-22SD-B	Without Back Shell Type	For Conduit
		CE05-6A22-22SD-B-BSS	Straight Back Shell Type	CE3057-12A-□ (D265)
		CE05-8A22-22SD-B-BAS	Angle Back Shell Type	
22-23	CE05-2A22-23PD-B	CE05-6A22-23SD-B	Without Back Shell Type	For Conduit
		CE05-6A22-23SD-B-BSS	Straight Back Shell Type	CE3057-12A-□ (D265)
		CE05-8A22-23SD-B-BAS	Angle Back Shell Type	
24-10 (D)	CE05-2A24-10PD-B	CE05-6A24-10SD-B	Without Back Shell Type	For Conduit
		CE05-6A24-10SD-B-BSS	Straight Back Shell Type	CE3057-16A-□ (D265)
		CE05-8A24-10SD-B-BAS	Angle Back Shell Type	
24-10 (G)	CE05-2A24-10PG-B	CE05-6A24-10SG-B	Without Back Shell Type	For Conduit
		CE05-6A24-10SG-B-BSS	Straight Back Shell Type	CE3057-16A-□ (D265)
		CE05-8A24-10SG-B-BAS	Angle Back Shell Type	
32-17	CE05-2A32-17PD-B	CE05-6A32-17SD-B	Without Back Shell Type	For Conduit
		CE05-6A32-17SD-B-BSS	Straight Back Shell Type	CE3057-20A-1 (D265)
		CE05-8A32-17SD-B-BAS	Angle Back Shell 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)

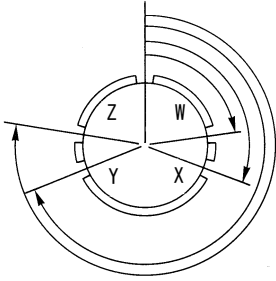
  

Insert No.	22-22	22-23	24-10 (D)	24-10 (G)	32-17
Arrangements					
Contact Size	#8	#12	#8	#8	#4
No. of Contacts	4	8	7	7	4
Premating Contact Position	D Terminal	D Terminal	D Terminal	G Terminal	D Terminal
Voltage Rating	250V AC (rms)	250V AC (rms)	250V AC (rms)	250V AC (rms)	250V AC (rms)
Withstanding 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

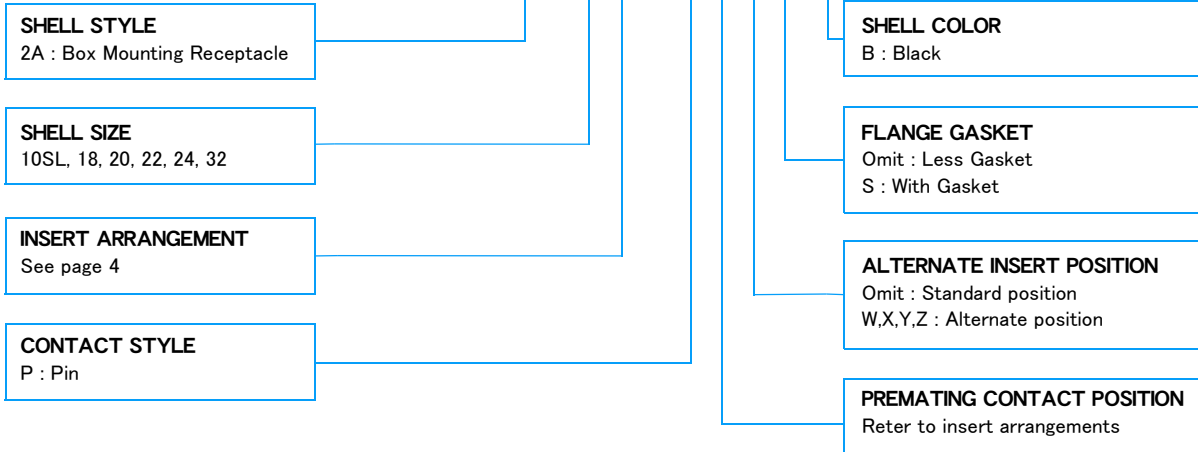


Front View of Socket Insert

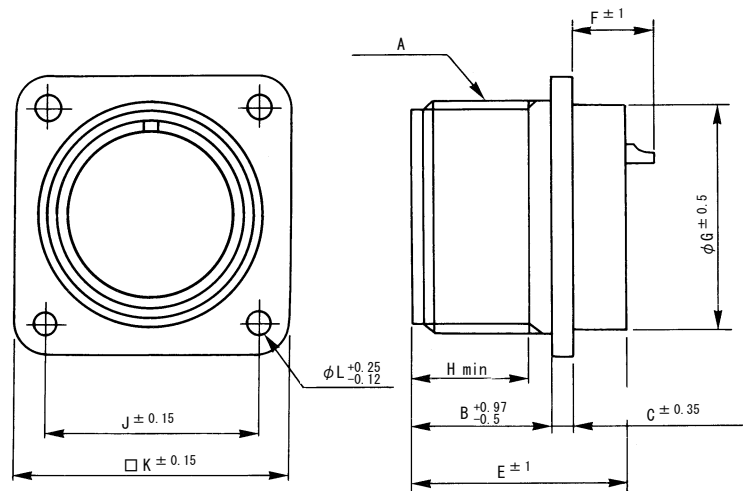
Insert No.	Contact size/ Number	W	X	Y	Z
10SL-3	#16/3	—	—	—	—
18-10	#12/4	—	120°	240°	—
18-12	#16/6	80°	—	—	280°
20-4	#12/4	45°	110°	250°	—
20-15	#12/7	80°	—	—	280°
22-22	#8/4	—	110°	250°	—
22-23	#12/8	35°	—	—	—
24-10	#8/7	80°	—	—	280°
32-17	#4/4	45°	110°	250°	—

## ■ Receptacle

### CE05-2A 18-10 PDYS-B



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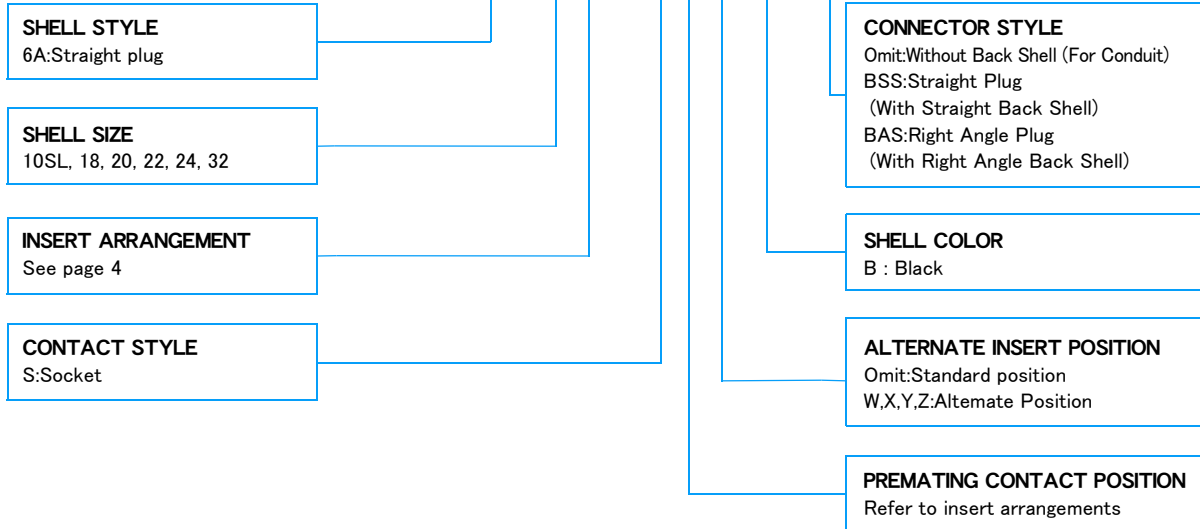


P/N	Thread A	B	C	E	F	G	H	J	K	L
CE05-2A10SL-3PC-B	5/8-24UNEF-2A	14.27	2.15	23.50	12.4	16	9.53	18.26	25.4	3.05
CE05-2A18-10PD-B	1 1/8-18UNEF-2A	19.05	2.75	30.50	14.2	27	15.88	26.97	34.9	
CE05-2A18-12PD-B					13.3					
CE05-2A20-4PD-B	1 1/4-18UNEF-2A	19.05	2.75	30.60	14.2	32	15.88	29.36	38.1	
CE05-2A20-15PD-B					17.2					
CE05-2A22-22PD-B	1 3/8-18UNEF-2A	19.05	2.75	31.50	14.3	33	15.88	31.75	41.3	
CE05-2A22-23PD-B					17.2					
CE05-2A24-10PD-B	1 1/2-18UNEF-2A	20.63	3.35	33.85	15.6	36	15.88	34.92	44.4	
CE05-2A24-10PG-B					14.3					
CE05-2A32-17PD-B	2-18UNS-2A	22.23	3.35	38.15	20.2	48	15.88	44.45	57.2	

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## Plug

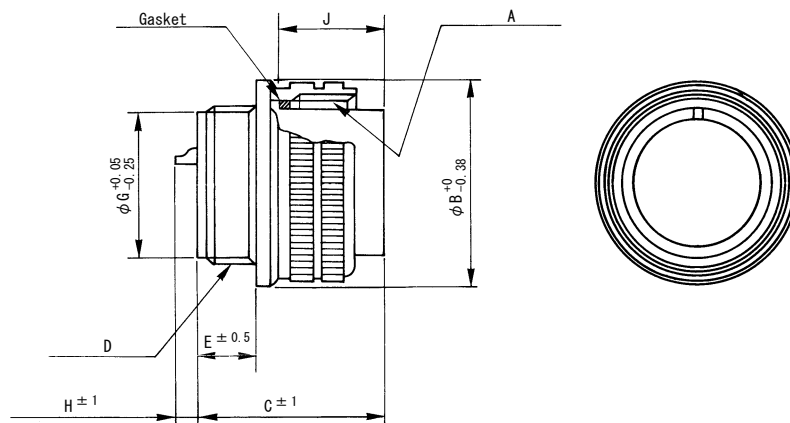
### CE05-6A 18-10SDY-B-BSS



## Plug

### CE05-6A□□-□□S□-B

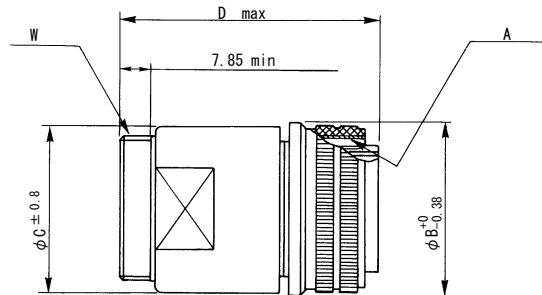
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P/N	Coupling Threads A	B	C	Pair Threads D	E	G	H	J
CE05-6A10SL-3SC-B	5/8-24UNEF-2B	22.22	23.3	9/16-24UNEF-2A	7.50	12.5	5.6	13.2
CE05-6A18-10SD-B	1 1/8-18UNEF-2B	34.13	33.7	1-20UNEF-2A	11.74	23.5	6.4	19.0
CE05-6A18-12SD-B							5.6	
CE05-6A20-4SD-B	1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

## Straight Plug

### CE05-6A□□-□□S□-B-BSS



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

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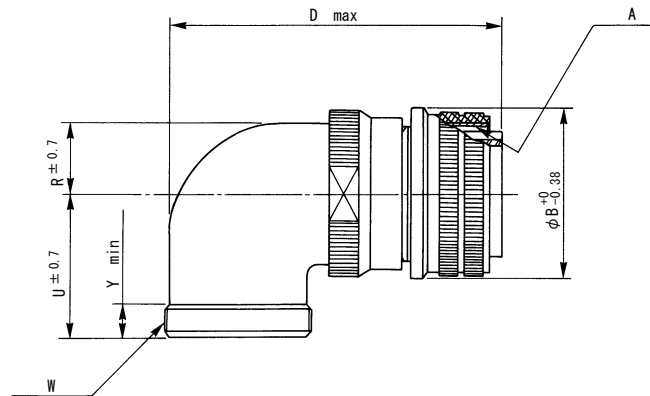


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Unit : mm

## Right Angle Plug

### CE05-8A□□-□□S□-B-BAS



P/N	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		
CE05-8A24-10SD-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

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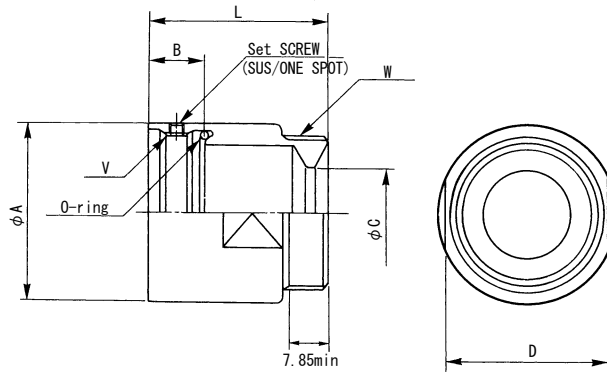
## ■ Accessories

### Waterproof Straight Back Shell

#### 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.



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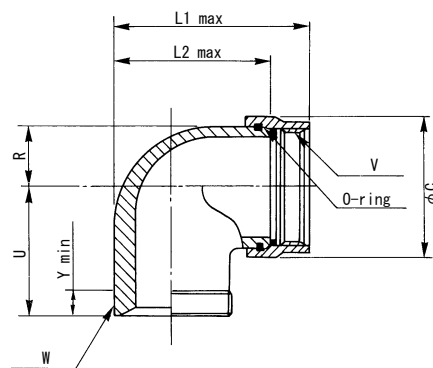
Shell Size	P/N	L	A	B	C	D	Threads V	Threads W
10SL	CE05-10SLBS-S-B	20.0	18.6	6.5	6.6	17.9	9/16-24UNEF-2B	5/8-24UNEF-2A
18	CE05-18BS-S-B	31.0	32.1	10.5	16.3	26.7	1-20UNEF-2B	1-20UNEF-2A
20	CE05-20BS-S-B	35.0	35.2	10.9	17.8	31.6	1 1/8-18UNEF-2B	1 3/16-18UNEF-2A
22	CE05-22BS-S-B	35.0	38.3	10.9	17.8	32.4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

## Waterproof Angle Back Shell

## 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.



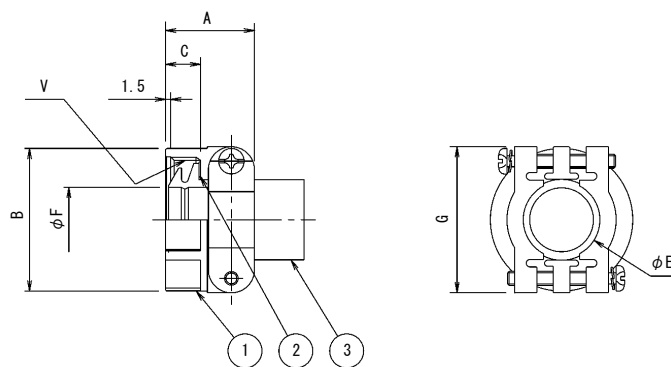
Shell Size	P/N	L1	L2	C	R	U	Threads V	Threads W	Y
10SL	CE-10SLBA-S (D265)	30.6	22.5	21.7	7.9	21.0	9/16-24UNEF-2B	5/8-24UNEF-2A	7.5
18	CE-18BA-S (D265)	44.6	34.0	32.4	13.2	30.2	1-20UNEF-2B	1-20UNEF-2A	7.5
20	CE-20BA-S (D265)	50.5	39.6	36.0	15.0	33.3	1 1/8-18UNEF-2B	1 3/16-18UNEF-2A	7.5
22	CE-22BA-S (D265)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



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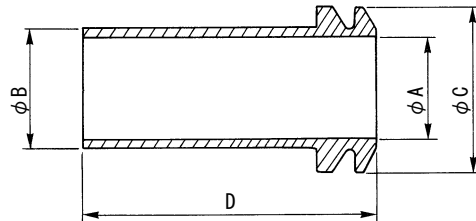
P/N	Shell Size	A	B	F	G	Threads V	Bushing P/N	Cable Outer Diameter
CE3057-4A-1 (D265)	10SL	20.6	20.6	5.6	22.2	$\frac{5}{8}$ -24UNEF-2B	CE3420-4-1	3.6~ 5.6
CE3057-10A-1 (D265)	18	23.8	30.1	14.1	31.7	1-20UNEF-2B	CE3420-10-1	10.5~14.1
CE3057-10A-2 (D265)				11.0			CE3420-10-2	8.5~11.0
CE3057-10A-3 (D265)				8.7			CE3420-10-3	5.5~ 8.7
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

## Bushing

## CE3420-□□-□

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

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



P/N	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)

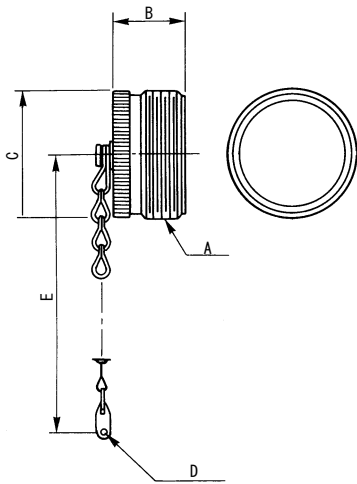
Material/Finish

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.

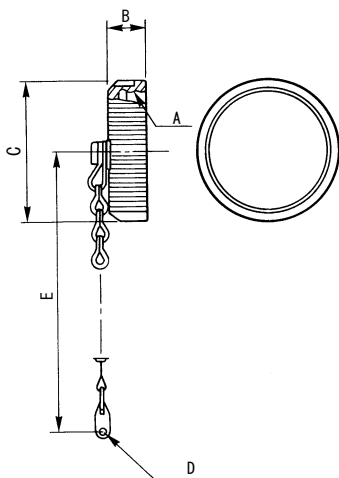
DMS25042-□□D (D265) (For Plug)



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

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DMS25043-□□D (D265) (For Receptacle)



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