

## MABAC Bayonet Coupling

### Description

- **A compact solution**
  - The smallest connector available (shell size 3)
  - Miniaturization of MIL-DTL-38999 Series I
  - Quick bayonet locking
  - Integrated backshell:
    - Easy to wire and handle
    - Compatible with heat shrink boot and braid retention band
    - Compliant with overmolding
- **A versatile solution**
  - 3 shells sizes: 3, 5, 7
  - Plug; In line, Box receptacle, Oval flange and Jam nut receptacle
  - Materials, 3 platings
  - Crimp & PC tails
  - Removable contacts #22D & #26
  - 6 keyway orientations
- **Harsh environment-resistant solution**
  - 100% Scoop proof
  - Cavity to cavity sealed with interfacial seal and grommet
  - Fluid resistant



## Technical Features:

### Materials

- **Shell:**  
Aluminum alloy  
Passivated stainless steel (for size 5 & 7)
- **Shell plating:**  
Aluminum:  
. Zinc nickel (RoHS)  
. Nickel (RoHS)  
. Olive drab cadmium  
Passivated stainless steel (RoHS)
- **Insulator:** Thermoplastic
- **Contact body:** Copper alloy
- **Contacts plating:** Gold over nickel plated
- **Shell endurance:**  
Aluminum:  
250 mating/unmating cycles  
Passivated stainless steel:  
1000 mating/unmating cycles
- **Vibration:**  
30 grms ambient, 2 axes during 8 hours

### Electrical

- **Wire size**

Layout	Wire (AWG)
03-05	24-30
03-35	22-28
05-06	24-30
05-35	22-28
07-09	24-30
07-35	22-28
- **Test voltage (at sea level):**  
Size 22D: 1000 Vrms  
Size 26: 400 Vrms
- **Contact resistance:**  
Size 22D: <14.6 mΩ    Size 26: <16 mΩ
- **Contact rating:**  
Size 22D: 5A    Size 26: 3A
- **Contact retention:**  
Size 22D: 45N  
Size 26: 30N
- **Shell to shell continuity (typical value)**

Shell size	All versions
03	250 mΩ
05	
07	
- **EMI:**  
-55dB @ 1GHz

### Environmental

- **Temperature range:**  
-55°C to +175°C
- **Water immersion:**  
IP 67 on mated connector  
1 meter for 30 min minimum  
> IP68 with appropriate cable termination
- **Salt spray:**  
Zinc nickel: 500 hours  
Nickel: 48 hours  
Olive drab cadmium: 500 hours  
Passivated stainless steel: 500 hours

### Resistance to fluids

- **According to MIL-DTL-38999 standard**  
Gasoline: JP5 (OTAN F44)  
Mineral hydraulic fluid: MIL-H-5606 (OTAN H515)  
Synthetic hydraulic fluid: Skydrol 500 B4
- **Compatible with de-icing fluids containing potassium acetate**

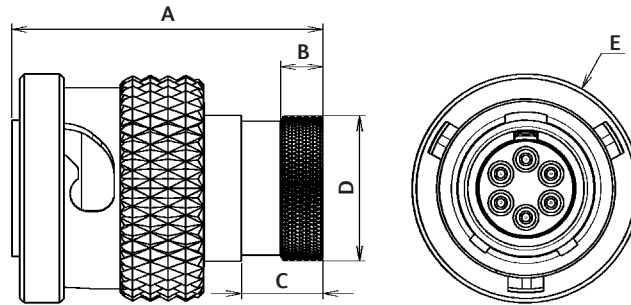
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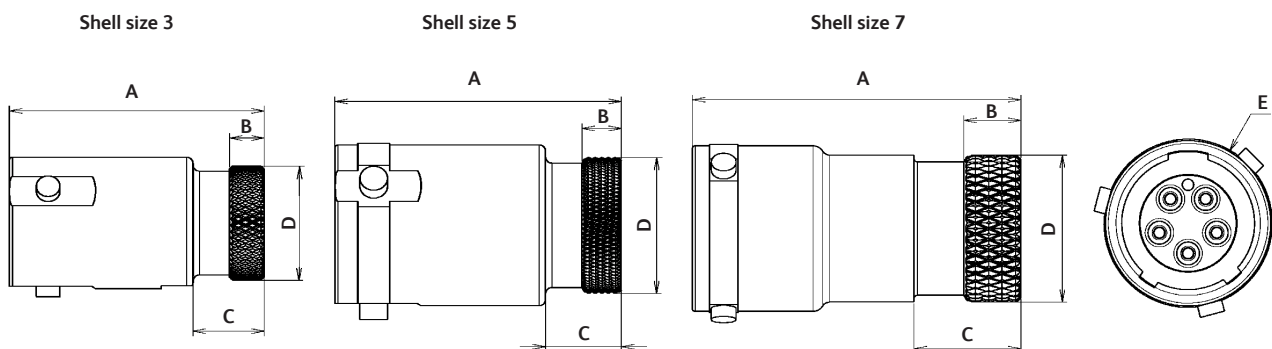
## Dimensions

Plug - Shell type 06



Shell size		A Max	B Max	C Max	Ø D Max	Ø E Max
3	3-05	16.2	2.2±0.15	4.6	7.2	10.5
	3-35	17.5	2.2±0.15	5.9	7.2	10.5
05		18.4	2.5±0.15	4.9	8.55	13.5
07		22.06	3.65±0.15	6.35	10.3	15.06

In line receptacle - Shell type 01



Shell size		A Max	B Max	C Max	Ø D Max	Ø E Max
3	3-05	16.2	2.2±0.15	4.6	7.2	8.3
	3-35	17.5	2.2±0.15	5.9	7.2	8.3
5		18.2	2.5±0.15	4.9	8.55	10.15
7		23.6	4±0.15	7.5	10.3	11.6

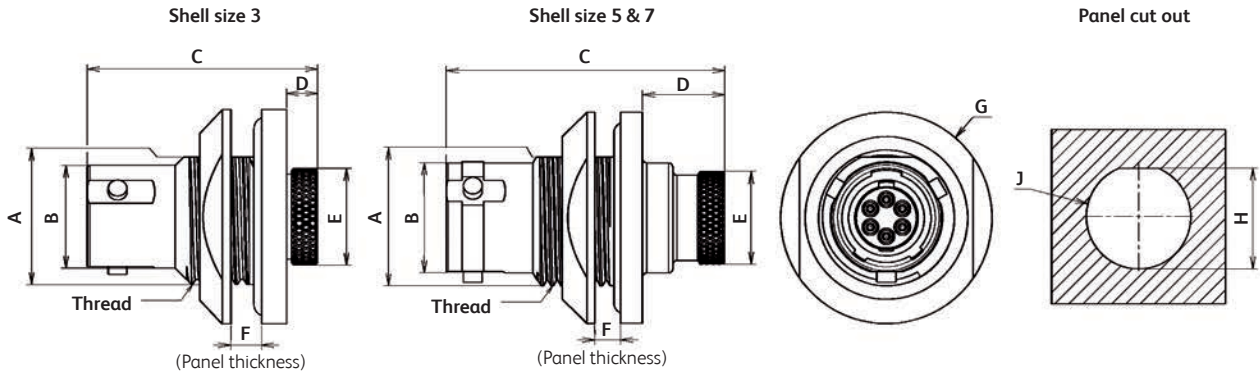
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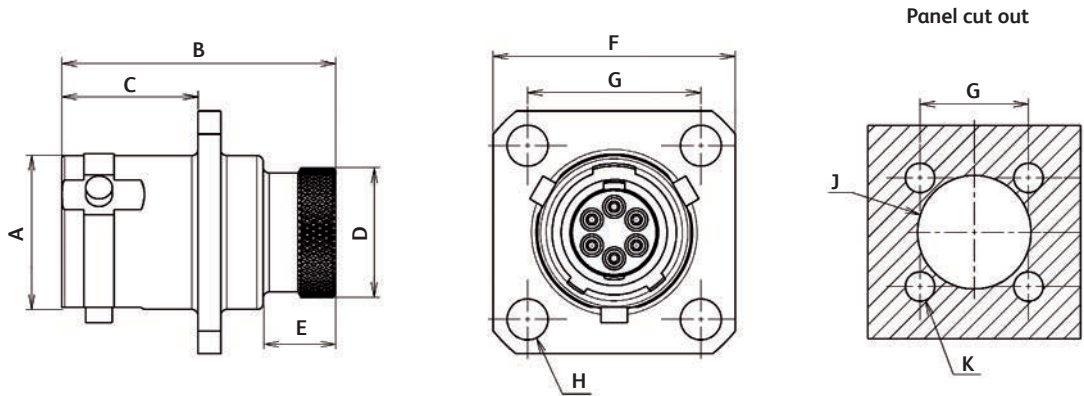


Jam nut receptacle - Shell type 07



Shell size	Thread	A Max	Ø B Max	C Max	D Max	Ø E Max	F Max	Ø G Max	H Max	Ø J Max	
3	3-05	7/16''28 UNEF 2A	10.3	8.3	16.2	2.6	7.8	1 to 3.2	17.3	11.3 <sup>±0.1</sup>	12 <sup>±0.1</sup>
	3-35	7/16''28 UNEF 2A	10.3	8.3	17.5	2.6	7.8	1 to 3.2	17.3	11.3 <sup>±0.1</sup>	12 <sup>±0.1</sup>
5	1/2''28 UNEF 2A	11.7	10.5	25.9	7.7	8.55	1 to 3.2	19.5	13 <sup>±0.1</sup>	13.5 <sup>±0.1</sup>	
7	9/16''24 UNEF 2A	13.4	11.6	33.55	10.4	10.3	1 to 3.2	20.8	14.4 <sup>±0.1</sup>	15.2 <sup>±0.1</sup>	

Box receptacle - Shell type 00



Shell size	Ø A Max	B Max	C Max	Ø D Max	E Max	F Max	G Max	Ø H Max	Ø J Max	Ø K Max	
3	3-05	8.3	16.2	8.7	7.2	4.6	15.5	10.8	2.7 <sup>±0.1</sup>	9.3 <sup>±0.1</sup>	3.1 <sup>±0.1</sup>
	3-35	8.3	17.5	8.7	7.2	5.9	15.5	10.8	2.7 <sup>±0.1</sup>	9.3 <sup>±0.1</sup>	3.1 <sup>±0.1</sup>
5	10.15	18.2	9.05	8.55	4.9	16	11.45	2.7 <sup>±0.1</sup>	12 <sup>±0.1</sup>	3.1 <sup>±0.1</sup>	
7	11.6	23.06	10.8	10.3	7.5	18	12.7	2.7 <sup>±0.1</sup>	13 <sup>±0.1</sup>	3.1 <sup>±0.1</sup>	

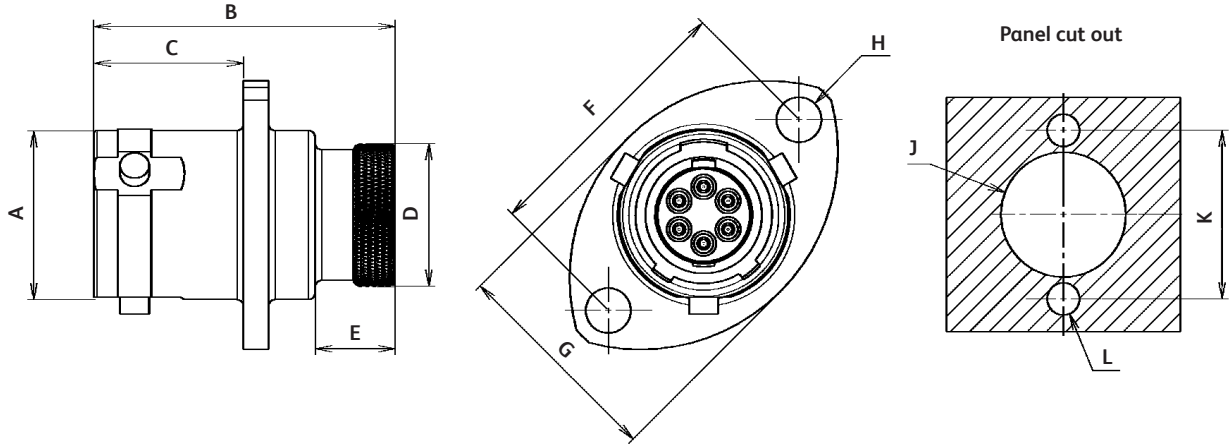
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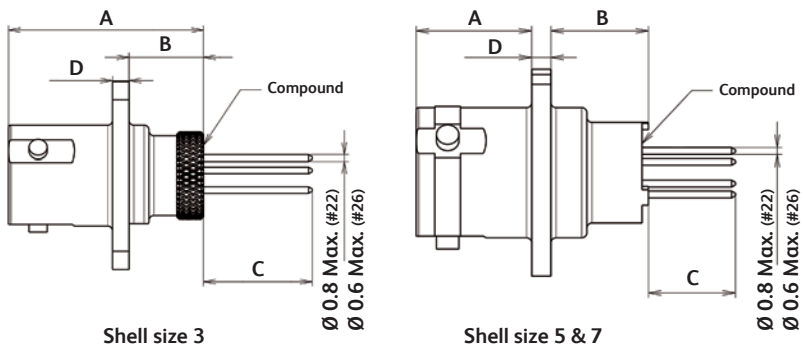


Oval flange receptacle - Shell type 02



Shell size	Ø A Max	B Max	C Max	Ø D Max	E Max	F Max	G Max	Ø H Max	Ø J Max	K Max	Ø L Max	
3	3-05	8.3	16.2	8.7	7.2	4.6	15.3 <sup>±0.2</sup>	10.5 <sup>±0.1</sup>	2.8	9.3 <sup>±0.1</sup>	15.3 <sup>±0.2</sup>	3.1 <sup>±0.1</sup>
	3-35	8.3	17.5	8.7	7.2	5.9	15.3 <sup>±0.2</sup>	10.5 <sup>±0.1</sup>	2.8	9.3 <sup>±0.1</sup>	15.3 <sup>±0.2</sup>	3.1 <sup>±0.1</sup>
5	10.15	18.2	9.05	8.55	4.9	16.2 <sup>±0.2</sup>	13 <sup>±0.1</sup>	2.7	12 <sup>±0.1</sup>	16.2 <sup>±0.2</sup>	3.1 <sup>±0.1</sup>	
7	11.6	23.06	10.8	10.3	7.5	18 <sup>±0.2</sup>	14.8 <sup>±0.1</sup>	2.7	13 <sup>±0.1</sup>	18 <sup>±0.2</sup>	3.1 <sup>±0.1</sup>	

Box receptacle with PC tail contacts - Shell type 90



Layout	A Max.	B Max.	C Min.	C Max.	D Max.
03-05	16.4	6.35	8.75	9.49	1.65
03-35	17.7	7.75	7.40	8.19	1.65
05-06	9.25	7.85	6.54	7.34	1.80
05-35	9.25	7.85	6.47	7.19	1.80
07-09	13.05	7.35	5.80	6.62	2.35
07-35	13.05	7.35	5.53	6.52	2.35

Shell design vary according to shell size.  
For L contact (long PC tail) please consult us.

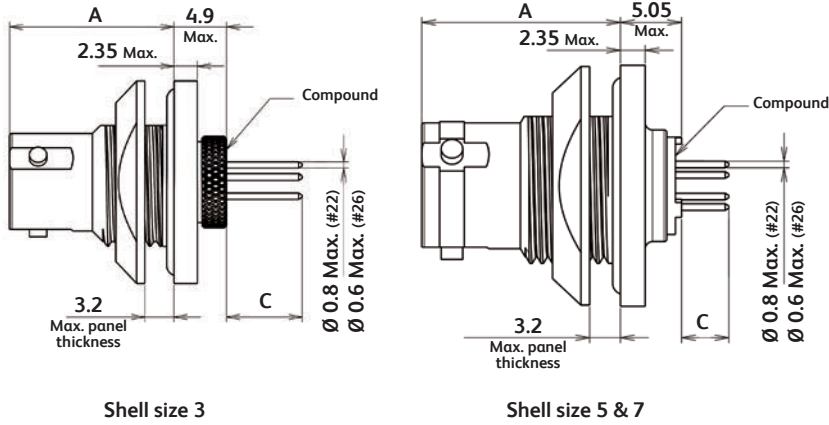
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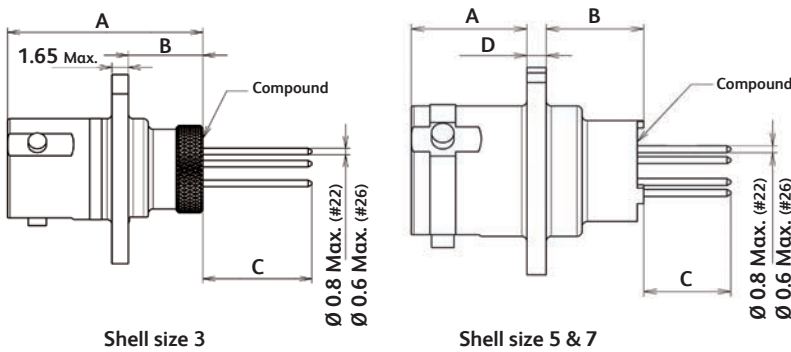
Jam nut receptacle with PC tail contacts - Shell type 97



Layout	A Max.	Short spill C		Long spill L	
		C Min.	C Max.	C Min.	C Max.
03-05	14.4	6.15	7.04	10.65	11.54
03-35	15.7	4.8	5.7	9.3	10.19
05-06	16.4	3.54	4.52	7.99	9.02
05-35	16.4	3.42	4.33	7.92	8.83
07-09	21.3	4.05	5.07	7.60	8.57
07-35	21.3	3.79	4.93	7.29	8.43

Shell design vary according to shell size.  
For L contact (long PC tail) please consult us.

Oval flange receptacle with PC tail contacts - Shell type 92



Layout	A Max.	B Max.	C Min.	C Max.	D Max.
03-05	16.2	6.35	8.75	9.49	-
03-35	17.5	7.75	7.4	8.19	-
05-06	9.25	7.85	6.54	7.34	1.80
05-35	9.25	7.85	6.47	7.19	1.80
07-09	13.05	7.35	5.8	6.62	2.35
07-35	13.05	7.35	5.53	6.52	2.35

Shell design vary according to shell size.  
For L contact (long PC tail) please consult us.

Note: All dimensions are in mm.

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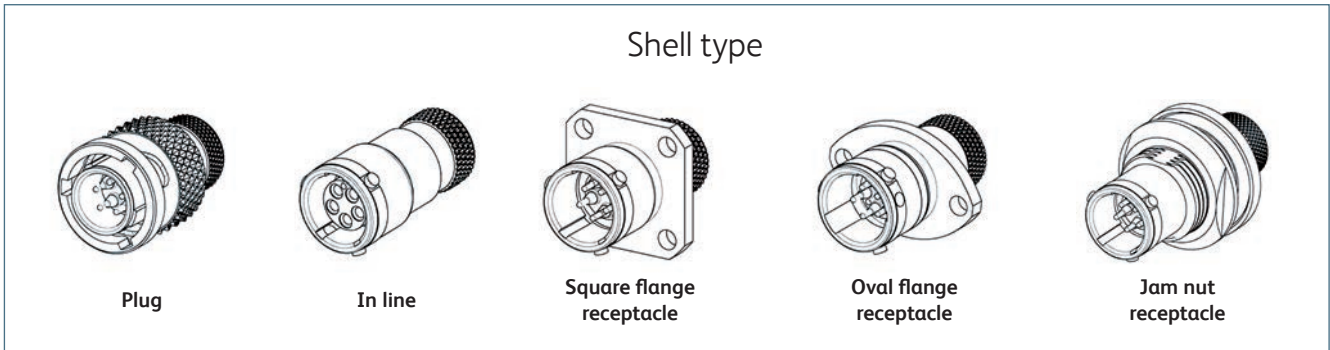
### Ordering information

PCB Contacts	MABAC B	06	W	05	35	P	N	XXX
<b>Shell type:</b>								
06: = Cable Plug								
01: = In-line Receptacle								
00: = Box Receptacle 4 hole								
02: = Oval flange receptacle								
07: = Jam Nut Receptacle								
90: = Square flange receptacle with PCB contacts								
92: = Oval flange receptacle with PCB contacts								
97: = Jam nut receptacle with PCB contacts								
<b>Material and Finish:</b>								
W = Cad								
F = Electroless Nickel								
Z = Zinc Nickel								
K = Stainless Steel								
<b>Shell size:</b> 03, 05, 07								
<b>Insert Arrangement:</b> See contact layouts								
<b>Contact type:</b>								
P = Pin								
S = Socket								
T1 = PCB Tail Short Pin								
T2 = PCB Tail Long Pin								
<b>Orientation :</b>								
Alternative A,B,C,D,E								
<b>Modification code</b>								

#### General Note

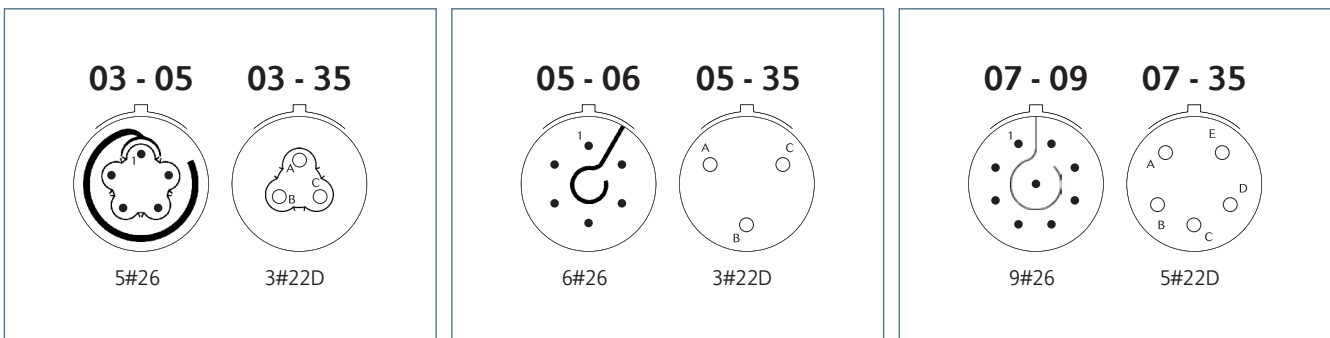
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For other configuration (PC tail, specific jam nut, ...) please consult us.

### Contact layouts



Note: For information only.

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## Connector weights

### Weight

Aluminum version (in gram  $\pm 10\%$ )

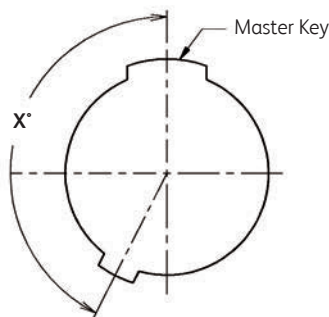
Shell size & layout	Plug		Square flange receptacle	
	Without contacts	With crimp contacts	Without contacts	With crimp contacts
03-05	1.6	1.7	2	2.2
05-35	3	3.3	2.9	3.1
07-35	4.5	4.9	4.2	4.6

## Orientations

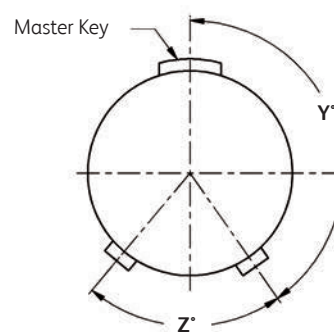
### Orientation - All shell types

#### Plug front face view

Shell size 3



Shell size 5 & 7



Shell size	Angles	N	A	B	C	D	E
3	X°	153	51	102	204	255	306
5 & 7	Y°	145	130	110	155	90	90
	Z°	75	120	120	115	115	180

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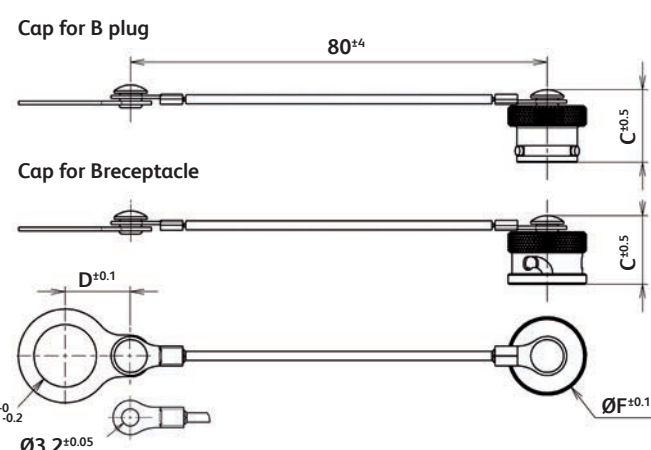




## Caps

<b>Basic Series:</b> B: Cap for B series	<b>MABAC B</b>	<b>32</b>	<b>Z</b>	<b>03</b>	<b>N</b>
<b>Cap type:</b> 32: Cap for plug 33: Cap for receptacle					
<b>Plating:</b> Z: Black zinc nickel F: Nickel W: Olive drab cadmium					
<b>Shell size:</b> 03 - 05 - 07					
<b>Style:</b> N: Ring R: Eyelet					

### Dimensions



Size	C		D	E	F
	Plug	Recep.			
03	14.1	12.1	13.5	11.5	10.4
05	13.7	13.9	14.5	13	13.4
07	14	13.1	15.5	14.5	15.05

Note: for other lanyard length please consult us.

## Gaskets

Shell size	Bayonet Box receptacle	Bayonet oval flange receptacle
3	B0G03	B2G03
	B0G05	B2G05
	B0G07	B2G07

Note: All dimensions are in millimeters (mm).

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