

# MN68 SPECIFICATION

19 January 2015



IOL's **Metal Network 68 Series (MN68)** connectors feature integrated RJ45, USB, 1394 and Mini USB in a standard circular design. Their size and performance both conform to MIL-C-26482 & MIL-DTL-38999.

## Electrical Specs

Operating voltage: 150 V (RJ45)

30 V (USB, Mini USB) 40 V (1394)

Operating current:

1.5 A (RJ45)

1 A (USB, Mini USB) 1.5 A (1394)

Contact resistance:

≤ 20 MΩ (RJ45)

≤ 30 MΩ (USB)

≤ 50 MΩ (1394, Mini USB)

Insulation resistance: ≥ 5000 MΩ

Maximum withstanding voltage:

1000v (RJ45)

500v (USB, Mini USB, 1394)

Data transfer: RJ45:

Loss: 0.3dB (100MHz)

Crosstalk: 40dB (100MHz)

Impedance: 100Ω

Transfer speed: 1000Mbps

USB and 1394:

Conforms to USB2.0 and IEEE1394

## Physical Specs

Temperature Rating: -55°C ~ +125°C

Relative humidity at 40°C: 90% ~ 95%

Vibration: 10 Hz ~ 2000 Hz, acceleration 147 m/s<sup>2</sup>

Shock: 490 m/s<sup>2</sup>

Endurance: ≥ 500 cycles

### IO Lab Corp.

P.O. Box 414, Littleton CO 80160 USA  
 2329 West Main Street, Suite 211, Littleton CO 80120 USA  
 303-347-8150 | Fax 303-347-8160 | <http://www.iolabcorp.com>

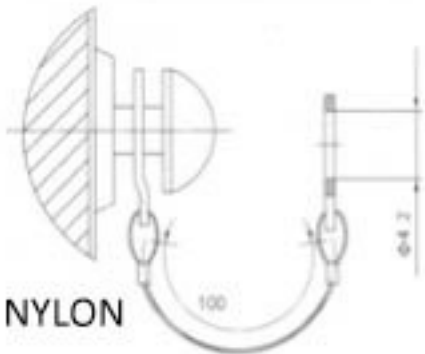
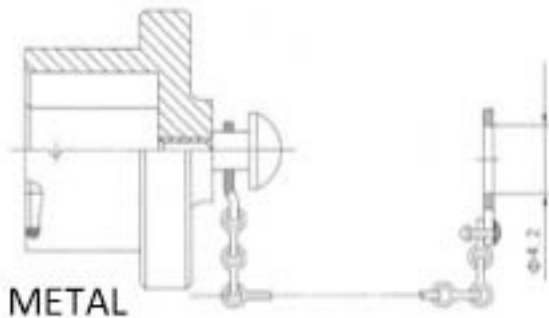
# Part Number Configurator

	<b>MN68</b>	<b>1</b>	<b>-10</b>	<b>F</b>	<b>01</b>	<b>S</b>	<b>01</b>
<b>SERIES</b>							
<b>STYLE</b>							
1 = Bayonet coupling							
2 = Triple start thread							
<b>PLUG /RECEPTACLE</b>							
-10 = Straight plug M							
-20 = Flange receptacle F							
-22 = Double bayonet, flange mount bulkhead F							
-23 = Nut receptacle F							
-24 = Single bayonet coupling, screw mount F							
<b>FINISH</b>							
F = Electroless nickel plating							
B = Cadmium plating							
E = Stainless steel passivated							
H = Black							
L = Olive green							
<b>NETWORK INTERFACE</b>							
01 = RJ45 Ethernet							
02 = USB2.0							
03 = 1394A							
04 = MINI-USB							
<b>CONTACT</b>							
B = Straight Solder							
W = 90° Elbow Solder							
S = Cable Solder							
OMIT = Crimp Contact							
<b>BACKSHELL</b>							
01 = Straight spring guard / hermetic							
02 = Straight heat shrinkable sleeve / hermetic							

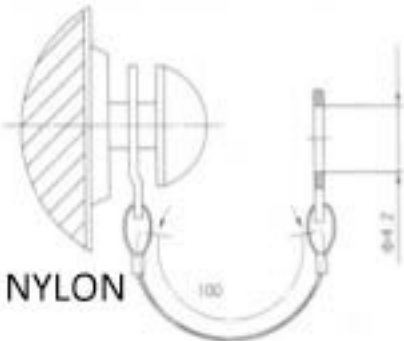
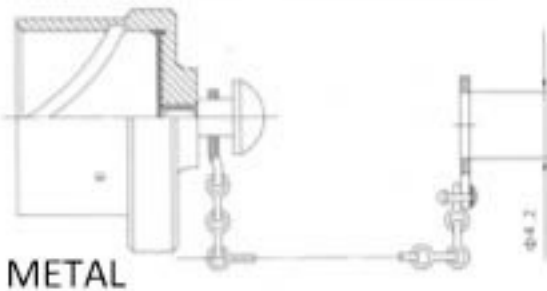
## Optional Dust Covers

	<b>MNDC</b>	<b>1</b>	<b>-1</b>	<b>F</b>	<b>01</b>	<b>L</b>	<b>O</b>
<b>SERIES</b>							
<b>STYLE</b> 1 = Bayonet coupling 2 = Triple start thread							
<b>PLUG /RECEPTACLE</b> -1 = Dust Cover / Plug -2 =Dust cover / Receptacle							
<b>FINISH</b> F = Electroless nickel plating B = Cadmium plating E = Stainless steel passivated H = Black L = Olive green							
<b>NETWORK INTERFACE</b> 01 = RJ45 Ethernet 02 = USB2.0 03 = 1394A 04 = MINI-USB							
<b>LANYARD</b> L = Metal chain OMIT = Nylon chain							
<b>LANYARD MOUNTING</b> O = Fixed ring OMIT = Fixed mounting hole							

DUST COVER | PLUG

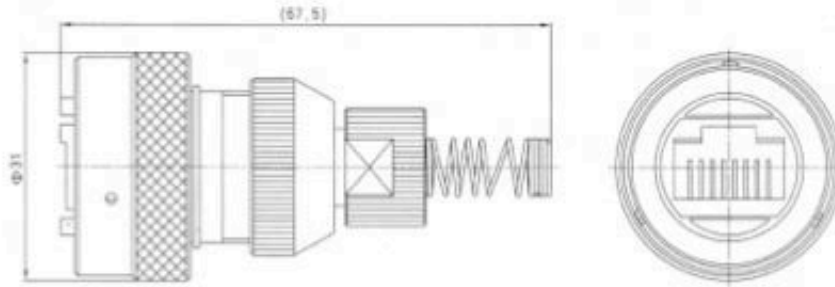


DUST COVER | RECEPTACLE

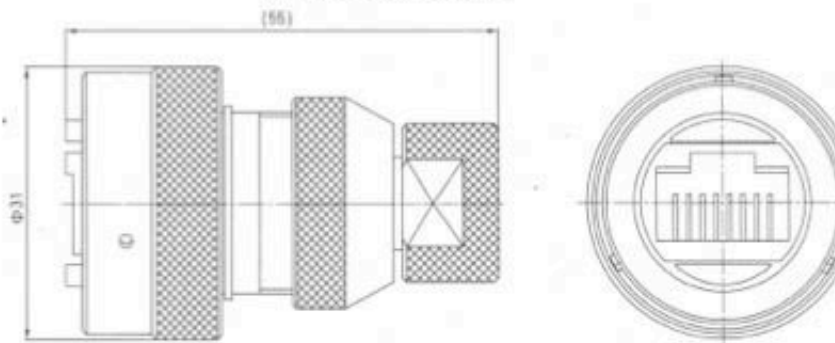


# Physical Dimensions

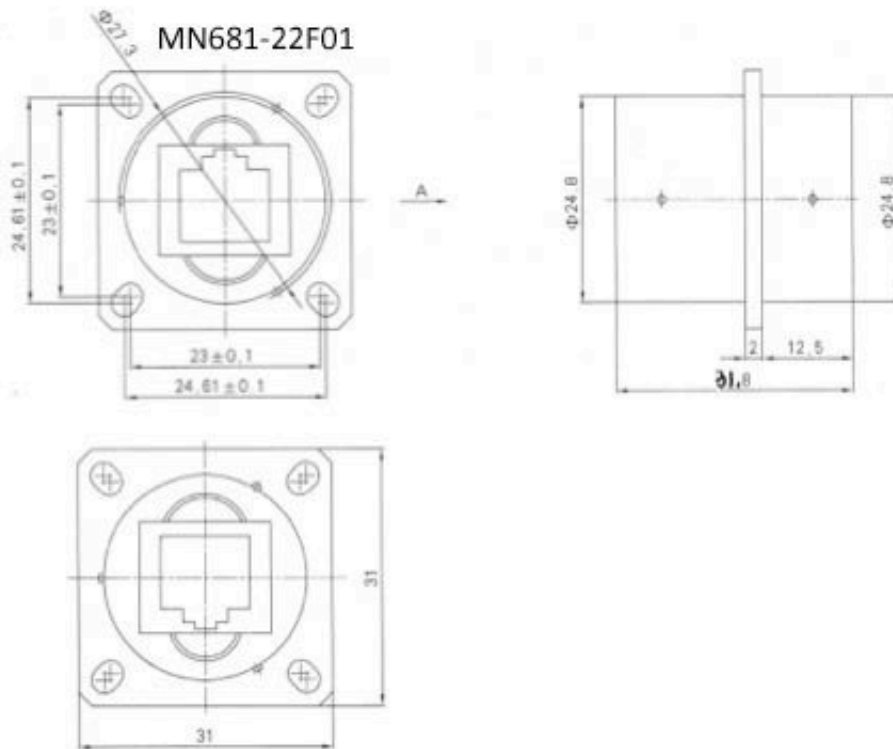
## MN681-10F01-01



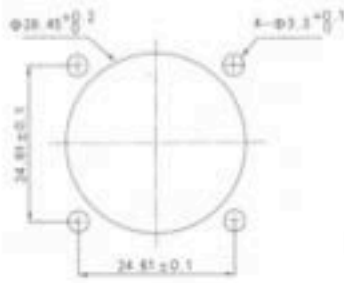
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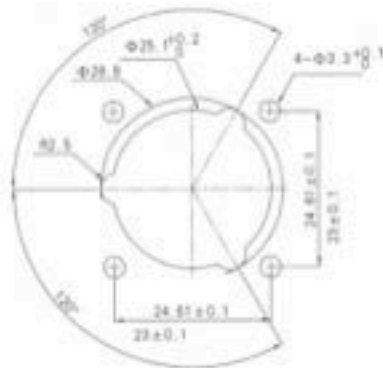
## MN681-22F01



Type I

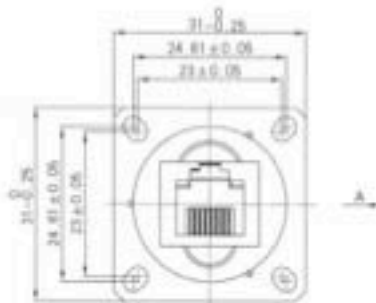


Type II

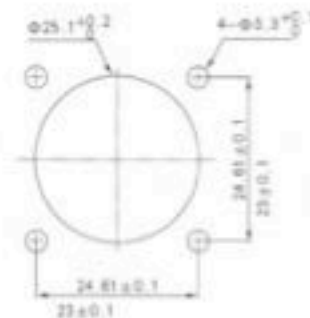
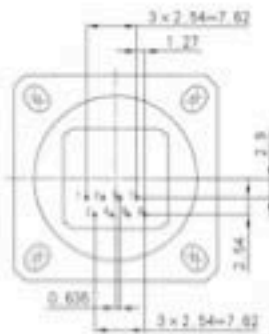


The dimension is same as #14, 16 of MIL-C-24682 I and #14, 15 of MIL-DTL-38999 III.

MN681-20F01B

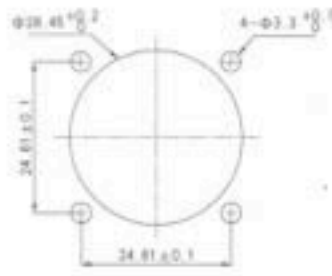


Mounting before board

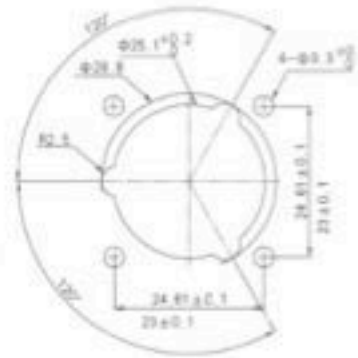


## Mounting behind board

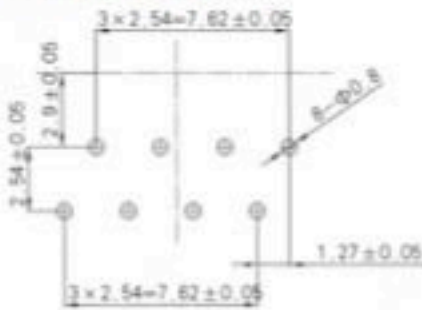
### Type I



### Type II

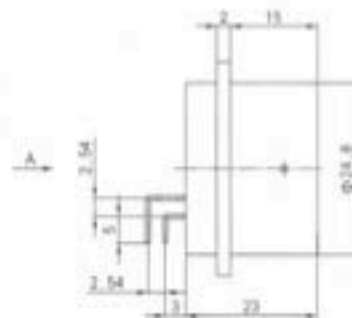
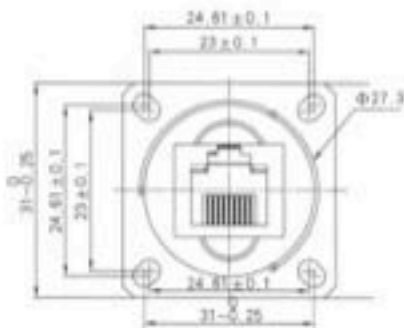


## Hole dimension of PCB

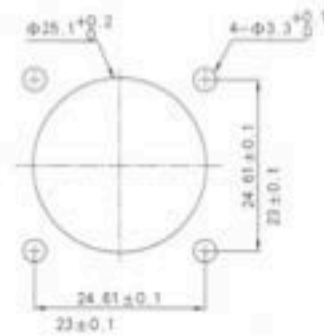
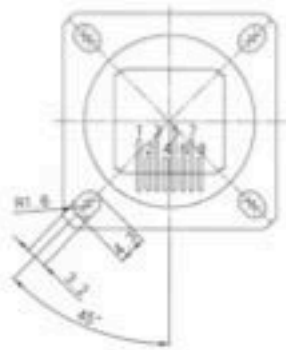


The dimension is same as #14, 16 of MIL-C-24682 I and #14, 15 of MIL-DTL-38999 III.

## MN681-20F01W



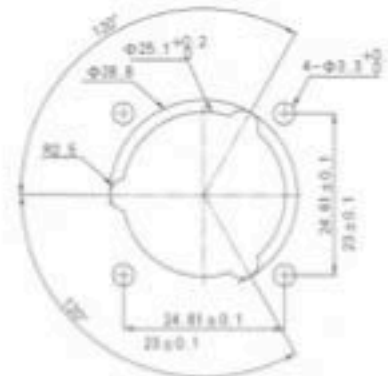
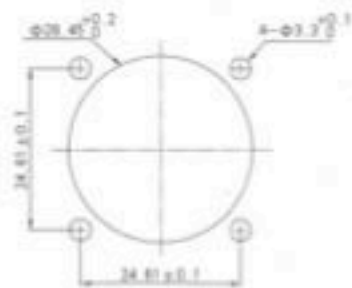
Mounting before board



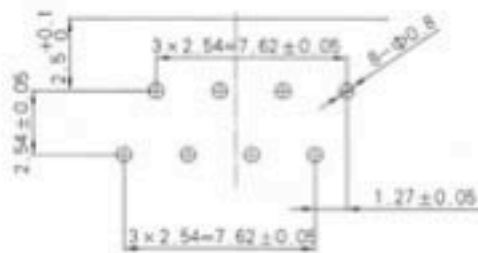
Mounting behind board

Type I

Type II



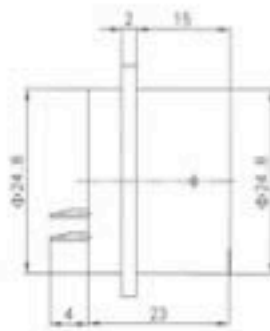
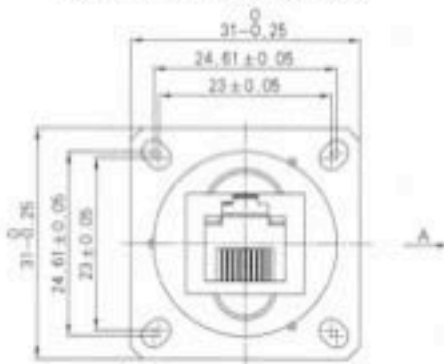
Hole dimension of PCB



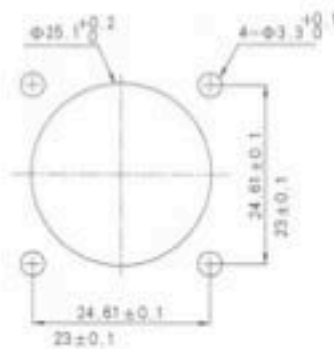
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# MN681-20F01S01

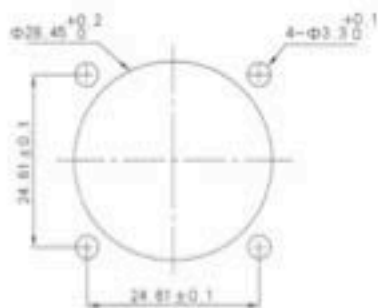


## Mounting before board

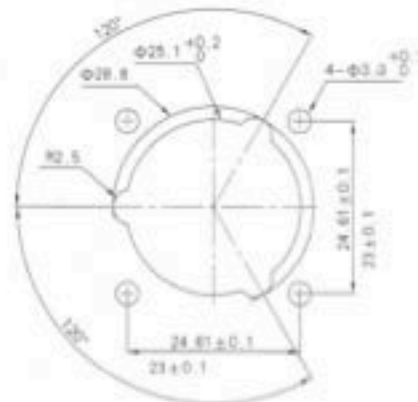


## Mounting behind board

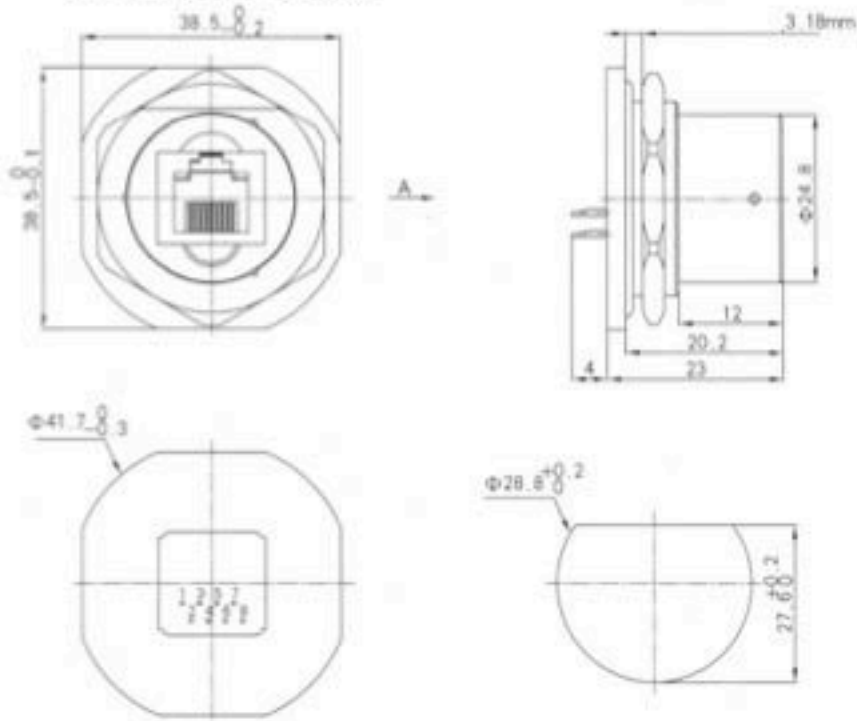
### Type I



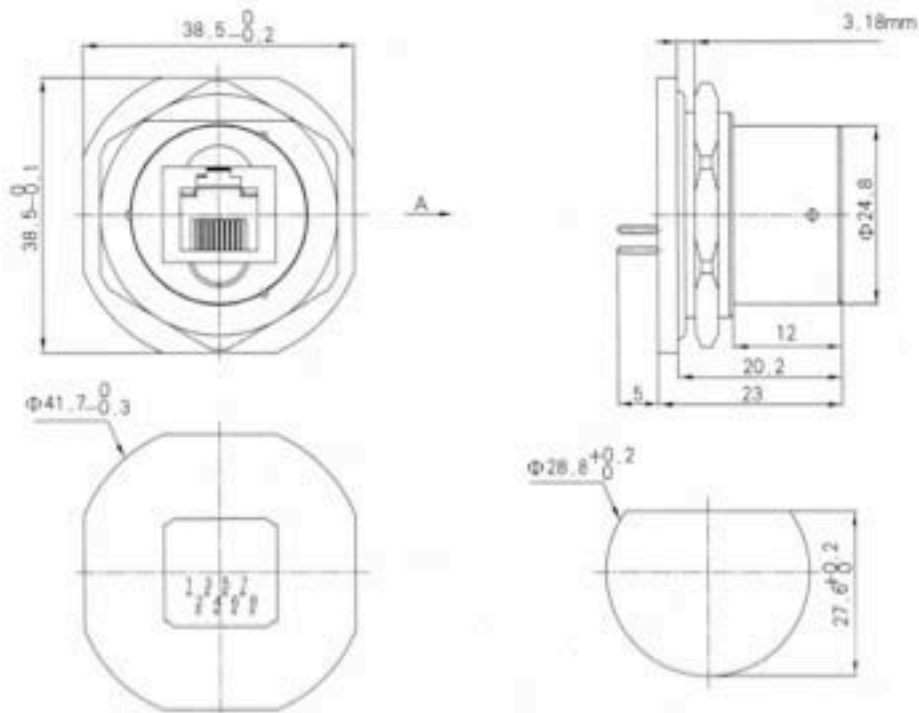
### Type II



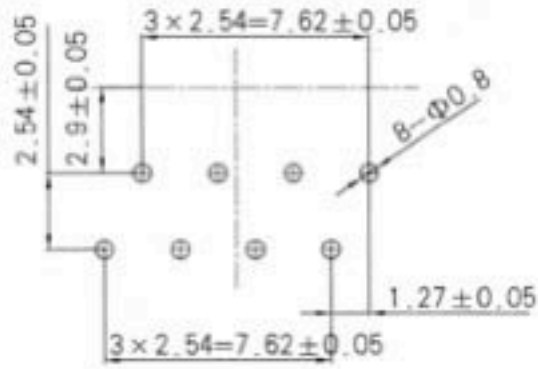
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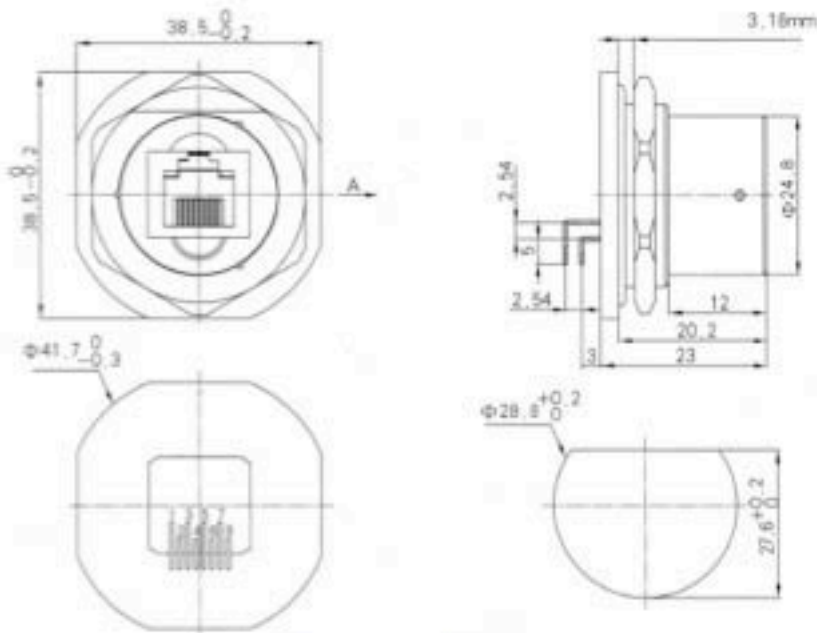
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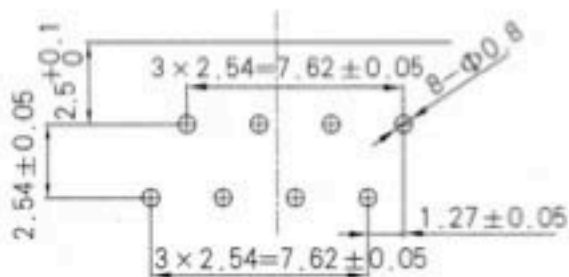
Hole dimension of PCB



MN681-23F01W

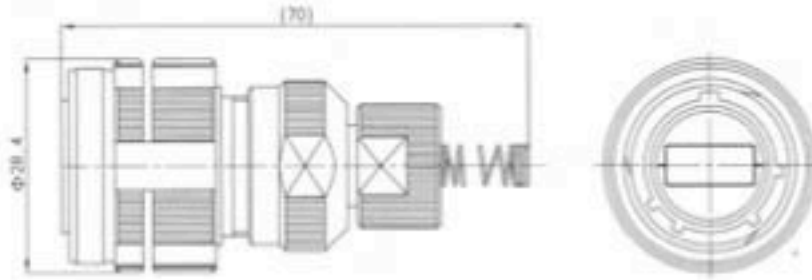


Hole dimension of PCB

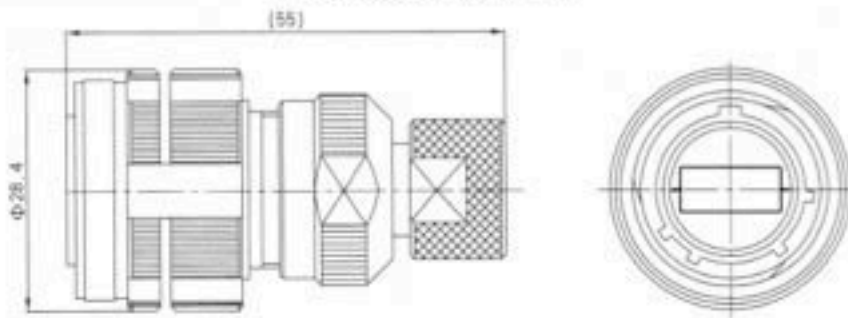


USB

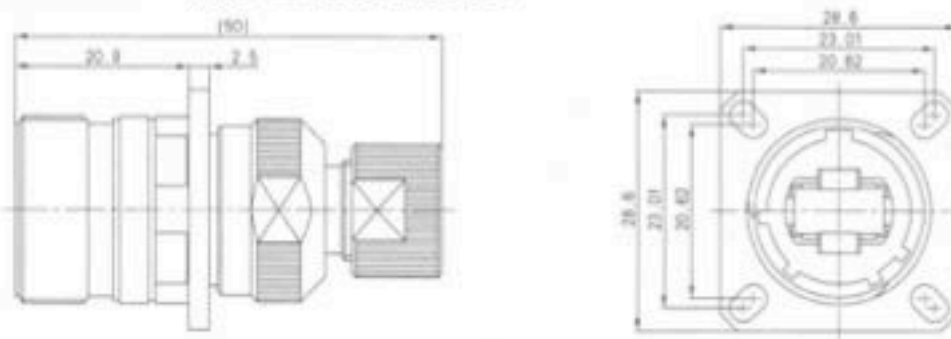
MN683-10F02-01



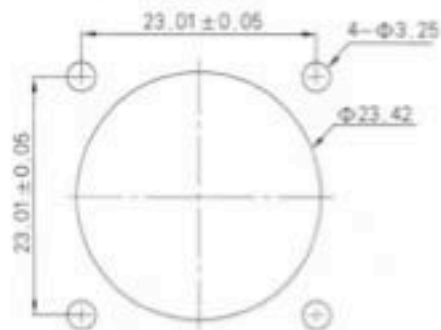
MN683-10F02-02



MN683-20F02S-02

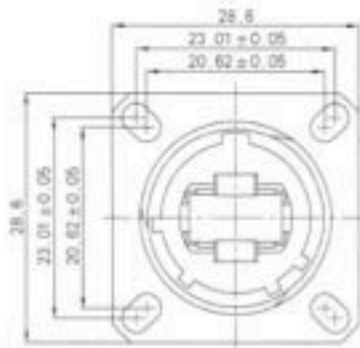
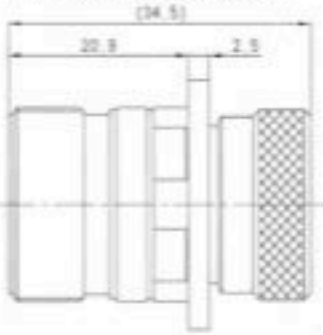


Hole dimension behind board

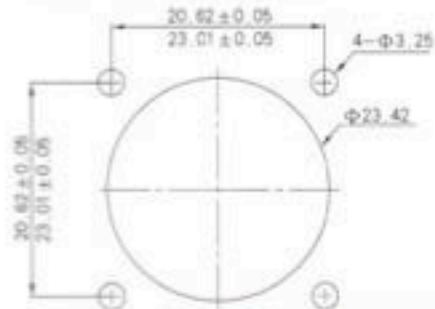


The dimension is same as #13 of MIL-DTL-38999 III.

### MN683-20F02S

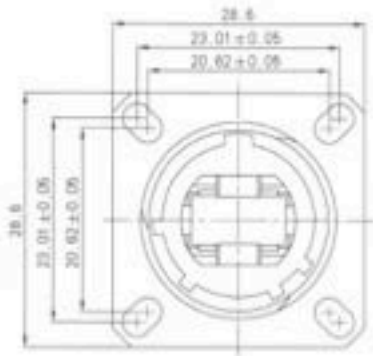
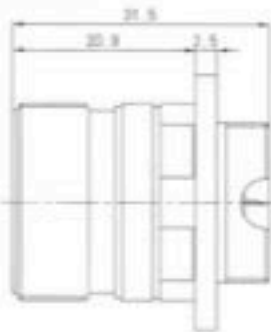


Hole dimension behind board

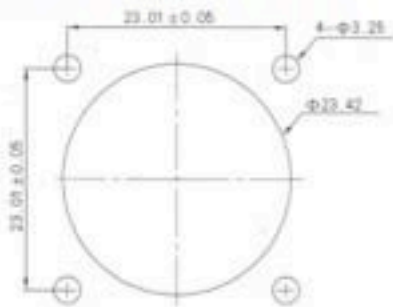


The dimension is same as #13 of MIL-DTL-38999 III.

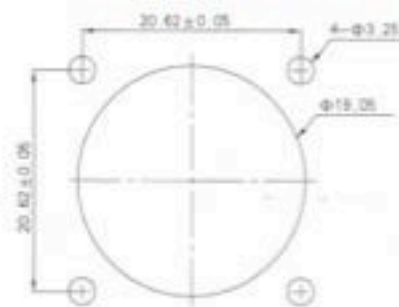
### MN683-20F02S01



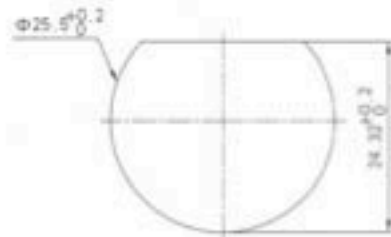
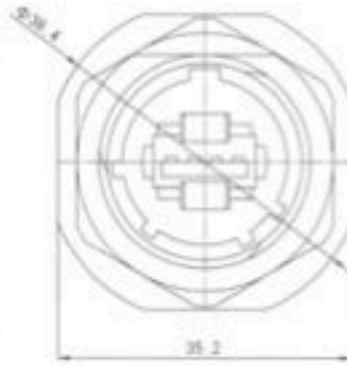
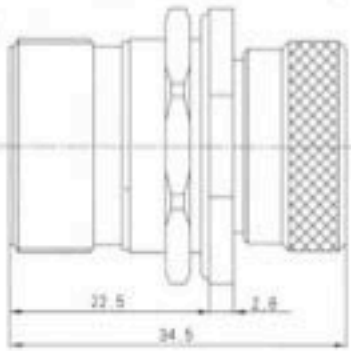
Hole dimension behind board



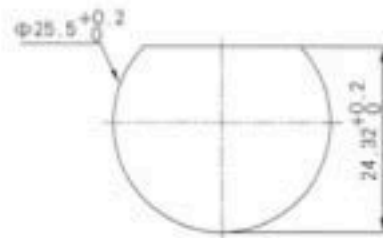
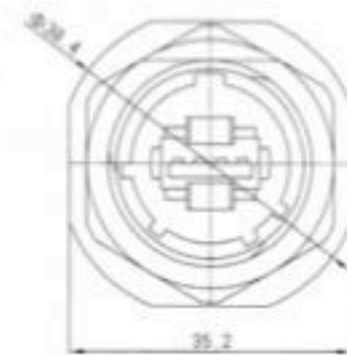
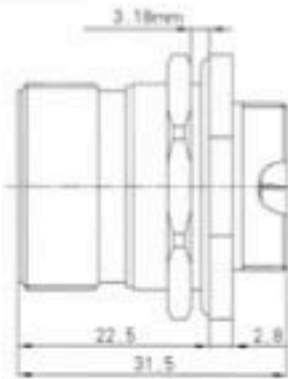
Hole dimension before board



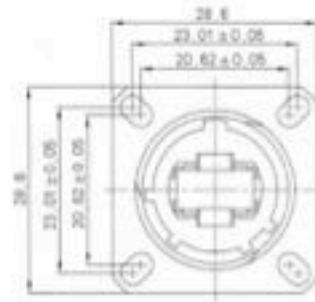
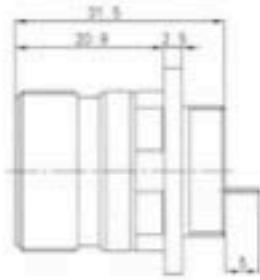
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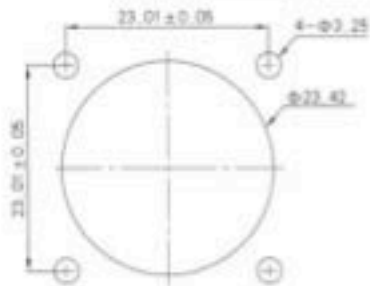
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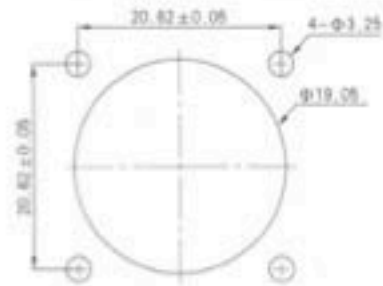
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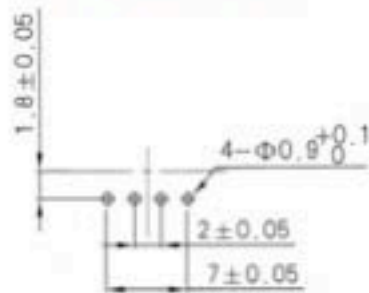
Dimension behind board



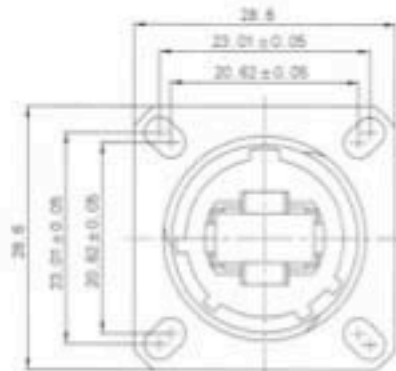
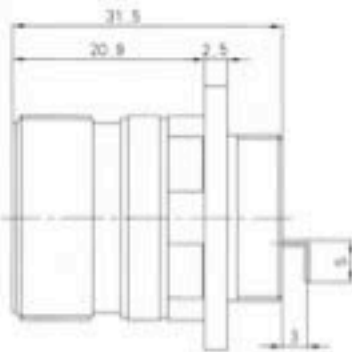
Dimension before board



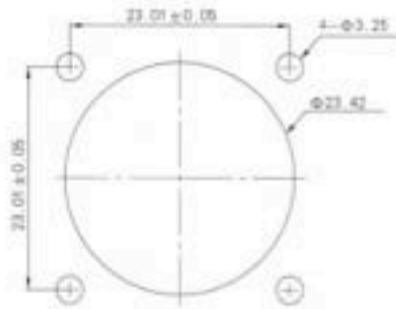
Hole dimension of PCB



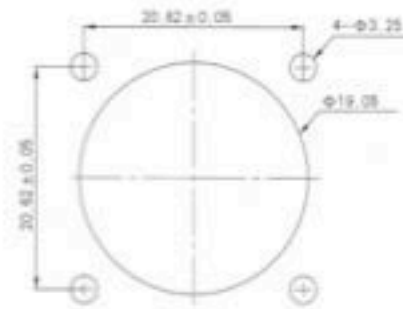
## MN683-20F02W



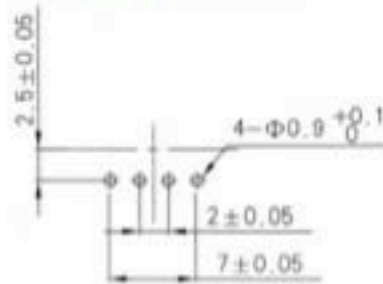
Dimension behind board



Dimension before board



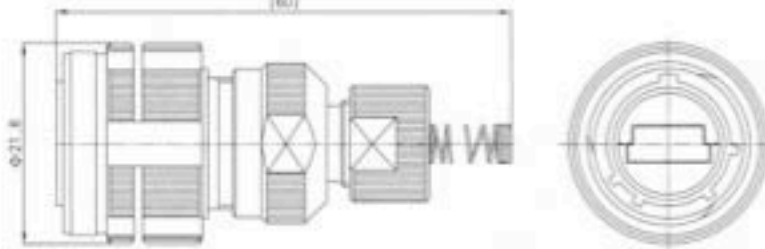
Hole dimension of PCB



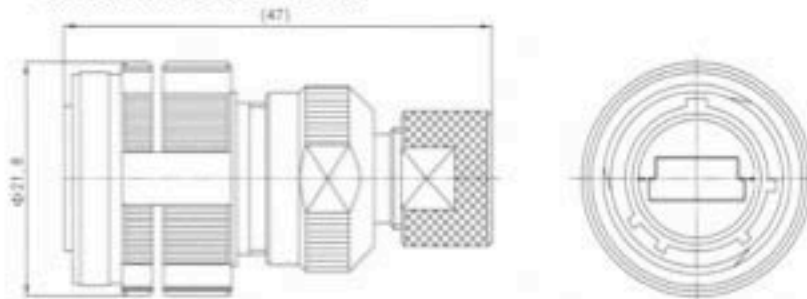
The dimension is same as #13 of MIL-DTL-38999 III.

## MINI-USB

MN683-10F04S-01

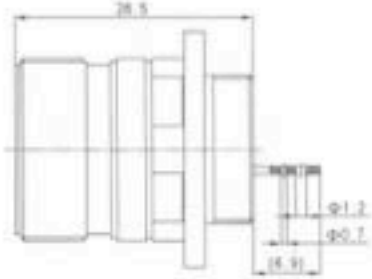


MN683-10F04S-02

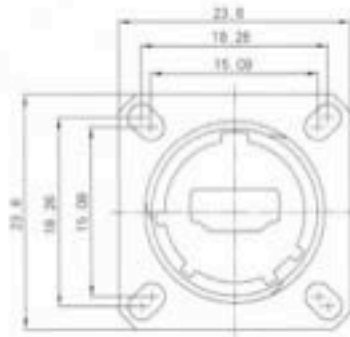




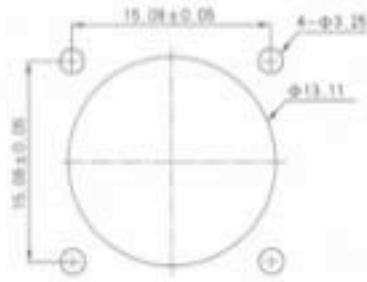
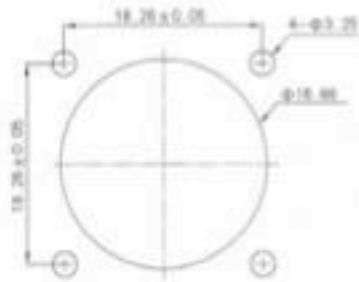
### MN683-20F04S



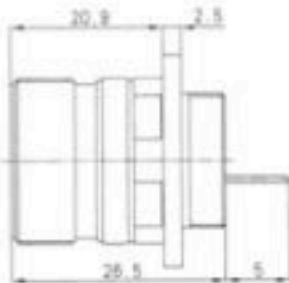
Dimension behind board



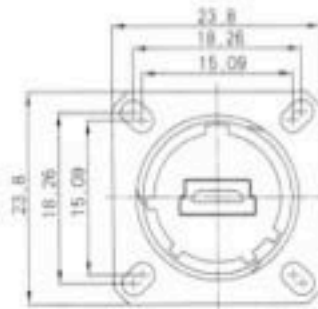
Dimension before board



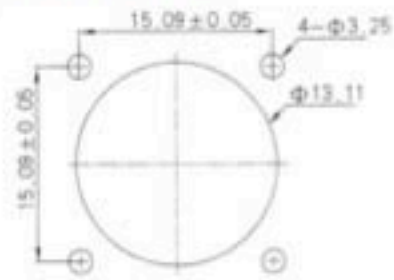
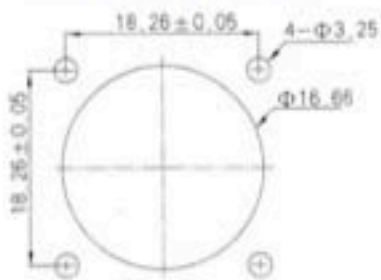
### MN683-20F04B



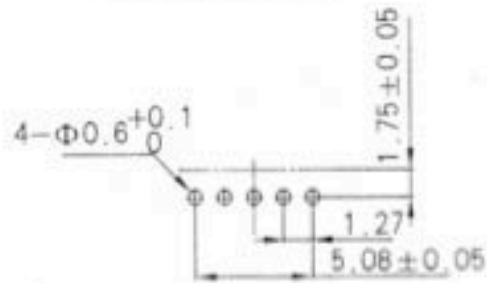
Dimension behind board



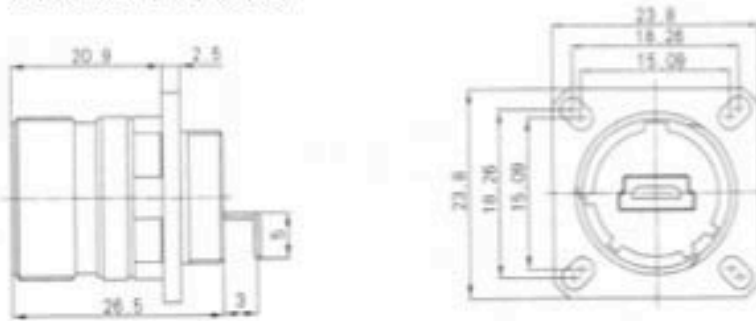
Dimension before board



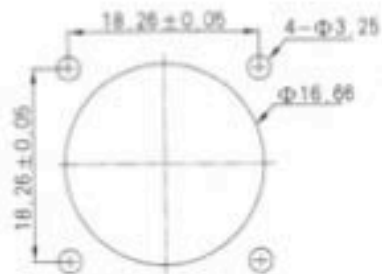
Hole dimension of PCB



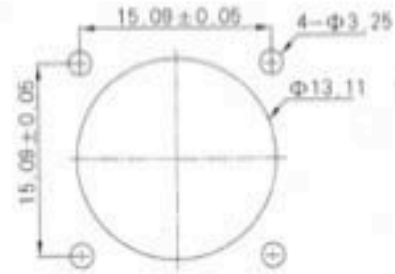
MN683-20F04W



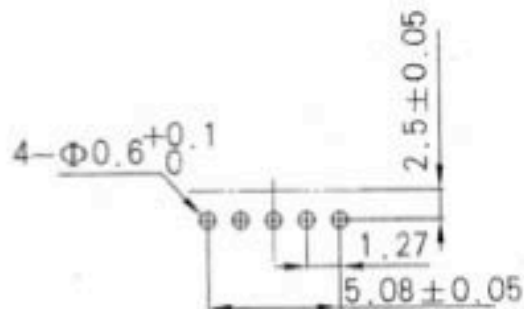
Dimension behind board



Dimension before board



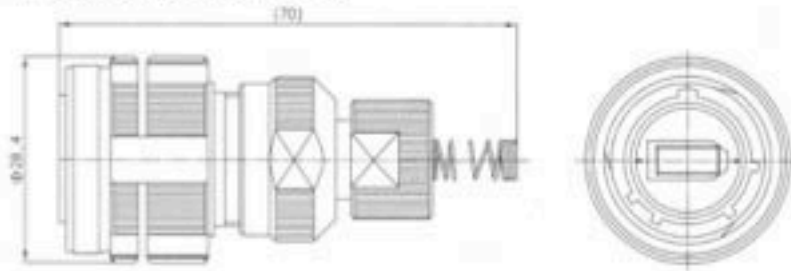
Hole dimension of PCB



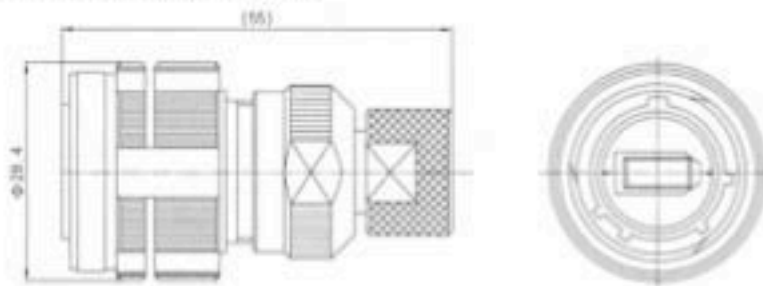
The dimension is same as #9 of MIL-DTL-38999 III.

1394

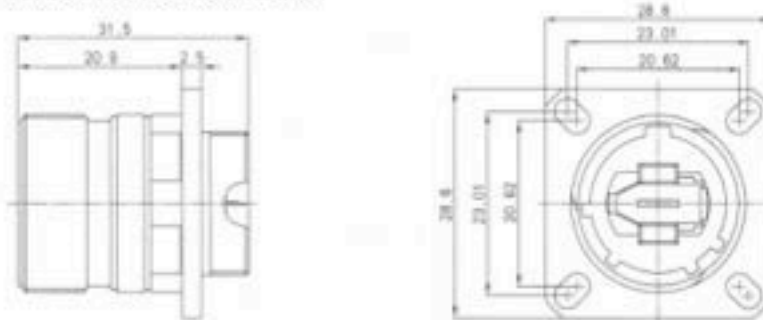
MN683-10F03S-01



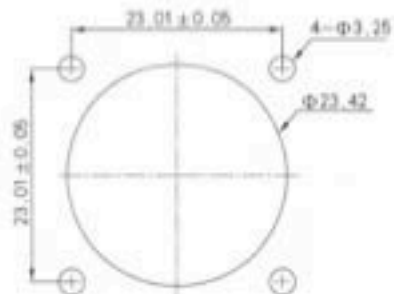
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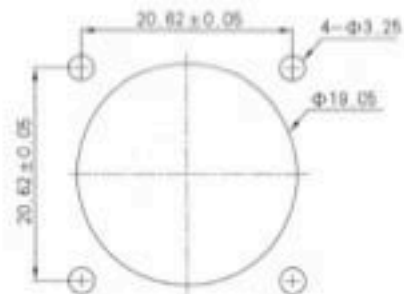
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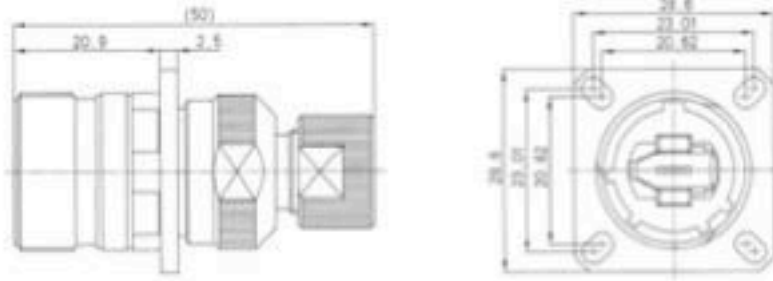
Dimension behind board



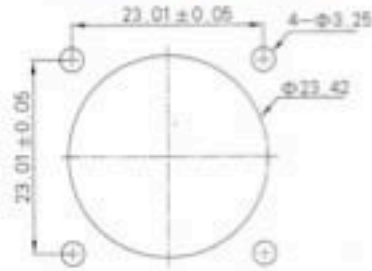
Dimension before board



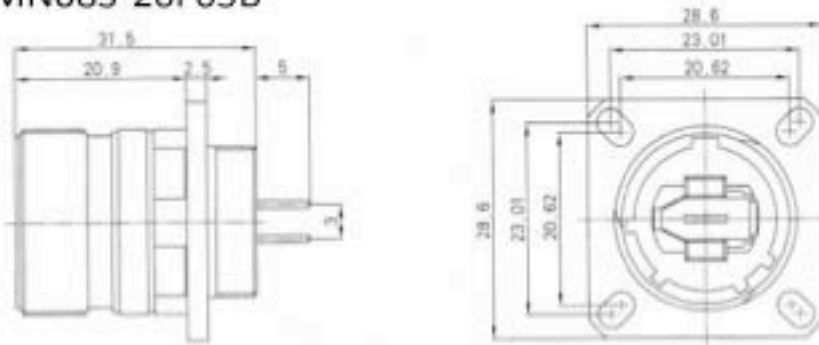
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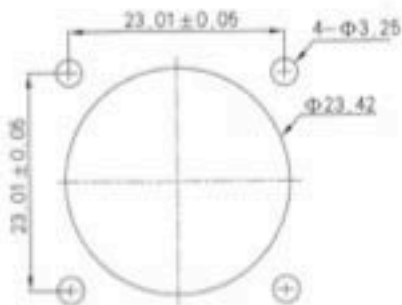
Dimension behind board



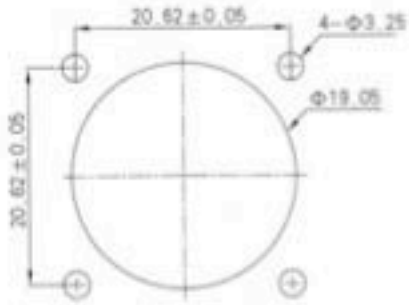
### MN683-20F03B



Dimension behind board

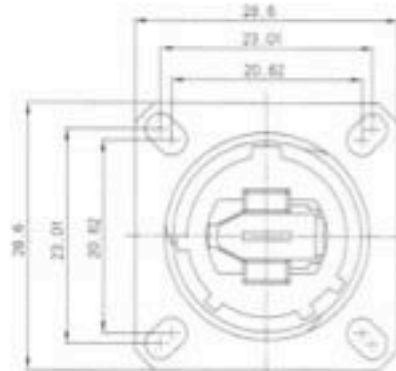
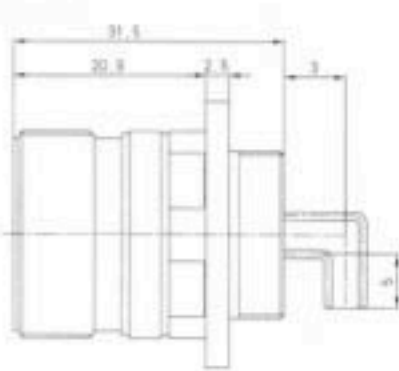
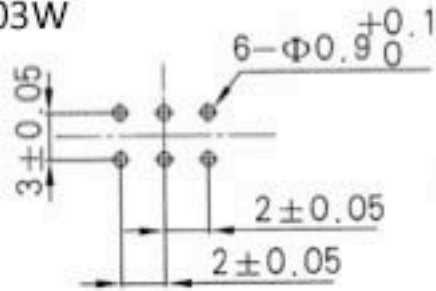


Dimension before board

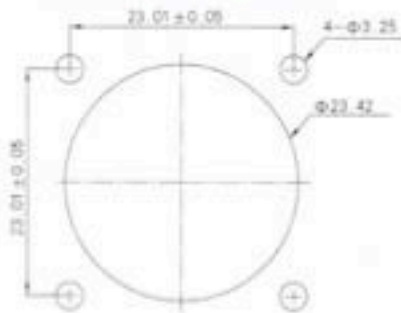


MN683-20F03W

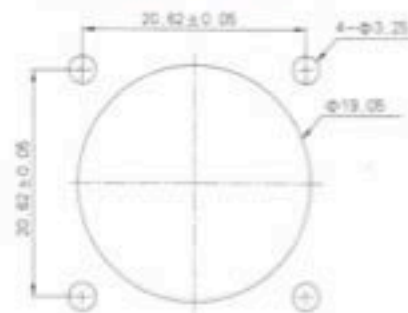
Hole dimension of PCB



Dimension behind board



Dimension before board



Hole dimension of PCB

