



# MDP FTV

Mini DisplayPort connection system  
for harsh environment



## Description

MDPFTV is a complete ruggedized solution around Mini DisplayPort standard using a Tri Start Thread coupling mechanism (MIL-DTL-38999 series III type) to connect the two plug and receptacle parts.

This solution allows you to insert a standard Mini DP cordset into a metallic plug which will protect it from shocks, dust and fluids. The assembly of this ruggedized plug doesn't require any tool and can be easily done directly on the field.

The corresponding MDP FTV receptacle dedicated to be mounted on your panel enables you to reinforce and protect your system against leakage, shocks, vibrations and much more.

## Main features

### Main characteristics :

- Tri Start thread coupling mechanism (MIL-DTL-38999 series III type) with anti-decoupling device.
- Shell size 13.
- No cabling operation in field and no tools required.
- Improved EMI protection.
- Mating cycles : 500.
- Panel thickness : 1,6 mm min and 3,18 mm max for jam nut receptacle.

### Data Transmission :

- Display 1.4 protocol.
- Transmission bandwidth : 32.4 Gbit/s with 8.1 Gbit/s per lane.
- Can support 8K UHD (7680 × 4320) at 60 Hz or 4K UHD (3840 × 2160) at 120 Hz.

### Environmental protection :

- Sealed against fluids and dusts : IP68 mated.
- Salt spray : Aluminium shell : Nickel plating ✓ : 48h.  
Black zinc nickel plating ✓ : 500h.  
Olive drab cadmium plating : 500h

Fire retardant/Low smoke : EN45545 + UL94V0.

Vibrations MIL-STD-810H : 10 - 500 Hz, 10 g, 3 axes : no discontinuity > 10 micro s.

Shocks : IK06 ► weight of 250 g drop from 40 cm [15.75 in]. onto connectors (mated pair).

Humidity : 21 days, 43°C, 98% humidity.

Temperature range : -40°C / +85°C.



✓ : RoHS compliant

## Markets & Applications



C6ISR, Ground vehicles



Naval



Railway



### Applications :

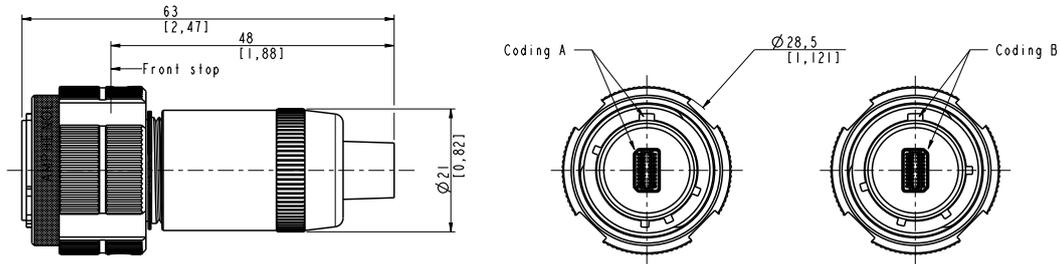
► Data acquisition and transmission in harsh environment, radars, shelters, battlefield communication

# MDP FTV

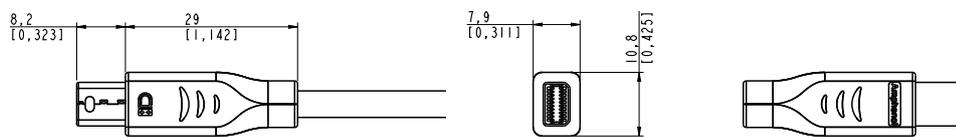
## Plug

### Plug without cordset - Shell type 6

Part number type: **MDP FTV 6 X X**



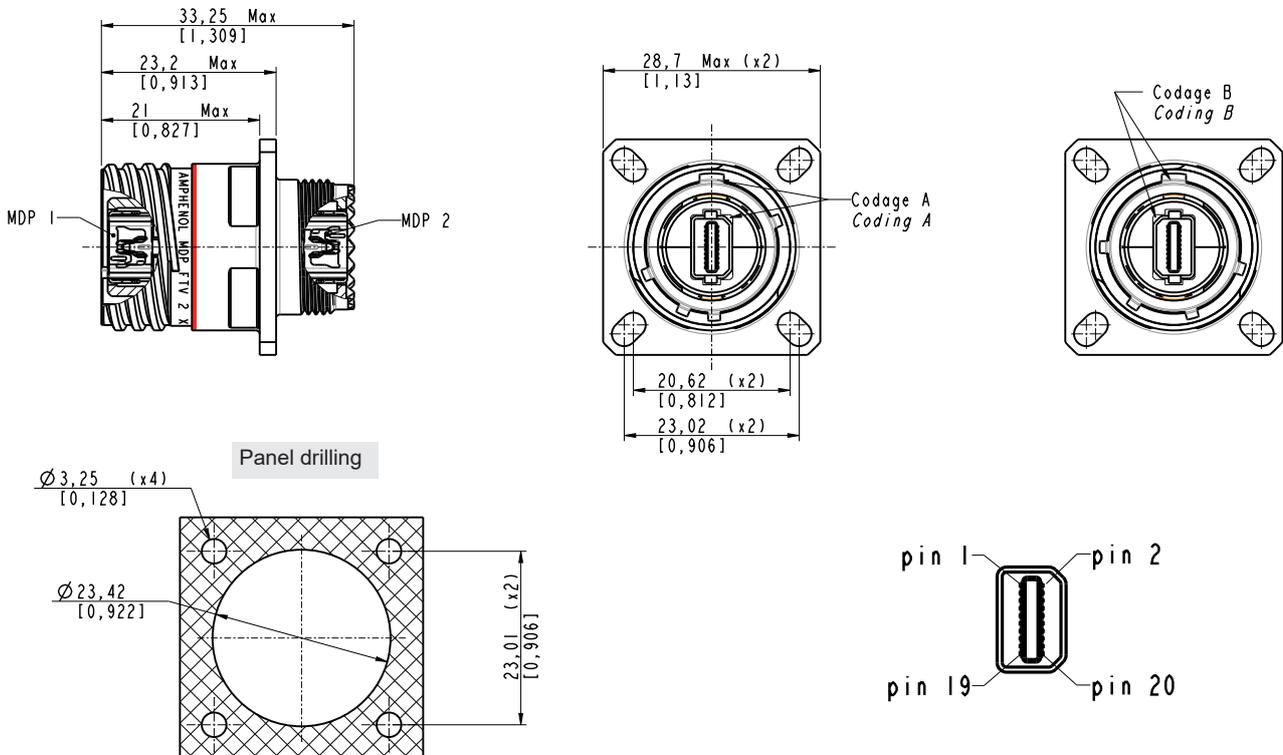
MiniDP plug recommendation dimensions (not included)



## Receptacles

### Square flange receptacle – Shell type 2 - 4 mounting holes

Part number type: **MDP FTV 2 X X**

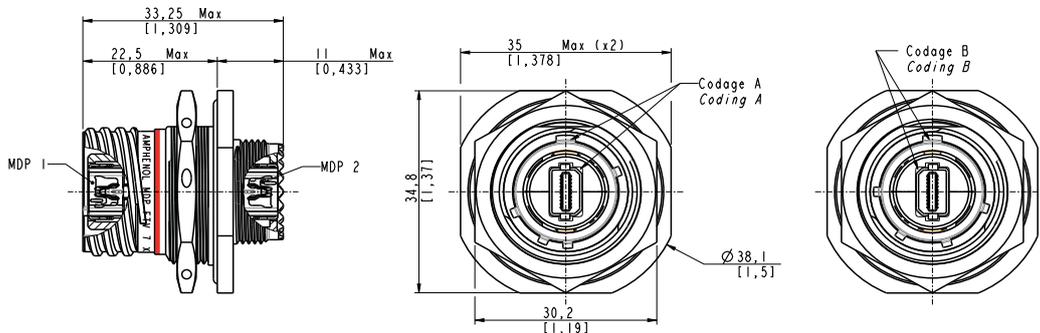


**X:** see the 'How to order' below to complete your part number

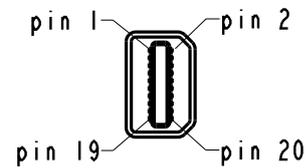
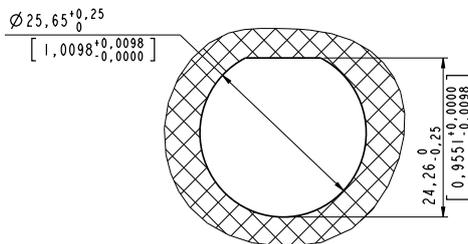
## Receptacles

### Jam nut receptacle – Shell type 7 - Hexagonal nut mounting

Part number type: **MDP FTV 7 X X**

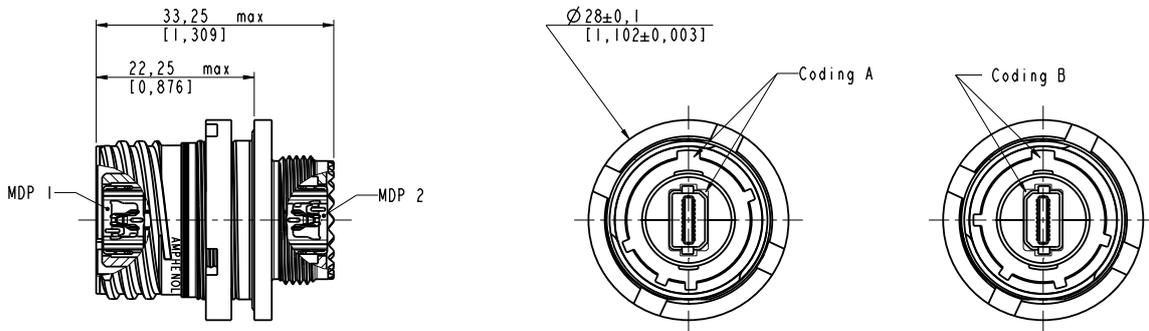


Panel drilling

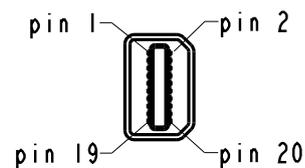
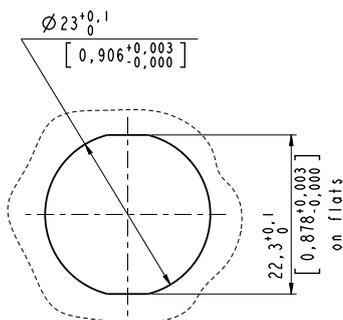


### Reduced flange Jam nut receptacle – Shell type 7 - Castle nut mounting: Deviation F312

Part number type: **MDP FTV 7 X X F312**



Panel drilling



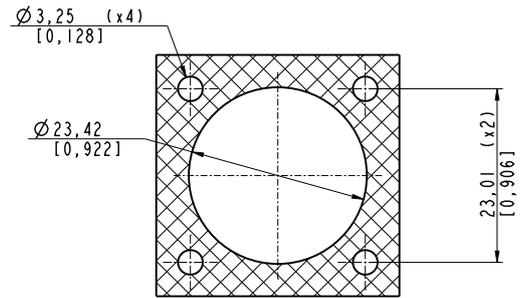
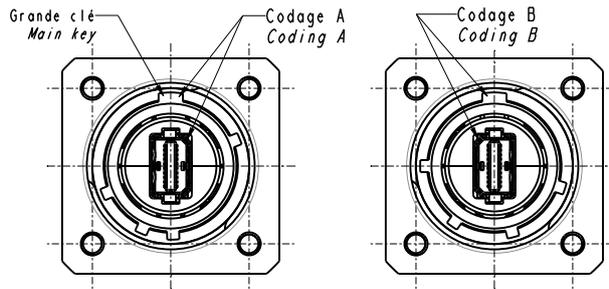
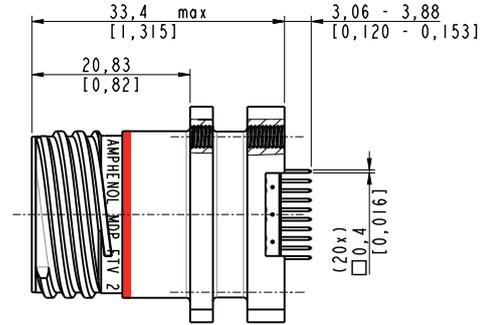
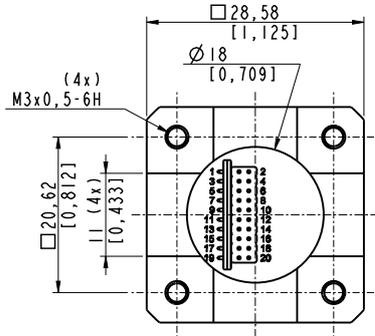
**X**: see the 'How to order' below to complete your part number

## Receptacles

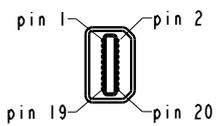
### Square flange receptacle – Shell type 2 - 4 mounting holes

Part number type: **MDP FTV 2 X X F459**

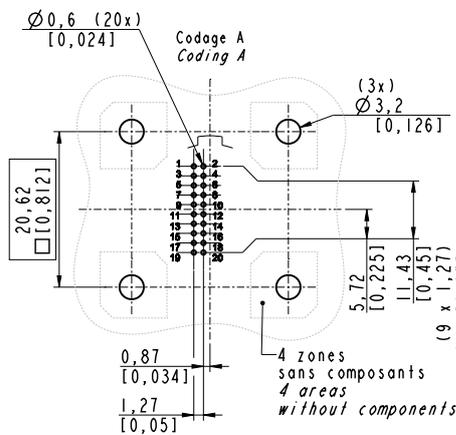
**X:** see the 'How to order' below to complete your part number



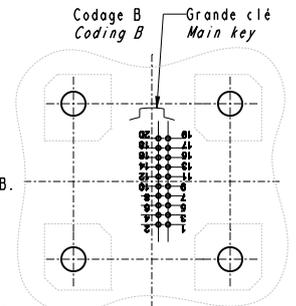
Panel drilling



Wiring table	
MDP I	PC Tails
N° pin	N° pin
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
16	16
17	17
18	18
19	19
20	20
Shell	Ground



Perçage CI  
vue côté  
soudure.  
Orientation  
du perçage  
suivant  
codage A ou B.  
PCB drilling  
solder side  
view.  
Drilling  
orientation  
according to  
A or B coding.

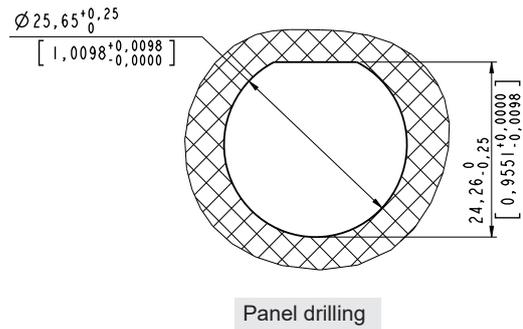
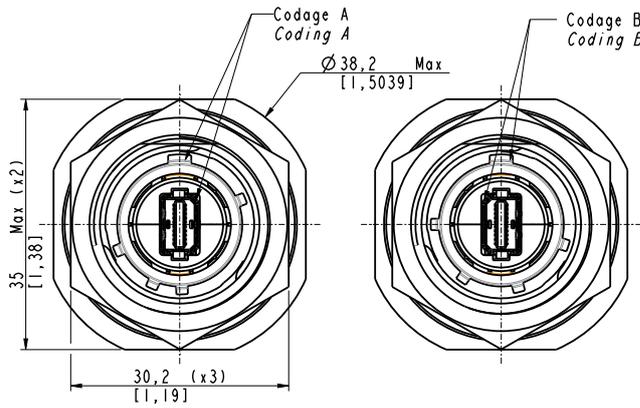
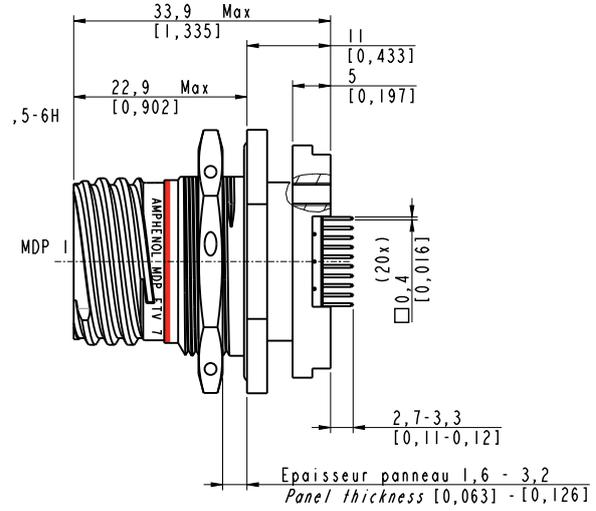
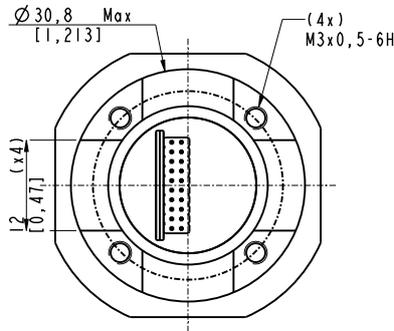


## Receptacles

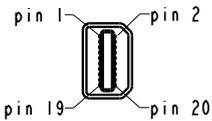
### Jam nut receptacle – Shell type 7 - Hexagonal nut mounting

Part number type: **MDP FTV 7 X X F459**

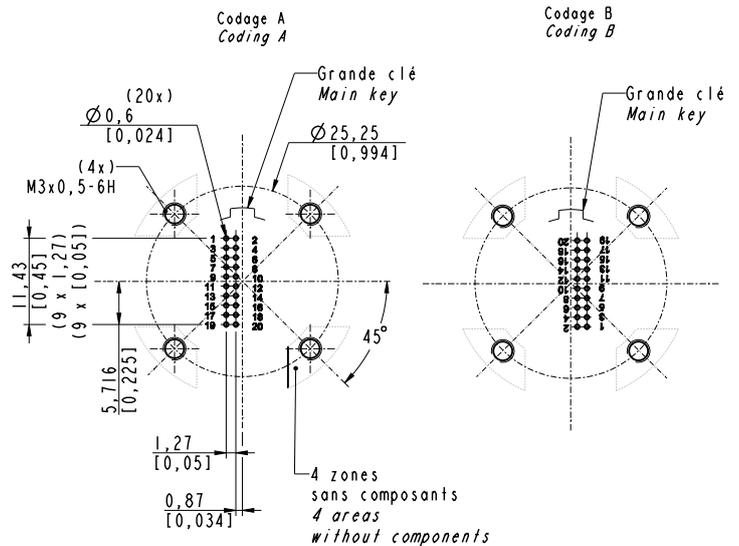
**X:** see the 'How to order' below to complete your part number



Panel drilling



Wiring table	
MDP I	PC Tails
N° pin	N° pin
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
16	16
17	17
18	18
19	19
20	20
Shell	Ground



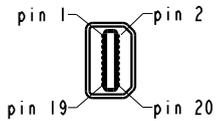
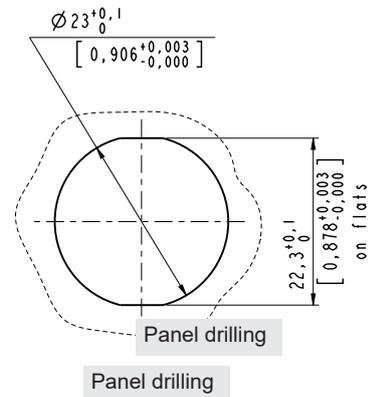
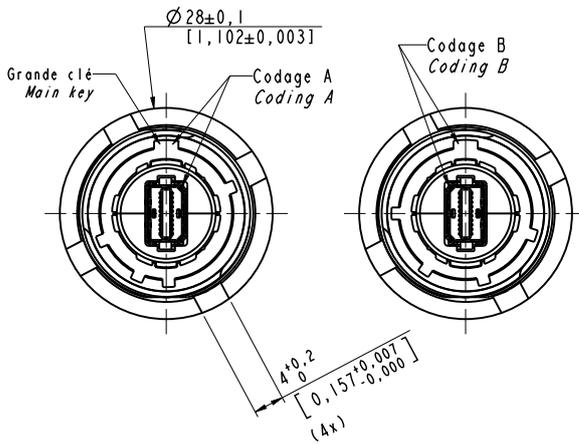
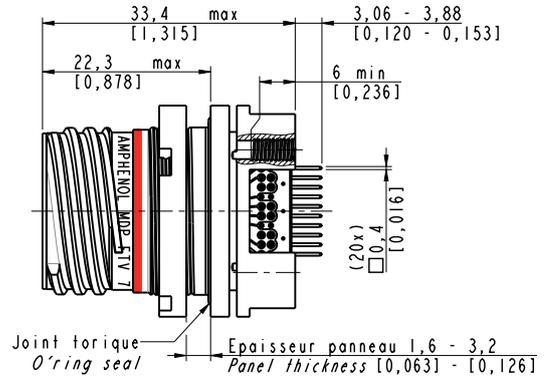
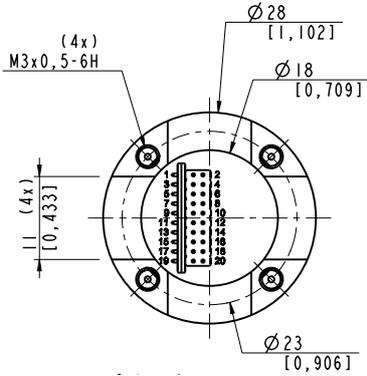
Perçage CI vue coté soudure.  
Orientation du perçage suivant codage A ou B.  
PCB drilling solder side view.  
Drilling orientation according to A or B coding.

## Receptacles

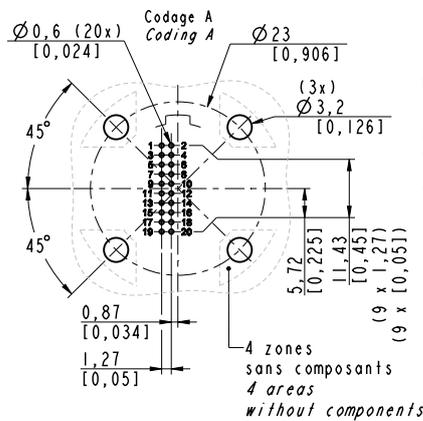
Reduced flange Jam nut receptacle – Shell type 7 - Castle nut mounting: Deviation F312

Part number type: **MDP FTV 7 X X F059**

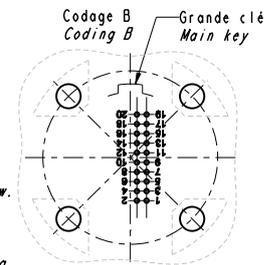
**X:** see the 'How to order' below to complete your part number



Wiring table	
MDP I	PC Tails
N° pin	N° pin
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
16	16
17	17
18	18
19	19
20	20
Shell	Ground



Perçage CI  
vue côté  
soudure.  
Orientation  
du perçage  
suivant  
codage A ou B.  
PCB drilling  
solder side view.  
Drilling  
orientation  
according  
to A or B coding.

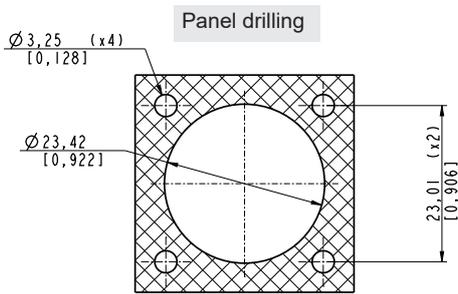
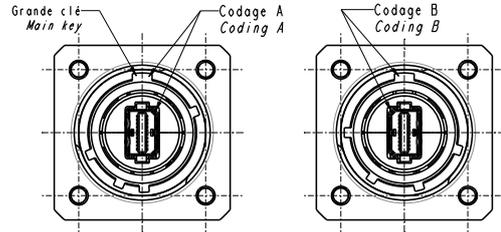
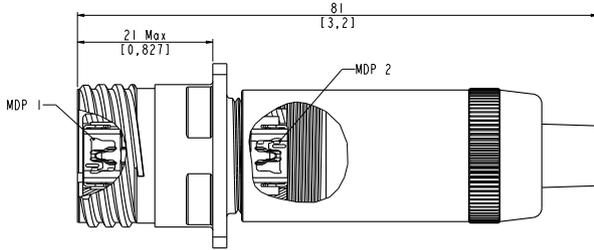


## Receptacles

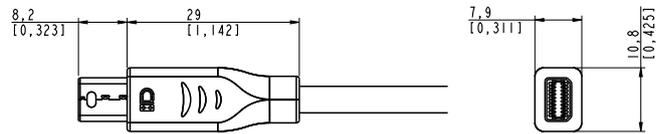
### Square flange receptacle – Shell type 2PE with metal backshell - 4 mounting holes

Part number type: **MDP FTV 2 X PE X**

**X:** see the 'How to order' below to complete your part number



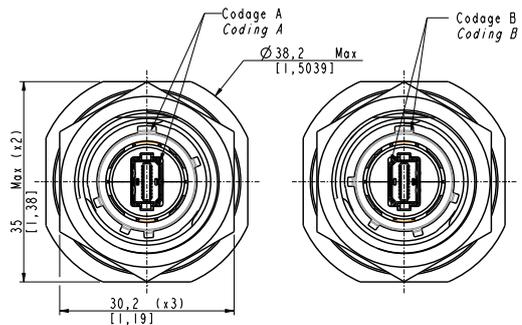
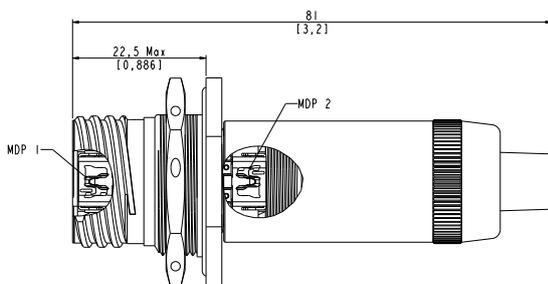
MiniDP plug recommendation dimensions (not included)



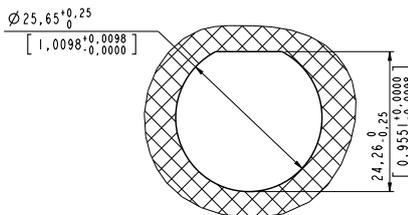
### Reduced flange Jam nut receptacle – Shell type 7PE with metal backshell - Hexagonal nut mounting

Part number type: **MDP FTV 7 X PE X**

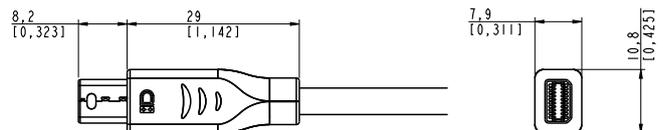
**X:** see the 'How to order' below to complete your part number



**Panel drilling**



MiniDP plug recommendation dimensions (not included)

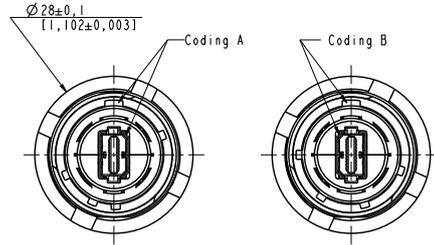
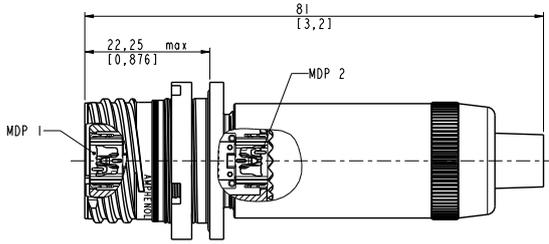


## Receptacles

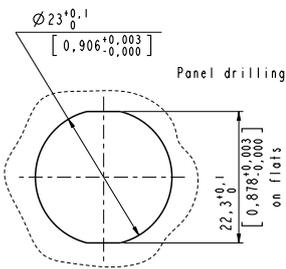
Reduced flange Jam nut receptacle – Shell type 7PE with metal backshell - Castle nut mounting: Deviation F312

Part number type: **MDP FTV 7 X PE X F312**

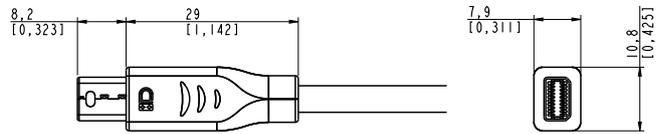
**X:** see the 'How to order' below to complete your part number



Panel drilling

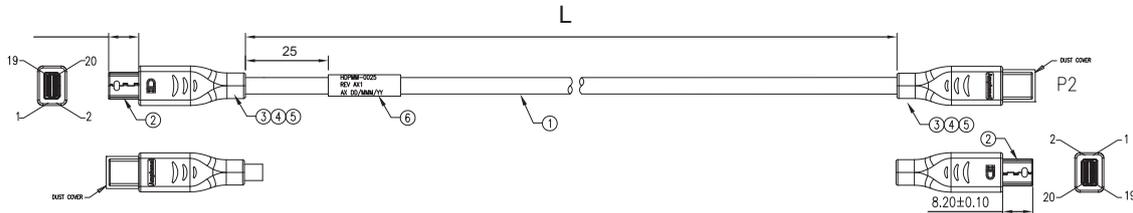


MiniDP plug recommendation dimensions (not included)

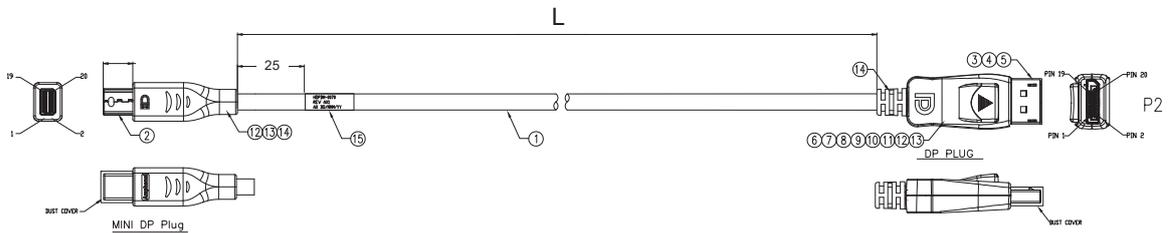


## Cordsets

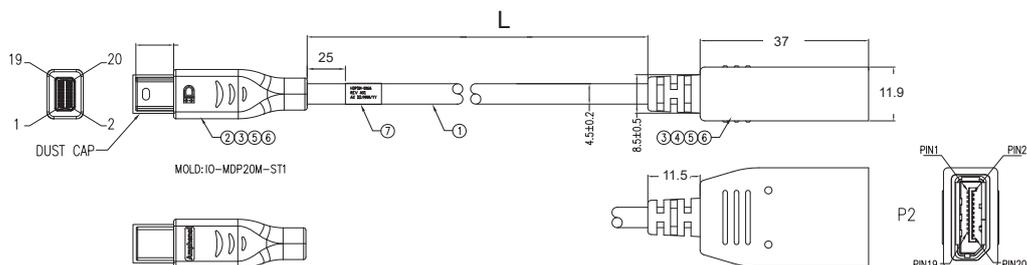
### MiniDisplay Port - MiniDisplay Port cordset



### MiniDisplay Port – Display Port cordset



### MiniDisplay Port – Female Display Port cordset

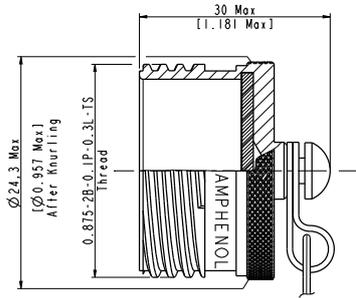


**X:** see the 'How to order' below to complete your part number

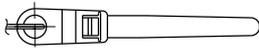
## Accessories

### Standard protective cap

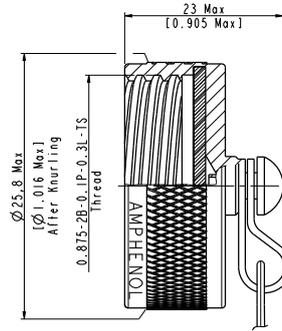
Part number: **MDPF<sub>TV</sub> C 6 X**



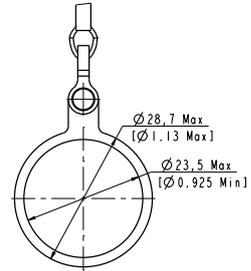
Tie wrap for plug cap



Part number: **MDPF<sub>TV</sub> C 2 X or MDPFTV C 7 X**



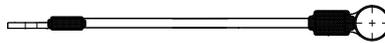
Ring for reduced flange jam nut receptacle



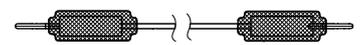
Metallic chain



Stainless steel rope



Nylon rope



Cap type	Metallic chain length (mm)	Nylon cord length (mm)	Stainless steel rope length (mm)
<b>MDPF<sub>TV</sub> C 2 &amp; MDPFTV C 7</b>		127 (+13,-7)	
<b>MDPF<sub>TV</sub> C 6</b>		160±5	

**X:** see the 'How to order' below to complete your part number

## How to order - Connector

1.	2.	3.	4.	5.	6.
Series	Shell type	Coding	Backshell	Material and platings	Deviation
MDP FTV	7	A	PE	G	F312

### 1. Series

MDP FTV	MiniDisplay Port
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### 2. Shell type

6	Plug
2	Square flange receptacle
7	Jam nut receptacle

### 3. Coding

A	Coding A
B	Coding B

### 4. Backshell

PE	Metal backshell (for coupler receptacle only)
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### 5. Material and platings

	Shell material	Shell finish
G		Olive drab cadmium
N	Aluminum	Nickel ✓
ZN		Black zinc nickel ✓

### 6. Deviation

F459	PC tails receptacle
F059	Reduce flange PC tails receptacle (for shell type 7 only)
F312	Reduce flange coupler receptacle (for shell type 7 only)

✓ : RoHS compliant

## How to order - Cordset

1.	2.	3.
Series	Cordset end	Coding
MDP	MDP	100

### 1. Series

MDP	MiniDisplay Port
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### 2. Cordset end

MDP	Plug
DP	Display Port
DPF	Female Display Port

### 3. Length

100	1 m
150	1,50 m
200	2 m

## How to order - Accessories

1.	2.	3.	4.	5.
Series	Connector type	Rope type	Shells material and finish	Deviation
MDPFTV C	7		G	F057

### 1. Series

MDPFTV C	MDPFTV standard protective cap
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### 2. Connector type

6	Plug
2	Square flange receptacle
7	Jam nut receptacle

### 3. Rope type

	Nylon cord
M	Metallic chain
MR	Stainless Steel rope - Transparent teflon jacket
BMR	Stainless Steel rope - Black teflon jacket

### 4. Shell material and finish

N	Nickel plating ✓
G	Olive drab cadmium
ZN	Black zinc nickel plating ✓

### 5. Deviation (for jam nut receptacle only)

F057	Reduced flange ring
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✓ : RoHS compliant

