

## USB3F TV - Reduced Flange

### Smaller and Lighter



Dataspeed  
10 x higher than USB2.0

### Description

Derived from standard USB3F TV, Reduced Flange USB3F TV is ideal for applications where small dimensions and lower weight are critical.

With USB field, you can insert a standard USB 3.0 cordset into a metallic plug which will protect it from shocks, dust and fluids. No hazardous on-field cabling and grounding!

### Main Features

- Smaller: **40% footprint surface reduction**
- Lighter: **15% lighter than standard USB3F TV receptacles**
- MIL-DTL-38999 coupling mechanism
- Mates with standard USB3F TV plugs & caps
- 3 platings: Olive Drab Cadmium, Nickel, Black Zn Ni
- USB3.0
- Reduced Flange Deviation (to be added at the end of your part number):
  - **F312** for standard versions (**F311** with safety castle nut\*)
  - **F059** for Stand Off versions (**F058** with safety castle nut\*)



standard  
castle nut

\* safety  
castle nut

#### Main characteristics

Sealed against fluids and dust (IP68)

Shock, vibration and traction resistant

No cabling operation in field and no tools required

Improved EMI protection

Tri start thread coupling mechanism (MIL-DTL-38999 series III type) with anti-decoupling device - shell size 15

2 mechanical coding / polarization possibilities (receptacle insert rotation)

Mating cycles: 500 minimum

#### Environmental protection

Sealing: IP68 when mated with cap or potted version without cap

Salt spray:

> 48h with aluminium shell - Nickel ✓

> 500h with aluminium shell - Olive drab cadmium plating

> 500 h with aluminium shell - Black zinc nickel ✓

Fire retardant / low smoke: UL94 V0 and EN45545

Vibrations:

10 – 500 Hz, 10 g, 3 axes: no discontinuity > 1micro s

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

Temperature range: - 40°C / +85°C

### Data transmission

USB specification 3.0

Data rate: up to 5Gb/s for high speed USB

Power supply: up to 4.5 W

### Markets & Applications



C4ISR, Battlefield, Ground vehicles



Navy



Railway

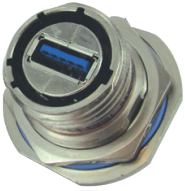
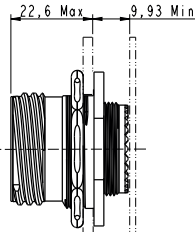
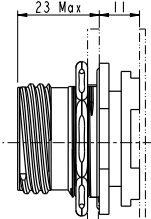
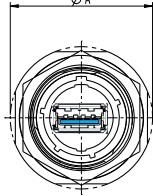
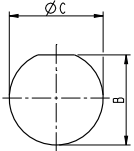

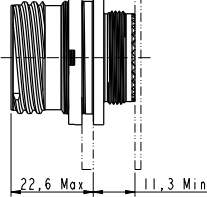
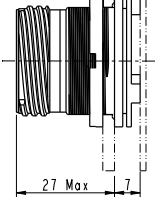
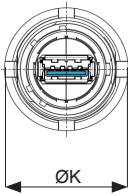
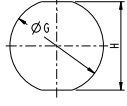


Applications:

- › Embedded computers, data acquisition and transmission in harsh environment, battlefied communication

# USB3F TV - Reduced Flange

## Smaller Dimensions and 15% lighter

| Product   | Length (mm)   |   | Footprint (mm)   | Panel dimension  |
|---|---|---|--|--|
| <b>Standard USB3F TV</b><br>       | Standard USB3F TV<br>              | Standard stand off USBF TV<br>               | Standard USB3F TV<br>       | Standard USB3F TV<br>       |
| <b>Reduced Flange USB3F TV</b><br> | Reduced Flange USB3F TV (F312)<br> | Stand off Reduced Flange USB3F TV (F059)<br> | Reduced Flange USB3F TV<br> | Reduced Flange USB3F TV<br> |
|   | Increase of internal length by 1,37 mm  | Reduction of internal length by 4mm and increase of external length by 4mm  | 40% footprint surface reduction  |  |

## Footprint Saving

40% footprint surface reduction:

| Shell Size | USB3F TV standard diameter ØA max (mm) | USB3F TV Reduced Flange diameter ØK max (mm) | Footprint surface reduction Reduced Flange vs standard |
|------------|--|--|--|
| 15         | 41,6                                   | 32,1   | 40%  |

## Panel Dimension

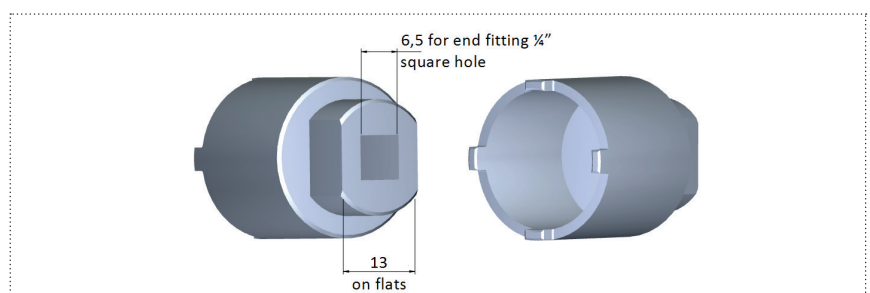
| Size | USB3F TV Standard                    |                                       | USB3F TV Reduced Flange              |                                     |
|------|--------------------------------------|---------------------------------------|--------------------------------------|-------------------------------------|
|      | B <sup>0</sup> <sub>-0,25</sub> (mm) | ØC <sup>+0,25</sup> <sub>0</sub> (mm) | ØG <sup>+0,1</sup> <sub>0</sub> (mm) | H <sup>+0,1</sup> <sub>0</sub> (mm) |
| 15   | 27,56                                | 28,83                                 | 27                                   | 25,5                                |

## Tools

Need of a specific tool for castle nut:

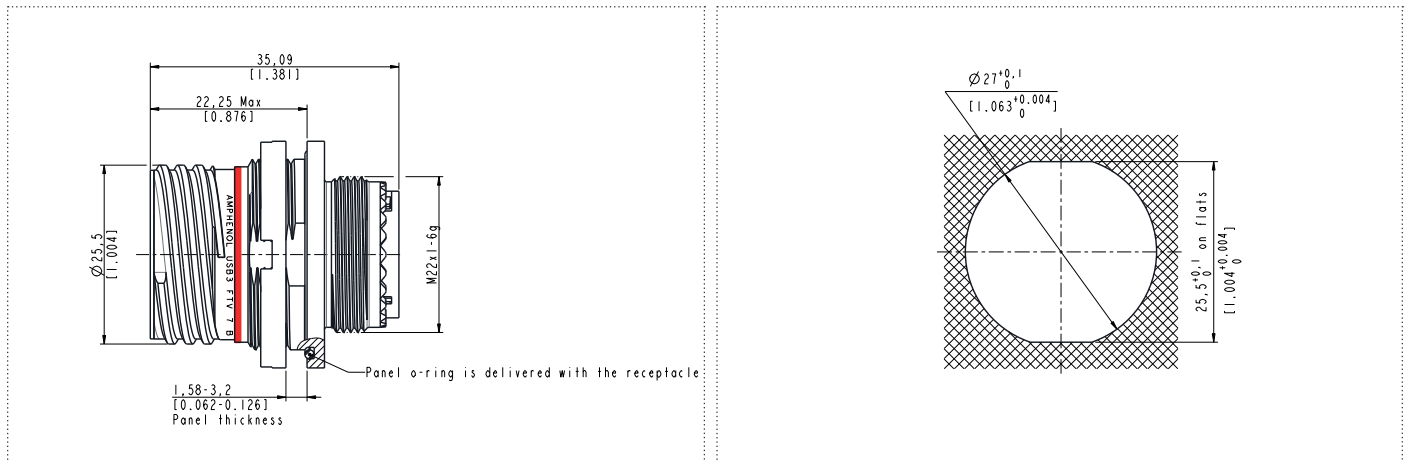
| Size | Tool Part Number |
|------|------------------|
| 15   | 809684           |

Max torque value: 8.5 N.m



# USB3F TV - Reduced Flange

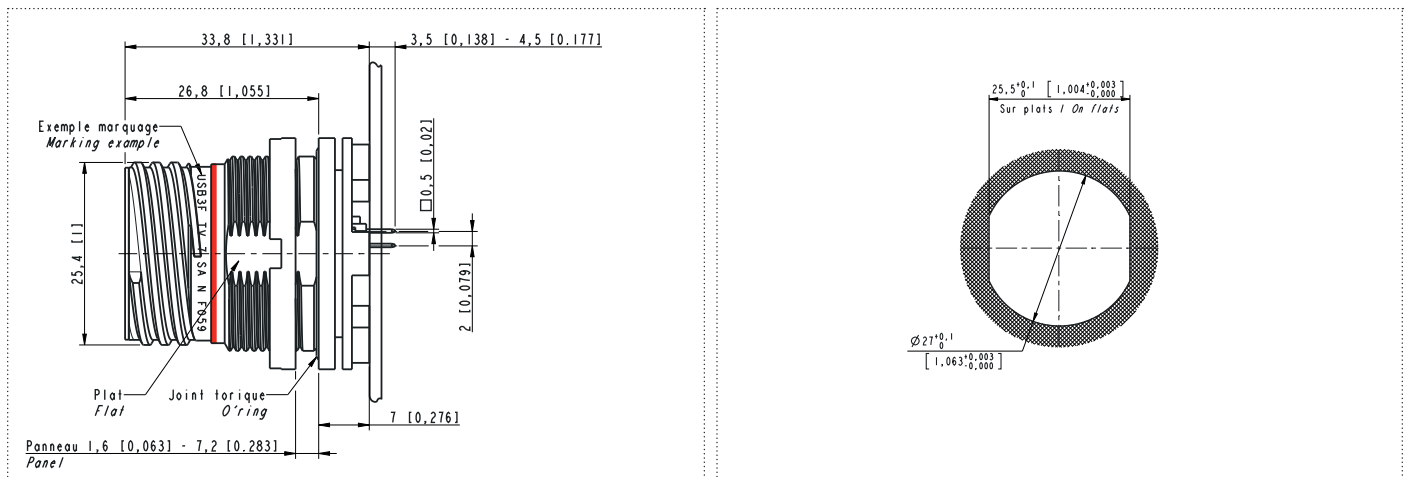
## Receptacle



USB3F TV 7 X X F312

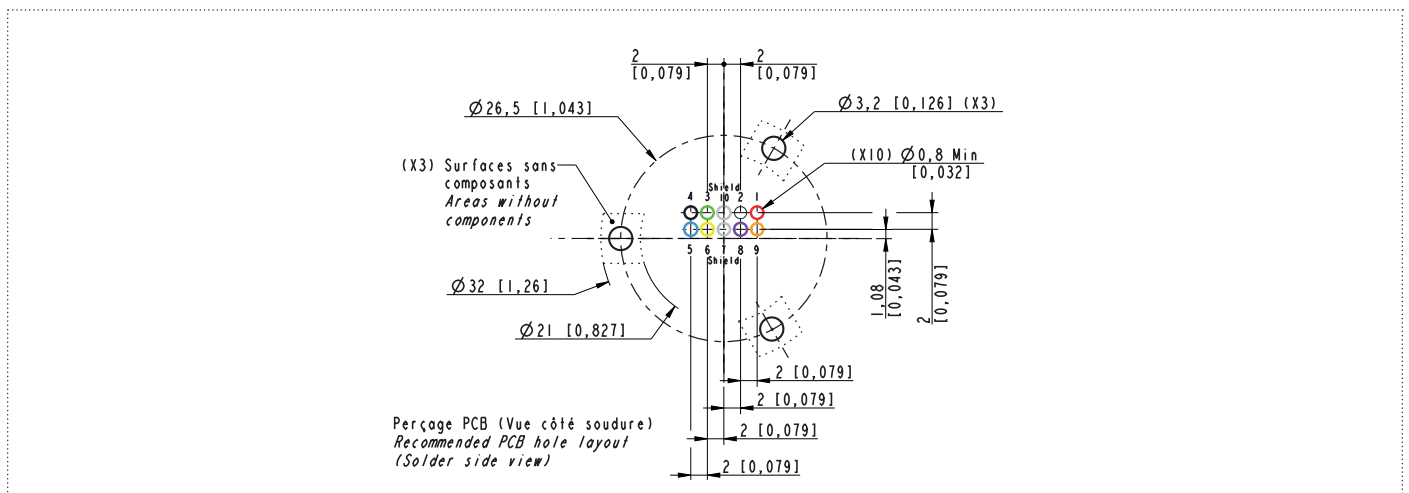
Panel Drilling

## Stand off receptacle



USB3F TV 7S X X F059

Panel Drilling

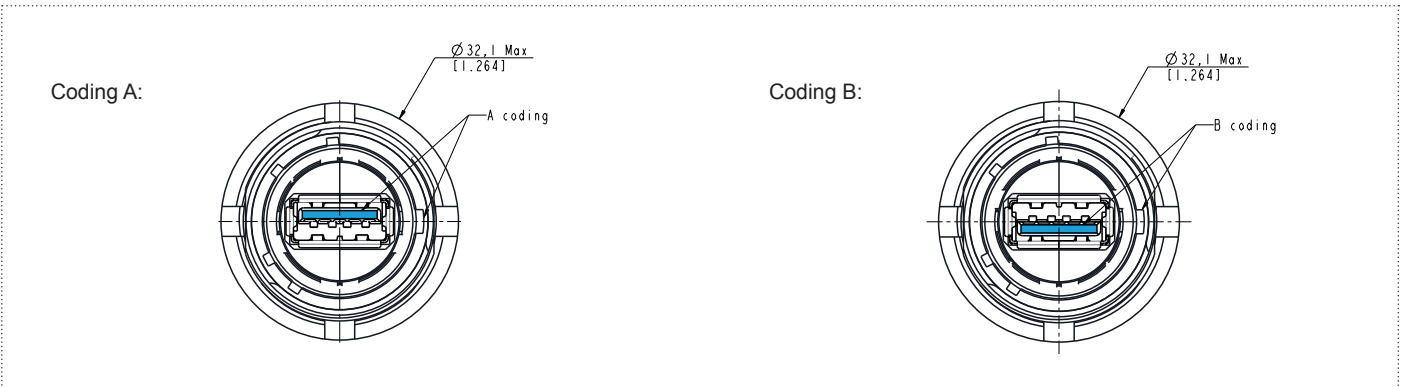


PCB Layout

# USB3F TV - Reduced Flange

## Coding

To be specified in the part number: A or B.



## How to order

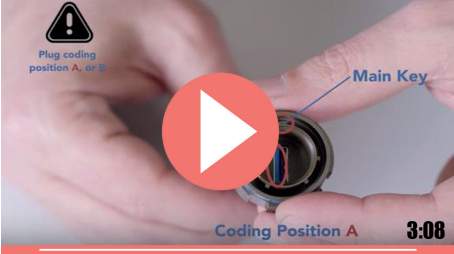
| Series   | USB3F TV | 7 | A | ZN | F312 |
|--|----------|---|---|----|------|
| <b>Shell type</b><br>7: Jam nut receptacle<br>7S: Transversally sealed jam nut receptacle for F059 or F058 only  |          |   |   |    |      |
| <b>Coding</b><br>A or B  |          |   |   |    |      |
| <b>Shells material &amp; Finish (inserts are metallized)</b><br>N: Aluminium shell - nickel plating ✓<br>G: Aluminium shell - olive drab cadmium plating<br>ZN: Aluminium shell - black zinc nickel plating ✓  |          |   |   |    |      |
| <b>Deviation</b><br>F312: Reduced Flange<br>F059: Stand off Reduced Flange (only in transversally sealed version)<br>F311: Reduced Flange with safety castle nut<br>F058: Stand off Reduced Flange with safety castle nut (only in transversally sealed version) |          |   |   |    |      |

Examples: USB3FTV7AZNF312 ; USB3FTV7SBGF059


✓ : RoHS compliant

## Watch our video

### Rugged USB Plug Assembly



Scan & discover !



<http://opn.to/a/Azd09>



## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for [USB Connectors](#) category:*

*Click to view products by [Amphenol](#) manufacturer:*

Other Similar products are found below :

[65-647-8-BK-BU](#) [950](#) [E8144-B01021-L](#) [A-USB A-LP-SMT-C](#) [A-USB B-TOP-C](#) [MUSBA511N5](#) [MUSBD11135](#) [217450-1](#) [CA 6 W LD](#)  
[KMBVX-TH-5S-B30](#) [896-30-004-00-000000](#) [KUSBVX-BS1N-W30](#) [KUSBX-AP-KIT-SCBLK](#) [KUSBX-AS2N-W](#) [KUSBX-SMT2AP1S-W](#)  
[KUSBX-SMT2AP1S-W30](#) [935](#) [957](#) [30-498-6](#) [17-210051](#) [1734082-1](#) [30-1574](#) [30-470](#) [30-489](#) [30-541](#) [30-572-3](#) [MAB 8 SN V](#) [A-USB A-](#)  
[2P-C](#) [MIKROE-1451](#) [USBFTV2PEM2G](#) [USBFTVC6ZN](#) [KUSBX-AS2N-W30](#) [KUSBX-SLAS1N-W](#) [KUSBX-SMT-AS1N-W30](#) [4689-1](#) [1-](#)  
[1734084-2](#) [E8110-001-01](#) [MUSBA81130](#) [33UBARS1-04SW11](#) [33UBAR-04SW11](#) [USBF21ZNSCC](#) [USBBFTV6ZC](#) [10135326-001LF](#)  
[M9177/3-1](#) [USB-A-S-F-B-VT](#) [925](#) [4198](#) [690-024-633-031](#) [KUSBEX-BSFS1N-W](#) [USBFTVC6MRG](#)