Amphenol SOCAPEX

# 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:**<br>> 48h with aluminium shell - Nickel ✓<br>> 500h with aluminium shell - Olive drab cadmium plating<br>> 500 h with aluminium shell - Black zinc nickel ✓ |
| **Fire retardant / low smoke:** UL94 V0 and EN45545 |
| **Vibrations:**<br>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

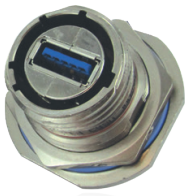
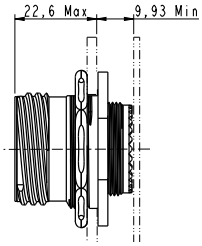
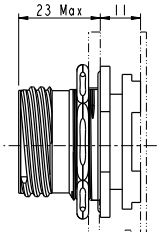
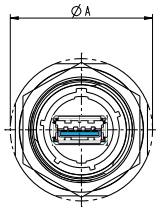
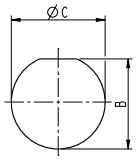
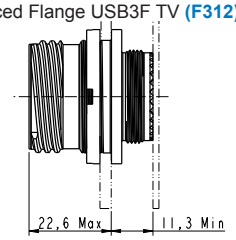
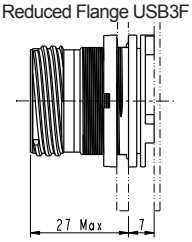
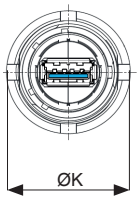
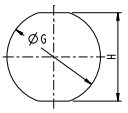
Railway

*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 |
|---|---|---|---|---|
| Standard USB3F TV | Standard USB3F TV | Standard stand off USBF TV | Standard USB3F TV | Standard USB3F TV |
|  |  |  |  |  |
| Reduced Flange USB3F TV | Reduced Flange USB3F TV **(F312)** | Stand off Reduced Flange USB3F TV **(F059)** | Reduced Flange USB3F TV | Reduced Flange USB3F TV |
| |  |  |  |  |
| | 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

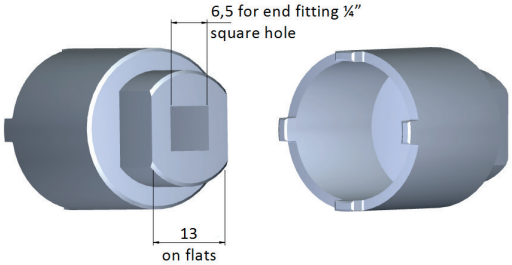
| | USB3F TV Standard | | USB3F TV Reduced Flange | |
|---|---|---|---|---|
| Size | B $^{0}_{-0,25}$ (mm) | ØC $^{+0,25}_{0}$ (mm) | ØG $^{+0,1}_{0}$ (mm) | H $^{+0,1}_{0}$ (mm) |
| 15 | 27,56 | 28,83 | 27 | 25,5 |

## Tools

**Need of a specific tool for castle nut:**

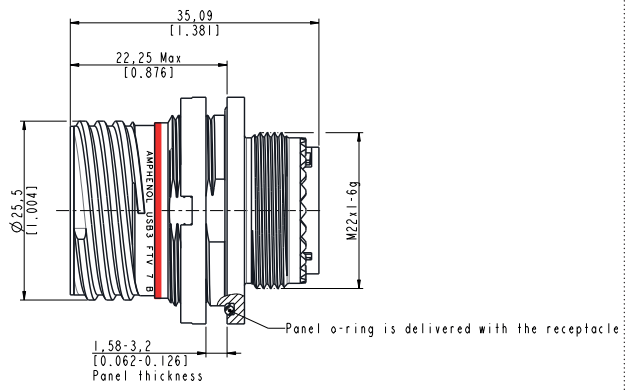
| Size | Tool Part Number |
|---|---|
| 15 | 809684 |

**Max torque value: 8.5 N.m**

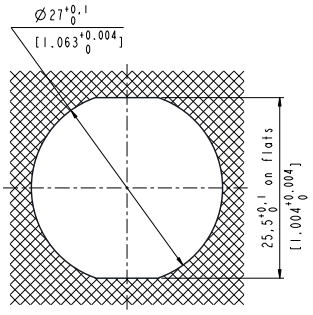


# USB3F TV - Reduced Flange

## Receptacle

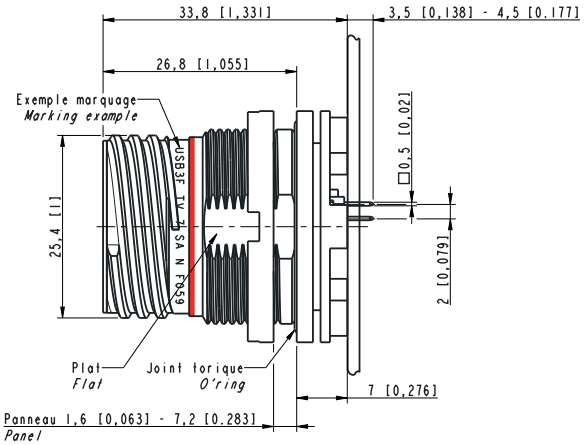



USB3F TV 7 X X F312

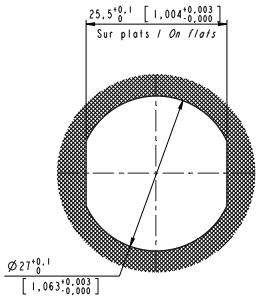



Panel Drilling

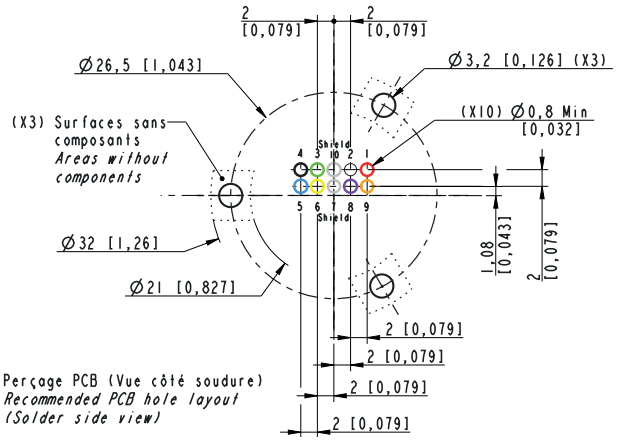
## Stand off receptacle




USB3F TV 7S X X F059




Panel Drilling




PCB Layout

Due to technical modifications, all information provided is subject to change without prior notice
Designed by Amphenol Socapex

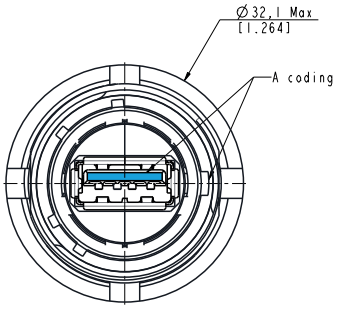
Amphenol SOCAPEX

# USB3F TV - Reduced Flange

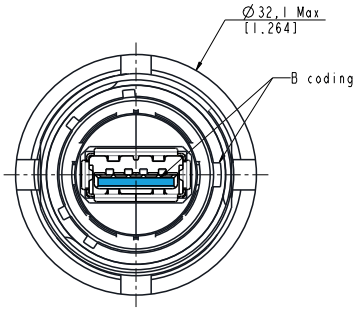
## Coding

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

Coding A:




Coding B:




## How to order

| Series | USB3F TV | 7 | A | ZN | F312 |
|---|---|---|---|---|---|

**Shell type**
**7**: Jam nut receptacle
**7S**: Transversally sealed jam nut receptacle for F059 or F058 only

**Coding**
**A** or **B**

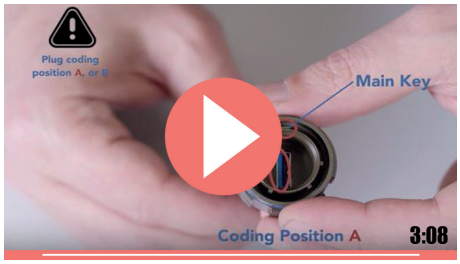
**Shells material & Finish (inserts are metallized)**
**N**: Aluminium shell - nickel plating ✓
**G**: Aluminium shell - olive drab cadmium plating
**ZN**: Aluminium shell - black zinc nickel plating ✓

**Deviation**
**F312**: Reduced Flange
**F059**: Stand off Reduced Flange (only in transversally sealed version)
**F311**: Reduced Flange with safety castle nut
**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**




*http://opn.to/a/Azd09*

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Amphenol SOCAPEX

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Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

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На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

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