

Amphenol RJ Field Series



NO HAZARDOUS ON-FIELD CABLING AND GROUNDING

The Amphenol RJ Field series allows the use of an Ethernet Class D/ CAT5e and Class E/CAT6 connection for Ethernet over twisted-pair networks in harsh environments. The RJStop® connection system protects from shock, dust and fluid. No hazardous on-field cabling and grounding required!

- Connections for 10Base-T, 100Base-TX, or 1000Base-T networks
- No tools required
- Mechanical coding/polarization


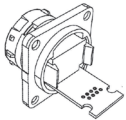

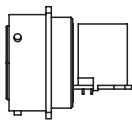



APPLICATIONS

- Robotics
- Military data hubs
- Special machines
- Welding machines
- Communications
- CNC machines
- Process & motion control
- Diagnostics

FEATURES

- CAT5e & CAT6 Cable
- USB-A 2.0, USB-B 2.0, USB-A 3.0
- Mating systems – bayonet, triple-lead, latch, push-pull

TECHNICAL SPECIFICATIONS

| |  |  |  |  |  |  |  |
|--|---|---|---|---|---|---|---|
| SERIES | RJF RB | RJF 544 | RJF-EZ | RJF | RJFTV | USBFTV (USB-A) | USBBFTV (USB-B) |
| Shape | Circular | Circular | Rectangular | Circular | Circular | Circular | Circular |
| Coupling System | Reverse Bayonet | Push-Pull | Lever | Bayonet | Tri-Start Thread | Tri-Start Thread | Tri-Start Thread |
| Material | Plastic | Plastic | Plastic | Metal | Metal | Metal | Metal |
| Data Type | CAT5e & CAT6 | CAT5e & CAT6 | CAT5e | CAT5e & CAT6 | CAT5e & CAT6 | USB-A 2.0 & 3.0 | USB-B 2.0 |
| Number of possible Codings (polarizations) | 1 | 1 | 1 | 4 | 4 | 4 | 4 |
| RoHS Options Available | Yes | No | No | Yes | Yes | Yes | Yes |
| Mating Cycles | 500 min. | 500 min. | 500 min. | 500 min. | 500 min. | up to 1500 | up to 1500 |



MAIN CHARACTERISTICS

- Sealed (IP68) USB-B connection system
- USB-B male plug overmolded on USB2.0 cable
- USB-A plug can be used with USBFTV
- USB-B female receptacle with 50 mm wires & five-way connectors
- Plastic shells
- Thread coupling
- Rear mount jam nut receptacle with panel gasket included
- To -4°F +176°F (-20°C +80°C)

APPLICATIONS

- Embedded computers
- Data transfer
- * Numerical control machine

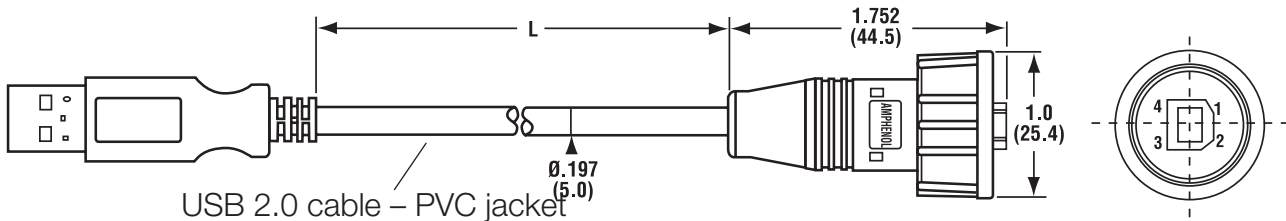
MALE SEALED PLUG USB-B / USB-A CORDSET



FEMALE RECEPTACLE AND CAP



PLUG CORDSET – MALE SEALED USB-B / MALE USB-A (*)



PART NUMBERS:

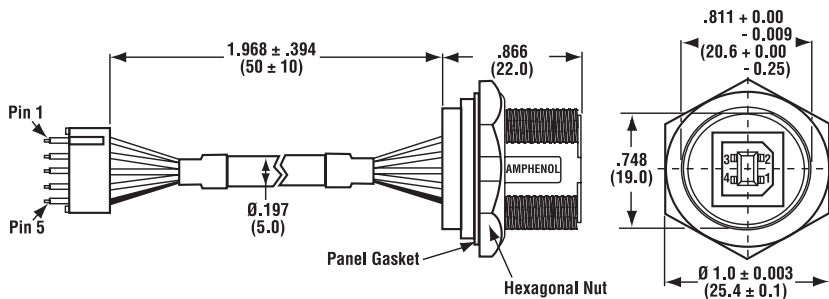
L = 39.37±1.97 [1000±50mm] - P/N: **USBBF6100**
 L = 78.74±1.97 [2000±50mm] - P/N: **USBBF6200**

(*) To get a sealed USB-A plug, use our USB FTV series.

PIN ASSIGNMENTS (FRONT VIEW)

- 1 = RED (24 AWG)
- 2 = WHITE (28 AWG)
- 3 = GREEN (28 AWG)
- 4 = BLACK (24 AWG)
- Shield = Drain

RECEPTACLE – FEMALE USB-B

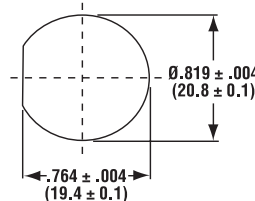


RECEPTACLE & CAP



JWT CONNECTOR – PITCH 2.5MM

- JWT 1 = USB1 = RED (24 AWG)
- JWT 2 = USB2 = WHITE (28 AWG)
- JWT 3 = USB3 = GREEN (28 AWG)
- JWT 4 = USB4 = BLACK (24 AWG)
- JWT 5 = USB Shield = YELLOW (24 AWG)



All dimensions in inches (millimeters in parenthesis)

USBBFTV - USB-B

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
- 2 mechanical coding / polarization possibilities by the user (receptacle insert rotation)
- USB TV plug retention in the receptacle: 100 N in the axis
- Mating cycles: 500 to 1500

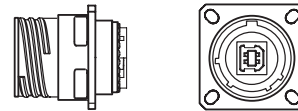
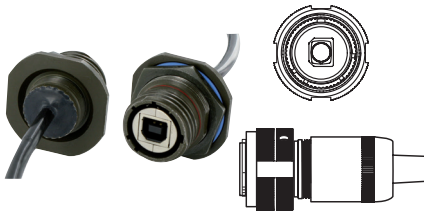
ENVIRONMENTAL PROTECTION

- Sealing (when mated): IP68 (Temporary immersion)
- Salt Spray: 48-hour with nickel-plating > 500-hour with olive drab cadmium
- Fire-retardant / low-smoke: UL94 V0 and NF F 16 101 & 16 102
- Vibrations: 10 – 500 Hz, 10 g, 3 axes: no discontinuity > 1 micros
- Shocks: IK06; weight of 250 g drop from 40 cm [15.75 in] onto connectors (mated pair)
- Humidity: 21 days, 109.4°F (43°C), 98% humidity
- Temperature Range: -40°F to +185°F (-40°C to +85°C)

DATA TRANSMISSION

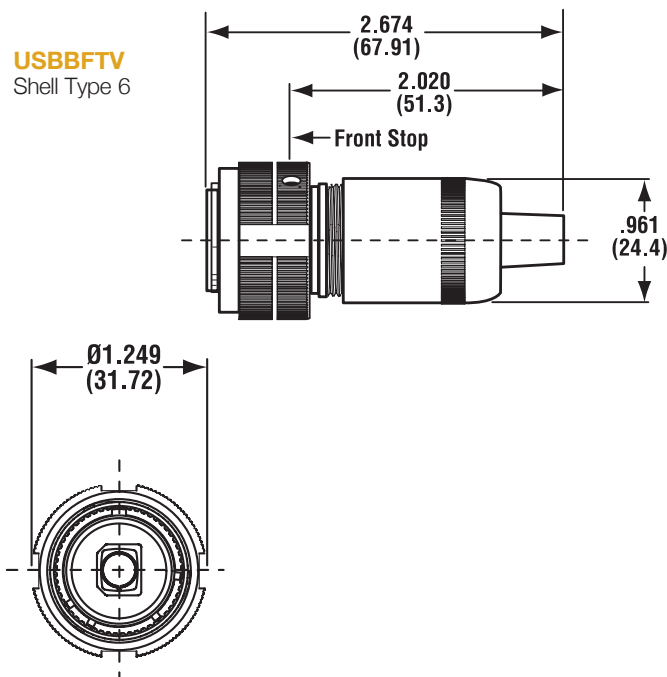
USB Specification 2.0

Data Rate: Up to 480 Mb/s for high-speed

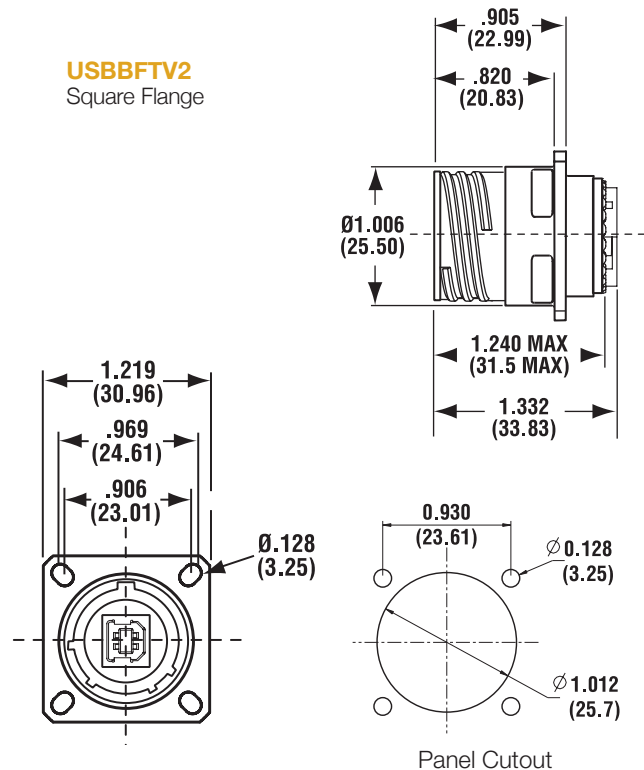


| PLATING | PLUG | | RECEPTACLES | | | |
|--------------------|-----------|--------------------------|--------------|-------------------------|---------------|--|
| | STANDARD | SQUARE FLANGE RECEPTACLE | | | | |
| | | FEMALE USB-A | | SOLDER (4 TINNED HOLES) | | |
| Nickel | USBBFTV6N | USBBFTV21N | USBBFTV2PE1N | USBBFTV2PE2N | USBBFTV2PEM2N | |
| Olive Drab Cadmium | USBBFTV6G | USBBFTV21G | USBBFTV2PE1G | USBBFTV2PE2G | USBBFTV2PEM2G | |

PLUG

USBBFTV
Shell Type 6

RECEPTACLES

USBBFTV2
Square Flange

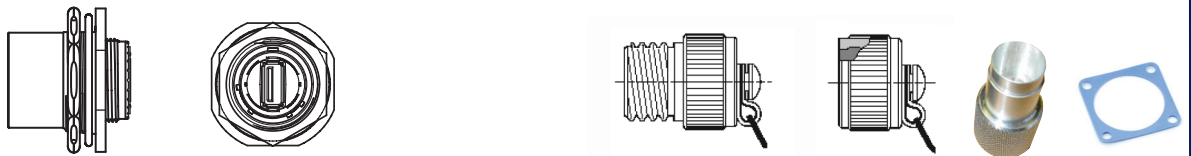
All dimensions in inches (millimeters in parenthesis)

USBBFTV TRANSVERSALLY-SEALED



| PLATING | PLUG | RECEPTACLES | | | | | |
|-------------------------|---------------------|-------------------|----------------------------|--------------------------|-------------------|----------------------------|--------------------------|
| | STANDARD USB-B PLUG | SQUARE FLANGE | | | JAM NUT | | |
| | | OPEN CABLE | W/ BACKSHELL PLASTIC GLAND | W/ BACKSHELL METAL GLAND | OPEN CABLE | W/ BACKSHELL PLASTIC GLAND | W/ BACKSHELL METAL GLAND |
| Nickel | USBBFTV2S2N**A | USBBFTV2S2N**OPEN | USBBFTV2PES2N**A | USBBFTV2PEMS2N**A | USBBFTV7S2N**OPEN | USBBFTV7PES2N**A | USBBFTV7PEMS2N**A |
| Olive Drab Cadium | USBBFTV2S2G**A | USBBFTV2S2G**OPEN | USBBFTV2PES2G**A | USBBFTV2PEMS2G**A | USBBFTV7S2G**OPEN | USBBFTV7PES2G**A | USBBFTV7PEMS2G**A |

* Coding A, B, C, D ** Select for Cordset Length 03 = 11.81 (0.30M) 05 = 19.68 (0.50M) 10 = 39.37 (1.00M) 15 = 59.05 (1.50M)



| RECEPTACLES | | | | ACCESSORIES | | | | |
|--------------|-----------------|---------------------------------|---------------|--------------------|----------|----------|--------------|--------|
| JAM NUT | | | | METALLIC DUST CAPS | | | REMOVAL TOOL | GASKET |
| FEMALE USB-A | | SOLDER (4 TINNED HOLES) | | PLUG | FLANGE | JAM NUT | | |
| STANDARD | METAL BACKSHELL | METAL BACKSHELL + PLASTIC GLAND | METAL GLAND | USBFVC6N | USBFVC2N | USBFVC7N | USBBF ODE | JE-15 |
| USBBFTV71N | USBBFTV7PE1N | USBBFTV7PE2N | USBBFTV7PEM2N | USBFVC6G | USBFVC2G | USBFVC7G | USBBF ODE | JE-15 |

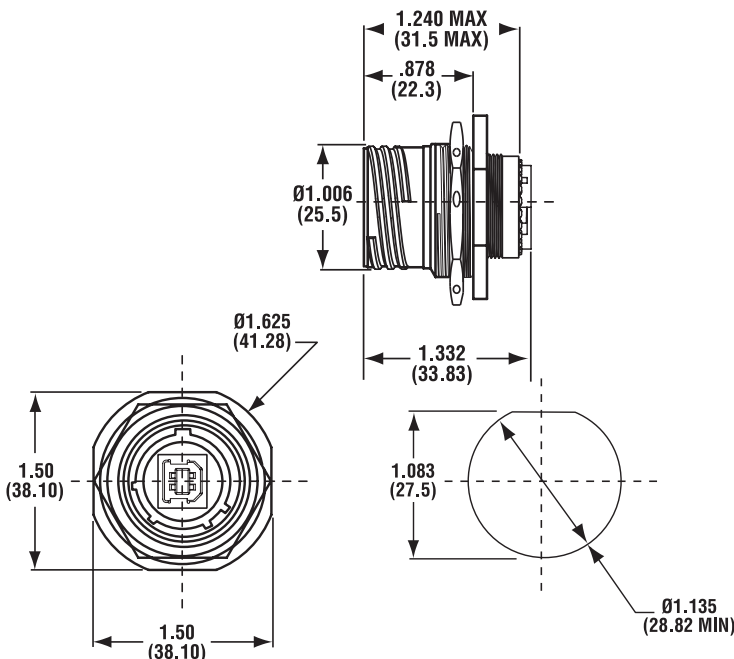
RECEPTACLE

USBBFTV7

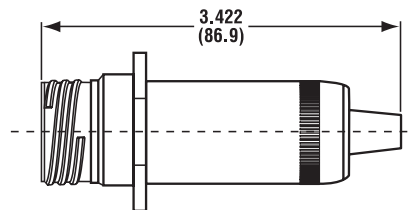
Jam Nut Receptacle

USBBF TV 2PE/7PE-1

Backshell used with back termination type 1: USB-A receptacle



Panel Cutout



USBBF TV 2PE(M)/7PE(M)-2

Backshell used with back termination type 2: Solder IP68

