

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

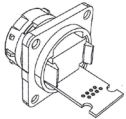
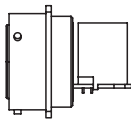
APPLICATIONS

- 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

USB B FIELD



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

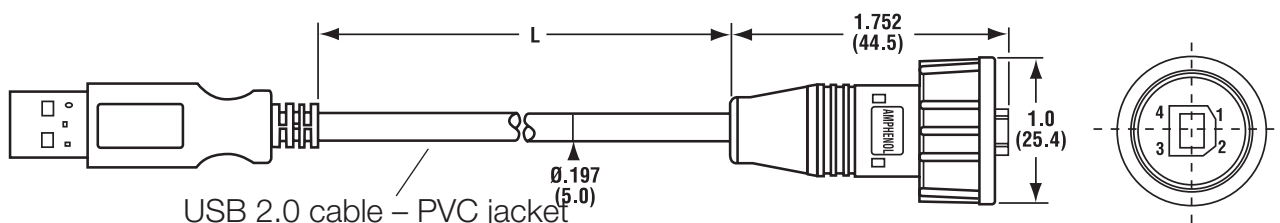
MALE SEALED PLUG USB-B / USB-A CORDSET



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**

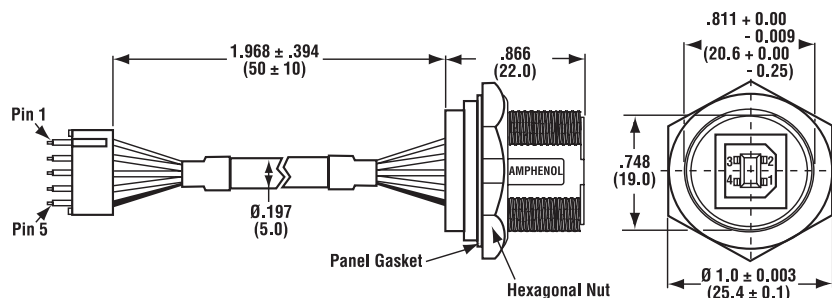
L = 78.74±1.97 [2000±50mm] - P/N: **USBBF6200**

(*) 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



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)

RECEPTACLE & CAP



RECEPTACLE PN:
USBBF7

CAP PN: **USBBFC7**

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)
- USBF TV plug retention in the receptacle: 100 N in the axis
- Mating cycles: 500 to 1500

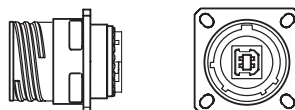
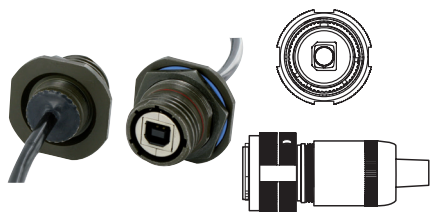
ENVIRONMENTAL PROTECTION

- 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

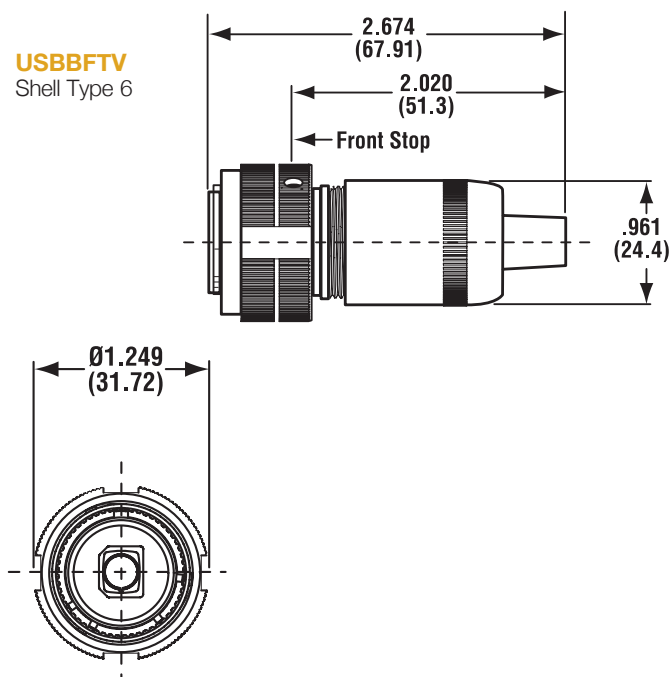
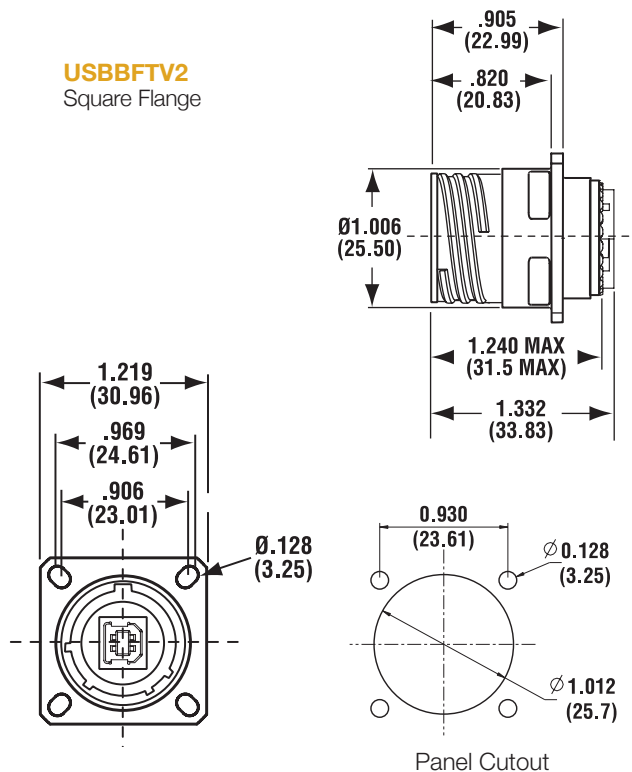
Data Rate: Up to 480 Mb/s for high-speed



PLATING	PLUG	RECEPTACLES			
		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

RECEPTACLES

USBBFTV
Shell Type 6USBBFTV2
Square Flange

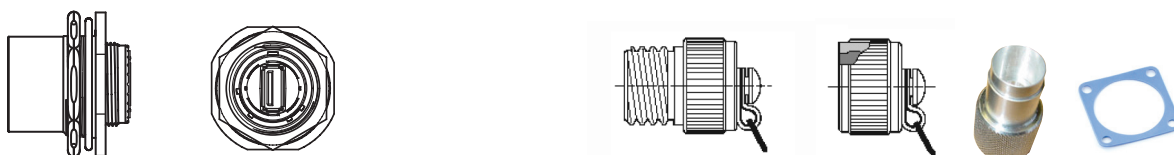
All dimensions in inches (millimeters in parenthesis)

USBFTV TRANSVERSALLY-SEALED



PLATING	PLUG	RECEPTACLES					
		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					
USBBFTV71N	USBBFTV7PE1N	USBBFTV7PE2N	USBBFTV7PEM2N	USBFTVC6N	USBFTVC2N	USBFTVC7N	USBBF ODE	JE15
USBBFTV71G	USBBFTV7PE1G	USBBFTV7PE2G	USBBFTV7PEM2G	USBFTVC6G	USBFTVC2G	USBFTVC7G	USBBF ODE	JE15

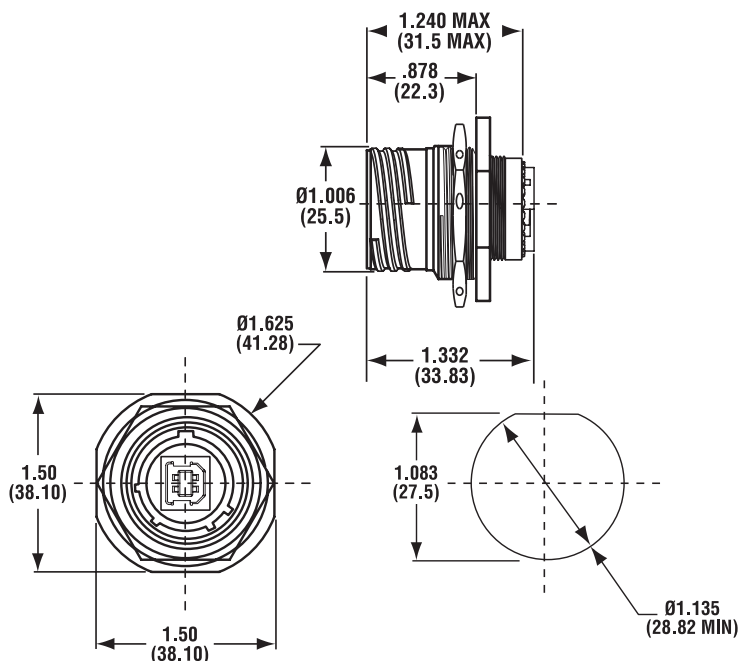
RECEPTACLE

USBBFTV7

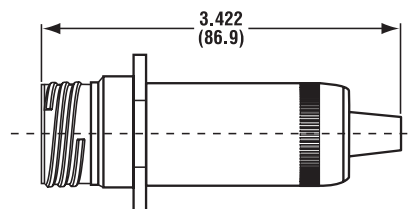
Jam Nut Receptacle

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

