

# RJF TV

## Ethernet Connection System for Harsh Environment



RJF TV allows you to use an Ethernet Class D / Cat. 5e connection for 10 BaseT, 100 BaseTx or 1000 BaseT networks in harsh environments. With the patented RJStop system you can use a standard RJ45 cordset in a **metallic** plug which will protect it from shocks, dust and fluids. **No hazardous on-field cabling and grounding!**

### Applications

- Data Acquisition and Transmission in harsh environment
- Railways
- Radars
- Shelters
- Battlefield Communication
- Systems
- Navy

### Data Transmission

10 BaseT, 100 BaseTX and 1000 BaseT networks  
Cat 5e per TIA/EIA 568B and ClassD per ISO/IEC 11801

### Main characteristics

- Sealed against fluids and dusts (IP68)
- Shock, Vibration and Traction resistant
- No cabling operation in field and no tools required
- Mechanical Coding / Polarization (4 positions)
- Improved EMI protection
- **Tri Start Thread coupling mechanism (MIL-DTL-38999 series III type) with anti-decoupling device**
- **Robust metallic shells**
- RJ45 cordset retention in the plug: 100 N in the axis
- Mating cycles: 500 min
- Compatible with cable diameter from 6 mm [0.236 in] to 13 mm [0.512 in], for smaller diameters please consult us

### Environmental Protection

- Sealing: IP68
- Salt Spray: 48h with Aluminium shell - Nickel plating  
> 500h with Aluminium shell - Olive drab cadmium plating  
1000 h with Marine bronze shell
- Fire Retardant/Low Smoke : UL94 V0 and NF F 16 101 & 16 102
- Vibrations : 10 - 500 Hz, 10 g, 3 axes: no discontinuity > 10 nano s.
- Compounded versions tested per NAS 1599 (5-3000 Hz, 20g, 12h)
- Shocks: IK06: weight of 250 g drop from 40 cm [15.75 in] onto connectors (mated pair)
- Humidity: 21 days, 43°C, 98% humidity
- Thermal Shock: 5 cycles at -40°C / +100°C
- Temperature Range: -40°C / +85°C

### Part Number Code

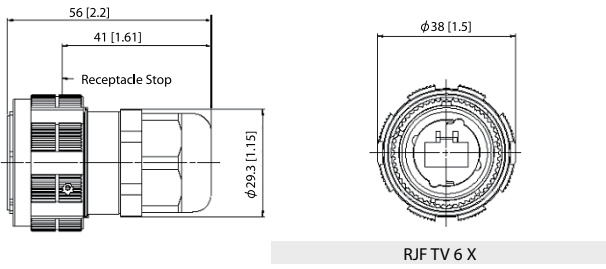
Series RJ Field TV	RJF TV	2	2	G	03 100 BTX
<b>Shell Type</b>					
6:	Plug with Plastic gland				
6M:	Plug with Metal gland				
2:	Square Flange Receptacle				
2PE:	Square Flange Receptacle, IP68 backshell, Plastic gland				
2PEM:	Square Flange Receptacle, IP68 backshell, Metal gland				
7:	Jam Nut Receptacle				
7PE:	Jam Nut Receptacle, IP68 backshell, Plastic gland				
7PEM:	Jam Nut Receptacle, IP68 backshell, Metal gland				
2SA, 7SA:	Transversally sealed receptacle (unmated) see page 34				
<b>Back Terminations (Receptacles only)</b>					
1:	Female RJ45				
1RA:	Right Angle Female RJ45				
2:	RJ45 Cordset				
<b>Shells material &amp; Finish</b>					
N:	Aluminium shell - nickel plating (receptacle inserts are metallized) - ROHS compliant				
G:	Aluminium shell - olive drab cadmium plating (receptacle inserts are metallized)				
BZ:	Marine bronze shell (receptacle inserts are metallized) - ROHS compliant				
<b>Cordset Length (type 2 back termination only)</b>					
03 100 BTX:	0.3m [11.81 inches]				
05 100 BTX:	0.5m 19.68 inches]				
10 100 BTX:	1m [39.37 inches]				
15 100 BTX:	1.5m [59.05 inches]				
00:	8 tinned holes at the rear of the PCB to solder the cable				

**Remark: Cabling configuration:** 100 BTX = 568B (Ethernet specification)

- Examples:**
- Olive Drab Cadmium plug with plastic gland: RJF TV 6G
  - Olive Drab Cadmium Jam Nut Receptacle, female RJ45 back termination: RJF TV 71G
  - Nickel Jam Nut Receptacle, 1,5 m 100 BTX cordset back termination: RJF TV 72N 15 100BTX
  - Olive Drab Cadmium in line Square Flange Recept., 0,3 m 100 BTX cordset back termination: RJF TV 2PE 2 G 03 100BTX
  - Nickel Jam Nut Receptacle Solder termination 8 tinned holes: RJF TV 22 N 00

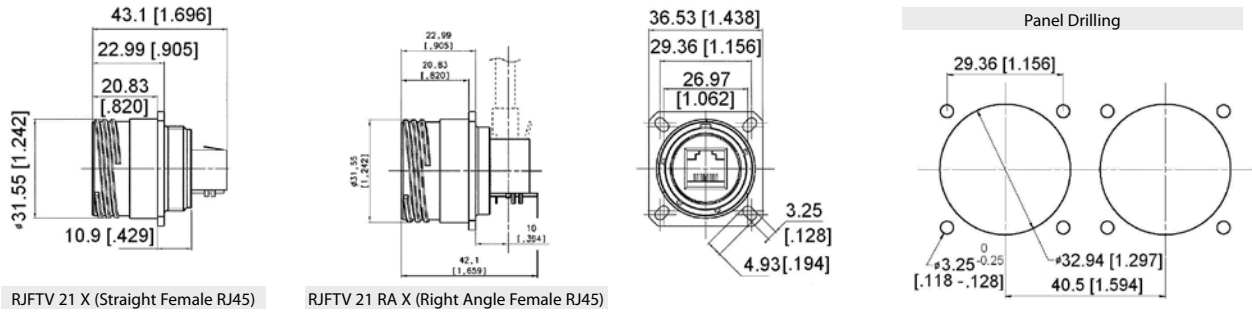
## Plug

- Shell type 6 with Plastic or Metal Gland

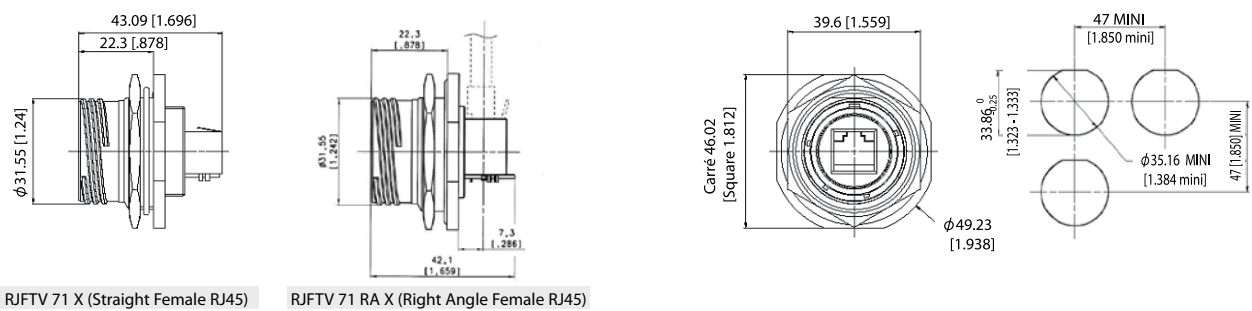


## Receptacles

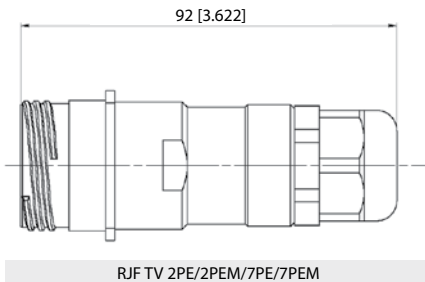
- Square flange receptacle - 4 mounting holes: Shell type 2



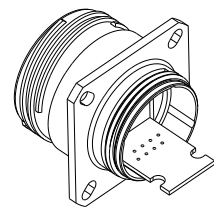
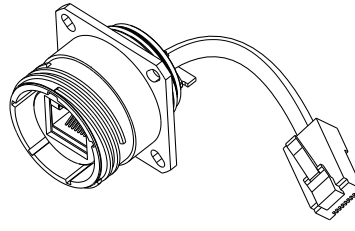
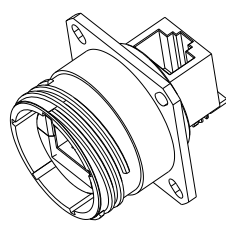
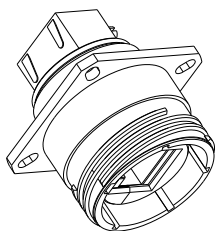
- Jam nut receptacle - Hexagonal Nut mounting: Shell type 7



- Receptacles with IP68 backshell: Shell type 2PE and 7PE with Plastic or Metal Gland



## Back terminations

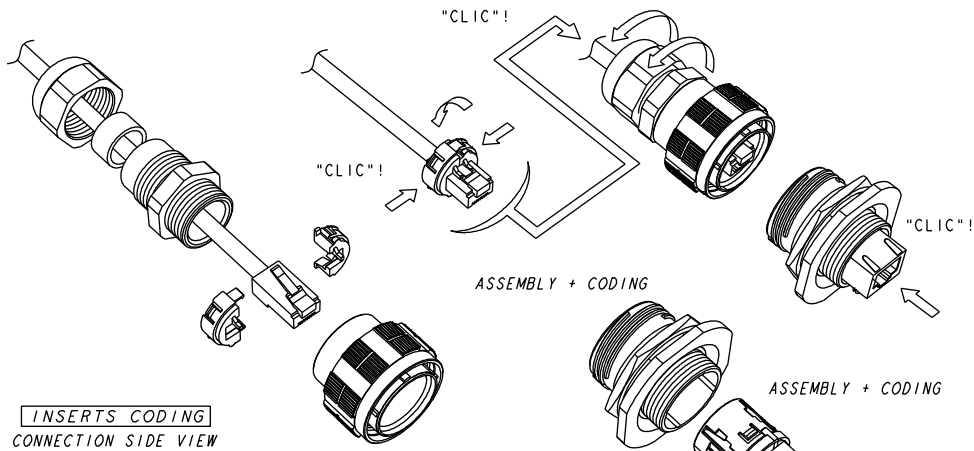


Notes Type 2 without RJ45 plug at the end of the cable is also available: consult factory

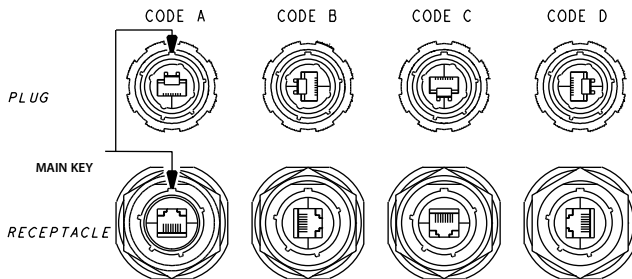
## Assembly instructions

### Insert Codings

CONNECTION SIDE VIEW



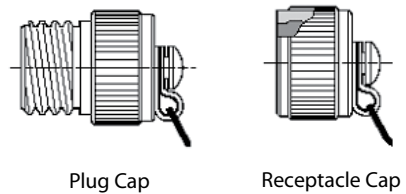
INSERTS CODING  
CONNECTION SIDE VIEW



### Accessories

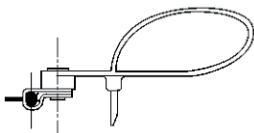
#### ■ Metallic Caps

	RJFTVC	2	G
<b>Connector Type</b>			
6: Plug			
2: Square Flange Receptacle			
7: Jam Nut Receptacle			
<b>Shell Material &amp; finish</b>			
N: Aluminium shell - nickel plating - ROHS compliant			
G: Aluminium shell - olive drab cadmium plating			
BZ: Marine bronze shell - ROHS compliant			

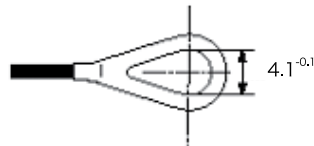


Plug Cap

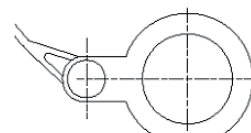
Receptacle Cap



Plug Cap end



Square flange receptacle cap end



Jam Nut receptacle cap end

- Panel Gasket for square flange receptacle  
(Thickness: 0,8 mm [.031]): JE19



- Insert removal tool: RJF ODE



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