

# RJF TV

## Ethernet Connection System for Harsh Environment

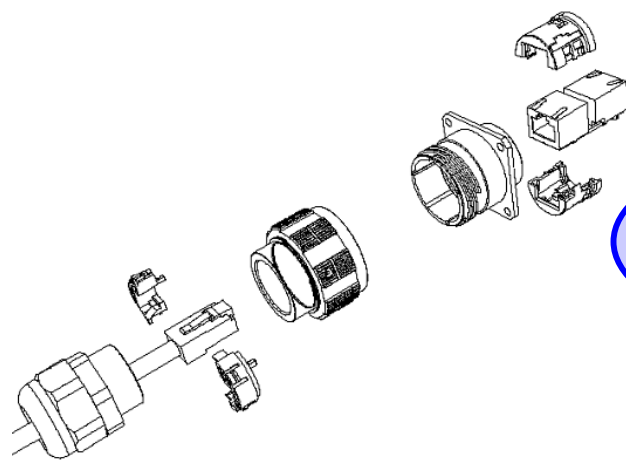
### Description

The RJField connector allows you to use an Ethernet Class D / Cat. 5e connection for 10 BaseT, 100 BaseTX or 1000 BaseT networks in harsh environments:

- Sealed against fluids and dusts (IP67)
- Shock, Vibration and Traction resistant
- No cabling operation in field and no tools required
- Mechanical Coding / Polarization (4 positions)
- Improved EMI protection

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 in-field cabling and grounding !



This metallic plug is connected into a receptacle, using a Tri-Start thread coupling mechanism (MIL-DTL-38999 Series III type) with an anti-decoupling device for high vibrations.

On the receptacle, one female RJ45 is soldered onto a PCB allowing for the following back terminations :

- another female RJ45
- a RJ45 cordset
- a solder termination

The RJ45 cordset shielding is transmitted to the RJ45 receptacle through lateral grounding fingers. For an outstanding EMI protection, the conductive plating versions (Ni and Cd) with metallized receptacle inserts transmit the shielding to the connector shells and finally to the panel.



**Compounded version  
also available (tested  
in vibration per NAS 1599)**

**NEW**  
<http://www.RJField.com>

**Transform your RJ45  
cordset into a Harsh  
Environment Connector !**

### Applications

- Data Acquisition and Transmission in Harsh Environment
- Railways
- Radars
- Shelters
- Battlefield Communication Systems
- Embedded computers
- Navy / Shipboard

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# Main Characteristics

## Data Transmission

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

## Mechanical

- Tri Start thread coupling mechanism (MIL-DTL-38999 Series III type) with anti-decoupling device
- 4 mechanical Coding / Polarization possibilities by the user (insert rotation)
- RJ45 cordset retention in the plug : 100 N in the axis
- Mating cycles : 500 min

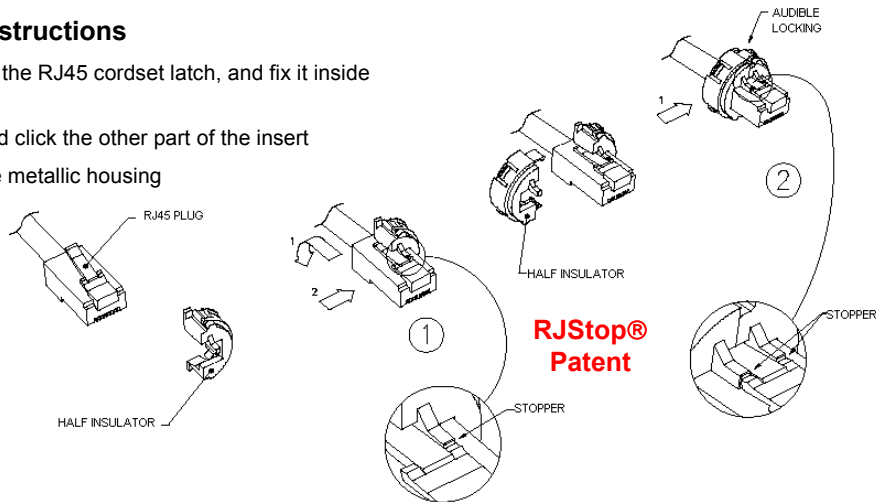
## Environmental Protection

- Sealing : IP67 with recommended 5 to 12 mm cable diameter
- Salt Spray : 48 h with Nickel plating  
> 500 h with Olive Drab Cadmium plating
- 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 version tested per NAS 1599 (5 - 3000 Hz, 20 g, 12 h)
- Shocks : IK06 : drop of a 250 g weight from 40 cm [15.75 in] height onto mated pair of connectors
- Humidity : 21 days, 43°C, 98% humidity
- Thermal Shock : 5 cycles at -40°C / +100°C
- Temperature Range : -40°C / +85°C

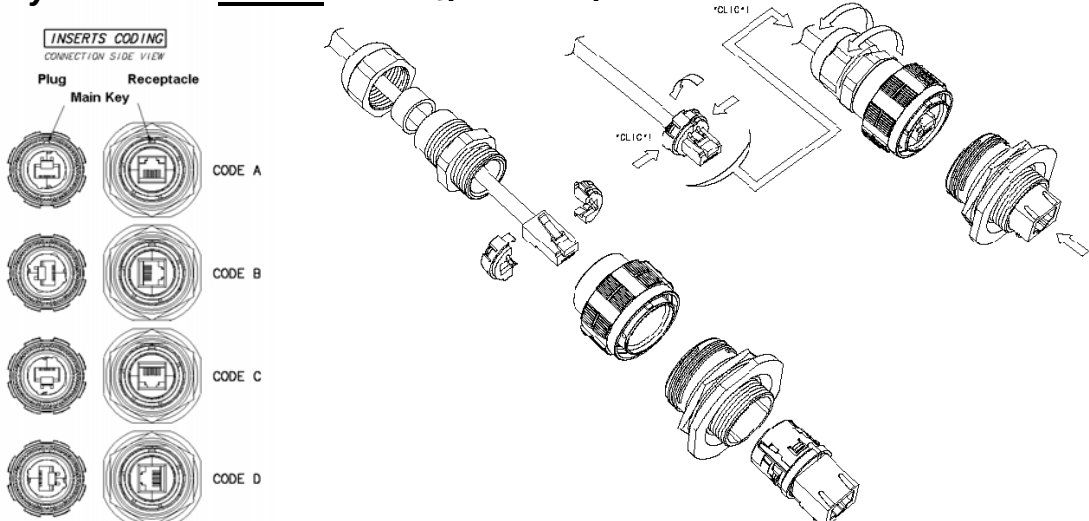
**Universal : Can be used with all standard \* RJ45 Cat.5e cordset brands**

## Assembly instructions

1. Push down the RJ45 cordset latch, and fix it inside the insert
2. Press in and click the other part of the insert
3. Insert in the metallic housing



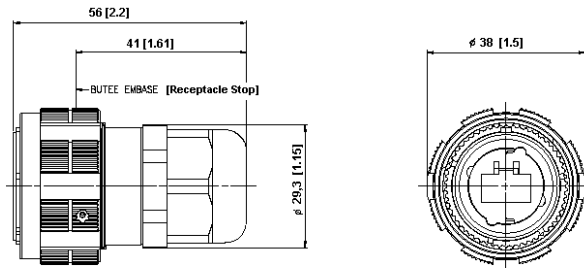
**Easy and Safe : No field cabling tools required**



\* The RJStop® system allows the use of standard RJ45 cordsets regardless their Brand. However, Amphenol can also provide Cat5- 5e cordset with reinforced jacket to be used in harsh environments (shocks, oils, fuel,...). Please consult factory.

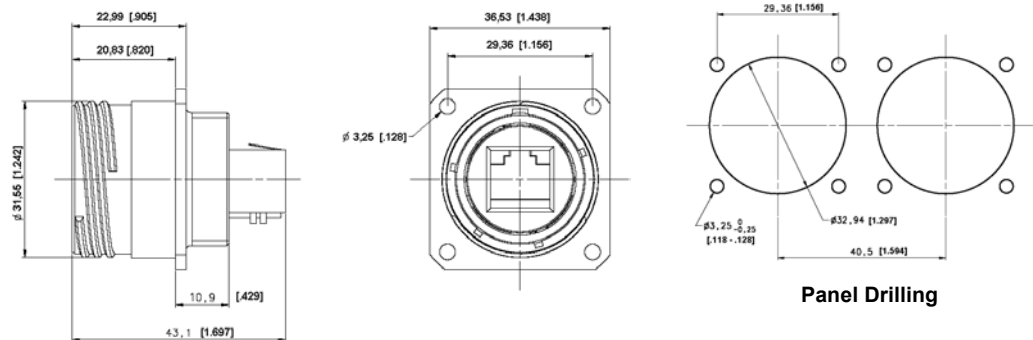
## Plug

Shell type 6  
With Plastic or  
Metal Gland

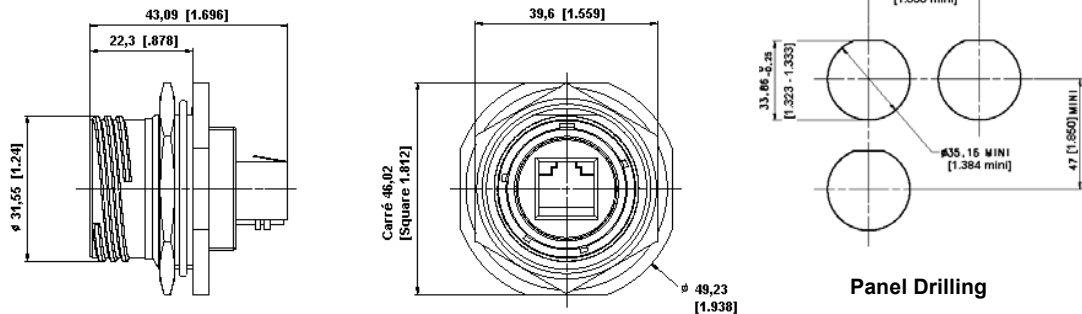


## Receptacle

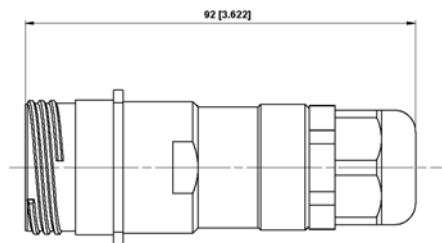
Square flange  
receptacle  
4 mounting holes  
Shell type 2



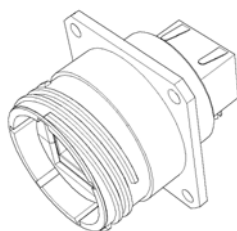
Jam Nut  
Receptacle  
Shell type 7



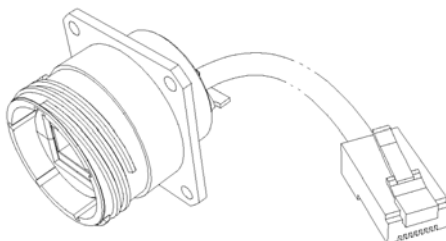
IP67 In line  
receptacle  
Shell type 2PE and 7PE with  
Plastic or Metal Gland



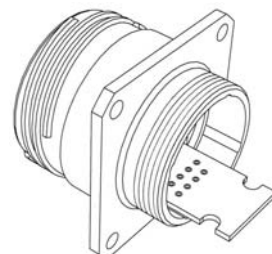
## Back Termination



Type 1 : Female RJ45



Type 2 : RJ45 Cordset



Type 2 - 00 : Solder - 8 tined holes

Notes : - Type 2 without RJ45 plug at the end of the cable is also available : please consult factory for details  
- RJFTV comes also in PC tail version : please consult factory for details

# Part Number Code

HOW TO ORDER

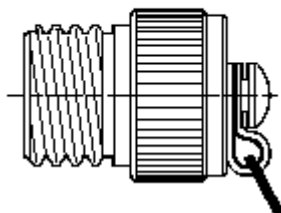
	RJF TV	2	2	G	03	100 BTX
RJ Field TV						
<b>Shell Type</b>						
6 : Plug with Plastic gland						
6M : Plug with Metal gland						
2 : Square Flange Receptacle						
2PE : Square Flange Rec. with IP67 backshell						
2PEM : Square Flange Rec, IP67 back., metal gland						
7 : Jam Nut Receptacle						
7PE : Jam Nut Rec. With IP67 backshell						
7PEM : Jam Nut Rec., IP67 back., metal gland						
2SA / 7SA : Compounded versions : see corresponding data sheet						
<b>Back Terminations (Receptacles only)</b>						
1 : Female RJ45						
2 : RJ45 Cordset						
<b>Shells Plating</b>						
N : Nickel						
G : Olive Drab Cadmium						
<b>Cordset Length (type 2 back termination only)</b>						
03 : 0,3 meters [11.81 inches]						
05 : 0,5 meters [19.68 inches]						
10 : 1 meter [39.37 inches]						
15 : 1,5 meters [59.05 inches]						
00 : 8 tined holes at the rear of the PCB to solder the cable						
<b>Cabling Configuration (for Type "2" receptacles only)</b>						
100BTX : 10/100 Base TX						
568A						
568B						

- 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 receptacle, 0,3 m 100 BTX cordset back termination : RJF TV 2PE 2 G 03 100BTX
  - Nickel jam nut receptacle, solder termination : RJF TV 22 N 00

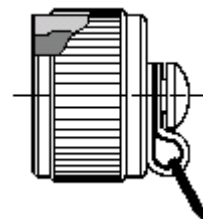
## Accessories

### • Metallic Caps

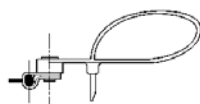
	RJFTVC	2	G
<b>Connector Type</b>			
6 : Plug			
2 : Square Flange Receptacle			
7 : Jam Nut Receptacle			
<b>Protection de surface</b>			
N : Nickel			
G : Olive Drab Cadmium			



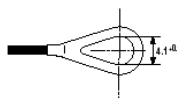
Plug Cap



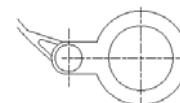
Receptacle Cap



Plug cap end



Square flange receptacle end



Jam nut receptacle end

• Panel Gasket for type 2 Receptacle (Thickness : 0.8mm [.031]) : Part No. **JE 19**

• Insert removal tool : Part No. **RJF ODE**

• Cat5 and 5e cordsets with reinforced jacket for harsh environments applications (shocks, oils, fuel, ...). Please consult factory for details.

