

# RJF TV

## Ethernet Connection System for Harsh Environment

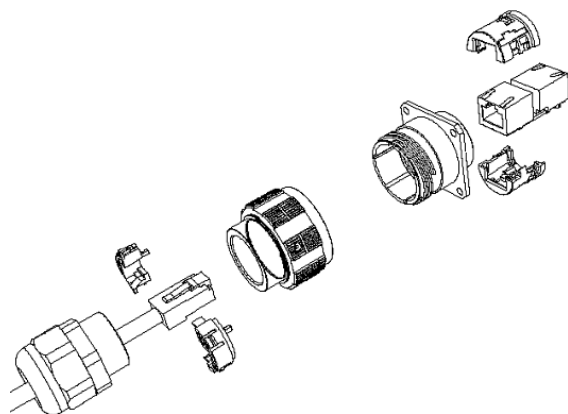
### Description

RJField 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 !



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

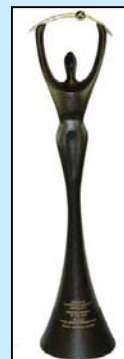
This metallic plug is connected into a receptacle, using a Tri Start Thread coupling mechanism (MIL-DTL-38999 series III type) with anti-decoupling device for high vibrations.

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 plated shells (Ni, Cd) with metallized receptacle inserts, transmit the shielding to the connector shells and finally to the panel.



*Electronica 2004 :  
RJField awarded « Component  
Product of the Year »*

**ROHS compliant :  
« N » : Nickel plating**

### Applications

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

DOC-000042-ANG-G Sept 2006

Amphenol®

# 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

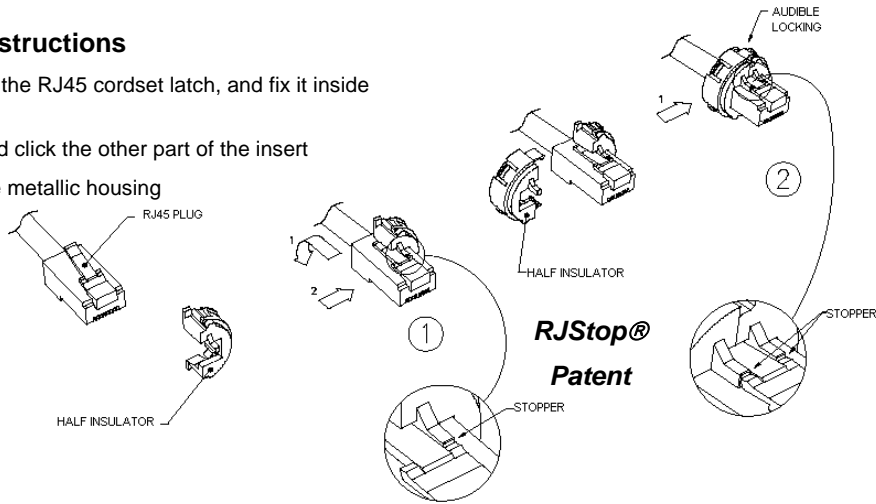
## Environmental Protection

- Sealing : IP67
  - Salt Spray : 48 h with Nickel plating  
> 500 h 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 > 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

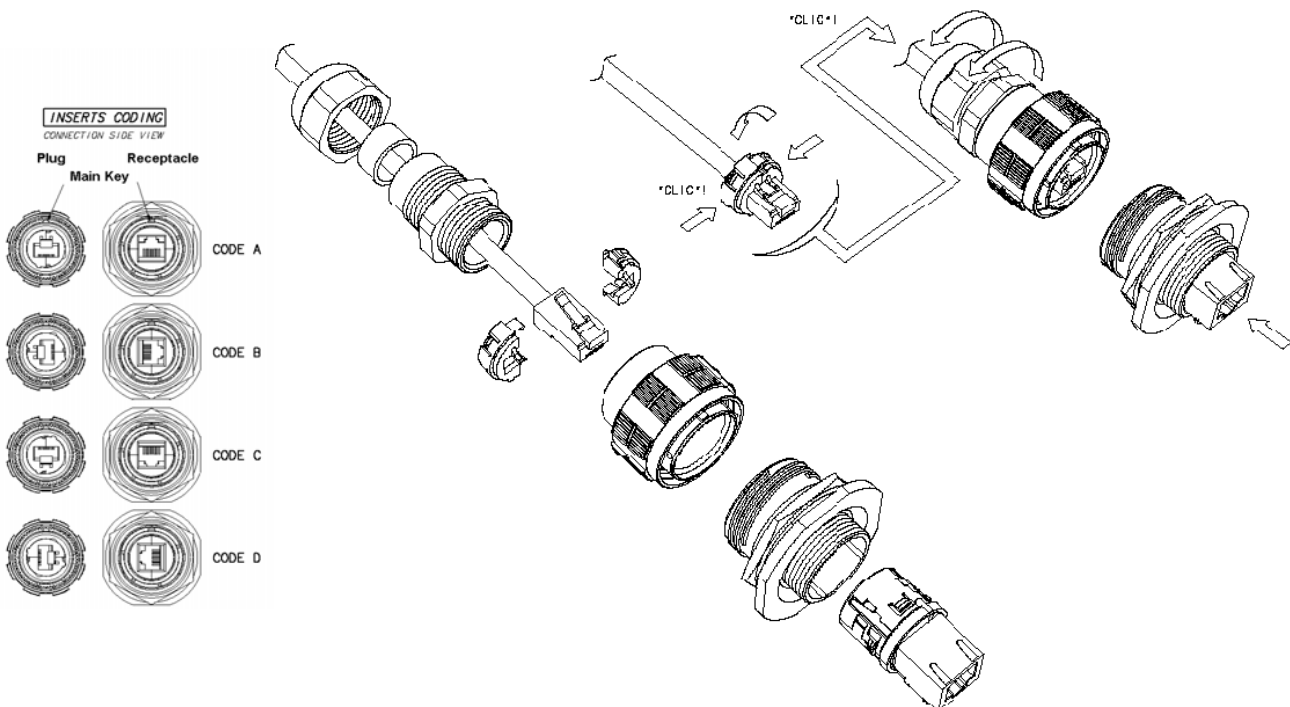
**Universal : Can be used with all standard \* RJ45 Cat.5e cordset brands**

## 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**

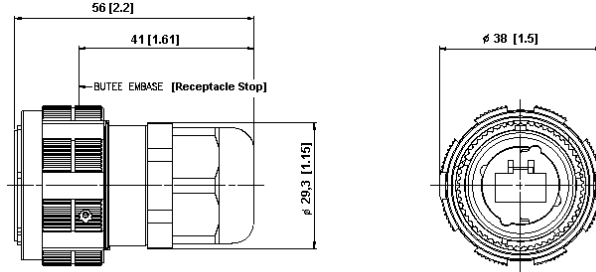


\* The RJStop® system allows the use of standard RJ45 cordsets regardless their Brand. However, Amphenol Socapex can provide Cat5-5e cordsets with reinforced jacket to be used in harsh environments (shocks, oils, fuel,...). Please consult factory.

## Plug :

« 6 » Shell

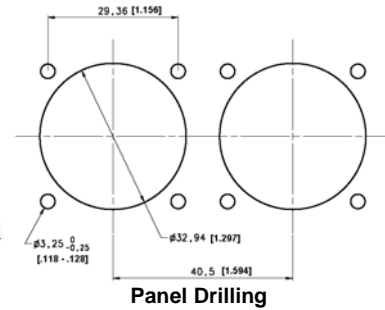
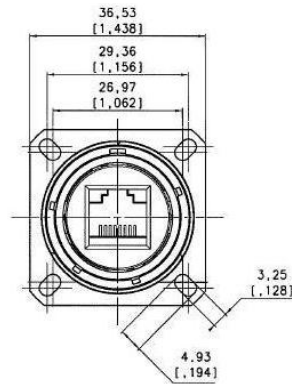
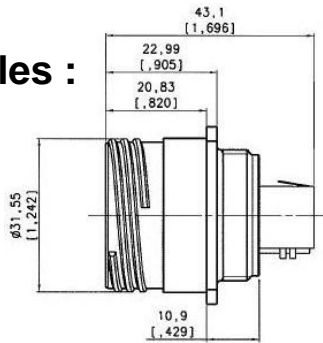
With plastic or metal gland



## Receptacles :

« 2 » Shell

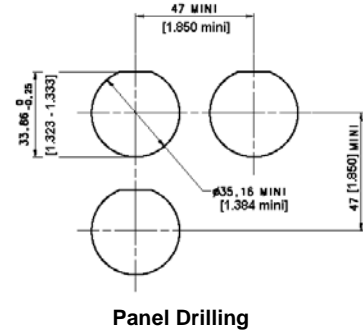
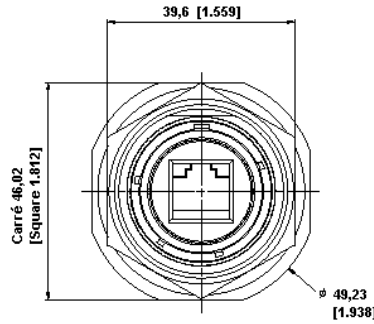
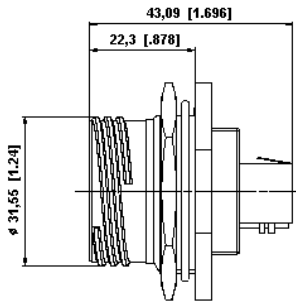
Square Flange



Panel Drilling

« 7 » Shell

Jam Nut

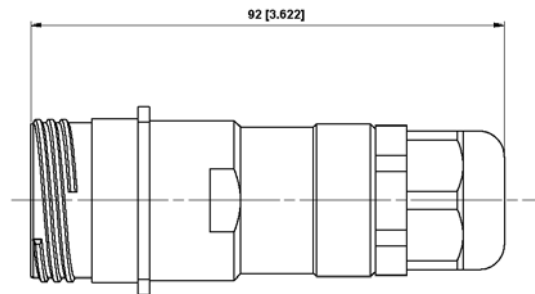


Panel Drilling

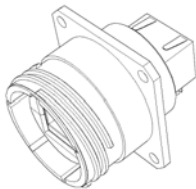
« 2PE » and « 7PE » Shells

IP67 In-line receptacle

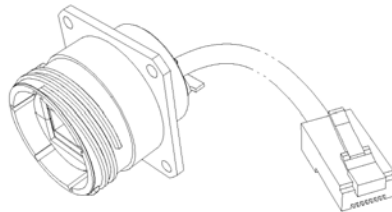
With plastic or Metal gland



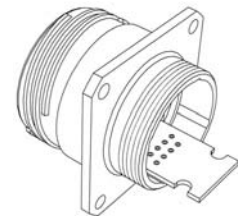
## Back Terminations :



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 are also available : consult factory

# Part Number Code

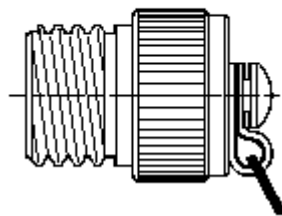
RJ Field TV	RJF TV	2	2	G	03	100 BTX
<b>Shell Type</b> 6 : Plug with Plastic gland 6M : Plug with Metal gland 2 : Square Flange Receptacle 2PE : Square Flange Rec. with IP67 backshell 2PEM : Square Flange Rec, IP67 back., metal gland 7 : Jam Nut Receptacle 7PE : Jam Nut Rec. With IP67 backshell 7PEM : Jam Nut Rec., IP67 back., metal gland 2SA, 7SA : Compounded versions : see specific doc.						
<b>Back Terminations (Receptacles only)</b> 1 : Female RJ45 2 : RJ45 Cordset						
<b>Shells Plating</b> N : Nickel (Receptacle inserts are metallized) G : Olive Drab Cadmium (Receptacle inserts are metallized)						
<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 Recept., 0,3 m 100 BTX cordset back terminat° : RJF TV 2PE 2 G 03 100BTX
  - Nickel Jam Nut Receptacle Solder termination 8 tined holes : RJF TV 22 N 00

## Accessories

### • Metallic Caps

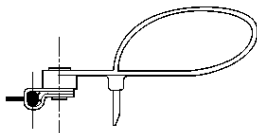
RJFTVC	2	G
<b>Connector Type</b> 6 : Plug 2 : Square Flange Receptacle 7 : Jam Nut Receptacle		
<b>Protection de surface</b> N : Nickel G : Olive Drab Cadmium		



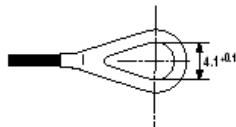
Plug Cap



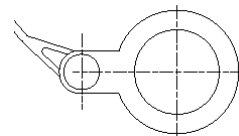
Receptacle Cap



Plug Cap end



Square flange receptacle cap end



Jam Nut receptacle cap end

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

- Inserts removal tool : RJF ODE



- Cat5-5e cordsets with reinforced jacket to be used in harsh environments (shocks, oils, fuel,...).

Please consult factory.