RJ Field
Ethernet Connection System for Harsh Environment
## The Industrial Ethernet Solution

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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)

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 !

RJF awarded "Best Automatic Control Component"

NEW http://www.RJField.com

Transform your RJ45 cordset into a Harsh Environment Connector !

This metallic plug is connected into a receptacle, using a fast ¼ turn bayonet coupling mechanism (MIL-C-26482 type) providing both "audible and visual" coupling.

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.

Applications

• Robotics
• Industrial Process Control
• CNC Machines
• Machine Tool
• Motion Control
• Data Acquisition and Transmission in Harsh Environment
• Tele-maintenance
• Warehousing / Logistics

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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

• Bayonet coupling ("Audible & Visual" coupling signal)

• 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

                        > 96 h with black coating

                        > 500 h with hard anodic coating and 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.

• 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
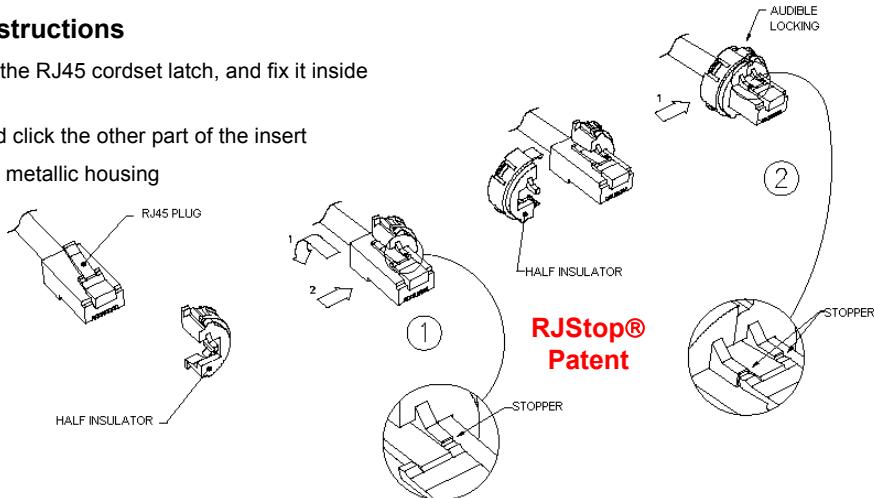
**RJStop®
Patent**

Easy and Safe : No field cabling tools required
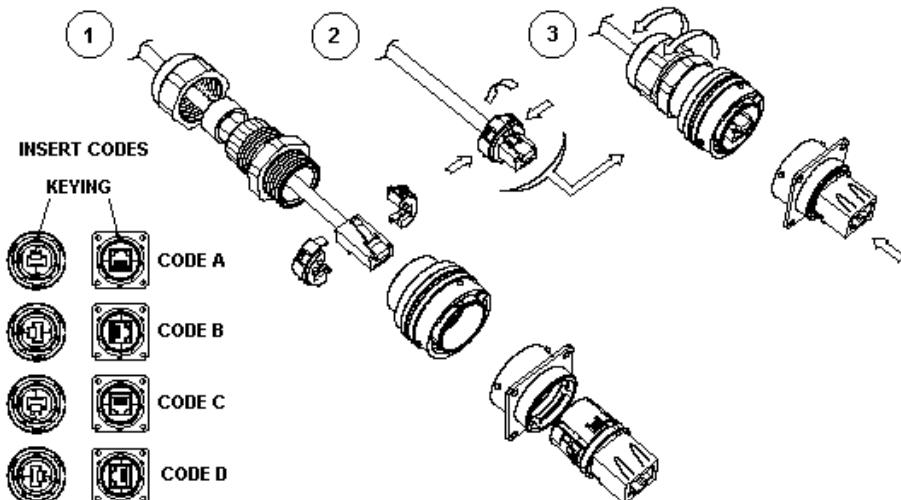
Amphenol – 295 Kesmark, Dollard-des-Ormeaux, Quebec, Canada H9B 3J1
Tel. : + 1 514 421 2153 - Fax : + 1 514 421 3408
http://www.RJField.com

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Plug

Shell type 6

With Plastic or Metal Gland

57.8 [2.275] Fully Assembled

Ø34.9 [1.374]

Ø14.8 [.583]
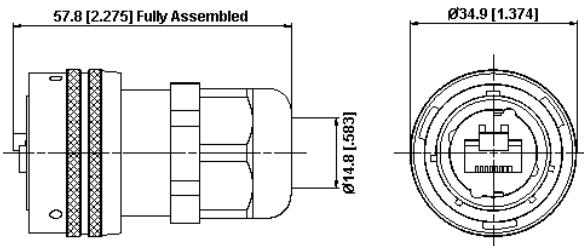
Receptacle

Square flange receptacle

4 mounting holes

Shell type 2

13.4 [.527]

11.8 [.464]

Ø28.58 [1.125]

Ø27.3 [1.075] MAX

39.1 [1.539]

33.3 [1.311]

26.97 [1.062]

Ø3.2 [.125]

26,97 [1.062]

Ø3,5 [.138]

Φ31,3 [1.232]
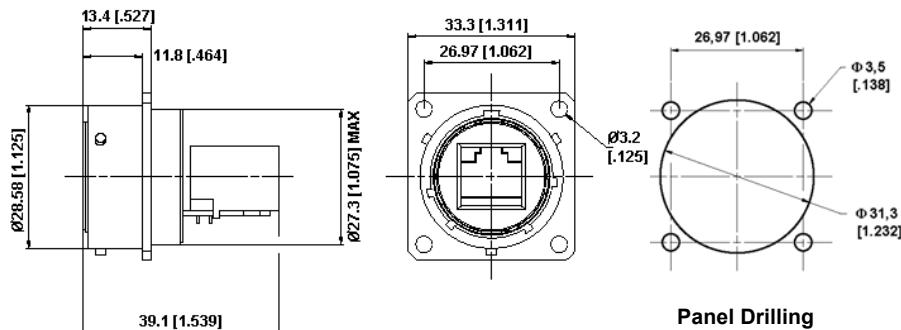
Panel Drilling

Jam nut receptacle

Shell type 7

21.7 [.854]

3.2 [.126]

Ø28.58 [1.125]

1.6 [.062]MIN / 3.2 [.126]MAX

39.1 [1.539]

41.3 [1.626]

30,7 $_{-0,3}^{0}$ [1.197 - 1.209]

Φ32 $_{0}^{+0.3}$ [1.260 - 1.272]
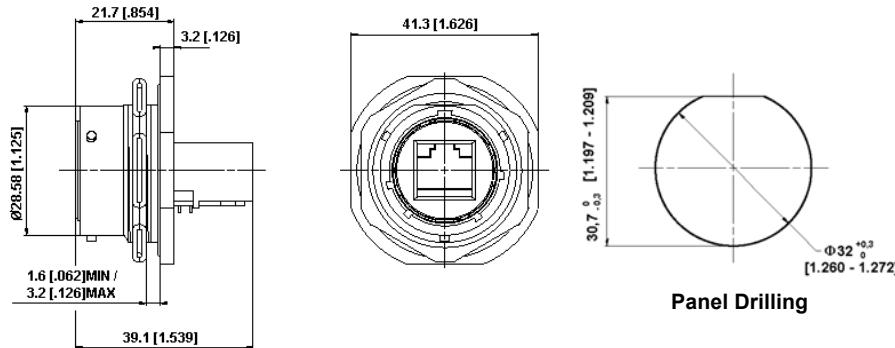
Panel Drilling

IP67 In line receptacle :

Shell type 2PE and 7PE with Plastic or Metal Gland

82 [3.23] Fully Assembled

82 [3.23] Fully Assembled
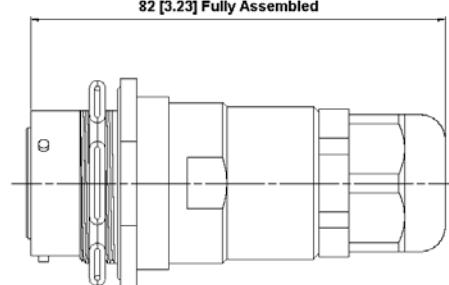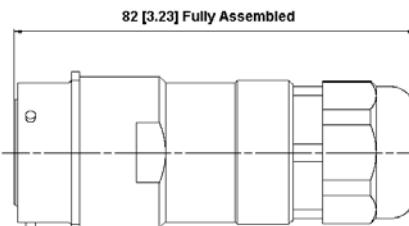
Back Termination
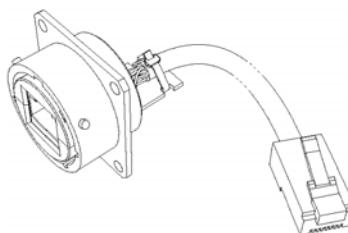
Type 1 : Female RJ45   **Type 2 : RJ45 Cordset**   **Type 2 - 00 : Solder – 8 tined holes**
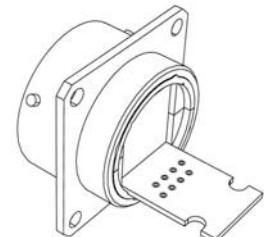
Notes : - Type 1 is also available with 90° female RJ45 : please consult factory for details
- Type 2 without RJ45 plug at the end of the cable is also available : please consult factory for details

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Part Number Code

Series	RJF	2	2	B	03	100 BTX
RJField						

Shell Type
6 : Plug
6M : Plug, Metal Gland
2 : Receptacle, 4 mounting holes
2PE : IP67 In line Receptacle, 4 mounting holes
2PEM : IP67 In line Receptacle, 4 mounting holes, Metal Gland
7 : Receptacle, Hexagonal nut mounting
7PE : IP67 In line Receptacle, Hexagonal nut mounting
7PEM : IP67 In line Receptacle, Hexagonal nut mounting, Metal Gland

Back Terminations (For Receptacles only)
1 : Female RJ45
2 : RJ45 Cordset

Shell Finishes
B : Black Coating
A : Hard Anodic Coating
N : Nickel (Note : with this version, the inserts are metallized)
G : Olive Drab Cadmium (Note : with this version, the inserts are metallized)

Cordset Length (For Receptacles with "2" Back Termination only)
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

Cabling Configuration (For "2" Receptacles only)
100BTX : 10/100 Base TX
**568A**
568B

Examples :   - Black Plug: RJF 6 B
- Black square flange receptacle, Female RJ45 Back termination: RJF 2 1 B
- Olive Drab Cadmium jam nut receptacle, 1.5 m [59.05"] 100 BTX cordset termination: RJF 7 2 G 15 100BTX
- Black in line square flange receptacle, 30 cm [11.81"] 568B cordset termination: RJF 2PE 2 B 03 568B
- Nickel jam nut receptacle, solder termination: RJF 7 2 N 00

Accessories

• **Metallic Caps**

	RJFC	2	B

Connector Type
6 : Plug
2 : Receptacle - 4 mounting holes
7 : Receptacle - Hexagonal nut mounting

Finishes
B : Black Coating
A : Hard Anodic coating
N : Nickel
G : Olive Drab Cadmium


Plug Cap
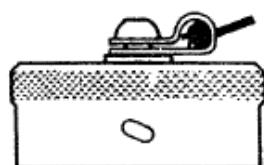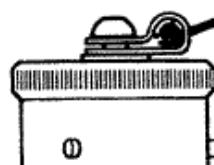
Receptacle Cap

**Plug cap end**
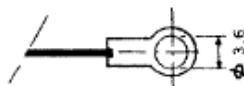
Type 2 receptacle end
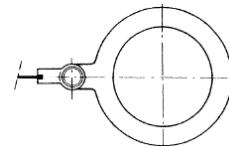
Type 7 receptacle end

• **Panel Gasket for type 2 Receptacle (Thickness : 0.6mm [.024]) : Part No. JE 18**

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

• **Cat5 and 5e cordsets with reinforced jacket for harsh environments applications (shocks, oils, fuel, …). Please consult corresponding data sheet.**
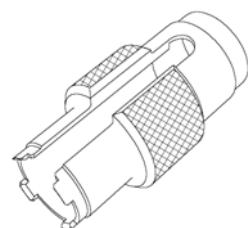
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