RJ Field

Ethernet Connection System for Harsh Environment – Industrial Ethernet

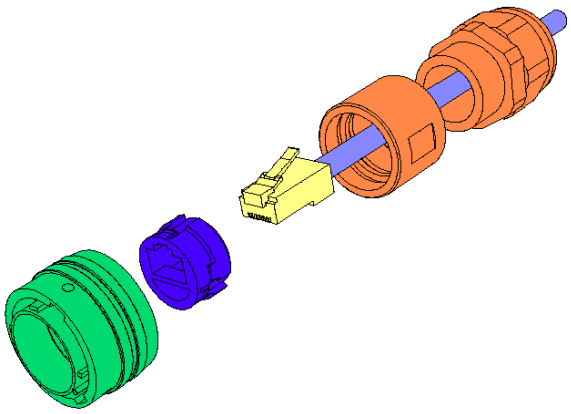


Description

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)

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 !





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

ROHS compliant :
« N » : Nickel plating
« B » : Black coating

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

Applications

- Robotics
- Industrial Process Control
- CNC Machines
- Special Machines
- Motion Control
- Data Acquisition and Transmission in Harsh Environment
- Tele-maintenance



DOC-000041-ANG-J Sept 2006

Amphenol Socapex Promenade de l’Arve – BP 29 – 74311 THYEZ - F
Tel. : + 33 (0) 4 50 89 28 00 - Fax : + 33 (0) 4 50 96 29 75
http://www.rjfield.com

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

• 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

• Salt Spray : 48 h with Nickel plating
> 96 h with black coating
> 500 h with Oliv 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.

• Shocks : IK06 : weight of 250 g drop from 40 cm [15.75 in] onto connectors (mated pair)

• Humidity : 21 days, 43°C, 98% humidity

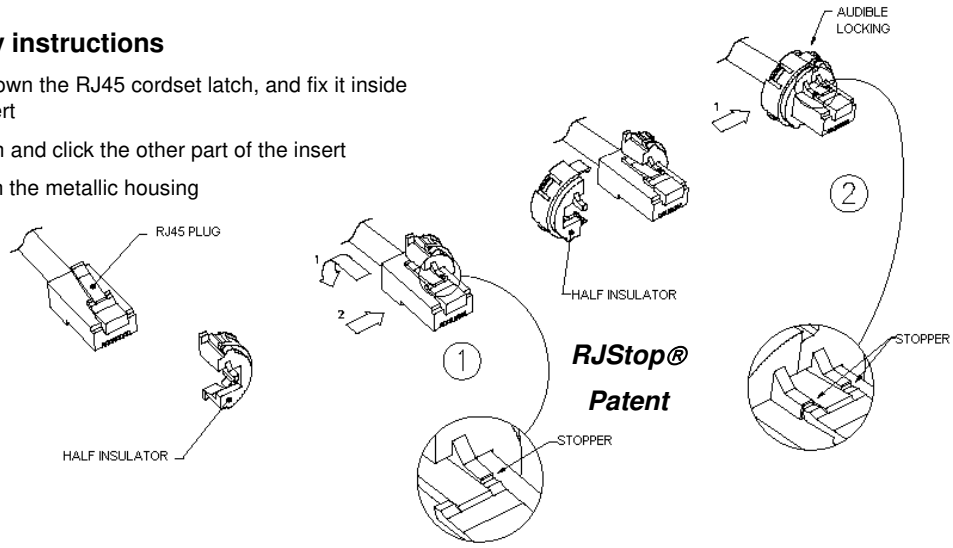
• Thermal Shock : 5 cycles at - 40°C / +100°C

• Temperature Range : - 40°C / +85°C

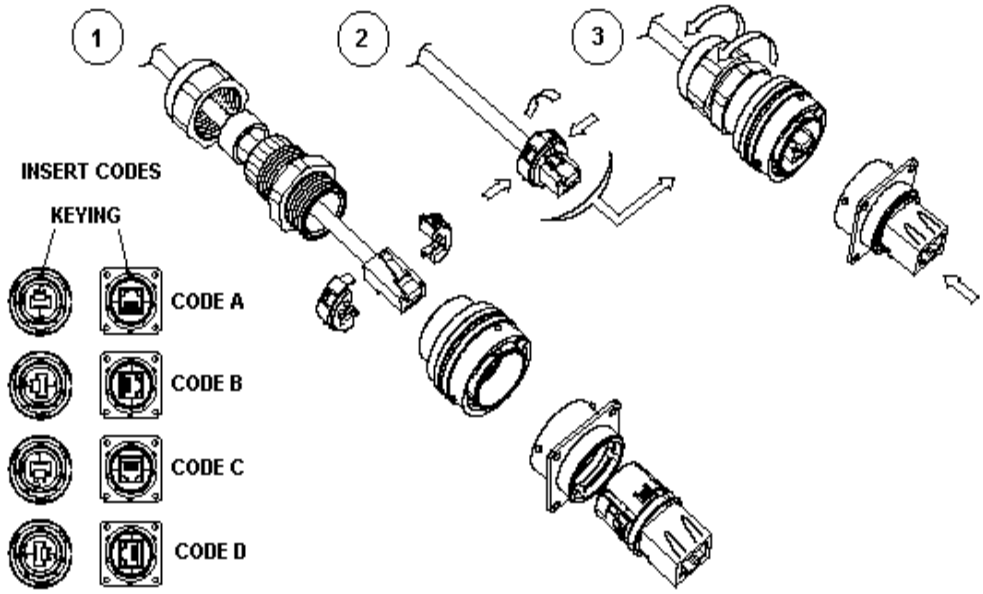
*Universal : Can be used with all standard * RJ45 Cat.5e cordset brands*

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 : <u>No field cabling tools required</u>



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



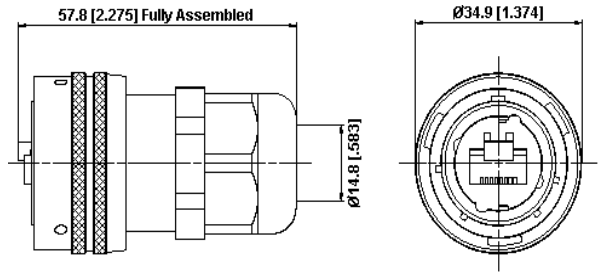
Amphenol Socapex Promenade de l’Arve – BP 29 – 74311 THYEZ - F
Tel. : + 33 (0) 4 50 89 28 00 - Fax : + 33 (0) 4 50 96 29 75
http://www.rjfield.com

Amphenol ®

Plug :

Shell type 6

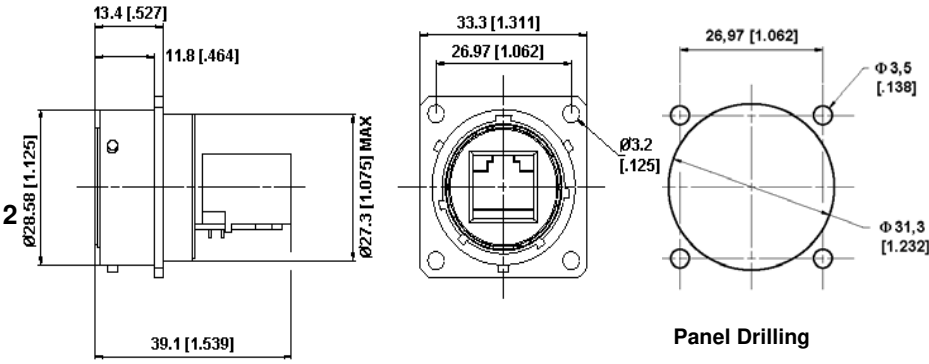
With Plastic or Metal Gland



Receptacles :

Square flange receptacle

4 mounting holes : Shell type 2

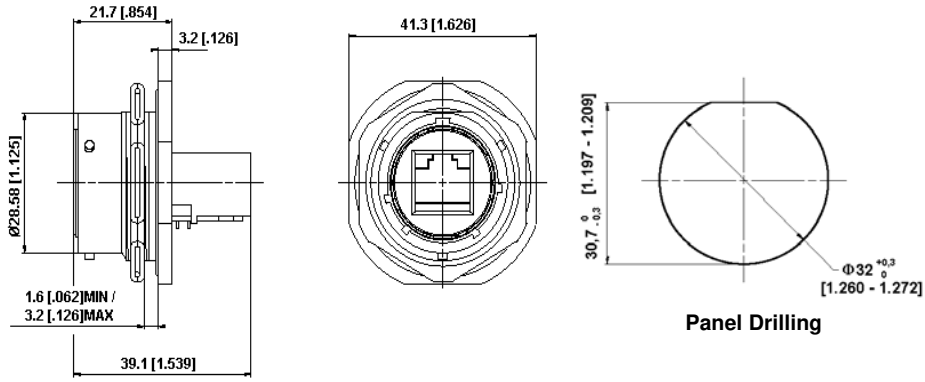


Panel Drilling

Jam nut receptacle

Hexagonal Nut mounting :

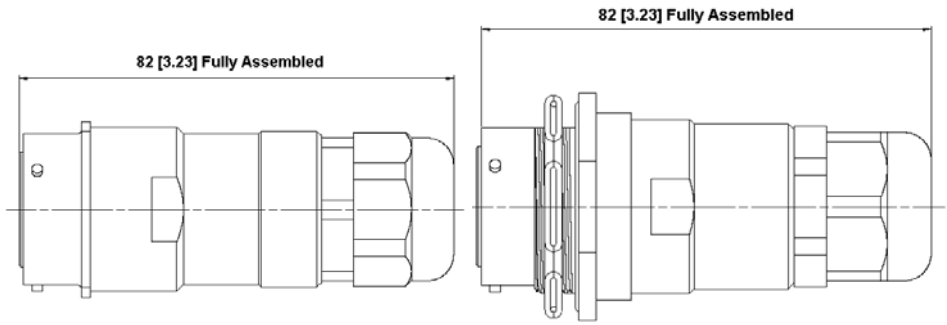
Shell type 7



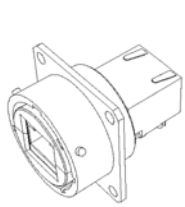
Panel Drilling

IP67 In line receptacles :

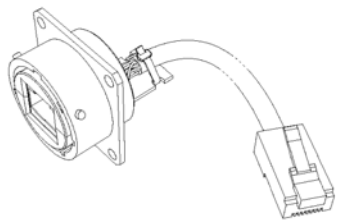
Shell type 2PE and 7PE with Plastic or Metal Gland



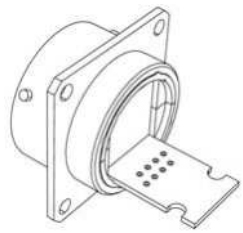
Back Terminations :



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
- Type 1 also available with 90° female RJ45

Amphenol Socapex Promenade de l'Arve – BP 29 – 74311 THYEZ - F
Tel. : + 33 (0) 4 50 89 28 00 - Fax : + 33 (0) 4 50 96 29 75
http://www.rjfield.com

Amphenol ®

Part Number Code

HOW TO ORDER

Series RJField	RJF	2	2	B	03	100 BTX

Shell Type
6 : Plug, Plastic Gland
6M : Plug, Metal Gland
2 : Square Flange Receptacle
2PE : IP67 In line square flange Receptacle
2PEM : IP67 In line square flange Receptacle, Metal Gland
7 : Jam Nut Receptacle
7PE : IP67 In line Jam Nut Receptacle
7PEM : IP67 In line Jam Nut Receptacle, Metal Gland

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

Shell Finishes
B : Black 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

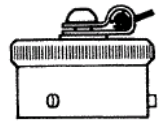
Examples :
- **Nickel Plug: RJF 6 N**
- **Black square flange receptacle, Female RJ45 Back termination: RJF 2 1 B**
- **Oliv Drab cadmium jam nut receptacle, 1.5m [59.05"] 100 BTX cordset termination: RJF 7 2 G 15 100BTX**
- **Black in line square flange receptacle, 30cm [11.81"] 100BTX cordset termination: RJF 2PE 2 B 03 100BTX**
- **Nickel Jam Nut Receptacle, solder termination : RJF 72 N 00**

Accessories :
Metallic cap

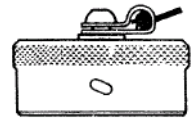
	RJFC	2	B

Connector Type
6 : Plug
2 : Square Flange Receptacle
7 : Jam Nut Receptacle

Finishes
B : Black Coating
N : Nickel
G : Olive Drab Cadmium



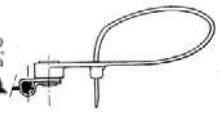
Plug cap



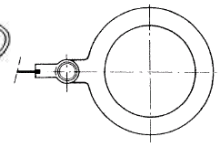
Receptacle cap



Square Flange type « 2 »



Plug Cap end Type « 6 »



Jam nut receptacle type « 7 »

- <u>Self closing cap (cap with a spring inside) :</u>

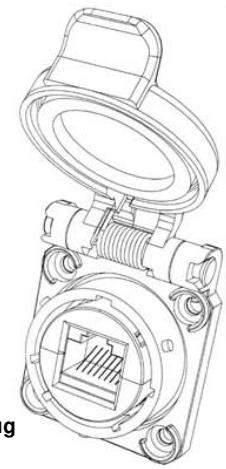
Compatible with all receptacle type « 2 » (Square flange recept). P/N : <u>RJF SCC</u> (*)

(*)RJF Receptacle have to be ordered separatly.

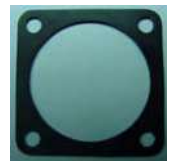




Remark : you can connect on our receptacle a standard RJ45 cordset or a cordset equiped with our RJF 6xx plug



Panel gasket for square flange « 2 » thickness : 0,6 mm – P/N : <u>JE 18</u>



Insert removal tool for receptacle and plug – P/N = <u>RJF ODE</u>





Amphenol Socapex Promenade de l'Arve – BP 29 – 74311 THYEZ - F
Tel. : + 33 (0) 4 50 89 28 00 - Fax : + 33 (0) 4 50 96 29 75
http://www.rjfield.com

Amphenol ®