RJF Cat6 allows you to use an Ethernet Class E / Cat. 6 connection for 10 BaseT, 100 BaseTX or 1000 BaseT up to 250 MHz 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!

Main characteristics
- Compliant with IEC 60603-7 variante 11
- Bayonet coupling (*Audible & Visual” coupling signal )
- Robust metallic shells based on MIL-DTL-26482 H - Shell size 18
- RJ45 cordset retention in the plug: 100 N in the axis
- Mating cycles: 500 min
- Sealed against fluids and dust (IP68)
- Shock, vibration and traction resistant
- No cabling operation in field and no tools required
- Mechanical coding / polarization (4 positions)
- 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: 48 h with nickel plating
  > 96 h with black coating
  < 500 h with olive drab cadmium
- Fire retardant/Low smoke: UL94 V0 and NF F 16 101 & 16 102
- Vibrations: 10-500Hz, 10g, 3 axes: no discontinuity >10 nano s
- Shocks: IK06 ► weight of 250 g drop from 40cm [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

Applications
- Robotics
- Industrial process control
- CNC machines
- Special machines
- Oil & Gas
- Motion control
- Data acquisition and transmission in harsh environment
- Tele-maintenance

Data transmission
10 BaseT, 100 BaseTX and 1000 BaseT up to 250 MHz networks
Cat 6 per EIA/TIA 568 and ClassE per ISO11801

Part number code: receptacles.

<table>
<thead>
<tr>
<th>Shell type</th>
<th>Coding</th>
<th>Backshells</th>
<th>Back termination</th>
<th>Shell finishes</th>
</tr>
</thead>
<tbody>
<tr>
<td>2: square flange receptacle</td>
<td>A, B, C, or D</td>
<td>PE: IP68 backshell, plastic gland</td>
<td>female RJ45</td>
<td>B: black Coating - ROHS compliant</td>
</tr>
<tr>
<td>7: jam nut receptacle</td>
<td>Note: also available a transversally sealed receptacle (unmated) ► see page 13</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>PEM: IP68 backshell, metal gland</td>
<td></td>
<td>B: black Coating - ROHS compliant</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Blank for receptacles without backshell</td>
<td></td>
<td>N: nickel - ROHS compliant</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>G: olive drab cadmium</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>BZC: aluminium shell - black zinc cobalt plating</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>ZC: aluminium shell - green zinc cobalt plating - ROHS compliant</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>NOTA: for N, G, BZC, and ZC plating, the inserts are metallized.</td>
<td></td>
</tr>
</tbody>
</table>

Example: square flange receptacle, coding A, female RJ45 back termination, black plating ► RJF6 2 A 1 B

Part number code: plug ► see page 11.

<table>
<thead>
<tr>
<th>Shell type</th>
<th>Shell finishes</th>
</tr>
</thead>
<tbody>
<tr>
<td>6: plug, plastic gland</td>
<td>B: black Coating - ROHS compliant</td>
</tr>
<tr>
<td>6M: plug, metal gland</td>
<td>N: nickel (note: with this version, the inserts are metallized) - ROHS compliant</td>
</tr>
<tr>
<td></td>
<td>G: olive drab cadmium (note: with this version, the inserts are metallized)</td>
</tr>
</tbody>
</table>

Example: plug with metal gland, nickel plating ► RJF 6M N

NOTA: also available a plug with 360° EMI backshell, and a plug for big insulation wire up to 1.6mm ► see pages 16 & 17.
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

Codings - To be specified in the part number: A, B, C, or D.

Back termination

Type 1
Female RJ45
Plug

- Shell type 6 with plastic or metal gland

Universal: can be used with all standard RJ45 Cat. 6 cordset brands.

Assembly instructions of the RJ Stop
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 for cabling

Assembling of the plug.

4 codings possibilities (defined by the customer during the assembling).

IMPORTANT NOTE: to remove the insert, use the Insert removal tool for plug
P/N: RJF ODE

Accessories

- Metallic cap
- Panel gasket for square flange 2 x thickness - 0.6 mm

Connector type
- 6: plug
- 2: square Flange Receptacle
- 7: Jam Nut Receptacle

Shell material & finish
- B: black coating - ROHS compliant
- N: aluminium shell - nickel plating - ROHS compliant
- G: aluminium shell - olive drab cadmium plating

NOTA: also available a plug with 360° EMI backshell, and a plug for big insulation wire up to 1.6mm - see pages 16 & 17.
**RJF6**

**CAT6 in line receptacle**

In line receptacles allow you to make cable extensions in the field by using them with rugged RJ Field series plugs.

### In line receptacle

![In line receptacle diagram](image)

### Codings - To be specified in the part number: A, B, C, or D.

**Main Key**

<table>
<thead>
<tr>
<th>Part number</th>
<th>Plating</th>
<th>Plastic gland</th>
<th>Metallic gland</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black coating - ROHS compliant</td>
<td>RJF6 2 X PEWF1 B</td>
<td>RJF6 2 X PEMWF 1 B</td>
<td></td>
</tr>
<tr>
<td>Nickel - ROHS compliant</td>
<td>RJF6 2 X PEWF 1 N</td>
<td>RJF6 2 X PEMWF 1 N</td>
<td></td>
</tr>
<tr>
<td>Olive drab cadmium</td>
<td>RJF6 2 X PEWF 1 G</td>
<td>RJF6 2 X PEMWF 1 G</td>
<td></td>
</tr>
</tbody>
</table>

X to be replaced by the letter of the coding position you need (A, B, C, or D)

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**Cat5e version:** page 20 of the Field series catalogue.
- Direct access by clicking here
- Or visit [www.amphenol-socapex.com](http://www.amphenol-socapex.com)
**RJF6**

**CAT6 transversally sealed receptacles**

In some applications, a transversal sealing for the receptacle is a « must ». This will prevent fluids and dust from going through the receptacle when plug or cap are not mated to the receptacle.

The sealed solution (version "S") has a compound at the rear of the receptacle as shown on the picture. This feature is available both in RJF and RJF TV shells (please consult the relevant data sheet for product details and accessories).

In addition, the Sealed RJF TV has been successfully tested in very high vibration corresponding to airplane applications.

### Applications
- Outdoor equipment
- Airplanes equipment
- Tactical radios
- Shelters
- Rugged computers
- Data acquisition and transmission in harsh environments

### Data transmission
10 BaseT, 100 BaseTX and 1000 BaseT up to 250 MHz networks
Cat 6 per EIA/TIA 568 and ClassE per ISO 11801

### Important Note
Due to the compound, the coding of the connector must be done in the factory: use the codes A, B, C or D in the part number: see below.

### Part number code

| Shell type | 2 S: sealed square flange receptacle  
| 7 S: sealed jam nut receptacle  
| Coding | A, B, C, D  
| Backshells | PE: IP68 backshell, plastic gland  
| PEM: IP68 backshell, metal gland  
| Blank for receptacle without backshell  
| Back termination | 1: female RJ45  
| Shell material & finishes | B: aluminium shell - black coating - ROHS compliant  
| N: aluminium shell - nickel plating - ROHS compliant  
| G: aluminium shell - olive drab cadmium plating  
| BZC: aluminium shell - black zinc cobalt plating  
| ZC: aluminium shell - green zinc cobalt plating - ROHS compliant  

**Examples:**
- sealed jam nut receptacle, A coding, with female RJ45 back termination, olive drab cadmium plating © RJF6 7 S A 1 G
- sealed square flange receptacle, D coding, with IP68 backshell, plastic gland, female RJ45 back termination, black plating © RJF6 2 S D PE 1 B

---

**Main characteristics**
- Same as the RJF series.
- A complete IP68 sealing of the receptacle (even with no plug or no protective cap mated) is added.
- Outside dimensions are the same as the standard RJF series.

**NOTA:** for N, G, BZC, and ZC plating, the inserts are metallized.
## RJF6

**CAT6 hermetic receptacles**

In some applications, a transversal hermeticity for the receptacle is a «must». This will prevent gas from going through the receptacle when plug or cap are not mated to the receptacle.

The hermetic solution (version "H") has a compound at the rear of the receptacle as shown on the picture.

This feature is available both in RJF and RJF TV shells (please consult the relevant data sheet for product details and accessories).

Helium leakage is less than $1 \times 10^{-6}$ cm$^3$ per second [0.1 micron cubic ft per hour] at one bar [15 psi] pressure differential.

### Applications
- Outdoor equipment
- Airplanes equipment
- Tactical radios
- Shelters
- Rugged computers
- Data acquisition and transmission in harsh environments

### Data Transmission
- 10 BaseT, 100 BaseTX and 1000 BaseT up to 250 MHz networks
- Cat 6 per EIA/TIA 568 and ClassE per ISO 11801

### Main characteristics
- Same as the RJF series.
- A complete IP68 sealing of the receptacle (even with no plug or no protective cap mated) is added.
- Outside dimensions are the same as the standard RJF series.

#### Important Note
Due to the compound, the coding of the connector must be done in the factory: use the codes A, B, C or D in the part number: see below.

![Main Key](image)

### Part number code

<table>
<thead>
<tr>
<th>Shell type</th>
<th>Coding</th>
<th>Back termination</th>
<th>Shell material &amp; finish</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>2H: transversally sealed and hermetic square flange receptacle</td>
<td>A, B, C, D</td>
<td>1: female RJ45</td>
<td>B: aluminium shell - black coating - ROHS compliant</td>
<td>- sealed jam nut receptacle, A coding, with female RJ45 back termination, olive drab cadmium plating ⇒ RJF6 7HA 1 G</td>
</tr>
<tr>
<td>7H: transversally sealed and hermetic jam nut receptacle</td>
<td></td>
<td></td>
<td>BZC: aluminium shell - black zinc cobalt plating</td>
<td>- sealed square flange receptacle, A coding, with female RJ45 back termination, black plating ⇒ RJF6 2HA 1 B</td>
</tr>
</tbody>
</table>

**NOTA:** for N, G, BZC, and ZC plating, the inserts are metallized.

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**Cat5e version:** page 23 of the Field series catalogue.

- Direct access by clicking here
- Or visit [www.amphenol-socapex.com](http://www.amphenol-socapex.com)
This kit includes a receptacle and a Self Closing Cap which protects the RJ Field square flange receptacles (MIL-C-26482 type).

This cap offers a protection against dust and water projections. A spring automatically closes the upper part of the cap when either the RJ field plug, USB or IEEE1394 cordset, or USB key are removed from the receptacle.

**Sealing level IP54**
(Splash and dust Proof)

**RJF CAT6 receptacle with self closing cap**

**RJF6 2 x 1 x SCC**

**RJ45 version**

**Codings - To be specified in the part number: A, B, C, or D.**

**Part number**

<table>
<thead>
<tr>
<th>Plating</th>
<th>Metallized insert (EMI)</th>
<th>Part number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black coating - ROHS compliant</td>
<td>No</td>
<td>RJF6 2 x 1 B SCC</td>
</tr>
<tr>
<td>Nickel - ROHS compliant</td>
<td>Yes</td>
<td>RJF6 2 x 1 N SCC</td>
</tr>
<tr>
<td>Olive drab cadmium</td>
<td>Yes</td>
<td>RJF6 2 x 1 G SCC</td>
</tr>
</tbody>
</table>

* The part number includes the receptacle + the self closing cap X to be replaced by the letter of the coding position you need (A, B, C, or D)

Remarks:
- the back termination is female RJ45
- it could be used with our RJF series plug (part number RJF6xx see page 9)

**Note**: Panel gasket with any of these receptacles: JE18

Cat5e version: page 25 of the Field series catalogue.
- Direct access by clicking here
- Or visit [www.amphenol-socapex.com](http://www.amphenol-socapex.com)
RJF series plug with EMI backshells provide a solution with 360° shielding: same protection than the one proposed by standard MIL-DTL-26482 connectors. With those solutions we recommend using our reinforced and double shielded Cat5E, Cat6, and Cat6A cable ► see page 27 for Cat6 version.

**Kit30394 & Kit30394NI include:**

- **Plug body**
- **Inserts**
- **Backshell body**
- **Band**
- **Heat shrink sleeve**

**Plug - Straight backshell**

<table>
<thead>
<tr>
<th>Part number</th>
<th>Plating</th>
<th>Part number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kit30394NI</td>
<td>Nickel - ROHS compliant</td>
<td>Kit30394NI</td>
</tr>
<tr>
<td></td>
<td>Olive drab cadmium</td>
<td>Kit30394</td>
</tr>
</tbody>
</table>

*Cat5E version: page 41 of the Field series catalogue [Direct access by clicking here](#) Or visit [www.amphenol-socapex.com](http://www.amphenol-socapex.com)

*Cat6A version: page 43 of the Field series catalogue [Direct access by clicking here](#) Or visit [www.amphenol-socapex.com](http://www.amphenol-socapex.com)*
RJF
Special plug for big insulation wire up to 1.6 mm [0.062 in]

Rugged plug dedicated to cable with insulation wire from 1.1 to 1.6 mm [from 0.043 in to 0.062 in]

Remark:
- Solution compatible with any RJF6 receptacle
- For cables which are not compatible with standard RJ45 plug.

Applications
- Robotics
- Industrial process control
- CNC machines
- Special machines
- Oil & Gas
- Motion control
- Data acquisition and transmission in harsh environment
- Tele-maintenance

Main characteristics
- Bayonet coupling ("Audible & Visual" coupling signal)
- Robust metallic shells based on MIL-DTL-26482 H - Shell size 18
- RJ45 cordset retention in the plug: 100 N in the axis
- Mating cycles: 500 min
- Sealed against fluids and dust (IP68)
- Shock, vibration and traction resistant
- Mechanical coding / polarization (4 positions)
- Compatible with cable diameter from 6 mm [0.216 in] to 13 mm [0.512 in]. For smaller diameters, please consult us.

Environmental protection
- Sealing: IP68
- Salt Spray: 48 h with nickel plating
  - > 96 h with black coating
  - > 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.
- 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

Data Transmission
10 BaseT, 100 BaseTX and 1000 BaseT up to 250 MHz networks
Cat 6 per EIA/TIA 568 and ClassE per ISO 11801

Part number	Plating	Part number
Nickel - ROHS compliant	Kit39992NI
Olive drab cadmium	Kit39992G