RJF™

Description

This connector has been Amphenol's best seller for decades. This RJF™ connector dedicated for Ethernet transmission is a derivate from MIL-DTL-26482 J with a shell size 18. The bayonet coupling is quick, audible and visual, facilitating the data transmission and acquisition in harsh environment.
This solution has several advantages. The assembly of your solutions is easy to install because you don't need any tool, thanks to the patented RJStop system. You can choose between four different codings on the plug and receptacle side. With the help of the dedicated tool, you can remove the insert of the receptacle in order to change the coding if needed. You can also use it for reparation or maintenance. Everything can be done in place. The complete solution is metallized and united when connected in order to transmit the electrical continuity from the cordset to the panel.
The following pages list all complementary configurations that you might need on your system such as sealed and hermetic receptacles, 360° EMI solutions for reinforced shielding or whether special plugs for big insulations wire.

Main features

MAIN CHARACTERISTICS
- Bayonet coupling ("Audible & Visual" coupling signal)
- Robust metallic shells based on MIL-DTL-26482 J - 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 12 mm [0.512 in]. For smaller diameters, please consult us.

ENVIRONMENTAL PROTECTION
- Sealing: IP68
- Salt spray:
    - 48 h with nickel plating over aluminium shell ✓
    - 96 h with black coating over aliminium shell ✓
    - 500 h black zinc nickel over aluminium shell ✓
    - 500 h with olive drab cadmium over aluminium shell
- Fire retardant / Low smoke: UL94 V0 and EN45545
- 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
- Temperature range: -40°C / +85°C

DATA TRANSMISSION
- 10 BaseT, 100 BaseTX and 1000 BaseT networks
- Cat.5e per TIA/EIA 568B and ClassD per ISO/IEC 11801
- Cat.6 per TIA/EIA 568B and ClassE per ISO/IEC 11801
- Cat.6A per TIA/EIA 568B and ClassEa per ISO/IEC 11801

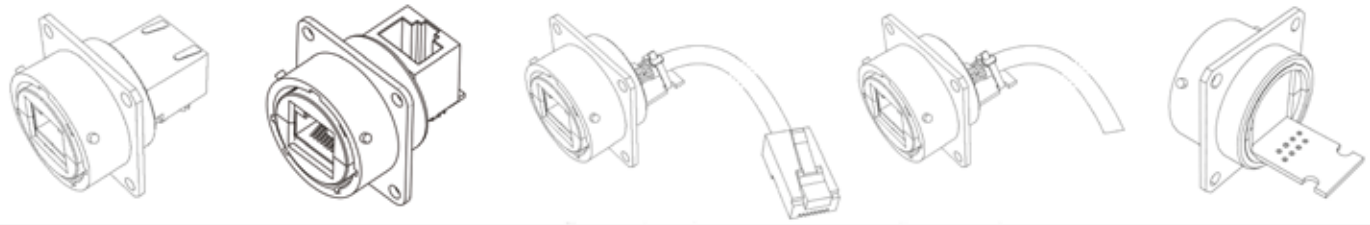
APPLICATIONS
- Battlefield communication systems
- C5ISR
- Data acquisition and transmission in harsh environment
- Navy
- Rail Mass Transit
- Industrial process control
- Robotics
- CNC machines
- Oil & Gas

How to order : **Please refer to page 110**

✓: RoHS compliant

Back terminations

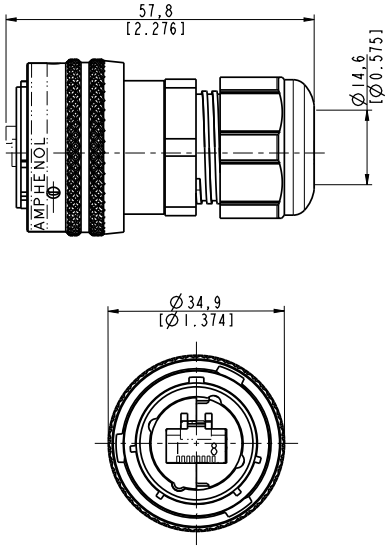
Type 1:	Type 1RA:	Type 2:	Type 2 OPEN:	Type 2 - 00:
Female RJ45	Right angle female RJ45	RJ45 cordset	No plug at the end	Solder - 8 tinned holes

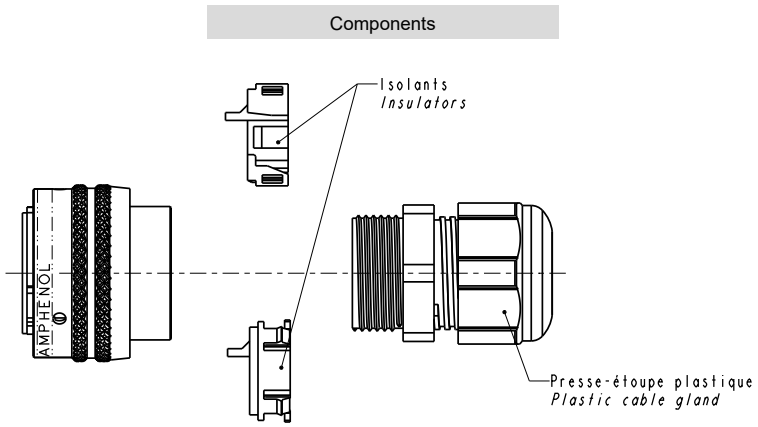


Overall dimension

Plug - Shell type 6 - Plastic gland

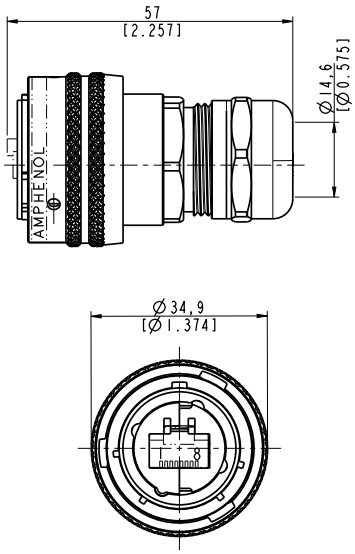
Part number type : **RJF 6 X**

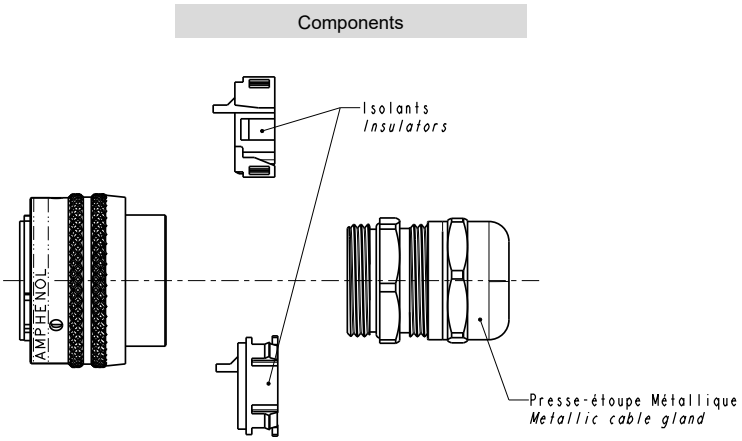




Plug - Shell type 6 - Metal gland

Part number type : **RJF 6M X**

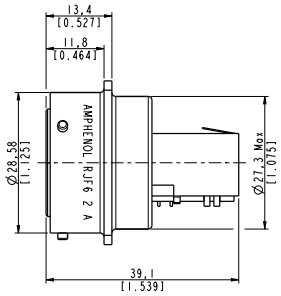


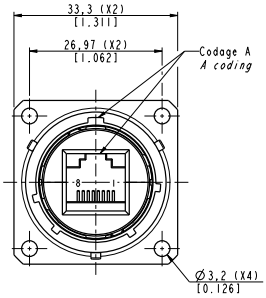


Overall dimension

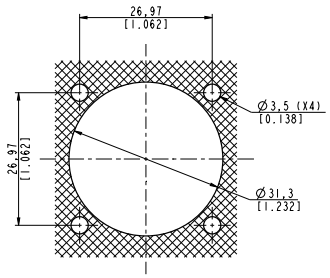
Receptacle - Square flange receptacle - 4 mounting holes - Shell type 2 - Back termination type 1

Part number type (Cat.5e) : **RJF 2 1 X**
Part number type (Cat.6) : **RJF 6 2 X 1 X**

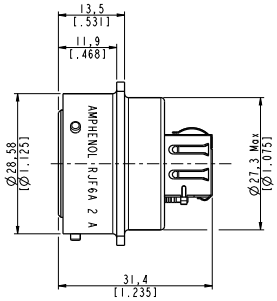


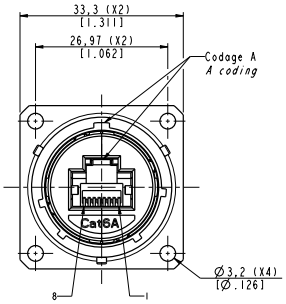


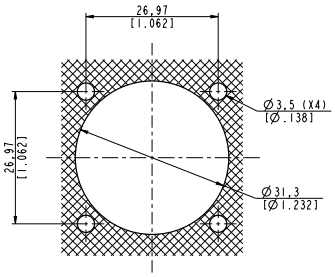
Panel drilling



Part number type (Cat.6A) : **RJF 6A 2 X 1 X**

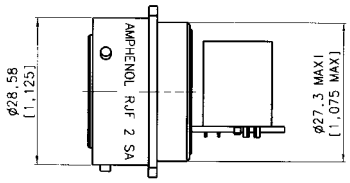


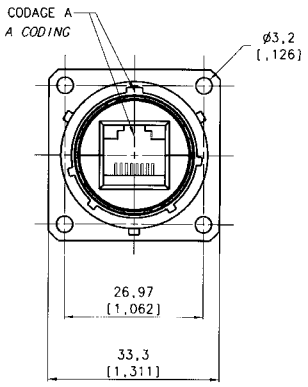




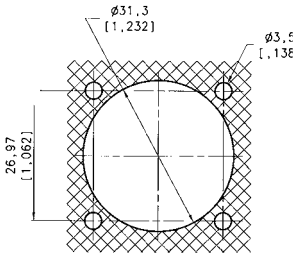
Receptacle - Square flange receptacle - 4 mounting holes - Shell type 2 - Back termination type 1RA

Part number type (Cat.5e) : **RJF 2 1RA X**

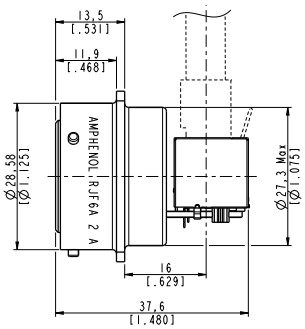


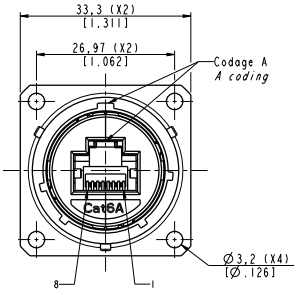


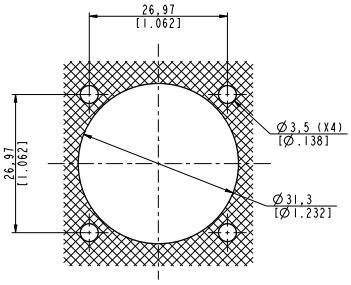
Panel drilling



Part number type (Cat.6A) : **RJF 6A 2 X 1RA X**



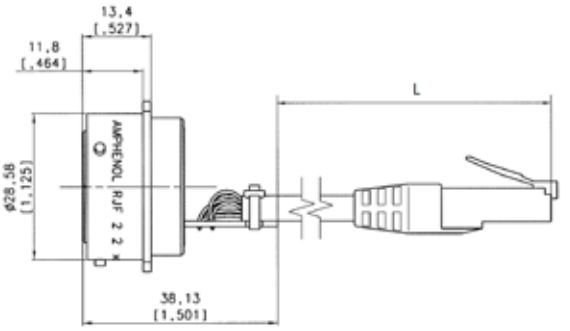


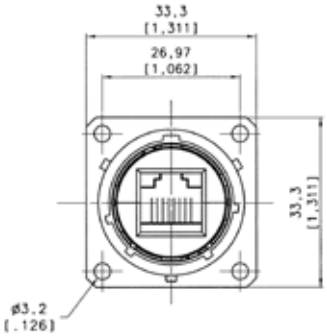


Overall dimension

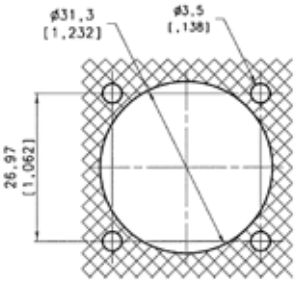
Receptacle - Square flange receptacle - 4 mounting holes - Shell type 2 - Back termination type 2

Part number type (Cat.5e) : **RJF 2 2 X XX 100BTX**

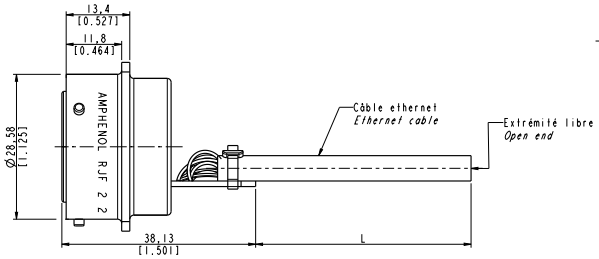


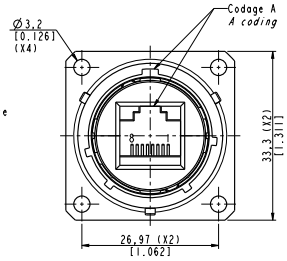


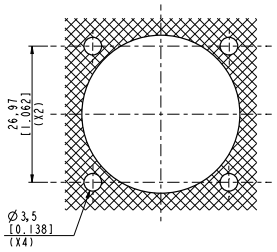
Panel drilling



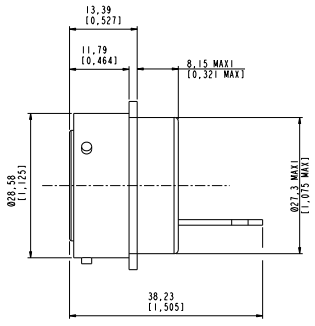
Part number type (Cat.5e) : **RJF 2 2 X XX OPEN**

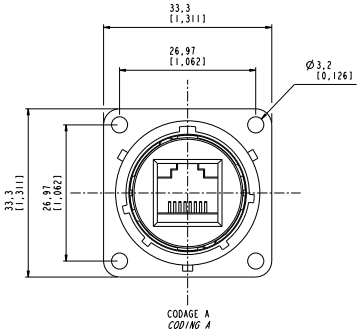


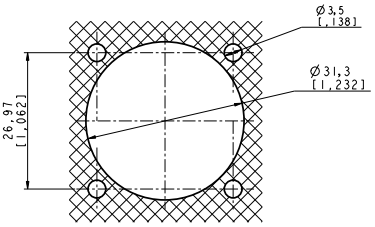




Part number type (Cat.5e) : **RJF 2 2 X 00**







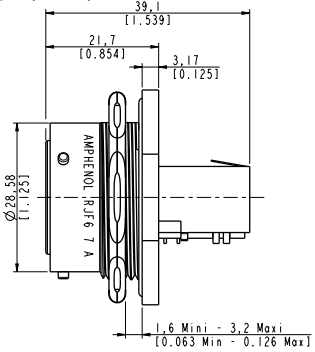
Important note:

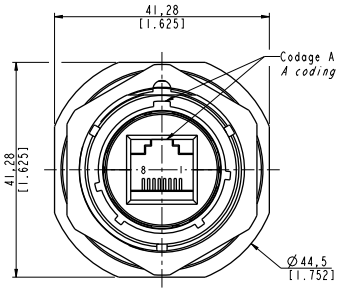
- To choose your coding orientation, please refer to “Assembly instructions” page 102

Overall dimension

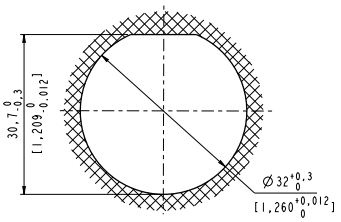
Receptacle - Jam nut receptacle - Hexagonal nut mounting - Shell type 7 - Back termination type 1

Part number type (Cat.5e) : **RJF 7 1 X**
Part number type (Cat.6) : **RJF 6 7 X 1 X**

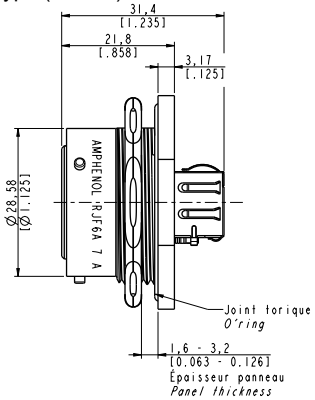


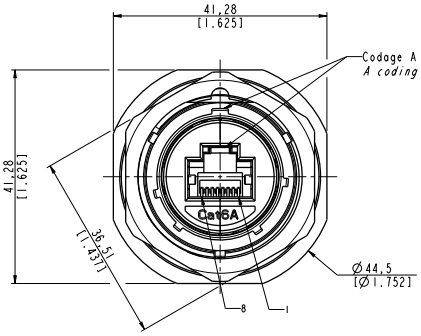


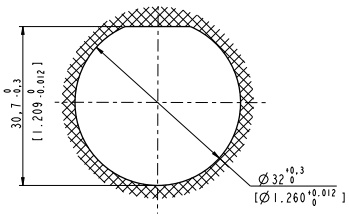
Panel drilling



Part number type (Cat.6A) : **RJF 6A 7 X 1 X**

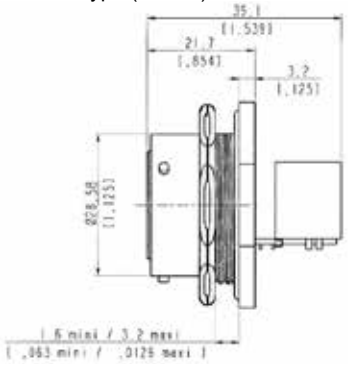


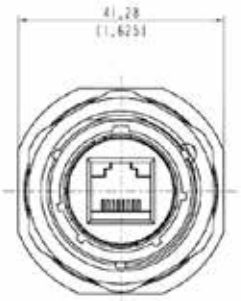




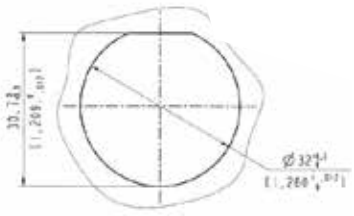
Receptacle - Jam nut receptacle - Hexagonal nut mounting - Shell type 7 - Back termination type 1RA

Part number type (Cat.5e) : **RJF 7 1RA X**

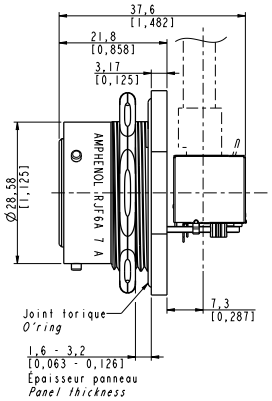


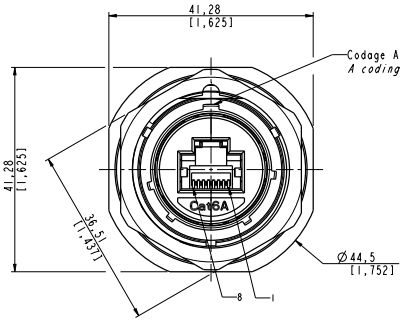


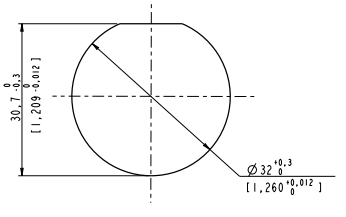
Panel drilling



Part number type (Cat.6A) : **RJF 6A 7 X 1RA X**



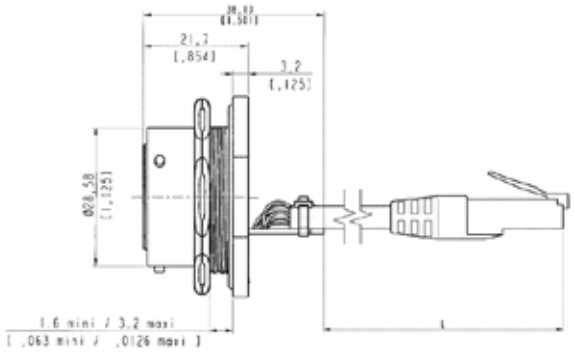


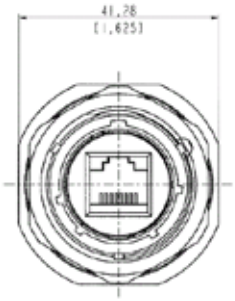


Overall dimension

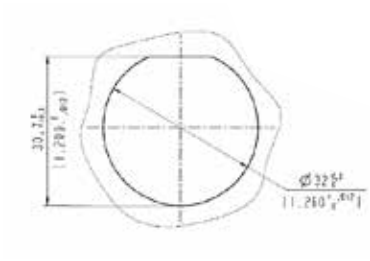
Receptacle - Jam nut receptacle - Hexagonal nut mounting - Shell type 7 - Back termination type 2

Part number type (Cat.5e) : **RJF 7 2 X XX 100BTX**

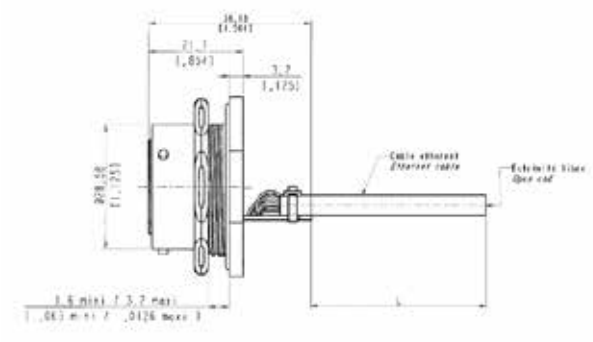


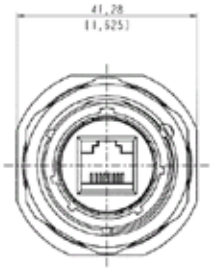


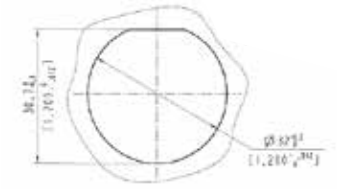
Panel drilling



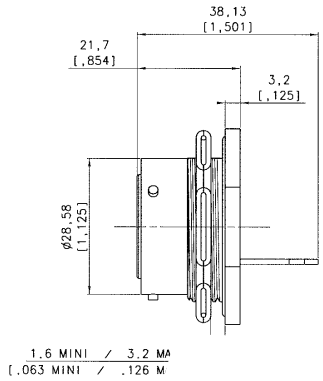
Part number type (Cat.5e) : **RJF 7 2 X XX OPEN**

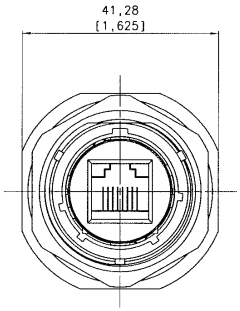


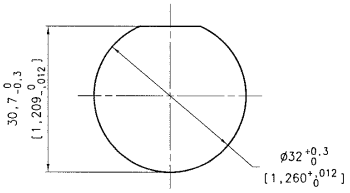




Part number type (Cat.5e) : **RJF 7 2 X 00**







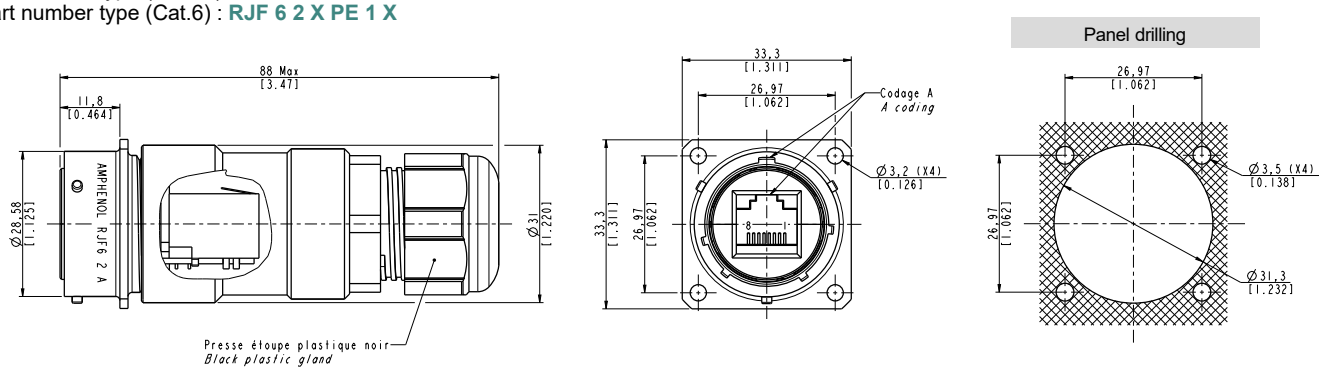
Important note:

- To choose your coding orientation, please refer to “Assembly instructions” page 102

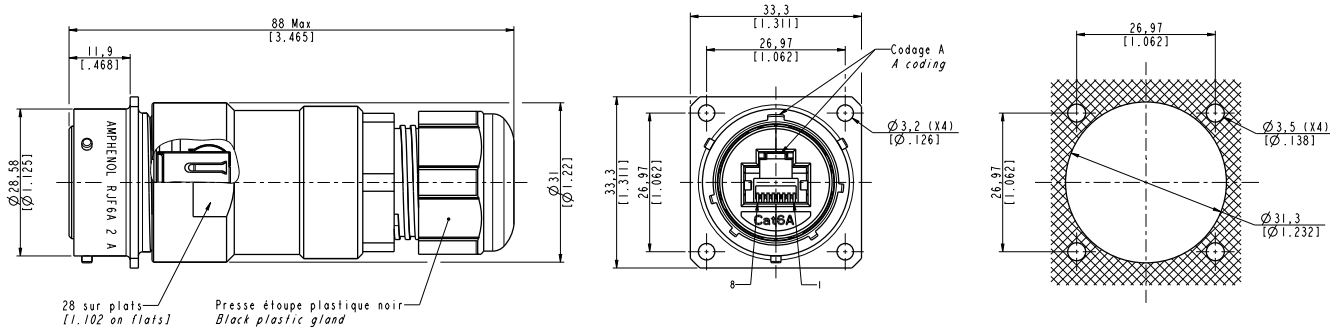
Overall dimension

Receptacle - Square flange receptacle - 4 mounting holes - Shell type 2 - Backshell with plastic gland

Part number type (Cat.5e) : **RJF 2 PE 1 X**
Part number type (Cat.6) : **RJF 6 2 X PE 1 X**

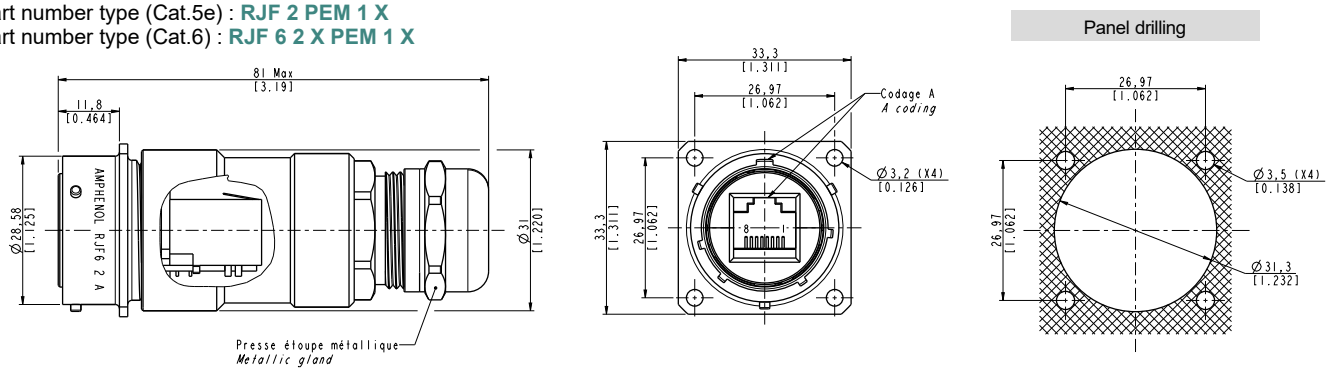


Part number type (Cat.6A) : **RJF 6A 2 X PE 1 X**

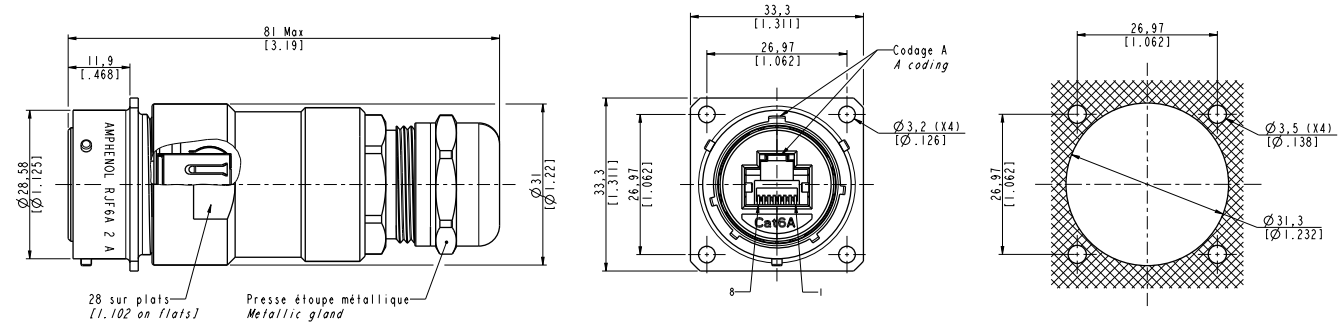


Receptacle - Square flange receptacle - 4 mounting holes - Shell type 2 - Backshell with metallic gland

Part number type (Cat.5e) : **RJF 2 PEM 1 X**
Part number type (Cat.6) : **RJF 6 2 X PEM 1 X**



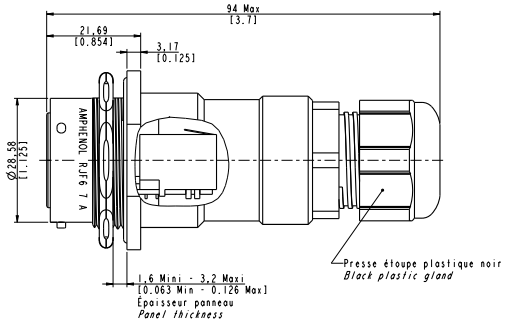
Part number type (Cat.6A) : **RJF 6A 2 X PEM 1 X**

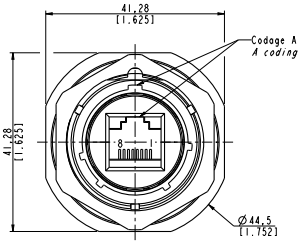


Overall dimension

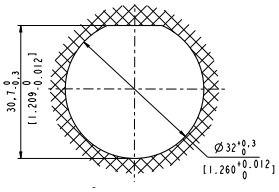
Receptacle - Jam nut receptacle - Hexagonal nut mounting - Shell type 7 - Backshell with plastic gland

Part number type (Cat.5e) : **RJF 7 PE 1 X**
Part number type (Cat.6) : **RJF 6 7 X PE 1 X**

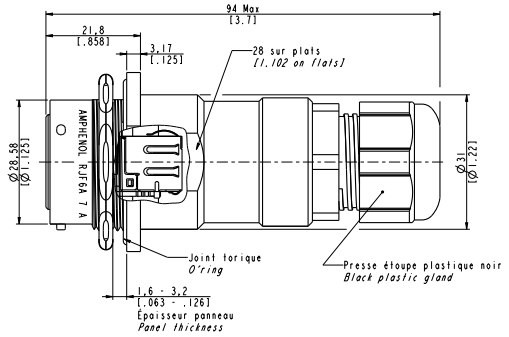


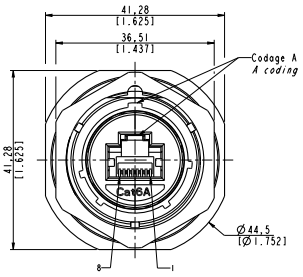


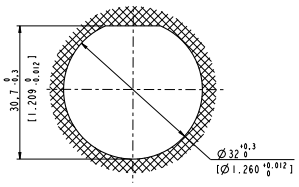
Panel drilling



Part number type (Cat.6A) : **RJF 6A 7 X PE 1 X**

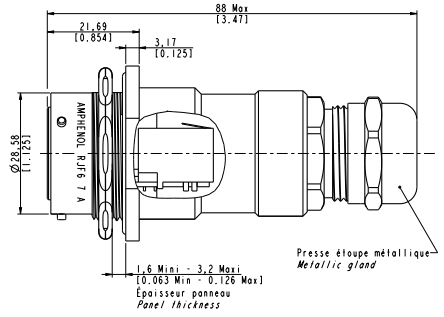


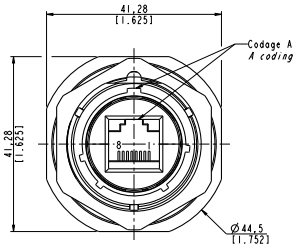




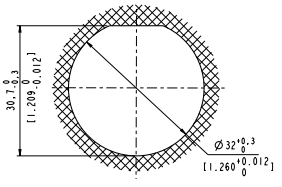
Receptacle - Jam nut receptacle - Hexagonal nut mounting - Shell type 7 - Backshell with metallic gland

Part number type (Cat.5e) : **RJF 7 PEM 1 X**
Part number type (Cat.6) : **RJF 6 7 X PEM 1 X**

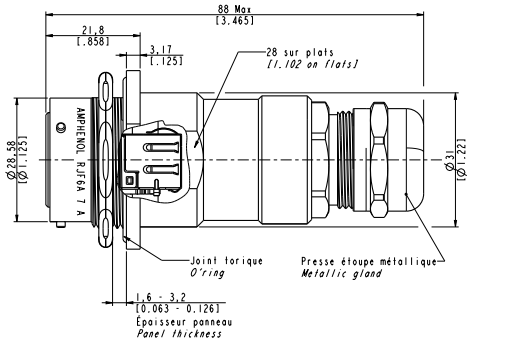


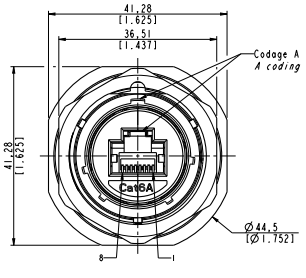


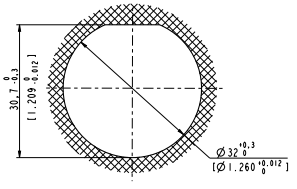
Panel drilling



Part number type (Cat.6A) : **RJF 6A 7 X PEM 1 X**



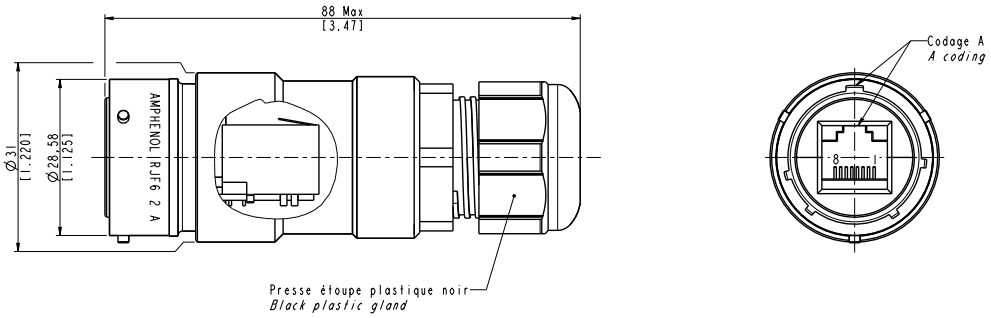




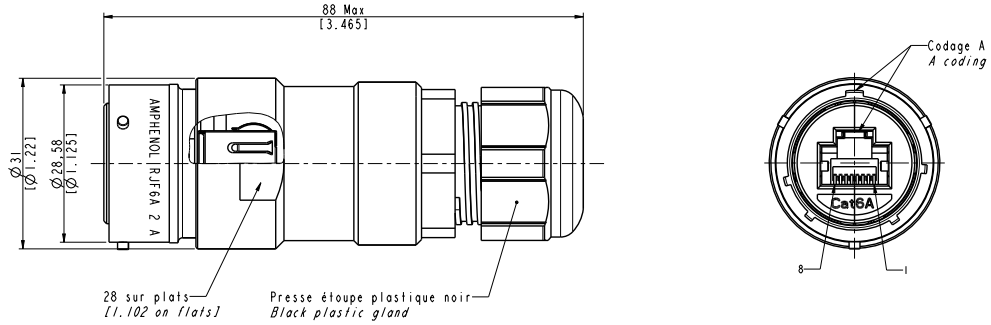
Overall dimension

Receptacle - In line receptacle - Without flange - Plastic gland

Part number type (Cat.5e) : **RJF 2 PEWF 1 X**
Part number type (Cat.6) : **RJF 6 2 X PEWF 1 X**

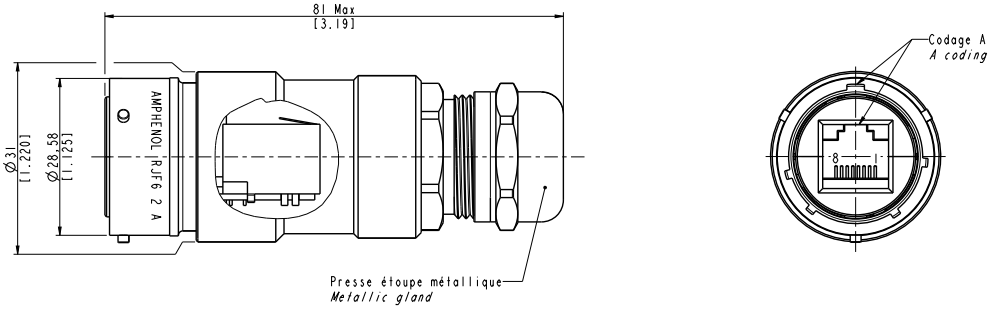


Part number type (Cat.6A) : **RJF 6A 2 X PEWF 1 X**

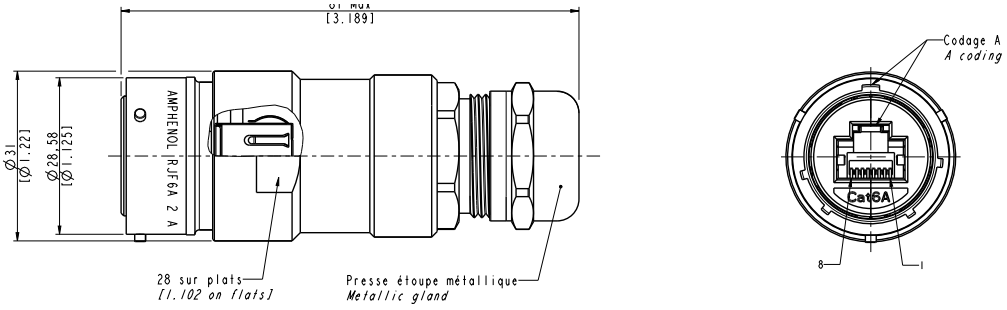


Receptacle - In line receptacle - Without flange - Metal gland

Part number type (Cat.5e) : **RJF 2 PEMWF 1 X**
Part number type (Cat.6) : **RJF 6 2 X PEMWF 1 X**



Part number type (Cat.6A) : **RJF 6A 2 X PEMWF 1 X**



RJF™ - TRANSVERSALLY SEALED AND HERMETIC RECEPTACLE

Description

The transversally sealed receptacle is in all aspects equivalent to the standard and in addition, is improved with compound at the rear of the receptacle. This prevents the sealing of the receptacle when unmated with his plug or protective cap.
The hermetic solution, as the transversally sealed one, is compounded at the rear of the receptacle. Helium leakage is less than 1.10-6 cm^3 per second [0.1 micron cubit ft per hour] at one bar [15 psi] pressure differential. The test is 100% done on all of these hermetic receptacles.

Main features

MAIN CHARACTERISTICS
- Robust metallic shells based on MIL-DTL-26482 J - Shell size 18
- A complete IP68 sealing of the receptacle (even with no plug or no protective cap mated) is added
- External dimensions are the same as the standard RJF™ series- Bayonet coupling (“Audible & Visual” coupling signal)

- RJ45 cordset retention in the plug: 100 N in the axis
- Mating cycles: 500 min
- Mechanical coding / polarization (4 positions)

DATA TRANSMISSION
- 10 BaseT, 100 BaseTX and 1000 BaseT networks
- Cat.5e per TIA/EIA 568B and ClassD per ISO/IEC 11801
- Cat.6 per TIA/EIA 568B and ClassE per ISO/IEC 11801
- Cat.6A per TIA/EIA 568B and ClassEa per ISO/IEC 11801

ENVIRONMENTAL PROTECTION
- Sealing: IP68
- Salt Spray:
  - 48 h with nickel plating over aluminium shell ✓
  - 96 h with black coating over aliminium shell ✓
  - 500 h black zinc nickel over aluminium shell ✓
  - 500 h with olive drab cadmium plating over aluminium shell
- Fire retardant/Low smoke: UL94 V0 and EN45545
- 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
- Temperature range: - 40°C / +85°C

APPLICATIONS
- Battlefield communication systems
- C5ISR
- Data acquisition and transmission in harsh environment
- Optronics
- Navy
- Rail Mass Transit
- Industrial process control
- Robotics
- CNC machines
- Oil & Gas

Important note:
- Due to the compound, the coding orientation has to be define in the reference.
- To choose your coding orientation, please refer to “Assembly instructions” page 102

How to order : **Please refer to page 111**

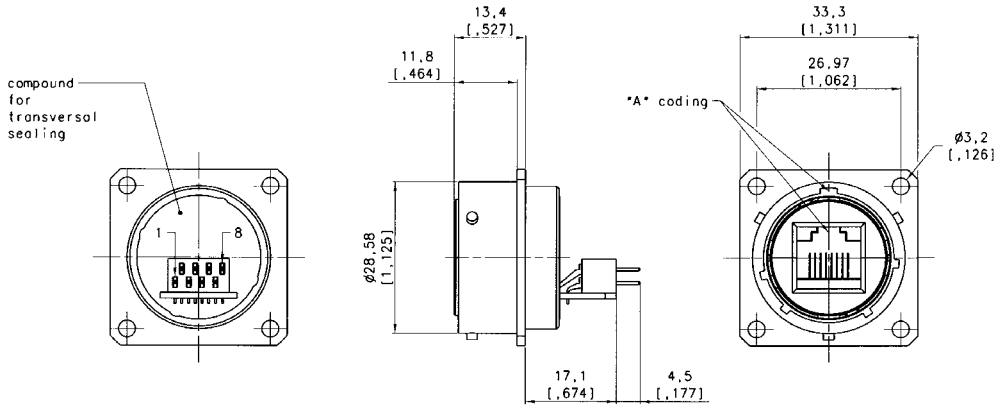
RJF™ - PC TAILS RECEPTACLE

Description

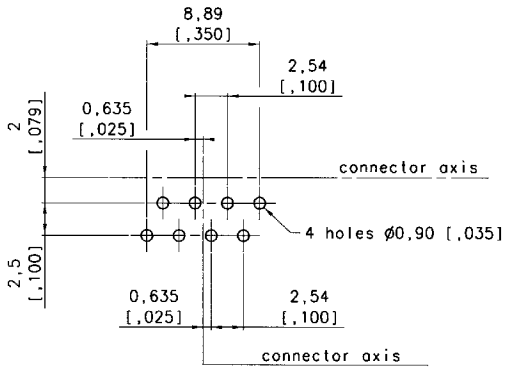
These receptacles can be soldered directly on your PCB. A compound insures a transversal sealing and good performance in high vibration environments. They can be connected with standard RJF™ plugs.

Overall dimension

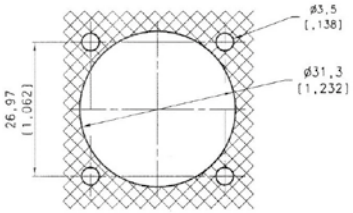
Receptacle - Square flange receptacle - 4 mounting holes - Shell type 2 - PC tails receptacle



PCB layout



Panel drilling



Important note:
- Due to the compound, the coding orientation has to be define in the reference.
- To choose your coding orientation, please refer to “Assembly instructions” page 102

Data transmission	Part number	Plating
Cat.5e	RJF 2S X 5 B	Black coating ✓
	RJF 2S X 5 N	Nickel ✓
	RJF 2S X 5 G	Olive drab cadmium
	RJF 2S X 5 ZN	Black zinc Nickel ✓

✓ : RoHS compliant

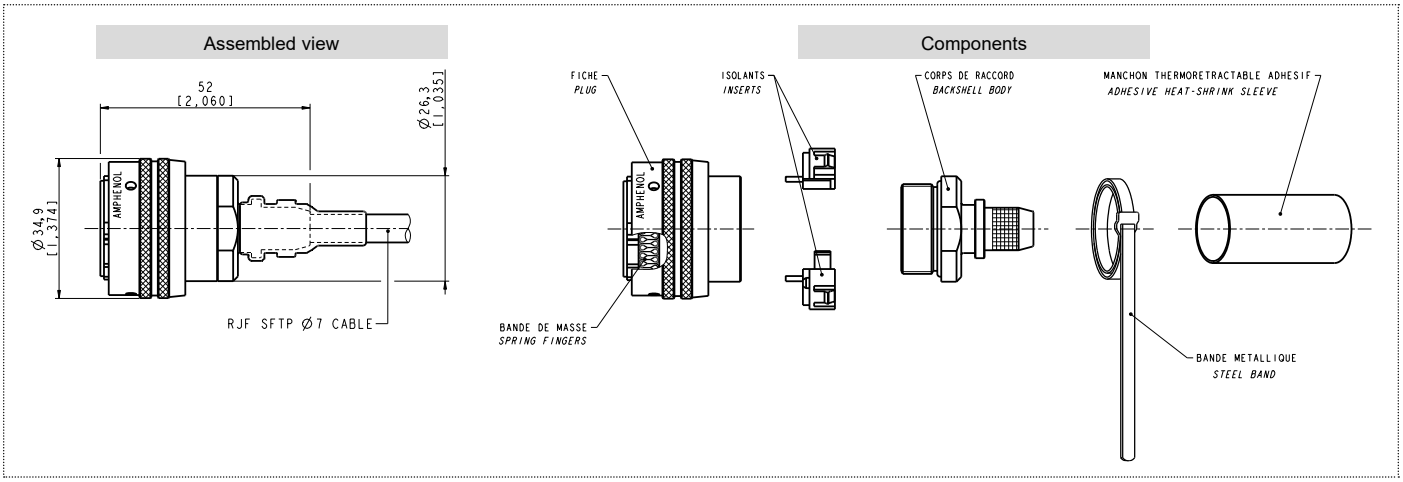
RJF™ - PLUG AND RECEPTACLE WITH 360° EMI BACKSHELL

Description

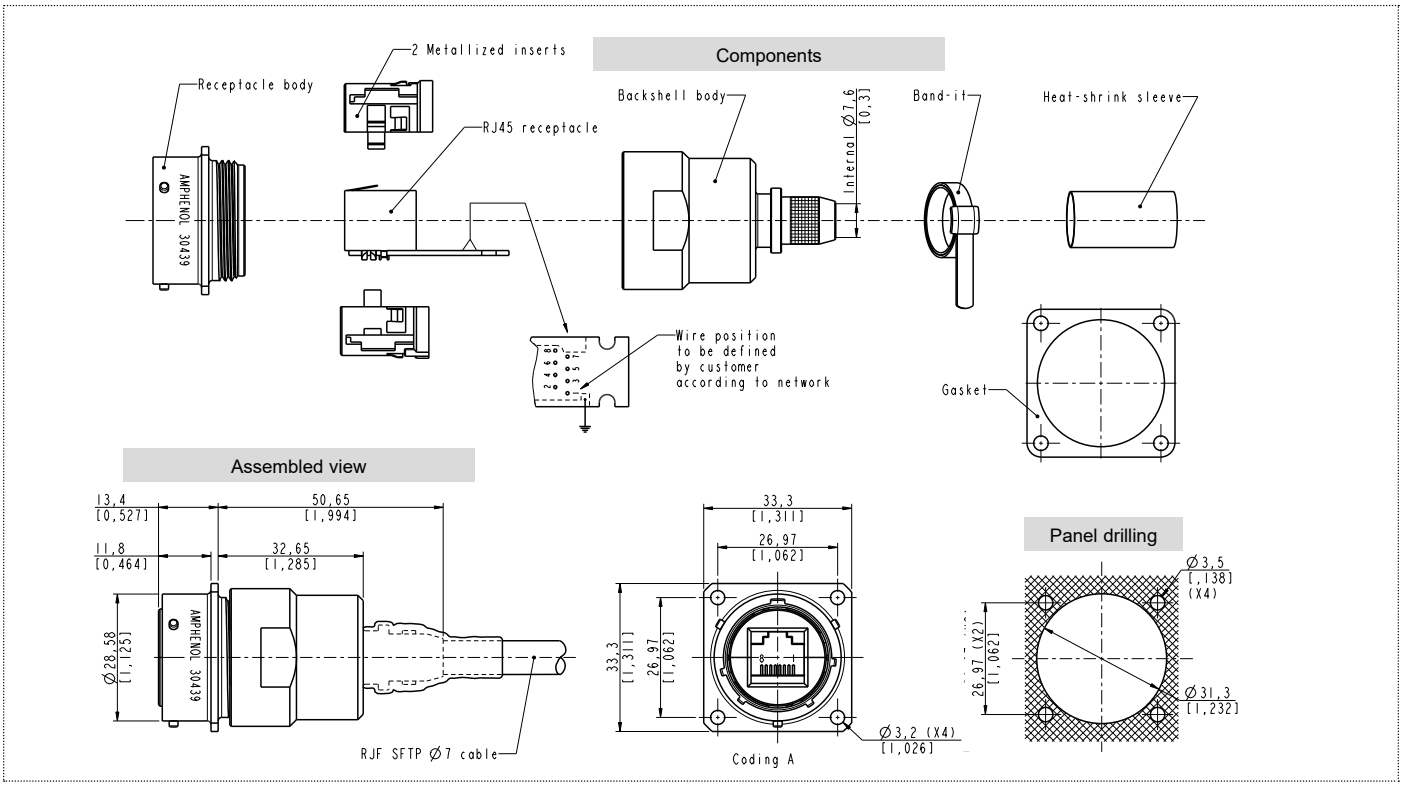
This RJF™ kit includes all components necessary to build up a totally 360° EMI shield solution. Receptacle kits are mainly composed of a 360° backshell and the RJF PCB receptacle with 8 tinned holes for solder termination. With those receptacle kits provided without cable, you will have to solder your cable on the PCB. The plug kit is composed with the 360° backshell where you will have to include your own RJ45 cordset. You can find below, wires and shielding wire cabling specification.
We recommend to use our reinforced Ethernet cables. If you prefer to use your own cable, please check with us compatibility.
In case you would like to receive a complete 360° EMI shield receptacle already mounted with a specific length of cable, please consult us.

Overall dimension

Plug - Shell type 6 - Straight 360° EMI backshell



Receptacle - Square flange receptacle - 4 mounting holes - Shell type 2 - Straight 360° EMI backshell

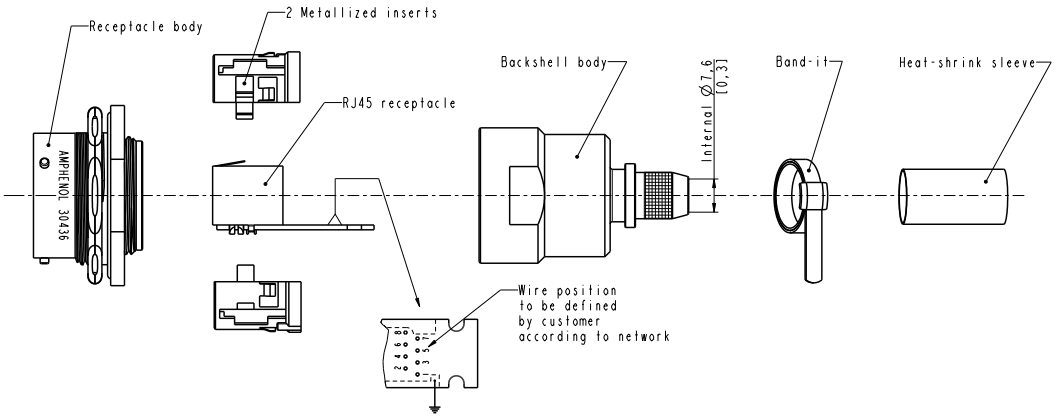


RJF™ - PLUG AND RECEPTACLE WITH 360° EMI BACKSHELL

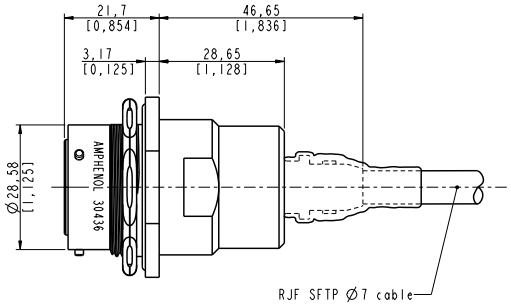
Overall dimension

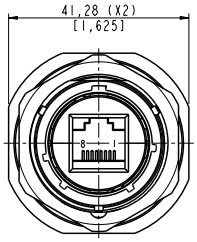
Receptacle - Jam nut receptacle - Hexagonal nut mounting - Shell type 7 - Straight 360° EMI backshell

Components

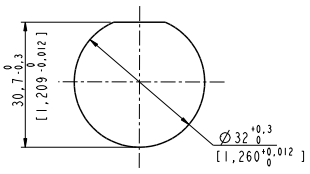


Assembled view





Panel drilling



Data transmission	Part number	Shell type	Plating
Cat.5e	KIT30394N	Plug	Nickel ✓
	KIT30394		Olive drab cadmium
	KIT30394ZN		Black zinc nickel ✓
	KIT30439N	Square flange receptacle	Nickel ✓
	KIT30439		Olive drab cadmium
	KIT30439ZN		Black zinc nickel ✓
	KIT30436N	Jam nut receptacle	Nickel ✓
	KIT30436		Olive drab cadmium
	KIT30436ZN		Black zinc nickel ✓

✓ : RoHS compliant

RJF™ - PLUG FOR BIG INSULATION WIRE UP TO 1.6 MM

Description

This RJF™ kit is composed of necessary components to assemble a RJF™ plug, particulary if you forsee to use a large ethernet cable. The plug kit is composed by a specific RJ45 Cat6A plug that should be crimped to the cable. The adhesive metal tape and the heat shrink boot provide a proper finish and a electrical insulation. Finally the RJStop included in this kit, is perfectly adapted to the RJ45 Cat6A plug.

Main features

MAIN CHARACTERISTICS
- Bayonet coupling ("Audible & Visual" coupling signal)
- Robust metallic shells based on MIL-DTL-26482 J - 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

DATA TRANSMISSION
- 10 BaseT, 100 BaseTX and 1000 BaseT networks
- Cat.6A per TIA/EIA 568B and ClassEa per ISO/IEC 11801

ENVIRONMENTAL PROTECTION
- Sealing: IP68
- Salt Spray:
  - 48 h with nickel plating over aluminium shell ✓
  - 96 h with black coating over aliminium shell ✓
  - 500 h black zinc nickel over aluminium shell ✓
  - 500 h with olive drab cadmium plating over aluminium shell
- Fire retardant/Low smoke: UL94 V0 and EN45545
- 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
- Temperature range: - 40°C / +85°C

APPLICATIONS
- Battlefield communication systems
- C5ISR
- Data acquisition and transmission in harsh environment
- Optronics
- Navy
- Rail Mass Transit
- Industrial process control
- Robotics
- CNC machines
- Oil & Gas

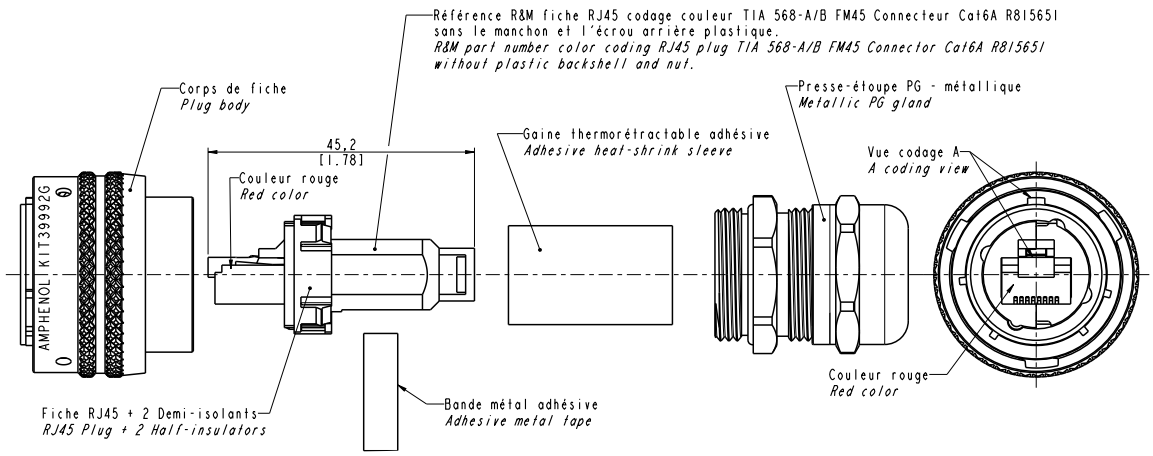
✓ : RoHS compliant

RJF™ - PLUG FOR BIG INSULATION WIRE UP TO 1.6 MM

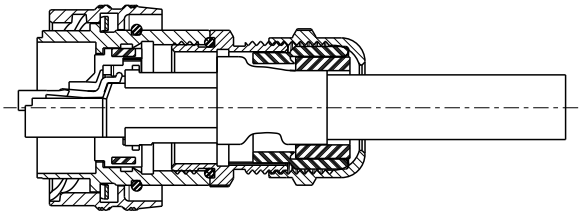
Overall dimension

Plug - Shell type 6 - Straight 360° EMI backshell

Components



Assembled view



Data transmission	Part number	Plating
Cat.6A	KIT39992B	Black coating ✓
	KIT39992NI	Nickel ✓
	KIT39992G	Olive drab cadmium
	KIT39992ZN	Black Zinc Nickel

✓ : RoHS compliant