Rugged Digital Networks Solutions

Reinforced Infocom Connectors for Harsh Environment

RJ Field Cat6

NEW

Amphenol

Connecting to people + technology

INFORMATION ■■■ □

	CAT5e	CAT6	CAT6A
Standard	ISO 11801 EIA/TIA 568	ISO 11801 EIA/TIA 568	ISO 11801 EIA/TIA 568
Data rate	1 GBit/s	1 GBit/s	10 GBit/s
Frequency	100 MHz	250 MHz	500 MHz

OUR SOLUTIONS

Series	CAT5e	CAT6	CAT6A
RJFRB	X	X	
RJF544	X		
RJF5446	X	X	
RJFEZ	X		
RJF / RJFTV	X		
RJF6 / RJFTV6	X	X	
RJFTV ATEX	X		
RJFTV6 ATEX	X	X	
µCom-10Gb+	X	X	X
RJF6A / RJFTV6A *	X	X	X
High reliability cables & cordsets	X	X	X

* Coming soon

Cat5e solutions ▶ *Download the Rugged Ethernet & USB catalogue*

µCom-10Gb+ **Ethernet Micro Connector** ▶ *Download the catalogue*

or visit ▶ *www.amphenol-socapex.com*

RUGGED ETHERNET CAT6 SOLUTIONS SELECTION GUIDE

Connectors	Series	Indust. Ethernet Spec.	Coupling Mechanism	Shape	Material	Specification	Prime Market	Page
	RJFRB		Reverse bayonet	Circular	Plastic	N/A	Inustrial & Telecom	5
	RJF5446	IEC 60603-7 variant 12	Push Pull	Circular	Plastic	N/A	Industrial & Telecom	7
	RJF6	IEC 60603-7 variant 11	Bayonet	Circular	Metal	MIL-DTL-26482	Industrial Mil/Aero	9
	RJF6 CAT6 in line receptacle	IEC 60603-7 variant 11	Bayonet	Circular	Metal	MIL-DTL-26482	Industrial Mil/Aero	12
	RJF6 CAT6 transversally sealed receptacles		Bayonet	Circular	Metal	MIL-DTL-26482	Mil/Aero & Industrial	13
	RJF6 CAT6 hermetic receptacles		Bayonet	Circular	Metal	MIL-DTL-26482	Mil/Aero & Industria	14
	RJ Field Cat 6 receptacles with self closing cap	IEC 60603-7 variant 11	Bayonet	Circular	Metal	MIL-DTL-26482	Industrial Mil/Aero	15
	RJF TV6		Thread	Circular	Metal	MIL-DTL-38999 Series III	Mil/Aero & Rail Mass Transit	18
	RJF TV6 CAT6 through bulkhead receptacles		Thread	Circular	Metal	MIL-DTL-38999 Series III	Mil/Aero & Rail Mass Transit	21
	RJF TV 6 CAT6 transversally sealed receptacles		Thread	Circular	Metal	MIL-DTL-38999 Series III	Mil/Aero & Industrial	22
	RJF TV 6 CAT6 hermetic receptacles		Thread	Circular	Metal	MIL-DTL-38999 Series III	Mil/Aero & Industrial	23

Cable	Series	Prime Market	Page
	High reliabiliy Cat6 cable & cordets	Mil/Aero	27

RUGGED ATEX ZONE 2 CAT6 SOLUTION SELECTION GUIDE

Connectors	Series	Indust. Ethernet Spec.	Coupling Mechanism	Shape	Material	Specification	Prime Market	Page
	RJF TV6X	EN60079-15	Thread	Circular	Metal	MIL-DTL-38999 Series III	Factory Automation, Video, Oil & Gas	28

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RJF RB

CAT6 Ethernet connection system for harsh environment – Industrial Ethernet

RJFRB 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 protective **composite** plug which will protect it from shocks, dust and fluids.
No hazardous on-field cabling and grounding!

Applications
- Telecom equipments
- Video control
- Robotics
- Industrial process control
- CNC machines
- Special machines
- Motion control

Data transmission
10 BaseT, 100 BaseTX and 1000 BaseT up to 250 MHz networks
Cat6 per EIA/TIA 568 and ClassE per ISO11801

Main characteristics
- Sealed against fluids and dust (IP68)
- Shock, vibration and traction resistant
- No cabling operation in field, no tools required
- **Reverse bayonet coupling**
- RJ45 cordset retention in the plug: 70 N in the axis
- Mating cycles: 500 min
- Compatible with cable diameter from 5,5 mm [0.216 in] to 7 mm [0.275 in]

Environmental protection
- Sealing: IP68
- Salt spray > 1000 h
- Fire retardant / Low smoke: UL94 V0 and NFF 16102, DIN 5510-2
- Thermal shock: 5 cycles at - 40°C / +100°C
- Operating temperature: - 40°C / +85°C

Part number code

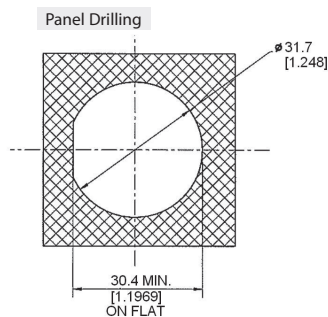|	RJF RB	7	3U
Shell type **7**: composite jam nut receptacle **6**: composite reverse bayonet plug, plastic gland			
Back terminations *(for receptacles only)* **3U**: IDC cat6 - unshielded **3F**: IDC cat6 - partial shielding **3S**: IDC cat6 - 100% shielded			

Examples: - receptacle, IDC cat6, unshielded ⇨ **RJF RB 73U**
             - plug ⇨ **RJF RB 6**

Receptacle

- Type 3: IDC CAT 6 termination (rear mounting)

Panel Drilling

ø31.7
[1.248]

30.4 MIN.
[1.1969]
ON FLAT

Unshielded: **RJF RB 73U**
Partial shielding **RJF RB 73F**

Shielded: **RJFRB73S**
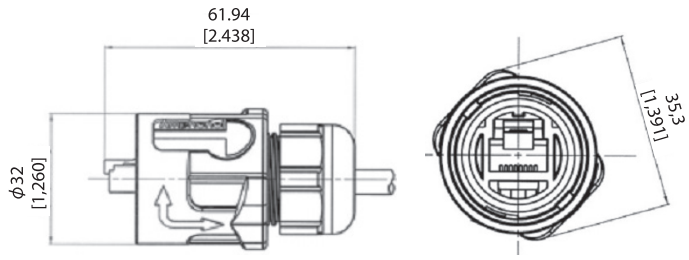
Cat5e version: page 10 of the Field series catalogue.
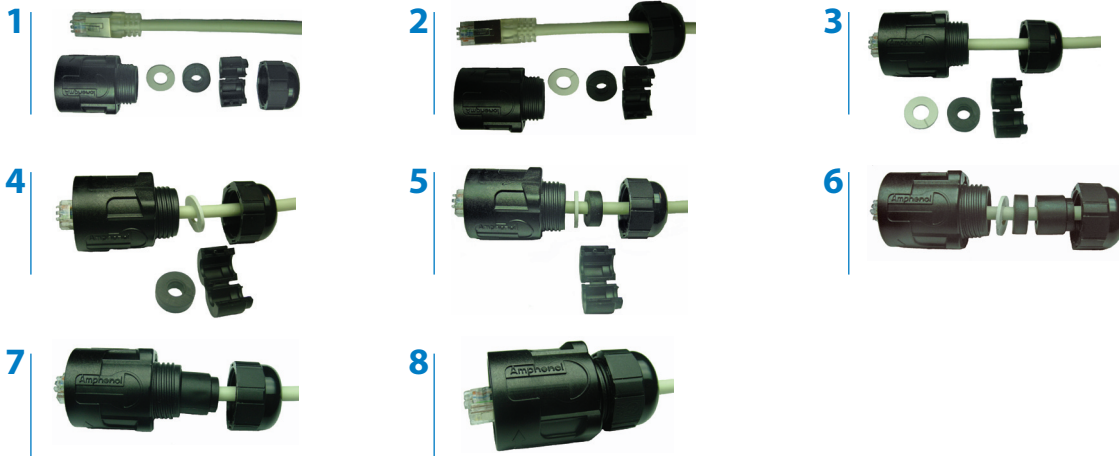▶   *Direct access by clicking here*
▶   Or visit *www.amphenol-socapex.com*

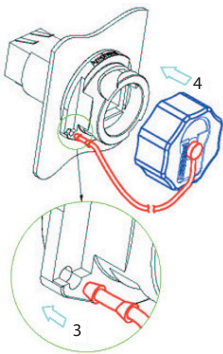Amphenol

Plug

■ Type 6 shell with plastic gland

RJFRB6

Assembly instructions

1

2
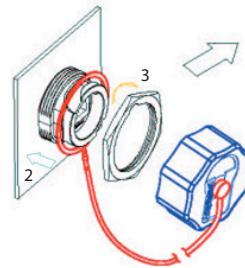
3

4

5

6

7

8

Accessories

■ **IP68 Dust caps**

RJF RB C7
Cap for receptacles RJFRB71 / 71RA / 72xxx

RJF RB C75
Cap for receptacles RJFRB75 and RJFRB73x

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6

RJF 5446

CAT6 Ethernet connection system for harsh environment – Industrial Ethernet

ROHS COMPLIANT
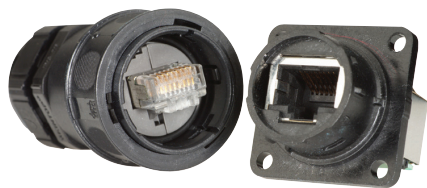
RJF5446 allows you to use an Ethernet Class E / Cat 6 connection for 10 BaseT, 100 Base TX or 1000 BaseT up to 250 MHz networks in harsh environments. **With the patented RJStop®** system you can use a standard RJ45 cordset in a protective **composite** plug which will protect it from shocks, dust and fluids. **No hazardous on-field cabling and grounding !**

Applications
- Telecom equipment
- Video control
- Robotics
- Industrial process control
- CNC machines
- Special machines
- Motion control
- Tele-maintenance

Data transmission
10 BaseT, 100 BaseTX and 1000 BaseT up to 250 MHz networks
Cat6 per EIA/TIA 568 and ClassE per ISO11801

Main characteristics
- Compliant with IEC 60603-7 variante 12
- Shock, vibration and traction resistant
- No cabling operation in field and no tools required
- Sealed against fluids and dust (IP68)
- **Quick push pull coupling**
- RJ45 cordset retention in the plug: 100 N in the axis
- Mating cycles: 500 min
- Improved EMI Protection
- Compatible with cable diameter from 6 mm [0.236 in] to 13 mm [0.512 in]

Environmental Protection
- Sealing: IP68
- Salt spray > 1000 h
- Fire retardant / Low smoke: UL94 V0 and NFF 16102, DIN 5510-2
- Vibrations: 10 – 500 Hz, 10 g, 3 axes: no discontinuity > 10 nano s.
- Thermal shock: 5 cycles at - 40°C / +100°C
- Operating temperature: - 40°C / +85°C

Also available with tranversal sealing*
***Sealed in unmated condition**

Part number code: <u>receptacles.</u>

	RJF 5446	2	1
Shell type **2**: composite square flange receptacle **2S**: composite square flange receptacle transversally sealed **2M**: metallized (Ni) composite square flange receptacle **2SM**: metallized (Ni) composite square flange receptacle transversally sealed			
Back termination **1**: female RJ45			

Examples: - Square flange receptacle, female RJ45 back termination: RJF 5446 21
          - Metallized square flange receptacle, female RJ45 back termination: RJF 5446 2M 1
   - Transversally sealed receptacle, female RJ45 back termination: RJF5446 2S1

Part number code: <u>plug.</u>

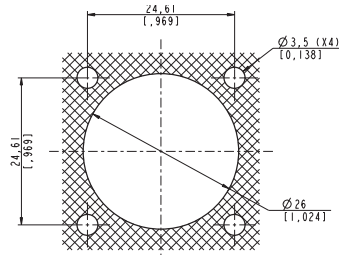|	RJF 544	6
Shell type **6**: composite push pull plug, plastic gland		

Cat5e version: page 13 of the Field series catalogue.
▶ *Direct access by clicking here*
▶ Or visit *www.amphenol-socapex.com*

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Receptacle

■ Type 2S/2M/2SM shell: square flange receptacle with 4 mounting holes

RJF 5446 2x 1

Non conductive black plastic shell
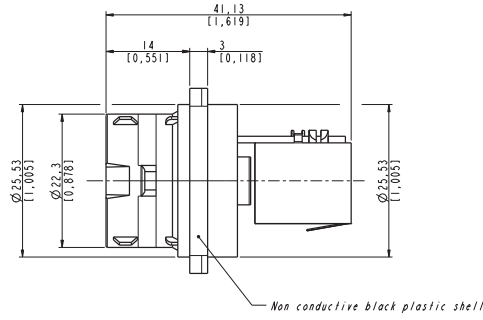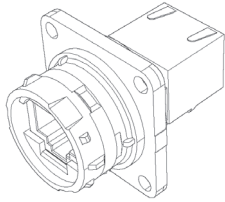

Panel drilling

Back termination
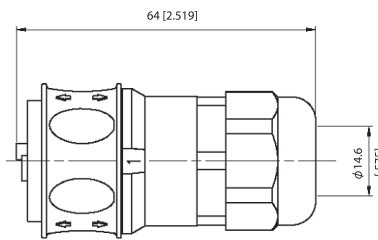

Type1: female RJ45

Plug

■ Type 6 shell with plastic gland
p/n RJF544 6

RJF 544 6

Accessories

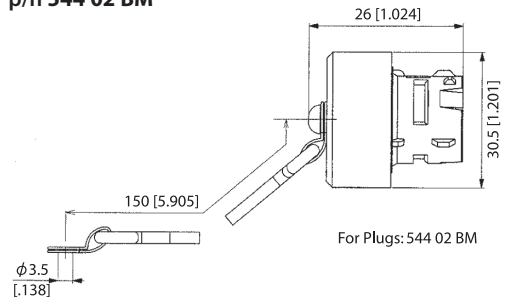■ **Rubber IP68 receptacle cap
p/n RJF 544BESC**

■ **Panel gasket
p/n RJF 544 02JE**

■ **IP68 caps for plug
p/n 544 02 BM**

For Plugs: 544 02 BM

■ Panel gasket (thickness: 0.6mm [.039]): p/n **RJF 544 02 JE**
■ Plug Insert removal tool: p/n **5440 OT 02**

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RJF6

CAT6 Ethernet connection system for harsh environment – Industrial Ethernet

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!

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

Cat5e version: page 17 of the Field series catalogue.
- ▶ *Direct access by clicking here*
- ▶ Or visit *www.amphenol-socapex.com*

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

Part number code: <u>receptacles.</u>

RJF6	2	A	PE	1	B

Shell type
2: square flange receptacle
7: jam nut receptacle
Nota: also available a transversally sealed receptacle (unmated) ▶ see page 13

Coding
A, B, C, or D

Backshells
PE: IP68 backshell, plastic gland
PEM: IP68 backshell, metal gland
Blank for receptacles without backshell

Back termination
1: female RJ45

Shell finishes
B: black Coating - *ROHS compliant*
N: nickel - *ROHS compliant*
G: olive drab cadmium

BZC: aluminium shell - black zinc cobalt plating
ZC: aluminium shell - green zinc cobalt plating - *ROHS compliant*
NOTA: for N,G, BZC, and ZC plating, the inserts are metallized.

*Example: square flange receptacle, coding A, female RJ45 back termination, black plating ⇨**RJF6 2 A 1 B***
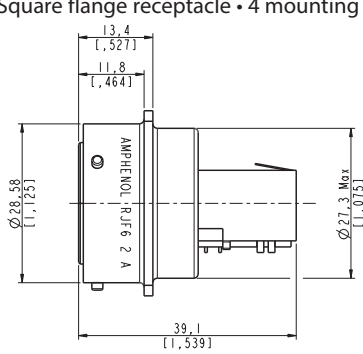
Part number code: <u>plug</u> ▶see page 11.

RJF	6	B

Shell type
6: plug, plastic gland
6M: plug, metal gland

Shell finishes
B: black Coating - *ROHS compliant*
N: nickel *(note: with this version, the inserts are metallized)* - *ROHS compliant*
G: olive drab cadmium *(note: with this version, the inserts are metallized)*

BZC: aluminium shell - black zinc cobalt plating
ZC: aluminium shell - green zinc cobalt plating - *ROHS compliant*

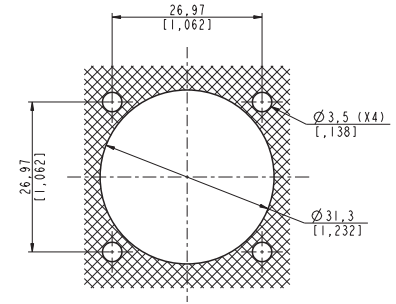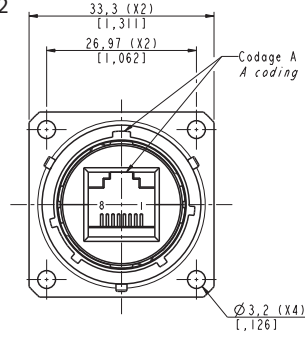*Example: plug with metal gland, nickel plating ⇨**RJF 6M N***

▶ **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

33,3 (X2)
[1,311]
26,97 (X2)
[1,062]

Codage A
A coding

13,4
[,527]

11,8
[,464]

Ø 28,58
[1,125]

AMPHENOL·RJF6·2·A

Ø 27,3 Max
[1,075]

39,1
[1,539]

26,97
[1,062]

26,97
[1,062]

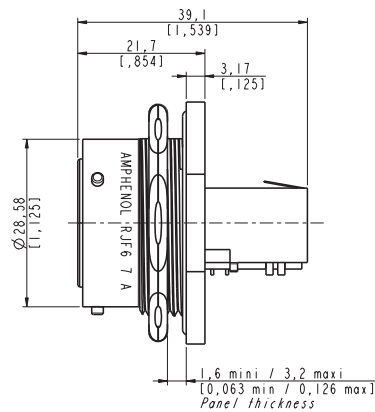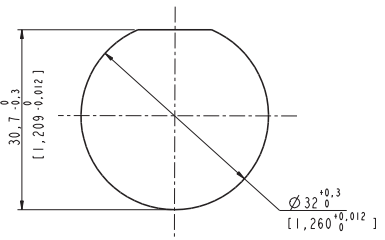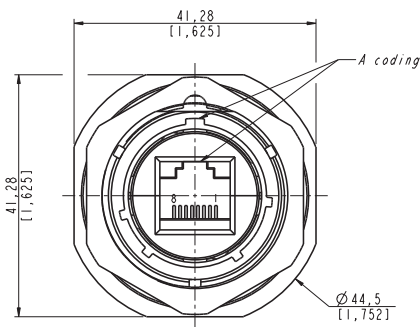Ø 3,5 (X4)
[,138]

Ø 31,3
[1,232]

Ø 3,2 (X4)
[,126]

RJF6 2 X 1 X (Straight Female RJ45)

Panel Drilling

■ Jam nut receptacle • Hexagonal nut mounting: shell type 7

39,1
[1,539]

21,7
[,854]

3,17
[,125]

Ø 28,58
[1,125]

AMPHENOL·RJF6·7·A

1,6 mini / 3,2 maxi
[0,063 min / 0,126 max]
Panel thickness

41,28
[1,625]

A coding

41,28
[1,625]

Ø 44,5
[1,752]

30,7 0 -0,3
[1,209 +0,012 0]

Ø 32 +0,3 0
[1,260 +0,012 0]

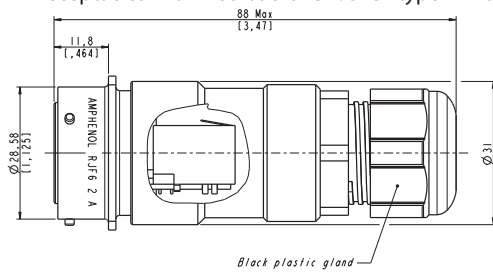RJF6 7 x 1 X (straight female RJ45)

Panel drilling

■ Receptacles with IP68 backshell : shell type 2PE and 7PE with plastic or metal gland

88 Max
[3,47]

11,8
[,464]

Ø 28,58
[1,125]

AMPHENOL·RJF6·2·A

Ø 31
[1,220]

Black plastic gland

RJF6 2 X PE 1 X / 2 X PEM 1 X

88 Max
[3,47]

3,17
[,125]

Ø 28,58
[1,125]

AMPHENOL·RJF6·7·A

21,69
[,854]

Metallic gland
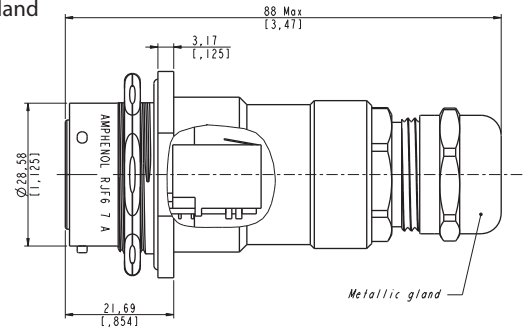
RJF6 7 X PE 1 X / 7 X PEM 1 X

Codings - *To be specified in the part number: A, B, C, or D.*
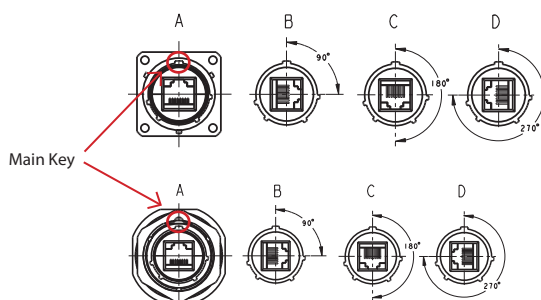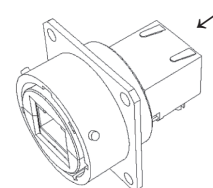
A   B   C   D
         90°   180°   270°

Main Key

A   B   C   D
         90°   180°   270°

Back termination

Type **1**
Female RJ45

Plug

■ Shell type 6 with plastic or metal gland

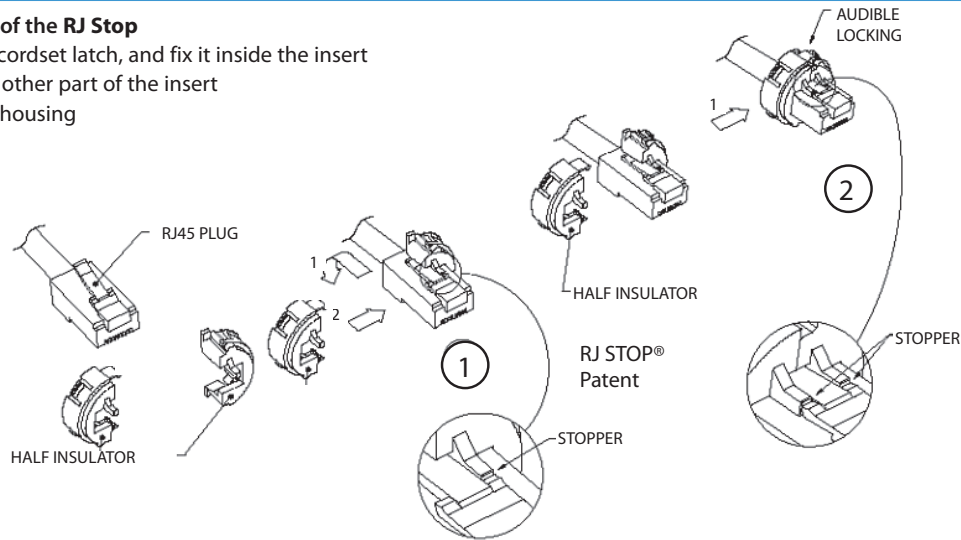57.8 [2.275] Fully Assembled

φ14.8 [.583]

φ34.9 [1.374]
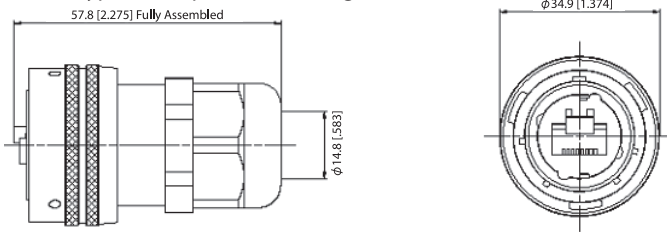
NOTA: also available a plug with 360° EMI backshell, and a plug for big insulation wire up to 1.6mm
▶ see pages 16 & 17.

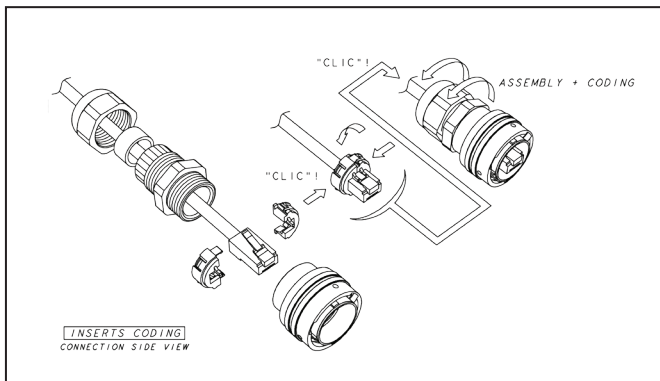## Universal: can be used with all standard RJ45 Cat. 6 cordset brands.

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
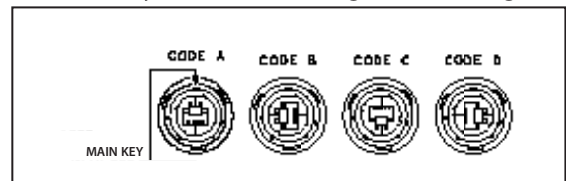3. Insert in the metallic housing

AUDIBLE LOCKING

1

2

RJ45 PLUG

1

2

HALF INSULATOR

HALF INSULATOR

RJ STOP®
Patent

STOPPER

1

STOPPER

STOPPER

Easy and safe - No field cabling tools required for cabling

Assembling of the plug.

"CLIC"!

"CLIC"!

ASSEMBLY + CODING

INSERTS CODING
CONNECTION SIDE VIEW

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

CODE A   CODE B   CODE C   CODE D

MAIN KEY

IMPORTANT NOTE: to remove the insert, use the

■ **Insert removal tool for plug**
P/N: **RJF ODE**

Accessories

■ **Metallic cap**

	RJFC	2	G
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			

■ **Panel gasket for square flange 2 »thickness - 0,6 mm**
P/N: **JE 18**

Plug cap

Receptacle cap

Ø4.45 ±0.25
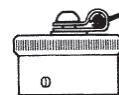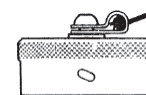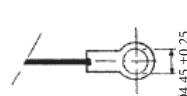
Square Flange
type « 2 »
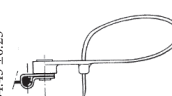
Plug Cap end
type « 6 »
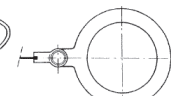
Jam nut receptacle
type « 7 »

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

88 Max
[3,47]

Ø 31
[1,220]
Ø 28,58
[1,125]

AMPHENOL RJF6 2 A

Black plastic gland

A coding

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

Main Key

A   B 90°   C 180°   D 270°
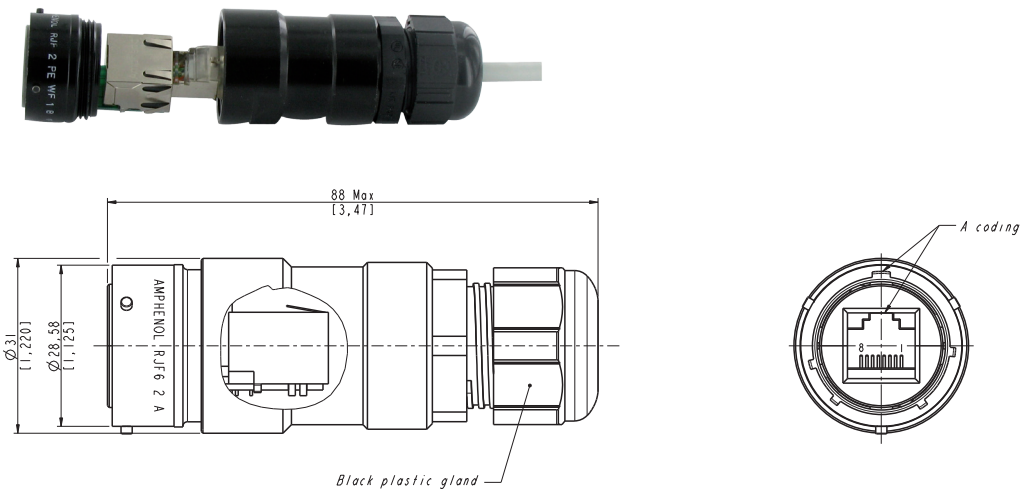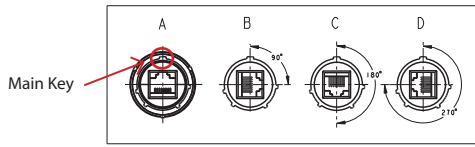
Part number	Plating	Plastic gland	Metallic gland
	Black coating - *ROHS compliant*	**RJF6 2 X PEWF1 B**	**RJF6 2 X PEMWF 1 B**
	Nickel - *ROHS compliant*	**RJF6 2 X PEWF 1 N**	**RJF6 2 X PEMWF 1 N**
	Olive drab cadmium	**RJF6 2 X PEWF 1 G**	**RJF6 2 X PEMWF 1 G**

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

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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

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
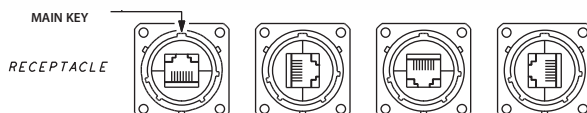
RECEPTACLE

Part number code

RJF6	7 S	A	PE	1	G

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*

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

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**

Cat5e version: page 22 of the Field series catalogue.
▶ *Direct access by clicking here*
▶ Or visit *www.amphenol-socapex.com*

RJF6

CAT6 hermetic receptacles

In some applications, a transversal hermiticity 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 1.10^{-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
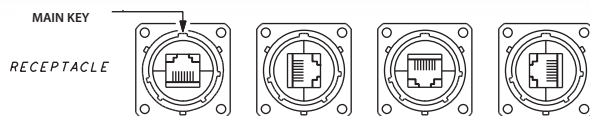- Data acquisition and transmission in harsh environments

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.

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**.

MAIN KEY

RECEPTACLE

Part number code

		RJF6	7H	A	2	G
Shell type						
2H: transversally sealed and hermetic square flange receptacle						
7H: transversally sealed and hermetic jam nut receptacle						
Coding						
A,B,C,D						
Back termination						
1: female RJ45						

Shell material & finish

B: aluminium shell - black coating - *ROHS compliant*	**BZC**: aluminium shell - black zinc cobalt plating
N: aluminium shell - nickel plating - *ROHS compliant*	**ZC**: aluminium shell - green zinc cobalt plating - *ROHS compliant*
G: aluminium shell - olive drab cadmium plating	<u>*NOTA*</u>*: for N, G, BZC, and ZC plating, the inserts are metallized.*

Examples:
- sealed jam nut receptacle, A coding, with female RJ45 Back termination, olive drab cadmium plating ⇨ **RJF6 7HA 1 G**
- sealed square flange receptacle, A coding, with female RJ45 back termination, black plating ⇨ **RJF6 2HA 1 B**

Cat5e version: page 23 of the Field series catalogue.
- ▶ *Direct access by clicking here*
- ▶ Or visit *www.amphenol-socapex.com*

Amphenol

RJF CAT6 receptacle with self closing cap

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 RJfield plug, USB or IEEE1394 cordset, or USB key are removed from the receptacle.

Sealing level IP54
(Splash and dust Proof)

RJF6 2 x 1 x SCC

RJ45 version

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

Main Key
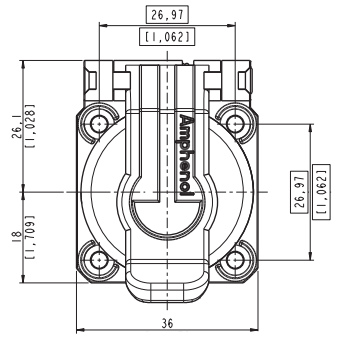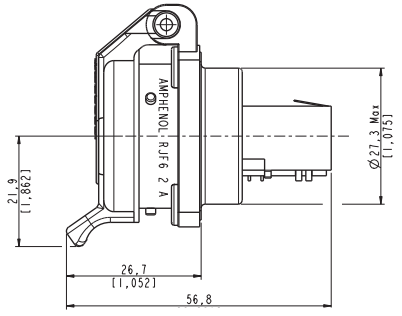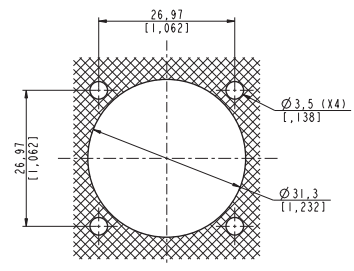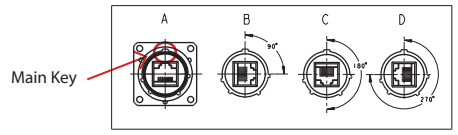
Part number *	Plating	Metallized insert (EMI)	Part number
	Black coating - *ROHS compliant*	No	**RJF6 2 X 1 B SCC**
	Nickel - *ROHS compliant*	Yes	**RJF6 2 X 1 N SCC**
	Olive drab cadmium	Yes	**RJF6 2 X 1 G SCC**

* *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**

Amphenol

15

RJF
Plug with 360° EMI backshell

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

Cat5E version: page 41 of the Field series catalogue	▶	*Direct access by clicking here*	**Or visit**	*www.amphenol-socapex.com*
Cat6A version: page 43 of the Field series catalogue	▶	*Direct access by clicking here*		

Plug - *Straight backshell*

52 [2,060] Ø 26,3 [1,035] Ø 34,9 [1,374]

RJF SFTP Ø7 CABLE
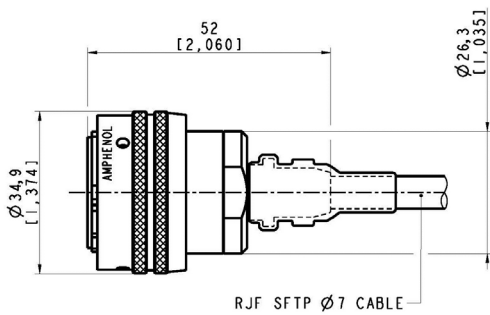
Part number	Plating	Part number
	Nickel - *ROHS compliant*	**Kit30394NI**
	Olive drab cadmium	**Kit30394**

Kit30394 & Kit30394NI include:

| Plug body | Inserts | Backshell body | Band | Heat shrink sleeve |

Amphenol
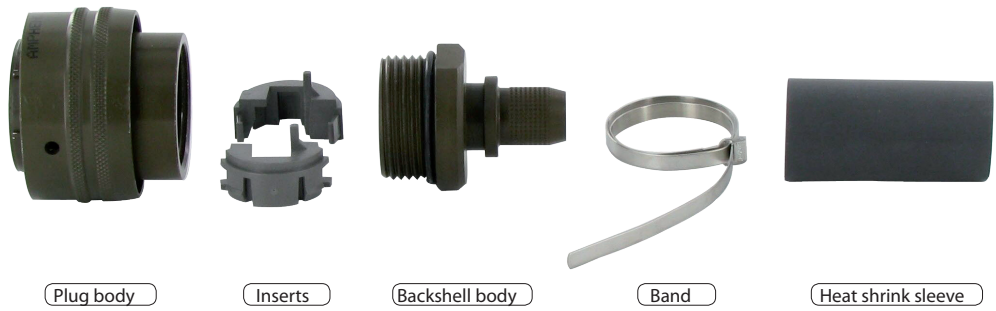
RJF
Special plug for big insulation wire up to 1.6 mm [0.062 in]
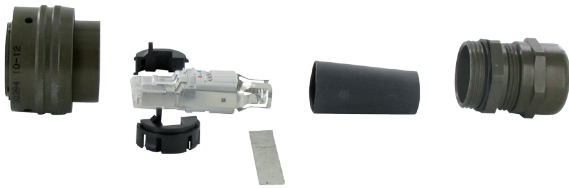
Rugged plug dedicated to cable with insulation wire from 1,1 to 1,6 mm [from 0.043 in to 0.062 in]

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

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
- **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 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

SPECIAL RJ45 PLUG FOR INSULATION WIRE FROM 1.1 TO 1.6MM [FROM 0.043 IN TO 0.062 IN]

PLUG BODY

METALLIC PG GLAND

ADHESIVE HEAT-SHRINK SLEEVE

45,2 [1,78]

2 HALF-INSULATORS

ADHESIVE METAL TAPE

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

RJF TV6

CAT6 Ethernet connection system for harsh environment
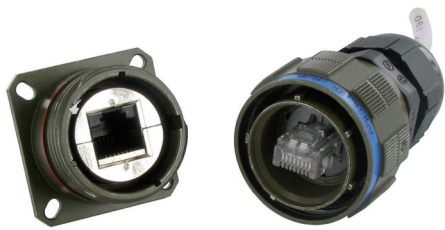
RJFTV Cat6 allows you to use an Ethernet Class E / Cat. 6 connection for 10 BaseT, 100 BaseTx or 1000 BaseT up to 250 MHz networks in harsh environments.

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!

Applications
- Data acquisition and transmission in harsh environment
- Railways
- Radars
- Shelters
- Battlefield communication
- Systems
- Navy

Data Transmission
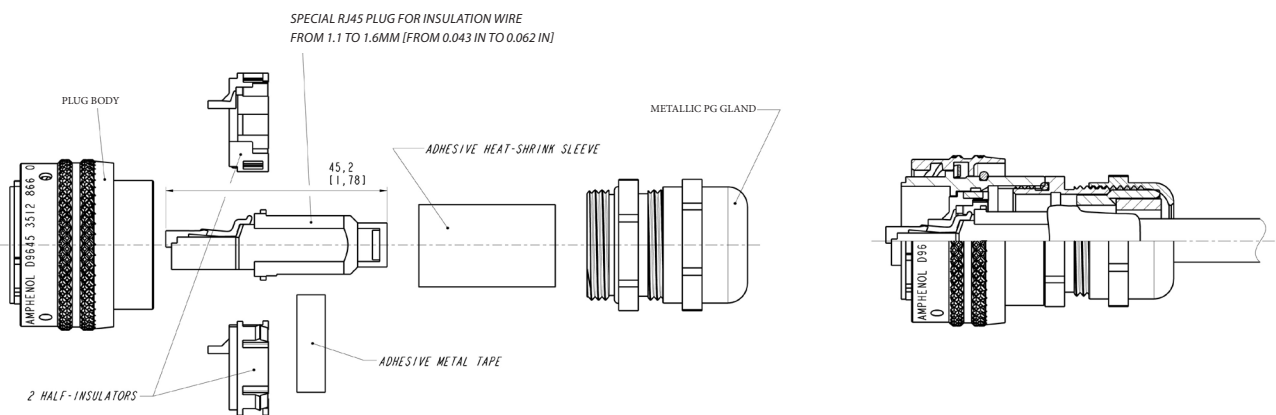10 BaseT, 100 BaseTX and 1000 BaseT up to 250 MHz networks

Cat 6 per EIA/TIA 568 and ClassE per ISO 11801

Cat5e version: page 26 of the Field series catalogue.
- ▶ *Direct access by clicking here*
- ▶ Or visit *www.amphenol-socapex.com*

Main characteristics
- Sealed against fluids and dusts (IP68)
- Shock, vibration and traction resistant
- No cabling operation in field and no tools required
- Mechanical coding / Polarization (4 positions)
- Improved EMI protection
- **Tri Start Thread coupling mechanism (MIL-DTL-38999 series III type) with anti-decoupling device - Shell size 19**
- **Robust metallic shells**
- RJ45 cordset retention in the plug: 100 N in the axis
- Mating cycles: 500 min
- 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: 48h with aluminium shell - Nickel, & black zinc cobalt plating
  > 500h with aluminium shell - Olive drab cadmium plating
  500 h with marine bronze shell
- 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

Part number code: receptacles.

	RJF TV6	2	A	PEM	1	G

Shell type
2: square flange receptacle
7: jam nut receptacle
Nota: also available a transversally sealed receptacle (unmated) ▶ *See page 22*

Coding
A, B, C, or D

Backshells
PE: IP68 backshell, plastic gland
PEM: IP68 backshell, metal gland
Blank for receptacles without backshell

Back terminations
1: female RJ45

Shells material & Finish *(inserts are metallized)*
N: aluminium shell - nickel plating - *ROHS compliant*
G: aluminium shell - olive drab cadmium plating
BZ: marine bronze shell - *ROHS compliant*

BZC: aluminium shell - black zinc cobalt plating
ZC: aluminium shell - green zinc cobalt plating - *ROHS compliant*
ZN: aluminium shell - black zinc nickel plating - *ROHS compliant*

Example: jam nut receptacle, coding A, female RJ45 back termination, olive drab cadmium plating ⇨ RJF TV6 7 A 1 G

Part number code: plugs ▶ see page 20.

	RJF TV	6	G

Shell type
6: plug with plastic gland
6M: plug with metal gland

Shells material & Finish *(inserts are metallized)*
N: aluminium shell - nickel plating - *ROHS compliant*
G: aluminium shell - olive drab cadmium plating
BZ: marine bronze shell - *ROHS compliant*

BZC: aluminium shell - black zinc cobalt plating
ZC: aluminium shell - green zinc cobalt plating - *ROHS compliant*
ZN: aluminium shell - black zinc nickel plating - *ROHS compliant*

Example: plug with plastic gland, olive crab cadmium plating ⇨ RJF TV 6G

▶ **NOTA**: also available a plug with 360° EMI backshell, and a plug for big insulation wire up to 1.6mm ▶ see pages 24 & 25.

Amphenol

Receptacles

■ Square flange receptacle - 4 mounting holes: shell type 2

RJFTV6 2 X 1 X
Straight female RJ45

Perçage panneau
Panel drilling

Panel Drilling

■ Jam nut receptacle - Hexagonal nut mounting: shell type 7

RJFTV6 7 X 1 X
Straight female RJ45

Panel Drilling

■ Receptacles with IP68 backshell: Shell type 2PE and 7PE with plastic or metal gland

Black plastic gland

RJF TV6 2 X PE 1 X / 7 X PE 1 X

Metallic gland

RJF TV6 2 X PEM 1 X / 7 X PEM 1 X

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

Main Key
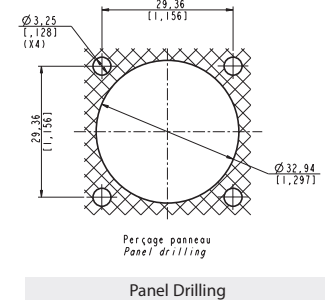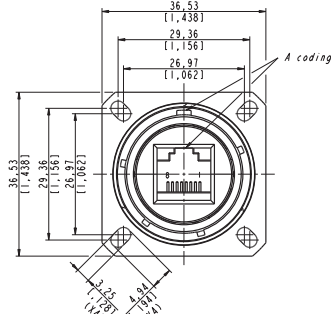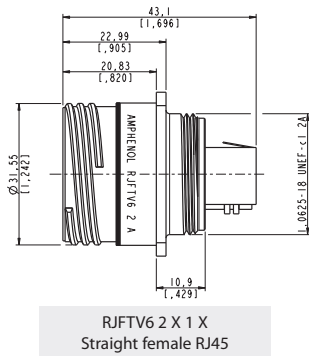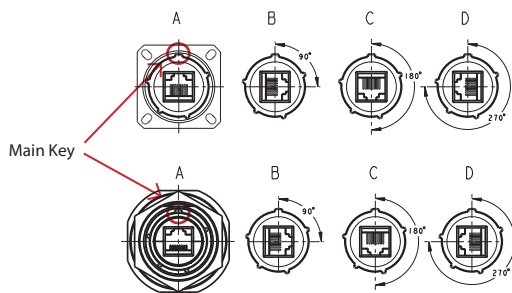
Back terminations

Type **1**
Female RJ45
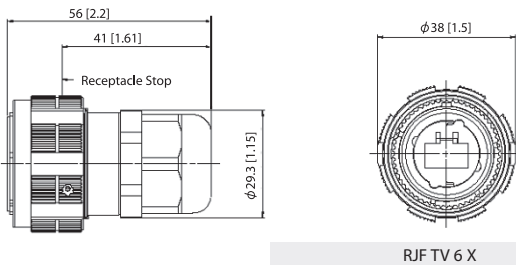
Plug

■ Shell type 6 with plastic or metal gland

56 [2.2]

41 [1.61]
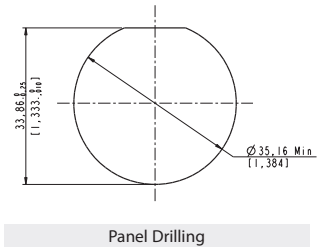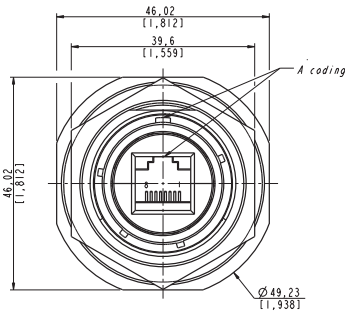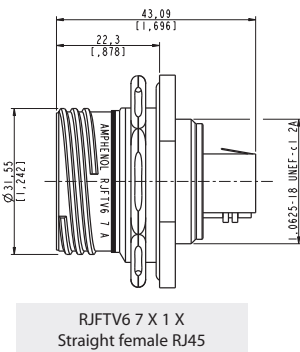
Receptacle Stop

φ38 [1.5]

φ29.3 [1.15]

RJF TV 6 X

NOTA: also available a plug with 360° EMI backshell, and a plug for big insulation wire up to 1.6mm
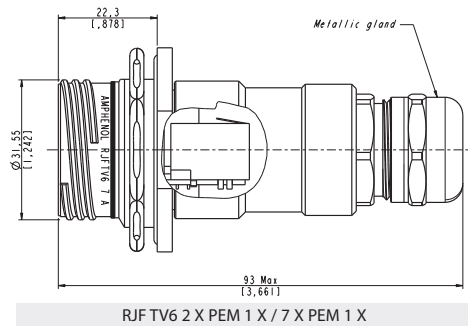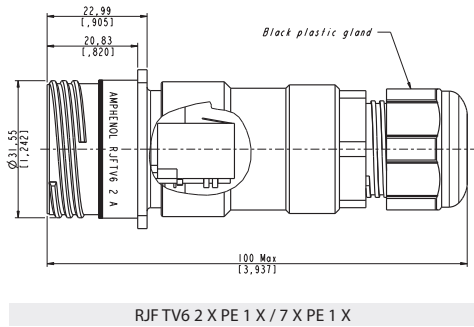► see pages 24 & 25.

Assembly instructions

Insert codings

Assembling of the plug.

"CLIC"!

"CLIC"!

ASSEMBLY + CODING

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

CODE A   CODE B   CODE C   CODE D

PLUG

MAIN KEY

IMPORTANT NOTE: to remove the insert, use the

■ **Insert removal tool for plug**

P/N: **RJF ODE**

Accessories

■ **Metallic Caps**

	RJFTVC	2	G
Connector type **6**: plug **2**: square flange receptacle **7**: jam nut receptacle			
Shell material & finish **N**: aluminium shell - nickel plating - *ROHS compliant* **G**: aluminium shell - olive drab cadmium plating **BZ**: marine bronze shell - *ROHS compliant* **ZC**: aluminium shell - green zinc cobalt plating - *ROHS compliant* **ZN**: aluminium shell - black zinc nickel plating - *ROHS compliant*			

Plug Cap   Receptacle Cap
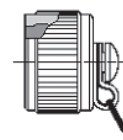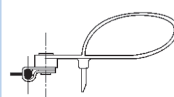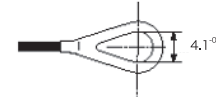
Plug Cap end   Square flange receptacle cap end   Jam Nut receptacle cap end

4.1$^{-0.1}$
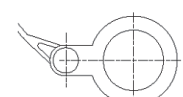
■ **Panel gasket for square flange receptacle**
   Thickness: 0,8 mm [.031]):
   P/n: JE19
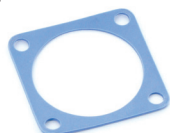
RJF TV6

CAT6 through bulkhead receptacles

Our RJFTV Cat6 through bulkhead receptacles can be connected on each side with rugged RJFTV plugs.
This system allows mechanical protection and a sealing (IP68 when mated) inside and outside the equipement, and keeps the flexibility offered by panel mount and plug connectors.
They can be connected with RJFTV series plugs.

Square flange receptacle
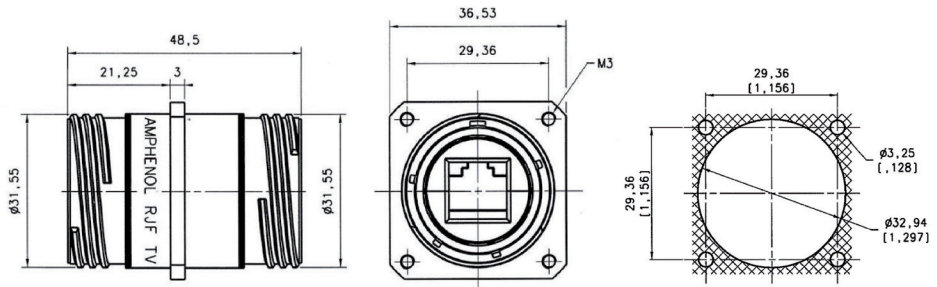
Part number	Plating	Metallized insert	For coding A
	Nickel - *ROHS compliant*	No	**RJF TV6 B 2 N ISO BRUT ***
	Nickel - *ROHS compliant*	Yes	**RJF TV6 B 2 N ISO NI ***
	Olive drab cadmium	No	**RJF TV6 B 2 G ISO BRUT ***
	Olive drab cadmium	Yes	**RJF TV6 B 2 G ISO NI ***

* ISO BRUT = non conductive insert
ISO NI = conductive insert

IMPORTANT NOTE
Possibility of other codings - Please consult us

Jam nut receptacle
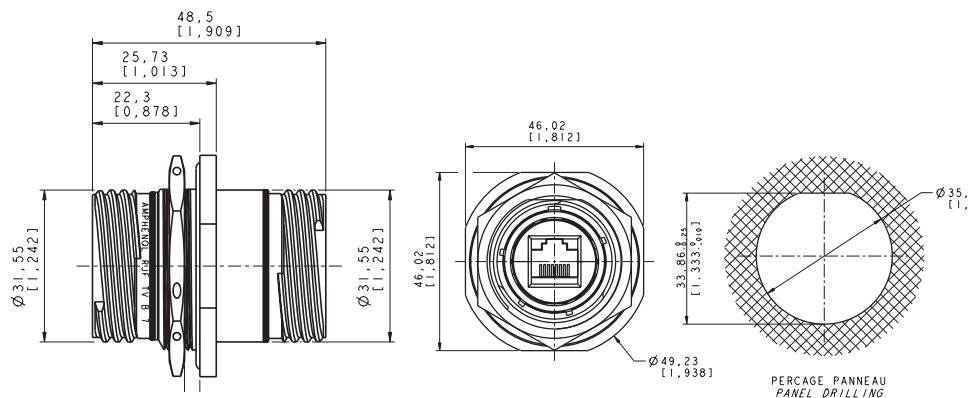
Part number	Plating	Metallized insert	Part number
	Nickel - *ROHS compliant*	No	**RJF TV6 B 7 N ISO BRUT ***
	Nickel - *ROHS compliant*	Yes	**RJF TV6 B 7 N ISO NI ***
	Olive drab cadmium	No	**RJF TV6 B 7 G ISO BRUT ***
	Olive drab cadmium	Yes	**RJF TV6 B 7 G ISO NI ***

* ISO BRUT = non conductive insert
ISO NI = conductive insert

Cat5e version: page 32 of the Field series catalogue.
▶ *Direct access by clicking here*   ▶ Or visit *www.amphenol-socapex.com*

Amphenol

RJF TV6

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

Main characteristics
- Same as the RJF TV 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 and RJF TV series.
- Vibrations: the compounded versions of the RJF TV have been tested in vibration following the NAS 1599 Aeronautic specification (Ambient temperature):
  5 - 3000 Hz, 20g, 2,5 mm [.1 inch] double amplitude, 3 axes, 12 hours
  Note: this specification exceeds MIL-C-26500 requirements.

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
RECEPTACLE
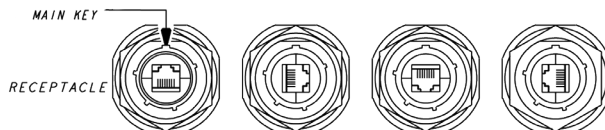
Part number code

	RJF TV6	7S	A	2	G
Shell type **2S:** sealed square flange receptacle **7S:** sealed jam nut receptacle					
Coding A,B,C,D					
Back terminations (for receptacles only) **1:** female RJ45					
Shell material & finish (inserts are metallized)					

Shell material & finish *(inserts are metallized)*

N: aluminium shell - nickel plating - *ROHS compliant*
G: aluminium shell - olive drab cadmium plating
BZ: marine bronze shell - *ROHS compliant*

BZC: aluminium shell - black zinc cobalt plating
ZC: aluminium shell - green zinc cobalt plating - *ROHS compliant*
**ZN**: aluminium shell - black zinc nickel plating - *ROHS compliant*

Examples: - sealed jam nut receptacle, A coding, with female RJ45 back termination, olive drab cadmium plating ⇨ **RJF TV6 7SA 1 G**
- sealed square flange receptacle, A coding, with female RJ45 back termination, nickel plating ⇨ **RJF TV6 2SA 1 N**

Cat5e version: page 36 of the Field series catalogue.
▶ *Direct access by clicking here*
▶ Or visit *www.amphenol-socapex.com*

Amphenol

RJF TV6
CAT6 hermetic receptacles

ROHS COMPLIANT
N, B & BZ

In some applications, a transversal hermiticity 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 1.10^{-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 TV 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 TV series.
- Vibrations: the compounded versions of the RJF TV have been tested in vibration following the NAS 1599 Aeronautic specification (Ambient temperature):
5 - 3000 Hz, 20g, 2,5 mm [.1 inch] double amplitude, 3 axes, 12 hours
Note: this specification exceeds MIL-C-26500 requirements.

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
RECEPTACLE
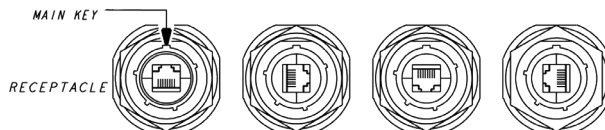
Part number code

		RJF TV6	7H	A	2	G
Shell type						
2H: transversally sealed and hermetic square flange receptacle						
7H: transversally sealed and hermetic jam nut receptacle						
Coding						
A,B,C,D						
Back terminations (for receptacles only)						
1: female RJ45						

Shell material & finish (inserts are metallized)
N: aluminium shell - nickel plating - ROHS compliant
G: aluminium shell - olive drab cadmium plating
BZ: marine bronze shell - ROHS compliant

BZC: aluminium shell - black zinc cobalt plating
ZC: aluminium shell - green zinc cobalt plating - ROHS compliant
ZN: aluminium shell - black zinc nickel plating - ROHS compliant

Examples: - sealed jam nut receptacle, A coding, with female RJ45 Back termination, olive drab cadmium plating ⇨ **RJF TV6 7HA 1 G**
- sealed square flange receptacle, A coding, with female RJ45 back termination, nickel plating ⇨ **RJF TV6 2HA 1 N**

Cat5e version: page 37 of the Field series catalogue.
▸   *Direct access by clicking here*
▸   *Or visit* www.amphenol-socapex.com

Amphenol

RJF TV

Plug with 360° EMI backshells

RJFTV series plugs with EMI backshells provide a solution with 360° shielding: same protection than the one proposed by standard MIL-DTL-38999 series III connectors.

With those solutions we recommend using our reinforced and double shielded Cat5E, Cat6, and Cat6A cable.

▶*see page* 27 for Cat6 version

Cat5E version: page 41 of the Field series catalogue ▶ *Direct access by clicking here*	**Or visit** *www.amphenol-socapex.com*
Cat6A version: page 43 of the Field series catalogue ▶ *Direct access by clicking here*	

Plug - *Straight backshell*

Part number	Plating	P/N
	Nickel - *ROHS compliant*	**Kit38081NI**
	Olive drab cadmium	**Kit38081**
	Green zinc cobalt - *ROHS compliant*	**Kit38081ZC**
	Black zinc cobalt - *ROHS compliant*	**Kit38081ZN**

Plug - *Right angle backshell*

Part number	Plating	P/N
	Nickel - *ROHS compliant*	**Kit40792NI**
	Olive drab cadmium	**Kit40792**
	Green zinc cobalt - *ROHS compliant*	**Kit40792ZC**
	Black zinc cobalt - *ROHS compliant*	**Kit40792ZN**

Kit38081 and Kit40792 include:

Plug body   Inserts   Backshell body   Band   Heat shrink sleeve

IMPORTANT NOTE

With these plugs, the standard RJ45 plug is not provided.

Customer will have to crimp a standard RJ45 on the cable by himself.

Remark: we advise using our double shielded, reinforced Cat6 cables (see page 27) with these RJFTV series EMI connectors.

If customer wants to use his own cable, please check with us regarding compatibility with our backshells: **contact@rjfield.com**.

We also provide assembled cordsets *(see example below)*.

For this type of solution please provide the configuration needed: length, description of second end…

Example of assembled cordset:
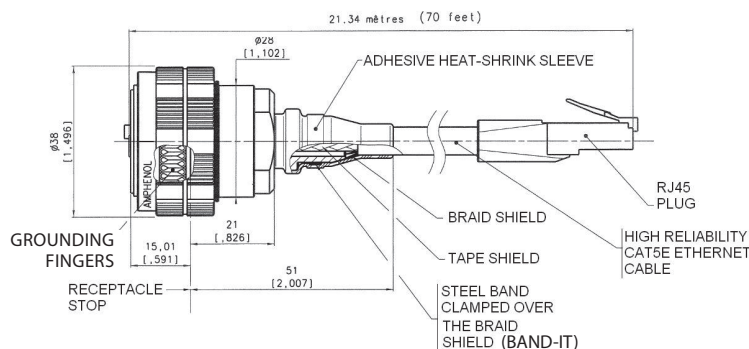
RJF TV

For big insulation wire up to 1.6 mm

Special RJF TV plug dedicated to Ethernet cable with insulation wire from 1,1 to 1,6 mm.

Remark:
- compatible with any RJF TV 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

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
- Sealed against fluids and dusts (IP68)
- Shock, vibration and traction resistant
- No cabling operation in field and no tools required
- Mechanical coding / Polarization (4 positions)
- Improved EMI protection
- **Tri Start Thread coupling mechanism (MIL-DTL-38999 series III type) with anti-decoupling device - Shell size 19**
- **Robust metallic shells**
- RJ45 cordset retention in the plug: 100 N in the axis
- Mating cycles: 500 min
- 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 – 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

Amphenol

PLUG BODY
SPECIAL RJ45 PLUG FOR ISOLATION WIRE UP TO 1,6 MM
ADHESIVE HEAT-SHRINK SLEEVE
METALLIC PG GLAND
45,2 [1,78]
RJ45 PLUG + 2 HALF-INSULATORS
ADHESIVE METAL TAPE

56 [2.2]
41 [1.61]

Part number	Plating	P/N
	Nickel - *ROHS compliant*	**35660**
	Olive drab cadmium	**35660G**

RJFTV
Self closing cap (SCC series) for RJFTV6 receptacles

This Self Closing cap automatically protects the RJF TV square flange receptacle (MIL-DTL-38999 type), protecting your system from dust and water projection. A spring automatically closes the upper part of the cap when the RJF TV plug is removed from the receptacle.

≈ 48,7

≈ 49,5

29,4

Ø 31,5

4- Ø 3,2
[0,128]

29,4

≈ 28,1

39
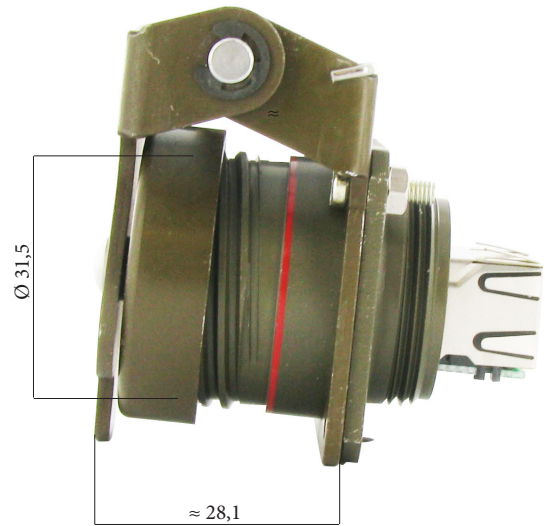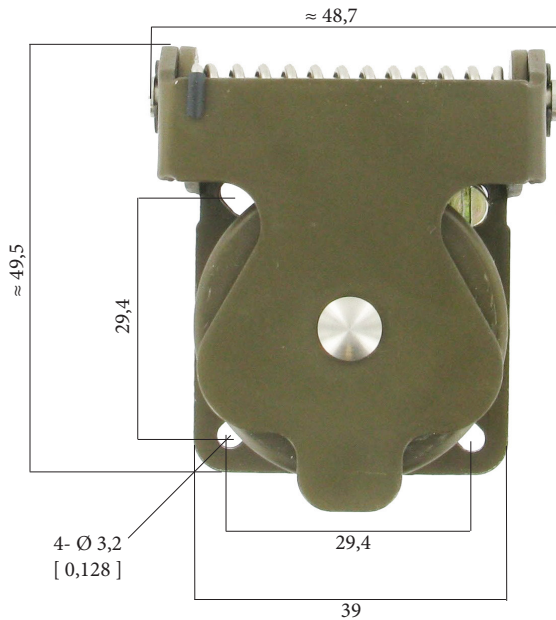
IMPORTANT NOTE
- Metal self closing cap are sold separately (without receptacle).
- This self closing cap must be used with reinforced RJFTV plugs.

Sealing level IP67

Green   Nickel   Black

Part number	Plating	Part number
	Black coating - *ROHS compliant*	**RJF TV SCC B**
	Nickel - *ROHS compliant*	**RJF TV SCC N**
	Olive drab cadmium	**RJFTV SCC G**

Remark: compatible with RJFTV6 square flange receptacle type RJFTV6 **2**xxx only *(see page18)*.

CAT 6 CABLE

High reliability Cat 6 Ethernet cable & cordsets

General construction

A 4 pairs, 26 AWG, 100 Ohm SFTP round patch cable, designed to the ISO 11801 Category 6 requirements. The cable contains 4 twisted pairs individually shielded, cabled, double shielded with kevlar reinforcement strands, jacketed in black UV resistant Polyurethane HFFR. Designed for fixed or portable applications in harsh environments.

HFFR: Halogen Free Flame Retardant

Jacket compound specification:

- Halogen free flame retardant polyether-based polyurethane
- Excellent hydrolysis resistance
- High microbial resistance
- Glossy finish
- UV resistant
- High flexibility

Applications

- Robotics
- Motion control
- Railways
- CNC machines
- Battlefield communication
- Industrial process control

Electrical characteristics *(at 20°C - 68°F)*

DC Resistance	290 Ohm/Km
Impedance *(100 MHz)*	100 +/- 5 Ohm

Frequency	Insertion loss (dB/100m)	N.E.X.T. (Near-End Crosstalk Loss)
1 MHz	3.1 dB	75.3 dB min.
4 MHz	5.8 dB	66.3 dB min.
8 MHz	8.0 dB	61.8 dB min.
10 MHz	9.0 dB	60.3 dB min.
16 MHz	11.4 dB	57.2 dB min.
20 MHz	12.8 dB	55.8 dB min.
25 MHz	14.1 dB	54.3 dB min.
31.25 MHz	16.1 dB	52.8 dB min.
62.5 MHz	23.2 dB	48.4 dB min.
100 MHz	29.9 dB	45.3 dB min.
200 MHz	43.7 dB	40.8 dB min.
250 MHz	49.7 dB	39.3 dB min.

(According to IEC 61156-6)

Capacitance (1 kHz)	50nF/km nom.
Capacitance unbalance	1600 pF/km max.
Insulation resistance	5 GOhm/km
Voltage rating (peak)	230 V
Dielectric strength	VAC/1 min - 700 V/Min
Propagation delay	4.6 ns/m
Skew	45 ns/100m
Resistance unbalance	2%
Return loss (250 MHz)	15.6dB
Velocity of propagation	72% nom.

Reel of cable *(without RJ45 plug on ends)*

Length (m / ft)	Part number
100 m / ~328 ft	191-031179-00
300 m / ~984 ft	191-031179-01

Physical characteristics

Datas for the cable alone only (without RJ45 plug)

Conductors	26 AWG (0,14 mm²) tinned copper
Insulation	Polyethylene Nom. Dia. 0,039" (1mm)
Assembly	Pairs cabled with Kevlar strength members and separation tape wrapped
Shields	Inner: aluminium mylar 100% coverage Outer: tinned copper braid 80% coverage
Jacket	Black, special PUR compound
Weight	36.9 lbs / mft (55 kg/km)
Outside diam.	0.272" (6.9 mm) nom.
Min bend radius *(During installation)*	72mm (10x O. D.)
MIn bend radius *(During operation)*	36mm (5 x O.D.)
Min flexes to failure	Passes IEC 61156-6 requirements
Temperature	-40°C *(-40°F)* / + 85°C *(185°F)*

Cordsets with a RJ45 plug overmolded on each end

Length (m/ft)	Part number
0,75 m / 2,46 ft	RJF SFTP 6 0075
1,00 m / 3,28 ft	RJF SFTP 6 0100
1,50 m / 4,92 ft	RJF SFTP 6 0150
2,00 m / 6,56 ft	RJF SFTP 6 0200
2,50 m / 8,20 ft	RJF SFTP 6 0250
3,00 m / 9,84 ft	RJF SFTP 6 0300
3,50 m / 11,48 ft	RJF SFTP 6 0350
4,00 m / 13,12 ft	RJF SFTP 6 0400
4,50 m / 14,76 ft	RJF SFTP 6 0450
5,00 m / 16,40 ft	RJF SFTP 6 0500
6,00 m / 19,68 ft	RJF SFTP 6 0600
7,00 m / 22,96ft	RJF SFTP 6 0700
8,00 m / 26,24 ft	RJF SFTP 6 0800
9,00 m / 29,52 ft	RJF SFTP 6 0900
10,00 m / 32,80 ft	RJF SFTP 6 1000
15,00 m / 49,20 ft	RJF SFTP 6 1500
20,00 m / 65,60 ft	RJF SFTP 6 2000
25,00 m / 82,00 ft	RJF SFTP 6 2500
30,00 m / 98,40 ft	RJF SFTP 6 3000
35,00 m / 114,80 ft	RJF SFTP 6 3500
40,00 m / 131,20 ft	RJF SFTP 6 4000
45,00 m / 147,60 ft	RJF SFTP 6 4500
50,00 m / 164,00 ft	RJF SFTP 6 5000
60,00 m / 196,80 ft	RJF SFTP 6 6000

Amphenol

RJF TV6X

CAT6 RJ45 explosion proof solution for **Zone 2**

Amphenol Atex Field Bus range is designed for device group II category 3G. According to EN60079-15 it may be operated within zone 2 and class I, Division 2, as low power non sparking connectors.
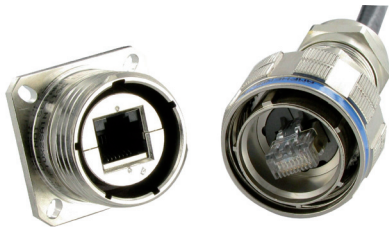
RJFTV6X allows you to use an Ethernet Class E / Cat.6 connection for 10 BaseT, 100 BaseTx or 1000 BaseT networks up to 250 MHz in ATEX zone 2 environments. With the patented RJStop system you can use a standard RJ45 cordset in a metallic plug which will protect it from shocks, dust and fluids. RJFTV6X features the same main characteristics than RJFTV6 series (see page 18).

Main characteristics

■	Ex marking	II3G ExnAIIT6 X
■	Operating temperature range	-40°C / +60°C
■	Voltage	60 Veff max
■	Power	20 W max
■	Outside cable diameter	6mm to 12mm
■	Sealing	IP68
■	Data transmission	10 BaseT, 100 BaseTX & 1000 BaseT up to 250 MHznetworks. Cat. 6 per EIA/TIA 568 & Class E per ISO 11801

Part number code: receptacles.

Series	RJF TV6X	7S	A	2	N
Shell Type **2S:** Square flange receptacle **7S:** Jam nut receptacle					
Coding "A" (Standard) or "B", "C", "D"					
Back termination **1:** Female RJ45					
Shell Material and Finish: **N:** Nickel **G:** Olive drab cadmium					

*Example: jam nut receptacle, A coding, with female RJ45 Back termination, olive drab cadmium plating ⇨***RJF TV6X 7SA 1 G**

Part number code: plug.

Series	RJF TVX	6M	N
Shell Type **6M:** Plug			
Shell Material and Finish: **N:** Nickel **G:** Olive drab cadmium			

*Example: plug, olive drab cadmium plating ⇨***RJF TVX 6MG**
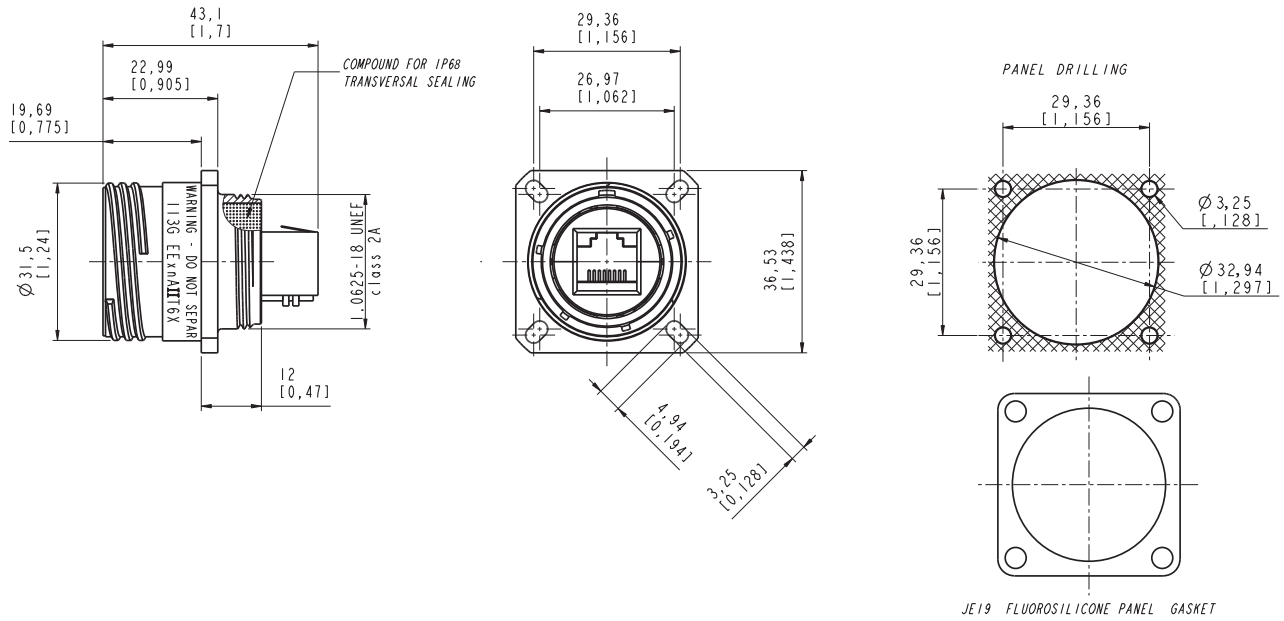
Cat5e version: page 132 of the Field series catalogue.
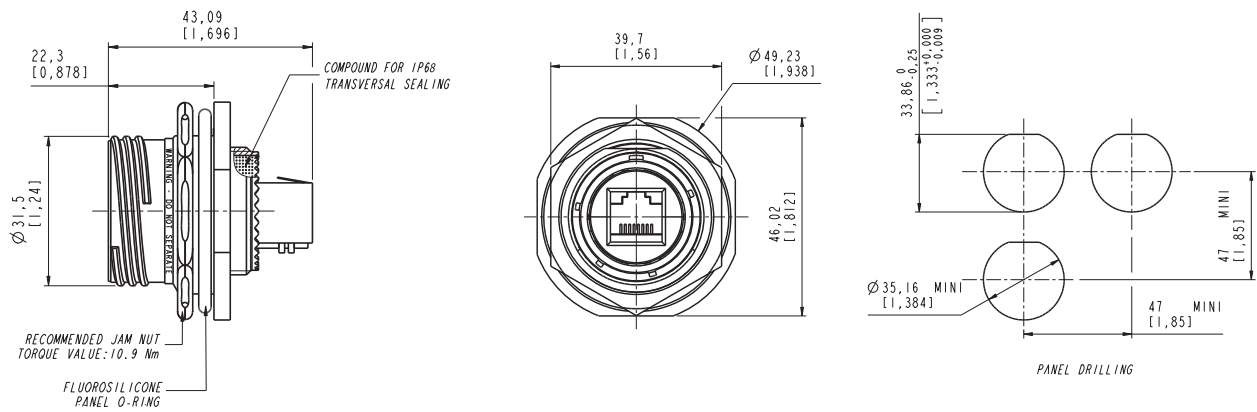▶   *Direct access by clicking here*   ▶   Or visit *www.amphenol-socapex.com*

■ Square flange receptacle - 4 mounting holes: shell type 2

PANEL DRILLING

JE19 FLUOROSILICONE PANEL GASKET

■ Jam nut receptacle

RECOMMENDED JAM NUT
TORQUE VALUE:10.9 Nm

FLUOROSILICONE
PANEL O-RING

PANEL DRILLING

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

Main Key

Back termination

Type **1**
Female RJ45

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29
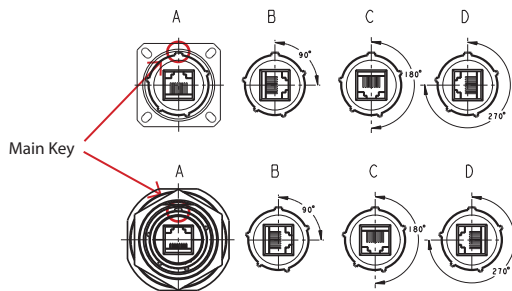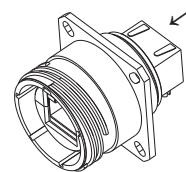
Plug

■ Shell type 6 with metal gland
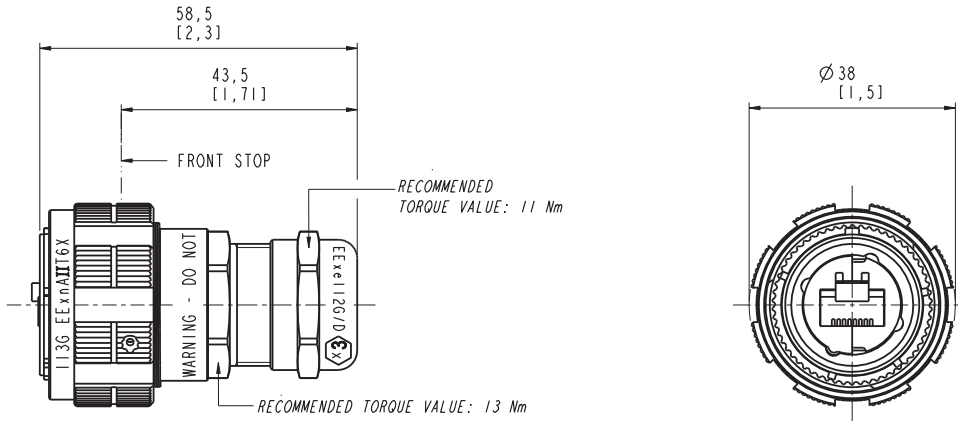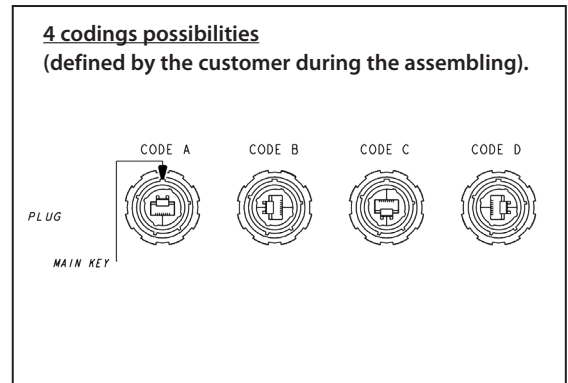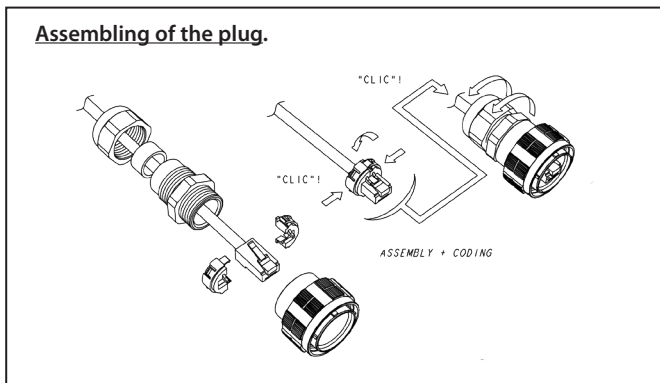

```
58,5
[2,3]

43,5
[1,71]

FRONT STOP

RECOMMENDED
TORQUE VALUE: 11 Nm

WARNING - DO NOT

II3G EExnAIIT6X

EExeII2G/D

RECOMMENDED TORQUE VALUE: 13 Nm

Ø 38
[1,5]
```

Assembly instructions

Insert codings

Assembling of the plug.


```
"CLIC"!
"CLIC"!
ASSEMBLY + CODING
```

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


```
CODE A    CODE B    CODE C    CODE D

PLUG

MAIN KEY
```

IMPORTANT NOTE: to remove the insert, use the

■ **Insert removal tool for plug**

P/N: **RJF ODE**

Accessories

■ **Metallic Caps**

	RJFTVC	2	G
Connector type **6**: plug **2**: square flange receptacle **7**: jam nut receptacle			
Shell material & finish **N**: aluminium shell - nickel plating - *ROHS compliant* **G**: aluminium shell - olive drab cadmium plating			

Plug Cap   Receptacle Cap

Plug Cap end   Square flange receptacle cap end   Jam Nut receptacle cap end

4.1⁻⁰·¹

NOTES
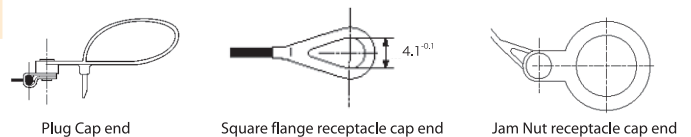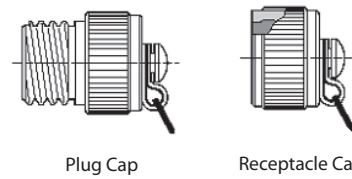
Amphenol

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DOC-0000xx-ANG

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