RJF TV6A
Cat6A 10 Gb/s Ethernet connection system for harsh environment

10Gb/s!

Description

RJFTV Cat6A allows you to use an Ethernet Class Ea / Cat. 6A connection for 10 BaseT, 100 BaseTx, 1000 BaseT or 10G BaseT up to 500 MHz networks in harsh environments.
With the patented RJStop system you can use a standard RJ45 cordset in a metallic plug which will protect it from shocks, dust and fluids. No hazardous on-field cabling and grounding!

Main Features

- **Tri Start Thread coupling mechanism (MIL-DTL-38999 series III type) with anti-decoupling device**
- **Shell size 19**
- **No cabling operation in field and no tools required**
- **Mechanical coding / Polarization (4 positions)**
- **Improved EMI protection**
- **Mating cycles: 500 min**
- **Compatible with cable diameter from 6 mm [0.236 in] to 12 mm [0.512 in]**
- **Panel thickness: 1,6 mm min and 3,2 mm max for standard jam nut receptacle**
- **Compatible with standard RJFTV plug**

Data Transmission:
- 10 BaseT, 100 BaseTX, 1000 BaseT and 10G Base T up to 500 MHz networks
- Cat.6A connector according to TIA568C.2 and ISO/IEC11801 standard

Environmental protection:
- Sealed against fluids and dusts: IP68 mated
- Compounded versions: IP68 unmated
- Salt spray: Aluminium shell: Nickel plating ✓ : 48h.
                                    Black zinc nickel plating ✓ : 500h
                                    Olive drab cadmium plating: 500h
                                    Marine bronze shell ✓ : 500h
                    Stainless steel shell: Passivated ✓ : 500h

- Fire retardant/Low smoke: EN45545 + UL94V0 (non metallized inserts)
- Vibrations: 10 - 500 Hz, 10 g, 3 axes: no discontinuity > 1 micro s.
- Shocks: IK06 ► weight of 250 g drop from 40 cm [15.75 in]
                  ► onto connectors (mated pair)
- Temperature range: -40°C / +85°C

Markets & Applications

✓ : RoHS compliant

C4ISR, battlefield   Ground Vehicle   Navy   Railway

Applications :
  › Data acquisition and transmission in harsh environment, radars, shelters, battlefield communication

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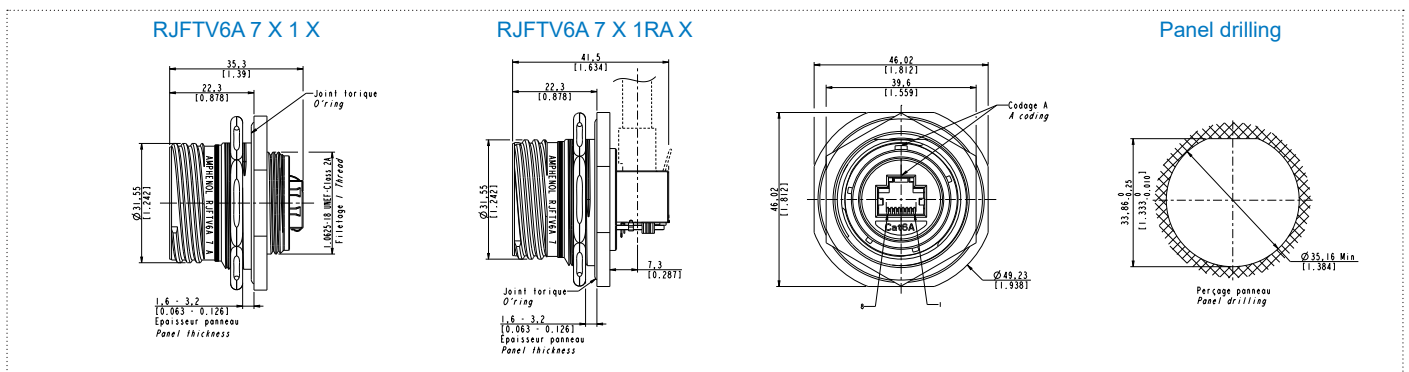
Square flange receptacle - 4 mounting holes: shell type 2
Compatible with standard plugs, accessories and cables

RJFTV6A 2 X 1 X   RJFTV6A 2 X 1RA X   Panel drilling
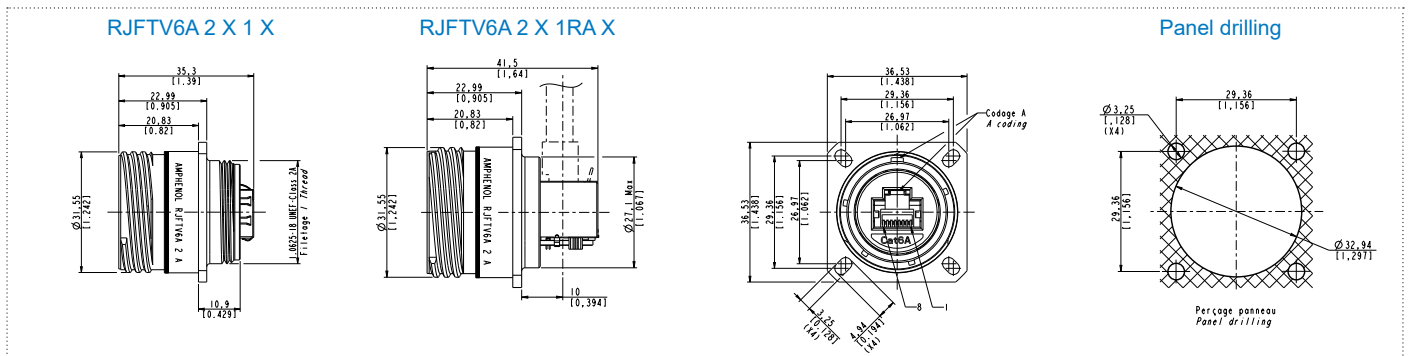
Jam nut receptacle - Hexagonal nut mounting: shell type 7
Compatible with standard plugs, accessories and cables

RJFTV6A 7 X 1 X   RJFTV6A 7 X 1RA X   Panel drilling
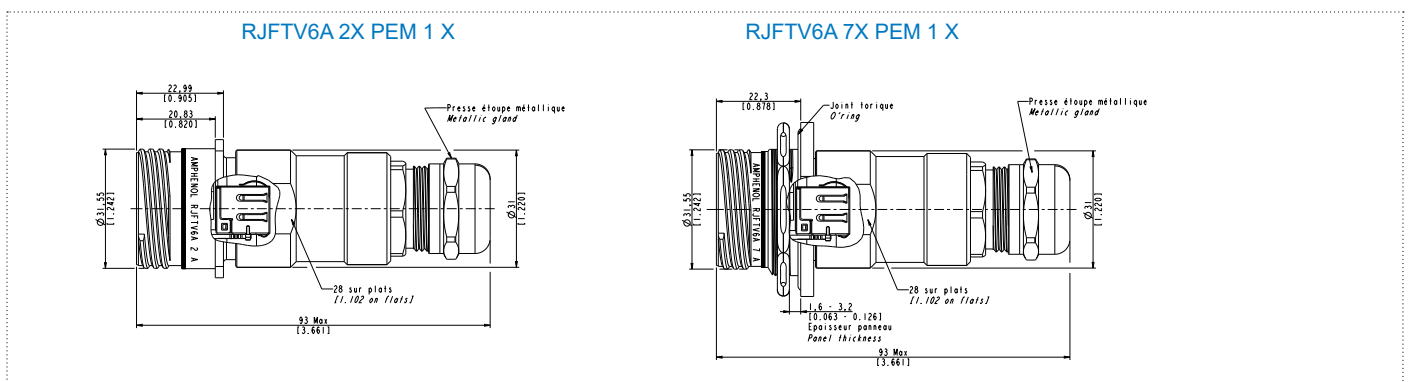
Receptacles with IP68 backshell: Shell type 2PE and 7PE with plastic gland
Compatible with standard plugs, accessories and cables

RJFTV6A 2X PE 1 X   RJFTV6A 7X PE 1 X
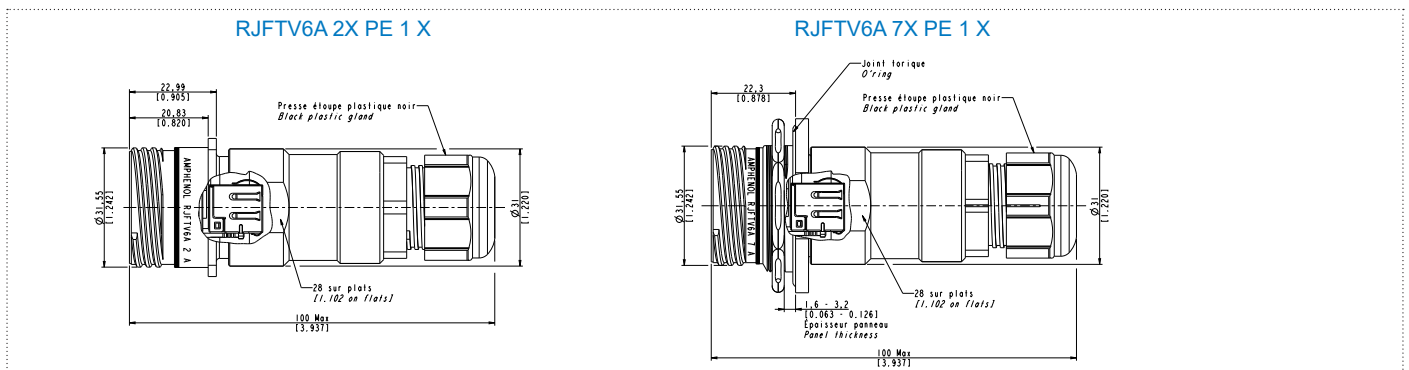
Receptacles with IP68 backshell: Shell type 2PEM and 7PEM with metal gland
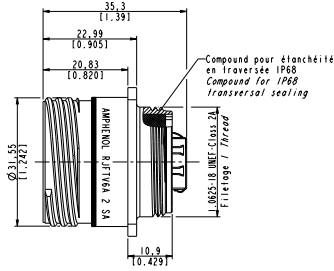Compatible with standard plugs, accessories and cables

RJFTV6A 2X PEM 1 X   RJFTV6A 7X PEM 1 X

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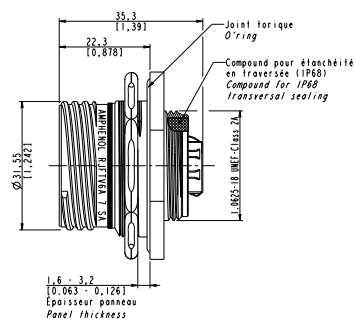Designed by Amphenol Socapex

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Sealed receptacles : Shell type 2S and 7S with compound for IP68 transversal sealing
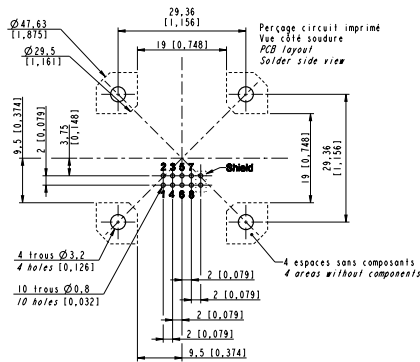Compatible with standard plugs, accessories and cables
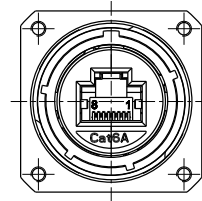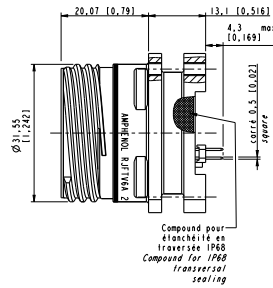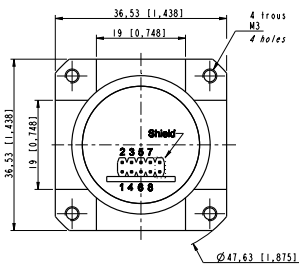
RJFTV6A 2S X 1 X

RJFTV6A 7S X 1 X

Stand-off receptacles : Shell type 2S with compound for IP68 transversal sealing: Deviation F459
Compatible with standard plugs, accessories and cables

RJFTV6A 2S X 5 X F459

Panel drilling

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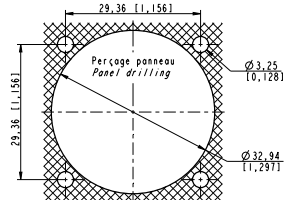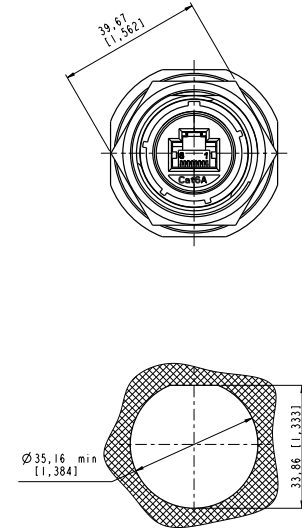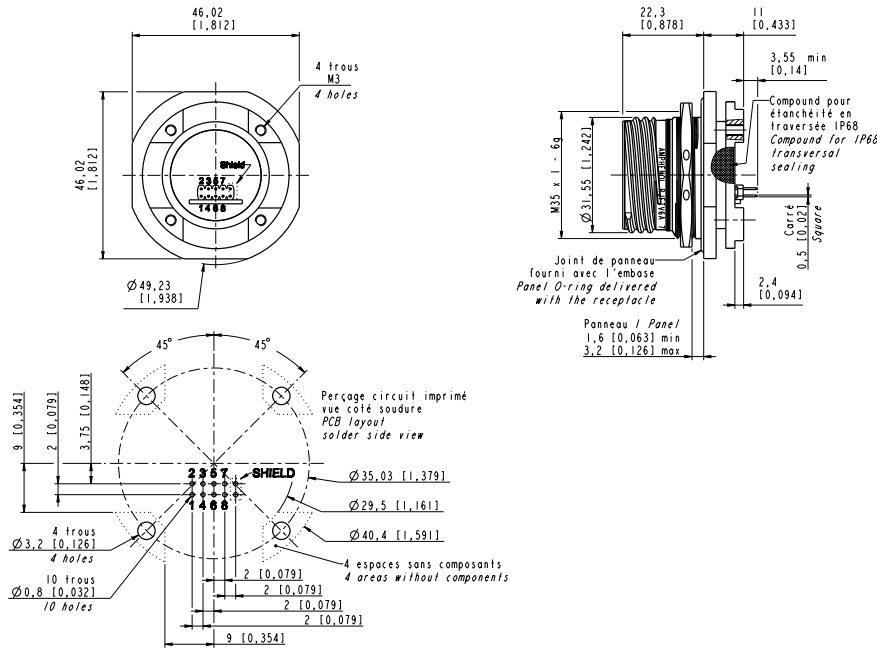x: see the 'How to order' below to complete your part number

Stand-off receptacles: Shell type 7S with compound for IP68 transversal sealing: deviation F459

Compatible with standard plugs, accessories and cables

RJFTV6A 7S X 5 X F459

Panel drilling

46,02 [1,812]

4 trous M3
4 holes

46,02 [1,812]

Ø 49,23 [1,938]

22,3 [0,878]

11 [0,433]

3,55 min [0,14]

Compound pour étanchéité en traversée IP68
Compound for IP68 transversal sealing

M35 x 1 - 6g

Ø 31,55 [1,242]

Joint de panneau fourni avec l'embase
Panel O-ring delivered with the receptacle

Carré 0,5 [0,02]
Square

2,4 [0,094]

Panneau / Panel
1,6 [0,063] min
3,2 [0,126] max

39,67 [1,562]

Cat6A

45°   45°

9 [0,354]
2 [0,079]
3,75 [0,148]

Perçage circuit imprimé vue coté soudure
PCB layout solder side view

2 3 5 7   SHIELD
1 4 6 8

Ø 35,03 [1,379]
Ø 29,5 [1,161]
Ø 40,4 [1,591]

4 trous
Ø 3,2 [0,126]
4 holes

10 trous
Ø 0,8 [0,032]
10 holes

4 espaces sans composants
4 areas without components

2 [0,079]
2 [0,079]
2 [0,079]
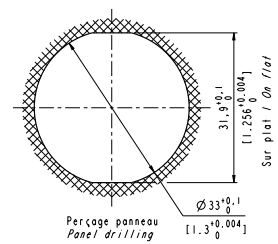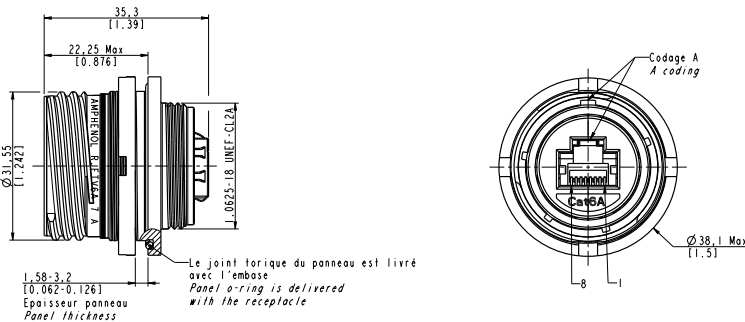2 [0,079]

9 [0,354]

Ø 35,16 min [1,384]

31,86 [1,333]

Reduced flange Jam nut receptacle – Castle nut mounting: Deviation F312

Compatible with standard plugs, accessories and cables

RJFTV6A 7 X 1 X F312

Panel drilling

35,3 [1,39]

22,25 Max [0,876]

Ø 31,55 [1,242]

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1.0625-18 UNEF-CL2A

1,58-3,2 [0,062-0,126]
Epaisseur panneau
Panel thickness

Le joint torique du panneau est livré avec l'embase
Panel o-ring is delivered with the receptacle

Codage A
A coding

Cat6A

Ø 38,1 Max [1,5]

8

31,9 +0,1 0 [1,256 +0,004 0]
Sur plat / On flat

Perçage panneau
Panel drilling

Ø 33 +0,1 0 [1,3 +0,004 0]

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Reduced flange Jam nut receptacle – Castle nut mounting : Deviation F312 with compound for IP68 transversal sealing

Compatible with standard plugs, accessories and cables

RJFTV6A 7S X 1 X F312

Panel drilling
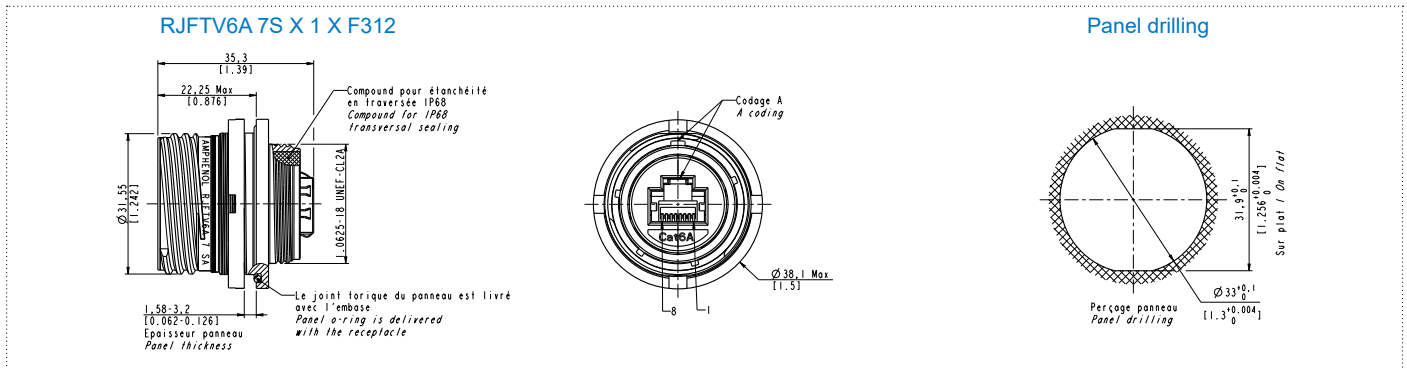
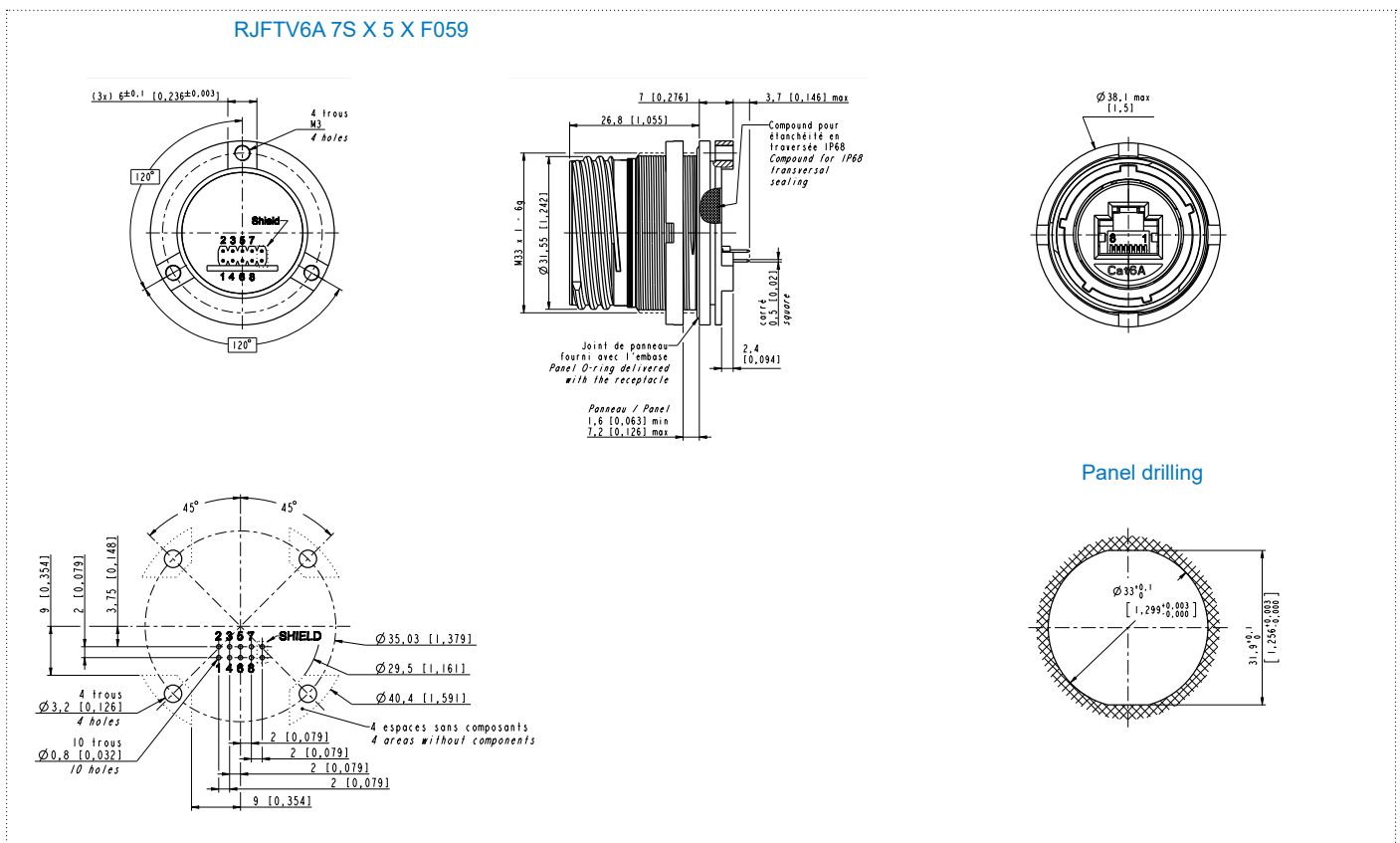## Reduced flange Stand-off Jam nut receptacle – Castle nut mounting : Deviation F059 with compound for IP68 transversal sealing

Compatible with standard plugs, accessories and cables

RJFTV6A 7S X 5 X F059

Panel drilling

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Mating parts and accessories

	Plugs	Protective caps	Tools/accessories	Cables
Mating parts	Standard RJFTV plugs	RJF TV caps Self-closing caps Rubber caps	RJF ODE JE18	Cat 6A cable
Refer to	RJ Field catalog (DOC-000075-ANG)	RJ Field catalog (DOC-000075-ANG) Protective caps data-sheet (DOC-000034-ANG)	RJ Field catalog (DOC-000075-ANG)	RJ Field catalog (DOC-000075-ANG)

How to order - RJFTV6A

	1.	2.	3.	4.	5.	6.
Series	Shell type	Coding	Material and platings	Back termination	Material and platings	Deviation
RJFTV6A	**2**	**A**	**PE**	**1**	**ZN**	**F459**

1. Shell type

2	Square flange receptacle
2S	Sealed square flange receptacle
7	Jam nut receptacle
7S	Sealed jam nut receptacle

2. Coding

A
B
C
D

3. Backshells

PE	IP68 backshell, plastic gland
PEM	IP68 backshell, metal gland
Blank	Receptacle without backshell

✓ : RoHS compliant

4. Back termination

1	Female RJ45
1RA	Right angle female RJ45
5	PC Tails

5. Material and platings

	Shell material	Shell finish
G		Olive Drab cadmium
N	Aluminum	Nickel ✓
ZN		Black zinc nickel ✓
S	Stainless steel	Passivated ✓
BZ	Bronze ✓	-

6. Deviation

F459	Stand-off receptacle (for back termination 5 only)
F312	Reduced flange Jam nut receptacle (for back termination 1 and 1RA only)
F059	Reduced flange Stand-off Jam nut receptacle (for back termination 5 only)

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