![Chipsmall logo]

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

Contact us

RJF TV
Ethernet Connection System for Harsh Environment

RJFTV allows you to use an Ethernet Class D / Cat. 5e connection for 10 BaseT, 100 BaseTx or 1000 BaseT 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 networks
Cat 5e per TIA/EIA 568B and ClassD per ISO/IEC 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**
- **Robust metallic shells**
- RJ45 cordset retention in the plug: 100 N in the axis
- Mating cycles: 500 min
- Compatible with cable diameter from 5,5 mm [0.216 in] to 13 mm [0.512 in]

Environmental Protection
- Sealing: IP68
- Salt Spray: 48 h with Aluminium shell - Nickel plating
                    > 500 h with Aluminium shell - Olive Dran Cadmium plating
                    1000h 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
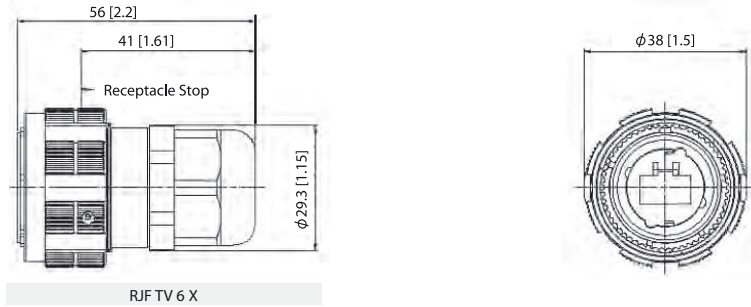- Temperature Range: - 40°C / +85°C

Part Number Code

		RJF TV	2	2	G	03 100 BTX
Series RJ Field TV						

Shell Type
6:	Plug with Plastic gland
6M:	Plug with Metal gland
2:	Square Flange Receptacle
2PE:	Square Flange Receptacle, IP68 backshell, Plastic gland
2PEM:	Square Flange Receptacle, IP68 backshell, Metal gland
7:	Jam Nut Receptacle
7PE:	Jam Nut Receptacle, IP68 backshell, Plastic gland
7PEM:	Jam Nut Receptacle, IP68 backshell, Metal gland
2SA, 7SA:	Transversally sealed receptacle (unmated) see page 22

Back Terminations *(Receptacles only)*
1:	Female RJ45
1RA:	Right Angle Female RJ45
2:	RJ45 Cordset

Shells material & Finish
N:	Aluminium shell - nickel plating (receptacle inserts are metallized) - ROHS compliant
G:	Aluminium shell - olive drab cadmium plating (receptacle inserts are metallized)
BZ:	Marine bronze shell (receptacle inserts are metallized) - ROHS compliant

Cordset Length *(type 2 back termination only)*
03 100 BTX:	0.3m [11.81 inches]
05 100 BTX:	0.5m 19.68 inches]
10 100 BTX:	1m [39.37 inches]
15 100 BTX:	1.5m [59.05 inches]
00:	8 tinned holes at the rear of the PCB to solder the cable

Remark: Cabling configuration: 100 BTX = 568B (Ethernet specification)

Examples:
- Olive Drab Cadmium plug with plastic gland: RJF TV 6G
- Olive Drab Cadmium Jam Nut Receptacle, female RJ45 back termination: RJF TV 71G
- Nickel Jam Nut Receptacle, 1,5 m 100 BTX cordset back termination: RJF TV 72N 15 100BTX
- Olive Drab Cadmium in line Square Flange Recept., 0,3 m 100 BTX cordset back termination: RJF TV 2PE 2 G 03 100BTX
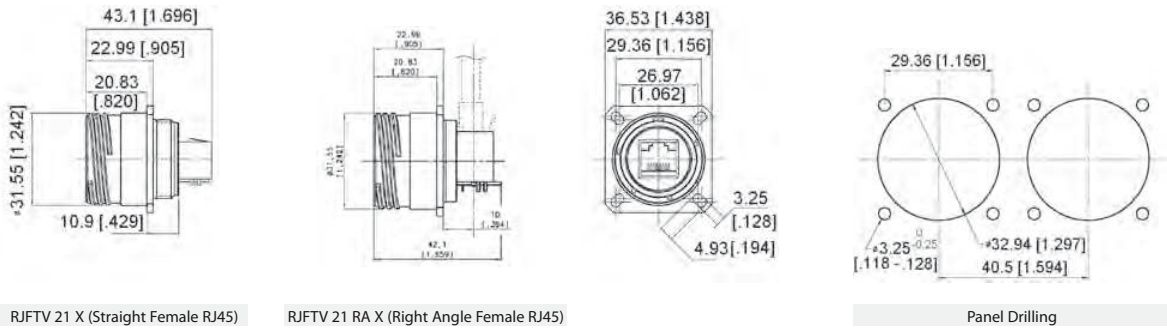- Nickel Jam Nut Receptacle Solder termination 8 tinned holes: RJF TV 22 N 00
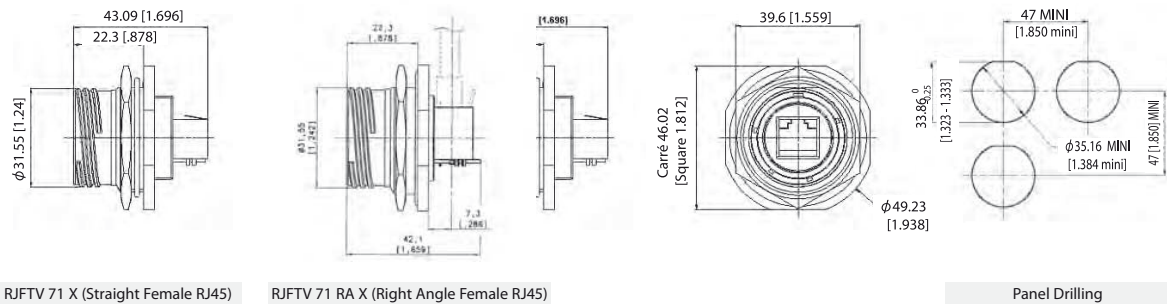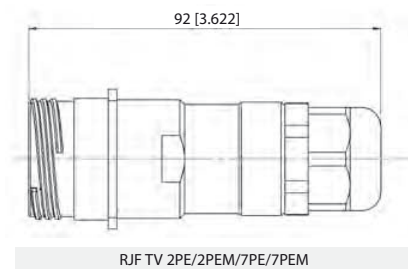
Plug:

■ Shell type 6 with Plastic or Metal Gland

56 [2.2]
41 [1.61]

Receptacle Stop

φ29.3 [1.15]

φ38 [1.5]

RJF TV 6 X

Receptacles:

■ Square flange receptacle • 4 mounting holes: Shell type 2

43.1 [1.696]
22.99 [.905]
20.83 [.820]
31.55 [1.242]
10.9 [.429]

22.6W [.905]
20.83 [.820]
31.55 [1.242]
42.1 [1.659]
10 [.394]

36.53 [1.438]
29.36 [1.156]
26.97 [1.062]
3.25 [.128]
4.93[.194]

29.36 [1.156]
3.25 -0.25 [.118 - .128]
32.94 [1.297]
40.5 [1.594]

RJFTV 21 X (Straight Female RJ45)   RJFTV 21 RA X (Right Angle Female RJ45)   Panel Drilling

■ Jam nut receptacle • Hexagonal Nut mounting: Shell type 7

43.09 [1.696]
22.3 [.878]
φ31.55 [1.24]

22.3 [.875]
φ31.55 [1.242]
7.3 [.286]
42.1 [1.659]

[1.696]

39.6 [1.559]
Carré 46.02 [Square 1.812]
33.86 0 -0.25 [1.323 - 1.333]
φ49.23 [1.938]

47 MINI [1.850 mini]
φ35.16 MINI [1.384 mini]
47 [1.850] MINI

RJFTV 71 X (Straight Female RJ45)   RJFTV 71 RA X (Right Angle Female RJ45)   Panel Drilling

■ Receptacles with IP68 backshell: • Shell type 2PE and 7PE with Plastic or Metal Gland

92 [3.622]

RJF TV 2PE/2PEM/7PE/7PEM

Back Terminations

Type 1: Female RJ45   Type 1RA: Right Angle Female RJ45   Type 2: RJ45 Cordset   Type 2 - 00: Solder - 8 tinned holes
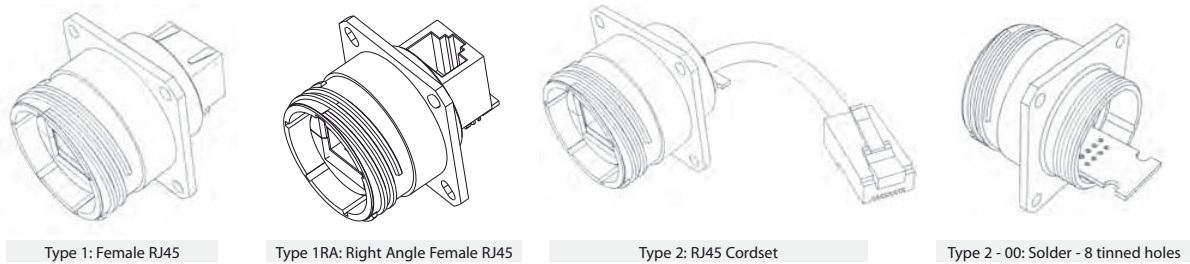
Notes   Type 2 without RJ45 plug at the end of the cable is also available: consult factory

RJF TV

Amphenol

Assembly instructions

Insert Codings

CONNECTION SIDE VIEW

"CLIC"!

"CLIC"!

"CLIC"!

ASSEMBLY + CODING

"CLIC"!

ASSEMBLY + CODING

INSERTS CODING
CONNECTION SIDE VIEW

| CODE A | CODE B | CODE C | CODE D |

PLUG

MAIN KEY
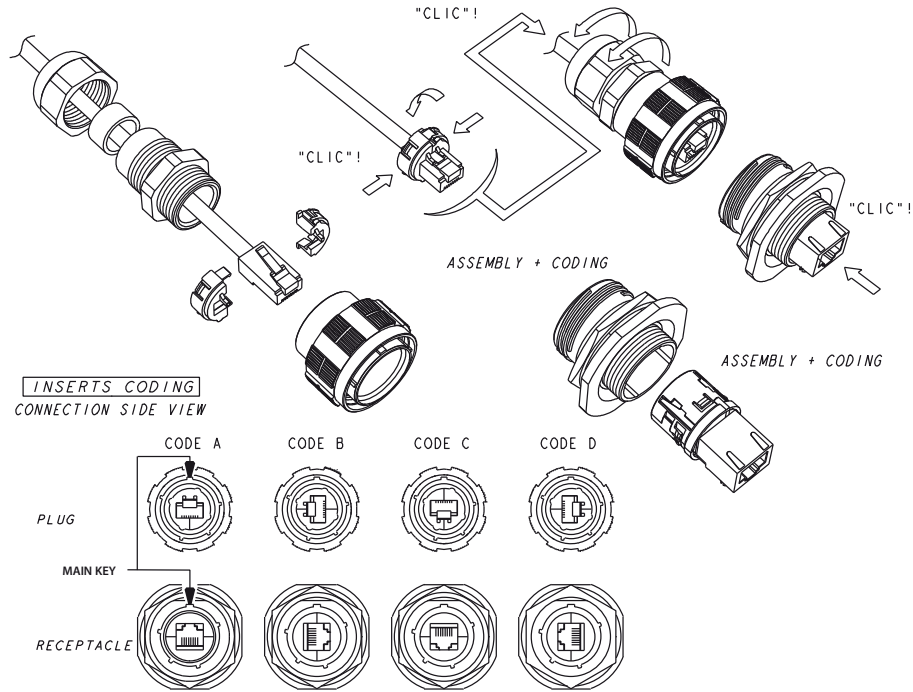
RECEPTACLE

Accessories

■ **Metallic Caps**

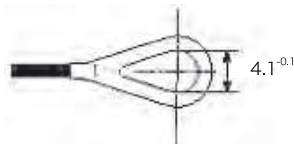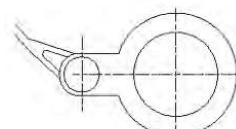|	RJFTVC	2	G
Connector Type **6:** Plug **2:** Square Flange Receptacle **7:** Jam Nut Receptacle			
Shell Material & finish **N:** Aluminium shell - nickel plating - ROHS compliant **G:** Aluminium shell - olive drab cadmium plating **BZ:** Marine bronze shell - ROHS compliant			
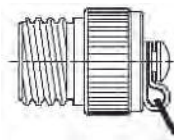
Plug Cap   Receptacle Cap

$4.1^{-0.1}$
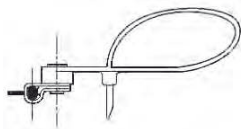
Plug Cap end   Square flange receptacle cap end   Jam Nut receptacle cap end

■ **Panel Gasket for square flange receptacle (Thickness: 0,8 mm [.031]): JE19**

■ **Insert removal tool: RJF ODE**