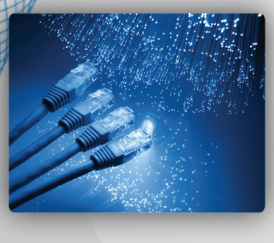
Rugged Digital Networks Solutions

Reinforced Infocom Connectors for Harsh Environment

RJ Field - USB Field

Amphenol



Connecting to people + technology

www.rjfield.com

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RUGGED ETHERNET SOLUTION SELECTION GUIDE

FIELD INSTALLABLE

Connectors	Series	Indust. Ethernet Spec.	Coupling Mechanism	Shape	Material	Specification	Prime Market	Page
	RJF RB		Reverse Bayonet	Circular	Plastic	N/A	Industrial & Telecom	10
	RJF544	IEC 60603-7 variant 12	Push Pull	Circular	Plastic	N/A	Industrial & Telecom	13
	RJF EZ	IEC 60603-7 variant 13	Lever	Rectangular	Plastic	N/A	Industrial & Telecom	15
	RJF	IEC 60603-7 variant 11	Bayonet	Circular	Metal	MIL-DTL-26482	Industrial Mil/Aero	17
	RJF in line recepatcles & PC tails receptacles	IEC 60603-7 variant 11	Bayonet	Circular	Metal	MIL-DTL-26482	Industrial Mil/Aero	20
	RJF receptacles & plugs with 360° EMI backshells		Bayonet	Circular	Metal	MIL-DTL-26482	Industrial Mil/Aero	21
	RJF transversally sealed receptacles		Bayonet	Circular	Metal	MIL-DTL-26482	Mil/Aero & Industrial	22
	RJF hermetic receptacles		Bayonet	Circular	Metal	MIL-DTL-26482	Mil/Aero & Industrial	23
	RJF for big insulation wire up to 1.6mm [0.062 inch]		Bayonet	Circular	Metal	MIL-DTL-26482	Industrial Mil/Aero	24
	RJFTV		Thread	Circular	Metal	MIL-DTL-38999 Series III	Mil/Aero & Rail Mass Transit	26
	RJF TV receptacles & plugs with 360° EMI backshells		Thread	Circular	Metal	MIL-DTL-38999 Series III	Mil/Aero & Rail Mass Transit	30
	RJF TV through bulkhead receptacles		Thread	Circular	Metal	MIL-DTL-38999 Series III	Mil/Aero & Rail Mass Transit	32
	RJF TV stand off receptacles		Thread	Circular	Metal	MIL-DTL-38999 Series III	Mil/Aero & Rail Mass Transit	33
	RJFTV transversally sealed receptacles		Bayonet or Thread	Circular	Metal	MIL-DTL-38999 Series III	Mil/Aero & Industrial	36
	RJFTV hermetic receptacles		Bayonet or Thread	Circular	Metal	MIL-DTL-38999 Series III	Mil/Aero & Industrial	37
	RJF TV for big insulation wireup to 1.6 mm		Bayonet or Thread	Circular	Metal	MIL-DTL-38999 Series III	Mil/Aero	38
	RJ45/M12 adaptors			Circular	Metal		Industrial & Rail Mass Transit	39
	Special RJ45 adaptor for Military & Commercial Aeronautics			Circular	Metal		Industrial & Rail Mass Transit	40

FIELD INSTALLABLE CABLE ASSEMBLIES

Cables	Series	Indust. Ethernet Spec.	Coupling Mechanism	Shape	Material	Specification	Prime Market	Page
	High reliability **Cat 5E** cable and cordsets						Mil/Aero & Industrial	41
NEW 	High reliability **Cat 6** cable and cordsets						Mil/Aero & Industrial	42
NEW 	High reliability **Cat 6A** cable and cordsets						Mil/Aero & Industrial	43

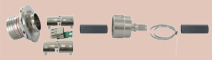
Connectors	Series	Indust. Ethernet Spec.	Coupling Mechanism	Shape	Material	Specification	Prime Market	Page
NEW 	RJ45/M12 Railway cable solution		Bayonet	Circular	Metal	MIL-DTL-26482	Industrial & Rail Mass Transit	46
NEW 	Jumper		Thread	Circular	Metal	MIL-DTL-38999 Series III	Rail Mass Transit	47

RUGGED ELECTRONICS

Connectors	Series	Sealing	Type	# of ports	Prime Market	Page
NEW 	RES-GMC Media converter with Expanded Beam Tech.	IP67/68	Unmanaged	2 Gb ports	Mil/Aero	50
NEW 	RES-GMC Media converter with Butt Joint Fiber connect.	IP67/68	Unmanaged	2 or 4 Gb ports	Mil/Aero	52
NEW 	RJS-GMC with Expanded Beam Technology	IP67/68	Unmanaged	2 or 4 or 8 Gb ports	Mil/Aero	54
NEW 	RES-GMC-1M-FORC Media converter with Remote Control	IP67/68	Unmanaged	1 Gb port + 1 Fiber port	Mil/Aero	56
NEW 	RES-SCE-AC-8US miniature portable switch	IP67/68	Unmanaged	8 Fast ports	Mil/Aero	58
NEW 	RES-SCE-AC-8MG miniature portable switch	IP67/68	Managed	8 Gb ports	Mil/Aero	60
NEW 	RESMLAC-8US-CAPS military Ethernet switch MIL-DTL-38999 connectors	IP67/68	Unmanaged	8 Fast ports	Mil/Aero	62
NEW 	RJSMLAC-8UG-CAPS military Ethernet switch MIL-DTL-38999 connectors	IP67/68	Unmanaged	8 Gb ports	Mil/Aero	64
NEW 	RJSMLAC-8MG-CAPS military Ethernet switch RJFTV connectors	IP67/68	Managed	8 Gb ports	Mil/Aero	66
NEW 	RESMLAC-8MG-CAPS military Ethernet switch MIL-DTL-38999 connectors	IP67/68	Managed	8 Gb ports	Mil/Aero	68
NEW 	RESMLAC-8MG-CAPS-F35 military Ethernet switch MIL-DTL-38999 connectors	IP67/68	Managed	8 Gb ports	Mil/Aero	70
	RESMLAC-28MG military Ethernet switch	IP67/68	Managed	24 Gb + 4 combo 10G ports	Mil/Aero	72
	RJSML-8US1 & RJSML-8UG1 military Ethernet switch	IP67/68	Unmanaged	8 Gb ports	Mil/Aero	73
	RJSML-MG7F3G military Ethernet switch	IP67/68	Managed	7 fast + 3 Gb ports	Mil/Aero	77

RUGGED USB SOLUTION SELECTION GUIDE

FIELD INSTALLABLE

Connectors	Series	Coupling Mechanism	Shape	Material	Specification	Prime Market	Page
	USB3FTV (USB-A)	Thread	Circular	Metal	MIL-DTL-38999 Series III	Mil/Aero, Rail Mass Transit & Industrial	81
	USB3F TV transversally sealed receptacles	Thread	Circular	Metal	MIL-DTL-38999 Series III	Mil/Aero, Rail Mass Transit & Industrial	86
	USB3F TV hermetic receptacles	Thread	Circular	Metal	MIL-DTL-38999 Series III	Mil/Aero & Industrial	89
	High reliability USB 3.0 Cordsets					Mil/Aero, Rail Mass Transit & Industrial	92
	USBFTV (USB-A)	Thread	Circular	Metal	MIL-DTL-38999 Series III	Mil/Aero, Rail Mass Transit & Industrial	93
	USBF TV transversally sealed receptacles	Thread	Circular	Metal	MIL-DTL-38999 Series III	Mil/Aero, Rail Mass Transit & Industrial	96
	USBF TV hermetic receptacles	Thread	Circular	Metal	MIL-DTL-38999 Series III	Mil/Aero & Industrial	98
	USBF TV special receptacles with 360° EMI backshells	Thread	Circular	Metal	MIL-DTL-38999 Series III	Mil/Aero, Rail Mass Transit & Industrial	99
	Special USB through bulkhead receptacles	Thread	Circular	Metal	MIL-DTL-38999 Series III	MII/Aero & Industrial	100
	USBF TV stand off receptacles	Thread	Circular	Metal	MIL-DTL-38999 Series III	Mil/Aero, Rail Mass transit & Industrial	101
	High reliability USB 2.0 Cordsets					Mil/Aero, Rail Mass Transit & Industrial	105
	USBF SC Quick release series	Spring Release	Circular	Metal	N/A	Mil/Aero & Industrial	106
	USBBF TV (USB-B)	Thread	Circula	Metal	MIL-DTL-38999 Series III	Mil/Aero, Rail Mass Transit & Industrial	108
	USBBF TV stand off receptacles	Thread	Circular	Metal	MIL-DTL-38999 Series III	Mil/Aero, Rail Mass Transit & Industrial	111
	USBBF TV transversally sealed receptacles	Thread	Circular	Metal	MIL-DTL-38999 Series III	Mil/Aero, Rail Mass Transit & Industrial	113
	Special USB adaptor for Military & Commercial Aeronautics	Circular	Metal			Aeronautic	116

	Connectors	Series	Coupling Mechanism	Shape	Material	Specification	Prime Market	Page
CABLE ASSEMBLIES		USB-A plastic with Self Closing Cap		Circular	Plastic	N/A	Industrial & Telecom	118
		USB B Field Plastic shell Overmolded cordset plug	Thread	Circular	Plastic	N/A	Industrial & Telecom	121
RUGGED ELECTRONICS		Reinforced USB3FTV & USB 2.0 Memory Keys	Thread	Circular	Metal	MIL-DTL-38999 Series III	Mil/Aero & industrial	124
		Reinforced USB 2.0 amplifier	Thread	Circular	Metal	MIL-DTL-38999 Series III	Mil/Aero & Industrial	125

RUGGED ATEX ZONE 2 SOLUTION GUIDE

	Connectors	Series	Coupling mechanism	Shape	Material	Specification	Prime Market	Page
RUGGED ELECTRONICS		RJFTVX, USBFTVX RJ11FTVX	IP68	Metal			Factory Automation, Video, Oil & Gaz	128

OTHER RUGGED SOLUTIONS

	Connectors	Series	Coupling Mechanism	Shape	Material	Specification	Prime Market	Page
FIELD INSTALLABLE		FWFTV (FireWire)	Thread	Circular	Metal	MIL-DTL-38999 Series III	Mil/Aero & Video	136
		RJ11F (RJ11)	Bayonet	Circular	Metal	MIL-C-26482	MIL/Aero & Industrial	140
		Special RJ11 adaptor for Military & Commercial Aeronautics		Circular	Metal		Aeronautic	142
		MTRJFTV (MTRJ) Fiber optic solution	Thread	Circular	Metal	MIL-DTL-38999 Series III	Mil/Aero & Rail Mass Transit	141
		LC Field Fiber optic solution	Thread	Circular	Metal	MIL-DTL-38999 Series III	Mil/Aero & Rail Mass Transit	146

NOTES

Rugged Ethernet Solutions

Field installable

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RJF RB

Ethernet connection system for harsh environment – Industrial Ethernet

RJFRB allows you to use an Ethernet Class D / Cat 5e and Class E / Cat 6 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 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 networks
Cat 5e per TIA/EIA 568B and ClassD per ISO/IEC 11801
Cat6 per TIA/EIA 568B and ClassE per ISO/IEC 11801

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
- Operating temperature: - 40°C / +85°C

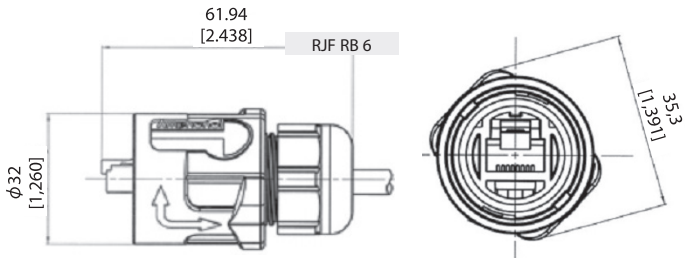
Part number code

RJF RB	7	1RA
Shell type **6**: composite reverse bayonet plug, plastic gland **7**: composite jam nut receptacle		
Back terminations *(for receptacles only)* **1**: female RJ45 **1RA**: right angle female RJ45 **2**: RJ45 Cordset **3U**: IDC cat6 - unshielded **3F**: IDC cat6 - partial shielding **3S**: IDC cat6 - 100% shielded **5**: straight PCB		
Cordset length *(for receptacles with "2" back termination only)* **03 100BTX**: 0.3m *[11.81 inches]* **05 100BTX**: 0.5m *[19.68 inches]* **10 100BTX**: 1m *[39.37 inches]* **15 100BTX**: 1.5m *[59.05 inches]*		
Remark: cabling configuration → 100 BTX = 568B (Ethernet specification)		

Examples:
- Plug: RJF RB 6
- Receptacle, female RJ45 Back termination: RJF RB 71
- Receptacle, right angle female RJ45 back termination: RJF RB 71RA
- Receptacle, 1,5m [59.05"] RJ45 cordset termination: RJF RB 72 15 100BTX

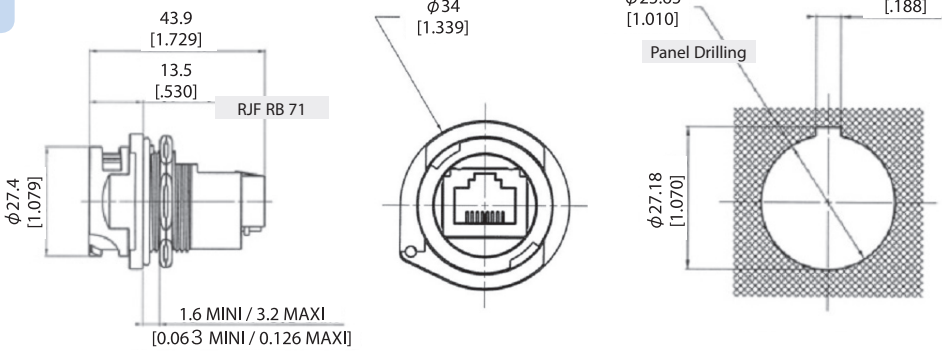
Plug

■ Type 6 shell with plastic gland

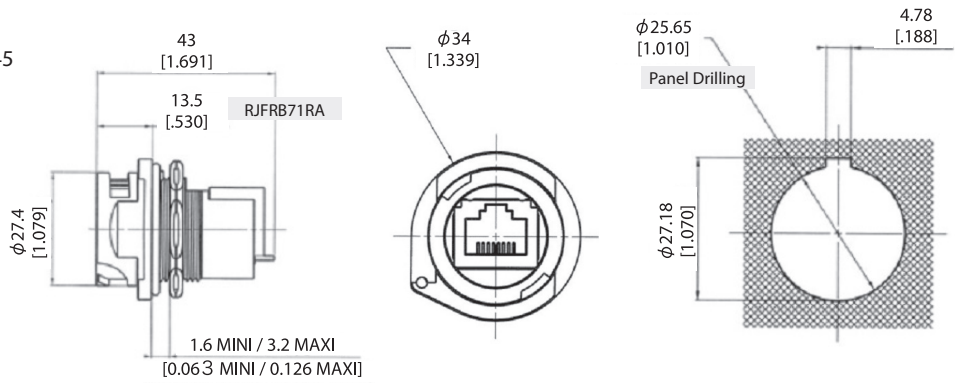


Receptacles

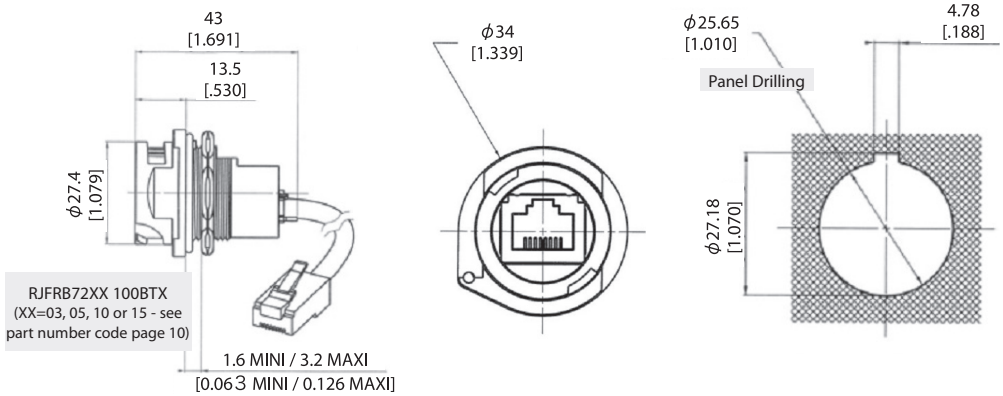
■ Type 1: female RJ45
(front mounting)



■ Type 1RA: right angle female RJ45
(front mounting)

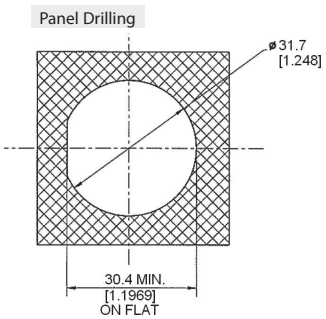


■ Type 2: RJ45 cordset
(front mounting)



■ Type 3: IDC **CAT 6** termination
(rear mounting)

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



Shielded: **RJFRB73S**

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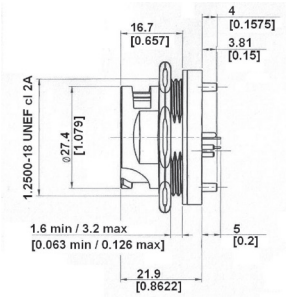
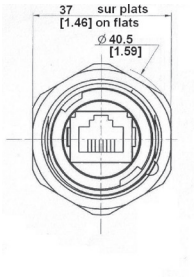
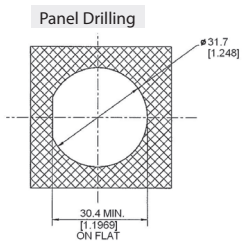
■ Straight PCB termination receptacle:
(rear mounting)

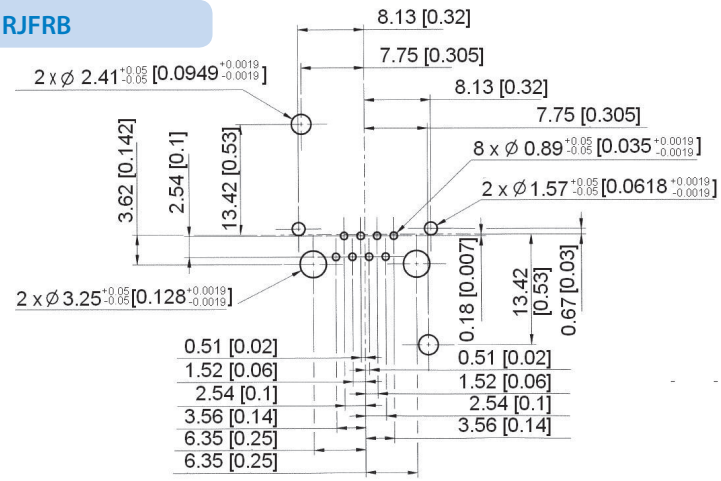
Part number: RJF RB 75





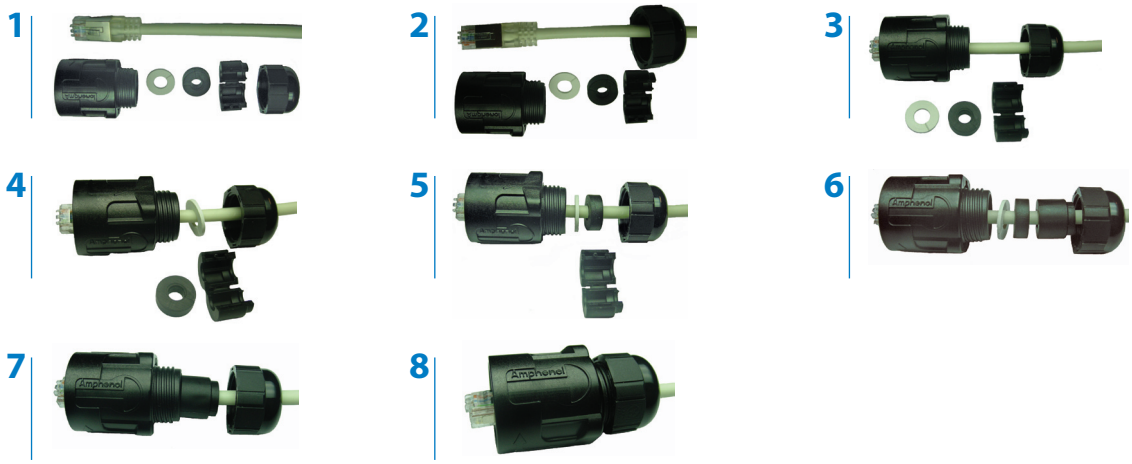


PCB drilling RJFRB



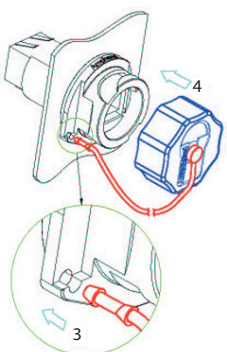
IMPORTANT NOTE
The customer's PCB design will determine the receptacle category.

Assembly instructions

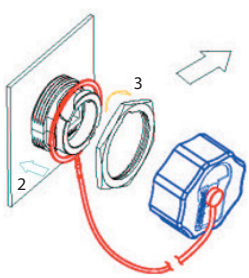


Accessories

■ **IP68 Dust caps**



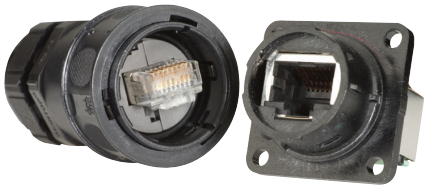
RJF RB C7
Cap for receptacles RJFRB71 / 71RA / 72xxx



RJF RB C75
Cap for receptacles RJFRB75 and RJFRB73x

RJF 544

Ethernet connection system for harsh environment – Industrial Ethernet



RJF544 allows you to use an Ethernet Class D / Cat 5e connection for 10 BaseT, 100 Base TX or 1000 BaseT 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 networks Cat 5e per TIA/EIA 568B and ClassD per ISO/IEC 11801

Now available with tranversal sealing*

***Seald in unmated condition**

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.
- Operating temperature: - 40°C / +85°C

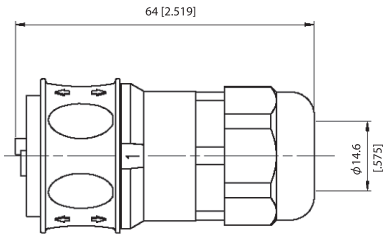
Part number code

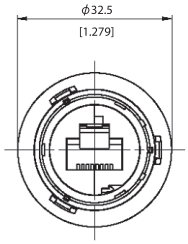
RJF 544	2	2	03 100BTX
Shell type **6**: composite push pull plug, plastic gland **2**: composite square flange receptacle **2S**: composite square flange receptacle transversally sealed **2M**: metallized (Ni) composite square flange receptacle **2SM**: metallized (Ni) composite square flange receptacle transversally sealed			
Back terminations *(for receptacles only)* **1**: female RJ45 **1RA**: right angle female RJ45 **2**: RJ45 cordset			
Cordset length *(for receptacles with "2" back termination only) - Other lengths are available on demand* **03 100BTX**: 0.3 meters *[11.81 inches]* **05 100BTX**: 0.5 meters *[19.68 inches]* **10 100BTX**: 1 meter *[39.37 inches]* **15 100BTX**: 1.5 meters *[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:
- Plug: RJF 544 6
- Square flange receptacle, female RJ45 back termination: RJF 544 21
- Metallized square flange receptacle, female RJ45 back termination: RJF 544 2M 1
- Square flange receptacle, 1,5m [59.05"] 100 BTX cordset termination: RJF 544 22 15 100BTX
- Square flange receptacle, solder termination: RJF 544 22 00
- Transversally sealed receptacle female RJ45 back termination: RJF544 2S1

Plug

■ Type 6 shell with plastic gland

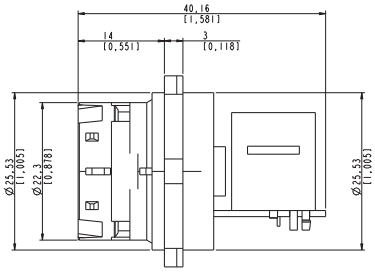




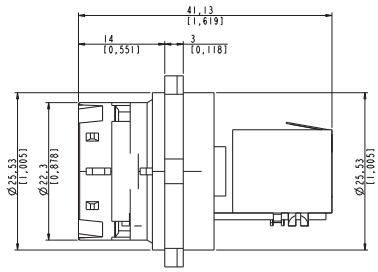
RJF 544 6

Receptacle

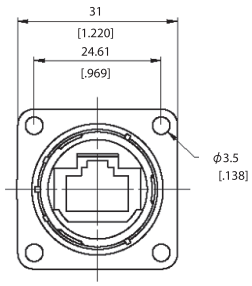
■ Type 2S/2M/2SM shell: square flange receptacle with 4 mounting holes

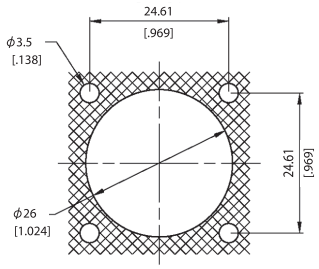


RJF 544 2x 1 RA



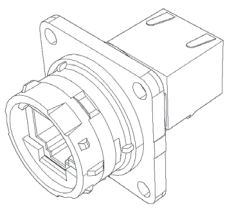
RJF 544 2x 1



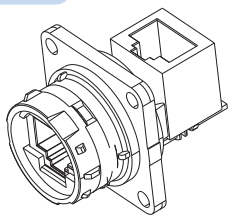


Panel Drilling
(same as#16 MIL-C-5015)

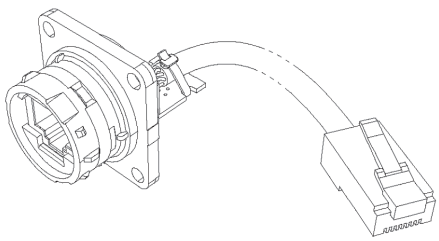
Back terminations



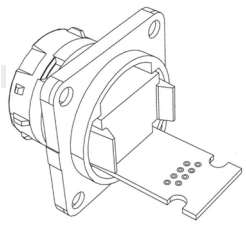
Type1: female RJ45



Type1RA: right angle female RJ45



Type2: RJ45 cordset



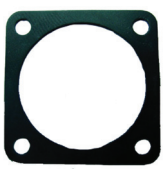
Type 2 - 00: solder - 8 tinned holes

Notes: type 2 without RJ45 plug at the end of the cable is also available: consult factory

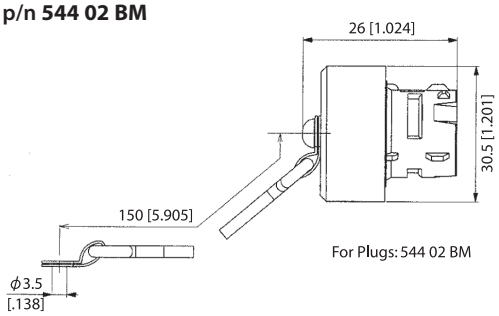
Accessories

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

■ **Panel gasket p/n RJF 544 02JE**



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



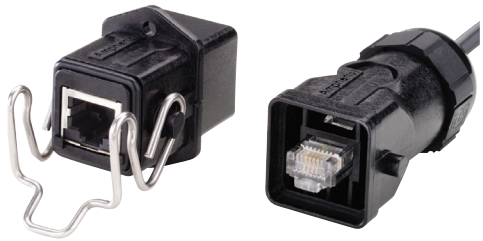
For Plugs: 544 02 BM

■ Panel gasket (thickness: 0.6mm [.039]): p/n **RJF 544 02 JE**

■ Plug Insert removal tool: p/n **5440 OT 02**

RJF EZ

Ethernet connection system for harsh environment – Industrial Ethernet



RJFEZ 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 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 networks Cat 5e per TIA/EIA 568B and ClassD per ISO/IEC 11801

Main characteristics

- Compliant with IEC 60603-7 variante 13
- Sealed against fluids and dust (IP68)
- Shock, vibration and traction resistant
- No cabling operation in field and no tools required
- **Quick lever 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

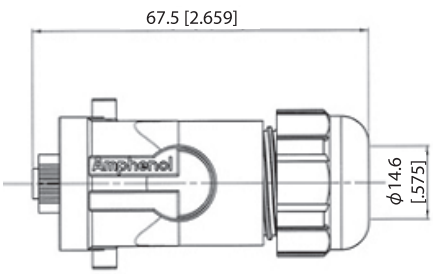
- Sealing: IP68
- Salt spray > 1000 h
- Fire retardant / Low smoke: UL94 V0 and NFF 16102, DIN 5510-2
- Operating temperature: - 40°C / +85°C

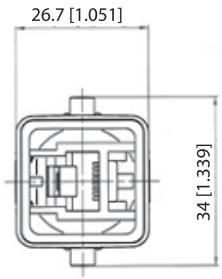
Part number code

RJF EZ	2	2	03 100BTX
Shell type **6**: composite lever plug, plastic gland **2**: composite square flange receptacle			
Back terminations *(for receptacles only)* **1**: female RJ45 **2**: RJ45 cordset			
Cordset length *(for receptacles with "2" back termination only)* **03 100BTX**: 0.3m [11.81 inches] **05 100BTX**: 0.5m [19.68 inches] **10 100BTX**: 1m [39.37 inches] **15 100BTX**: 1.5m [59.05 inches]			
Remark: Cabling configuration → 100 BTX = 568B (Ethernet specification)			

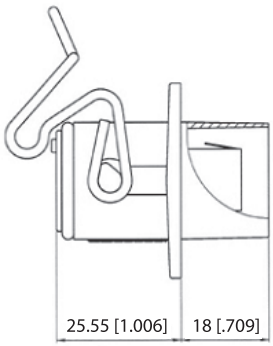
Examples:
- Plug: RJF EZ 6
- Receptacle, female RJ45 back termination: RJF EZ 21
- Receptacle, 1,5m [59.05"] 100 BTX cordset termination: RJF EZ 22 15 100BTX

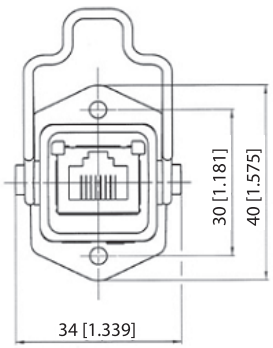
Plug



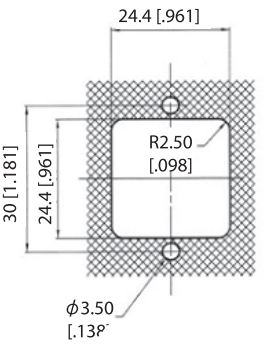


Receptacles

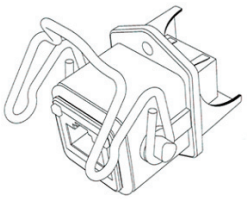




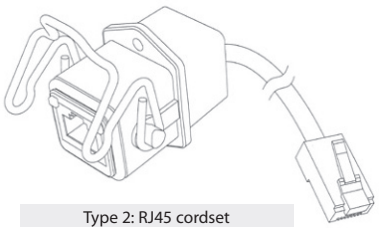
Panel Drilling



Back terminations



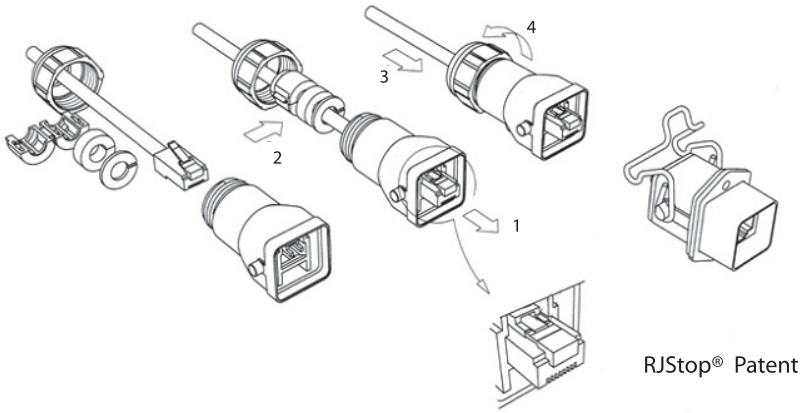
Type 1: female RJ45



Type 2: RJ45 cordset

Notes: type 2 without RJ45 plug at the end of the cable is also available: consult factory

Assembly instructions



RJStop® Patent

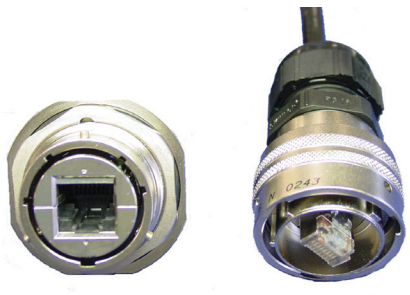
Accessories

- **IP68 dust caps**
  For plugs: **not available**
  For receptacles: **RJF EZ BE**

- **Panel gasket**
  Thickness: 1 mm [.039]
  Part No. **RJF EZ JE**

RJF

Ethernet connection system for harsh environment – Industrial Ethernet



RJF 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

- 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 networks Cat 5e per TIA/EIA 568B and ClassD per ISO/IEC 11801

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
- Temperature range: -40°C / +85°C
- Storage temperature:

Part number code

	RJF	2	2	B	03 100BTX
Shell type **6**: plug, plastic gland **6M**: plug, 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 ***Nota:** also available a transversally sealed receptacle (unmated)* ►*see page 22*					
Back terminations *(for receptacles only)* **1:** female RJ45 **1RA:** right angle female RJ45 **2:** RJ45 cordset					
Shell finishes **B**: black Coating - *ROHS compliant* **N**: nickel - *ROHS compliant* **G**: olive drab cadmium ***Nota: for N, G, ZN the inserts are metallized.***					
Cordset length (*for receptacles with "2" back termination only) - Other lengths are available on demand* **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]*					
Remark: cabling configuration → 100 BTX = 568B (Ethernet specification)					

ZN: aluminium shell - black zinc nickel plating - *ROHS compliant*

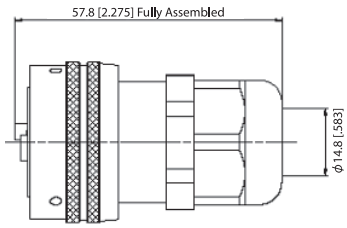
00: 8 tinned holes at the rear of the PCB to solder the cable

xx OPEN: open cable - with no plug at the end (**xx** to be replaced by the cordset length 03, 05, 10, or 15 - see nearby)

Examples:
- Nickel plug: RJF 6 N
- Black square flange receptacle, female RJ45 back termination: RJF 2 1 B
- Olive drab cadmium jam nut receptacle, 1.5m [59.05"] 100 BTX cordset termination: RJF 7 2 G 15 100BTX
- Black in line square flange receptacle, 30cm [11.81"] 100BTX cordset termination: RJF 2PE 2 B 03 100BTX
- Nickel jam nut receptacle, solder termination: RJF 72 N 00

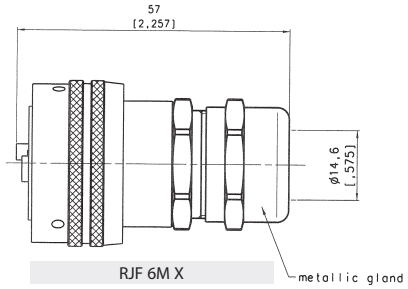
Plug

■ Shell type 6 with plastic gland



RJF 6 X

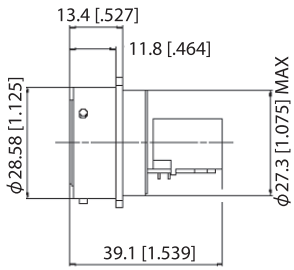
■ Shell type 6 with metal gland



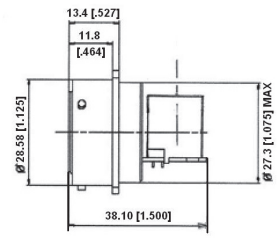
RJF 6M X

Receptacles

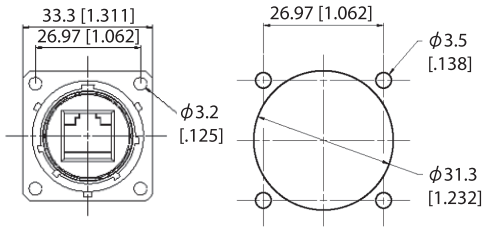
■ Square flange receptacle • 4 mounting holes: shell type 2



RJF 21 X (Straight Female RJ45)

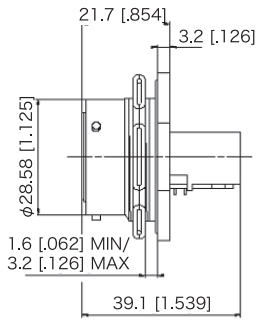


RJF 21 RA X (Right Angle Female RJ45)

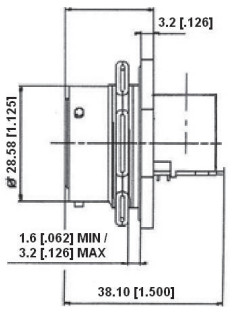


Panel Drilling

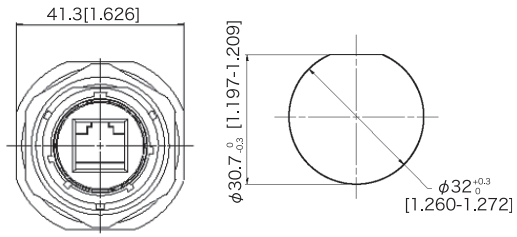
■ Jam nut receptacle • Hexagonal nut mounting: shell type 7



RJF 71 X (straight female RJ45)

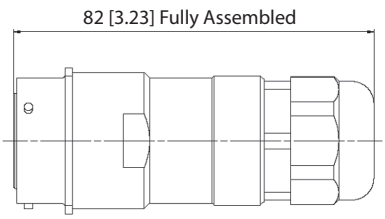


RJF 71 RA X (right angle female RJ45)

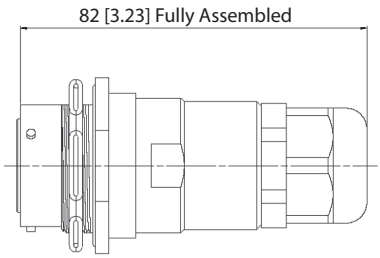


Panel drilling

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

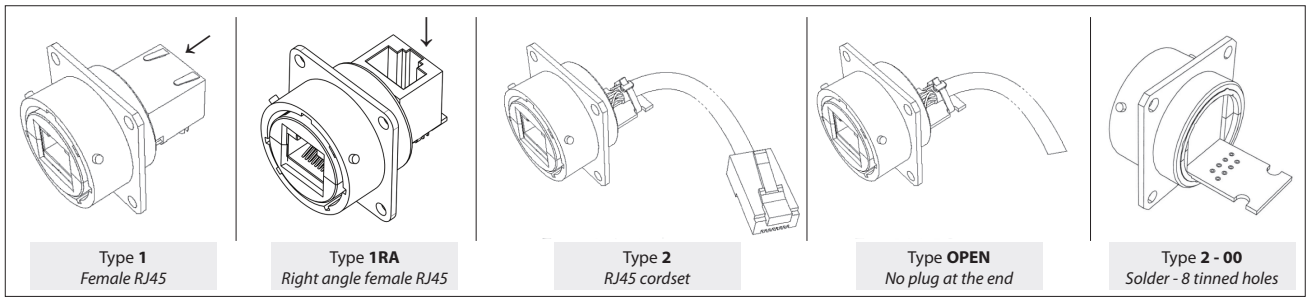


RJF 2PE/2PEM



RJF 7PE/7PEM

Back terminations

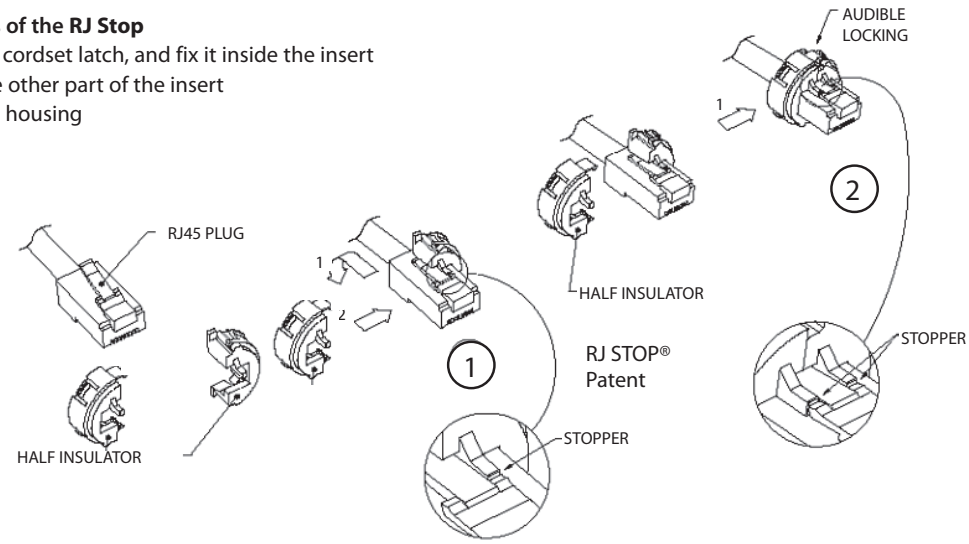


Type **1**	Type **1RA**	Type **2**	Type **OPEN**	Type **2 - 00**
Female RJ45	*Right angle female RJ45*	*RJ45 cordset*	*No plug at the end*	*Solder - 8 tinned holes*

Universal: can be used with all standard RJ45 Cat.5e cordset brands.

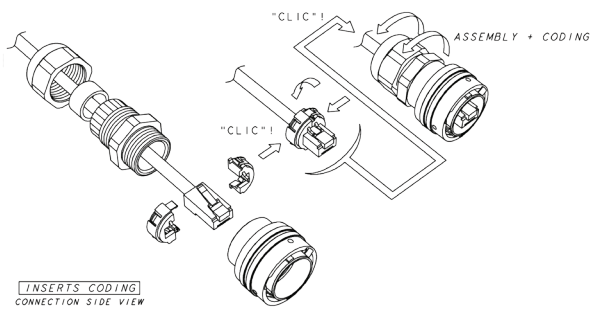
Assembly instructions of the RJ Stop

1. Push down the RJ45 cordset latch, and fix it inside the insert
2. Press in and click the other part of the insert
3. Insert in the metallic housing

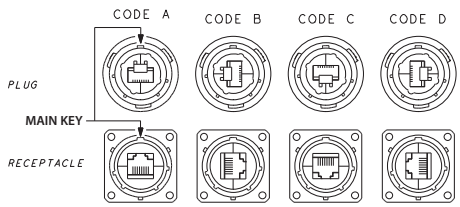


Easy and safe - No field cabling tools required for cabling

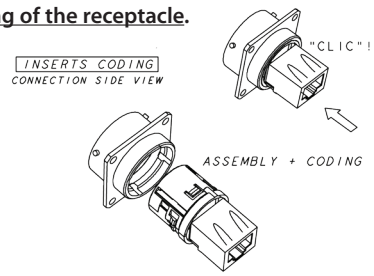
Assembling of the plug.



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



Assembling of the receptacle.



IMPORTANT NOTE: to remove the insert, use the

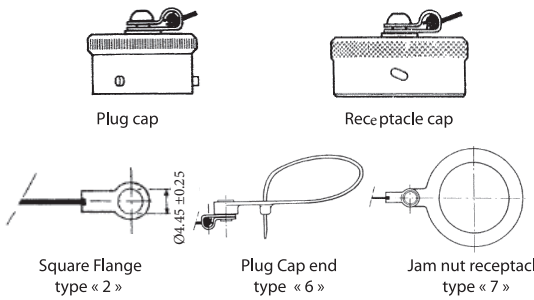
- **Insert removal tool for receptacle and plug**

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 **ZN**: aluminium shell - black zinc nickel plating - *ROHS compliant*			



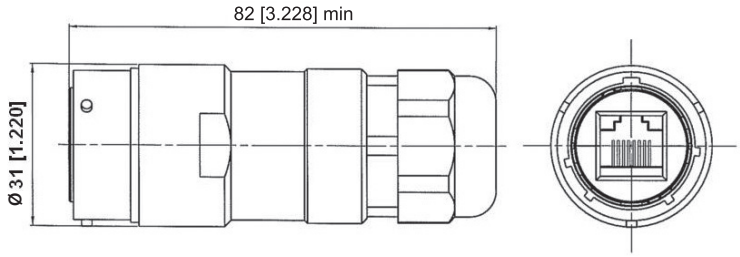
- **Panel gasket for square flange 2 »thickness - 0,6 mm**

P/N: **JE 18**

RJF
In line receptacles & PC tails receptacles

In line receptacles

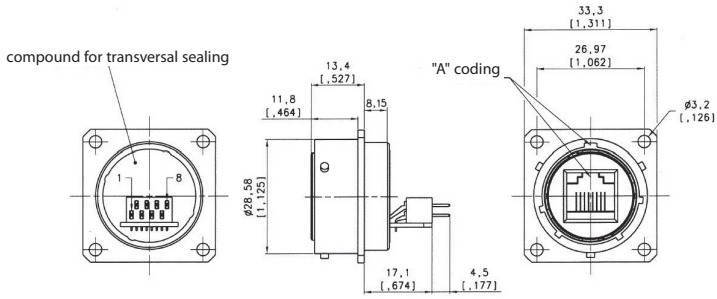
Inline receptacles allow you to make cable extensions in the field by using them with rugged RJ Field series plugs.



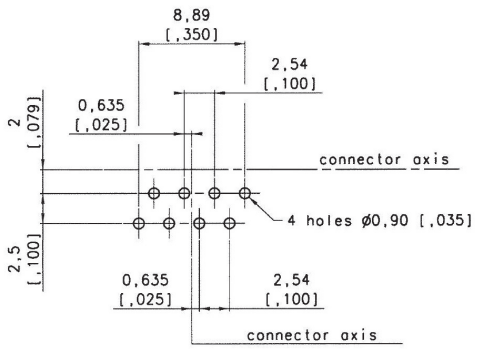
	Plating	Plastic gland	Metallic gland
Part number	Black coating - *ROHS compliant*	**RJF2PEWF1B**	**RJF2PEMWF1B**
	Nickel - *ROHS compliant*	**RJF2PEWF1N**	**RJF2PEMWF1N**
	Olive drab cadmium	**RJF2PEWF1G**	**RJF2PEMWF1G**
	Black Zinc Nickel	**RJF2PEWF1ZN**	**RJF2PEMWF1ZN**

PC tails receptacles

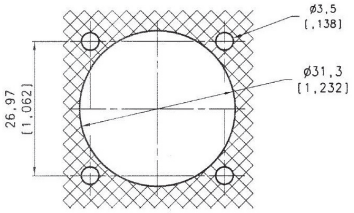
These receptacles can be soldered directly on your PCB. A compound insures a transversal sealing and good performance in high vibration environments. They can be connected with rugged RJField series plugs.



PCB LAYOUT – SOLDER FACE VIEW

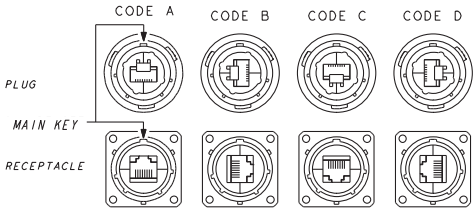


Panel Drilling



	Plating	Part number
Part number	Black coating - *ROHS compliant*	**RJF 2S X 5B**
	Nickel - *ROHS compliant*	**RJF 2S X 5N**
	Olive drab cadmium	**RJF 2S X 5G**
	Black zinc Nickel	**RJF 2S X 5ZN**

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

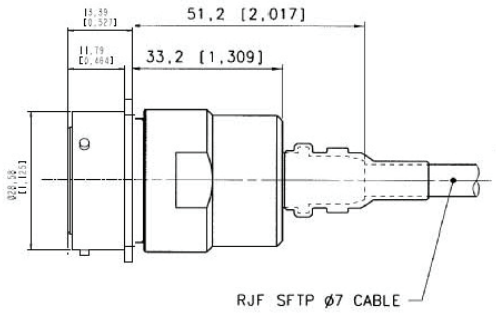


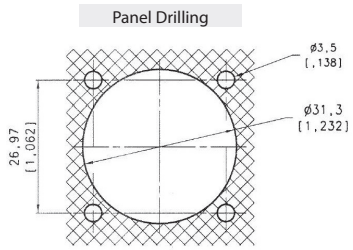
RJF

Receptacles & plugs with 360° EMI backshell

RJF series receptacles and plugs with EMI backshells provide a solution with 360° shielding: same protection than the one proposed by standard MIL-DTL-26482H connectors. With those solutions we recommend using our reinforced and double shielded Cat5E, Cat6, or Cat6A cable ▶ *see pages 41-42-43*.

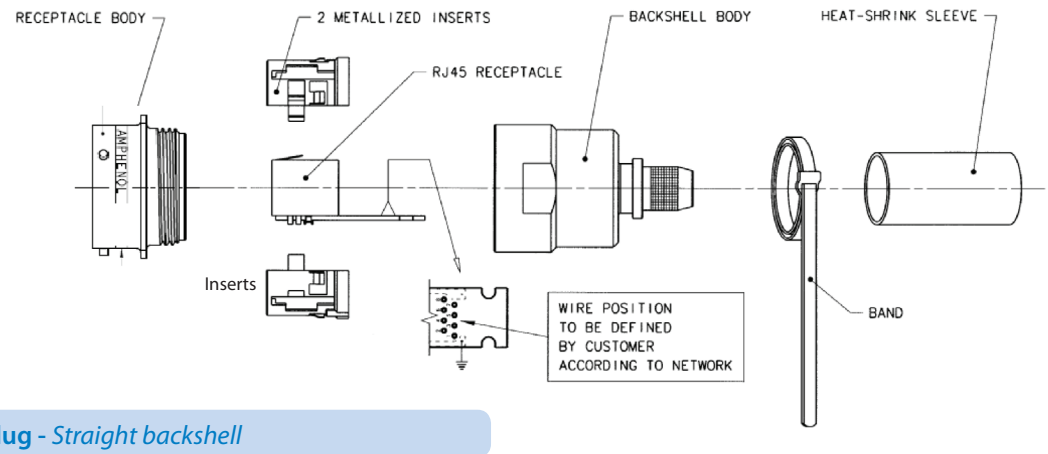
Square flange receptacle - *Straight backshell*



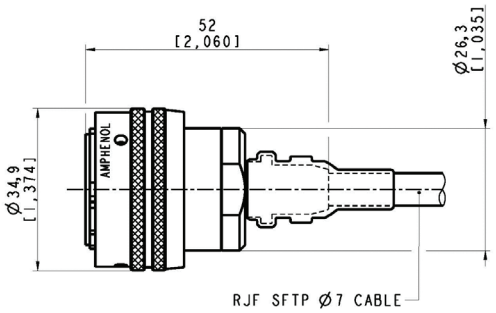


Part number	Plating	Part number
	Nickel - *ROHS compliant*	**Kit30439NI**
	Olive drab cadmium	**Kit30439**
	Black Zinc Nickel	**Kit30439ZN**

Kit30439 / Kit30439NI & Kit30436 / Kit30436N include:



Plug - *Straight backshell*



Part number	Plating	Part number
	Nickel - *ROHS compliant*	**Kit30394NI**
	Olive drab cadmium	**Kit30394**
	Black Zinc Nickel	**Kit30394ZN**

Kit30394 & Kit30394NI include:

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

RJF
Transversally sealed receptacles

ROHS COMPLIANT N, B & BZ

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.

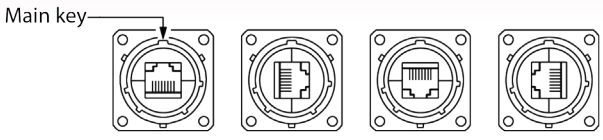
Applications
- Outdoor equipment
- Airplanes equipment
- Tactical radios
- Shelters
- Rugged computers
- Data acquisition and transmission in harsh environments

Data transmission
10 BaseT, 100 BaseTX and 1000 BaseT networks
Cat 5e per TIA/EIA 568B and ClassD per ISO/IEC 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**.



Part number code

	RJF	7S	A	2	G	03 100BTX
Series **RJF:** MIL-DTL-26482 H bayonet						
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 **1RA:** right angle female RJ45 **2:** RJ45 Cordset						
Shell material & finish **B:** aluminium shell - black coating - *ROHS compliant* **N:** aluminium shell - nickel plating - *ROHS compliant* **G:** aluminium shell - olive drab cadmium plating **ZN:** aluminium shell - black zinc nickel plating - *ROHS compliant* ***Nota**: for N, G, ZN, the inserts are metallized.*						
Cordset length *(For Receptacles with "2" Back Termination only) - Other lengths are available on demand* **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] **xx OPEN**: open cable - with no plug at the end (**xx** to be replaced by the cordset length 03, 05, 10, or 15 - see above)						
Remark: cabling configuration: 100 BTX = 568B (Ethernet specification)						

Examples:
- *bayonet, sealed jam nut receptacle, A coding, with female RJ45 back termination, olive drab cadmium plating:* ***RJF 7SA 1 G***
- *bayonet, sealed square flange receptacle, A coding, with female RJ45 back termination, black plating:* ***RJF 2SA 1 B***
- *bayonet, sealed jam nut receptacle, A coding, 1.5m [59.05"] 100 BTX cordset, olive drab cadmium plating:* ***RJF 7SA 2 G15 100BTX***

RJF
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.
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.

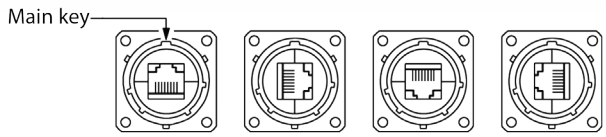
Applications
- Outdoor equipment
- Airplanes equipment
- Tactical radios
- Shelters
- Rugged computers
- Data acquisition and transmission in harsh environments

Data transmission
10 BaseT, 100 BaseTX and 1000 BaseT networks Cat 5e per TIA/EIA 568B and ClassD per ISO/IEC 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**.



Part number code

Series **RJF:** MIL-DTL-26482 H bayonet	**RJF**	**7H**	**A**	**2**	**G**	**03 100BTX**
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 **1RA:** right angle female RJ45 **2:** RJ45 Cordset						
Shell material & finish **B:** aluminium shell - black coating - *ROHS compliant* **N:** aluminium shell - nickel plating - *ROHS compliant* **G:** aluminium shell - olive drab cadmium plating ***Nota**: for N, G, ZN plating, the inserts are metallized.*		**ZN:** aluminium shell - black zinc nickel plating - *ROHS compliant*				
Cordset length *(for receptacles with "2" back termination only) - Other lengths are available on demand* **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] **xx OPEN**: open cable - with no plug at the end (**xx** to be replaced by the cordset length 03, 05, 10, or 15 - see above)						
Remark: cabling configuration: 100 BTX = 568B (Ethernet specification)						

Examples: *- bayonet, sealed jam nut receptacle, A coding, with female RJ45 Back termination, olive drab cadmium plating:* ***RJF 7HA 1 G***
- bayonet, sealed square flange receptacle, A coding, with female RJ45 back termination, black plating: ***RJF 2HA 1 B***
- bayonet, sealed jam nut receptacle, A coding, 1.5m [59.05"] 100 BTX cordset, olive drab cadmium plating : ***RJF 7HA 2 G15 100BTX***

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 RJF 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

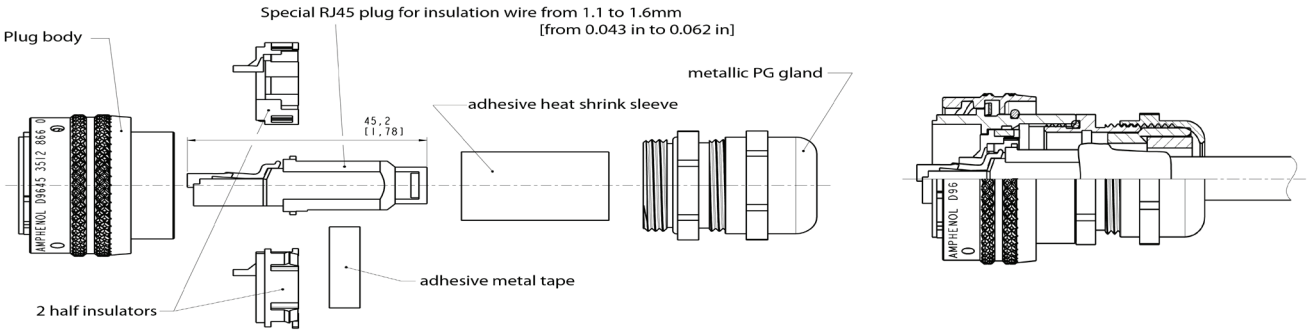
10 BaseT, 100 BaseTX and 1000 BaseT networks Cat 5e per TIA/EIA 568B and ClassD per ISO/IEC 11801

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
- Temperature range: - 40°C / +85°C



Part number	Plating	Part number
	Black coating - *ROHS compliant*	**Kit39992B**
	Nickel - *ROHS compliant*	**Kit39992NI**
	Olive drab cadmium	**Kit39992G**
	Black Zinc Nickel	**Kit39992ZN**

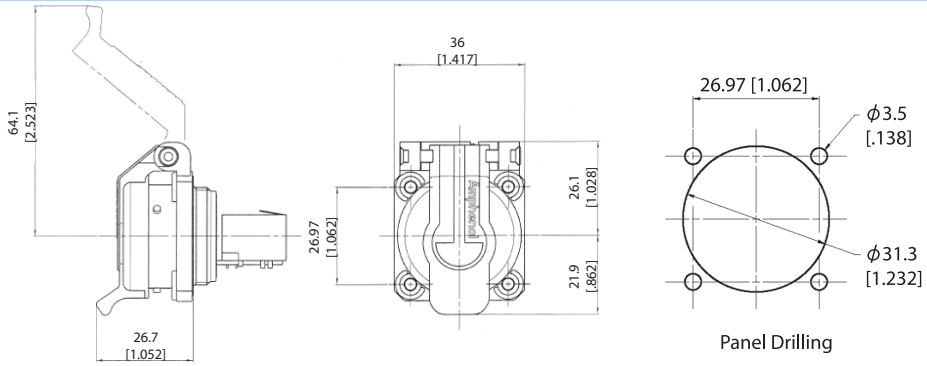
RJ Field receptacle with self closing cap

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 or RJ45 cordset are removed from the receptacle.

Sealing level IP54
(Splash and dust Proof)

RJF 21 X SCC

RJ45 version



Panel Drilling

	Plating	Metallized insert (EMI)	Part number
Part number *	Black coating - *ROHS compliant*	No	**RJF 21B SCC**
	Nickel - *ROHS compliant*	Yes	**RJF 21N SCC**
	Olive drab cadmium	Yes	**RJF 21G SCC**
	Black Zinc Nickel - *ROHS compliant*	No	**RJF 21ZN SCC**

* *The part number includes the receptacle + the self closing cap*

Remarks:
- the back termination is female RJ45
- it could be used with our RJF series plug *(part number RJF6xx ▶ see page 17)*

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

USBF 21 x SCC, USBBF 21 x SCC, & IEEE1394

USB2.0 & 3.0 - A version
(see pages 94 & 107)

USB-B version
(see page 118)

IEEE1394 version
(see page 143)

RJF TV

Ethernet connection system for harsh environment

ROHS COMPLIANT N & BZ

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 - 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
  > 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
- Temperature range: -40°C / +85°C

Part number code

	RJF TV	2	2	G	03 100 BTX

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
Nota: *also available a transversally sealed receptacle (unmated)* ▶ *See page 36*

Back terminations *(receptacles only)*
1: female RJ45
1RA: right angle female RJ45
2: RJ45 Cordset

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

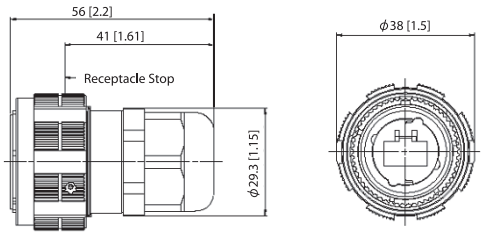
Cordset length *(type 2 back termination only) - Other lengths are available on demand*
03 100 BTX: 0.3m *[11.81 inches]*
05 100 BTX: 0.5m *[19.68 inches]*
10 100 BTX: 1m *[39.37 inches]*
15 100 BTX: 1.5m *[59.05 inches]*
00: 8 tinned holes at the rear of the PCB to solder the cable
xx OPEN: open cable - with no plug at the end (**xx** to be replaced by the cordset length 03, 05, 10, or 15 - see nearby)

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

Examples:
- Olive crab 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

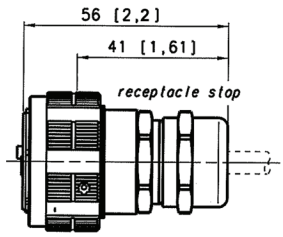
Plug

■ Shell type 6 with plastic or metal gland



RJF TV 6 X

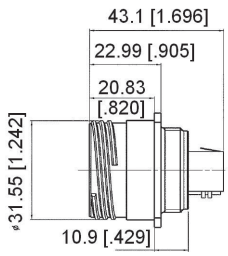
■ Shell type 6 with metal gland



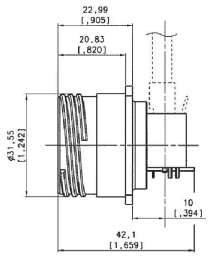
RJF TV 6M X

Receptacles

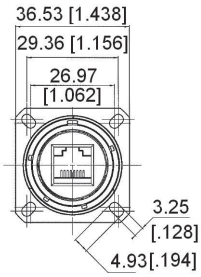
■ Square flange receptacle - 4 mounting holes: shell type 2



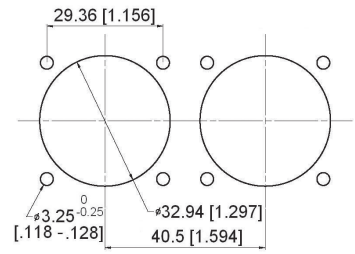
RJFTV 21 X (straight female RJ45)



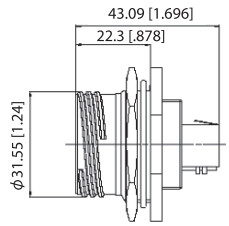
RJFTV 21 RA X (right angle female RJ45)



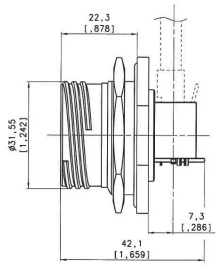
Panel Drilling



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

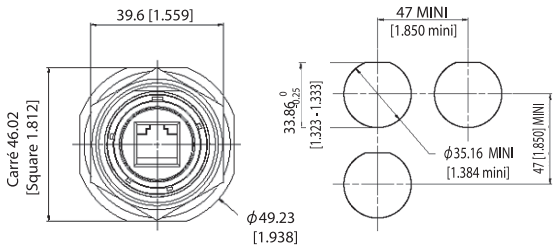


RJFTV 71 X (straight female RJ45)

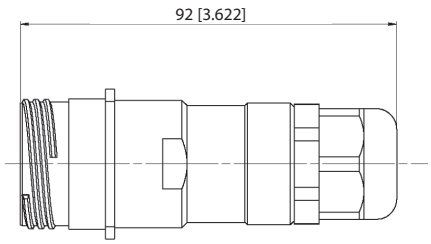


RJFTV 71 RA X (right angle female RJ45)

Panel drilling

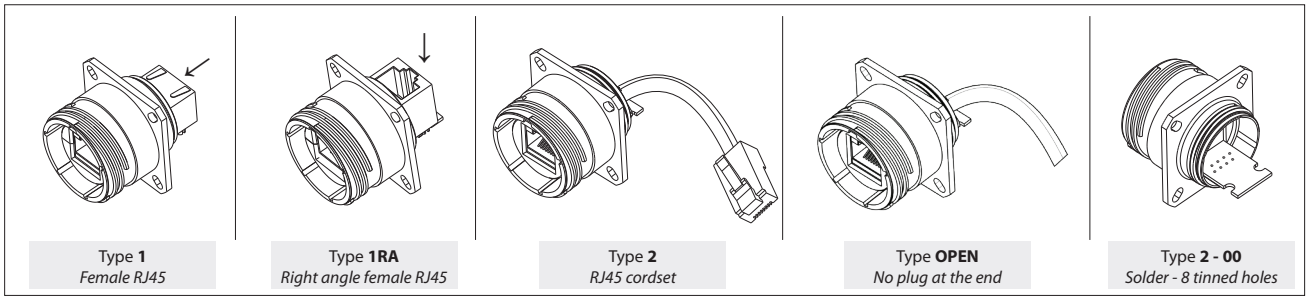


■ Receptacles with IP68 backshell: Shell type 2PE and 7PE with plastic or metal gland



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

Back terminations

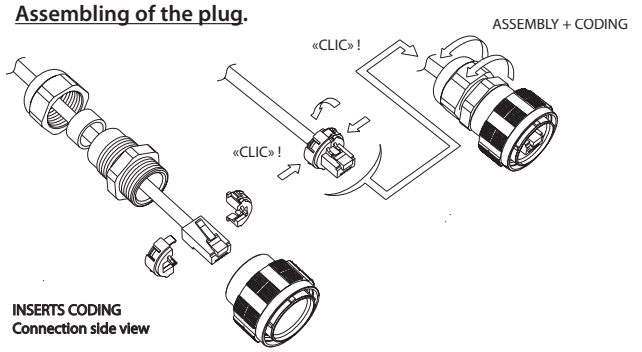


Type **1**	Type **1RA**	Type **2**	Type **OPEN**	Type **2 - 00**
Female RJ45	*Right angle female RJ45*	*RJ45 cordset*	*No plug at the end*	*Solder - 8 tinned holes*

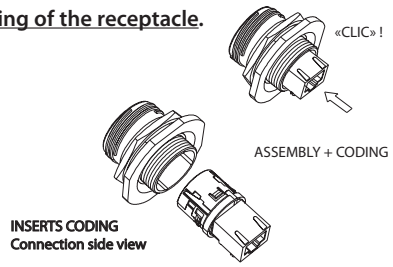
Assembly instructions

Insert codings

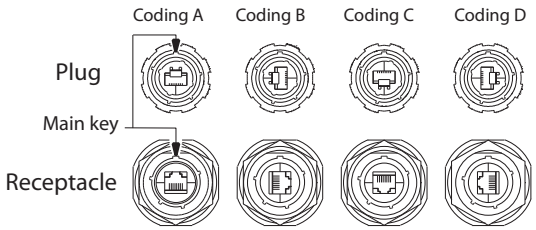
Assembling of the plug.



Assembling of the receptacle.



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



IMPORTANT NOTE: to remove the insert, use the

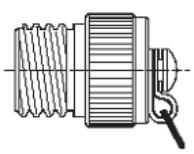
- **Insert removal tool for receptacle and plug**

P/N: **RJF ODE**

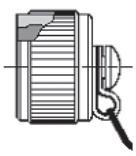
Accessories

- **Metallic caps**

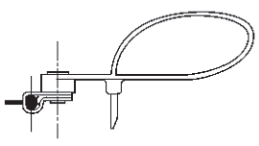
	RJFTVC	2	G
Connector type **6**: plug **2**: square flange receptacle **7**: jam nut receptacle			
Shell material & finish **N**: aluminium shell - nickel plating - *ROHS compliant* **G**: aluminium shell - olive drab cadmium plating **BZ**: marine bronze shell - *ROHS compliant* **ZC**: aluminium shell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



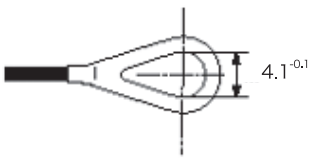
Plug Cap



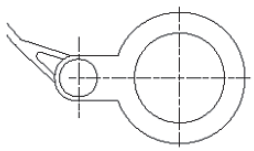
Receptacle Cap



Plug Cap end

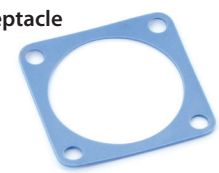


Square flange receptacle cap end



Jam Nut receptacle cap end

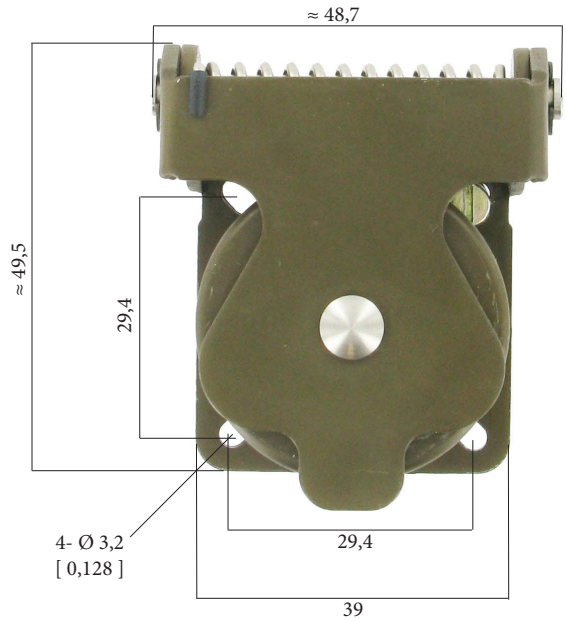
- **Panel gasket for square flange receptacle**
  Thickness: 0,8 mm [.031]):
  P/n: JE19

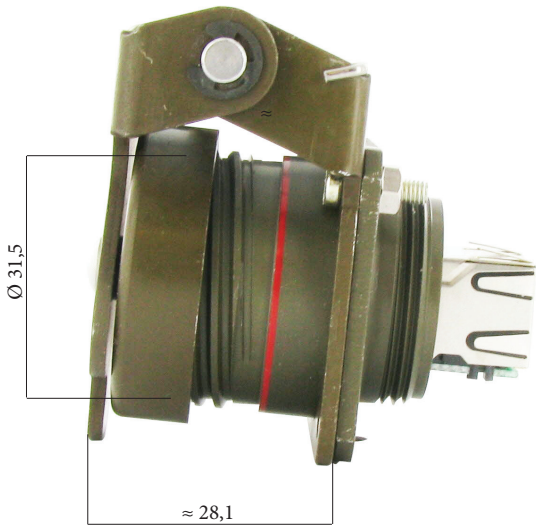


Metallic self closing cap (SCC)

For RJFTV square flange receptacles.

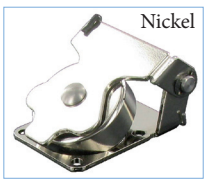
This self closing cap automatically protects the RJF TV square flange receptacle (MIL-DTL-38999 type), protecting your system from dust and water projection. A spring automatically closes the upper part of the cap when the RJF TV plug is removed from the receptacle.





IMPORTANT NOTE
Metal self closing cap are sold separately (without receptacle).

Sealing level IP67



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

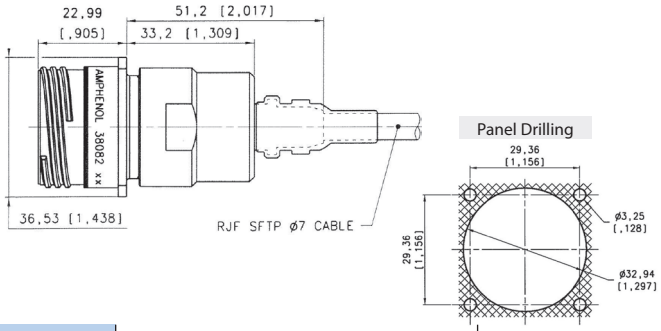
Remark: compatible with RJFTV square flange receptacle type RJFTV**2**xxx only *(see page 26)*.

RJF TV

Receptacles & plugs with 360° EMI backshells

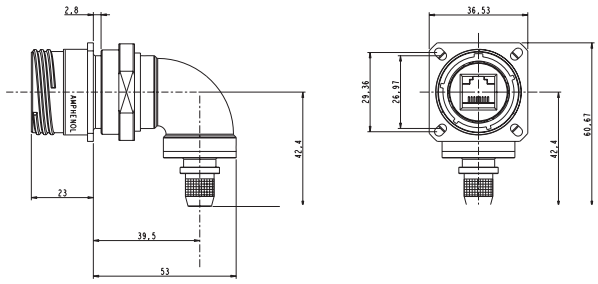
RJFTV series receptacles and plugs with EMI backshells provide a solution with 360° shielding: same protection than the one proposed by standard MIL-DTL-38999 series III connectors.
With those solutions we recommend using our reinforced and double shielded Cat5E, Cat6, or Ca6A cable.
►*see pages 41-42-43*

Square flange receptacle - *Straight backshell*



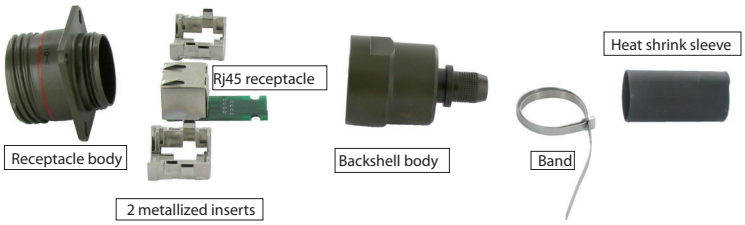
Part number	Plating	P/N
	Nickel - *ROHS compliant*	**Kit38082NI**
	Olive drab cadmium	**Kit38082**
	Black zinc nickel - *ROHS compliant*	**Kit38082BZN**

Square flange receptacle - *Right angle backshell*



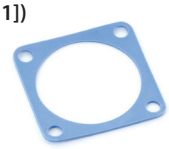
Part number	Plating	P/N
	Nickel - *ROHS compliant*	**Kit40791NI**
	Olive drab cadmium	**Kit40791**
	Black zinc nickel - *ROHS compliant*	**Kit40791BN**

Kit38082 and Kit40791 include:

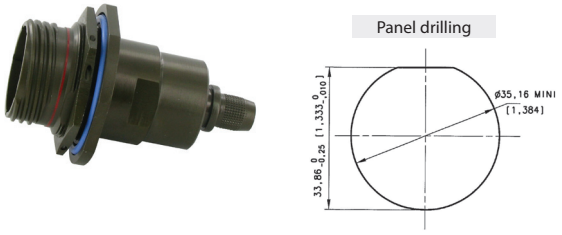


- **Panel gasket for square flange receptacle (thickness: 0,8 mm [.031])**

P/n: JE19

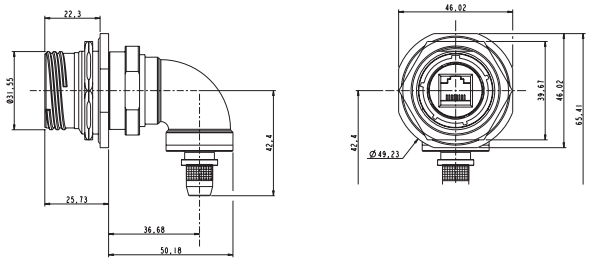


Jam nut receptacle - *Straight backshell*



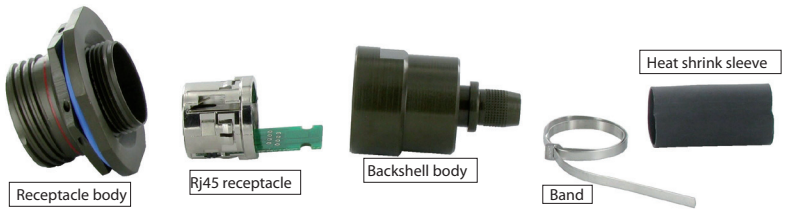
Part number	Plating	P/N
	Nickel - *ROHS compliant*	**Kit38204NI**
	Olive drab cadmium	**Kit38204**
	Black zinc nickel - *ROHS compliant*	**Kit38204BZN**

Jam nut receptacle - *Right angle backshell*



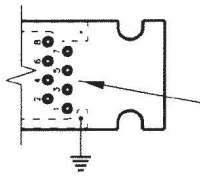
Part number	Plating	P/N
	Nickel - *ROHS compliant*	**Kit40771NI**
	Olive drab cadmium	**Kit40771**
	Black zinc nickel - *ROHS compliant*	**Kit40771BZN**

Kit38204 and Kit40771 include:



IMPORTANT NOTE

With these receptacles, you will have to solder your own cable on the PCB.
So the wire positions have to be defined according to your network.

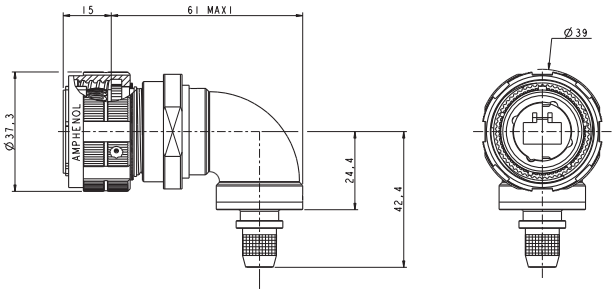


WIRE POSITION TO BE DEFINED BY CUSTOMER ACCORDING TO NETWORK

Plug - *Straight backshell*

Part number	Plating	P/N
	Nickel - *ROHS compliant*	**Kit38081NI**
	Olive drab cadmium	**Kit38081**
	Black zinc nickel - *ROHS compliant*	**Kit38081BZN**

Plug - *Right angle backshell*



Part number	Plating	P/N
	Nickel - *ROHS compliant*	**Kit40792NI**
	Olive drab cadmium	**Kit40792**
	Black zinc nickel - *ROHS compliant*	**Kit40792BZN**

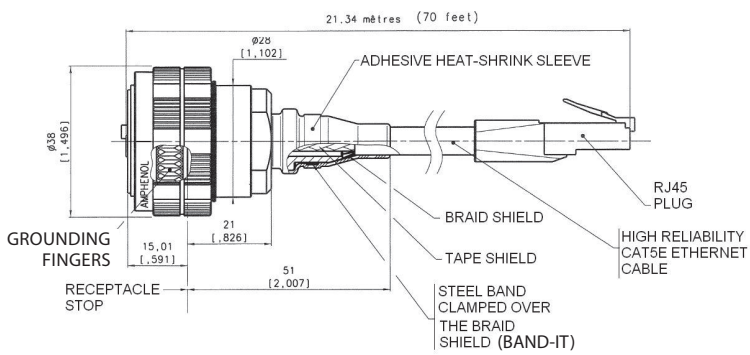
Kit38081 and Kit40792 include:

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 Cat5E, Cat6, or Cat6A cables (see pages 41-42-43) 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 examples below)***.
For this type of solution please provide the configuration needed: length, description of second end…

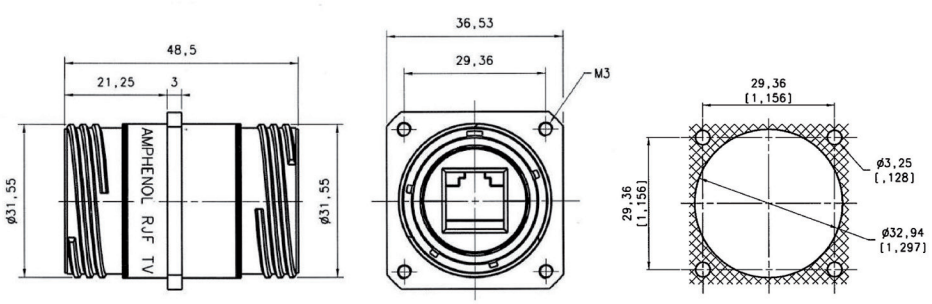
Example of assembled cordset:



RJF TV
Through bulkhead receptacles

Our RJFTV 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

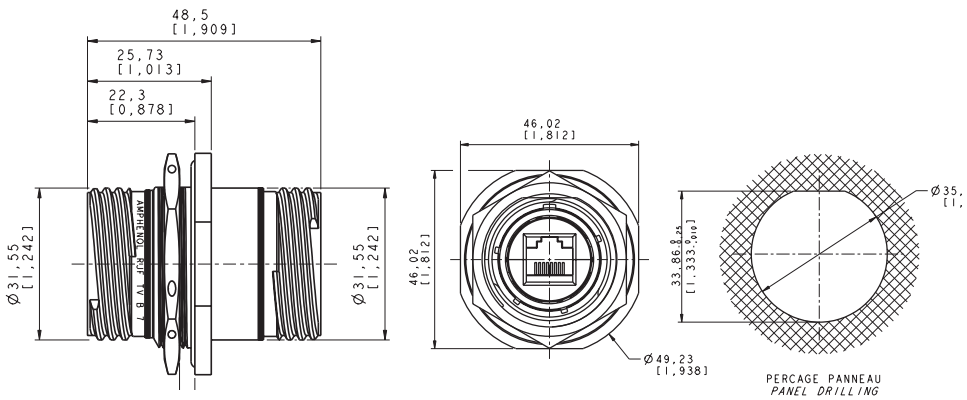


Part number	Plating	Metallized insert	For coding A
	Nickel - *ROHS compliant*	No	**RJF TV B 2 N ISO BRUT ***
	Nickel - *ROHS compliant*	Yes	**RJF TV B 2 N ISO NI ***
	Olive drab cadmium	No	**RJF TV B 2 G ISO BRUT ***
	Olive drab cadmium	Yes	**RJF TV B 2 G ISO NI ***
	Black Zinc Nickel - *ROHS compliant*	No	**RJF TV B 2 ZN ISO BRUT ***
	Black Zinc Nickel - *ROHS compliant*	Yes	**RJF TV B 2 ZN ISO NI ***

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

IMPORTANT NOTE
Possibility of other codings - Please consult us

Jam nut receptacle



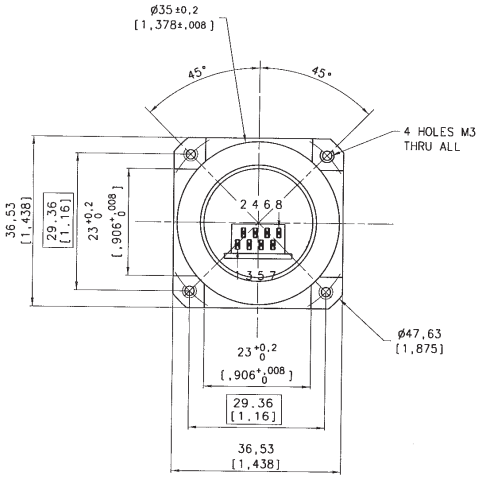
Part number	Plating	Metallized insert	Part number
	Nickel - *ROHS compliant*	No	**RJF TV B 7 N ISO BRUT ***
	Nickel - *ROHS compliant*	Yes	**RJF TV B 7 N ISO NI ***
	Olive drab cadmium	No	**RJF TV B 7 G ISO BRUT ***
	Olive drab cadmium	Yes	**RJF TV B 7 G ISO NI ***
	Black Zinc Nickel - *ROHS compliant*	No	**RJF TV B 2 ZN ISO BRUT ***
	Black Zinc Nickel - *ROHS compliant*	Yes	**RJF TV B 2 ZN ISO NI ***

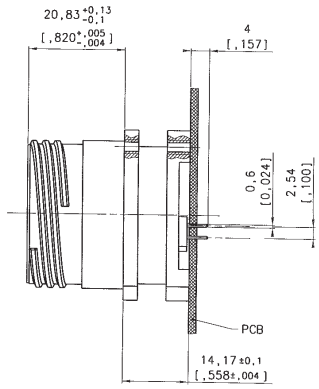
*** ISO BRUT = non conductive insert**
ISO NI = conductive insert

RJF TV
Stand off receptacles

These receptacles can be sold directly to your PCB.
A compound insures a transversal sealing and good performance in high-vibration environments.
The shell of those receptacles are in the "Stand Off" style.
They can be connected with RJFTV series plugs.

Square flange receptacle

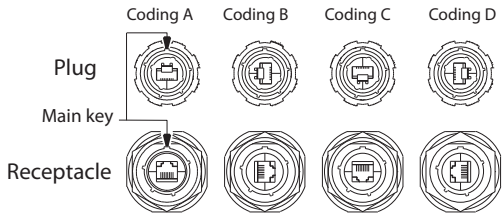




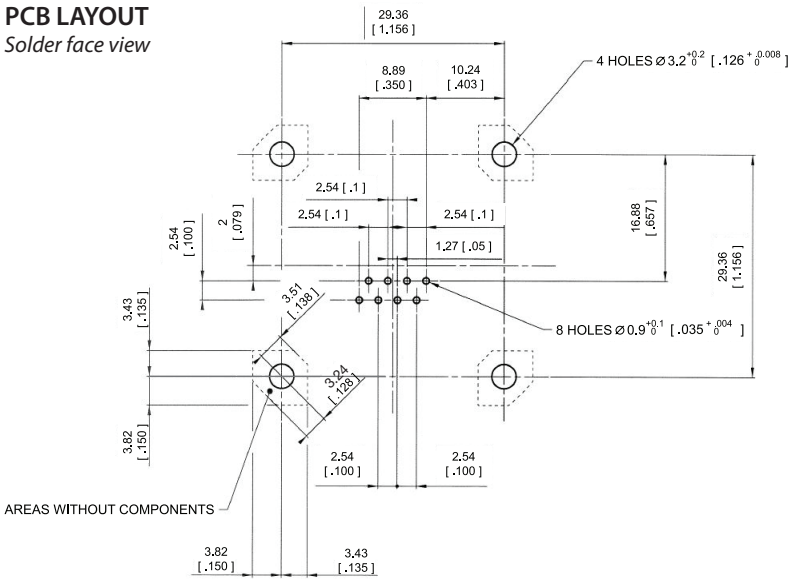
Part number *	Plating available	Part number
	Nickel - *ROHS compliant*	**RJF TV 2S X 5N F459**
	Olive drab cadmium	**RJF TV 2S X 5G F459**
	Black Zinc Nickel - *ROHS compliant*	**RJF TV 2S X 5ZN F459**

* *new p/n - before it was RJFTV25GF459 or RJFTV25NF459*

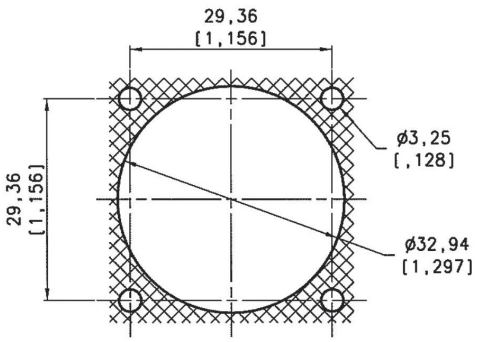
X to be replaced by the letter of the coding position you need (A, B, C, or D)



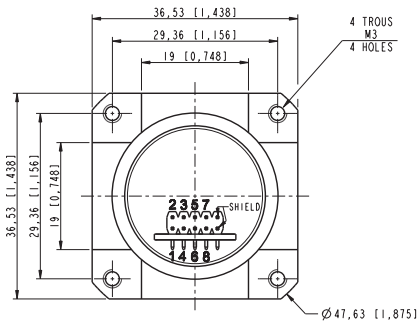
PCB LAYOUT
Solder face view

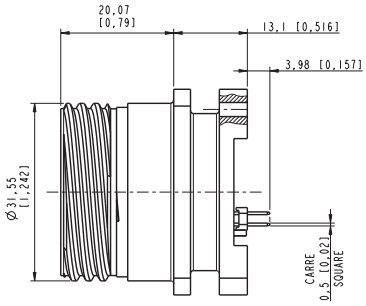


Panel drilling

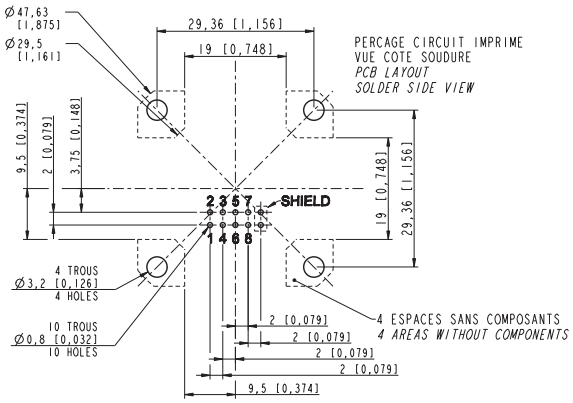


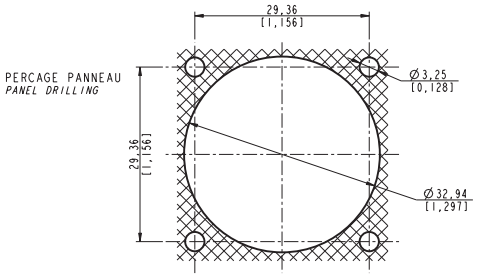
Now available with same distance between flange and PCB than the 38999 stand off one.
So you can use a 38999 stand off and a RJ45 stand off in the same implementation.



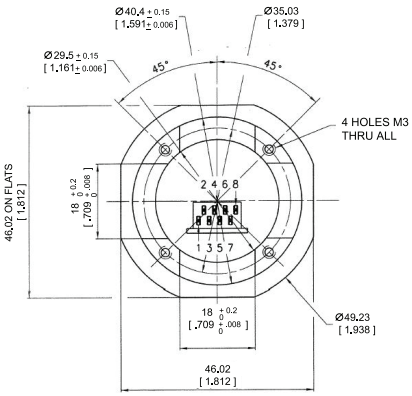


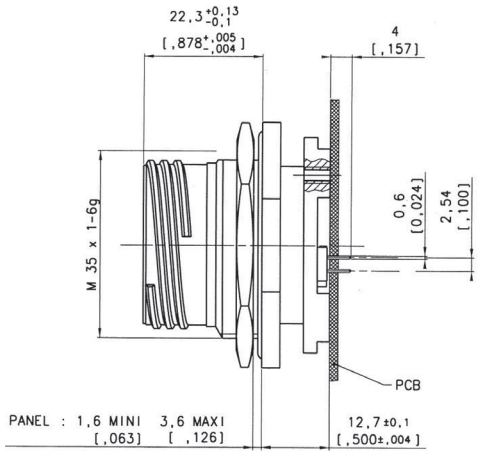
Part number: 36542
Plating: olive drab cadmium





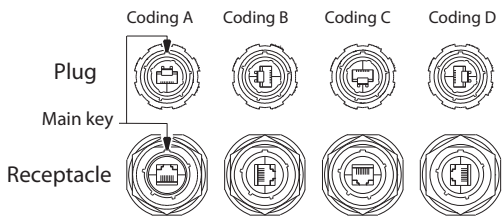
Jam nut receptacle





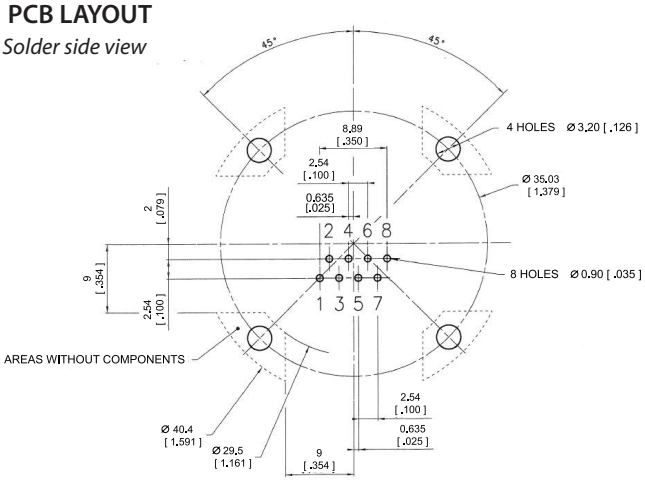
Part number	Plating	Part number
	Nickel - *ROHS compliant*	**RJF TV 7S X 5N F459**
	Olive drab cadmium	**RJF TV 7S X 5G F459**
	Black Zinc Nickel - *ROHS compliant*	**RJF TV 7S X 5ZN F459**

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

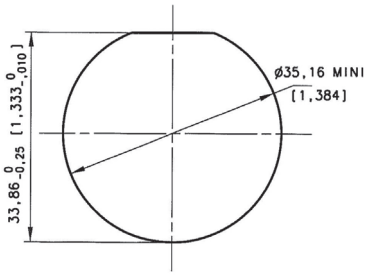


PCB LAYOUT

Solder side view

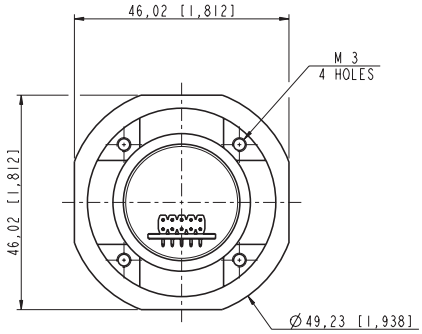


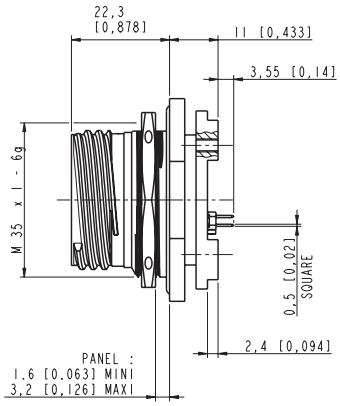
Panel Drilling



NEW

Now available with same distance between flange and PCB than the 38999 stand off one. So you can use a 38999 stand off and a RJ45 stand off in the same implementation.



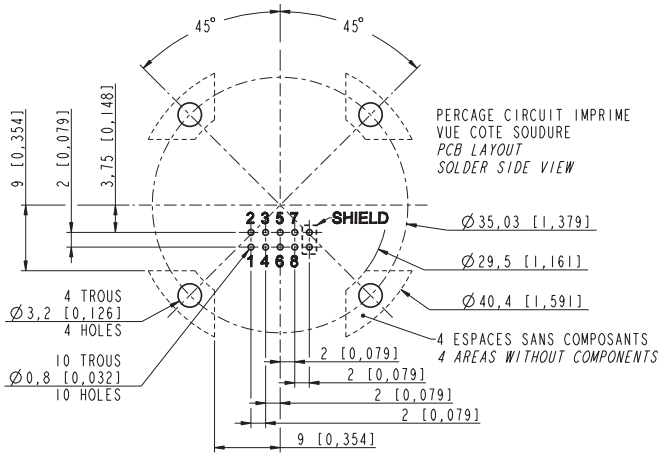


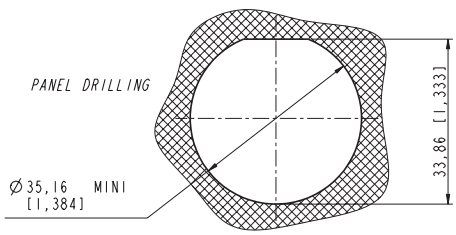
Part number: 36540

Jam nut receptacle, olive drab cadmium plating.

PCB LAYOUT

Solder side view





Amphenol

RJF TV

Transversally sealed receptacles

ROHS COMPLIANT N, B & BZ

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.
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

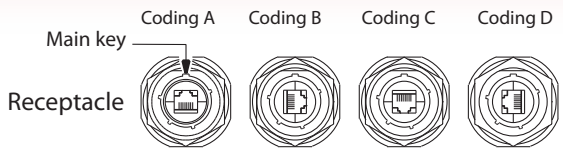
10 BaseT, 100 BaseTX and 1000 BaseT networks Cat 5e per TIA/EIA 568B and ClassD per ISO/IEC 11801

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**.



Example :
RJFTV 2S **A**2 G 15 100BTX

Part number code

Series **RJFTV:** MIL-DTL-38999 Series III	**RJF TV**	**7S**	**A**	**2**	**G**	**03 100BTX**
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 **1RA:** right angle female RJ45 **2:** RJ45 Cordset						
Shell material & finish **N:** aluminium shell - nickel plating - *ROHS compliant* **G:** aluminium shell - olive drab cadmium plating **BZ:** marine bronze shell - *ROHS compliant* ***Nota**: receptacle inserts are metallized*			**ZN:** aluminium shell - black zinc nickel plating - *ROHS compliant*			
Cordset length *(For Receptacles with "2" Back Termination only) - Other lengths are available on demand* **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] **xx OPEN**: open cable - with no plug at the end (**xx** to be replaced by the cordset length 03, 05, 10, or 15 - see above)						
Remark: cabling configuration: 100 BTX = 568B (Ethernet specification)						

Examples: *- series III, sealed jam nut receptacle, A coding, with female RJ45 back termination, olive drab cadmium plating:* ***RJF TV 7SA 1 G***
- series III, sealed jam nut receptacle, A coding, 1.5m [59.05"] 100 BTX cordset, olive drab cadmium plating: ***RJF TV 7SA 2 G15 100BTX***

Amphenol

RJF TV
Hermetic receptacles

ROHS COMPLIANT N, B & BZ

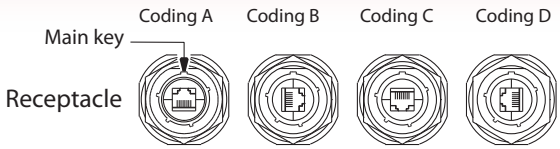
In some applications, a transversal hermiticity for the receptacle is a « must ».
This will prevent gas from going through the receptacle when plug or cap are not mated to the receptacle.
The hermetic solution (version "H") has a compound at the rear of the receptacle as shown on the picture.
Helium 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 networks
Cat 5e per TIA/EIA 568B and ClassD per ISO/IEC 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**.



Example :
RJFTV 2H **A**2 N 15 100BTX

Part number code

Series **RJFTV:** MIL-DTL-38999 series III	**RJF TV**	**7H**	**A**	**2**	**G**	**03 100BTX**
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 **1RA:** right angle female RJ45 **2:** RJ45 Cordset						
Shell material & finish **N:** aluminium shell - nickel plating - *ROHS compliant* **G:** aluminium shell - olive drab cadmium plating **BZ:** marine bronze shell - *ROHS compliant* **ZN:** aluminium shell - black zinc nickel plating - *ROHS compliant* *Nota: receptacle inserts are metallized*						
Cordset length *(for receptacles with "2" back termination only) - Other lengths are available on demand* **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] **xx OPEN**: open cable - with no plug at the end (**xx** to be replaced by the cordset length 03, 05, 10, or 15 - see above)						
Remark: cabling configuration: 100 BTX = 568B (Ethernet specification)						

Examples: *- Series III, sealed jam nut receptacle, A coding, with female RJ45 Back termination, olive drab cadmium plating:* ***RJF TV 7HA 1 G***
- Series III, sealed jam nut receptacle, A coding, 1.5m [59.05"] 100 BTX cordset, olive drab cadmium plating : ***RJF TV 7HA 2 G15 100BTX***

RJF TV

Special plug 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.

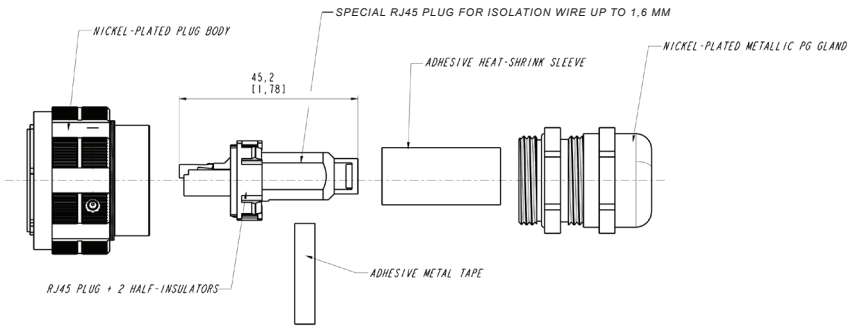
Remark:
- compatible with any RJF TV receptacle
- for cables which are not compatible with standard RJ45 plug

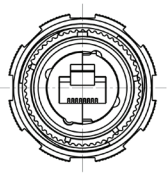
Applications
- Robotics
- Industrial process control
- CNC machines
- Special machines
- Oil & Gas
- Motion control
- Data acquisition and transmission in harsh environment
- Tele-maintenance

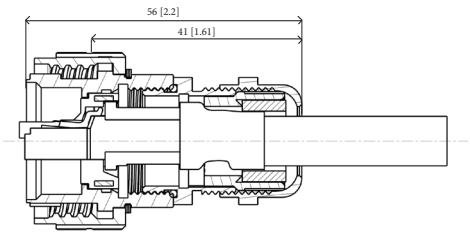
Data transmission
10 BaseT, 100 BaseTX and 1000 BaseT networks Cat 5e per TIA/EIA 568B and ClassD per ISO/IEC 11801

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 - 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
- Temperature range: - 40°C / +85°C





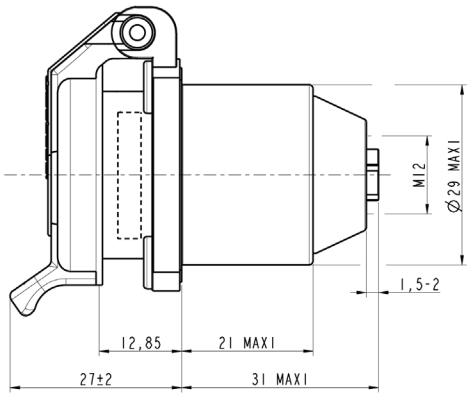


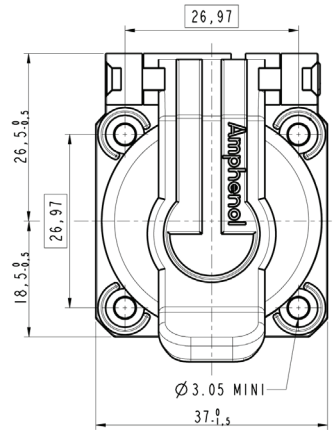
Part number	Plating	P/N
	Nickel - *ROHS compliant*	**35660**
	Olive drab cadmium	**35660G**
	Black Zinc Nickel - *ROHS compliant*	**35660ZN**

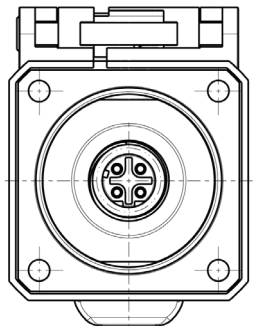
RJ45/M12 adaptor

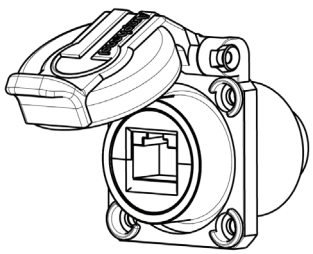
RJ45/M12 adaptors allow to give an access point with RJ45 on M12 D coded based networks.
Especially used in Railway applications.

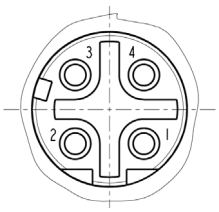
Part number : 35655
Nickel plating.



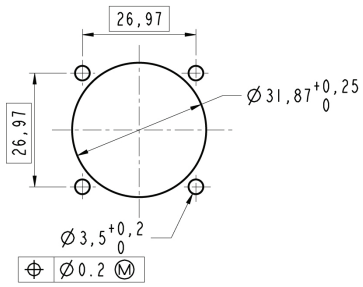








M12-D	RJ45 contact position
1	1
2	3
3	2
4	6



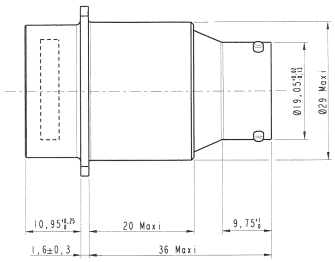
Special RJ45 adaptor

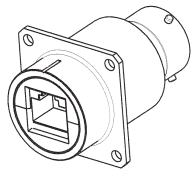
For Military & Commercial Aeronautics

NEW

At the rear of the adaptor, the connection is for connectors type EN3646.

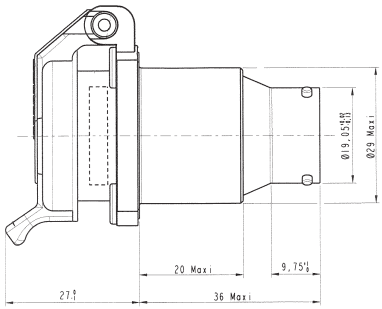
Adaptor RJ45 only

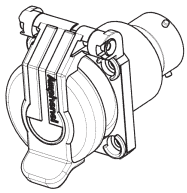


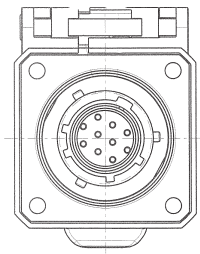


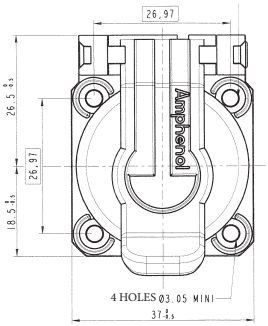
Part number	Coding
35629	N
35632	Y

Adaptor RJ45 + Self Closing Cap





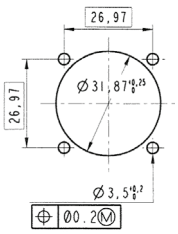




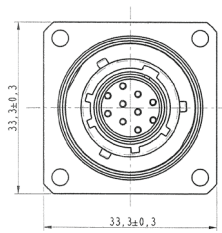
Part number	Coding
35630	N
35631	Y

For all options:

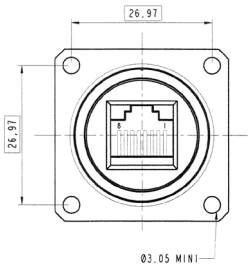
Panel Drilling



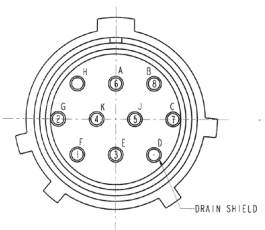
Coding N

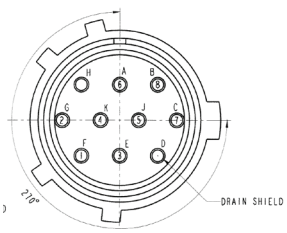


12-10 Male contact EN3155



Coding Y

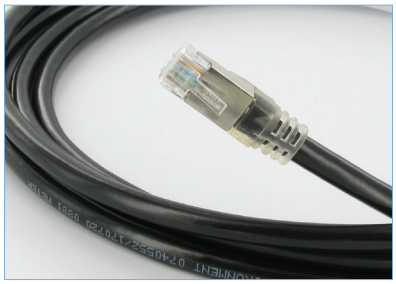




CAT 5E CABLE

High reliability Cat 5e Ethernet cable & cordsets

ROHS COMPLIANT



General construction

A 4 pair, 24 AWG, 100 Ohm SFTP round patch cable, designed to the ISO / IEC 11801 Category 5e requirements (cat 5e on 76m). The cable contains 4 twisted pairs, 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
- Resistance to microbial/fungus growth acc. IEC60068-2-10 Environmental Testing – Test J degree of mould growth 1
- Glossy finish
- UV resistant
- High flexibility

Applications

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

Datas for the cable alone only (without RJ45 plug)

Physical characteristics

CONDUCTORS	24 AWG (0,25 mm²) tinned copper, 7x0.20 mm
INSULATION	Color coded 568-B, linear low Density 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	40 lbs / mft (59 kg/km)
OUTSIDE DIAM.	0.28" (7.1 mm) nom.
MIN BEND RADIUS *(During installation)*	67.5mm (9x O. D.)
MIN BEND RADIUS *(During operation)*	37.5mm (5 x O.D.)
MIN FLEXES TO FAILURE	Passes IEC 61156-6 requirements
TEMPERATURE	Transport and fixed installation : -50°C *(-58°F)* up to + 85°C *(185°F)* Installation and flexible use : -40°C *(-40°F)* up to + 85°C *(185°F)*

Cordsets with a RJ45 plug overmolded on each end

Length (m/ft)	Part number
0,76 m / 2,5 ft	RJF SFTP 5E 0076
1,00 m / 3.28 ft	RJF SFTP 5E 0100
1,52 m / 5 ft	RJF SFTP 5E 0152
3,05 m / 10 ft	RJF SFTP 5E 0305
4,57 m / 15 ft	RJF SFTP 5E 0457
5,00 m / 16.4 ft	RJF SFTP 5E 0500
6,00 m / 19.68 ft	RJF SFTP 5E 0600
6,24 m / 20.46 ft	RJF SFTP 5E 0624
7,62 m / 25 ft	RJF SFTP 5E 0762
8,00 m / 26.24 ft	RJF SFTP 5E 0800
10,00 m / 32.78 ft	RJF SFTP 5E 1000
14,00 m / 45.92 ft	RJF SFTP 5E 1400
15,25 m / 50 ft	RJF SFTP 5E 1525
22,87 m / 75 ft	RJF SFTP 5E 2287
30,5 m / 100 ft	RJF SFTP 5E 3050
45,75 m / 150 ft	RJF SFTP 5E 4575
50,00 m / 164 ft	RJF SFTP 5E 5000
61,00 m / 200.08 ft	RJF SFTP 5E 6100

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

DC Resistance	96 Ohms/Km
Impedance *(1-100 MHz)*	100 +/- 15 Ohms

Frequency	Insertion loss *(dB/100m)*	N.E.X.T. *(Near-End Crosstalk Loss)*
772 KHz	2.70 dB	64 dB min.
1 MHz	3.15 dB	62 dB min.
4 MHz	6.45 dB	53 dB min.
10 MHz	9.90 dB	47 dB min.
16 MHz	12.3 dB	44 dB min.
20 MHz	13.8 dB	42 dB min.
31.25 MHz	17.7 dB	40 dB min.
62.5 MHz	25.6 dB	35 dB min.
100 MHz	33 dB	32 dB min.

Capacitance (1 kHz)	46nF/km nom.
LCL	43 dB min. @ 64 KHz
Capacitance unbalance	3.4 pF/m max. @ 1KHz (wire to ground)
Insulation resistance	150 M Ohm min.
Voltage rating	230 VMS
Dielectric strength	VAC/1 min - 700 V/Min
Propagation delay (100 MHz)	5.2 ns/m max.
Delay skew	20 ns/100m max. @ 1-100 MHz
Resistance unbalance	3% max.
Structural return loss (1-20 MHz)	23db/100m min.
Spark test (tested during production)	3 KV
Velocity of propagation	67% nom.

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

Length (m / ft)	Part number
100 m / ~328 ft	190-038045-00
300 m / ~984 ft	190-038045-01

Amphenol

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 / IEC 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
- Resistance to microbial/fungus growth acc. IEC60068-2-10 Environmental Testing – Test J degree of mould growth 1
- 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.

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	Transport and fixed installation : -50°C *(-58°F)* up to + 85°C *(185°F)* Installation and flexible use : -40°C *(-40°F)* up to + 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

CAT 6A CABLE

High reliability Cat 6A Ethernet cable & cordsets

NEW

ROHS COMPLIANT

General construction

A 4 pairs, 26 AWG, 100 Ohm SFTP round patch cable, designed to the ISO / IEC 11801 Category 6A 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
- Resistance to microbial/fungus growth acc. IEC60068-2-10 Environmental Testing – Test J degree of mould growth 1
- Glossy finish
- UV resistant
- High flexibility

Applications

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

Datas for the cable alone only (without RJ45 plug)

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	5.7 dB	66.3 dB min.
8 MHz	8.0 dB	61.8 dB min.
10 MHz	8.9 dB	60.3 dB min.
16 MHz	11.2 dB	57.2 dB min.
20 MHz	12.6 dB	55.8 dB min.
25 MHz	14.1 dB	54.3 dB min.
31.25 MHz	15.8 dB	52.8 dB min.
62.5 MHz	22.5 dB	48.4 dB min.
100 MHz	28.7 dB	45.3 dB min.
200 MHz	41.4 dB	40.8 dB min.
250 MHz	46.6 dB	39.3 dB min.
300 MHz	51.4 dB	38.1 dB min.
400 MHz	60.1 dB	36.3 dB min.
500 MHz	67.9 dB	34.8 dB min.

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 (500 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	191-031190-00
300 m / ~984 ft	191-031190-01

Physical characteristics

Conductors	26 AWG (0,14 mm²) tinned copper
Insulation	Density 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	Transport and fixed installation : -50°C *(-58°F)* up to + 85°C *(185°F)* Installation and flexible use : -40°C *(-40°F)* up to + 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 6A 0075
1,00 m / *3,28 ft*	RJF SFTP 6A 0100
1,50 m / *4,92 ft*	RJF SFTP 6A 0150
2,00 m / *6,56 ft*	RJF SFTP 6A 0200
2,50 m / *8,20 ft*	RJF SFTP 6A 0250
3,00 m / *9,84 ft*	RJF SFTP 6A 0300
3,50 m / *11,48 ft*	RJF SFTP 6A 0350
4,00 m / *13,12 ft*	RJF SFTP 6A 0400
4,50 m / *14,76 ft*	RJF SFTP 6A 0450
5,00 m / *16,40 ft*	RJF SFTP 6A 0500
6,00 m / *19,68 ft*	RJF SFTP 6A 0600
7,00 m / *22,96ft*	RJF SFTP 6A 0700
8,00 m / *26,24 ft*	RJF SFTP 6A 0800
9,00 m / *29,52 ft*	RJF SFTP 6A 0900
10,00 m / *32,80 ft*	RJF SFTP 6A 1000
15,00 m / *49,20 ft*	RJF SFTP 6A 1500
20,00 m / *65,60 ft*	RJF SFTP 6A 2000
25,00 m / *82,00 ft*	RJF SFTP 6A 2500
30,00 m / *98,40 ft*	RJF SFTP 6A 3000
35,00 m / *114,80 ft*	RJF SFTP 6A 3500
40,00 m / *131,20 ft*	RJF SFTP 6A 4000
45,00 m / *147,60 ft*	RJF SFTP 6A 4500
50,00 m / *164,00 ft*	RJF SFTP 6A 5000
60,00 m / *196,80 ft*	RJF SFTP 6A 6000

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NOTES