Field Attachable and Moulded Connectors

The RJ-Lnxx® range of connectors achieves an IP67 rating by using a rugged outer shell that fully seals the RJ-45 connector from environmental factors like water, dirt, dust and oil. Field-attachable male connectors provides maximum flexibility by allowing the machine / system builder to affix the necessary cable length themselves when either the cable length is unknown or the connector needs to be attached after cable installation for example through ducting or conduit.

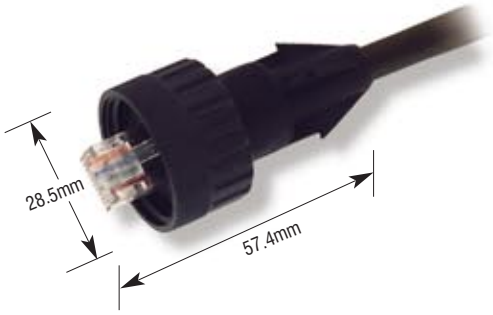
The pre-wired male and female moulded connectors totally eliminate any possibility of termination errors during on-site installation and combine great mechanical strength with IP67 ingress protection to provide maximum data integrity under the most arduous of operating conditions. Male connectors mate directly with the whole range of female receptacles and also provide the data link between the RJ-Lnxx IP67 Ethernet switch, Ethernet I/O module and the datacoms network. The female connectors are used on equipment where there is limited room to fit a female receptacle and are also used to extend network length in male/female connector configurations.

Cable

To ensure the connectors can be used in a wide range of industrial and harsh external applications, Woodhead has developed a number of Category 5e datacoms cables:

- Polyurethane (PUR) jacketed cables are the natural choice for factory environments, providing maximum resistance to oil, grease and general contaminants encountered on the shop floor.
  RJCAB-V cable has solid conductors, is suitable for fixed applications and allows transmission distances of up to 100metres.
  RJCAB-C cable has a stranded core construction and is suitable where the connector is subject to limited or infrequent movement. Transmission distances are limited to 30metres due to the inferior attenuation properties of stranded conductors. Both cables provide a good degree of EMC protection due to the FTP foil screen construction.
- Two cables are available for external applications and for areas within factory environments where equipment washdown is a regular occurrence such as food processing. Featuring a rugged black Polyethylene (PE) outer jacket that resists cutting or ripping, the cables are waterproof and U/V stable against sunlight.
  RJCAB-X has solid core unshielded (UTP) construction and is particularly suited to fixed external applications. RJCAB-Y provides additional EMC and physical protection due to the addition of a foil (FTP) screen. Both cables are suitable for transmission lengths of up to 100m.
- RJCAB-P has been created for the most severe of uses. Featuring a Kevlar weave protecting the stranded flexible conductors and a thick waterproof PUR outer jacked, the cable is particularly suited for outdoor mobile applications where there is a risk of crushing standard cables and losing data communications as a result. Recommended maximum transmission length is 30metres due to the stranded core construction.
- For repetitive movement applications such as dragchains, RJCAB-D should be used.

In addition to being fitted to the pre-terminated moulded connectors, all the above cables can be supplied in 50m or 305m reels for use either with field attachable connectors or for applications where industrial grade data cable without connectors is required, see page 10.







Male Field Attachable Connectors



Fitted with standard shielded Cat 5e male plugs
Available for both solid core and stranded (patch) core cable
Accepts 24/26 AWG/0.50mm FTP/UTP datacoms cable with outer jacket O/D from 2.5mm – 6.5mm
Uses standard AMP style shielded RJ-45 crimp tools
10/100 Base TX, 568A, 568B compatible
Ingress protection to IP67, Cat 5e rated

Part Number	Description
ENSAM315	Field attachable connector for solid core FTP/UTP cable
ENQAM315	Field attachable connector for stranded (patch) core FTP/UTP cable
RJ56-0200-01	Replacement shielded male plug for ENSAM315
RJ56-0200-02	Replacement shielded male plug for ENQAM315

Male and Female Moulded Connectors

RJoLnxx® Harsh-Duty DataCom Solutions

The RJ-Lnxx® range of moulded connectors are available in a number of head and cable configurations to suit the majority of industrial and commercial applications. Being pre-wired and individually tested, connectivity is guaranteed on installation and also eliminates the cost, complexity and potential wiring errors associated with on-site termination.
Industrial male connectors provide a robust data connection when mated to the range of RJ-Lnxx IP67 rated female receptacles, Ethernet switches, Ethernet I/O modules and closure caps.

Industrial female connectors are used where either there is limited cabinet space for female receptacles or there is a need to extend the data link in hostile environments as part of a male/female double ended connector. Again, IP67 ingress protection is assured when mated with RJ-Lnxx male connectors or closure caps.
The two principle datacoms wire maps are available as standard:
10/100 Base TX 568A – 4 pair, 8 wire – Example part number ENV**2**115M020
10/100 Base TX 568B – 4 pair, 8 wire – Example part number ENV**3**115M020
Where necessary, 'pure Ethernet' 2 pair, 4 wire connectors (Pin wiring 1,2,3,6) can be specified as an option eg. ENV1115M020, however 4 pair, 8 wire versions provide maximum data connectivity potential and are therefore strongly recommended.

In conjunction with the cable descriptions opposite, use the cable selector guide below to choose the correct cable by application

Cable ref	Description	Typical part no.	Transmission distance 100M	Transmission distance 30M	Flexible Applications	EMC	Oil/Dirt	External Water, U/V
RJCAB-**V**	FTP/Solid Conductor/ PUR Jacket	EN**V**3115M020	•			•	•	
RJCAB-**C**	FTP/Stranded Conductor/ PUR Jacket	EN**C**3115M020		•	•	•	•	
RJCAB-**D**	FTP/Stranded Conductor/ PUR Jacket	EN**D**3115M020		•	•	•	•	
RJCAB-**P**	FTP/Stranded Conductor/ PUR Jacket/Kevlar	EN**P**3115M020		•	•	•	•	•
RJCAB-**X**	UTP/Solid Conductor/ PE Jacket	EN**X**3115M020	•					•
RJCAB-**Y**	FTP/Solid Conductor/ Pe Jacket	EN**Y**3115M020	•			•		•
The following UL/CSA cables are available as an option								
RJCAB-**S**	FTP/Solid Conductor/ PUR Jacket	EN**S**3115M020	•			•	•	
RJCAB-**Q**	UTP/Stranded Conductor/ PVC Jacket	EN**Q**3115M020		•	•			

Connector Head Configurations

The RJ-Lnxx moulded connector range comprises male moulded connectors, female moulded connectors and standard RJ-45 male connectors which are available in the following configurations, with other variations available on request. The table below details the range of connector configuration available as standard, using **V** cable as an example, this being the preferred cable choice for the majority of applications.

	Length	10/100 BaseTX, 568A	10/100 BaseTX, 568B
Industrial Male – Free End 	1m	EN**V**2105M010	EN**V**3105M010
	2m	EN**V**2105M020	EN**V**3105M020
	3m	EN**V**2105M030	EN**V**3105M030
	4m	EN**V**2105M040	EN**V**3105M040
	5m	EN**V**2105M050	EN**V**3105M050
Industrial Male – Industrial Male 	1m	EN**V**2115M010	EN**V**3115M010
	2m	EN**V**2115M020	EN**V**3115M020
	3m	EN**V**2115M030	EN**V**3115M030
	4m	EN**V**2115M040	EN**V**3115M040
	5m	EN**V**2115M050	EN**V**3115M050
Industrial Male – Standard Male 	1m	EN**V**2135M010	EN**V**3135M010
	2m	EN**V**2135M020	EN**V**3135M020
	3m	EN**V**2135M030	EN**V**3135M030
	4m	EN**V**2135M040	EN**V**3135M040
	5m	EN**V**2135M050	EN**V**3135M050
Industrial Female – Free End 	1m	EN**V**2205M010	EN**V**3205M010
	2m	EN**V**2205M020	EN**V**3205M020
	3m	EN**V**2205M030	EN**V**3205M030
	4m	EN**V**2205M040	EN**V**3205M040
	5m	EN**V**2205M050	EN**V**3205M050
Industrial Female – Industrial Female 	1m	EN**V**2225M010	EN**V**3225M010
	2m	EN**V**2225M020	EN**V**3225M020
	3m	EN**V**2225M030	EN**V**3225M030
	4m	EN**V**2225M040	EN**V**3225M040
	5m	EN**V**2225M050	EN**V**3225M050
Industrial Female – Industrial Male 	1m	EN**V**2215M010	EN**V**3215M010
	2m	EN**V**2215M020	EN**V**3215M020
	3m	EN**V**2215M030	EN**V**3215M030
	4m	EN**V**2215M040	EN**V**3215M040
	5m	EN**V**2215M050	EN**V**3215M050

Lengths above 5 metres are available in multiples of 5m. e.g. ENV2135M100 (10M), ENV2135M250 (25m)