

Ethernet Connectivity

Rugged, industrial-grade physical media components for plant-wide Ethernet connections

Ethernet networking is a growing solution for industry applications, and Rockwell Automation offers a full suite of Ethernet-enabled products, ranging from Armor I/O, safety and PLCs to HMI, motion and drives. To complement this constantly growing line of industrial Ethernet products, Rockwell Automation introduces a complete portfolio of industrial-grade Ethernet physical media, including RJ45 connectivity, M12 Connectivity and RJ45 Accessories. More robust than standard, off-the-shelf Ethernet cabling, Allen-Bradley Ethernet media is specifically designed for use in harsh industrial environments, combining a specially-designed cable with rugged connector construction to ensure reliability and flexibility.

Simple Yet Robust Connections

Understanding the importance of a dependable Ethernet network, Rockwell Automation offers a full suite of Ethernet connectivity with IP20 and IP65/67 rated products. Ethernet provides various networking strategies, with no limitations to total network size like DeviceNet media. In addition, Ethernet supports various topologies for flexible networking.

The RJ45 Patchcords and Cordsets have been mechanically and electrically tested using category 5e cables with category 6 connectors. This design allows for more terminations in a single channel and stronger signal strength with reduced internal noise.

Allen-Bradley M12 Ethernet cables have an IP67 overmolded connector with a twisted pair cable, which is durable for flex applications and provides better performance in applications with noise and vibration. The overmolded housing protects the integrity of the signal providing a reliable connection.

Accessories include a traditional crimp connector, rated to category 5e with a ruggedized boot, and an Insulation Displacement RJ45 connector (IDC) rated to category 6. A simple three-step solution, the RJ45 IDC allows for reliable connection--simply remove the cable jacket and place the conductors into the proper location.



Features:

- RJ45 Connectivity – Male RJ45 Patchcords and Cordsets
 - Teal and Red Robotic TPE Cable (4 pair)
 - Teal Robotic TPE Cable (2 pair)
 - Teal PVC Riser Cable (4 pair)
 - Red Plenum Cable (4 pair)
- M12 Connectivity – Overmolded Male M12 D Code Patchcords and Cordsets
 - Teal Robotic TPE Cable (2 pair)
- RJ45 Accessories
 - Male RJ45 Insulation Displacement Connectors (IDC)
 - Male RJ45 Crimp Connector with ruggedized boot
 - Crimp Tool Kit, includes crimper, cable stripper/cutter, conductor separator

Benefits:

- Cables have been designed by Rockwell for harsh environments and durable quality based on ODVA, MICE, EIA/TIA-568 standards.
- Twisted pairs preserve signal balance through the cable to provide noise immunity and return loss – no terminating shield required.
- Unshielded pressure extruded cable maintains maximum balance during flexing and thick conductors to resist signal degradation.
- M12 connectors offer an overmolded, IP67 solution RJ45 connectors offer a convenient strain relief, making it easier to reach into small areas to plug and unplug the connector.
- RJ45 IDC solution provides a simpler and more reliable assembling procedure – IDC connector may be re-terminated up to 5 times.

General Ordering Information

M12 D Coded Connectivity

Jacket Material	Number of Pins	Assembly Rating	Connector	Straight Male
TPE High Flex rated	4	24 AWG	Male M12 D Code to Male M12 D Code	1585D-M4TBDM-*
TPE High Flex rated	4	24 AWG	Male M12 D Code to Flying Leads	1585D-M4TB-*

* Replace symbol with 1 (1 m), 2 (2 m), 5 (5 m), 10 (10 m) for standard cable lengths.



RJ45 Connectivity

Jacket Material	Number of Conductors	Jacket Color	Wire Gauge	Nominal O.D mm (in)	Connector	Straight Male
TPE HighFlex	4	Teal	24 AWG	5.84mm (0.23in)	RJ45 Male to RJ45 Male	1585J-M4TBJM-*
TPE HighFlex	8	Teal		5.84mm (0.23in)		1585J-M8TBJM-*
TPE HighFlex	8	Red		5.84mm (0.23in)		1585J-M8VBJM-*
Riser PVC	8	Teal		5.84mm (0.23in)		1585J-M8PBJM-*

* Replace symbol with 1 (1 m), 2 (2 m), 5 (5 m), 10 (10 m) for standard cable lengths.



RJ45 Accessories

Description	Cat. No.
RJ45 Insulation Displacement Connector (IDC) – Cat.6	1585J-M8CC-H
RJ45 Crimp Connector with Boot – Cat.5e	1585J-M8CC-C
RJ45 Crimp Tool Kit	1585A-JCrimp



RJ45 Crimp Connector with Boot

Cable Spools

Jacket Material	Number of Conductors	Jacket Color	Wire Gauge	Nominal O.D mm (in)	Spool Cat. No.
TPE HighFlex	4	Teal	24 AWG	5.6mm (0.22in)	1585-C4TB-S*
TPE HighFlex	8	Teal		5.84mm (0.23in)	1585-C8TB-S*
TPE HighFlex	8	Red		5.84mm (0.23in)	1585-C8VB-S*
Plenum	8	Red		5.84mm (0.23in)	1585-C8MB-S*
Riser PVC	8	Teal		5.84mm (0.23in)	1585-C8PB-S*

* Replace symbol with 100 (100 m), 300 (300 m) or 600 (600 m) for standard cable lengths.



RJ45 Insulation Displacement Connector (IDC)



Ethernet Cable – 4 pair TPE High Flex

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