

Ethernet Media

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Patchcords & Field Attachables

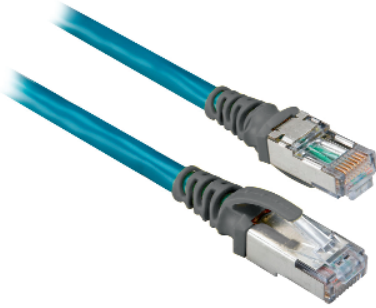
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Ethernet Media

Quick Selection Guide

	 1585 Ethernet Cable Spools	 1585J In-Cabinet Ethernet Media	 1585D On-Machine Ethernet Media	 1585B On-Machine Variant 1 Ethernet Media	 1585 Ethernet Bulkhead Connector
Description	2 and 4 pair, shielded and unshielded cable	RJ45 cordsets, patchcords, and field attachable connectors	IP67 M12 D Code cordsets, patchcords, and field attachable connectors	IP67 Variant 1 connectivity - RJ45 connection with protective housing	Sealed media based on 4-pin D-coded micro (M12) connections
Features	<ul style="list-style-type: none"> • Unshielded - PVC riser, high-flex TPE, plenum PVC • Shielded - PVC riser, high-flex, and halogen-free PUR, PVC 600V 	<ul style="list-style-type: none"> • Available in 2 and 4 pair • Shielded and unshielded cable types • Rugged strain relief for secure connection 	<ul style="list-style-type: none"> • Available in 2 pair • High-flex cable • Male/female, straight/right angle receptacle 	<ul style="list-style-type: none"> • Available in diecast zinc and thermoplastic • Overmolded patchcords • Male and female • Male plug • Female outlet • Female RJ45 to RJ45 coupler 	<ul style="list-style-type: none"> • 4-pin D-coded M12 • Threaded connection • IP67 rating • Rugged durable construction
Connections	Field attachable RJ45, M12, Variant 1 connectors	RJ45	<ul style="list-style-type: none"> • M12 D Code • M12 D Code to RJ45 • M12 D Code receptacle to RJ45 	Variant 1 - RJ45 with housing for IP67 applications	M12 RJ45 to D-coded micro
Available Models	Cable spools for customized applications	<ul style="list-style-type: none"> • Pre-assembled patchcords • IDC field attachable connectors for custom applications 	<ul style="list-style-type: none"> • Pre-assembled patchcords • IDC field attachable connectors for custom applications 	<ul style="list-style-type: none"> • Pre-assembled patchcords • IDC field attachable connectors for custom applications 	<ul style="list-style-type: none"> • IDC field attachable connectors • M12 to RJ45 bulkhead pass-thru
Additional Info	See page 7-5	See page 7-9	See page 7-10	See page 7-14	See page 7-22



As ethernet becomes increasingly utilized in industrial control, survival of physical media in rugged or harsh environments is becoming a necessity. The high speed of network protocol allows it to be used in applications where other networks fall short. EtherNet/IP™ uses both standard ethernet and TCP/IP technologies and an open application layer protocol called the Control and Information Protocol (CIP). This is the same application layer used in DeviceNet™ and ControlNet™ networks.

Rockwell Automation Cat5e ethernet cables are designed to supply a reliable network connection in harsh surroundings. By optimizing the balance of twisted pair conductors inside a robust Thermoplastic

Elastomer (TPE) jacket, data is protected from noise, chemicals, and mechanical issues to M₃l₃C₃E₃ environmental protection levels. The cable is available in RJ45 patchcords for IP20 applications or in four-pin D-coded M12 patchcords for IP67 applications where high vibration, fluids, and other contaminants can threaten the reliability of a network.

M12 D-code field attachable insulation displacement connectors (IDCs) are available in both shielded and unshielded housings with male or female connectors. Male eight-pin RJ45 connectors are available in both a crimp termination and a toolless IDCs for custom cabling.

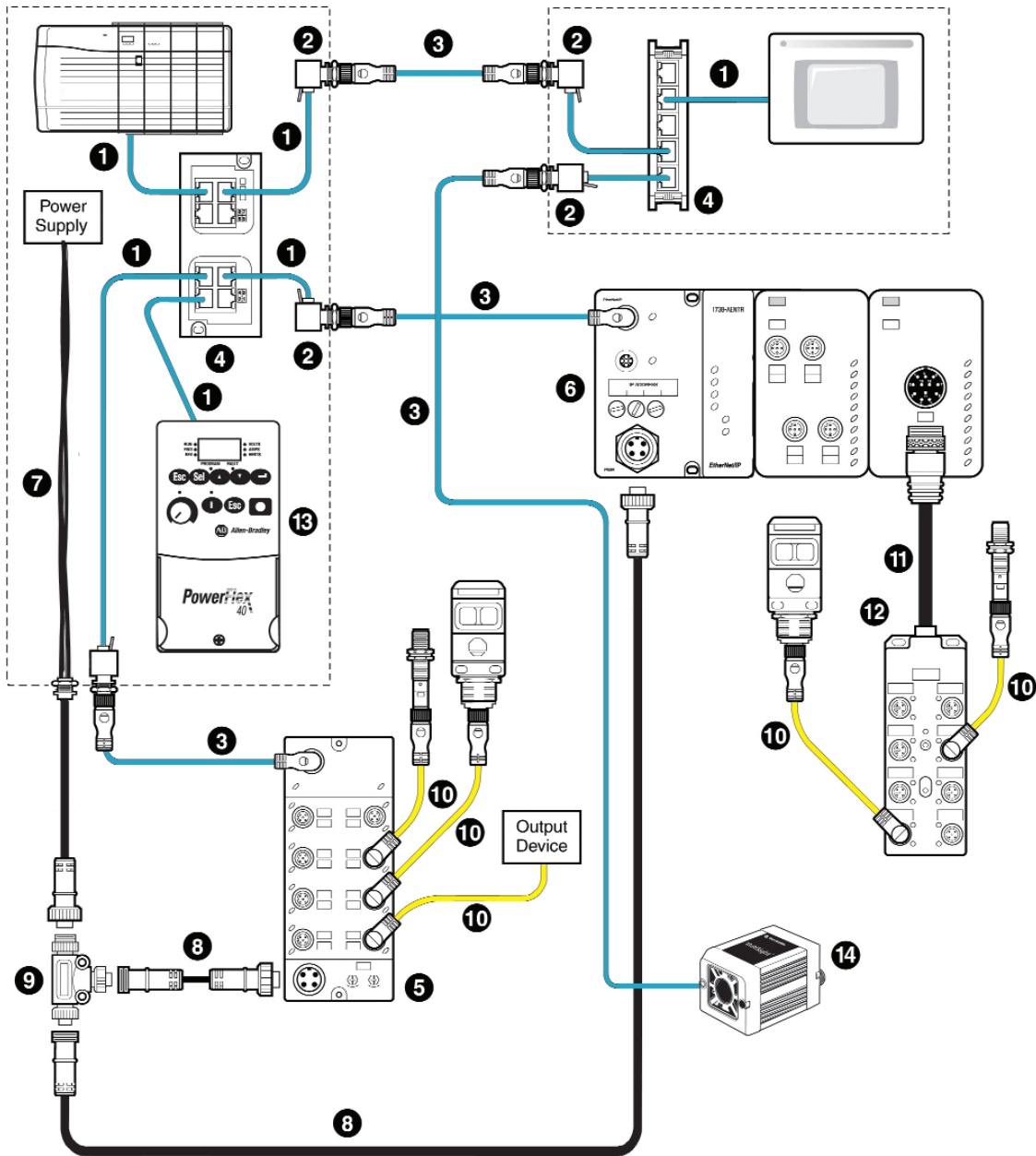
Rockwell Automation M12 to RJ45 bulkhead connectors provide an elegant transition for network architecture from an IP20 setting to an IP67 environment. The adaptor can be used to connect remote junction boxes or implement an On-Machine™ solution with Armor™ I/O products.

The Rockwell Automation ethernet media portfolio provides reliable connectivity to maintain network integrity and prevent costly downtime from troubleshooting.

M12 patchcords can be used with the following sensing products:

- 48MS MultiSight™ vision sensors
- 54RF, 55RF, and 56RF RFID ethernet control interfaces

Ethernet Architecture Layout



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- 14. MultiSight™See Sensors catalog



Unshielded Ethernet Cable Spool

Description

Rockwell Automation's Cat5e shielded and unshielded cable is designed to supply a reliable network connection in harsh surroundings. The high speed data rate allows more data to be transferred within a shorter period of time. By optimizing balance of twisted pair conductors inside a robust thermoplastic elastomer (TPE) jacket, data is protected from noise, chemicals, and mechanical issues to M₃l₃C₃E₃ environmental protection levels. Two and four pair TPE robotic flex cable is available for flex applications reaching 10 million cycles, as well as a riser PVC cable for standard applications and a plenum PVC cable for air duct applications. All ethernet media components are designed to perform above TIA 568-B.2 and ODVA ethernet standards. Rockwell Automation's Bulletin 1585 ethernet cables are optimized UTP and STP cables in many applications.



Specifications

Certifications	UL Listed and CEC
Conductor Material	Tinned copper stranded
Bend Radius	10 million cycles at 20 x diameter (TPE cable)
Data Rate	Up to 1 Gb/s, Cat 5e
Voltage	300V

Features

- Four- and eight-conductor styles
- Twisted pair unshielded cable types, Cat 5e
- Twisted pairs maintain signal balance through cable to provide high noise immunity and return loss
- Designed to ODVA EtherNet/IP™ specifications and ISO IEC 24702
- Suitable for high noise environments M₃l₃C₃E₃
- Riser PVC cables used for general purpose environments
- TPE robotic cable used for flex applications, transmission-tested to 10 million cycles
- Plenum PVC cable used for air duct applications
- TPE cable meets channel transmission performance to 10 million flexes

Cable and Color Code

Two-Pair	Four-Pair																								
																									
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Product Selection

Jacket Material	Cable Type	No. of Conductors	Jacket Color	Wire Size, AWG	Nominal Outer Diameter	Operating Temperature [C (F)]	Cable Rating	Cat. No.*
Robotic TPE	Unshielded	4 (two pair)	Teal	24	5.6 mm (0.22 in.)	-40...+75 (-40...+167)	Weld splatter, sunlight, and oil resistant; UL CM, CMX; cUL CM; Standard TIA 568-B, high flex rated	1585-C4TB-S100
		8 (four pair)			5.84 mm (0.23 in.)			1585-C8TB-S100
Robotic TPE	Unshielded	8 (four pair)	Red	24	5.84 mm (0.23 in.)	-40...+75 (-40...+167)	UL CMP; cUL CMP; Standard TIA 568-B	1585-C8VB-S100
Plenum								1585-C8MB-S100
Riser PVC	Unshielded	8 (four pair)	Teal	24	5.84 mm (0.23 in.)	-40...+75 (-40...+167)	UL CMR; cUL CMG; Standard TIA 568-B	1585-C8PB-S100

* Replace 100 (100 m) with 300 (300 m) or 600 (600 m) for additional standard cable lengths (example 1585-C4TB-S100 becomes 1585-C4TB-S600).

Ethernet Media

Cable Spools

Shielded Twisted Pair (Foil & Braided Shield)



Shielded Ethernet Cable Spool

Description

Rockwell Automation's Cat5e shielded and unshielded cable is designed to supply a reliable network connection in harsh surroundings. The high speed data rate allows more data to be transferred within a shorter period of time. By optimizing balance of twisted pair conductors inside a robust thermoplastic elastomer (TPE) jacket, data is protected from noise, chemicals, and mechanical issues to M₃L₃C₃E₃ environmental protection levels. Two and four pair polyurethane (PUR) robotic flex cable and enclosures are available for flex applications. High voltage, 600V Ethernet cable is available for use in cable tray with high voltage power cables. All ethernet media components are designed to perform above TIA 568-B.2 and ODVA ethernet standards. Rockwell Automation's Bulletin 1585 ethernet cables are optimized UTP and STP cables in many applications.

Specifications

Certifications	UL Listed and CEC
Conductor Material	Tinned copper stranded
Bend Radius	10 million cycles at 20 x diameter (TPE cable)
Data Rate	Up to 1 Gb/s, Cat 5e
Voltage	300V

Features

- Four- and eight-conductor styles
- Twisted pair shielded cable types, Cat 5e
- Twisted pairs maintain signal balance through cable to provide high noise immunity and return loss
- Designed to ODVA EtherNet/IP™ specifications and ISO IEC 24702
- Suitable for high noise environments M₃L₃C₃E₃
- Riser PVC cables used for general purpose environments
- PUR robotic cable used for flex applications, also Halogen-free
- 600V PVC cable designed to support high voltage applications
- 600V On-Machine rated cable for use in a cable tray shared with high voltage power cables

Cable and Color Code

Two-Pair	Four-Pair																								
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Product Selection

Jacket Material	Cable Type	No. of Conductors	Jacket Color	Wire Size, AWG	Nominal Outer Diameter	Operating Temperature [C (F)]	Cable Rating	Cat. No.*
Riser PVC	Foil and braided shield	8 (four pair)	Teal	26	5.84 mm (0.23 in.)	-40...+75 (-40...+167)	UL CMR; cUL CMG; TIA-568-B	1585-C8CB-S100
Robotic PUR		4 (two pair)			—	-40...+75 (-40...+167)	C(ETL)US TYPE CMX; TIA 568-B, Flex rated, Halogen-Free	1585-C4UB-S100
		8 (four pair)	6.2 ± 12 mm (0.244 in.)	-40...+75 ° (-40...+167 °)	C(ETL)US TYPE CMX; TIA 568-B, Flex rated, Halogen-Free	1585-C8UB-S100		
600V PVC		8 (four pair)	Teal	22	8.13 ± 0.38 mm (0.32 in.)	-20...+80 ° (-4...+176 °)	(UL) CMX, CMR; c(UL) CMG; (UL) PLTC or AWM 2570 80 °C 600V; TIA-568-B	1585-C8HB-S100
	Red		8.13 ± 0.38 mm (0.32 in.)		-20...+80 ° (-4...+176 °)	(UL) CMX, CMR; c(UL) CMG; (UL) PLTC or AWM 2570 80 °C 600V; TIA-568-B	1585-C8EB-S100	

* Replace 100 (100 m) with 300 (300 m) or 600 (600 m) for additional standard cable lengths (example 1585-C4TB-S100 becomes 1585-C4TB-S600).



RJ45 Cordset—600V

Specifications

Certifications	UL and cUL Listed
Outside Diameter	0.32 ± 0.015 in. (8.13 ± 0.38 mm)
Operating Temperature	-20...+80 °C (-4...+176 °F)
Cable Rating	UL, cUL TYPE CMG; UL PLTC or UL AWM 2570 80C 600V, TIA 568B

Description

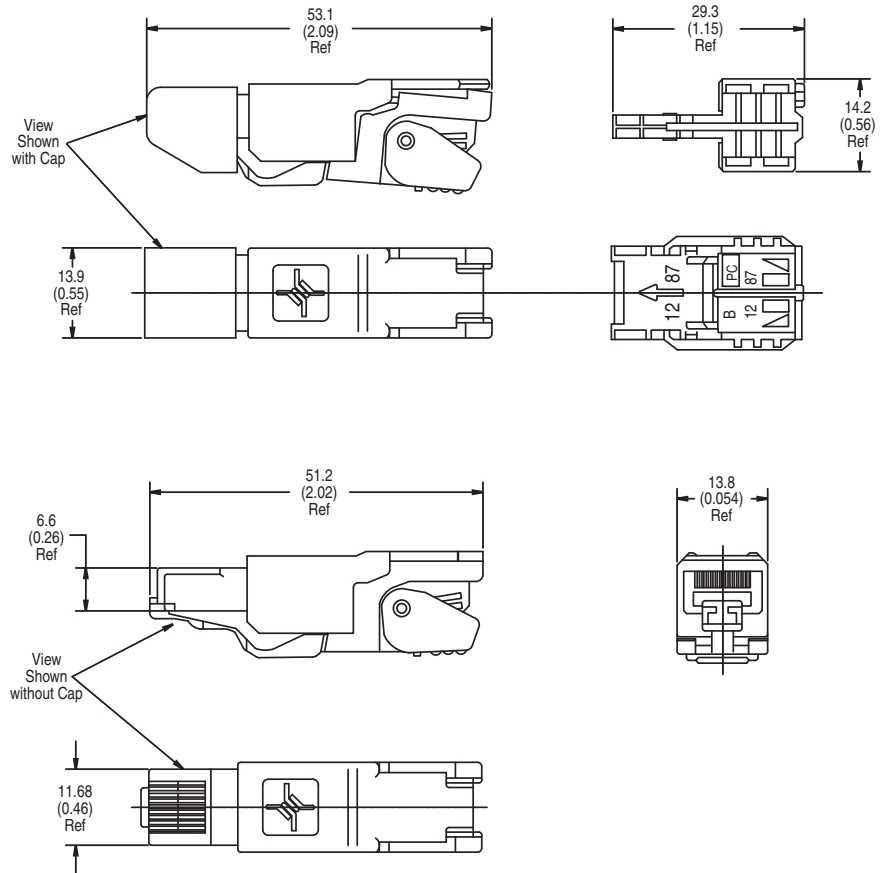
Rockwell Automation's Cat5e shielded and unshielded cable is designed to supply a reliable network connection in harsh surroundings. The high speed data rate allows more data to be transferred within a shorter period of time. By optimizing balance of twisted pair conductors inside a robust TPE jacket, data is protected from noise, chemicals, and mechanical issues to M₃L₃C₃E₃ environmental protection levels. Two and four pair PUR robotic flex cable is available for flex applications, reaching 10 million cycles, as well as a riser PVC cable for standard applications. High voltage, 600V ethernet cable is available for use in a cable tray with high voltage power cables. All ethernet media components are designed to perform above TIA 568-B.2 and ODVA ethernet standards. Rockwell Automation's Bulletin 1585 ethernet cables are optimized UTP and STP cables in many applications.

Features

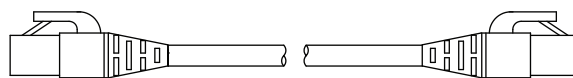
- Foil and braided shield, PVC, eight conductor (four pair)
- 600V PVC cable designed to support high voltage applications
- On-Machine rated cable for use in a cable tray shared with high voltage power cables
- RJ45 insulation displacement connector available for field terminations

Approximate Dimensions

RJ45 IDC Connector



RJ45 Cordset & Patchcord



Pinout

Color Code	Face View RJ45 Pinout	
A	1 White/Orange 2 Orange 3 White/Green 4 Blue 5 White/Blue 6 Green 7 White/Brown 8 Brown	TxData + TxData - Recv Data + Unused Unused Recv Data - Unused Unused

Product Selection

Jacket Material	Cable Type	No. of Conductors	Jacket Color	Wire Size, AWG	Nominal Outer Diameter	Operating Temperature [C (F)]	Cable Rating	Cat. No.*
600V PVC	Foil and braided shield	8 (four pair)	Teal	22	8.13 ± 0.38 mm (0.32 in.)	-20...+80 ° (-4...+176 °)	(UL) CMX, CMR; c(UL) CMG; (UL) PLTC or AWM 2570 80 °C 600V; TIA-568-B	1585-C8HB-S100
			Red					1585-C8EB-S100

* Replace 100 (100 m) with 300 (300 m) or 600 (600 m) for additional standard cable lengths (example 1585-C4TB-S100 becomes 1585-C4TB-S600).

RJ45 Cordset



Shielding	Cable Type	Cat. No.*
Foil and braided shield	8 conductor, teal 600V PVC	1585J-M8HB-2
		1585J-M8EB-2

RJ45 Patchcords

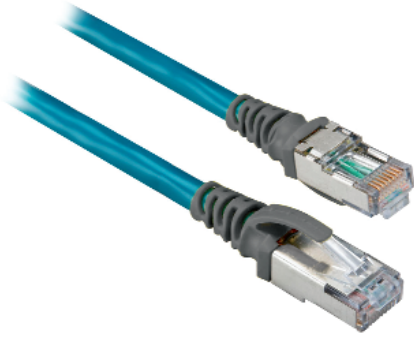


No. of Conductors	Jacket Material	Cable Type	Cable Rating	Cat. No.*
8	Teal 600V PVC	Foil and braided shield	(UL) CMX, CMR; c(UL) CMG; (UL) PLTC or AWM 2570 80 °C 600V; TIA-568-B	1585J-M8HBJM-2
	Red 600V PVC			1585J-M8EBJM-2

* Replace -2 (2 m) with 5 (5 m) or 10 (10 m) for additional standard cable lengths.

RJ45 IDC Connector

Insulation Diameter [mm (in.)]	Cable Diameter [mm (in.)]	Cat. No.
0.85...1.6 (0.033...0.063)	5...9 (0.197...0.354)	1585J-M8CC-SH



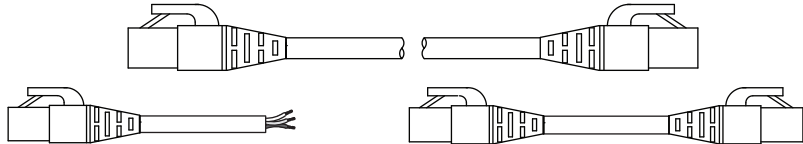
RJ45 Cordset

Specifications

Certifications	UL Listed
Connectors	RJ45 Male to RJ45 Male, Cat 6
Cable Type	Unshielded 4- and 8-conductor, 24 AWG, Industrial Cat5e Shielded 8-conductor 26 AWG Industrial Cat5e
Enclosure Type Rating	IP20
Nominal Outer Diameter	5.84 mm (0.23 in.)
Operating Temperature [C (F)]	-20...+60 ° (-4...+140 °)
Voltage	300V

Approximate Dimensions

Dimensions are in millimeters (inches). Illustrations are not drawn to scale.



Example of Cordset

Example of Patchcord

Features

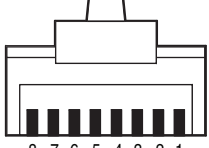
- Flex rated TPE, PVC, and Plenum cables for various applications
- Teal or red cable jacket
- Rugged strain relief and latch mechanism to maintain network integrity
- Suitable environments M₁L₁C₂E₂

Product Selection

Cordset

Shielding	Cable Type	Cat. No.*
Unshielded twisted pair	4 conductor, teal high-flex TPE	1585J-M4TB-2
	8 conductor, teal high-flex TPE	1585J-M8TB-2
	8 conductor, red high-flex TPE	1585J-M8VB-2
	8 conductor, teal riser PVC	1585J-M8PB-2
	8 conductor, red plenum PVC	1585J-M8MB-2
Foil and braided shield	8 conductor, teal riser PVC	1585J-M8CB-2
	4 conductor, teal high-flex PUR	1585J-M4UB-2
	8 conductor, teal high-flex PUR	1585J-M8UB-2
	8 conductor, teal 600V PVC	1585J-M8HB-2
	8 conductor, red 600V PVC	1585J-M8EB-2

Pinout

		Face View RJ45 Pinout			
		8-Pin			
					
		8-Pin		4-Pin	
Color Code	A	1 White/Orange	TxData +	1 White/Orange	TxData +
		2 Orange	TxData -	2 Orange	TxData -
		3 White/Green	Recv Data +	3 White/Green	Recv Data +
		4 Blue	Unused	4 NA	—
		5 White/Blue	Unused	5 NA	—
		6 Green	Recv Data -	6 Green	Recv Data -
		7 White/Brown	Unused	7 NA	—
		8 Brown	Unused	8 NA	—

Patchcords

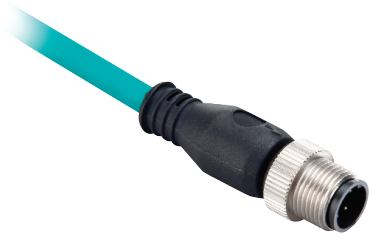
No. of Conductors	Jacket Material	Cable Type	Cable Rating	Cat. No.*
4	Teal high-flex TPE	Unshielded twisted pair	Weld splatter, sun light and oil resistant; UL CMG, CMX; cUL CMG; Standard TIA 568-B, flex rated	1585J-M4TBJM-2
	Teal high-flex TPE			1585J-M8TBJM-2
8	Red high-flex TPE			1585J-M8VBJM-2
	Teal Riser PVC			1585J-M8PBJM-2
	Red Plenum		1585J-M8MBJM-2	
4	Teal high-flex PUR	Foil and braided shield	C(ETL)US TYPE CMX; TIA 568-B, flex-rated, halogen-free	1585J-M4UBJM-2
	Teal Riser, PVC		UL CMR; CUR CMG, TIA B	1585J-M8CBJM-2
8	Teal high-flex PUR		C(ETL)US TYPE CMX; TIA 568-B, flex-rated, halogen-free	1585J-M8UBJM-2
	Teal 600V PVC		(UL) CMX, CMR; c(UL) CMG; (UL) PLTC or AWM 2570 80 °C 600V; TIA-568-B	1585J-M8HBJM-2
	Red 600V PVC		1585J-M8EBJM-2	

* Replace -2 (2 m) with 5 (5 m) or 10 (10 m) for additional standard cable lengths.

Accessories

Description	Cat. No.
RJ45 insulation displacement connector (IDC)	1585J-M8CC-H
RJ45 crimp connector with boot *	1585J-M8CC-C

* One item includes a quantity of 50.



4-Pin M12 D-Code Cordset

Features

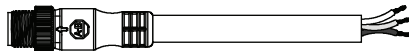
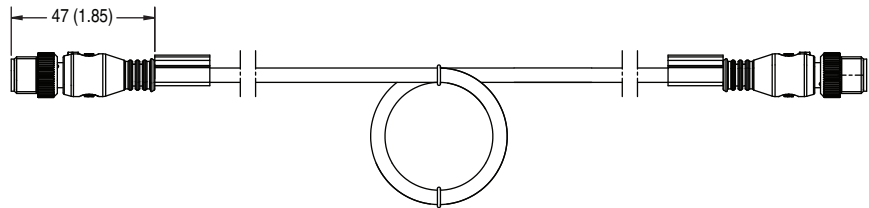
- Over-molded housing suitable for IP67 applications and harsh industrial environments where extreme vibration, shock, chemicals, and temperature are found
- Flex-rated cable (cable must be tied down and not flexed within six inches of the connector)
- Single-ended cordsets can be custom terminated with one of several field attachable connectors
- Designed to ODVA EtherNet/IP™ specifications and ISO IEC 24702, IEC 61918
- Twisted pairs maintain signal balance through cable to provide high noise immunity and return loss
- Suitable for noise environments $M_3I_3C_3E_3$

Specifications

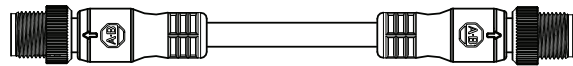
Mechanical	
Coupling Nut Material	Nickel-plated brass
Housing Material	Polyurethane (PUR)
Contact Material	Gold-plated brass
Cable Type	Unshielded Teal TPE, 4-conductor, stranded tinned wire, Industrial Cat5e, UL Listed, weld splatter, sun light and oil resistant
Cable Diameter [mm (in.)]	5.84 (0.23)
Bend Radius	—
Electrical	
Cable Rating	Unshielded: Standard TIA 568-B, flex rated, 24 AWG: UL, CMA, CMX, cUL and CMG Shielded: Standard TIA 568-B, flex rated, 26 AWG, halogen-free, C(ETL)US Type CMX
Environmental	
Enclosure Type Rating	IP67
Operating Temperature [C (F)]	-40...+75 ° (-40...+167 °)

Approximate Dimensions

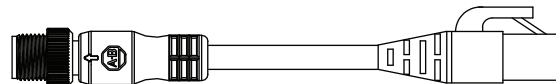
Dimensions are in millimeters (inches). Illustrations are not drawn to scale.



Example of Cordset



Example of M12 to M12 Patchcord



Example of M12 to RJ45 Patchcord

Pinout

Color Code	Face View Pinout		Face View RJ45 Pinout			
	4-Pin		8-Pin			
A	1 White-Orange 2 White-Green 3 Orange 4 Green	1 White/Orange 2 Orange 3 White/Green 4 Blue 5 White/Blue 6 Green 7 White/Brown 8 Brown	TxData + TxData - Recv Data + Unused Unused Recv Data - Unused Unused	1 White/Orange 2 Orange 3 White/Green 4 NA 5 NA 6 Green 7 NA 8 NA	TxData + TxData - Recv Data + — — Recv Data - — —	

Product Selection

M12 Cordset

First End Connector	Second End Connector	Cable Type	Cat. No.*
Male M12 D-Code, Straight	Flying Leads	Unshielded twisted pair, 4-conductor, Teal TPE, flex rated	1585D-M4TB-2
		Foil and braided shield, 4 conductor, teal PUR, flex rated, halogen-free	1585D-M4UB-2

M12 Patchcord

First End Connector	Second End Connector	Cable Type	Cat. No.*
Male M12 D-Code, Straight	Male M12 D-Code, Straight	Unshielded twisted pair, 4 conductor, teal TPE, flex rated	1585D-M4TBDM-2
Male M12 D-Code, Right Angle	Male M12 D-Code, Right Angle		1585D-E4TBDE-2
Male M12 D-Code, Straight	Male M12 D-Code, Right Angle		1585D-M4TBDE-2
Male M12 D-Code, Straight	Female M12 D-Code, Straight		1585D-M4TBDF-2
Male M12 D-Code, Straight	Male M12 D-Code, Straight	Foil and braided shield, 4 conductor, teal PUR, flex rated, halogen-free	1585D-M4UBDM-2
Male M12 D-Code, Right Angle	Male M12 D-Code, Right Angle		1585D-E4UBDE-2
Male M12 D-Code, Straight	Male M12 D-Code, Right Angle		1585D-M4UBDE-2
Male M12 D-Code, Straight	Female M12 D-Code, Straight		1585D-M4UBDF-2

M12 to RJ45 Patchcord

First End Connector	Second End Connector	Cable Type	Cat. No.*
Male M12 D-Code	RJ45	Unshielded twisted pair, 4 conductor, teal TPE, flex rated	1585D-M4TBJM-2
		Foil and braided shield, 4 conductor, teal PUR, flex rated, halogen-free	1585D-M4UBJM-2

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

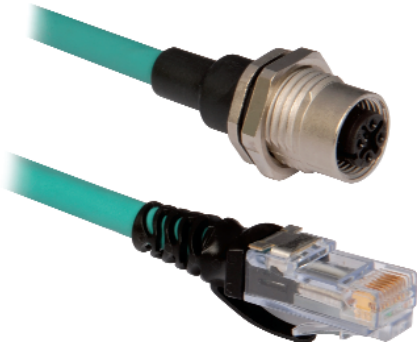
Accessories

Description	Channel Bandwidth	Cat. No.
RJ45 insulation displacement connector (IDC)	Cat. 6	1585J-M8CC-H*
RJ45 crimp connector with boot	Cat. 5e	1585J-M8CC-C‡

* Qty. = 1 piece.
‡ Qty. = 50 pieces.

Ethernet Media
Cordsets & Patchcords
 M12 Receptacle Flex-Rated

Ethernet Media



4-Pin M12 D-Code Receptacle to RJ45 Patchcord

Features

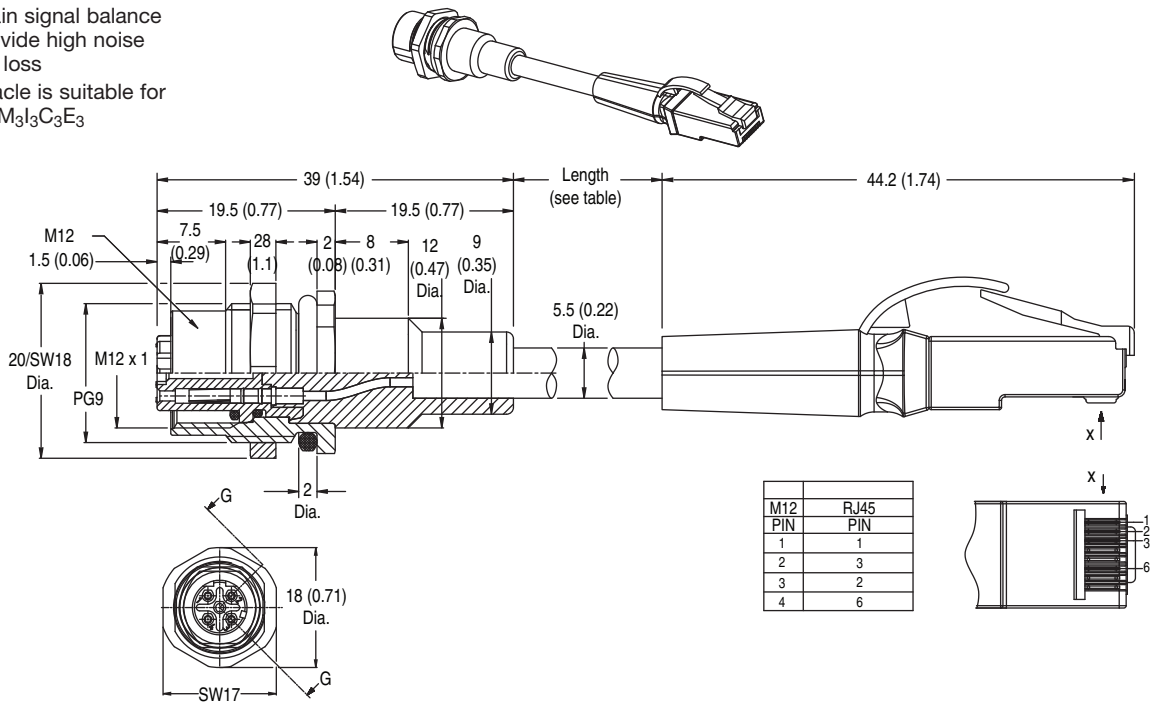
- Suitable for IP67 applications and harsh industrial environments where extreme vibration, shock, chemicals, and temperature are found
- Flex-rated cable (cable must be tied down and not flexed within six inches of the connector)
- Designed to ODA EtherNet/IP specifications and ISO IEC 24702, IEC 61918
- Twisted pairs maintain signal balance through cable to provide high noise immunity and return loss
- M12 D-code receptacle is suitable for noisy environments M₃I₃C₃E₃

Specifications


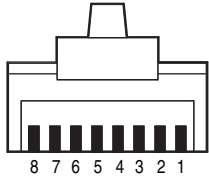
Mechanical	
Coupling Nut Material	Nickel-plated brass
Contact Material	Gold-plated brass
Cable Type	Unshielded Teal TPE, 4-conductor, stranded tinned wire, Industrial Cat5e, UL Listed, weld splatter, sun light and oil resistant
Cable Diameter [mm (in.)]	5.84 (0.23)
Mounting	Front-mount
Electrical	
Cable Rating	Unshielded: Standard TIA 568-B, flex rated, 24 AWG: UL, CMA, CMX, cUL and CMG Shielded: Standard TIA 568-B, flex rated, 26 AWG, halogen-free, C(ETL)US Type CMX
Voltage	300V
Environmental	
Enclosure Type Rating	IP67
Operating Temperature [C (F)]	-40...+75 ° (-40...+167 °)

Approximate Dimensions

Dimensions are in millimeters (inches). Illustrations are not drawn to scale.



Pinout

Face View Pinout (Female)	Face View RJ45 Pinout		
4-Pin			
			
1 White/Orange 2 White/Green 3 Orange 4 Green	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;"> 1 White/Orange 2 Orange 3 White/Green 4 Blue 5 White/Blue 6 Green 7 White/Brown 8 Brown </td> <td style="width: 50%; border: none;"> TxData + TxData - Recv Data + Unused Unused Recv Data - Unused Unused </td> </tr> </table>	1 White/Orange 2 Orange 3 White/Green 4 Blue 5 White/Blue 6 Green 7 White/Brown 8 Brown	TxData + TxData - Recv Data + Unused Unused Recv Data - Unused Unused
1 White/Orange 2 Orange 3 White/Green 4 Blue 5 White/Blue 6 Green 7 White/Brown 8 Brown	TxData + TxData - Recv Data + Unused Unused Recv Data - Unused Unused		

Product Selection

M12 to RJ45 Patchcord

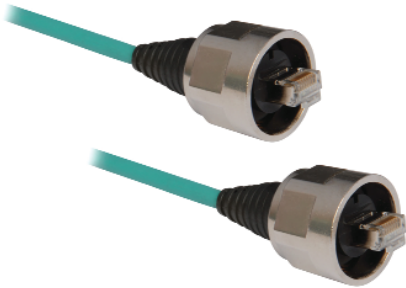
First End Connector	Second End Connector	Cable Type	Cat. No.*
Female M12 D-Code Receptacle, Front Mount	RJ45	Unshielded twisted pair, 4-Conductor, Teal TPE, Flex Rated	1585D-D4TBJM-2
		Foil and braided shield, 4 conductor, teal PUR, flex rated, halogen-free	1585D-D4UBJM-2

* Replace -2 (2 m) with 1 (1 m), 5 (5 m) or 15 (15 m) for additional standard cable lengths.

Ethernet Media

Patchcords & Field Attachables

Die-Cast Zinc RJ45 Connector, Variant 1



Variant 1 Connector

Specifications

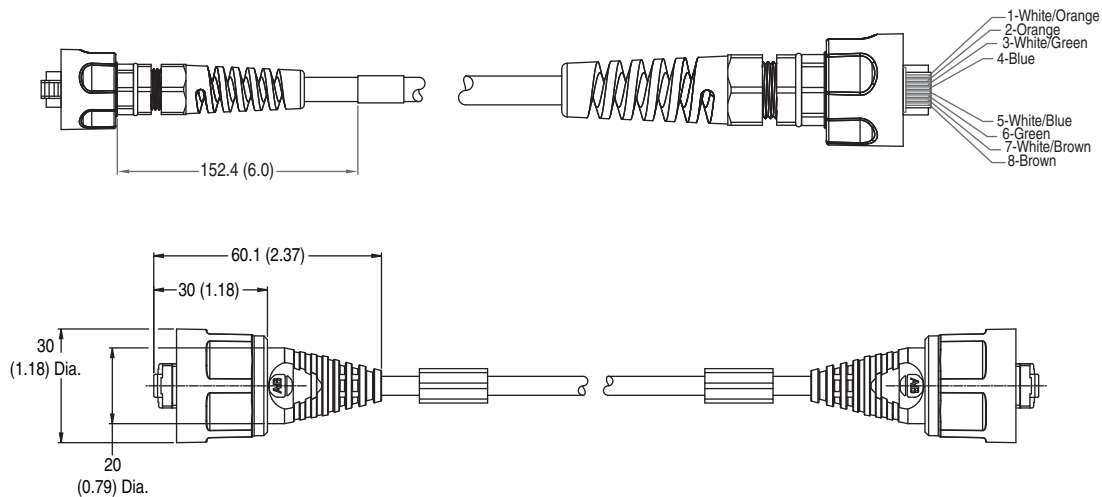
Certifications	UL Listed and cUL
Mechanical	
Contact Material	Copper alloy
Housing Material	Die-cast zinc
Cable Diameter [mm (in.)]	4.0...8.0 (0.157...0.315)
Electrical	
Cable Rating	22...26 AWG, 0.40...0.64 mm (0.016...0.025 in.)
Assembly Rating	150V, 1.5 A
Mating Cycles	750
Voltage	300V
Environmental	
Enclosure Type Rating	IP67
Operating Temperature [C (F)]	-40...+70 ° (-40...+158 °)

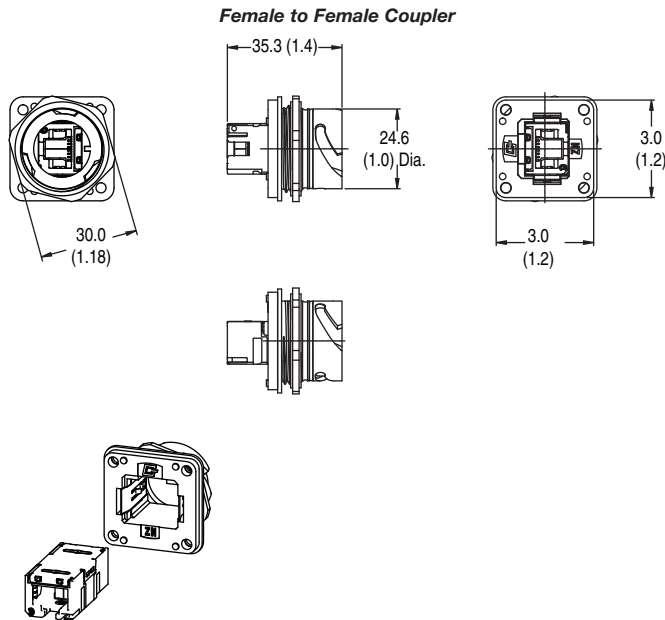
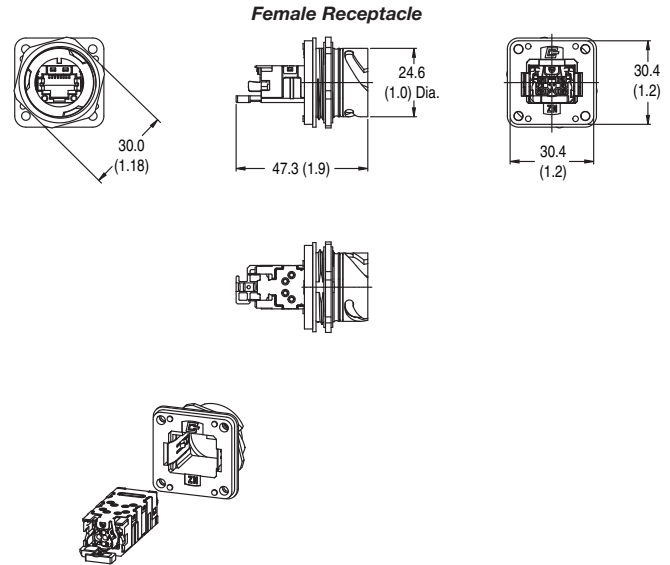
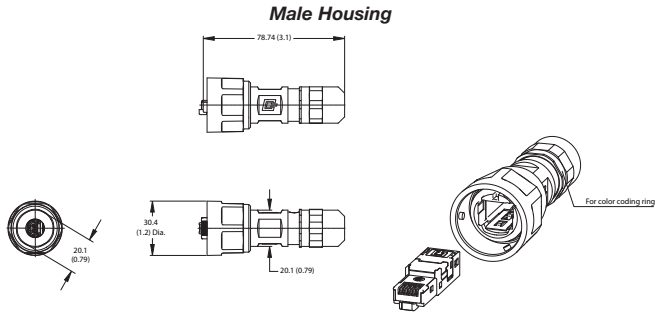
Features

- Eight-pin RJ45 connector with protective die-cast zinc housing
- IP67, Cat. 6A
- Cable must be tied down within 6 in. of connector
- Resistant to water, dust, moisture, vibration, temperature extremes, chemicals, and electromagnetic interference
- Easy to assemble and provides a rugged connection in harsh environments
- Used for On-Machine ethernet connectivity
- Suitable environments M₃I₃C₃E₃

Approximate Dimensions

Dimensions are in millimeters (inches). Illustrations are not drawn to scale.





Product Selection

Field Attachables — Die-Cast Zinc

Description	Cat. No.*
Variant 1 housing—male	1585BZ-M8CC
Variant 1 receptacle—female	1585BZ-F8CC
Female RJ45 to female RJ45 coupler	1585BZ-F8BF
Male protective cap	1585BZ-MCAP
Female protective cap	1585BZ-FCAP

Overmolded Patchcord — Die-Cast Zinc

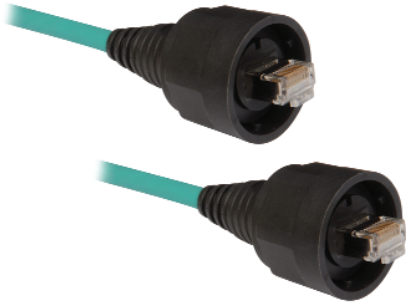
Description	Cable Style	Operating Temperature [C (F)]	Cat. No.*
Variant 1 Male to Variant 1 Male	Unshielded twisted pair, TPE robotic, 8 conductor	-25...+70 ° (-13...+158 °)	1585BX-M8TBBM-2
	Foil and braided shield, PUR, 8 conductor, high-flex, halogen-free	-40...+75 ° (-40...+167 °)	1585BX-M8UBBM-2

* Replace -2 (2 m) with 5 (5 m) or 10 (10 m) for additional standard cable lengths.

Ethernet Media

Patchcords & Field Attachables

Thermoplastic RJ45 Connector, Variant 1



Variant 1 Connector

Specifications

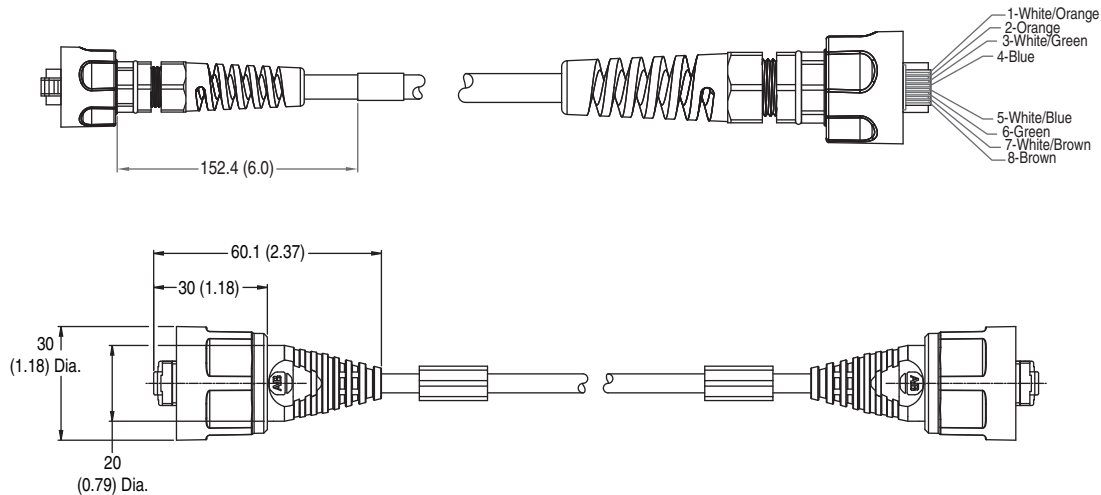
Certifications	UL Listed and cUL
Mechanical	
Contact Material	Copper alloy
Housing Material	Polybutylene terephthalate (PBT)
Cable Diameter [mm (in.)]	4.0...8.0 (0.157...0.315)
Electrical	
Cable Rating	22...26 AWG, 0.40...0.64 mm (0.16...0.025 in.)
Assembly Rating	150V, 1.5 A
Voltage	300V
Mating Cycles	750
Environmental	
Enclosure Type Rating	IP66, IP67, NEMA 6
Operating Temperature [C (F)]	-25...+75 ° (-13...+167 °)

Features

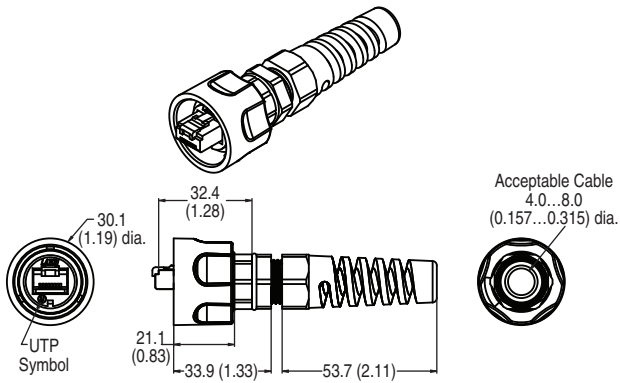
- Eight-pin RJ45 connector with protective thermoplastic bayonet housing
- IP66, IP67, Cat. 5e
- Cable must be tied down within 6 in. of connector
- Resistant to water, dust, moisture, vibration, temperature extremes, chemicals, and electromagnetic interference
- Easy to assemble and provides a rugged connection in harsh environments
- Used for On-Machine ethernet connectivity
- Suitable environments M₃L₃C₃E₃

Approximate Dimensions

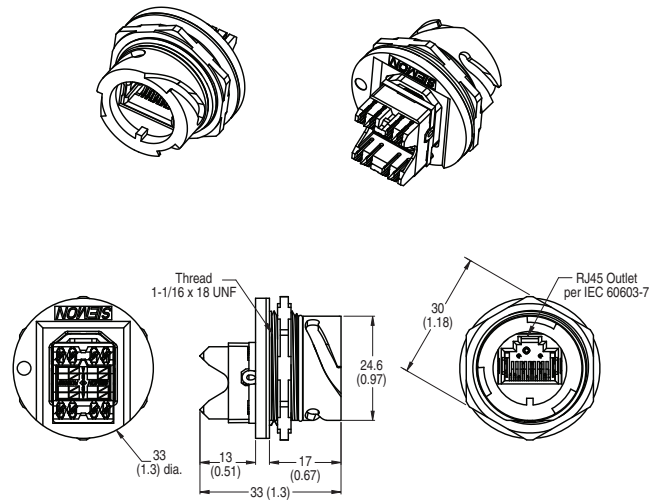
Dimensions are in millimeters (inches). Illustrations are not drawn to scale.



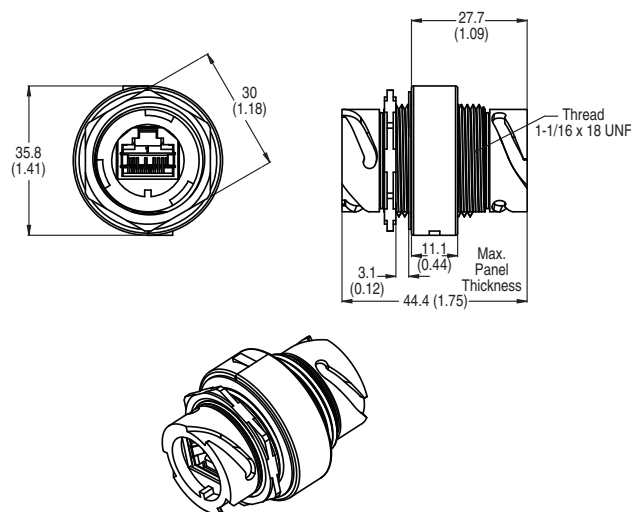
Male Housing



Female Receptacle



Female to Female Coupler



Product Selection

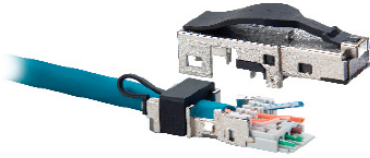
Field Attachables — Thermoplastic

Description	Cat. No.
Variant 1 housing—male	1585BP-M8CC
Variant 1 receptacle—female	1585BP-F8CC
Female RJ45 to female RJ45 coupler	1585BP-F8BF
Male protective cap	1585BP-MCAP
Female protective cap	1585BP-FCAP

Overmolded Patchcord — Thermoplastic

Description	Cable Style	Operating Temperature [C (F)]	Cat. No.*
Variant 1 male to variant 1 male	Unshielded twisted pair, TPE high-flex, 8 conductor	-25...+75 ° (-13...+167 °)	1585BT-M8TBMM-2
	Foil and braided shield, PUR, 8 conductor, high-flex, halogen-free	-40...+75 ° (-40...+167 °)	1585BT-M8UBBM-2

* Replace -2 (2 m) with 5 (5 m) or 10 (10 m) for additional standard cable lengths.



RJ45 Insulation Displacement Connector (IDC)



RJ45 Crimp

Specifications

Certifications	UL Listed
Connector Type	RJ45 male
Enclosure Type Rating	IP20
Operating Temperature [C (F)]	-20...+60 ° (-4...+140 °)

Features

IDC Connector

- Up to eight conductors
- 26...22 AWG conductors
- 360° shielding
- No tools or conductor stripping required
- Cat. 6

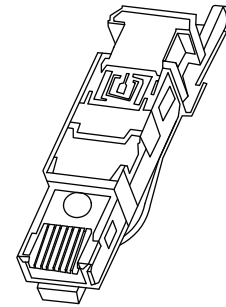
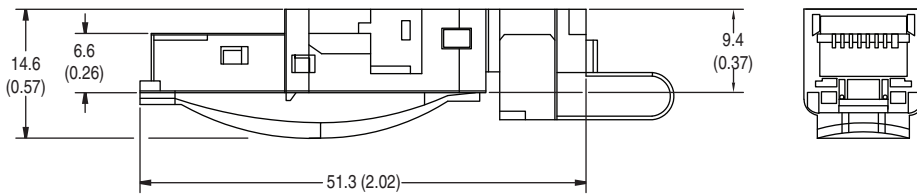
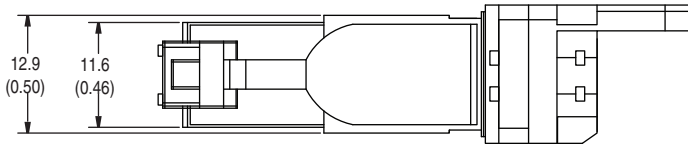
Crimp Connector

- Up to eight conductors
- 26...24 AWG
- Standard crimp connector with rugged boot
- Cat. 5e

Approximate Dimensions

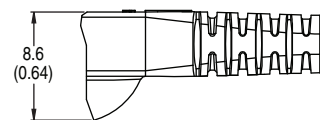
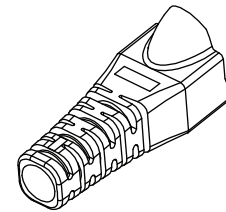
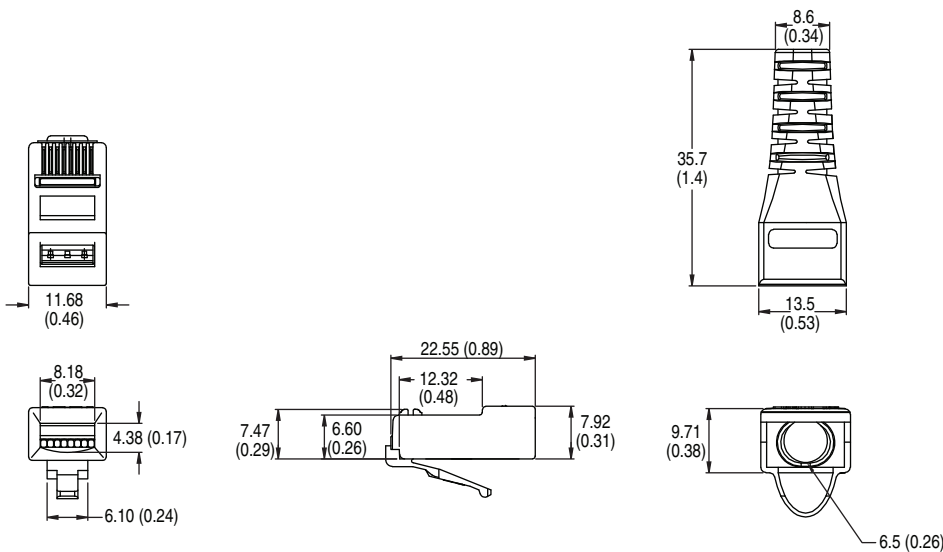
RJ45 Insulation Displacement Connector (IDC)

Dimensions are in millimeters (inches). Illustrations are not drawn to scale.

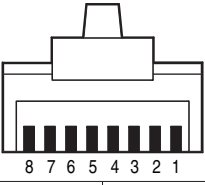


RJ45 Crimp Connector

Dimensions are in millimeters (inches). Illustrations are not drawn to scale.



Pinout

Face View RJ45 Pinout			
8-Pin			
			
8-Pin		4-Pin	
1 White/Orange	TxData +	1 White/Orange	TxData +
2 Orange	TxData -	2 Orange	TxData -
3 White/Green	Recv Data +	3 White/Green	Recv Data +
4 Blue	Unused	4 NA	Unused
5 White/Blue	Unused	5 NA	Unused
6 Green	Recv Data -	6 Green	Recv Data -
7 White/Brown	Unused	7 NA	Unused
8 Brown	Unused	8 NA	Unused

Product Selection

Description	Electrical Connection	Housing Material	Insulation Material	Contact Material	Channel Bandwidth	Cat. No.
RJ45 insulation displacement connector (IDC)	—	Diecast Zinc	Plastic	Gold-plated copper alloy	Cat. 6	* 1585J-M8CC-H
RJ45 crimp connector with boot	150V, 1.5 A	Clear Polycarbonate			Cat. 5e	* 1585J-M8CC-C

* Qty. = 1 piece

* Qty. = 50 pieces

Accessories

Description	Cat. No.
Crimper, cable stripper/cutter, conductor separator	1585A-JCRIMP

Ethernet Media
Field Attachables
 M12 Insulation Displacement Connectors



Field Attachable

Features

- Field installable with no hand tools needed
- Straight male or female shielded versions
- Allows easy modification of existing cable installations
- Insulation displacement technology for secure and reliable installation
- Metal body unit excellent in shielding applications

Specifications

Mechanical	
Coupling Nut Material	Zinc die-cast
Connector Shell Material	Zinc die-cast or polyamide
Contact Material	Gold-plated brass
IDC Installations	10 times, max.
Conductor OD [mm (in.)]	Unshielded: 26...22 AWG: 1.0...1.6 (0.04...0.063); Shielded: 24...22 AWG: 1.2...1.6 (0.04...0.063)
Electrical	
Assembly Rating	32V, 4 A
Environmental	
Enclosure Type Rating	IP67
Operating Temperature [C (F)]	-25...+85 ° (-13...+185 °)
Installation Temperature [C (F)]	-5...+50 ° (23...185 °)

Approximate Dimensions

Dimensions are in millimeters (inches). Illustrations are not drawn to scale.

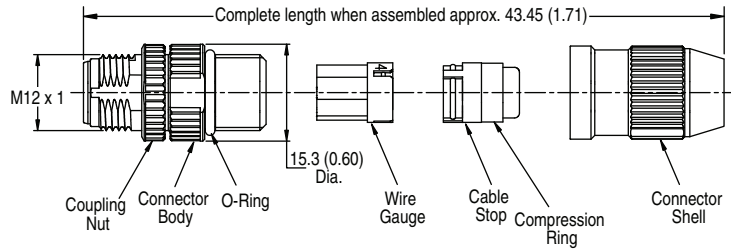
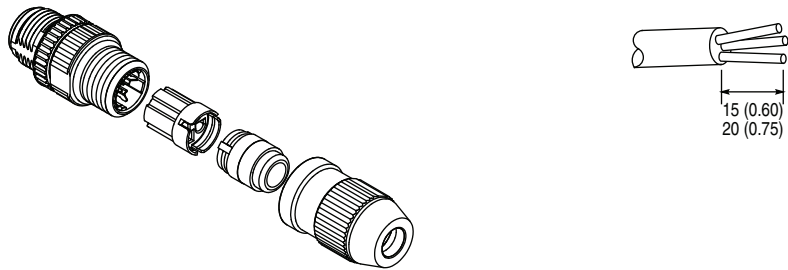


Figure A

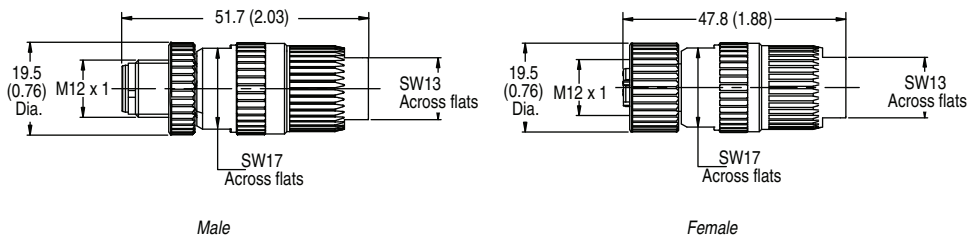


Figure B

Pinout

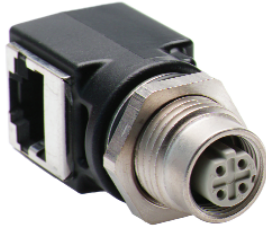
Color Code	Face View M12 Pinout	
	4-Pin	
A	1 White-Orange 2 White-Green	3 Orange 4 Green

Product Selection

No. of Pins	Connector Material	Cable Diameter [mm (in.)]	Wire Size, AWG	Assembly Rating	Dimensions	Cat. No.	
						Straight Female	Straight Male
4	Polyamide small body unshielded	4.0...5.1 (0.16...0.20)	26...22 AWG	32V, 4 A	Figure A	—	1585D-M4DC-H
	Zinc die-cast large body shielded	5.5...7.2 (0.22...0.28)	24...22 AWG		Figure B	1585D-F4DC-SH	1585D-M4DC-SH

Ethernet Media
Field Attachables
 M12 to RJ45 Bulkhead Connector

Ethernet Media



Field Attachable

Features

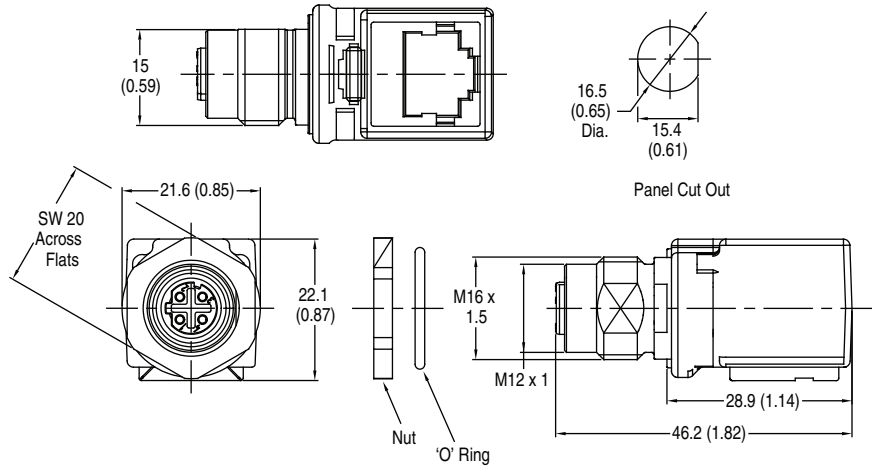
- M12 to RJ45 bulkhead
- Fluoroelastomer o-ring
- Convenient transition from IP67 ethernet to IP20
- Cat 5e
- Built-in differential 100 ohm terminators used for unused pairs

Specifications

Certifications	UL Recognized for Canada and USA
Mechanical	
Receptacle Shell Material	Nickel-plated brass
Contact Material	Brass with nickel plating
Wire Insulation	Oil-resistant PVC, 22 AWG stranded copper, 300V, UL Recognized
Electrical	
Assembly Rating	32V, 4 A
Environmental	
Enclosure Type Rating	IP67, 1200 psi (8270 kPa) washdown
Operating Temperature [C (F)]	-20...+85 ° (-4...+185 °)

Approximate Dimensions

Dimensions are in millimeters (inches). Illustrations are not drawn to scale.



Product Selection

Description	Connector Material	Panel Mount	Assembly Rating	Cat. No.
Female M12 receptacle to RJ45 female adaptor right angle	Polyamide and brass with nickel plating	PG 9 threads	22 AWG, 32V, 4 A	1585A-DD4JD