

**Connectivity Solutions for
Industrial Automation**

ALPHA

CONNECT



AlphaWire

Cables you trust. Service you deserve.

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Alpha Wire now makes it easier to achieve reliable, high-performance industrial connectivity. Alpha Connect provides an end-to-end solution for connecting sensors and actuators on the factory floor. Alpha Connect ensures safe and reliable communication in industrial environments to decrease downtime and increase productivity.



- Passive distribution boxes with up to twelve M8 or eight M12 ports
- Two-way splitters
- Cordsets with M8, M12, M23, MINI, RJ45 connectors
- Receptacle connectors
- Field attachable connectors

Easy to Use

Distribution boxes mount conveniently at the machine, simplifying wiring and saving space. Boxes are available with or without LED indicators. To speed maintenance and repairs, LEDs simplify troubleshooting to find errors and system malfunctions.

The compact distribution boxes save you space in several ways. They consolidate and simplify wiring from sensors/actuators to the controller. They also eliminate the need for additional enclosures. Some modules support two I/O channels per port so that an 8-port box can handle 16 signals.

Rugged overmolded cordsets, available with connectors on one or both ends, provide a plug and play solution in seven standard lengths to allow shorter installation times. Our field attachable connectors include either solder cups or screw termination for easy field installation to decrease human error.

Easy to Get

With a large in-stock inventory, we make it easy to get the products you need fast.

Mechanically and Environmentally Rugged

Alpha Connect products are designed for the factory floor, with industrial temperature ranges, IP67 sealing, and resistance to vibration, shock, and other hazards. Because the Alpha Connect system offers environmental sealing, the need for additional enclosures is eliminated.

Stainless Steel for Food and Beverage Applications

Stainless-steel models combine IP69K protection and washdown capabilities with additional protection against corrosion and aggressive chemical and cleaning agents.





Flexible Cordsets

Configurations

Connectors: Terminated one or both ends

M8: 3 and 4 conductors

M12: 3, 4, 5, 8, and 12 conductors

M12 D Code: 2 pairs, Ethernet

M12 to RJ45 Ethernet: 4 pairs

M23: 12 and 19 conductors

MINI 7/8": 3, 4, and 5 conductors

RJ45 Ethernet: 2 pairs, shielded or unshielded

Cables

mPPE Insulation, ZH-PUR Jacket, 22 AWG (AWM 21959)

SR-PVC Insulation, -40°C Premium PVC Jacket, 18 AWG (AWM 2661)

SR-PVC Insulation, TPE Jacket, 18 AWG (PLTC, AWM 20327)

SR-PVC Insulation, PVC Jacket, 24 AWG

PVC/Nylon Insulation, TPE Jacket, 16 AWG (TC-ER)

PO Insulation, TPE Jacket, Cat 5e 24 AWG (CMR, CMG)

PP Insulation, ZH-PUR Jacket, 24 AWG (AWM 20549/21198)

Passive Distribution Boxes

Materials

Housing: Die-cast zinc, TPU or stainless steel

Contacts: Copper alloy, plated gold over nickel

Environmental

Temperature Range: Up to +80°C

Sealing: IP67/IP69K

Electrical

Nominal Current at +40°C:

1.5 A to 4 A per port and up to 12 A per module

Nominal Voltage: 10 to 30 VDC

Configurations

M8: 4, 6, 8, 10, or 12 ports

M12: 4, 6, 8 ports

Channels per Port: 1 or 2

LEDs per Port: With or without

Cabled: with 5 m or 10 m homerun cable for direct attachment to controller or similar device

Connectorized: with M12 or M23 connector integrated in housing to accept Alpha Wire cable or cordsets



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CONNECTOR TYPE, END 1

- O** Unterminated / Cut End
- A** M12 Female
- D** M12 Male
- E** M23 Female
- F** M23 Male
- G** M8 Female
- H** M8 Male
- J** MINI Female, 7/8" External Thread
- K** MINI Female, 7/8"
- L** MINI Male, 7/8"
- P** MINI Male, 7/8" Internal Thread
- Q** RJ45

CONNECTOR STYLE, END 1

- O** Unterminated / Cut End
- R** Straight
- W** Right Angle (90°)
- C** Receptacle

NUMBER OF POLES

3, 4, 5, 8

CONNECTOR TYPE, END 2

- O** Unterminated
- A** M12 Female
- D** M12 Male
- E** M23 Female
- F** M23 Male
- G** M8 Female
- H** M8 Male
- J** MINI Female, 7/8" External Thread
- K** MINI Female, 7/8"
- L** MINI Male, 7/8"
- P** MINI Male, 7/8" Internal Thread
- Q** RJ45

CONNECTOR STYLE, END 2

- O** Unterminated / Cut End
- R** Straight
- W** Right Angle (90°)
- C** Receptacle

CABLE TYPE

(Unshielded unless noted)

mPPE Insulation, ZH-PUR Jacket, 22 AWG (AWM 21959)

- 100** 3 Conductor
- 101** 4 Conductor
- 102** 5 Conductor
- 123** 8 Conductor

SR-PVC Insulation, -40°C PVC Jacket, 18 AWG (AWM 2661)

- 103** 8 Conductor
- 104** 3 Conductor
- 105** 4 Conductor
- 106** 5 Conductor

SR-PVC Insulation, TPE Jacket, 18 AWG (PLTC, AWM 20327)

- 107** 3 Conductor
- 108** 3 Conductor
- 109** 5 Conductor
- 112** 8 Conductor, 22 AWG

PVC/Nylon Insulation, TPE Jacket, 16 AWG (TC-ER)

- 113** 3 Conductor, 16 AWG
- 114** 4 Conductor, 16 AWG
- 115** 5 Conductor

PO Insulation, TPE Jacket, 24 AWG (CMR, CMG)

- 117** 4 Conductor
- 118** 4 Conductor, Foil/Braid Shield

PP Insulation, ZH-PUR Jacket, 24 AWG (AWM 20549/21198)

- 124** 8 Conductor
- 125** 12 Conductor
- 126** 12 Conductor, Composite
- 127** 19 Conductor, Composite

SR-PVC Insulation, PVC Jacket, 24 AWG

- 128** 8 Conductor, Foil/Braid Shield

Flexible Cordsets

M8 Connectors



Widely used in industrial automation and factory floor applications, M8 connectors provide a compact size that enables cleaner cable management.

EcoFlex® PUR Cable: mPPE Insulation, Slate Zero-Halogen Polyurethane Jacket

22 AWG (26/36) Bare Copper Conductors

AWM 21959 • UL Sun Res • 60C Oil Res

IP67, IP68/NEMA 6P Protection • -50°C to +90°C • 600 V

Bend Radius: 4x Static, 5x Dynamic • 5 Million Flex Life Cycles



Configuration		Part Number	
End 1	End 2	3 Poles	4 Poles
Female	Cut	GR0300100	GR0400101
Female, 90°	Cut	GW0300100	GW0400101
Male	Cut	HRO300100	HR0400101
Female	Male	GR03HR100	GR04HR101
Male	Female, 90°	HRO3GW100	HR04GW101

Standard Lengths: 0.6, 1, 3, 5, 10, 15, and 20 m

M8-to-M12 Cordsets

EcoFlex® PUR Cable: mPPE Insulation, Slate Zero-Halogen Polyurethane Jacket

22 AWG (26/36) Bare Copper Conductors

AWM 21959 • UL Sun Res • 60C Oil Res

IP67, IP68/NEMA 6P Protection • -50°C to +90°C • 600 V

Bend Radius: 4x Static, 5x Dynamic • 5 Million Flex Life Cycles

Configuration		Part Number	
M12 End	M8 End	3 Poles	4 Poles
Male	Female	DR03GR100	DR04GR101
Male	Female, 90°	DR03GW100	DR04GW101

Field Attachable Connectors



M8 Connectors

Style	Poles	Part Number
		0.138 - 0.197 Cable Dia.
Female	3	210GR
	4	211GR
Male	3	214HR
	4	215HR
Male, Solder Cup	3	212HR
	4	213HR

M12 Connectors

Coupling Nut	Poles	Part Number		
		0.118 - 0.256 Cable Dia.	0.158 - 0.315 Cable Dia.	2 x 0.118 - 0.256 Cable Dia.
Thermoplastic				
Female	4	202AR7	202AR9	—
	5	203AR7	203AR9	—
Female, 90°	4	204AW7	204AW9	—
	5	206DR7	206DR7	—
Male	4	206DR7	206DR9	206DR2
	5	207DR7	207DR9	207DR2
Male, 90°	4	208DW7	—	—
	5	209DW7	—	—
Stainless Steel				
Female	4	200ARS7	—	—
Male	4	201DRS7	—	—



MINI 7/8" Connectors

Style	Poles	Part Number			
		0.236 - 0.315 Cable Dia.	0.315 - 0.394 Cable Dia.	0.394 - 0.472 Cable Dia.	0.472 - 0.551 Cable Dia.
Female	3	216KR9	216KR11	216KR13	216KR16
	4	217KR9	217KR11	217KR13	217KR16
	5	218KR9	218KR11	218KR13	218KR16
Male, External Threads	3	219LR9	219LR11	219LR13	219LR16
	4	220LR9	220LR11	220LR13	220LR16
	5	221LR9	221LR11	221LR13	221LR16
Male, Internal Threads	3	222PR9	—	222PR13	222PR16
	4	223PR9	223PR11	223PR13	223PR16
	5	224PR9	224PR11	224PR13	224PR16