3M™ Mini-Clamp, Link and Power Clamp Connectors

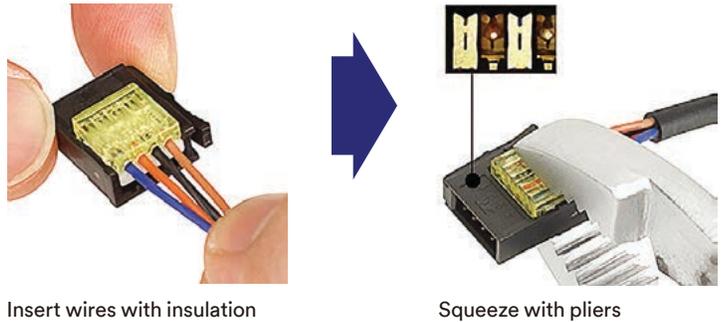Time-saving, reliable and field-installable
wiring solutions

3M™ Mini-Clamp Connectors

Mini-Clamp is a "de facto" industry standard for sensor, LED, switch and various small device connections for industrial equipment and manufacturing facility applications. Mini-Clamp Connectors with IDC technology do not require peeling of the cable jacket or special tools. They can be used with AWG20-28 wires and 2 mm pitch contact, enabling space savings and higher wiring density.
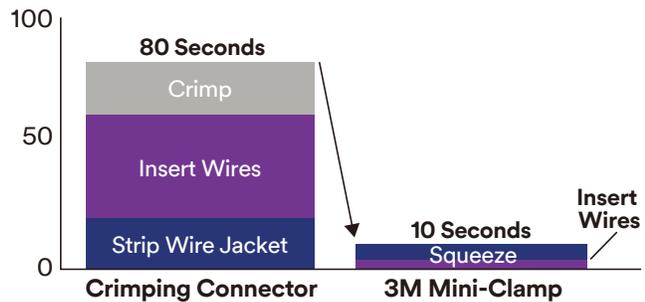
Simple termination process for fast, reliable installation and maintenance

- Helps minimize risk of conductor damage with no wire stripping.
- Stable termination quality with IDC increases reliability of sensor wiring.
- Supports wires 28 to 20AWG.
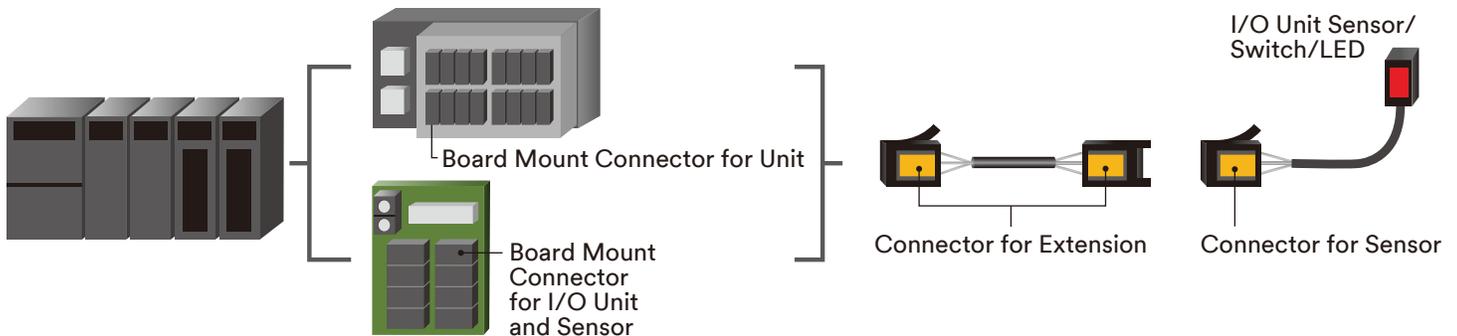
Insert wires with insulation

Squeeze with pliers

Optimize network layout with field-installability

- Easily connect to pig-tail wired sensors.
- Field termination allows for optimal cable lengths to save space and wire efficiently.

80 Seconds Crimp
Insert Wires
Strip Wire Jacket
Crimping Connector

10 Seconds Squeeze
Insert Wires
3M Mini-Clamp

Application Example

I/O Unit Sensor/Switch/LED

Board Mount Connector for Unit

Board Mount Connector for I/O Unit and Sensor

Connector for Extension

Connector for Sensor

Product Portfolio

(Table includes wiremount connectors only. Ask 3M for availability of boardmount and other options.)

3M™ Mini-Clamp Connector

Size of Conductor	Wire Jacketing Outside Diameter	Wiremount Plug y : # of positions (3,4,6,8)	Wiremount Socket x : 0=Standard, P=Panel Mount y: # of positions (3,4,6,8)	Common Socket Connector x : 0=Standard, P=Panel Mount	Cover Color	Related Accessories 3M™ Water-Resistant Boot 37800-P000
AWG28-26 (0.08 - 0.14 mm^2)	Ø0.6 - 0.8 mm	3710y-4080-G00 FL	—	—	Purple	Dust Covers 37803-1000-00 37804-1000-00
	Ø0.8 - 1.0 mm	3710y-4101-G00 FL	—	—	Red	
AWG26-24 (0.14 - 0.3 mm^2)	Ø0.6 - 0.8 mm	3710y-3080-000 FL	—	—	Purple	
	Ø0.8 - 1.0 mm	3710y-3101-000 FL	3730y-3101-0×0 FL	37C04-3101-0×0 FL	Red	Crimping Tool 37900-10
	Ø1.0 - 1.2 mm	3710y-3122-000 FL	3730y-3122-0×0 FL	37C04-3122-0×0 FL	Yellow	
	Ø1.2 - 1.6 mm	3710y-3163-000 FL	3730y-3163-0×0 FL	37C04-3163-0×0 FL	Orange	
AWG22-20 (0.3- 0.5 mm^2)	Ø1.0 - 1.2 mm	3710y-2124-000 FL	3730y-2124-0×0 FL	37C04-2124-0×0 FL	Green	
	Ø1.2 - 1.6 mm	3710y-2165-000 FL	3730y-2165-0×0 FL	37C04-2165-0×0 FL	Blue	
	Ø1.6 - 2.0mm	3710y-2206-000 FL	3730y-2206-0×0 FL	37C04-2206-0×0 FL	Grey	

3M™ Link Connector

Link Connectors offer single-action IDC termination for T-branch and splice of sensor and field networks. One Piece, IPX4 and Mini-Clamp branch types are also available.
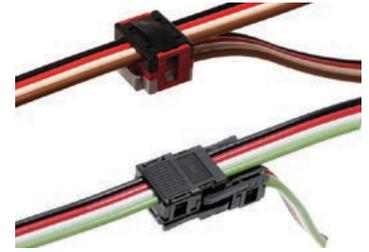
Enables branched networks and splicing into an existing network

- Provides networking efficiency by optimizing signal and power line routing to terminal.
- Allows installation of additional small devices without adding signal and power lines from controller.
- Supports wires 22 to 16AWG.

Just insert wires and squeeze with pliers

T branch by connector

3M™ Link Connectors, 381 and 382 Series (Detachable 2-piece type)

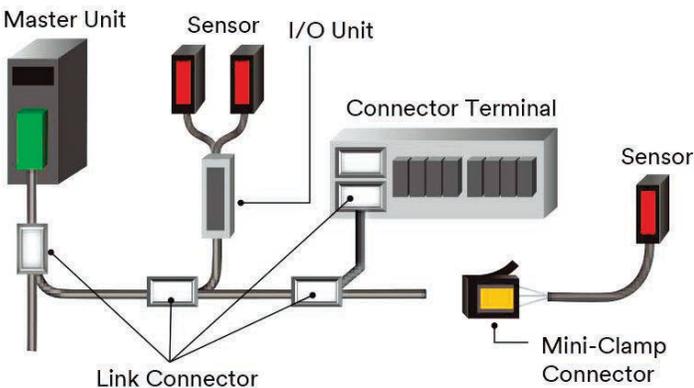3M™ One Piece Branch Link Connector

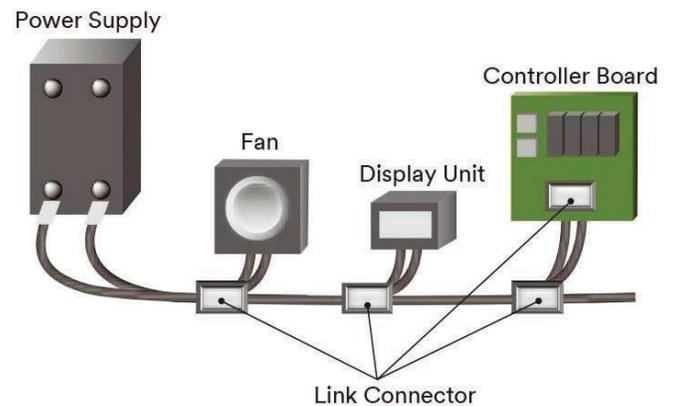3M™ Splash-proof One Piece Branch (OPB) Link Connector

3M™ Branch Mini-Clamp Link Connector

Application Example

Serial Sensor Network

Master Unit
Sensor
I/O Unit
Connector Terminal
Sensor
Mini-Clamp Connector
Link Connector

Power Supply

Power Supply
Controller Board
Fan
Display Unit
Link Connector

3M™ Power Clamp Connector

Power Clamp is a standard connector for field networking applications and protocols. The simple IDC installation process allows for labor savings and high connection reliability. It is compatible with CLPA's CC-Link open technology.

Splicing adapter with fast, reliable installation

- Smaller connector size than most standard screw-type alternatives.
- Supports 250 Volts, 10A max (1 line), 7A max (all lines).
- Supports 20 to 18AWG wire.
- Compatible with CC-Link Communication Interconnect Standard.

Just insert wires with insulation

Squeeze with a pair of standard pliers

Application Example

Wiring with 3M Power Clamp Connectors

Spliced connector network enables unit modularity

Product Portfolio (Table includes wiremount connectors only. Ask 3M for availability of boardmount and other options.)

3M™ Link Connector

Size of Conductor	Cable Style	Dielectric Outside Diameter	Detachable 2-Piece Type		Branch Mini-Clamp Type
			2 position	**4 position**	
22AWG (0.3 mm^2)	Round	Ø1.1 - 1.4 mm	38102-W022-W00 FL	38104-H022-K00 FL	—
20AWG (0.5 mm^2)	Round	Ø1.8 - 2.1 mm	38102-F020-H00 FL	38104-F020-H00 FL	—
	Round	Ø2.1 - 2.4 mm	—	38104-E020-G00 FL	—
	Flat	Ø2.54 mm	—	38104-0020-100 FL	38A04-0020-100 FL
18AWG (0.75 mm^2)	Round	Ø1.8 - 2.1 mm	—	38104-F018-F00 FL	—
	Round	Ø2.1 - 2.4 mm	—	38104-E018-E00 FL	—
	Flat	Ø2.54 mm	38102-0018-000 FL	38104-0018-000 FL	38A04-0018-000 FL
16AWG (1.25 mm^2)	Flat	Ø2.54 mm	38102-0016-200 FL	—	38A04-0016-200 FL

One Piece Branch (OPB) Type				
Main Line Cable	**Branch Line Cable**	**Standard**	**Splash-proof (IPX4)**	**3M™ 4-wire Cable, 18AWG/0.75 mm^2** 79100-075-4F1 **3M™ OPB Splash-proof Cable Cap** 38700-C01 **3M™ IDC Termination Tool for OPB** 38900-10
18AWG (0.75 mm^2)	18AWG (0.75 mm^2)/Flat	38704-FF880	38704-FF880-PA-C	
20-16AWG (0.5-1.25 mm^2)/Flat	20-16AWG (0.5-1.25 mm^2)/Flat Thinner gauges/Discrete	Custom option	Custom option	

Note 1: Don't mate to PCB connector.   **Note 2:** Ask 3M for splice type.   **Note 3:** Splash-proof end cap is available for sale. Need to use IDC Termination Tool 38900-10 for Splash-proof type.

3M™ Power Clamp Connectors

# Positions	Size of Conductor	Wire Jacketing Outside Diameter	Wiremount Socket	Wiremount Plug x: 0=Standard, P=Panel Mount	Related Products
5	20AWG (0.5 mm^2)	Ø1.6 - 2.0 mm	35505-6200-A00 GF	35805-6200-A×0 GF	**Termination Resistor** 35T05-6M00-B0M GF **Branch Connector:** **Type H:** 35720-L200-A00 AK **Type Y:** 35715-L010-A00 AK
	18AWG (0.75 mm^2)	Ø1.6 - 2.0 mm	35505-6080-A00 GF	35805-6080-A×0 GF	
		Ø2.0 - 2.3 mm	35505-6180-A00 GF	35805-6180-A×0 GF	
	Bar Terminal Diameter	Ø1.05 - 1.15 mm	35A05-60S0-A00 GF	35805-60S0-A×0 GF	
4 (CC-Link)	20AWG (0.5 mm^2)	Ø2.2 - 3.0 mm	35505-6000-B0M GF	35805-6000-B×M GF	
	Bar Terminal Diameter	Ø1.05 - 1.15 mm	35A05-60S0-B0M GF	35805-60S0-B×M GF	

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