

Introduction

What Is a Wiring System?

A Wiring System is a device that is used to convert a connection to a connector to connect (wire) a device or circuit. Converting connections to connectors makes it possible to connect and disconnect devices with just your hands or simple tools. This document classifies Wiring Systems as follows.

Connector-Terminal Block Conversion Unites

A Connector-Terminal Block Conversion Unit is a terminal block conversion unit with a prewired connector that can be used to wire all the I/O for a programmable controller with a single cable.

Industrial Ethernet Connectors

Industrial Ethernet Connectors support industrial networks based on Ethernet, such as EtherCAT®.

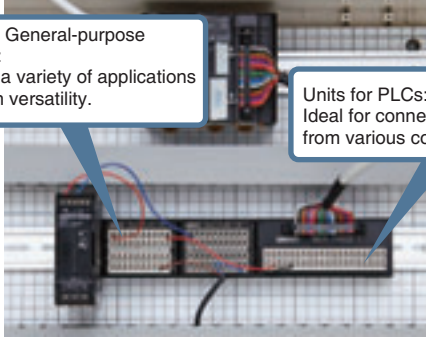


Sensor I/O Connectors

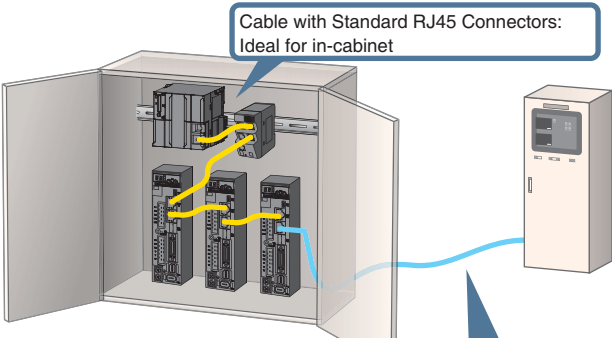



Sensor I/O Connectors are used to convert the wiring for a sensor into a connector.

PCB Connectors

PCB Connectors are specialized connectors that are used to connect PCBs to other PCBs or to cables of electronic devices and to connect mounted electronic parts.

Classifications

Connector-Terminal Block Conversion Unites		
Name	Main application locations	Main types
Industrial connectors		<p>Units for PLCs</p>  <p>Units for General-purpose Devices</p> 

Industrial Ethernet Connectors		
Name	Main application locations	Main types
Industrial connectors		<p>Cables with Standard RJ45 Connectors</p>  <p>Cables with Rugged RJ45 Connectors</p>  <p>Cables with Waterproof M12 Connectors</p> 

Sensor I/O Connectors		
Name	Main application locations	Main types
Industrial connectors	<p>Connector Terminal Boxes: For multiple sensors</p> <p>Sensors</p> <p>Connectors</p> <p>Waterproof Round Connectors: Connecting outside control panels e-CON Connectors: Connecting to a connector with e-CON specifications</p>	Waterproof Round Connectors
		Connector Terminal Boxes
		e-CON Connectors

PCB Connectors		
Name	Main application locations	Main types
FPC connectors	<p>PCB Connectors: Mounted on internal circuits for a variety of devices, from industrial devices to consumer and commercial devices</p>	FPC/FFC Connectors
Consumer and commercial connectors		MIL Connectors
Electroformed parts		PCB Terminal Blocks
		HM/ZD Connectors
		Half-pitch Connectors
		DIN Connectors
		I/O Connectors
		Jumper Plugs
		IC Sockets
		Battery Connectors
		Probe Pin

Refer to *the OMRON Electronic Components Web* (www.omron.com/ecb/) for details on Connectors for PCBs.

Product Lineup and Features

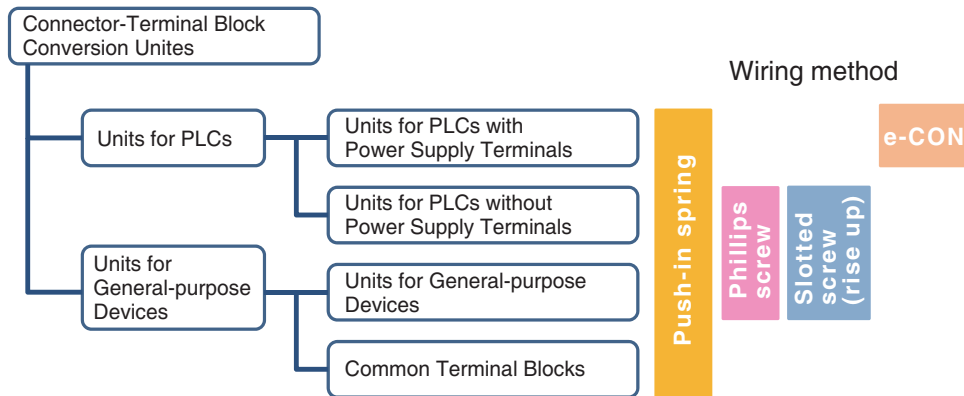
Connector-Terminal Block Conversion Unites

A Connector-Terminal Block Conversion Unit is a terminal block conversion unit with a prewired connector that can be used to wire all the I/O for a programmable controller (PLC) with a single cable.

OMRON provides Units for PLCs, which have wiring patterns specialized for PLC connections, and Units for general-purpose devices.

Recently, the use of devices with push-in terminal blocks has been increasing in order to improve work efficiency. In particular, push-in terminal blocks on Connector-Terminal Block Conversion Units that are used to connect to PLCs with their many signals make it possible to reduce space requirements and reduce wiring work.

OMRON's lineup also includes conventional Units with phillips screws or slotted screws, Units with e-CON specification, and more.

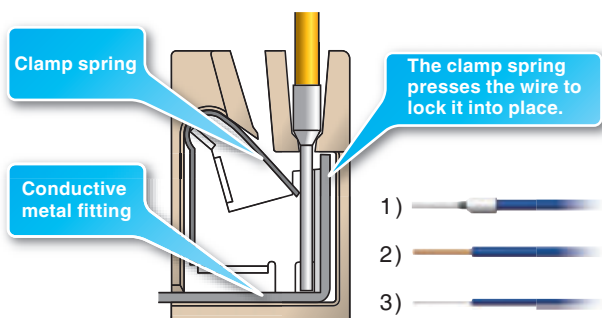


Features of Units with Push-in Terminal Blocks Structure



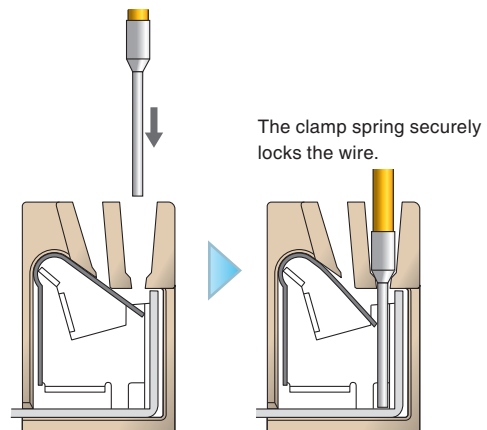
With a push-in terminal block, a wire is inserted and the clamp spring presses against the wire to lock it into place.

Three types of wire can be used: 1) wires with ferrules, 2) solid wires, and 3) stranded wires.



Connecting a Wire

If you use a wire with a ferrule, you can wire by inserting the ferrule into the push-in terminal block. Also, there is no need for retightening screws after shipping, so installation can be performed immediately.



Pullout Strength

The pullout strengths of push-in terminal blocks are specified in the JIS C 8201-7-1 or IEC 60947-7-1 standard.

Example: Pullout Strengths for Wires with Ferrules

Wire thickness (cross-sectional area)	Value in JIS standard
AWG20 (0.52 mm ²)	20 N
AWG22 (0.33 mm ²)	15 N

Refer to your OMRON website for details.

Industrial Ethernet Connectors

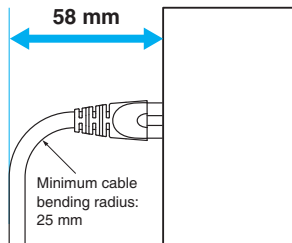
Industrial Ethernet Connectors support industrial networks based on EtherCAT® and other protocols. OMRON provides Cables with Standard Connectors, which reduce cable routing space, Cables with Rugged Connectors, which are suitable for wiring outside control panels, and Cables with Waterproof Connectors.

Features of Cables with Standard RJ45 Connectors Shape of RJ45 Connector



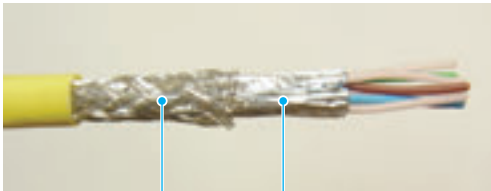
RJ45 Connectors are one form of connector that is used to connect communications cables such as LAN cables.

Minimum Cable Bending Radius: 25 mm



The small cable bending radius makes it possible to reduce cable routing space.

LSZH Cable with Double Shield



Overall braiding and individual foil shield on each wire pair

Double-shield cables with overall braiding and individual foil shield on each wire pair to reduce EMC interference in industrial environments.

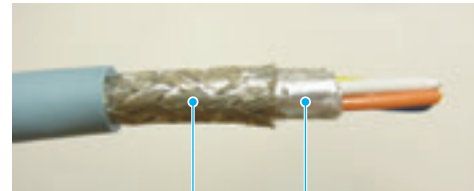
Features of Cables with Rugged RJ45 Connectors Shape of RJ45 Connector



Tough latch

Tough Latch RJ45 Connectors are suitable for connections outside of the control panels.

PVC Cable with Double Shield



Overall braiding and individual foil shield on each wire pair

Double-shield cables with overall braiding and individual foil shield on each wire pair to reduce EMC interference in industrial environments

Assembly Connectors



OMRON's lineup also includes Assembly Connectors that enable you to easily assemble Ethernet cables onsite without crimping tools or other special tools.

For details, refer to the *Industrial Connector Catalog* (Cat. No. X082).

Features of Cables with Waterproof Connectors (Round, M12)
Resistance to Environments

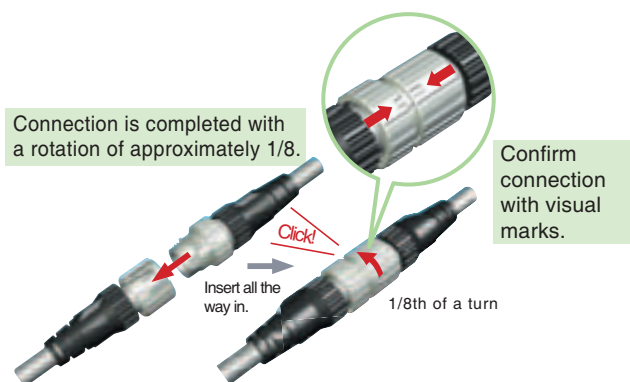


Shield structure

These connectors are environment resistant (waterproof) and achieve IP67 (IEC standard) compliance with their shield structure.

For information on IP67 (IEC standard), refer to the *Degree of Protection*.

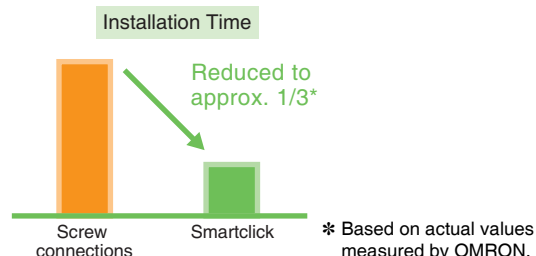
Smartclick Connectors



With a Smartclick Connector, connection is completed by turning the connector approximately 1/8th of a turn.

Smartclick Connectors

(1) Reduced Wiring Work and No Torque Management



Because connection is completed with approximately 1/8th of a turn, installation time is reduced. Also, you can confirm the completion of connection with the visible marks.

(2) No Periodic Retightening



* Enlargement of Bayonet Lock Mechanism

Thanks to the bayonet lock structure, machine vibration does not loosen the connector, eliminating the need for periodic retightening.

(3) Work Procedure Standardization



The distinct clicking sensation when the connector locks prevents insufficient tightening.

(4) Compatible with M12 Screw Connectors

	XS5 Smartclick Plug Connector	M12 plug connector
XS5 Smartclick Socket Connector	Twist-and-click connection	Screw connection
M12 socket connector	Screw connection	Screw connection

Even with existing equipment that uses M12 screw connectors, you can connect any combination of connectors.

* When a Smartclick Connector is connected to a screw connector, the connector is screwed on to make the connection.

Sensors

Switches

Safety Components

Relays

Control Components

Automation Systems

Motion / Drives

Energy Conservation Support / Environment Measure Equipment



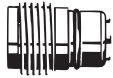

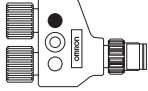
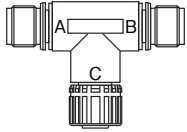
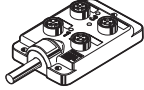
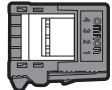
Power Supplies / In Addition

Others

Common

Sensor I/O Connectors

Sensor I/O Connectors are used to convert the wiring for a sensor into a connector. We offer various models to suit different uses.

Type	Main use	Appearance (typical example)
Connectors attached to Cable	Used for sensor and actuator wiring to relay sensor signals or the like.	
Connector Assemblies	Used to enable using connectors for sensor cables and relay cables.	
Sensor Connector Assemblies	Used to enable connectors to be integrated with the Sensor body.	
Panel-mounting Connectors	Used to enable using I/O box connectors mounted to panels.	
Y-Joint Connectors	Used to wire two sensors to a single cable.	
T-Joint Connectors	Aggregate model: Used to wire two sensors to a single cable. Bifurcated model: Used when branching one sensor signal to two cables. Daisy-chain model: Two-wire sensors with contact output can be connected through a daisy chain to obtain AND output.	
Connector Terminal Boxes	Used to wire multiple sensors to a single cable.	
e-CON Connectors	Used when the connected device uses e-CON specifications.	

Features of Pressure-welded Assembly Connectors Clarifies Assembly Completion Position

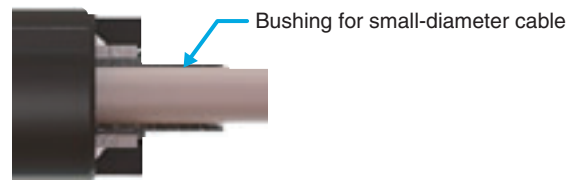
Assembly is completed with any type of cable simply by pressing the cable all the way in. The tightened position is clear, so you can visually confirm assembly completion.



The tightened position is clear.

Wide Range of Cables

Two sizes of bushings (one for large-diameter cables and one for small-diameter cables) are provided to support cable diameters from 3 mm to 8 mm.



In addition to these models, you can select from Connectors with IP67 protection, Smartclick Connectors, and other connectors suited to a variety of applications and environments. For details, refer to the *Industrial Connectors Catalog* (Cat. No. X082).

PCB Connectors

PCB Connectors are specialized connectors that are used to connect PCBs to other PCBs or to cables of electronic devices and to connect mounted electronic parts.

Refer to the *OMRON Electronic Components Web* (www.omron.com/ecb/) for details on Connectors for PCBs.

Explanation of Terms

Names

PCB Mounting Dimensions

Bottom View: View of PCB from solder mounting surface.

Top View: View of PCB from part mounting surface.

In the datasheets, the bottom view is given for products with DIP terminals and the top view for products with surface mounting terminals.

Triangle Mark

The position of the first terminal on the connector. (Some products have no triangle mark.)

Part Names (HSG, CNT, and Pin Clamp)

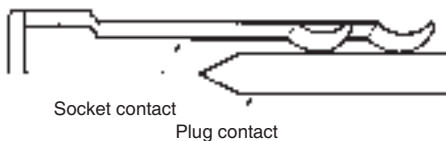
CNT (contact): Contacts for making electrical connections designed for use in multi-pole connectors.

HSG (housing): A synonym for a molded insulator that, for a connector with no shell, has the functions of holding the contacts in the correct alignment and insulating the contacts from each other and from any other conductors.

Pin Clamp: Same function as kink treatment. The objective is to increase the strength after mounting.

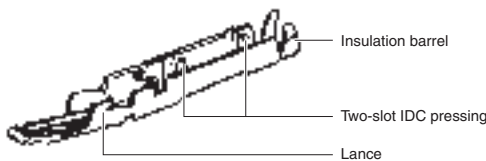
Twin Contacts

A method in which contact is made at two points.



Separated Contact

A contact that can be attached to or removed from the housing.



Dummy Board

A board inserted instead of the single-row contacts when they are left empty.

Insulation Barrel

The part of a contact that crimps the insulating sheath of a wire.

Lance

The lance-like projections arranged on a contact to secure it in the housing. A synonym for locking tab.

Plugs and Sockets

Connectors are classified as plugs or sockets according to the shape of the contact section or according to the connector that has the contacts.

Plug: Same as male connector, pin header, or post.

A connector with fixed contacts.

Mates with the socket contacts to make electrical connections.

Socket: Same as female connector or receptacle.

A connector with moving contacts.

Mates with the plug contacts to make electrical connections.

Harness

A part with wires attached to connectors.

Connector Mounting Tab

A part on both ends of the connector's housing mating section.

Used as a space for installing a screw, pin clamp, or other fixture.

Minimum Packing Unit

The minimum number packed for shipment from the factory.

Number of Pins

The number of contacts.

A synonym for pin count.

Pitch (Between Rows)

The interval between terminals in the long direction (distance between the terminal centers).

There is also a pitch between rows, which indicates the interval (distance between terminal centers) between rows of terminals in the long direction.

Through Holes

Holes into which terminals are inserted in order to connect connector terminals to the PCB wiring pattern.

Connector terminals are inserted into these holes and soldered to make the electrical connections.

A through hole sometimes indicates a hole used to connect the front and rear side wiring patterns of a PCB.

AWG

AWG is an abbreviation for American Wire Gauge. It is a conductor standard that indicates the core cross-sectional area for wires generally used in the United States.

Plating

Surface treatment that covers the surface of a metal or other material with a thin metal film (examples: gold plating or tin plating).

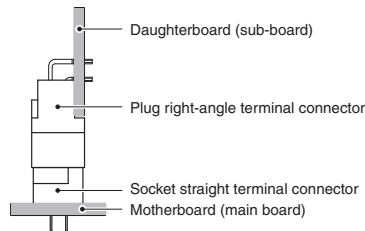
Coding

Processing performed on the housing in order to prevent incorrect insertion during connector mating.

Configurations and Structures

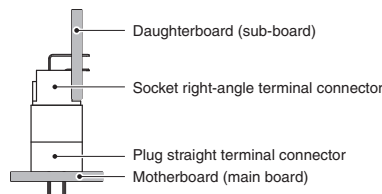
Standard (Perpendicular)

When perpendicular printed-wiring boards are connected, a socket straight terminal connector is connected to the motherboard (main board) and a plug right-angle terminal connector is connected to the daughterboard (sub-board).



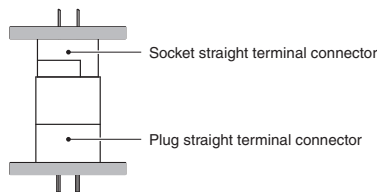
Reverse (Perpendicular)

When perpendicular printed-wiring boards are connected, a plug straight terminal connector is connected to the motherboard (main board) and a socket right-angle terminal connector is connected to the daughterboard (sub-board).



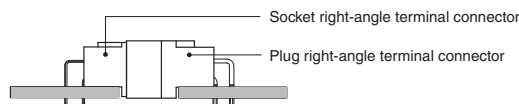
Stacking

Placing printed-wiring boards on top of each other and connecting them parallel to each other. The distance between the stacked circuit boards is called the stacking height.



Horizontal

Connecting two printed-wiring boards so that they are horizontal to each other.



One-piece Connector

A connector that connects directly. This term indicates a female connector that directly connects to a contact pattern on a printed-wiring board. A card edge connector is a type of one-piece connector.

Two-piece Connector

A connector that connects indirectly. This term indicates a type of connectors, male and female connectors, which are mounted on respective printed-wiring boards and are mated to each other to connect the PCBs.

Low Profile

A term that describes a device with a low height. Low-profile connectors are used in the following cases:

- When the vertical distance between PCBs is small when the connectors are mated.
- When the heights of the parts mounted on a PCB are low.

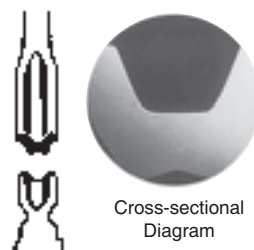
Wiping Effect

For a connector, this means that during mating, the socket contacts wipe any foreign matter off the contact surfaces of the plug contacts so that contact is made between clean surfaces.

Fine Fitting

Connecting with press fitting using OMRON's unique terminal shape.

Solder-free Connection Section (Fine-Fit Section) Structural Diagram



- The cross section has a W shape.
- The two points at the bottom serve as guide rails to minimize torsion.
- The two pairs of fins at the top deform to fit in the PCB through hole.

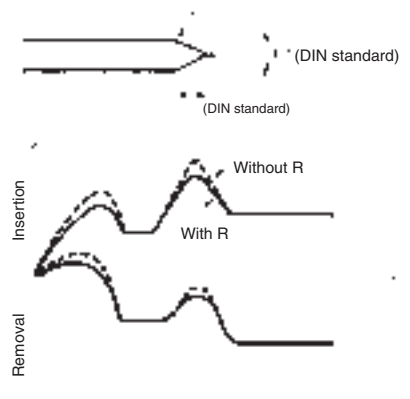
Backplane (Rack) System

A configuration in which multiple PCBs are placed in parallel with a direction intersecting the motherboard and joined by means of connectors.

Low Insertion Force Design

A plug tip shape like that in the figure on the right is used to reduce the insertion force.

The plug tip shape is regulated by the DIN standards, but the insertion force can be reduced by slightly rounding between the straight section of the plug and the tip section as in the figure on the right.



Bus Line Connection

A form of connection in which multiple devices are connected one at a time to a single main line.

Daisy Chain

A technique for connecting peripherals or other devices with cables in which the devices are connected in series.

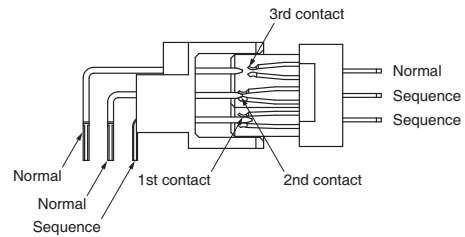
Sequence

A connection structure in which live wires can be connected and disconnected because the pins are given different lengths so that when connectors are mated, the power terminals connect first and the signal terminals are connected with power already being supplied and when connectors are disconnected, the power terminals are disconnected with the signal terminals already disconnected.

Terminals that have different terminal lengths to achieve this are called sequential terminals.

Three-step Sequence

A structure that combines normal terminals and sequential terminals to give a time difference to three-step contact system.



Electrical Performance

Rated Current

A current that serves as a reference for connector use. The rated current is normally specified according to the temperature rise limit of the connector contact section, connection section, etc.

Rated Voltage

A voltage that serves as a reference for connector use

Contact Resistance

The electrical resistance between contacts when the connectors are mated in the normal usage state. This electrical resistance is found by supplying the specified test current and measuring the voltage at the specified contact location. Therefore, this always includes the resistance of the contact conductors. Normally, a low-level contact resistance (measurement current: 100 mA max., open voltage: 20 mV max.) is given.

Insulation Resistance

The value of the resistance to the leakage current that flows through the insulator when the specified voltage is applied between adjacent contacts on the connector or between a contact and other adjacent metal.

Dielectric Strength

The limit to the voltage between adjacent contacts on the connector or between a contact and other adjacent metal for which no insulation breakdown, flashover, or other abnormality occurs within a certain time (normally, 1 minute).

Mechanical Performance

Insertion Tolerance

The minimum number of repeated connection (insertion) and disconnection (removal) operations that a connector can withstand.

The number of operations for which the base metal is first exposed is used as a guideline.

Note: This is not the number of operations that indicates the contact resistance rise limit.

Ambient Operating Temperature Range

The ambient temperature range around the connector in which it can be used in normal condition.

(There must be no condensation at low temperatures.)

Contact Insertion Force and Contact Removal Force

The force required to connect or disconnect the plug contacts and socket contacts.

Normally, a gauge specified for the specific connector is used instead of the plug contact. For the contact insertion force, the maximum value is specified and for the contact removal force, the minimum value is specified.

Total Insertion Force and Total Removal Force

The force required to connect or disconnect the entire plug and socket. Normally, for the total insertion force, the maximum value is specified and for the total removal force, the minimum value is specified.

Vibration

The range of mechanical vibration in which the connector satisfies its performance and characteristics requirements.

Information on Standards

VME Bus

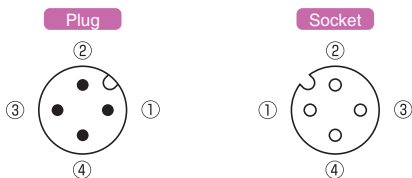
This is a computer bus standard. It is used by many devices and standardized as ANSI/IEEE 1014-1987 by the IEC.

IEC Standards: Specifications and Mating Dimensions

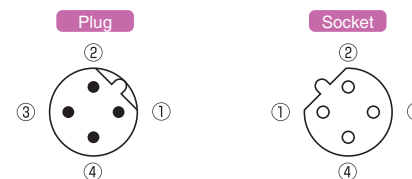
The specifications and mating dimensions of M12 Round Connectors comply with IEC 61076-2-101.

Coding Keys

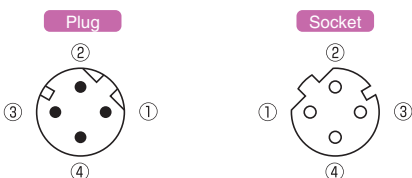
A-coding



B-coding



D-coding



Model Example

Model Example

For A-coding

XS5F-D421-C80-F
A-coding: For DC Sensors

For B-coding

XS2F-A421-B90-F
B-coding: For AC Sensors

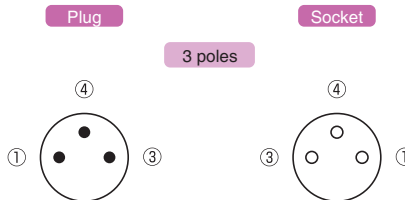
For D-coding

XS5H-T421-CM0-K
D-coding: For Industrial Ethernet

The specifications and mating dimensions of M8 Round Connectors comply with IEC 61076-2-104.

Coding Keys

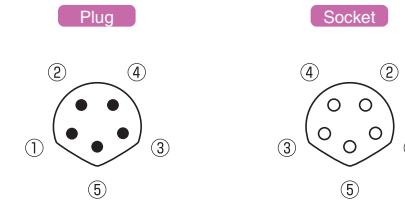
A-coding (3, 4 poles)



4 poles



B-coding (5 poles)



Model Example

Model Example

For A-coding

XS3F-M321-302-A
A-coding: 3 poles

For A-coding

XS3F-M421-402-A
A-coding: 4 poles

For B-coding

XS3F-M521-502-A
B-coding: 5 poles

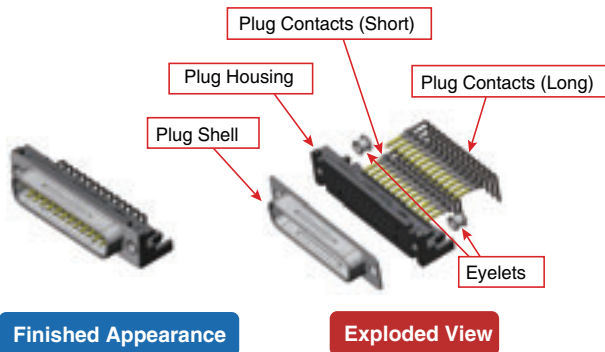
Further Information

Connector Section Structures

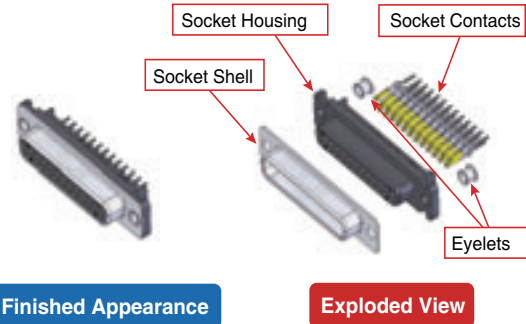
Connectors have a plug (male) side and a socket (female) side. Their structures are shown below.

Example: D-Sub Connectors

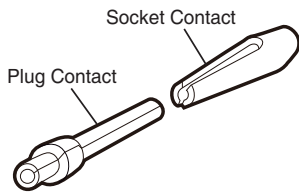
Connector Image Diagram (Plug Side)



Connector Image Diagram (Socket Side)

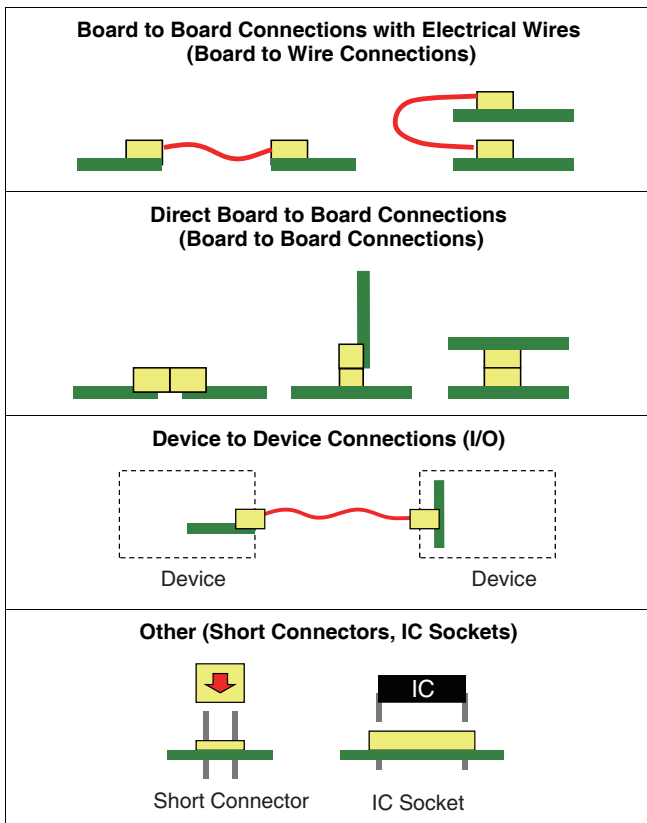


The connector contacts include the plug contacts on the plug side and the socket contacts on the socket side.



Connector Connection Methods

Connectors are divided into various types according to their applications and application locations.



Parts connected with connectors include wires and PCBs as described on the left. Typical connection methods for each are described below.

Wire Connection Methods (Typical Examples)

Crimping:

A wire connection technique in which metals are compressed to form a metal structure. The connection is made by applying high pressure to the wire from which the covering has been stripped and to the connector terminal.

IDC pressing:

A wire connection technique in which metal is compressed to form a metal structure. By pressing the wire with the covering intact against the contact section with high pressure, the wire covering is pierced through and an electrical connection is made.

Board Connection Methods (Typical Examples)

Soldering:

This method makes the connection by melting solder (a mixture of tin, lead, silver, flux, etc.) at high temperature and allowing it to flow into the connection. Industrial methods for automatic soldering include flow soldering and reflow soldering. When complying with an RoHS directive, it is necessary to use lead-free solder.

Press-fitting:

This method is used to make connections with an interference fit between the PCB terminals of connectors and the through holes in a PCB.

* A through hole is a hole for inserting a terminal into a PCB.

Cable Specifications

The cables used for connectors are mainly standard cables (F cables) or oil-resistant cables (P cables).

Standard Cables (F Cables)

- UL AWM2464, 6-mm dia., 4 cores × AWG20 (0.08/110)
- Robot
 - Fire-retardant
 - CL3 certified
NFPA (National Fire Protection Association) wire standard for industrial machinery for North America
 - PVC (polyvinyl chloride) is used.
In 2011, A cables (standard), R cables (robot), F cables (fire-retardant), and CL3 (CL3 certified cables) were all consolidated as F cables.

Oil-resistant Cables (P Cables)

- 6-mm dia., 4 cores × AWG20 (0.12/45)
- PUR (polyurethane) is used.

Cable specifications generally specify the following.

Example: Interpreting “UL AWM2464, 6-mm dia., 4 cores × AWG20 (0.08/110)” Standard Cable

- ULIndicates a UL-certified part.
- AWM2464 Specifies the rating, wire part name, and application.
- 6-mm dia. Specifies the cable outer diameter.
- 4×AWG20 Specifies that there are four core wires with a gauge of AWG 20.
(0.08/110) Specifies that there are 110 wires with a diameter of 0.08 mm in the conductor section.
(The smaller the wire diameter and the more wires there are, the higher the bending resistance.)

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Introduction

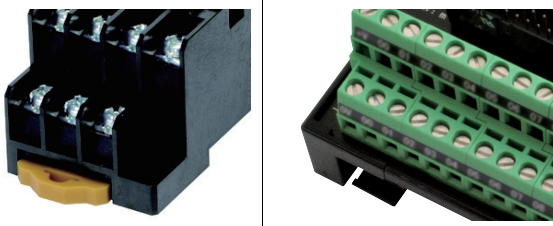
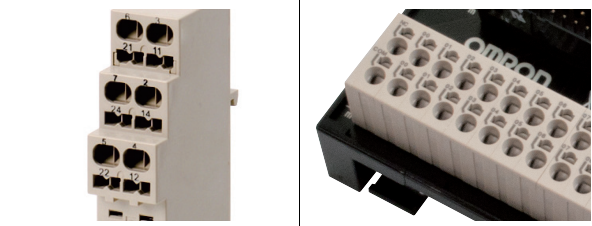





What Is a Push-In Plus Terminal Block?

A push-in terminal block allows you to connect wires by just pushing them in. Reducing wiring work when building control panels can greatly reduce production work.

Push-In Plus Terminal Blocks were independently developed by OMRON for easier wire insertion and firmer wire holding ability than standard push-in terminal blocks.

Terminal Block Types and Connection Methods

General terminal block types and how to connect them are shown in the following table.

Terminal block type	Screw terminal blocks		Screwless terminal blocks		
	This type of terminal block is structured to connect and fasten wires or crimp terminals directly or with a washer at the bottom of the heads of the terminal screws.		This type of terminal block is structured to connect with the pressure of the spring directly or with a metal strip when you insert the wire between the conductive fitting and the spring.		
Securing method	Screws		Springs		
Terminal blocks					
Applicable crimp terminals *1	Forked terminal 	Round terminal 	Round pin terminal 	Square pin terminal 	Ferrules *2 
Connection steps	Three-step connection (1) Loosen the screw with the tool. (2) Insert the terminal. (3) Tighten the screw with the tool.		Three-step connection (1) Insert the tool. (2) Insert the ferrule. (3) Remove the tool.		One-step connection *3 (1) Insert the ferrule.
Connection tool	Required		Required		Not required

*1. Bare wires (solid or stranded) can also be used.

*2. For details on ferrules, refer to *What is a Ferrule?* on page 3.

*3. A solid bare wire can be connected in one step, but a stranded bare wire requires three steps.

Mechanism of Screwless Terminal Blocks

This section describes the mechanisms and connection methods for push-in and clamp type terminal blocks.

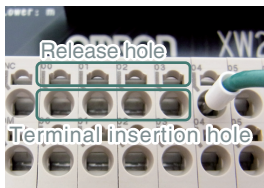
Push-in Type (Example for XW2R-P)

How to insert wire

Using Wires with Ferrules or Solid Wires

The wire should be pushed into the terminal block till stopping. The clamp spring opens automatically when the conductor is pushed in.

This applies the necessary force to the conductive fitting and the wire is held securely.

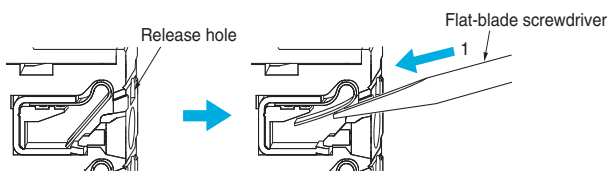


Using Stranded Wires

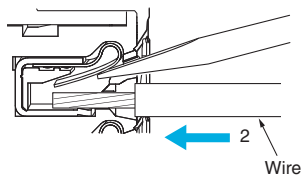


Wiring Completed in Three Steps

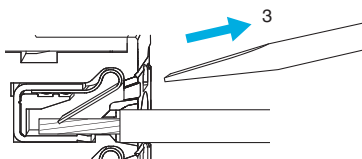
- (1) Press the flat-blade screwdriver diagonally into the release hole.



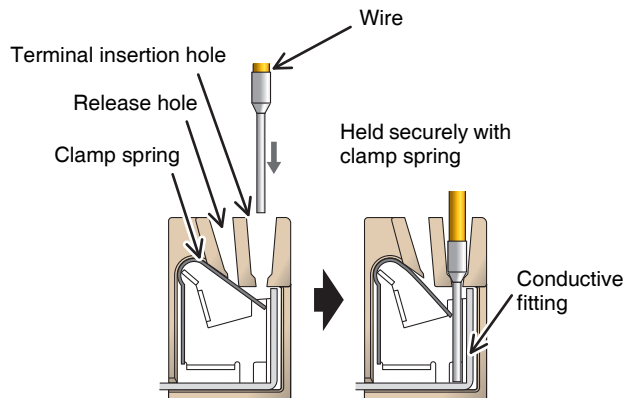
- (2) Leave the flat-blade screwdriver pressed into the release hole and insert the wire into the terminal hole. Insert the wire until the stripped portion is no longer visible to prevent shorting.



- (3) Remove the flat-blade screwdriver from the release hole. After you connect the wires, make sure that they are securely held in the terminal block.



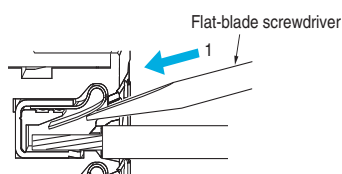
Wiring Completed in One Step



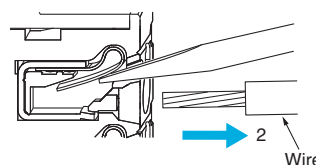
How to release wire (Same for Wires with Ferrules, Solid Wires, or Stranded Wires)



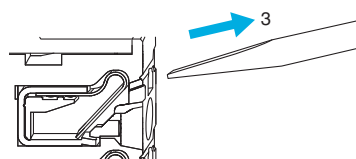
- (1) Press the flat-blade screwdriver diagonally into the release hole.



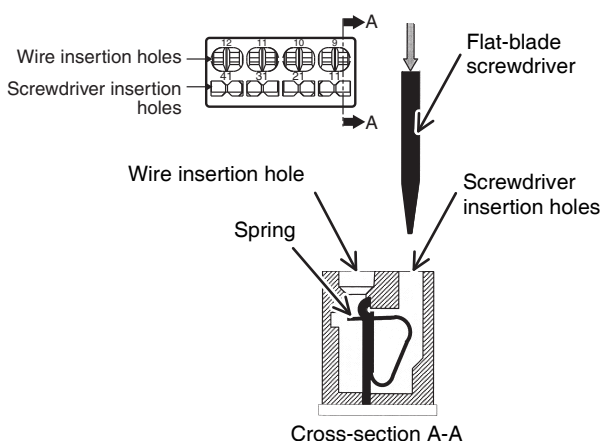
- (2) Leave the flat-blade screwdriver pressed into the release hole and pull out the wire.



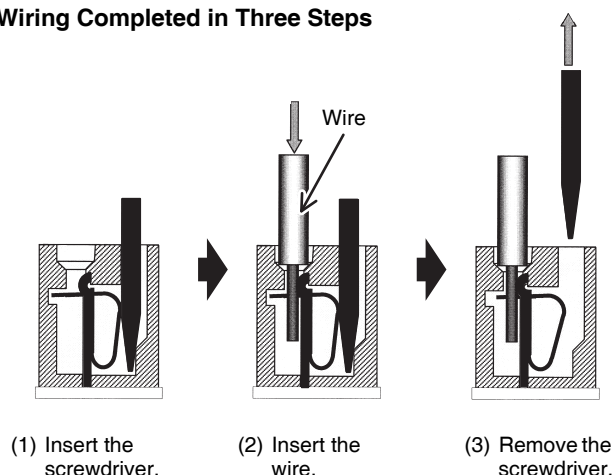
- (3) Remove the flat-blade screwdriver from the release hole.



Clamp Type (Example for PYF□□S)



Wiring Completed in Three Steps



- (1) Insert the screwdriver into the screwdriver insertion hole. (The spring at the back of the wire insertion hole will be open.)
- (2) Insert the wire or terminal into the wire insertion hole.
- (3) Remove the screwdriver. The spring will hold the wire.

* What is a Ferrule?

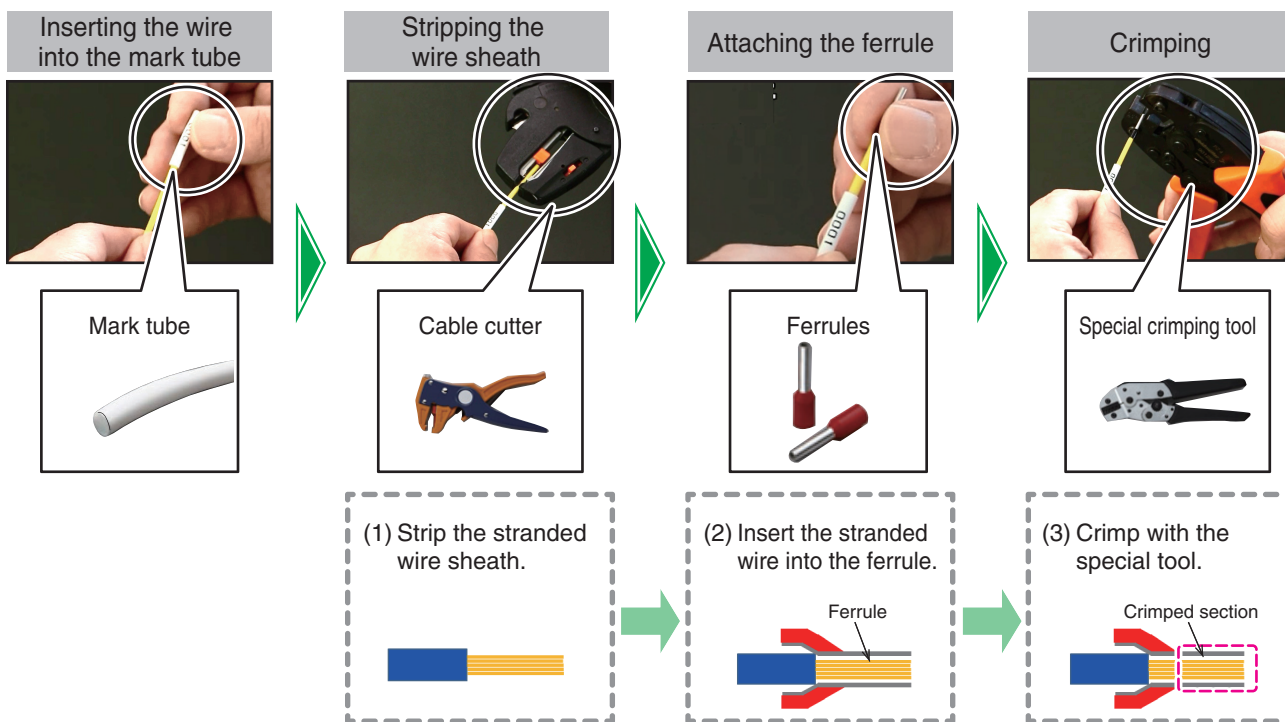
Ferrules are a European type of pin terminal to prevent unraveling of stranded wire and to stabilize the quality of electrical connections. They are smaller than standard pin crimp terminals and were designed to reduce the size of terminal blocks.

General Ferrules



<Reference Information>

The processing flow for wires with ferrules is as follows:



- Note:**
1. Attaching the ferrule to the wire requires a crimping tool.
 2. For information on recommended ferrules and crimping tools, refer to the datasheet of individual products.

Differences between Push-In Terminal Blocks and Push-In Plus Terminal Blocks

Push-In Plus Terminal Blocks use technology for easier wire insertion with firmer wire holding ability than previous push-in terminal blocks. They help reduce the time and work involved in wiring.

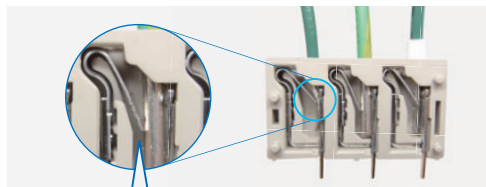
Easy to Insert

OMRON's Push-In Plus terminal blocks are as easy as inserting to an earphone jack. They help reduce the work load and improve wiring quality.



Held Firmly in Place

Even though less insertion force is required, the wires are held firmly in place. The advanced mechanism design technology and manufacturing technology produced a spring that ensures better workability and reliability.



IEC standard (cable diameter)	Push-In Plus terminal block	Screw terminal block
20 N min. (AWG20, 0.5 mm ²)	125 N	112 N

* Information for Push-In Plus terminal blocks and Screw terminal blocks is based on OMRON's actual measurement value data for the XW2R.

Work with Both Hands

Optimized shape to hold the screwdriver was created by the resin parts and the spring. Work goes smoothly when connecting stranded wires directly to the terminal because it's easier to aim at the desired terminal.



Products That Support Push-In Plus Terminal Blocks

(As of July 2016)

- Sockets
 - For Relays (MY and G2R-S)
 - For Timers (H3Y-□-B and H3YN-B)
 - For Liquid Leakage Sensor Amplifiers (K7L-□□B)
- Slim I/O Relays
- Solid State Relays
- I/O Relay Terminals
- Switch Mode Power Supplies
- DIN Track Terminal Blocks
- Measuring and Monitoring Relays
- Solid-state Timers
- Digital Temperature Controllers
- Power Monitors
- EtherCAT Slave Terminals NX-Series
- Connector-Terminal Block Conversion Units
- Safety Relay Units

Refer to the Panel Assist Web (www.ia.omron.com/solution/panel/) for details.

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Sensors

Switches

Safety Components

Relays

Control Components

Automation Systems

Motion / Drives

Energy Conservation Support /
Environment Measure Equipment

Power Supplies /
In Addition

Others

Common