

Description

Connecting inputs and outputs to an Allen-Bradley PLC is very convenient with Allen-Bradley PanelConnect™ Modules and cables. Unlike conventional methods of:

- Wiring a number of inputs or outputs on machine devices (sensors and pneumatic valves) through a panel and maintaining the integrity of the enclosure, then
- Wiring the connector to a terminal block,
- Wiring to the PLC I/O module or
- Facing the task of providing a seal on a number of cables entering an enclosure,

PanelConnect modules with the associated connection systems allow connection of up to 32 inputs or outputs directly to a 32 point PLC input or output module with convenient prebuilt cables and connectors.

Benefits

Simplified Machine & System Commissioning

Often a machine or system is set up at the manufacturer and disassembled for shipping to the job site. Many of the input and output connections need to be initially connected, then disconnected for shipment, only to be reconnected for final assembly. When connecting through the enclosure with PanelConnect, reconnection as well as making the correct connection for enclosure seals and final assembly can be greatly simplified, and the associated time and cost significantly reduced. Commissioning can be done in hours instead of weeks or months.

Enclosure Integrity

PanelConnect is a simple module that mounts on the enclosure, creating the proper seal at the input and output connection entry while preventing wiring errors. There is no need to use custom connectors or spend additional time or money to seal the opening where the cables enter the enclosure.

Environmental Rating

PanelConnect Modules are rated IP65/NEMA Type 1, 4, 4X, and 12 for harsh environments. These products bridge the gap between IP20 In-Panel environment and the IP65 On-Machine environment.

Reduced Wiring Time & Cost

When compared to traditional methods, the plug-and-play system of PanelConnect modules, prewired I/O cables, distribution boxes and

patchcords allows wiring to be completed in a fraction of the time. Standard and build-to-order cables are available, providing a neat, space-efficient wiring solution for any panel. The plug-and-play nature of the system also means less skilled labor is needed for commissioning, which ultimately means lower costs for OEMs and users.

Minimal Repair & Replacement Time

Threaded, secured connectors make PanelConnect and connection systems components quick easy to replace in the field, so repair and replacement time is minimal.

Simplified Design

Design engineers can now simplify their panel drawings by calling out a PanelConnect module and prewired cable instead of detailing each wire and terminal block connection. Simpler drawings aid not only the panel installer but also the end customer.

Reduced Wiring Errors

Wiring errors in a point-to-point system can take several minutes to track down and correct before the panel is ready for startup, and even a single wiring error in 128 I/O points may require a top-to-bottom wiring check. PanelConnect modules and wiring system cables are pretested to ensure 100% accurate connections and reduce the possibility of crossed wires or loose connections between the I/O and panel. The need for point-to-point wiring checks is all but eliminated, and when PanelConnect modules and cables are snapped in place, they fit every time—no need to find the wrong or loose connection, resulting in a much higher success rate at system startup.

Increased Volume & Productivity

An interconnected wiring system is 60 times faster to install than traditional point-to-point wiring. As a result, use of PanelConnect system components allows OEMs and panel builders to build more machines faster, and even allows building of machine segments to be outsourced more easily thanks to plug-and-play connections.

Design Flexibility

Hardware components must be flexible enough to meet the needs of today's installations—and tomorrow's expansions—while remaining cost-effective. Rockwell Automation's broad range of PanelConnect modules and cables provides flexibility with modularity and system expansion

capabilities while delivering a lower life-cycle cost.

Quality-Looking Panels

Prewired cables and PanelConnect modules organize your panel wiring, providing a consistent look. Markers and preprinted adhesive labels for the terminal wiring neatly identify connections on the field-wiring side, which correspond to the I/O module. A large marking area is also available on the PanelConnect modules for I/O information.

Reduce DIN Rail Space

Since PanelConnect modules are mounted on the side wall of the enclosure, the DIN rail space reserved for traditional terminal blocks is eliminated, saving valuable panel real estate.

Reduced Wire Preparation & Routing

Connectorized PanelConnect systems and prewired cables eliminate the stripping and cutting of wires as well as the associated time and costs. In addition, wire routing is simplified since engineers need only worry about routing one prewired cable as opposed to 20 wires used in a hardwired approach.

Easier Marking & Labeling

Three markers on the front of the PanelConnect are provided to identify I/O module, input/output points and patchcord cables. Preprinted, I/O-specific adhesive label strips for quick marking of power supply terminals save labor compared to point-to-point wiring that requires labor-intensive wire markers. And while prewired cables require no labels, PanelConnect modules are indicated by AC and DC voltage marking rings.

Fewer Parts, Less Inventory, and Lower Carrying Cost

A wiring system involves only a PanelConnect module and the cable, versus a terminal block, barrier, jumper, markers, wires, and swing arms in traditional hardwired systems. Therefore, it requires fewer components and, in turn, less inventory and lower carrying costs.

Compatibility

PanelConnect systems work with other digital and analog Allen-Bradley 1492 Programmable Controller Wiring Systems, and support connector cables for both mini-plus and M23 style for mini and micro sensor connectors.

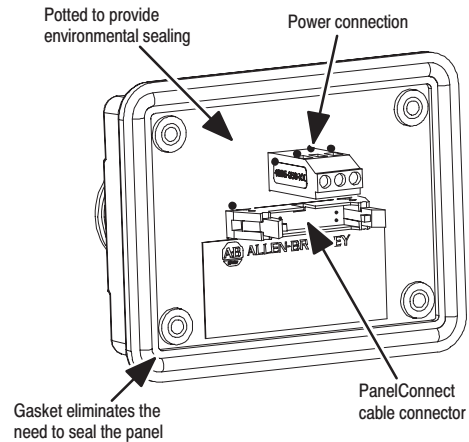
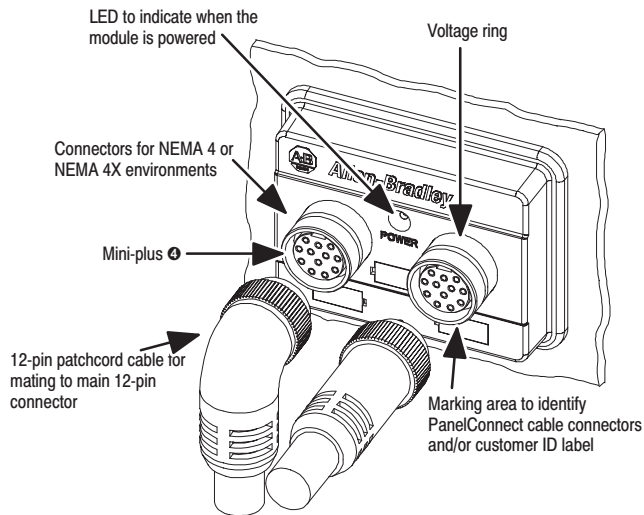
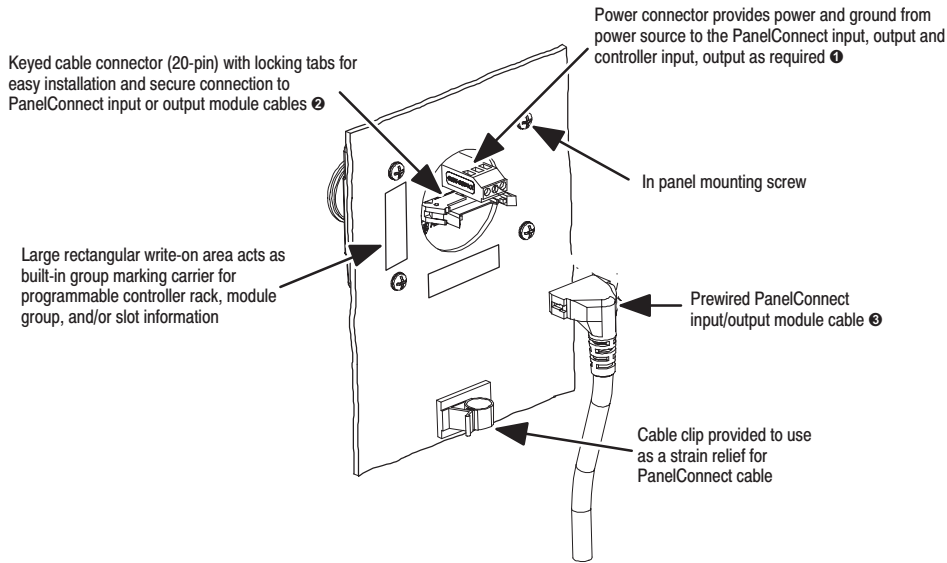
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Overview

Modules for Input/Output Connections

PanelConnect Input or Output Module Overview

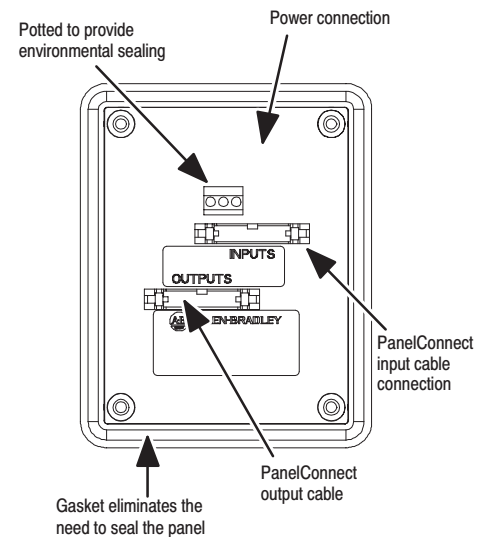
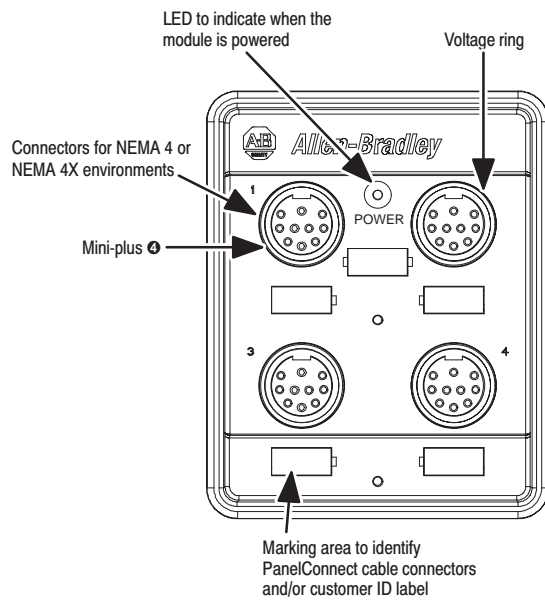
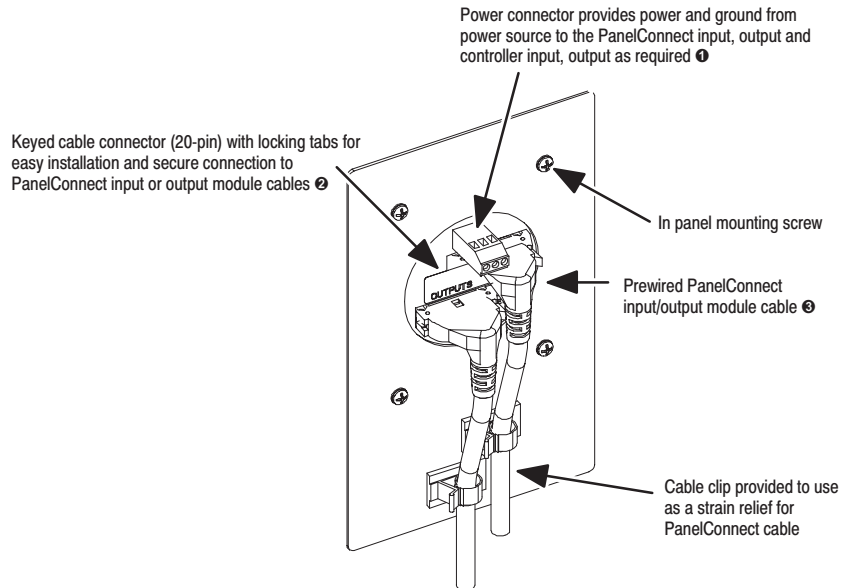
Note: All of the digital PanelConnect for input and output products have the following features:



- ❶ Power supply Connector for Power source input.
- ❷ PanelConnect input/output module connector for 16-point input/output module cable.
- ❸ Prewired or I/O ready PanelConnect Module cable.
- ❹ Field side connectors for two keyed 10-pin or two keyed 12-pin main PanelConnect connectors which mate to patchcords. Style: Mini-Plus (10 or 12-pin).

PanelConnect Combination Module Overview

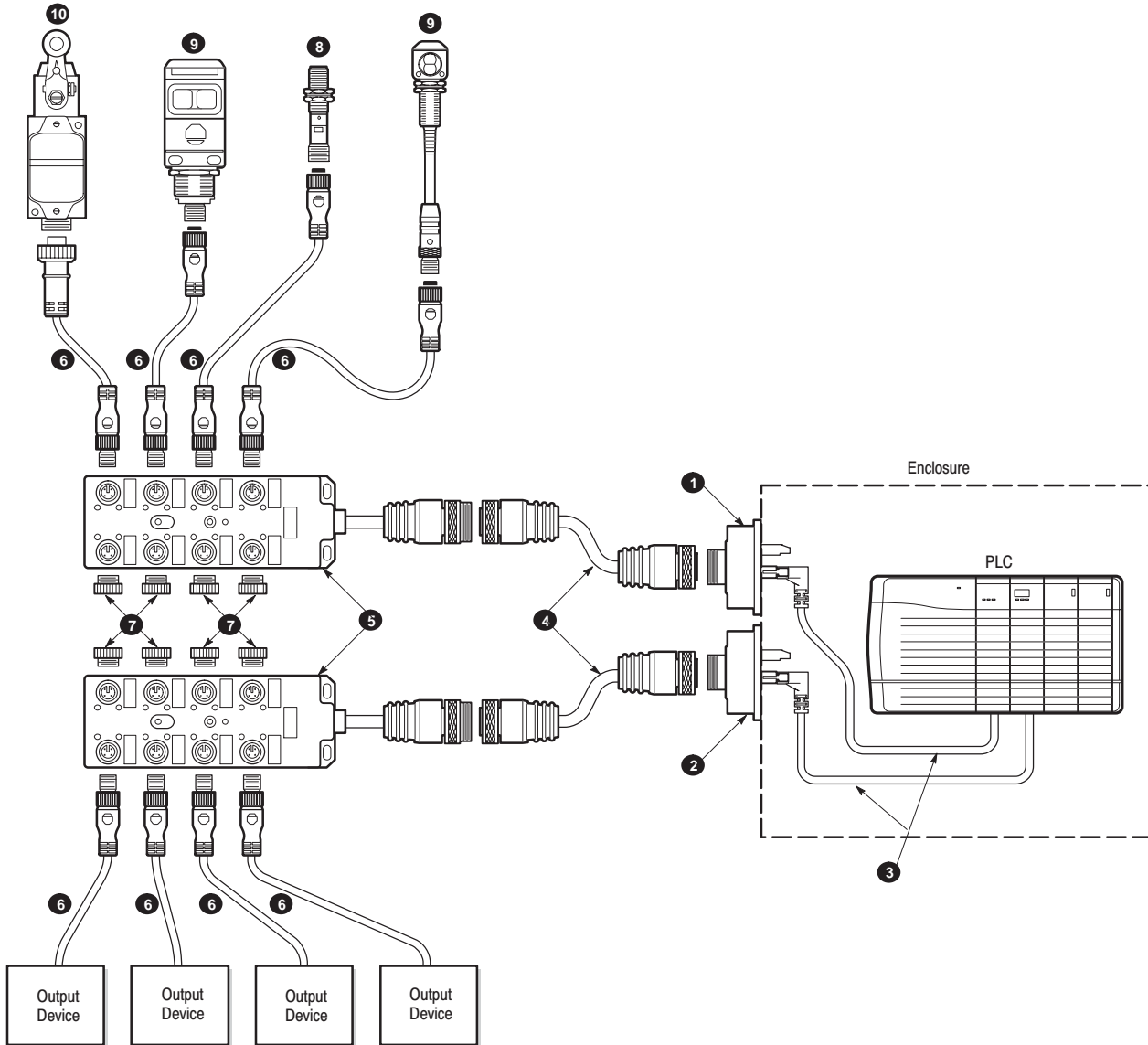
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- ❶ Power supply Connector for Power source input.
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- ❸ Prewired or I/O ready PanelConnect Module cable.
- ❹ Field side connectors for four keyed 12-pin main PanelConnect connectors which mate to patchcords. Style: Mini-Plus (12-pin)

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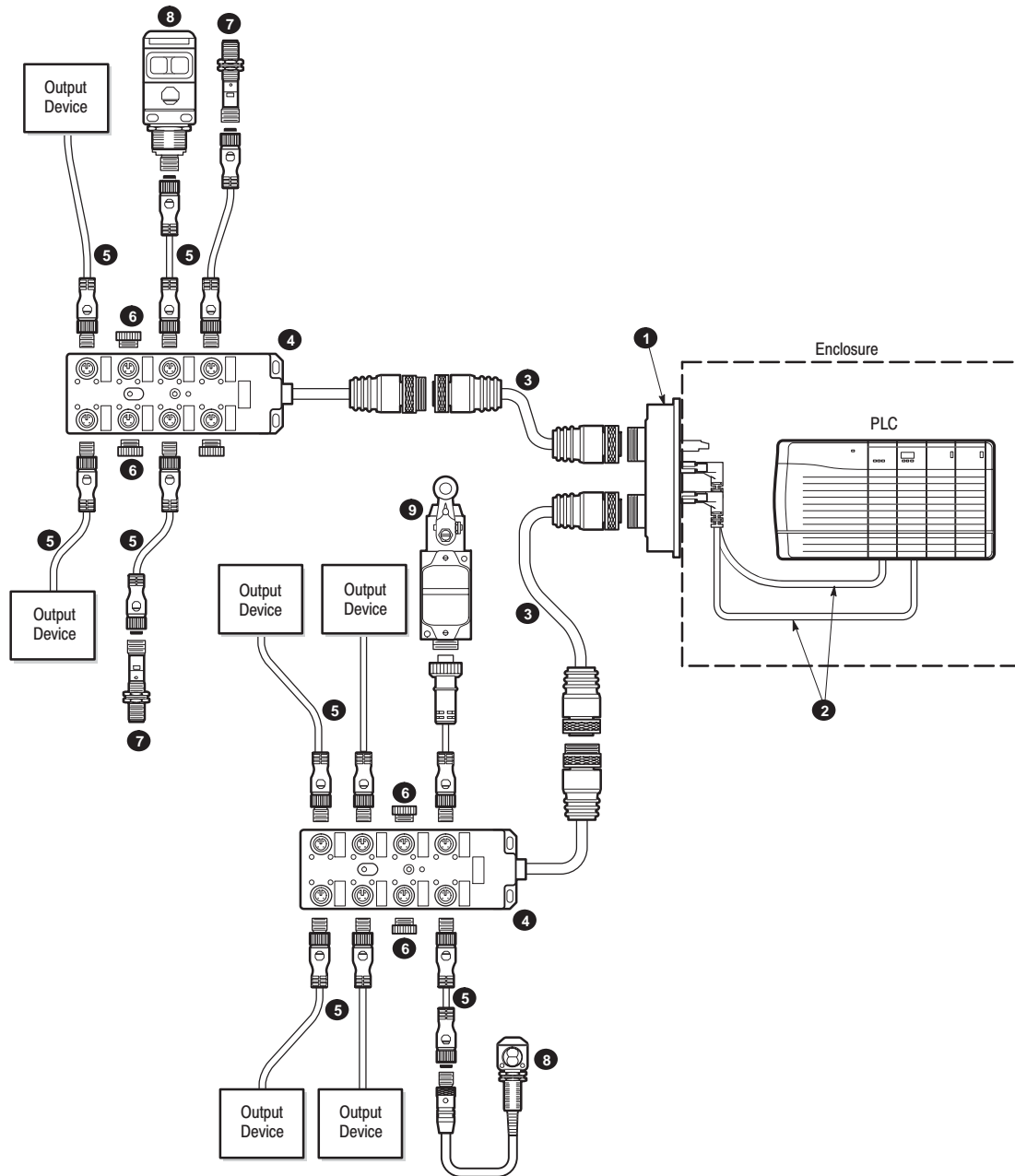
Typical Configuration



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 Catalog.**

Typical Configuration



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