



Analog I/O Conversion Module

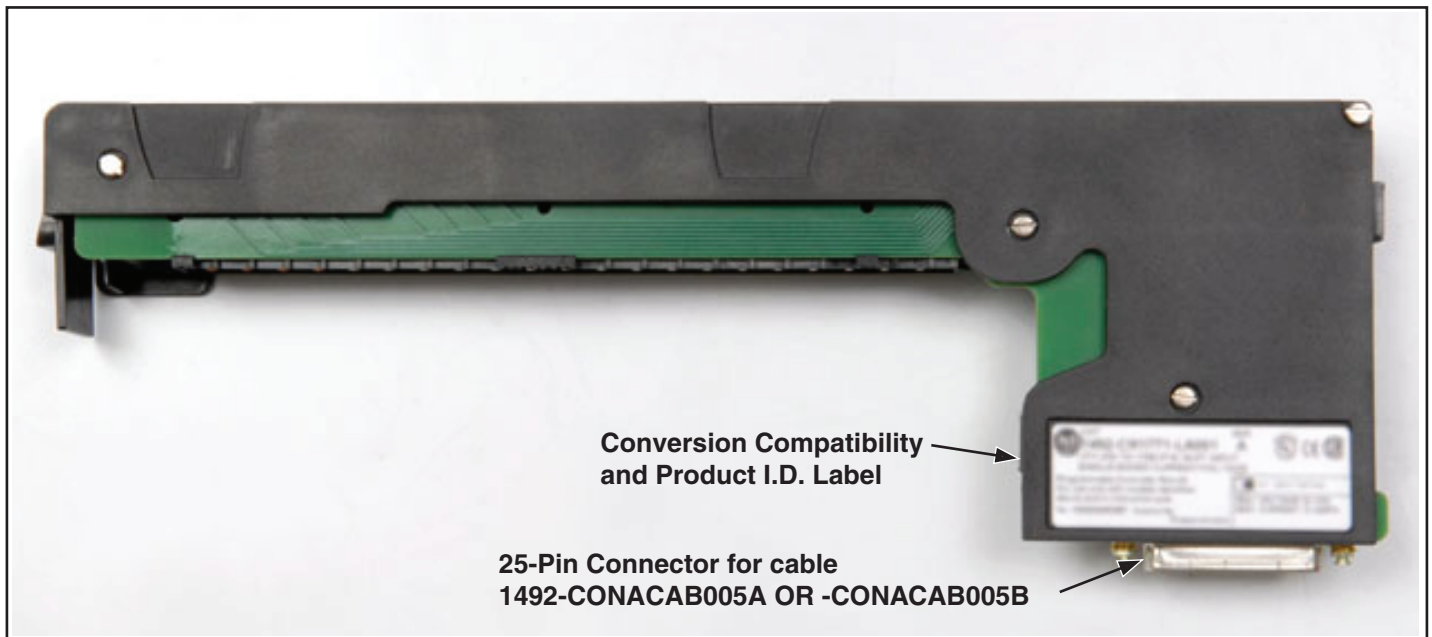
(Cat 1492-CM1771-LA001)

I. Description

This Analog I/O Conversion Module provides for the conversion of (1) 1771, 16 Channel I/O module to be converted to (1) 1756, 16 Channel I/O module and consists of the following:

- (1) 1771 Module (16ch) to (1) 1756 Module (16ch)
- (2) Conversion Module: 1492-CM1771-LA001
- (1) Cable: 1492-CONACAB005A or 1492-CONACAB005B (Table 2)
- (1) Conversion Mounting Assembly: 1492-MUA... (Table 1)

This conversion is accomplished without the removal of any field wires from the existing 1771 Swing Arm. The existing 1771 Swing Arm fits directly onto the edge connector of the 1492 Conversion Module. On one end of the 1492 Cable is (1) connector for the Conversion Module. On the other end is the Removable Terminal Block (RTB) for the 1756 I/O module, as shown in the photo below. The I/O signals are routed through the 1492 Conversion Module and the 1492 Cable to the appropriate terminals on the 1756 I/O module per the Wiring Diagrams in Section V. As standard, both portions of the 1492 Cables are 0.5M long, but we also offer a 1.0M cable length. Refer to the footnotes in Table 2 for further details.



1492-CM1771-LA001 Conversion Module



WARNING

De-energize and lockout any and all power to all I/O field devices connected to the A-B 1771 I/O chassis, and the power to the 1771 I/O chassis itself. Ensure all power is de-energized and locked out to any device in the control cabinet where the conversion is to be performed. Ensure work is performed by qualified personnel.

II. Installation

The 1492 Conversion Modules must be installed in a 1492 Conversion Mounting Assembly (see Table 1 below). A complete System Installation Manual ships with the 1492 Conversion Mounting Assembly.

- 1) Determine the quantity of each type of 1771 I/O modules used in the 1771 I/O Chassis to be converted.
- 2) Select the applicable 1492 Conversion Modules from Table 2, Section III.
- 3) Review the Max Slots for I/O and Chassis Width data from the Table 1 below.
- 4) Select a 1756 I/O Chassis which has enough I/O Slots.

NOTE: (2) I/O slots are required in the 1756 Chassis for conversions where (1) 1771 I/O module converts to (2) 1756 I/O modules.

- 5) Select the 1492 Conversion Mounting Assembly which has enough Conversion Module slots.

NOTE: (2) Conversion Module slots are required in the 1492 Conversion Mounting Assembly for conversions where (2) 1771 I/O module convert to (1) 1756 I/O modules.

NOTE: The 1492 Conversion Mounting Assembly has the same Height & Width foot-print as the 1771 Chassis and is designed to use the same mounting hardware. The combined Depth of the 1492 Conversion Mounting Assembly with the 1756 Chassis mounted on top is 10.25 inches (Controller w/key) or 10.0 inches (Controller w/o key). Dimension drawings are included in the System Installation Manual that ships with the 1492 Conversion Mounting Assembly.

Table 1: Bulletin 1771 to 1756 Chassis Conversion

| 1771 Chassis | | | | 1756 Chassis | | | Conversion Mounting Assembly | | |
|------------------------|-------------------|----------------------------|-------------------|--------------|-------------------|---------------|------------------------------|----------------------------------|---------------|
| Cat. No. | Max Slots for I/O | Chassis Width ^② | | Cat. No. | Max Slots for I/O | Chassis Width | Cat. No. | Max Slots for Conversion Modules | Chassis Width |
| | | without Power Supply | with Power Supply | | | | | | |
| 1771-A1B | 4 | 9.01 | 12.61 | 1756-A4 | 3 | 10.35 | 1492-MUA1B-A4-A7 | 4 | 9.01 |
| | | | | 1756-A7 | 6 | 14.49 | | | |
| 1771-A2B | 8 | 14.01 | 17.61 | 1756-A7 | 6 | 14.49 | 1492-MUA2B-A7-A10 | 8 | 14.01 |
| | | | | 1756-A10 | 9 | 19.02 | | | |
| 1771-A3B1 ^① | 12 | 19.01 | | 1756-A10 | 9 | 19.02 | 1492-MUA3-A10-A13 | 12 | 19.01 |
| | | | | 1756-A13 | 12 | 23.15 | | | |
| 1771-A4B | 16 | 24.01 | | 1756-A13 | 12 | 23.15 | 1492-MUA4-A13-A17 | 16 | 24.01 |
| | | | | 1756-A17 | 16 | 29.06 | | | |

Foot Notes:

① 1771-A3B is not listed as it is used for 19 inch wide instrumentation panels.

② Notice that the 1756 Chassis Width sometimes exceeds the 1771 Chassis Width, with or without the Power Supply. The Cover-Plate of the 1492 Conversion Mounting Assembly allows the 1756 Chassis to be Left justified, Right justified or Centered. A complete System Installation Manual ships with the 1492 Conversion Mounting Assembly.

III. Compatibility

| 1771 Analog I/O Module ^① | 1756 Analog I/O Module ^① | 1492 I/O Conversion Module | 1492 Cable ^② |
|--|--|-------------------------------|----------------------------|
| 1771-IFE (SEC) | 1771-IF16 (SEC) | 1492-CM1771-LA001 | 1492-CONACAB005B |
| 1771-IFE (SEV) | 1771-IF16 (SEV) | 1492-CM1771-LA001 | 1492-CONACAB005A |
| 1771-IFF (SEC) | 1771-IF16 (SEC) | 1492-CM1771-LA001 | 1492-CONACAB005B |
| 1771-IFF (SEV) | 1771-IF16 (SEV) | 1492-CM1771-LA001 | 1492-CONACAB005A |

Foot Notes:

① To understand any issues concerning I/O module compatibility, refer to the Installation Manuals for the specific 1771 and 1756 I/O modules involved.

② The 3 numbers indicate the length of the 1492 Cable. Recommended cable lengths of 0.5M are shown. Additional cable lengths are as follows:

1.0M = 1492-CONACAB010A

1.0M = 1492-CONACAB010B

IV. Conversion Module Specifications

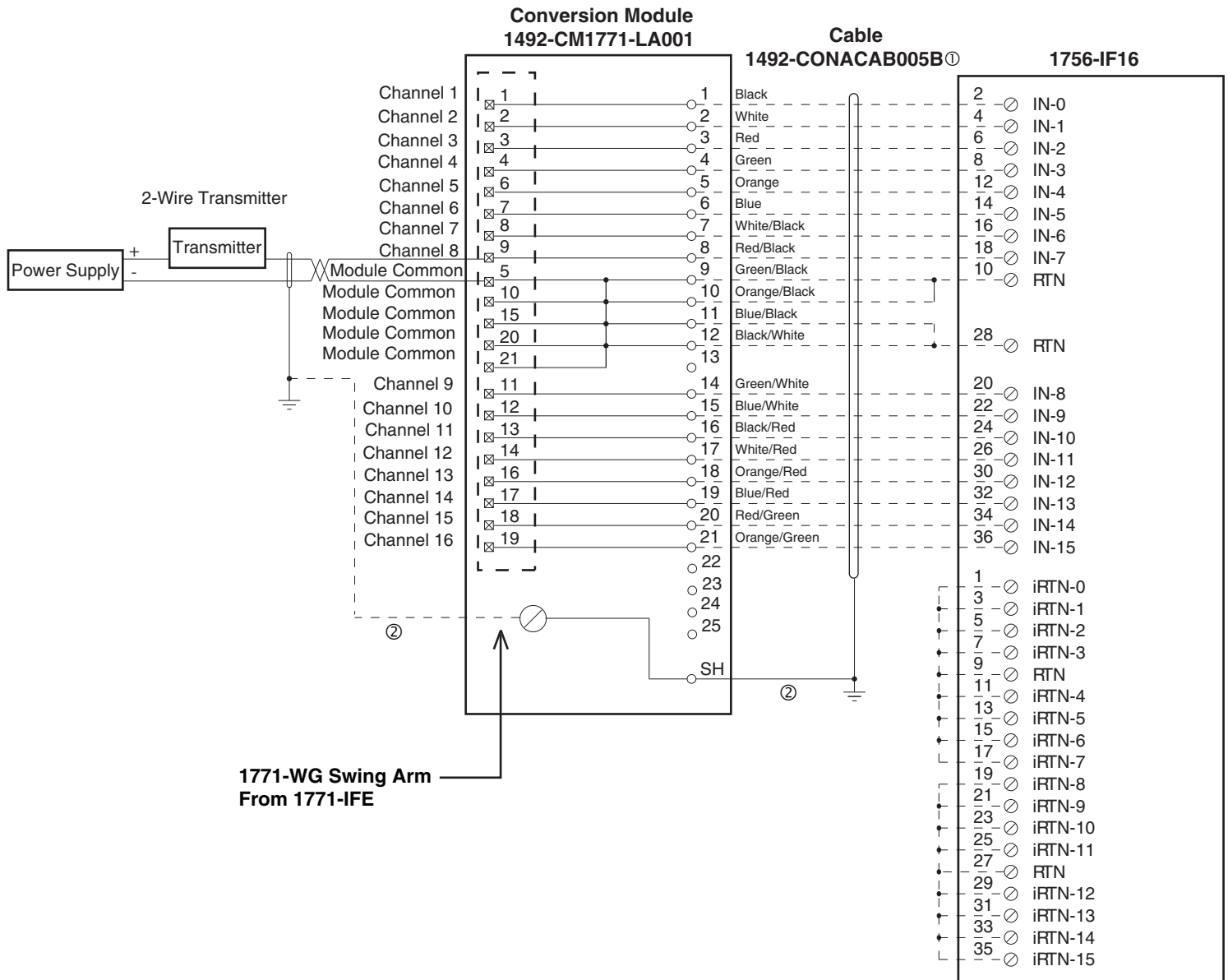
(Operating specifications are when installed in the Conversion System base / cover-plate assembly)

| Specification | Value |
|--|---|
| Dimensions | 11.81 in. (height) x 4.38 in. (depth) x 1.5 in. (width) 300 mm. (height) x 111.25 mm (depth) x 38.1 mm (width) |
| Approximate Shipping Weight | 250.6 g (0.55 lbs) (includes carton) |
| Storage Temperature | -40 to +85°C (-40 to +185°F) |
| Operating Temperature | 0 to 60°C (32 to 140°F) |
| Operating Humidity | 5 to 95% at 60°C (non-condensing) |
| Shock | |
| Non operating | 50g |
| Operating | 30g |
| Operating Vibration | 2g at 10 to 500Hz (Agrees with 1756 I/O module specifications) |
| Maximum Operating Voltage | 30 Vdc |
| Max. Module Operating Current Per Point: Per Module: | 2 Amps 12 Amps |
| | NOTICE Refer to the Wiring Diagram(s) for current limits for a specific configuration. |
| Agency Certifications | UL Classified: Under UL File Number E113724 CSA CE: compliant for all applicable directives |
| Pollution Degree | 2 |
| Environmental Rating | IP20 |



WARNING

There are several key application considerations and system specifications (bottom of drawing) when using these components (conversion module, cable and input module). Read and understand these considerations before installation.



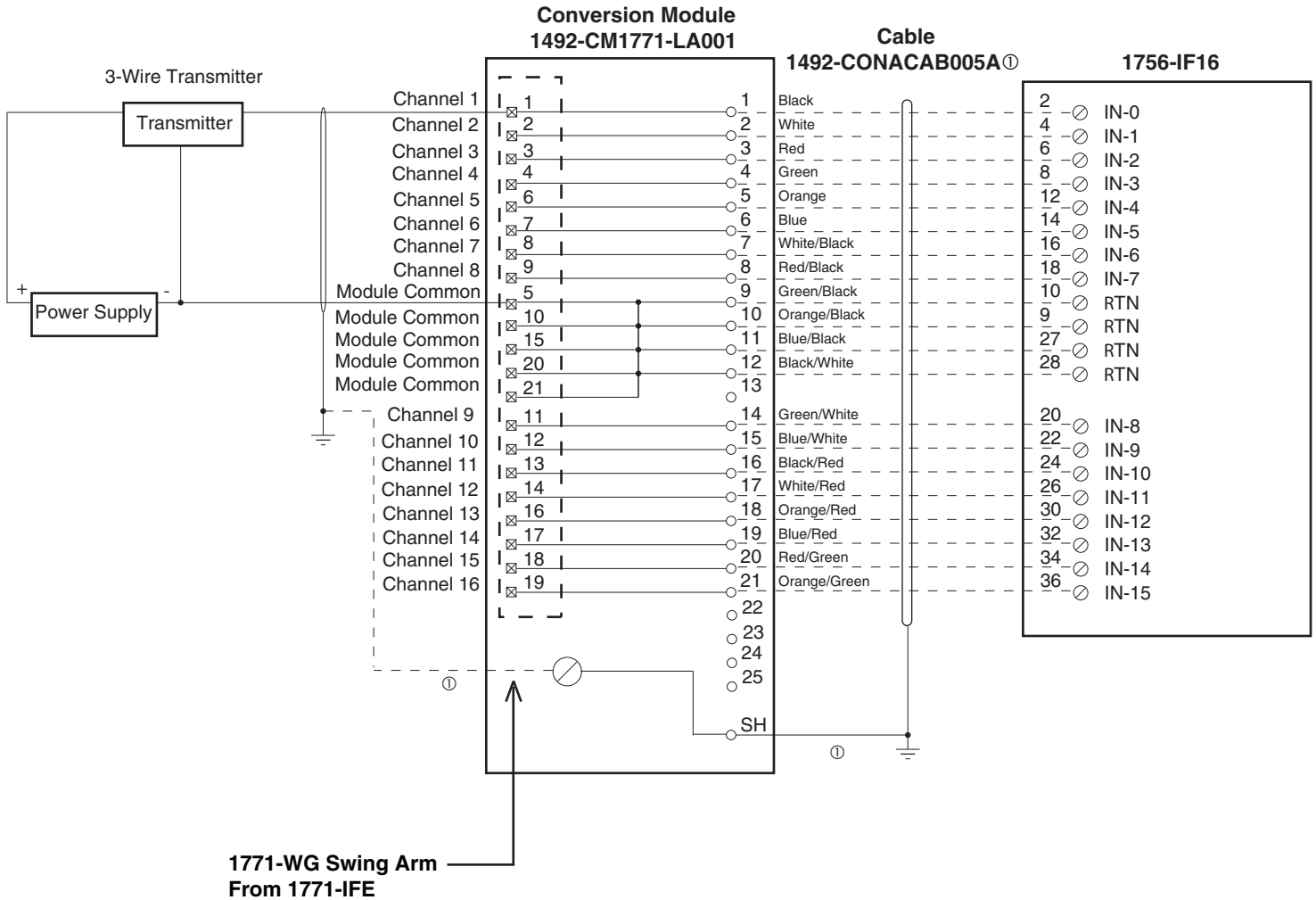
Conversion Module Installation and Application Considerations

- ① This Bul. 1492 cable consists of a cable wired to one 1756-IF16 RTB. Recommended cable lengths of 0.5M or 1.0M (005=0.5M, 010=1.0M). See table 2 for other lengths.
- ② SHIELD GROUNDING: In some installations, the field wiring shield was grounded on the 1771 chassis. If this was the case, the installer must remove these shield connections from the 1771 chassis and they can be connected to the grounding stud on the 1492-CM1771-LA001 module. The pre-wired cable used between the 1492-CM1771-LA001 module and the 1756-IF16 [1492-CONACAB005B] provides a shield ground lug to ground the shield at the 1756 ControlLogix chassis, this must be connected. Do NOT connect this ground lug to the conversion module grounding stud.
- ③ This design assumes that all inputs on the 1771-IFE were connected to current transmitters. If there was a mix of current and voltage transmitters, then modification of the pre-wired cable [1492-CONACAB005B] will need to occur at the 1756-IF16 terminal block. Refer to the 1756-IF16 Installation Manual for modification details.
- ④ The 1771-IFE analog input ranges were configured via software, as is the input range for the 1756-IF16. Please ensure the correct input range is configured in the 1756-IF16.
- ⑤ Refer to your 1771-IFE and 1756-IF16 Installation and User Manuals for additional information concerning comparisons of module wiring, features and configuration details. [Reference Doc: 41170-944 (Version 02)]



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Conversion Module Installation and Application Considerations

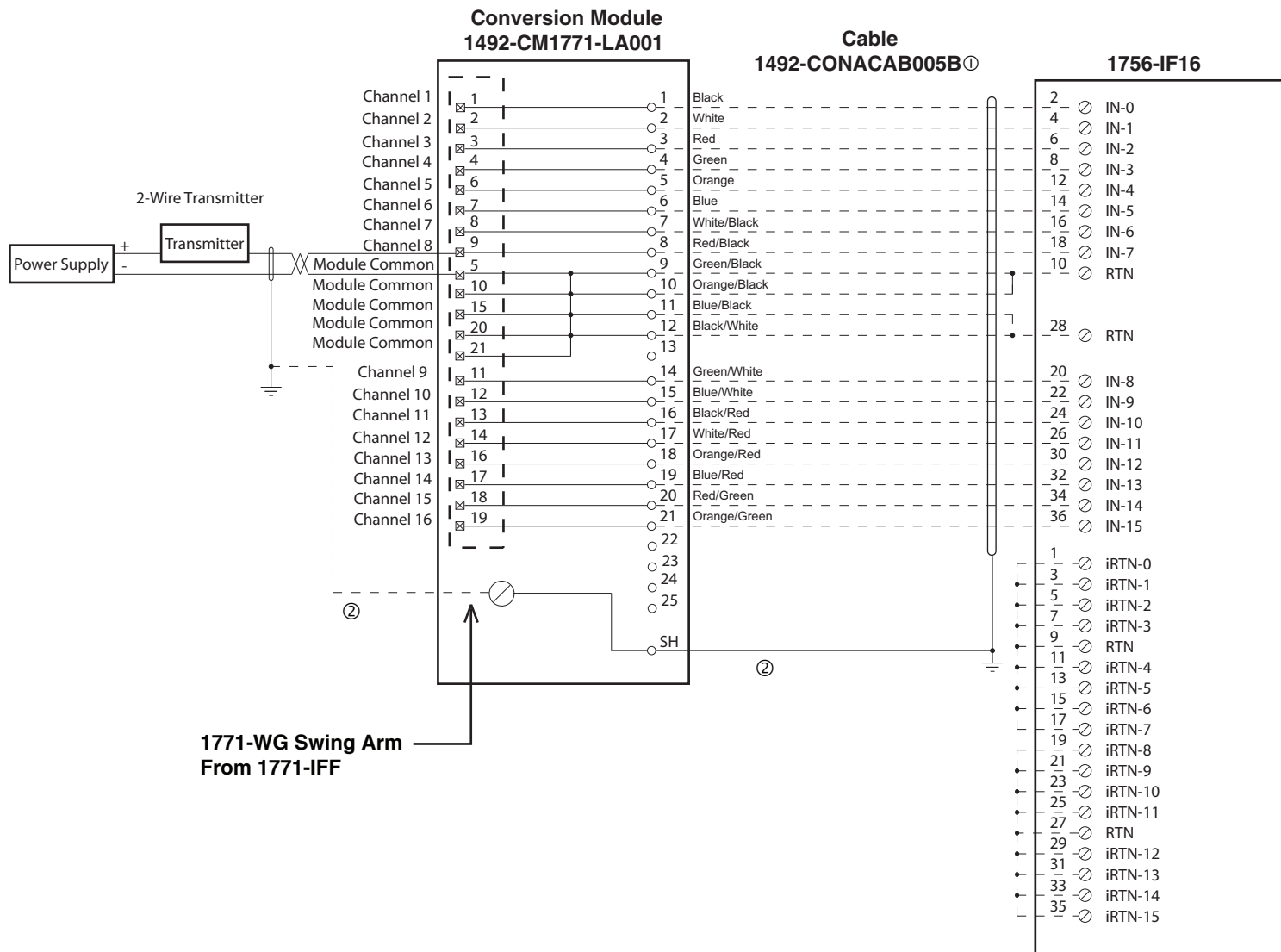
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- ④ The 1771-IFE analog input ranges were configured via software, as is the input range for the 1756-IF16. Please ensure the correct input range is configured in the 1756-IF16.
- ⑤ Refer to your 1771-IFE and 1756-IF16 Installation and User Manuals for additional information concerning comparisons of module wiring, features and configuration details.

[Reference Doc: 41170-945 (Version 02)]



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Conversion Module Installation and Application Considerations

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③ This design assumes that all inputs on the 1771-IFF were connected to current transmitters. If there was a mix of current and voltage transmitters, then modification of the pre-wired cable [1492-CONACAB005B] will need to occur at the 1756-IF16 terminal block. Refer to the 1756-IF16 Installation Manual for modification details.

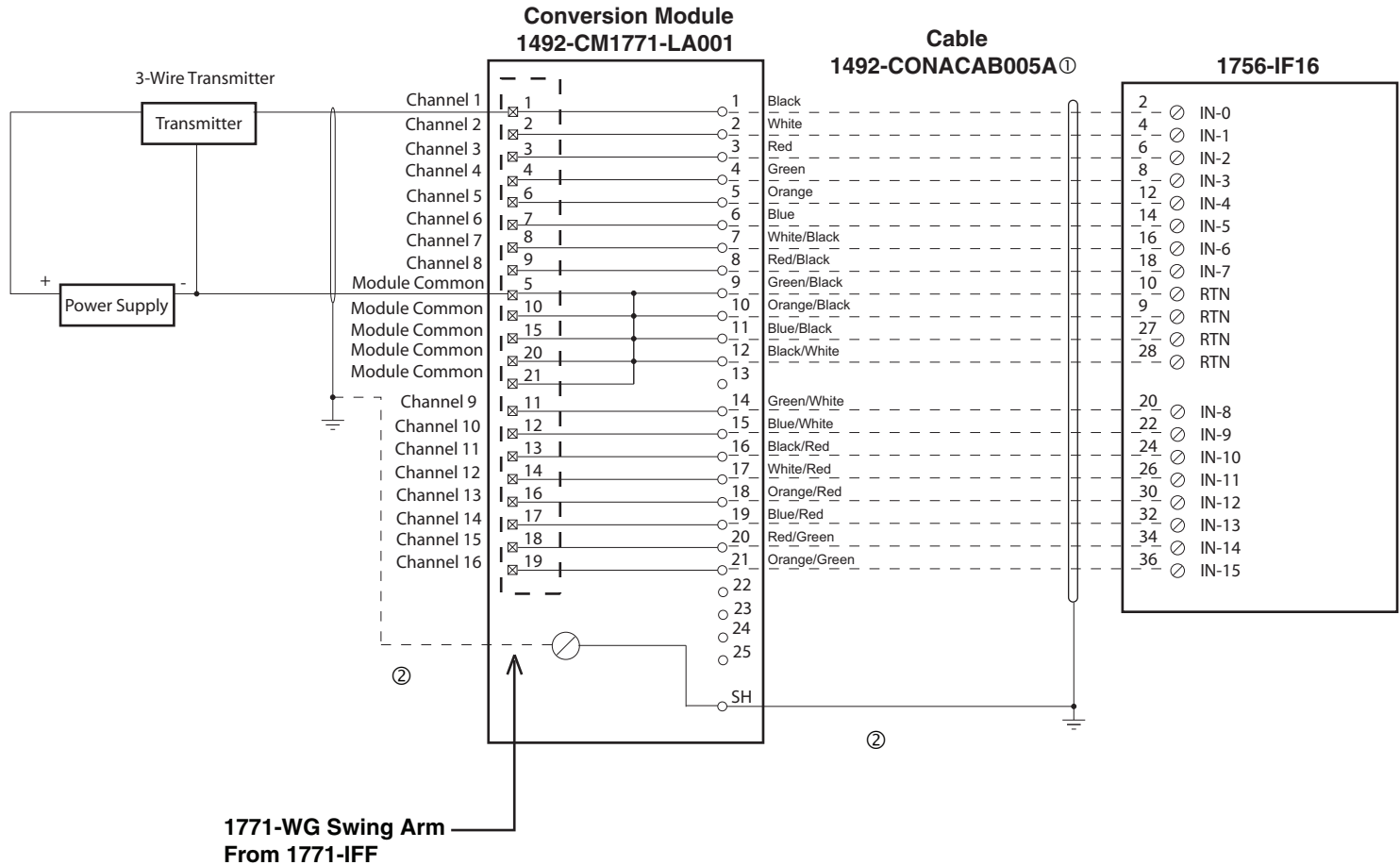
④ The 1771-IFF analog input ranges were configured via software, as is the input range for the 1756-IF16. Please ensure the correct input range is configured in the 1756-IF16.

⑤ Refer to your 1771-IFF and 1756-IF16 Installation and User Manuals for additional information concerning comparisons of module wiring, features and configuration details. [Reference Doc: 41171-023 (Version 00)]



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Conversion Module Installation and Application Considerations

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③ This design assumes that all inputs on the 1771-IFF were connected to voltage transmitters. If there was a mix of current and voltage transmitters, then modification of the pre-wired cable [1492-CONACAB005A] will need to occur at the 1756-IF16 terminal block. Refer to the 1756-IF16 Installation Manual for modification details.

④ The 1771-IFF analog input ranges were configured via software, as is the input range for the 1756-IF16. Please ensure the correct input range is configured in the 1756-IF16.

⑤ Refer to your 1771-IFF and 1756-IF16 Installation and User Manuals for additional information concerning comparisons of module wiring, features and configuration details. [Reference Doc: 41171-024 (Version 00)]

