



Digital I/O Conversion Module

(Cat 1492-CM1771-LD007)

I. Description

This Digital I/O Conversion system provides for the conversion of (2) 1771, 8 point I/O modules to be converted to (1) 1756, 16 point I/O module and consists of the following:

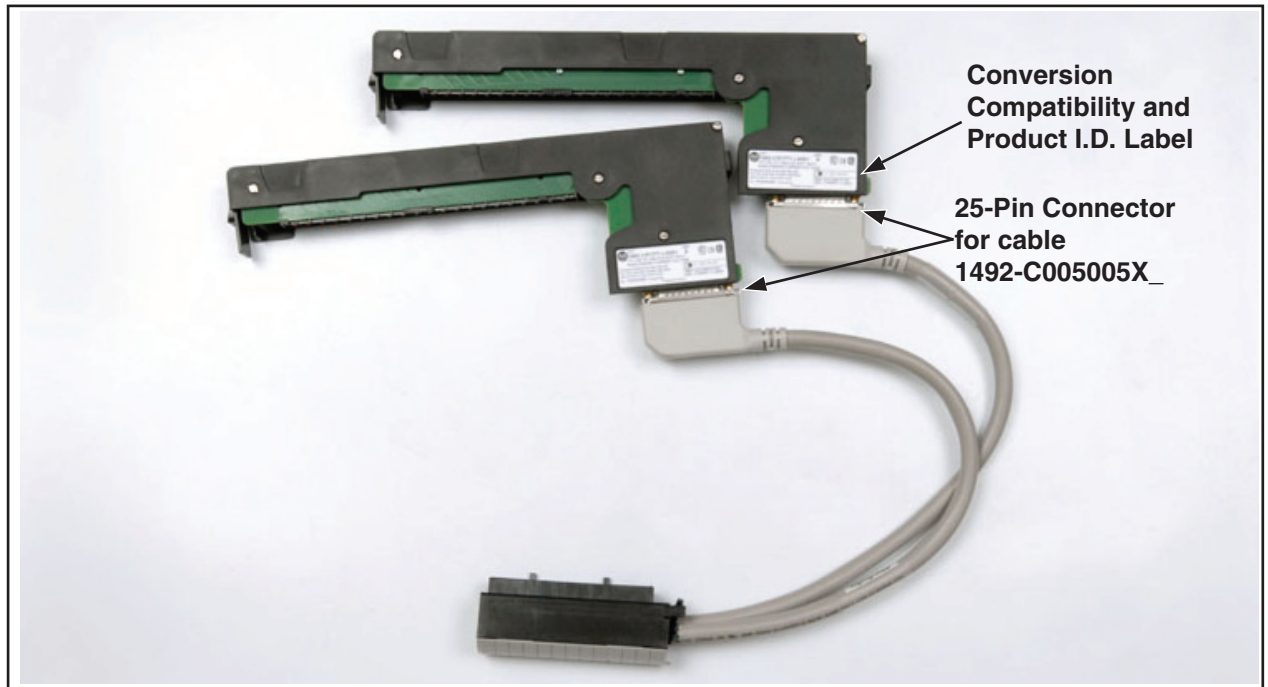
(2) 1771 Modules (8pt) to (1) 1756 Module (16pt)

(2) Conversion Modules: 1492-CM1771-LD007

(1) Cable: 1492-C005C005X_ (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 Arms. The existing 1771 Swing Arms fit directly onto the edge connectors of the 1492 Conversion Modules. On one end of the 1492 Cable are (2) connectors, one for each of the (2) Conversion Modules. 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 Modules 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, Section III for further details.



1492-CM1771-LD007 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

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

Table 2: Bulletin 1771 to 1756 Conversion Modules and Cables

1771 Digital I/O Module①	1756 Digital I/O Module①	1492 Conversion Module	1492 Cable ②
1771-IA (Qty 2)	1756-IA16	1492-CM1771-LD007 (Qty 2)	1492-C005005XE
1771-IA2 (Qty 2)	1756-IA16	1492-CM1771-LD007 (Qty 2)	1492-C005005XE
1771-IB (Qty 2)	1756-IB16	1492-CM1771-LD007 (Qty 2)	1492-C005005XE
1771-IC (Qty 2)	1756-IC16	1492-CM1771-LD007 (Qty 2)	1492-C005005XE
1771-IH (Qty 2)	1756-IC16	1492-CM1771-LD007 (Qty 2)	1492-C005005XE
1771-IM (Qty 2)	1756-IM16I	1492-CM1771-LD007 (Qty 2)	1492-C005005XH
1771-IN (Qty 2)	1756-IN16	1492-CM1771-LD007 (Qty 2)	1492-C005005XE
1771-IQ (Qty2)	1756-IB16I	1492-CM1771-LD007 (Qty 2)	1492-C005005XK (SINK)
1771-IT (Qty 2)	1756-IB16	1492-CM1771-LD007 (Qty 2)	1492-C005005XE

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 These 1492 cables consist of 2 separate cables (cable “A” and cable “B”) wired to (1) 1756 RTB. The 6 numbers indicate the cable length of each portion of the 1492 Cable. Recommended cable lengths of 0.5M / 0.5M are shown. Additional cable lengths are as follows:

1.0M / 1.0M = 1492-C010010XE, 1492-C010010XH, 1492-C010010XK

0.5M / 1.0M = 1492-C005010XE, 1492-C005010XH, 1492-C005010XK

1.0M / 0.5M = 1492-C010005XE, 1492-C010005XH, 1492-C010005XK

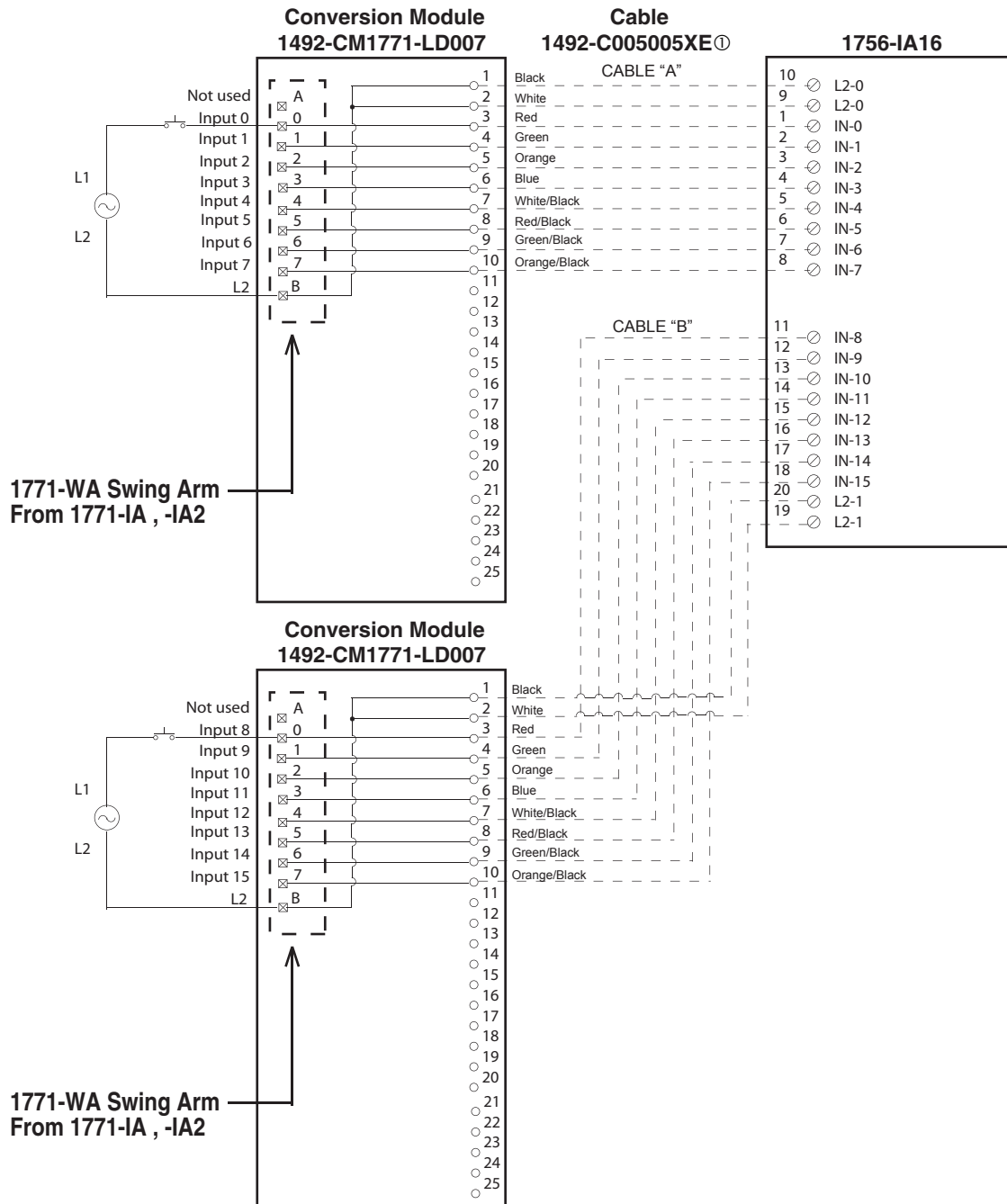
IV. Conversion Module Specifications

(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	235.6 g (0.52 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	132 Vac at 47 to 63Hz
Max. Module Operating Current	
Per Point:	2 Amps
Per Module:	2 Amps
	NOTICE Refer to the Wiring Diagram(s) for current limits for a specific configura-
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 2 separate cables (cable "A" and cable "B") wired to one 1756-IA16 RTB. Recommended cable lengths of 0.5 M / 0.5 M are shown. See table 2 for other lengths.

② The input delay times for the 1771-IA, -IA2 module versus the 1756-IA16 module are as follows:

	1771-IA, -IA2	1756-IA16 w/ 1492-C005005XE
a) Off-to-On Delay	24ms (+/-10ms)	10ms max (plus selectable filter)
b) On-to-Off Delay	24ms (+/-10ms)	8ms max (plus selectable filter)

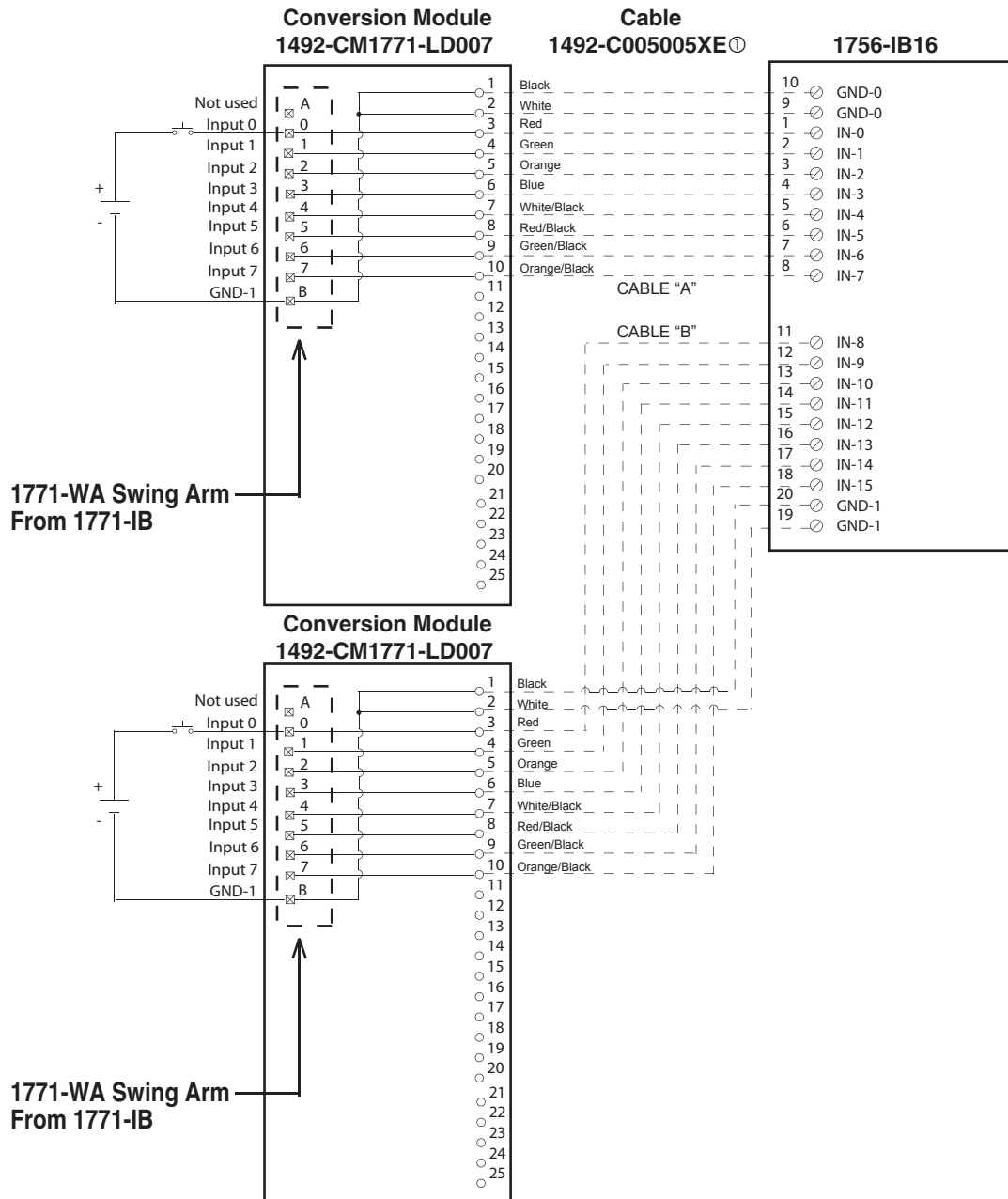
③ The 1771-IA, -IA2 module is rated 87V to 138V AC and 97V to 138V DC. The 1756-IA16 module is rated 79V to 132V AC only.

④ Refer to your 1771-IA, -IA2 and 1756-IA16 Installation Manual wiring schematics and diagrams for more details.

[Reference Doc: 41170-952 (Version 02)]

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**Conversion Module Installation and Application Considerations**

① This Bul. 1492 cable consists of 2 separate cables (cable "A" and cable "B") wired to one 1756-IB16 RTB. Recommended cable lengths of 0.5 M / 0.5 M are shown. See table 2 for other lengths.

② The input delay times for the 1771-IB module versus the 1756-IB16 module are as follows:

	1771-IB	1756-IB16 w/ 1492-C005005XE
a) Off-to-On Delay	24ms (+/-10ms)	1ms max (plus selectable filter)
b) On-to-Off Delay	24ms (+/-10ms)	2ms max (plus selectable filter)

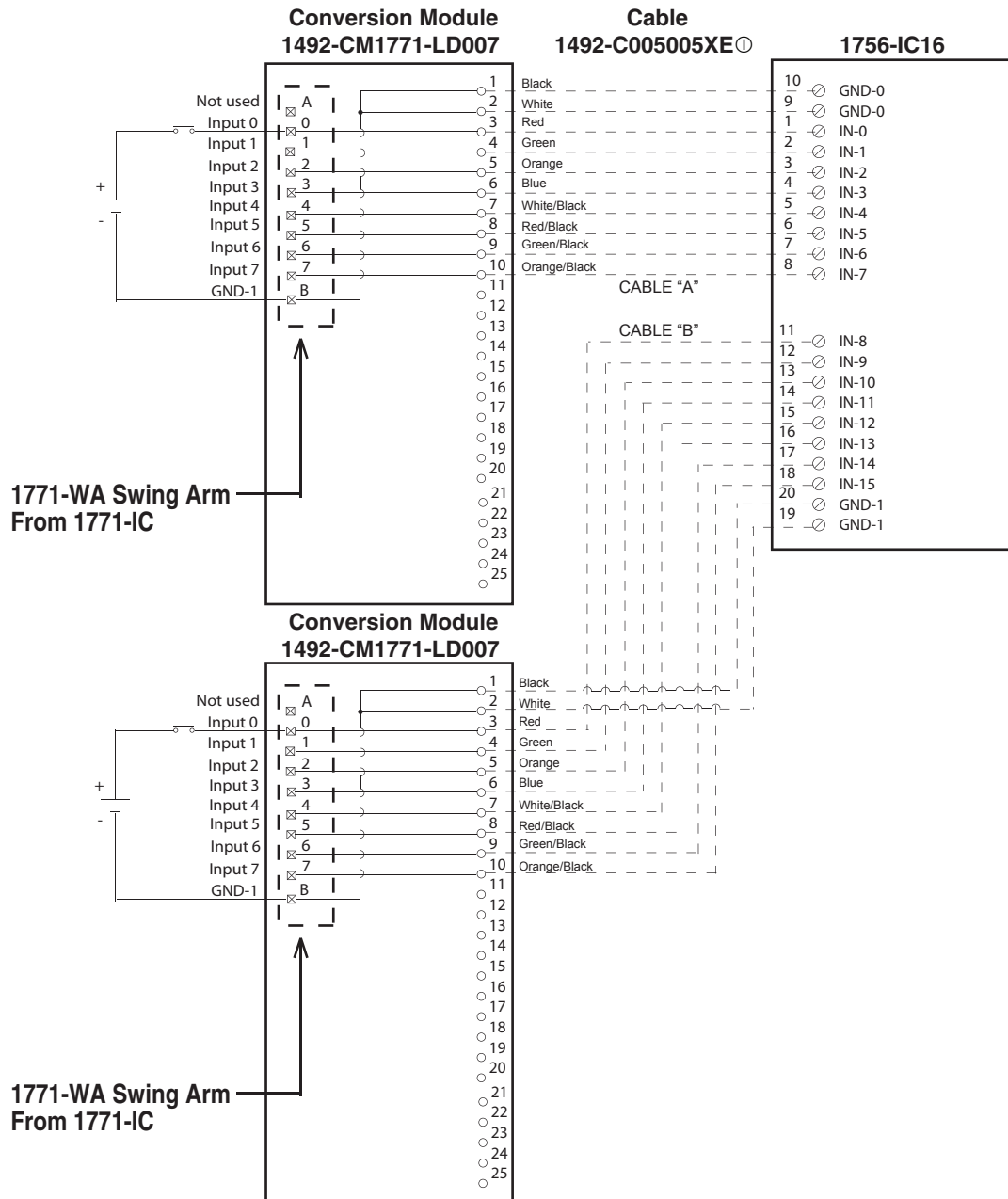
③ The 1771-IB module is rated 24V DC. The 1756-IB16 module is rated 10 - 31V DC only.

④ Refer to your 1771-IB and 1756-IB16 Installation Manual wiring schematics and diagrams for more details.

[Reference Doc: 41170-995 (Version 00)]

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**Conversion Module Installation and Application Considerations**

① This Bul. 1492 cable consists of 2 separate cables (cable "A" and cable "B") wired to one 1756-IC16 RTB. Recommended cable lengths of 0.5 M / 0.5 M are shown. See table 2 for other lengths.

② The input delay times for the 1771-IC module versus the 1756-IC16 module are as follows:

	1771-IC	1756-IC16 w/ 1492-C005005XE
a) Off-to-On Delay	12ms (+/-7ms)	1ms max (plus selectable filter)
b) On-to-Off Delay	20ms (+/-7ms)	4ms max (plus selectable filter)

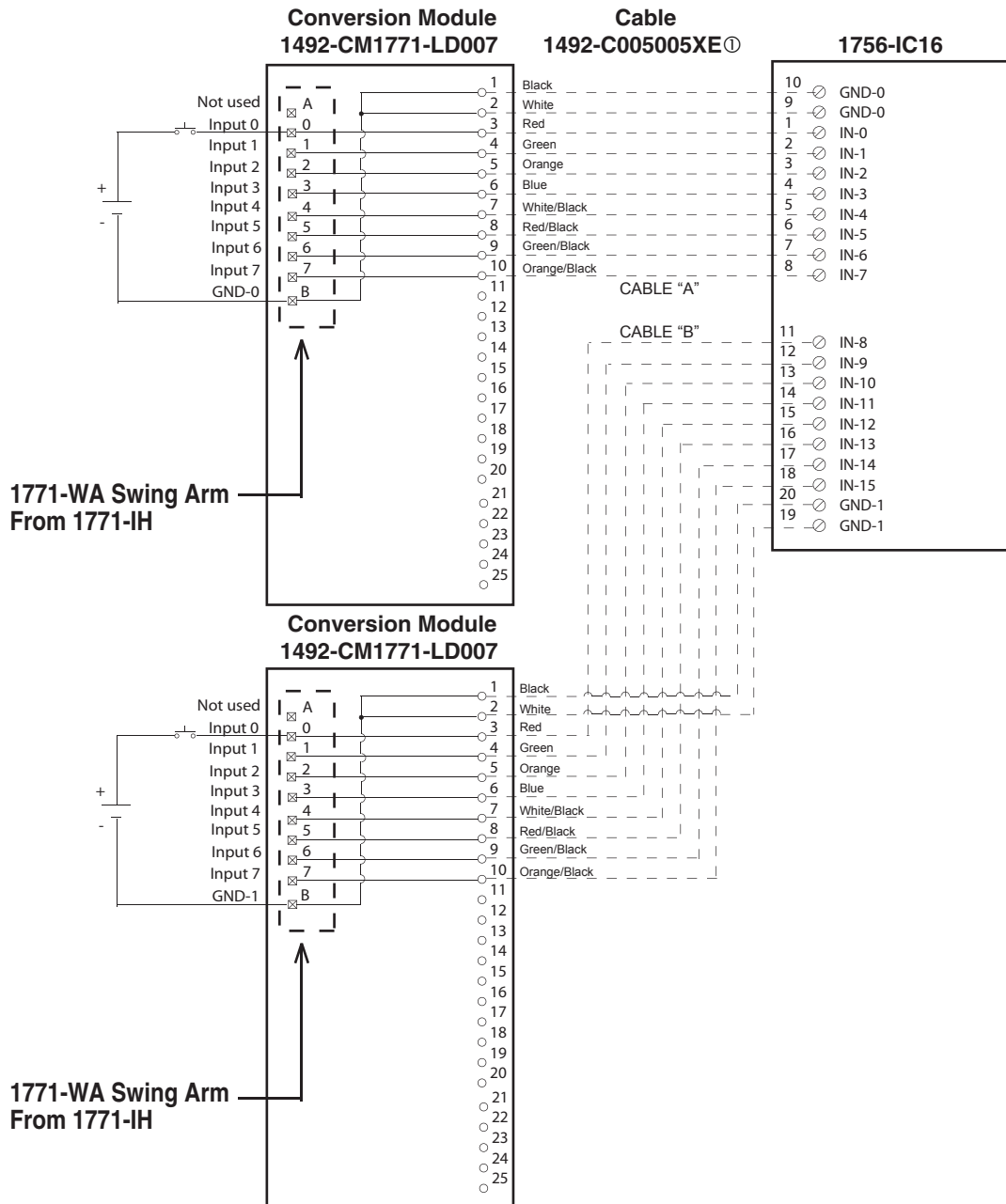
③ The 1771-IC module is rated 42 to 56V DC. The 1756-IC16 module is rated 42 to 56V DC only.

④ Refer to your 1771-IC and 1756-IC16 Installation Manual wiring schematics and diagrams for more details.

[Reference Doc: 41170-996 (Version 00)]

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**Conversion Module Installation and Application Considerations**

① This Bul. 1492 cable consists of 2 separate cables (cable "A" and cable "B") wired to one 1756-IC16 RTB. Recommended cable lengths of 0.5 M / 0.5 M are shown. See table 2 for other lengths.

② The input delay times for the 1771-IH module versus the 1756-IC16 module are as follows:

	1771-IH	1756-IC16 w/ 1492-C005005XE
a) Off-to-On Delay	15ms (+/-7ms)	1ms max (plus selectable filter)
b) On-to-Off Delay	15ms (+/-7ms)	4ms max (plus selectable filter)

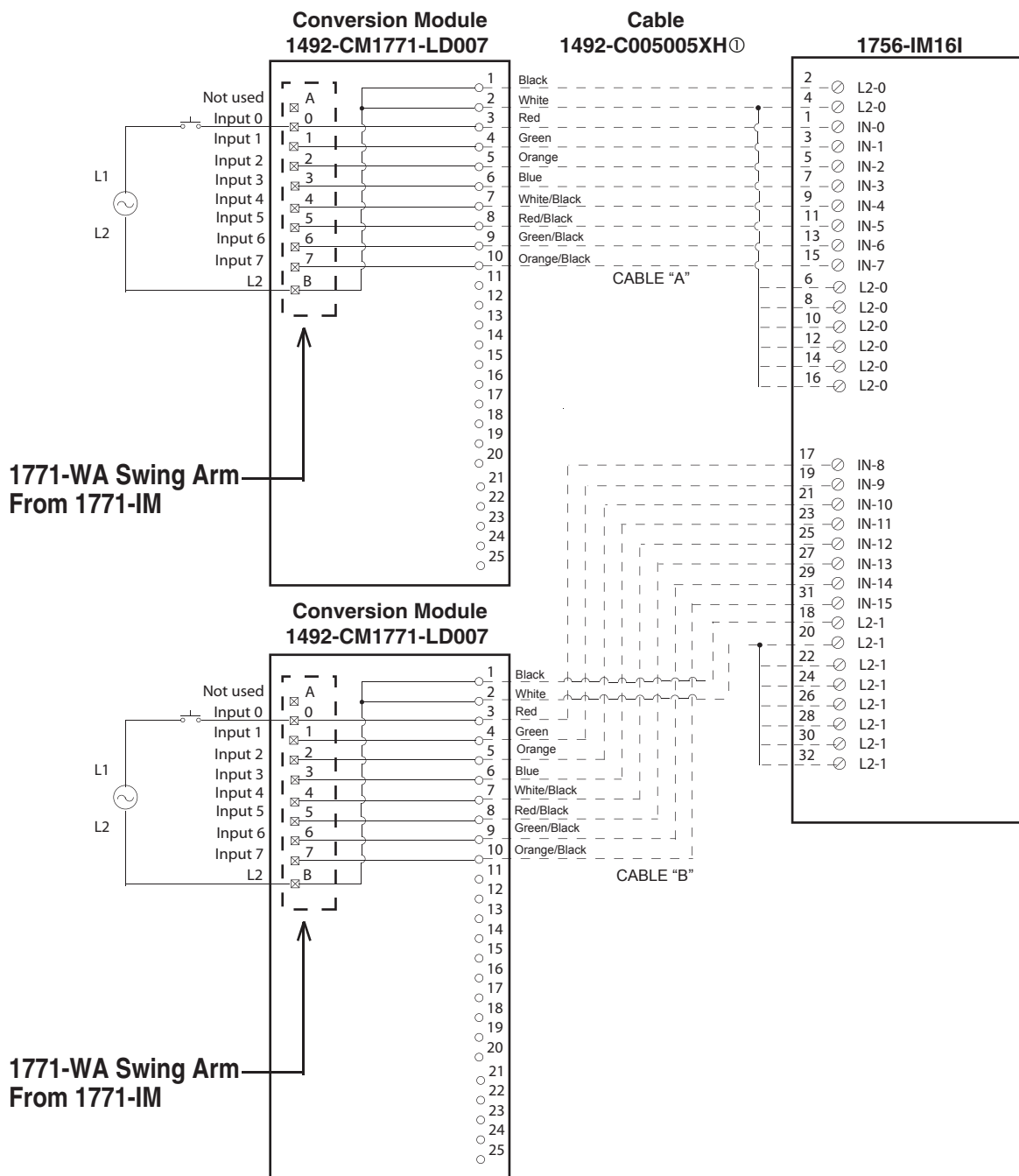
③ The 1771-IH module is rated 24V - 48V DC. The 1756-IC16 module is rated 30V - 60V DC.

④ Refer to your 1771-IH and 1756-IC16 Installation Manual wiring schematics and diagrams for more details.

[Reference Doc: 41170-997 (Version 00)]

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**Conversion Module Installation and Application Considerations**

① This Bul. 1492 cable consists of 2 separate cables (cable "A" and cable "B") wired to one 1756-IM16I RTB. Recommended cable lengths of 0.5 M / 0.5 M are shown. See table 2 for other lengths.

② The input delay times for the 1771-IM module versus the 1756-IM16I module are as follows:

	1771-IM	1756-IM16I w/ 1492-C005005XH
a) Off-to-On Delay	20ms (+/-6ms)	10ms max (plus selectable filter)
b) On-to-Off Delay	20ms (+/-6ms)	8ms max (plus selectable filter)

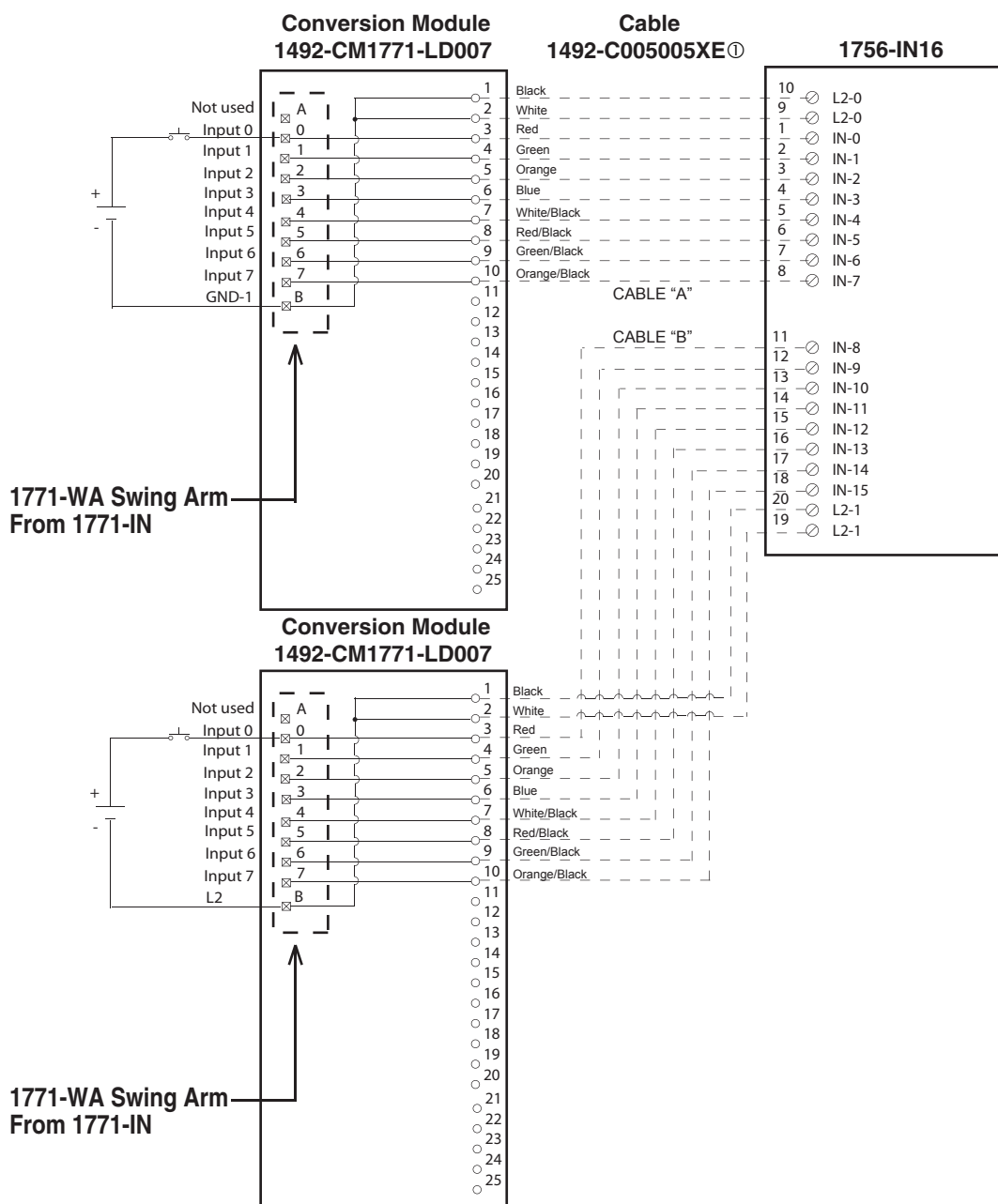
③ The 1771-IM module is rated 220V to 240V AC. The 1756-IM16I module is rated 159 - 265V AC only.

④ Refer to your 1771-IM and 1756-IM16I Installation Manual wiring schematics and diagrams for more details.

[Reference Doc: 41170-990 (Version 00)]

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**Conversion Module Installation and Application Considerations**

① This Bul. 1492 cable consists of 2 separate cables (cable "A" and cable "B") wired to one 1756-IN16 RTB. Recommended cable lengths of 0.5 M / 0.5 M are shown. See table 2 for other lengths.

② The input delay times for the 1771-IN module versus the 1756-IN16 module are as follows:

	1771-IN	1756-IN16 w/ 1492-C005005XE
a) Off-to-On Delay	18ms (+/-10ms)	10ms max (plus selectable filter)
b) On-to-Off Delay	18ms (+/-10ms)	10ms max (plus selectable filter)

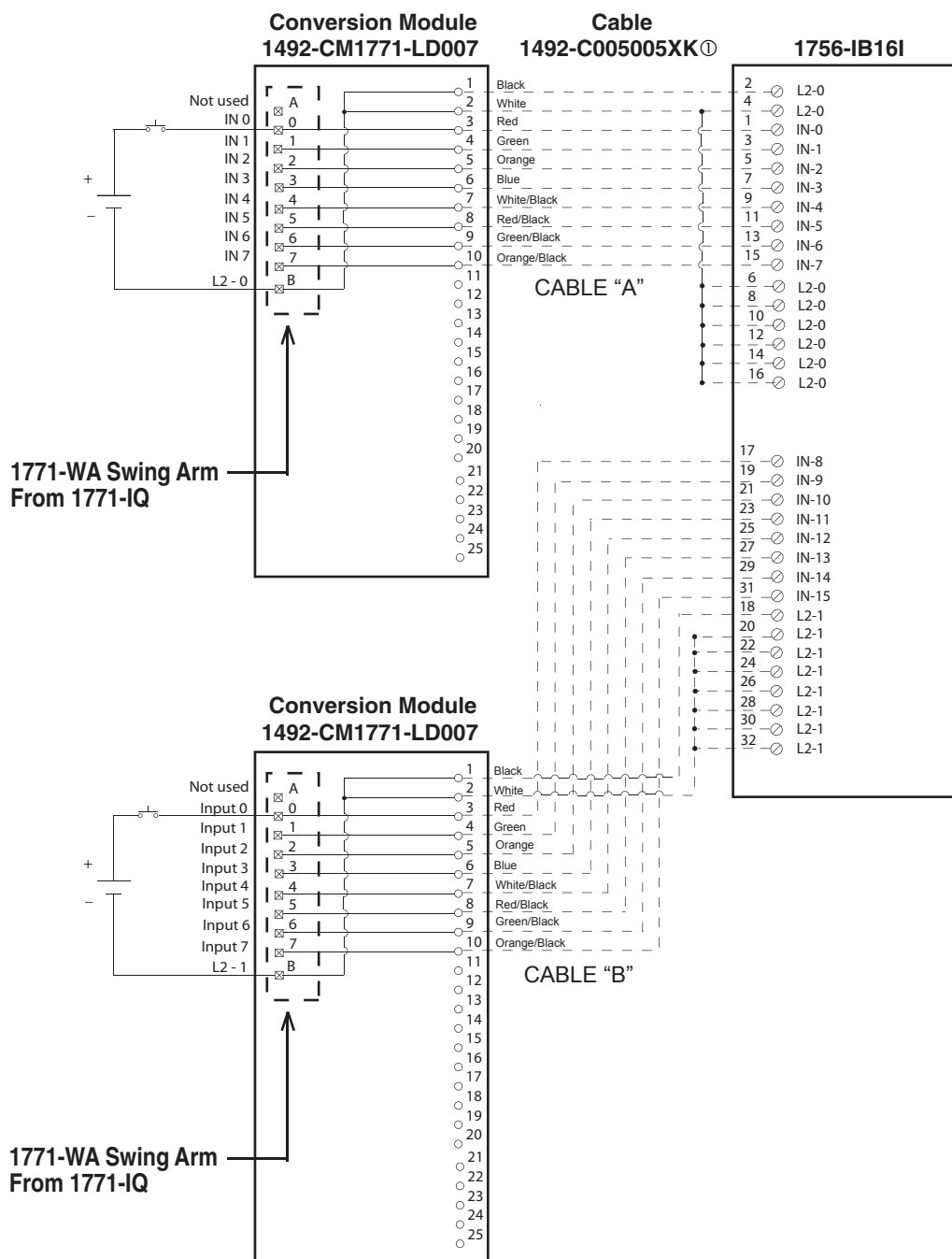
③ The 1771-IN module is rated 24V AC. The 1756-IN16 module is rated 24V AC only.

④ Refer to your 1771-IN and 1756-IN16 Installation Manual wiring schematics and diagrams for more details.

[Reference Doc: 41170-998 (Version 00)]

**WARNING**

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**Conversion Module Installation and Application Considerations**

① This Bul. 1492 cable consists of 2 separate cables (cable "A" and cable "B") wired to one 1756-IB16I RTB. Recommended cable lengths of 0.5 M / 0.5 M are shown. See table 2 for other lengths.

② The input delay times for the 1771-IQ module versus the 1756-IB16I module are as follows:

	1771-IQ	1756-IB16I w/ 1492-C005005XK
a) Off-to-On Delay	12ms (+/-14ms)	1ms max (plus selectable filter)
b) On-to-Off Delay	12ms (+/-7ms)	4ms max (plus selectable filter)

③ The 1771-IQ module is rated 5V to 30V DC. The 1756-IB16I module is rated 10V to 30V DC only.

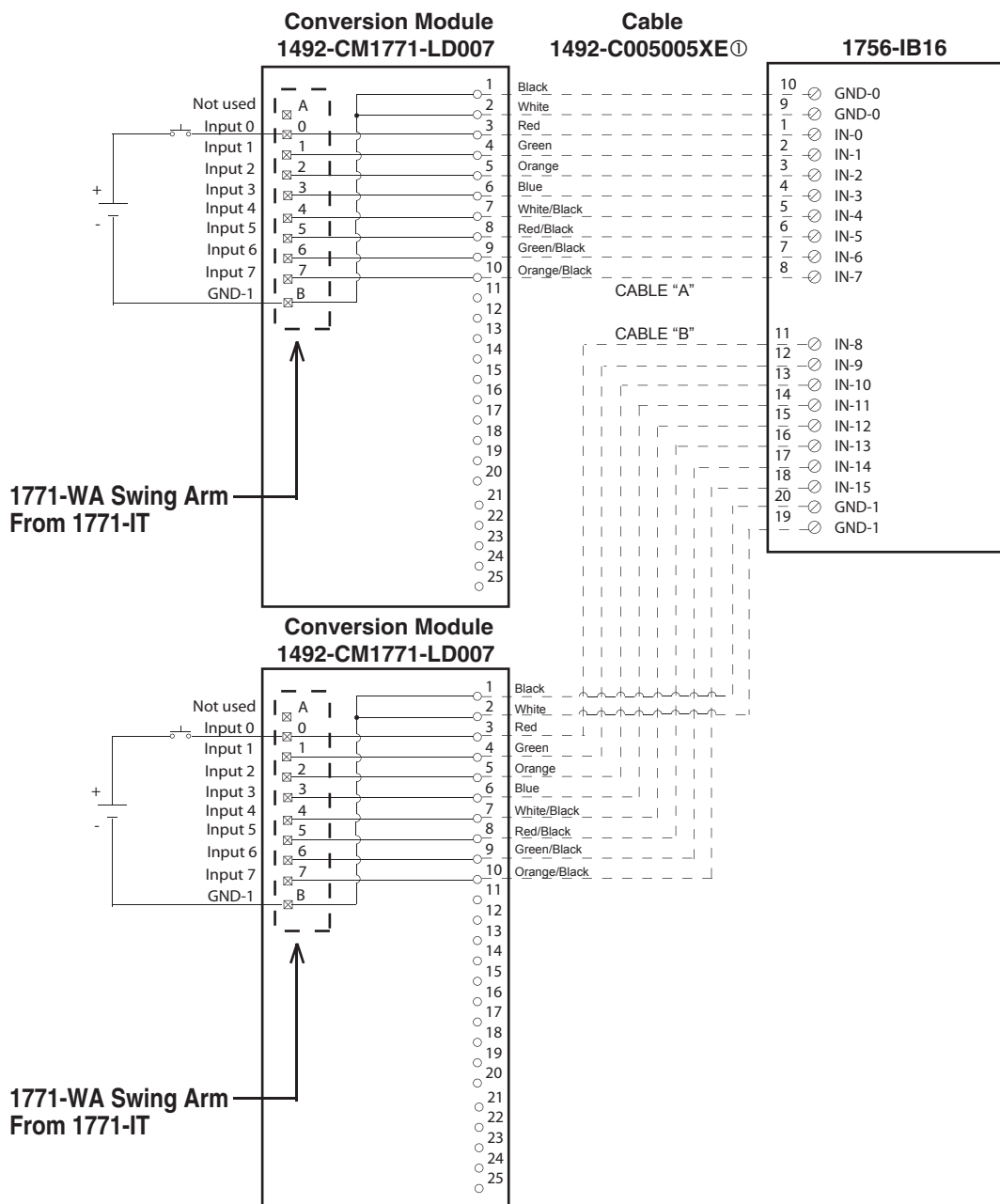
④ Refer to your 1771-IQ and 1756-IB16I Installation Manual wiring schematics and diagrams for more details.

⑤ For Sourcing applications use 1492-CM1771-LD014.

[Reference Doc: 41170-992 (Version 00)]

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**Conversion Module Installation and Application Considerations**

① This Bul. 1492 cable consists of 2 separate cables (cable "A" and cable "B") wired to one 1756-IB16 RTB. Recommended cable lengths of 0.5 M / 0.5 M are shown. See table 2 for other lengths.

② The input delay times for the 1771-IT module versus the 1756-IB16 module are as follows:

	1771-IT	1756-IB16 w/ 1492-C005005XE
a) Off-to-On Delay	0.6ms (+/-0.2ms)	1ms max (plus selectable filter)
b) On-to-Off Delay	0.6ms (+/-0.2ms)	2ms max (plus selectable filter)

③ The 1771-IT module is rated 24V DC. The 1756-IB16 module is rated 24V DC only.

④ Refer to your 1771-IT and 1756-IB16 Installation Manual wiring schematics and diagrams for more details.

[Reference Doc: 41170-999 (Version 00)]