



# Digital I/O Conversion Module

(Cat 1492-CM1771-LD012)

## I. Description

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

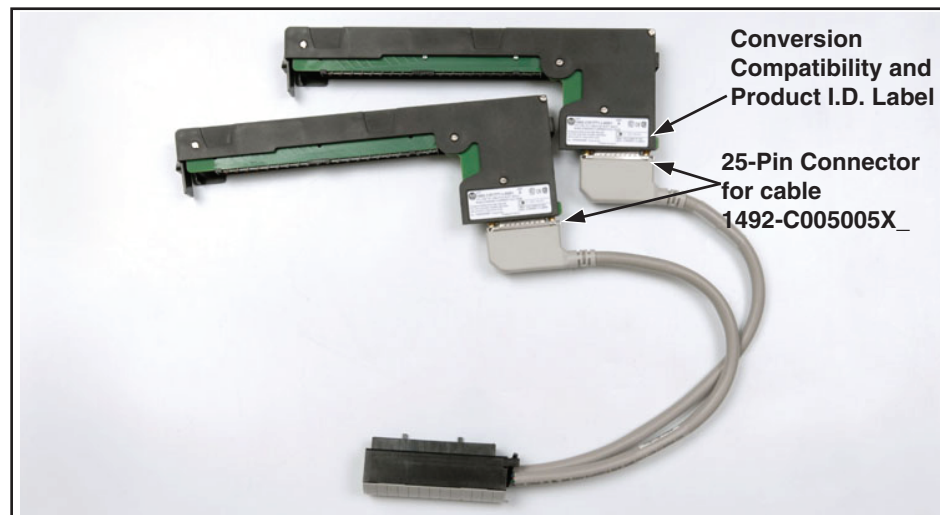
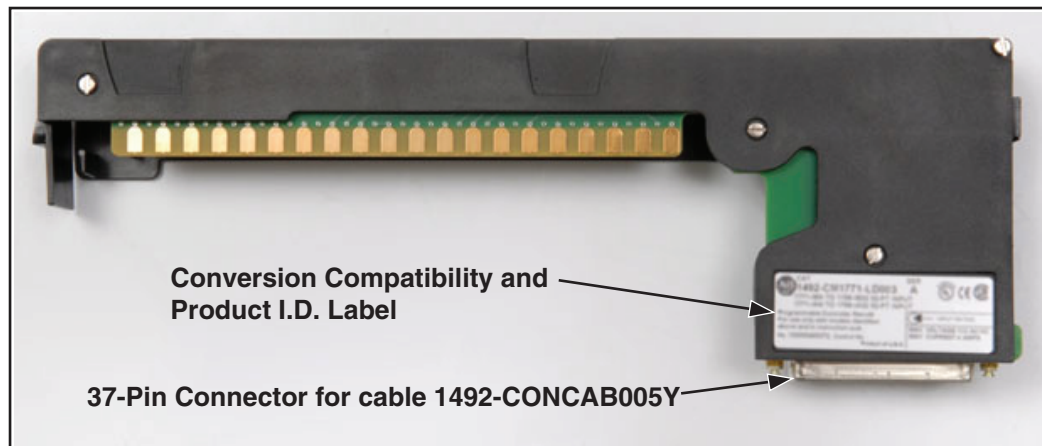
### (1) 1771 Module (8pt) to (1) 1756 Module (8pt)

- (1) Conversion Modules: 1492-CM1771-LD012
- (1) Cable: 1492-CONCAB005Y (Table 2)
- (1) Conversion Mounting Assembly: 1492-MUA... (Table 1)

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

- (2) Conversion Modules: 1492-CM1771-LD012
- (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 Cables are (1) or (2) connectors for the 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 Module and the 1492 Cable to the appropriate terminals on the 1756 I/O module per the Wiring Diagrams in Section IV. As standard, 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-LD012 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 <sup>②</sup>		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 <sup>①</sup>	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 Module <sup>①</sup>	1756 Digital I/O Module <sup>①</sup>	1492 Conversion Module	1492 Cable
1771-ID (Qty 2) <sup>②</sup>	1756-IA16I	1492-CM1771-LD012 (Qty 2)	1492-C005005XL <sup>③</sup>
1771-ID01 (Qty 2) <sup>②</sup>	1756-IM16I	1492-CM1771-LD012 (Qty 2)	1492-C005005XL <sup>③</sup>
1771-OD (Qty 2) <sup>②</sup>	1756-OA16I	1492-CM1771-LD012 (Qty 2)	1492-C005005XM <sup>③</sup>
1771-ODZ (Qty 2) <sup>②</sup>	1756-OA16I	1492-CM1771-LD012 (Qty 2)	1492-C005005XP <sup>③</sup>
1771-OR (Qty 2) <sup>②</sup>	1756-OA16I	1492-CM1771-LD012 (Qty 2)	1492-C005005XR <sup>③</sup>
1771-OW	1756-OX8I	1492-CM1771-LD012	1492-CONCAB005Y <sup>③</sup>
1771-OY	1756-OX8I	1492-CM1771-LD012	1492-CONCAB005Y <sup>③</sup>
1771-OYL	1756-OX8I	1492-CM1771-LD012	1492-CONCAB005Y <sup>③</sup>
1771-OZ	1756-OX8I	1492-CM1771-LD012	1492-CONCAB005Y <sup>③</sup>
1771-OZL	1756-OX8I	1492-CM1771-LD012	1492-CONCAB005Y <sup>③</sup>

**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 One conversion module required for each of the two 1771 nodules.
- ③ The 3 numbers indicate the cable length of the 1492 Cable. Recommended cable length of 0.5M is shown. Additional cable lengths are as follows:  
1.0M = 1492-CONCAB010Y
- ④ 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-C010010XL or 1492-C010010XM or 1492-C010010XP or 1492-C010010XR  
0.5M / 1.0M = 1492-C005010XL or 1492-C005010XM or 1492-C005010XP or 1492-C005010XR  
1.0M / 0.5M = 1492-C010005XL or 1492-C010005XM or 1492-C010005XP or 1492-C010005XR

### IV. Conversion Module Specifications

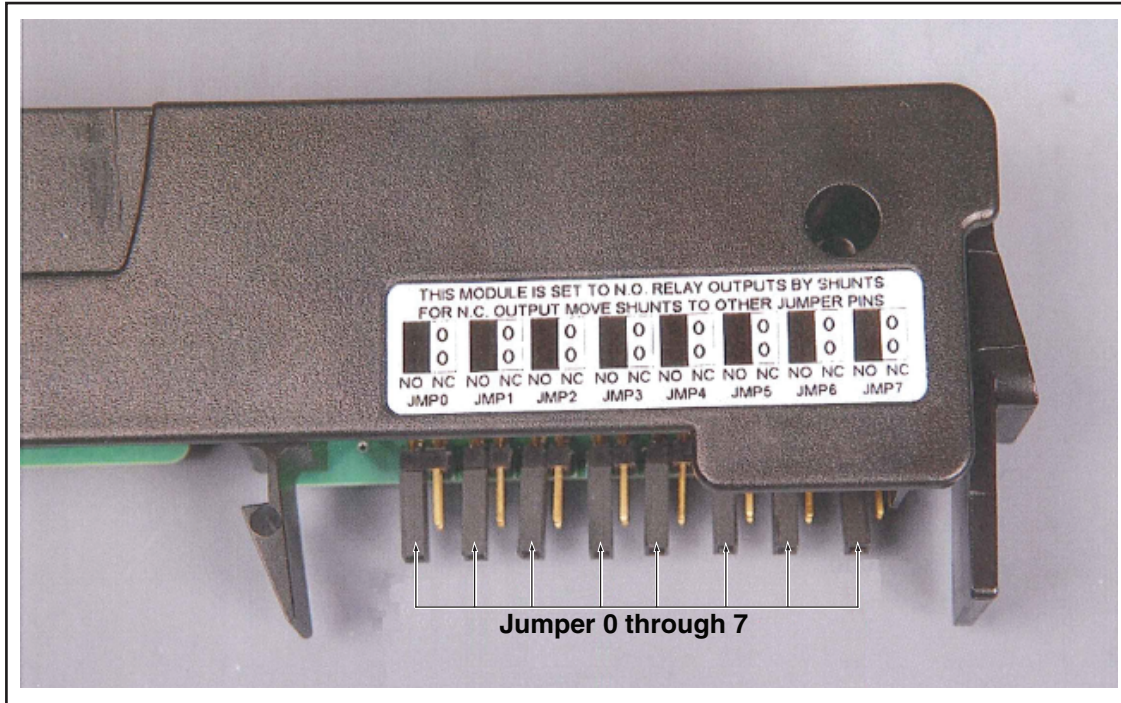
(Operating specifications are when installed in the Conversion System base / cover-plate assembly)

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	242.9 g (0.53 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 or 132 Vdc
Max. Module Operating Current	
Per Point:	2 Amps
Per Module:	12 Amps
	<b>NOTICE</b> 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

## V. Jumper Selection for N.O. or N.C. Relay Contact

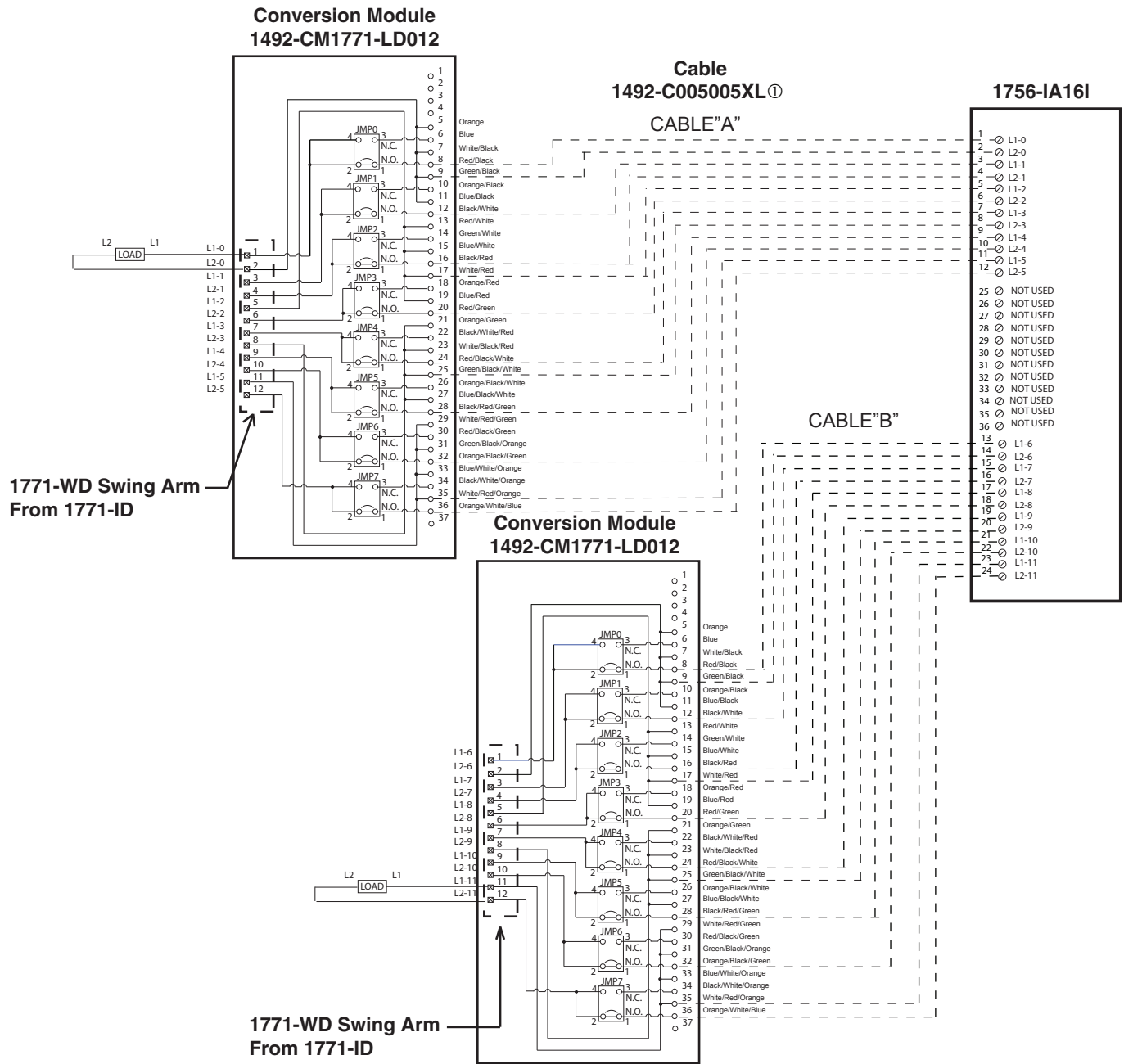
The following is a photograph of the normally open (N.O.) or normally closed (N.C.) relay output selection label on the 1492-CM1771-LD012 conversion module.

The 1771-OW relay output module allowed selection of a normally open (N.O.) or normally closed (N.C.) relay contact output by using a jumper. The 1756-OX8I also provides either N.O. or N.C. relay output selection but by field wire termination. The 1492-CONCAB@Y is wired to the 1756-OX8I to allow use of either N.O. or N.C. contacts. To select the N.O. or N.C. relay output type consistent with the initial 1771 configuration simply move the jumper on the conversion module to the appropriate position, as defined by the selection label. Each output is individually configurable. The default configuration is the N.O. type.





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-IA16I RTB. Recommended cable lengths of 0.5M or 1.0M (005=0.5M, 010=1.0M). See table 2 for other lengths.

② The input delay times for the 1771-ID module versus the 1756-IA16I module are as follows:

	1771-ID	1756-IA16I w/ 1492-C005005XL
a) Off-to-On Delay	24ms (+/-10ms)	10ms max (plus selectable filter)
b) On-to-Off Delay	24ms (+/-10ms)	8ms max (plus selectable filter)

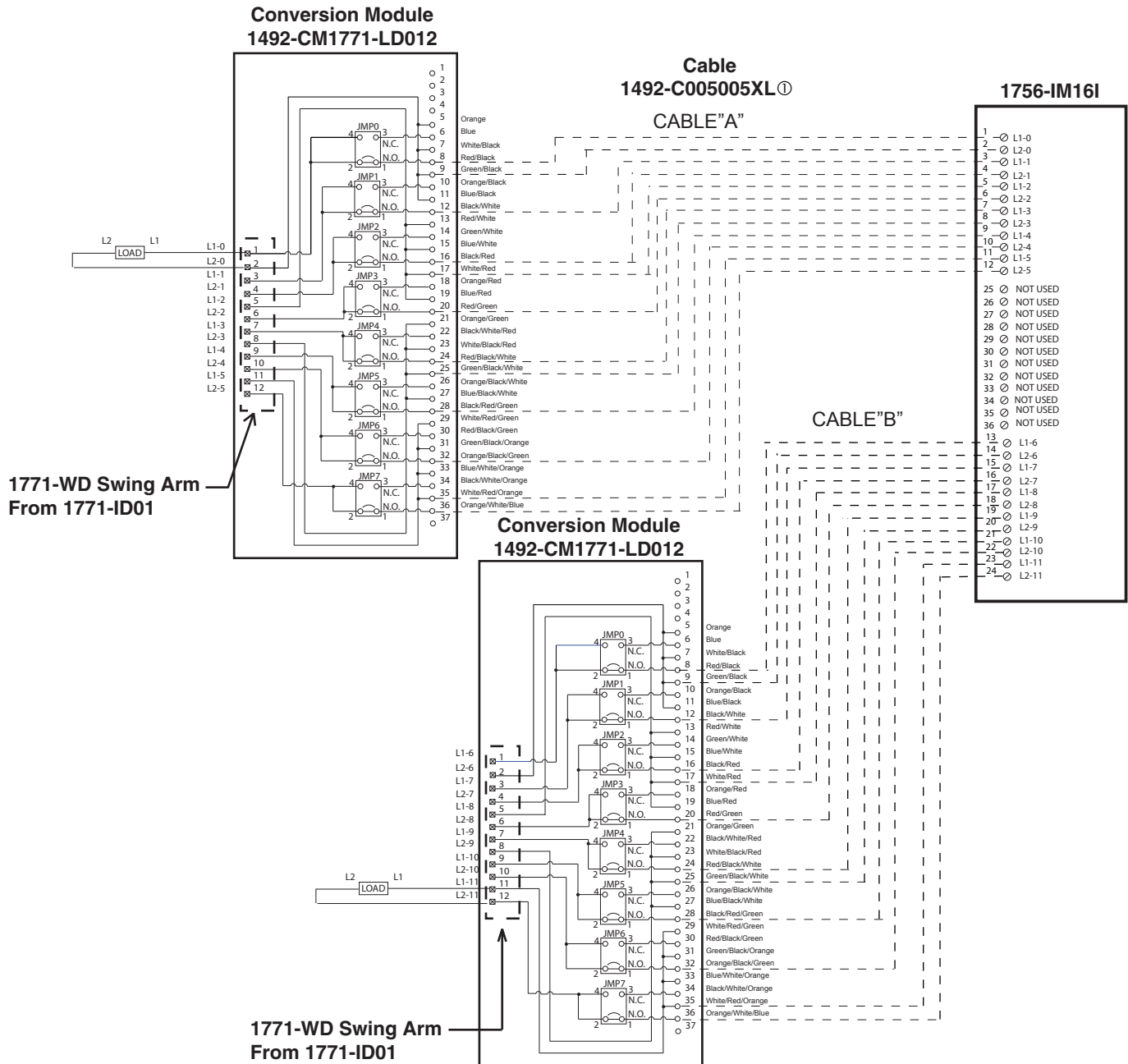
③ The 1771-ID module had a jumper selection of N.O. and N.C. outputs. The 1756-IA16I has both N.O. and N.C. outputs, but selection is by wiring termination on the 1756 swing arm. The 1492-CM1771-LD012 conversion module replaces the functionality of the 1771-ID jumpers with eight jumpers (JMP0 through JMP7). In the default position, the output will be N.O. If a N.C. output is required, change the jumper from pins 1-2 to pins 3-4.

④ Refer to your 1771-ID and 1756-IA16I Installation Manual wiring schematics and diagrams for more details. Ensure 1756 output module ratings are not exceeded. [Reference Doc: 41170-993 (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-IM16I RTB. Each cable can be either 0.5M or 1.0M (005=0.5M, 010=1.0M). Ensure that cable A and cable B are connected to the correct module in the conversion
- ② The input delay times for the 1771-IM module versus the 1756-IM16I module are as follows:
 

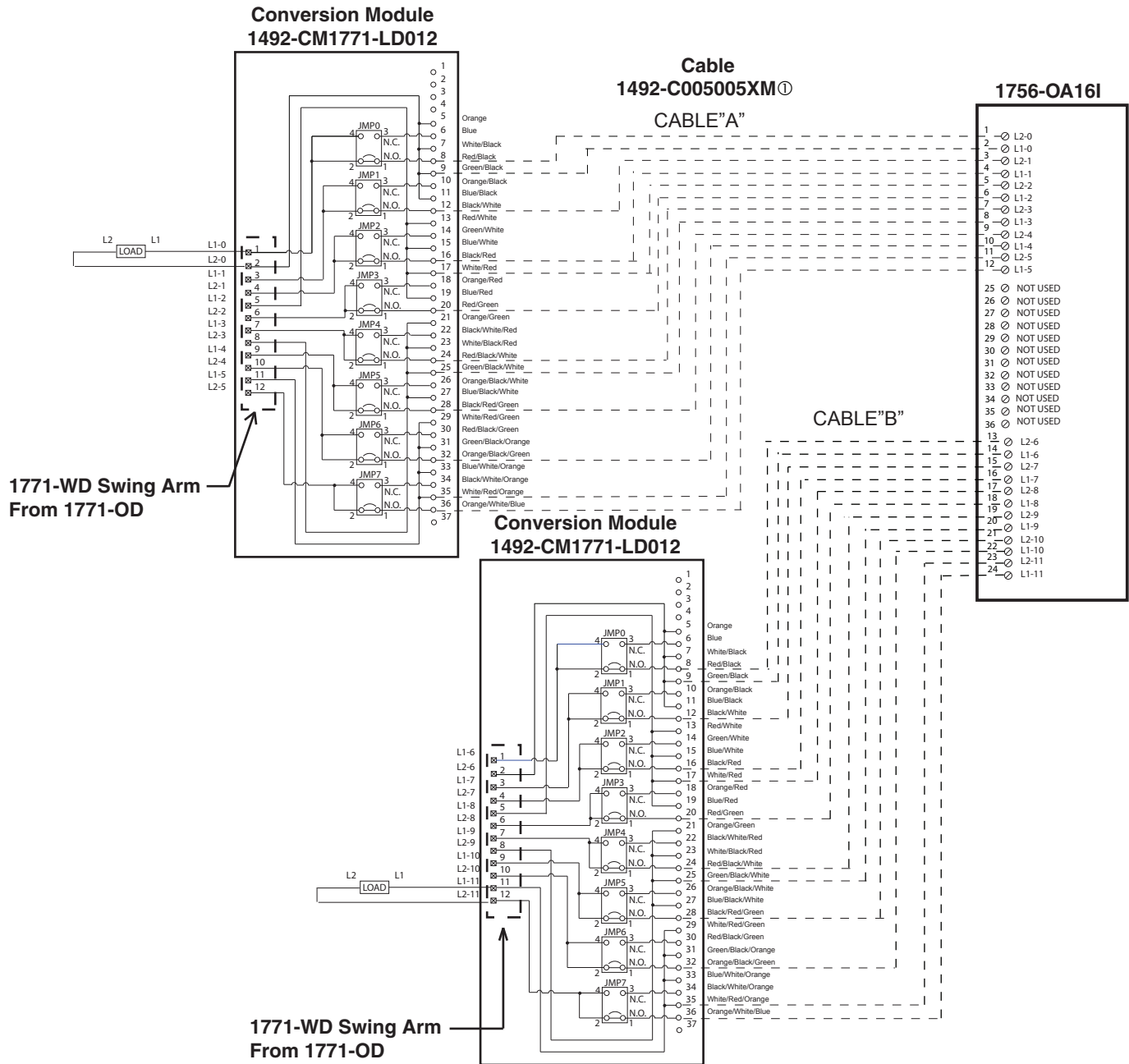
	<b>1771-ID01</b>	<b>1756-IM16I w/ 1492-C005005XL</b>
a) Off-to-On Delay	20ms (+/-10ms)	10ms max (plus selectable filter)
b) On-to-Off Delay	20ms (+/-10ms)	8ms max (plus selectable filter)
- ③ The 1771-ID01 module had a jumper selection of N.O. and N.C. outputs. The 1756-IM16I has both N.O. and N.C. outputs, but selection is by wiring termination on the 1756 swing arm. The 1492-CM1771-LD012 conversion module replaces the functionality of the 1771-ID01 jumpers with eight jumpers (JMP0 through JMP7). In the default position, the output will be N.O. If a N.C. output is required, change the jumper from pins 1-2 to pins 3-4.
- ④ Refer to your 1771-ID01 and 1756-IM16I Installation Manual wiring schematics and diagrams for more details. Ensure 1756 output module ratings are not exceeded.

[Reference Doc: 41171-015 (Version 00)]



**WARNING**

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**Conversion Module Installation and Application Considerations**

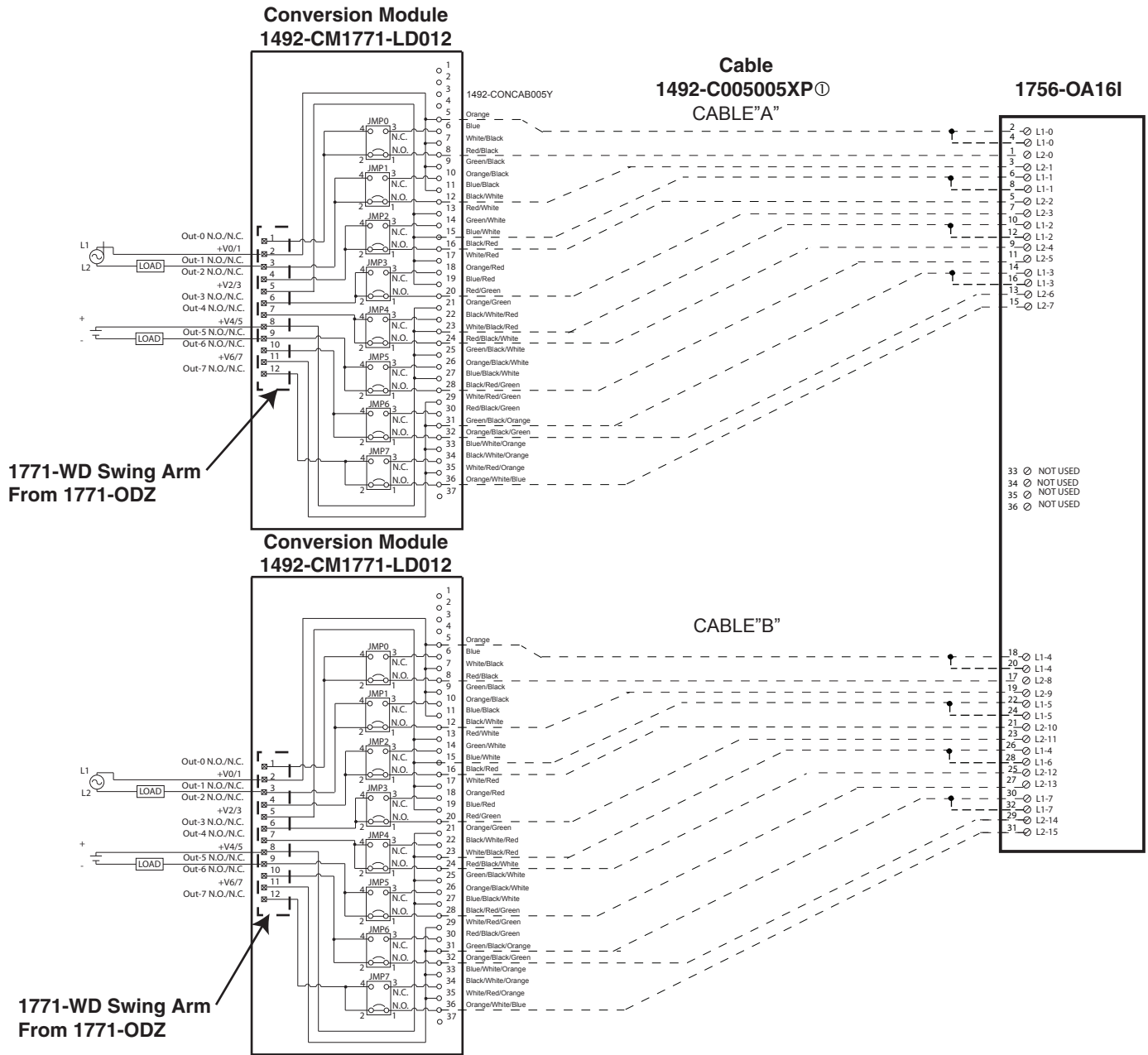
- ① This Bul. 1492 cable consists of 2 separate cables (cable "A" and cable "B") wired to one 1756-OA16I RTB. Each cable can be either 0.5M or 1.0M (005=0.5M, 010=1.0M). Ensure that cable A and cable B are connected to the correct module in the conversion
- ② The 1771-OD module output resistive current limits versus 1756-OA16I limits are as follows:
 

	1771-OD	1756-OA16I w/ 1492-C005005XM
a) Current/Point	2A	2A
b) Current/Module	6A	5A
c) Surge Current/Point	20A for 100ms	20A for 43ms
- ③ The 1771-OD module had a jumper selection of N.O. and N.C. outputs. The 1756-OA16I has both N.O. and N.C. outputs, but selection is by wiring termination on the 1756 swing arm. The 1492-CM1771-LD012 conversion module replaces the functionality of the 1771-OD jumpers with eight jumpers (JMP0 through JMP7). In the default position, the output will be N.O. If a N.C. output is required, change the jumper from pins 1-2 to pins 3-4.
- ④ Refer to your 1771-OD and 1756-OA16I Installation Manual wiring schematics and diagrams for more details. Ensure 1756 output module ratings are not exceeded. [Reference Doc: 41170-994 (Version 00)]



**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-OA16I RTB. Each cable can be either 0.5M or 1.0M (005=0.5M, 010=1.0M). Ensure that cable A and cable B are connected to the correct module in the conversion
- ② The 1771-ODZ module output resistive current limits versus 1756-OA16I limits are as follows:
 

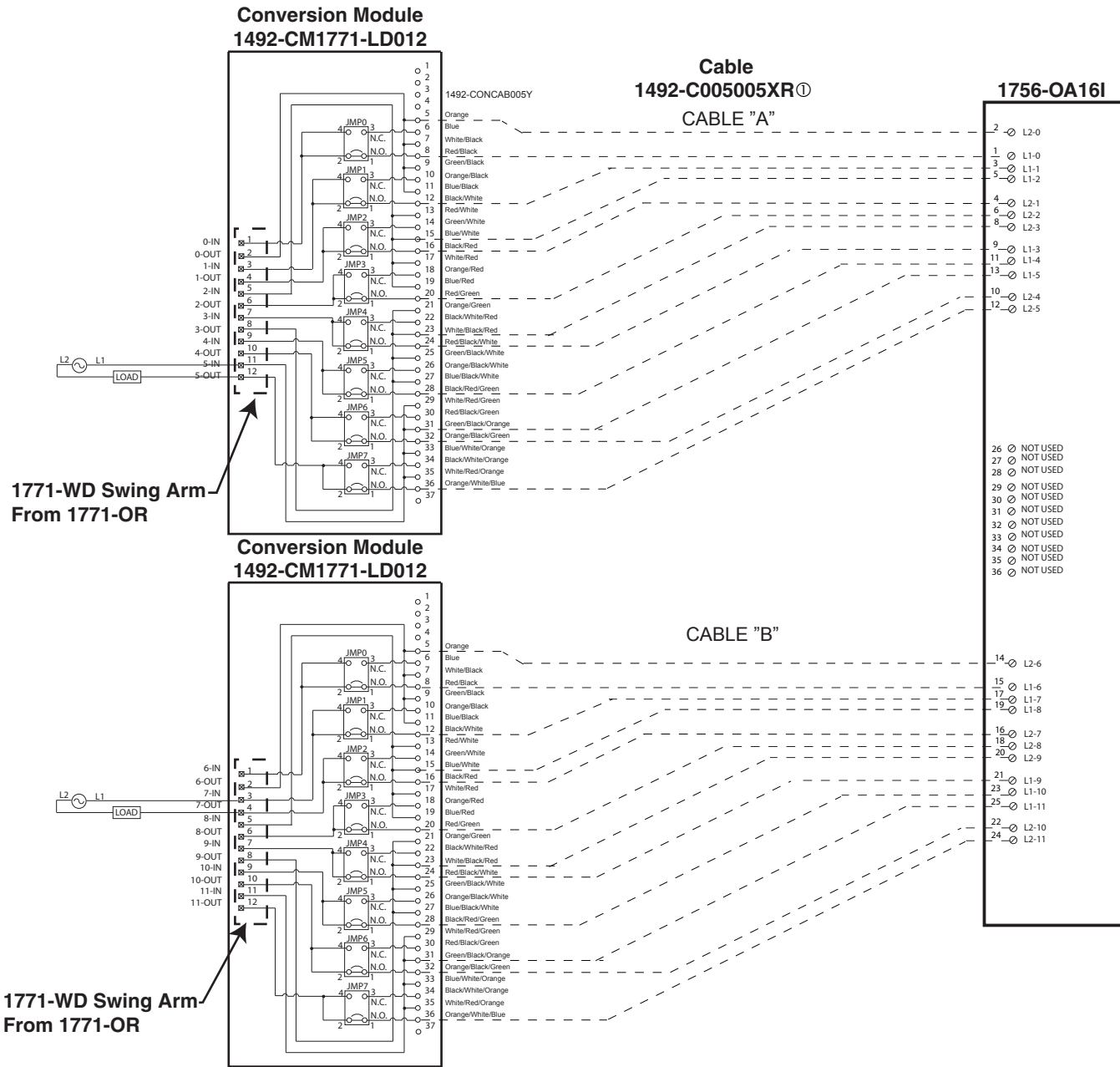
	1771-ODZ	1756-OA16I w/ 1492-C005005XP
a) Current/Point	2A	2A
b) Current/Module	6A	5A @ 60°C
c) Surge Current/Point	20A for 100ms	20A for 43ms
- ③ The 1771-ODZ module had a jumper selection of N.O. and N.C. outputs. The 1756-OA16I has both N.O. and N.C. outputs, but selection is by wiring termination on the 1756 swing arm. The 1492-CM1771-LD012 conversion module replaces the functionality of the 1771-ODZ jumpers with eight jumpers (JMP0 through JMP7). In the default position, the output will be N.O. If a N.C. output is required, change the jumper from pins 1-2 to pins 3-4.
- ④ Refer to your 1771-ODZ and 1756-OA16I Installation Manual wiring schematics and diagrams for more details. Ensure 1756 output module ratings are not exceeded. [Reference Doc: 41171-016 (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-OA16I RTB. Each cable can be either 0.5M or 1.0M (005=0.5M, 010=1.0M). Ensure that cable A and cable B are connected to the correct module in the conversion

② The 1771-OR module output resistive current limits versus 1756-OA16I limits are as follows:

	<b>1771-OR</b>	<b>1756-OA16I w/ 1492-C005005XR</b>
a) Current/Point	2A	2A
b) Current/Module	6A	5A @ 60°C
c) Surge Current/Point	15A for 100ms	20A for 43ms

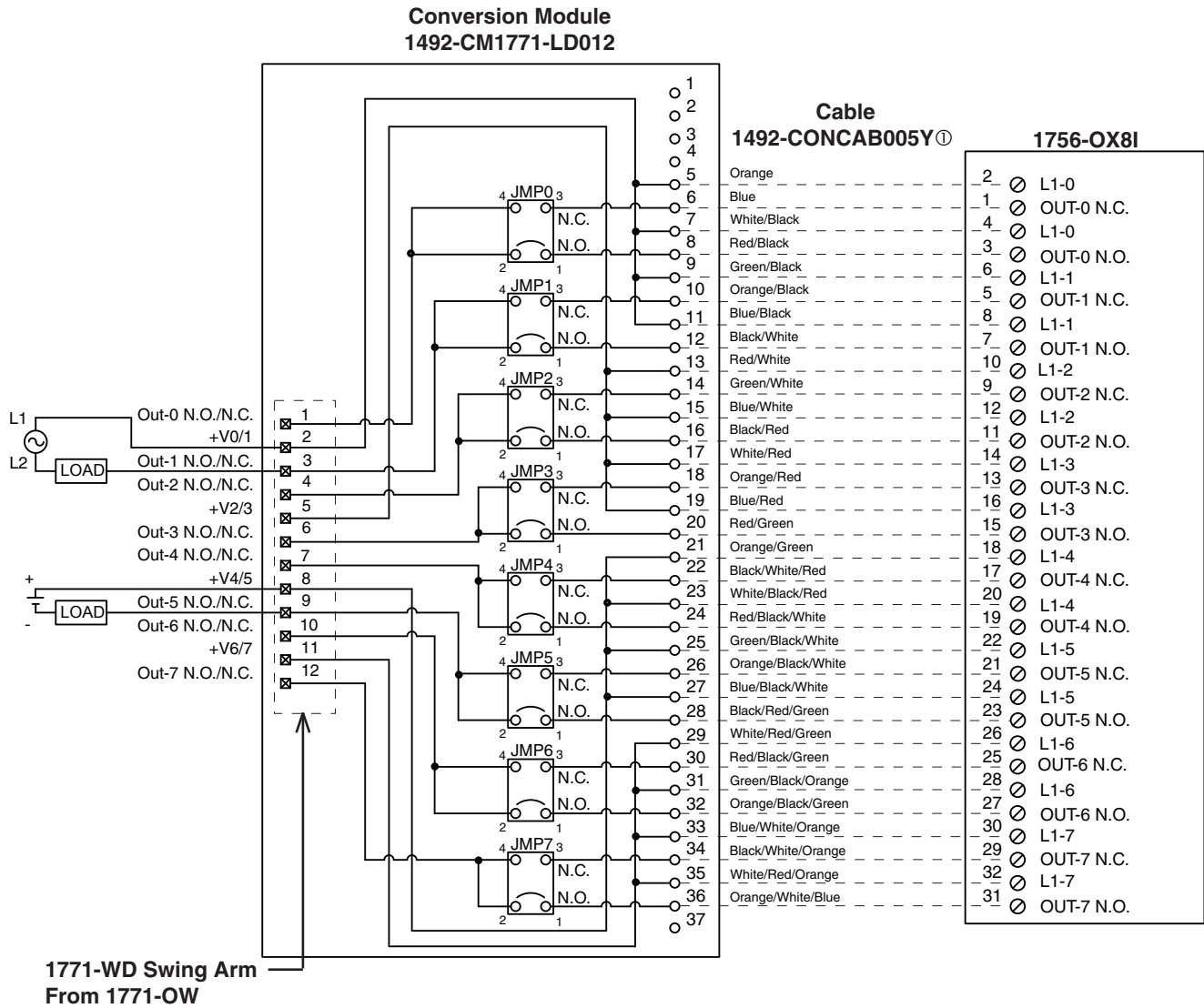
③ The 1771-OR module had a jumper selection of N.O. and N.C. outputs. The 1756-OA16I has both N.O. and N.C. outputs, but selection is by wiring termination on the 1756 swing arm. The 1492-CM1771-LD012 conversion module replaces the functionality of the 1771-OR jumpers with eight jumpers (JMP0 through JMP7). In the default position, the output will be N.O. If a N.C. output is required, change the jumper from pins 1-2 to pins 3-4.

④ Refer to your 1771-OR and 1756-OA16I Installation Manual wiring schematics and diagrams for more details. Ensure 1756 output module ratings are not exceeded. [Reference Doc: 41171-017 (Version 00)]



**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-OX8I RTB. Recommended cable lengths of 0.5M or 1.0M (005=0.5M, 010=1.0M). See table 2 for other lengths.

② The 1771-OW module output resistive current limits versus 1756-OX8I limits are as follows:  
(NOTE: For switching and inductive current ratings, refer to the modules Installation Instructions)

	<b>1771-OW</b>	<b>1756-OX8I w/ 1492-CONCAB005Y</b>
a) Current/Point	0.2A @ 138V AC	2A @ 240V AC
	1A @ 30V DC	2A @ 30V DC
	0.25A @ 125V DC	0.25A @ 125V DC

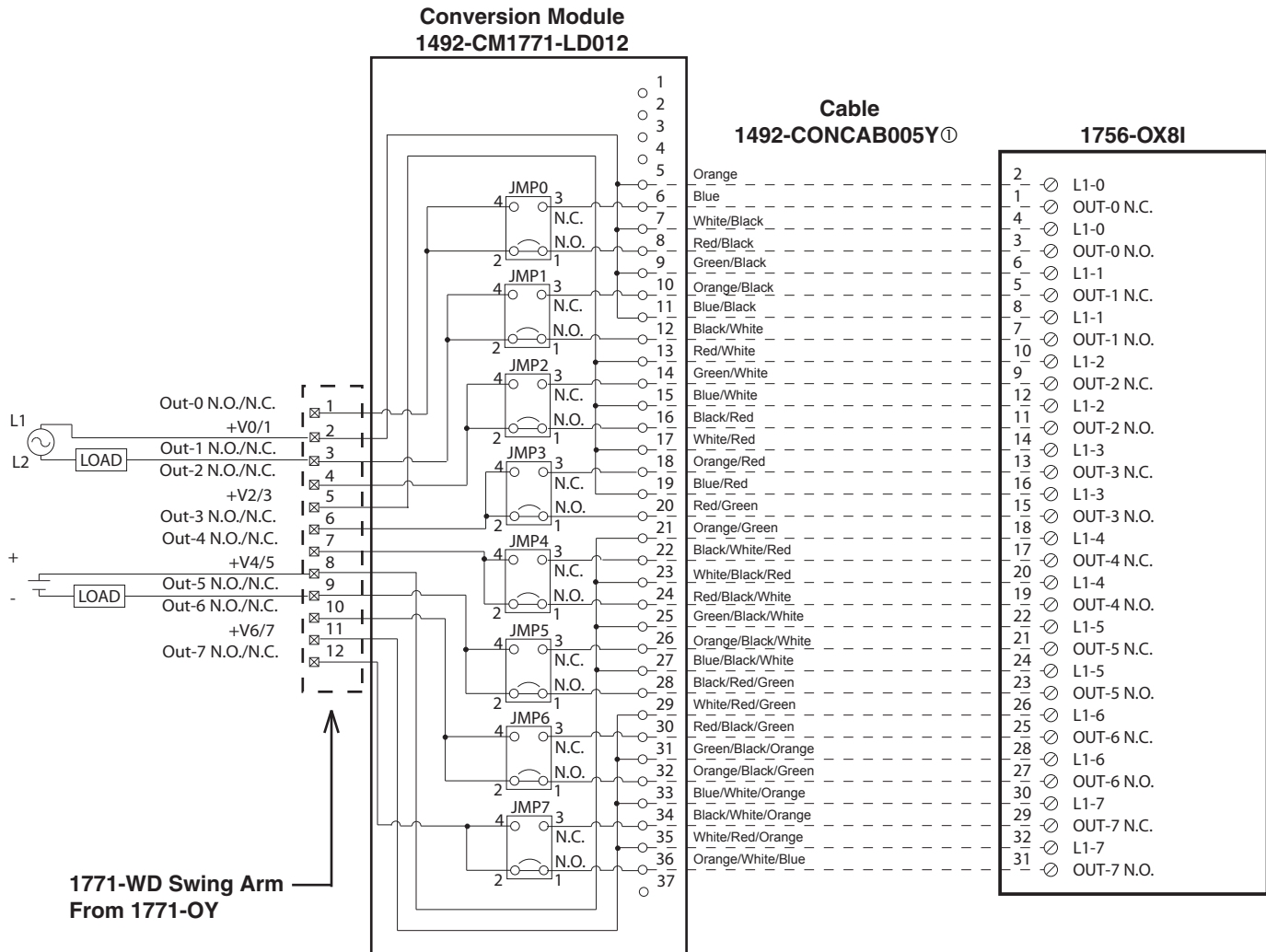
③ The 1771-OW module had a jumper selection of N.O. and N.C. outputs. The 1756-OX8I has both N.O. and N.C. outputs, but selection is by wiring termination on the 1756 swing arm. The 1492-CM1771-LD012 conversion module replaces the functionality of the 1771-OW jumpers with eight jumpers (JMP0 through JMP7). In the default position, the output will be N.O. If a N.C. output is required, change the jumper from pins 1-2 to pins 3-4.

④ Refer to your 1771-OW and 1756-OX8I Installation Manual wiring schematics and diagrams for more details. Ensure 1756 output module ratings are not exceeded.  
[Reference Doc: 41170-941 (Version 01)]



**WARNING**

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**Conversion Module Installation and Application Considerations**

① This Bul. 1492 cable consists of a cable wired to one 1756-OX8I RTB. Recommended cable lengths of 0.5M or 1.0M (005=0.5M), 010=1.0M). See table 2 for other lengths.

② The 1771-OY module output resistive current limits versus 1756-OX8I limits are as follows:  
(NOTE: For switching and inductive current ratings, refer to the modules Installation Instructions)

	<b>1771-OY</b>	<b>1756-OX8I w/ 1492-CONCAB005Y</b>
a) Current/Point	100mA @ 138V AC 100mA @ 125V DC	2A @ 240V AC 2A @ 30V DC 0.25A @ 125V DC

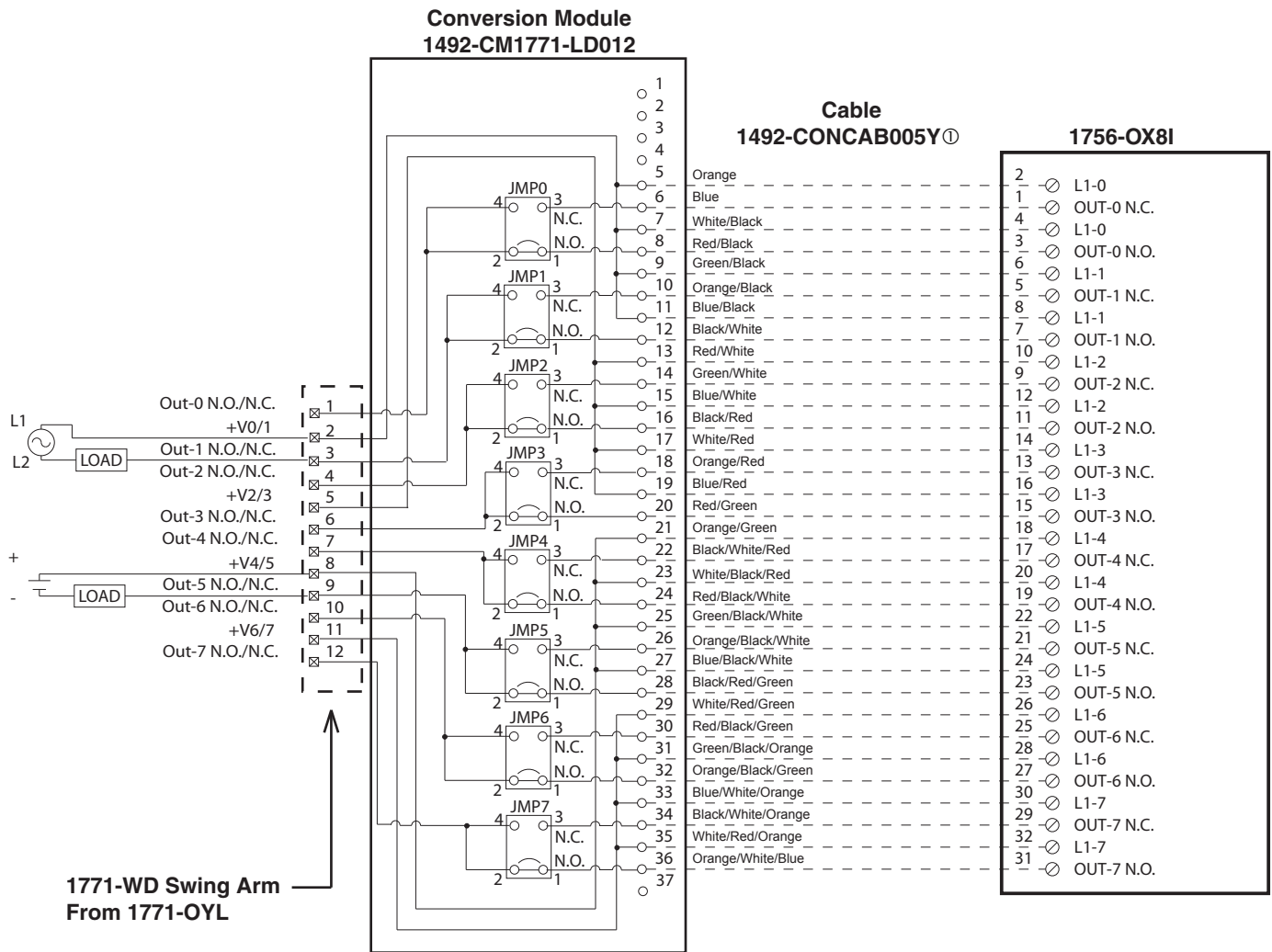
③ The 1771-OY module had a jumper selection of N.O. and N.C. outputs. The 1756-OX8I has both N.O. and N.C. outputs, but selection is by wiring termination on the 1756 swing arm. The 1492-CM1771-LD012 conversion module replaces the functionality of the 1771-OY jumpers with eight jumpers (JMP0 through JMP7). In the default position, the output will be N.O. If a N.C. output is required, change the jumper from pins 1-2 to pins 3-4.

④ Refer to your 1771-OY and 1756-OX8I Installation Manual wiring schematics and diagrams for more details. Ensure 1756 output module ratings are not exceeded.  
[Reference Doc: 41171-011 (Version 00)]



**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-OX8I RTB. Recommended cable lengths of 0.5M or 1.0M (005=0.5M), 010=1.0M). See table 2 for other lengths.

② The 1771-OYL module output resistive current limits versus 1756-OX8I limits are as follows:  
(NOTE: For switching and inductive current ratings, refer to the modules Installation Instructions)

	1771-OYL	1756-OX8I w/ 1492-CONCAB005Y
a) Current/Point	100mA @ 24V AC	2A @ 240V AC
	100mA @ 24V DC	2A @ 30V DC
		0.25A @ 125V DC

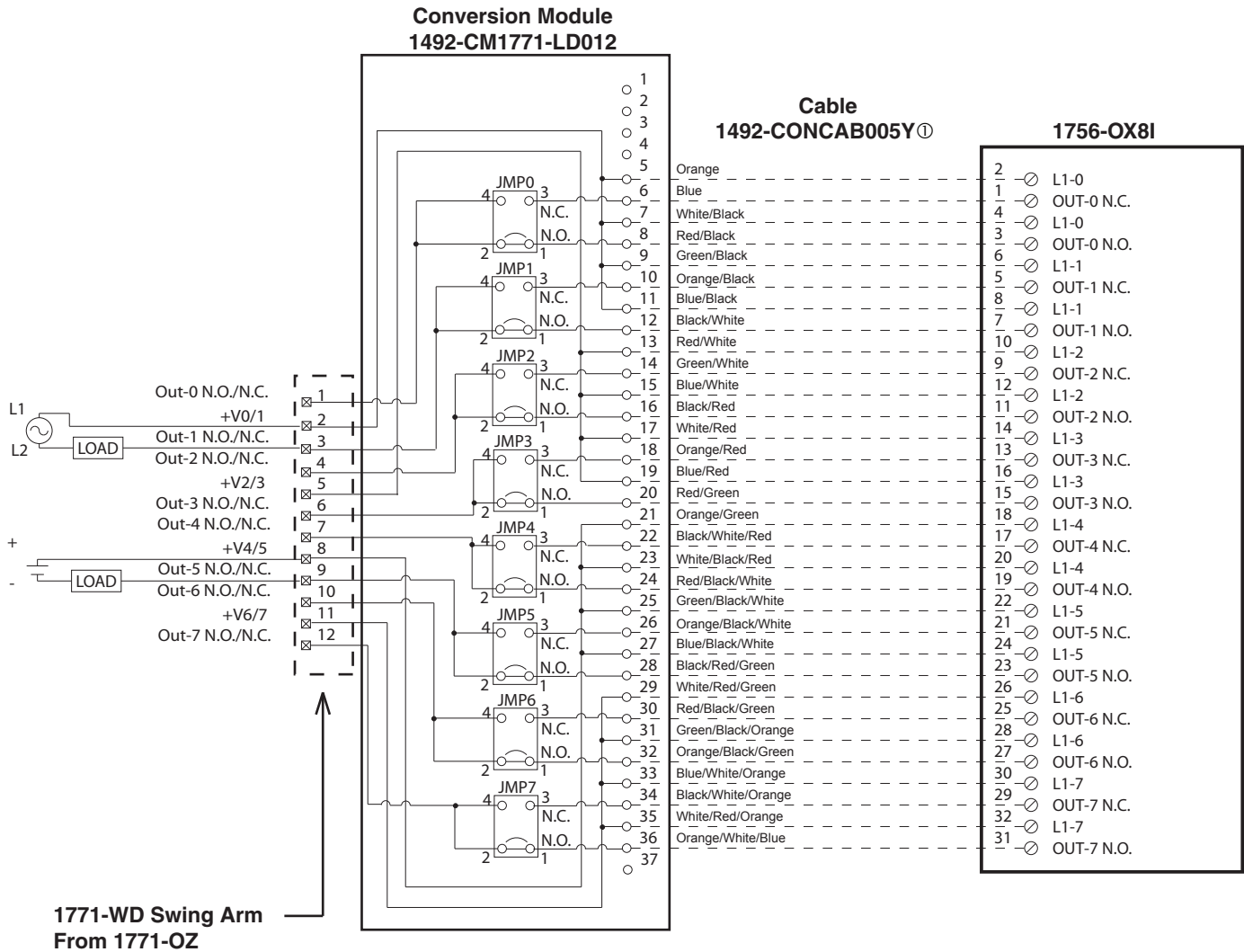
③ The 1771-OYL module had a jumper selection of N.O. and N.C. outputs. The 1756-OX8I has both N.O. and N.C. outputs, but selection is by wiring termination on the 1756 swing arm. The 1492-CM1771-LD012 conversion module replaces the functionality of the 1771-OYL jumpers with eight jumpers (JMP0 through JMP7). In the default position, the output will be N.O. If a N.C. output is required, change the jumper from pins 1-2 to pins 3-4.

④ Refer to your 1771-OYL and 1756-OX8I Installation Manual wiring schematics and diagrams for more details. Ensure 1756 output module ratings are not exceeded. [Reference Doc: 41171-012 (Version 00)]



**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-OX8I RTB. Recommended cable lengths of 0.5M or 1.0M (005=0.5M), 010=1.0M). See table 2 for other lengths.

② The 1771-OZ module output resistive current limits versus 1756-OX8I limits are as follows:  
(NOTE: For switching and inductive current ratings, refer to the modules Installation Instructions)

	1771-OZ	1756-OX8I w/ 1492-CONCAB005Y
a) Current/Point	100mA @ 138V AC 100mA @ 138V DC	2A @ 240V AC 2A @ 30V DC 0.25A @ 125V DC

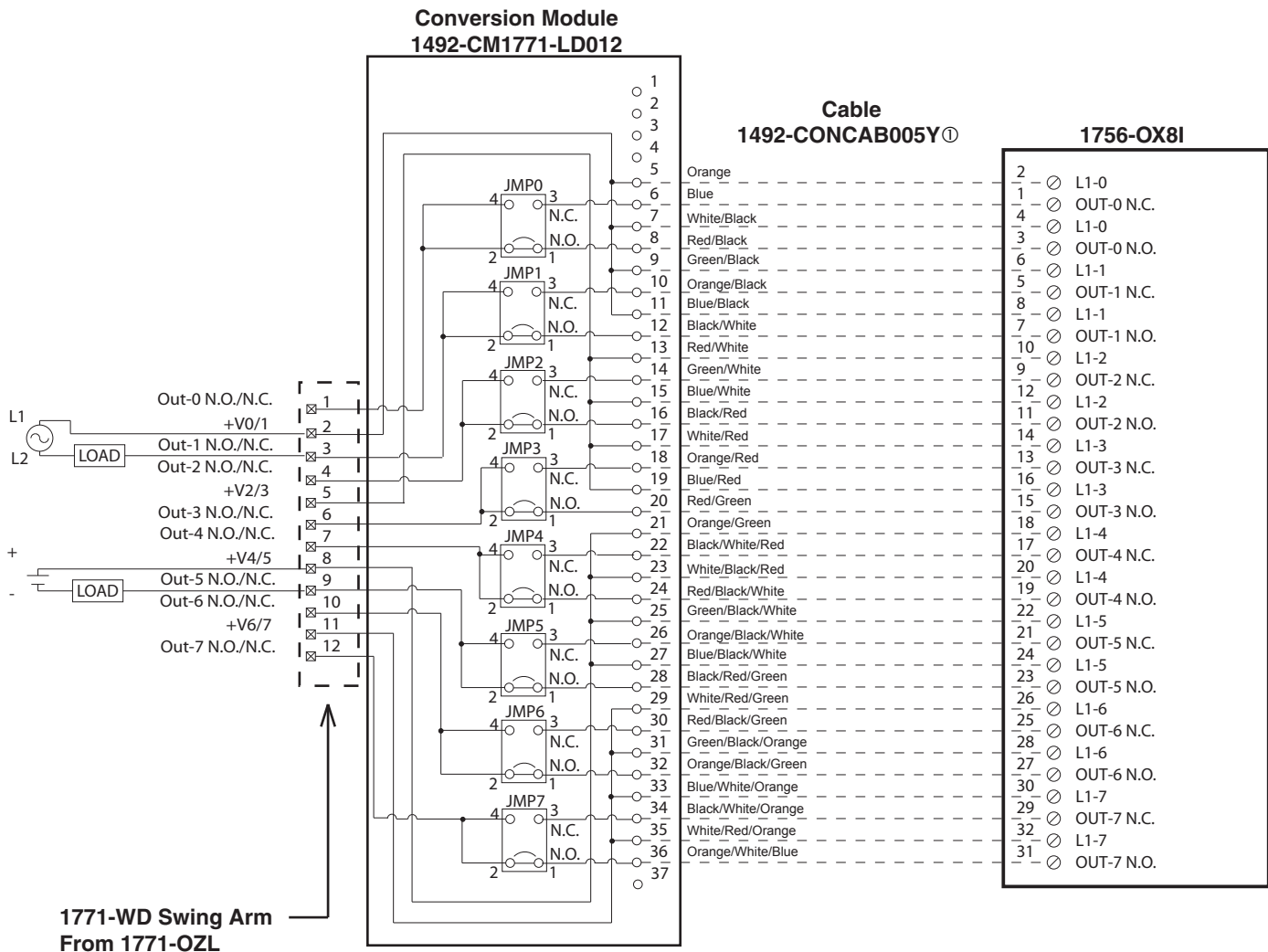
③ The 1771-OZ module had a jumper selection of N.O. and N.C. outputs. The 1756-OX8I has both N.O. and N.C. outputs, but selection is by wiring termination on the 1756 swing arm. The 1492-CM1771-LD012 conversion module replaces the functionality of the 1771-OZ jumpers with eight jumpers (JMP0 through JMP7). In the default position, the output will be N.O. If a N.C. output is required, change the jumper from pins 1-2 to pins 3-4.

④ Refer to your 1771-OZ and 1756-OX8I Installation Manual wiring schematics and diagrams for more details. Ensure 1756 output module ratings are not exceeded.  
[Reference Doc: 41171-013 (Version 00)]



**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-OX8I RTB. Recommended cable lengths of 0.5M or 1.0M (005=0.5M), 010=1.0M). See table 2 for other lengths.

② The 1771-OZL module output resistive current limits versus 1756-OX8I limits are as follows:  
(NOTE: For switching and inductive current ratings, refer to the modules Installation Instructions)

	<b>1771-OZL</b>	<b>1756-OX8I w/ 1492-CONCAB005Y</b>
a) Current/Point	100mA @ 138V AC 100mA @ 138V DC	2A @ 240V AC 2A @ 30V DC 0.25A @ 125V DC

③ The 1771-OZL module had a jumper selection of N.O. and N.C. outputs. The 1756-OX8I has both N.O. and N.C. outputs, but selection is by wiring termination on the 1756 swing arm. The 1492-CM1771-LD012 conversion module replaces the functionality of the 1771-OZL jumpers with eight jumpers (JMP0 through JMP7). In the default position, the output will be N.O. If a N.C. output is required, change the jumper from pins 1-2 to pins 3-4.

④ Refer to your 1771-OZL and 1756-OX8I Installation Manual wiring schematics and diagrams for more details. Ensure 1756 output module ratings are not exceeded.  
[Reference Doc: 41171-014 (Version 00)]



