

Digital I/O Conversion Module

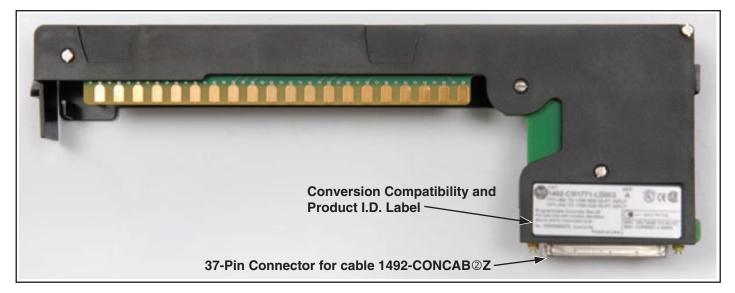
(Cat 1492-CM1771-LD005)

I. Description

This Digital I/O Conversion Module provides for the conversion of (1) 1771, 32 point I/O modules to be converted to (1) 1756, 32 point I/O module and consists of the following:

- (1) 1771 Module (32pt) to (1) 1756 Module (32pt)
- (2) Conversion Module: 1492-CM1771-LD005
- (1) Cable: 1492-CONCAB005Z (Table 2, Section III)
- (1) Conversion Mounting Assembly: 1492-MUA... (Table 1, Section II)

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, Section III for further details.



1492-CM1771-LD005 Conversion Module



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.

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

12

16

23.15

29.06

1492-MUA4-A13-A17

16

24.01

Table 1: Bulletin 1771 to 1756 Chassis Conversion

Foot Notes:

16

1771-A4B

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

24.01

1756-A13

1756-A17

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.

Table 2: Bulletin 1771 to 1756 Conversion Modules and Cables

1771	1756	1492	1492
Digital I/O Module①	Digital I/O Module①	Conversion Module	Cable②
1771-IVN	1756-IV32	1492-CM1771-LD005	1492-CONCAB005Z

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 cable length of each portion of the 1492 Cable. Recommended cable lengths of 0.5M are shown. Additional cable lengths are as follows: 1.0M = 1492-CONCAB010Z

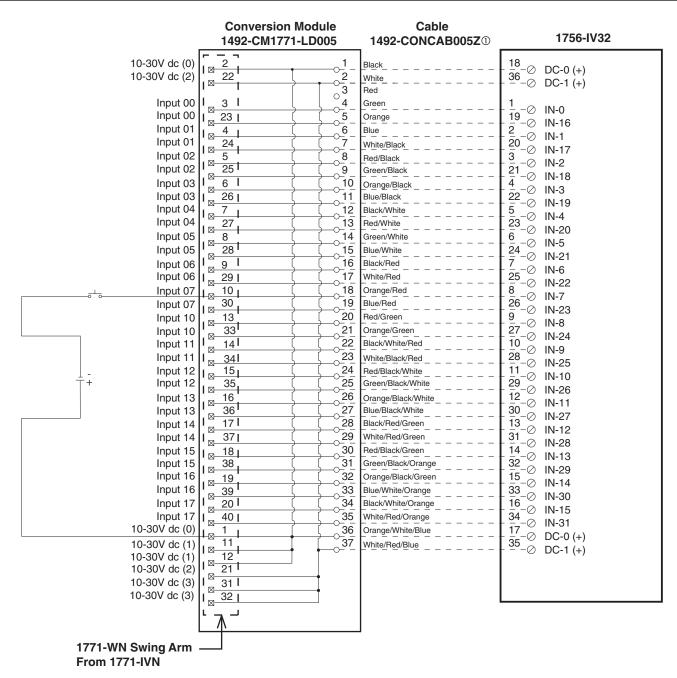
IV. Conversion Module Specifications

(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	242.1 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			
Nonoperating	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:	2 Amps		
Per Module:	4 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		



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 The input delay times for the 1771-IVN module versus 1756-IV32 module are as follows:

1771-IVN 1756-IV32

a) Off-to-On Delay 6ms (+/-2ms) 1ms (plus selectable filter) b) On-to-Off Delay 6ms (+/-2ms) 2ms (plus selectable filter)

② The 1771-IVN has 4 groups (allowing 4 seperate power supplies) and the 1756-IV32 has 2 groups. This module/cable combination ties Groups 0 & 1 from the 1771-IVN to Group 0 on the 1756-IV32 and it ties Groups 2 & 3 from the 1771-IVN to Group 1 on the 1756-IV32. Field wiring modification must be made to accommodate this if multiple supplies were used. If 4 supplies were used, 2 must be removed.

3 Refer to your 1771-IVN and 1756-IV32 Installation Manual wiring schematics and diagrams for more details.

[Reference Doc: 41170-934 (Version 02)]

