Field Wire Conversion Module for A-B 1771-IAD to 1756-IH16I or 1771-IMD to 1756-IM16I

(Cat 1492-CM1771-LD002)

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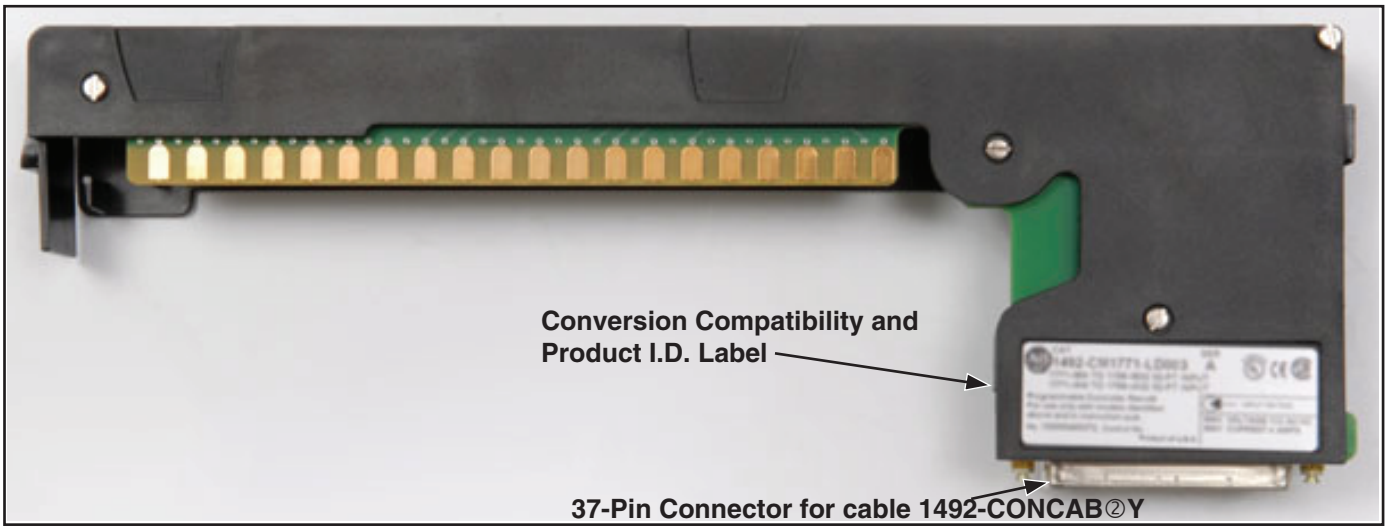
I. Module Description

The 1492-CM1771-LD002 conversion module provides field wire signal conversion from an A-B 1771-IAD, 79 to 138Vac/dc, 16 point input module to a 1756-IH16I, 90 to 146Vdc①, 16 point individually isolated input module or a 1771-IMD, 184 to 250Vac or 166 to 230Vdc, 16 point input module to a 1756-IM16I, 159 to 265Vac①, 16 point individually isolated input module. The conversion module provides the mating connector to the 1771-IAD or 1771-IMD module swing-arm/terminal block with the attached field wires. It routes those signals via its 37-pin connector and a 1492-CONCAB②Y pre-wired cable to compatible terminals on the 1756-IH16I or 1756-IM16I (refer to Wiring Diagrams on page 2 and 3 for details).



1492-CM1771-LD002 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.

① Refer to conversion module Specifications Section: Maximum Operating Voltage

II. Module Installation

The 1492-CM1771-LD002 conversion module must be installed in a 1492 conversion base-plate and cover-plate assembly. The installation of the module into the assembly is explained in the Installation Manual that ships with the conversion assembly. For a list of compatible assemblies refer to Appendix A.

III. Conversion Module Compatibility Matrix

Conversion Module	Compatible 1771 Input Module	Compatible 1756 Input Module	Required 1492 Cable
1492-CM1771-LD002	1771-IAD	1756-IH16I	1492-CONCAB②Y
1492-CM1771-LD002	1771-IMD	1756-IM16I	1492-CONCAB②Y

② This is cable length in meters. Available lengths are limited to 005 (0.5m) and 010 (1.0m).

PN-40373
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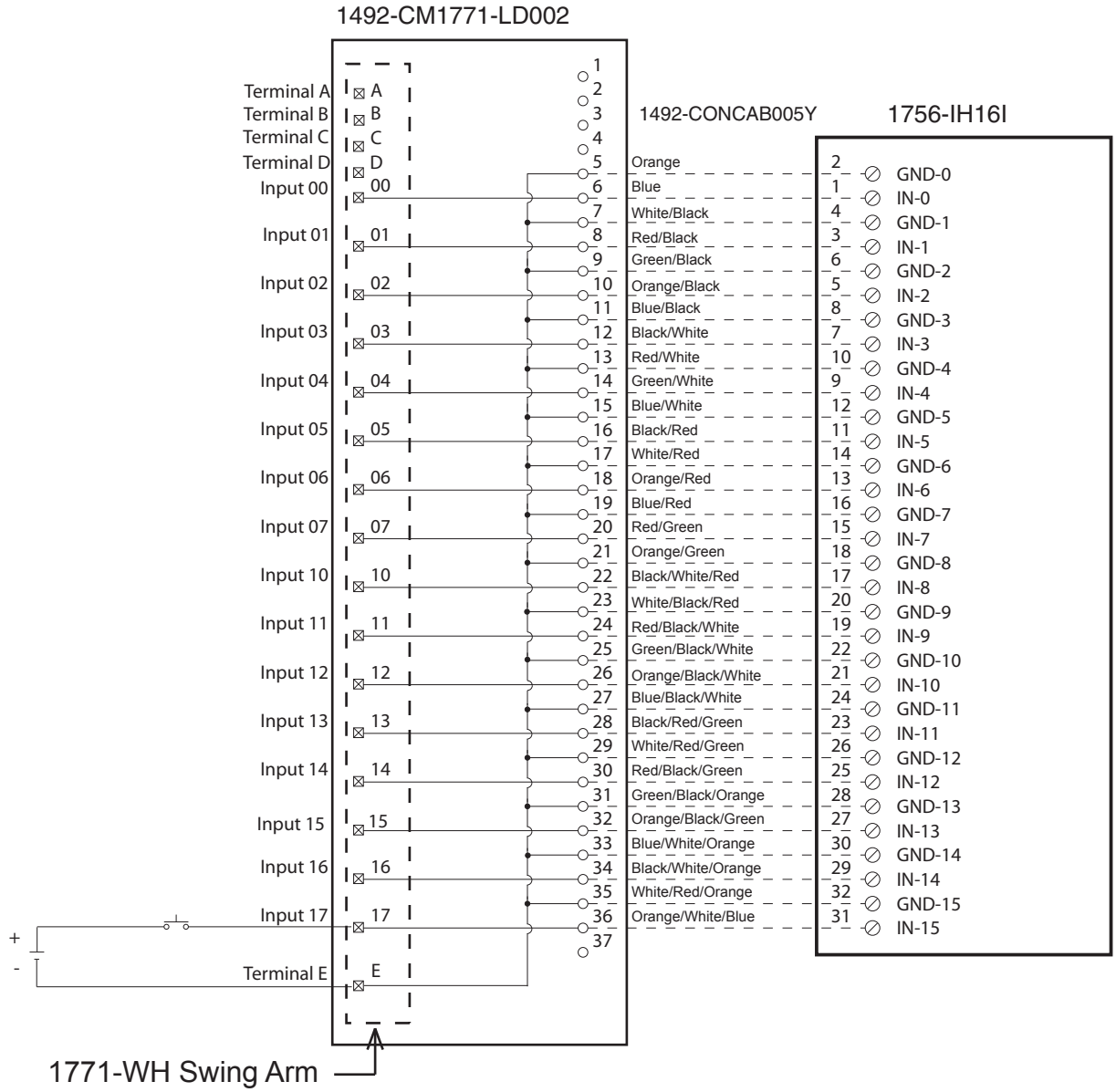
IV. Conversion Module Wiring Diagram

The following diagrams show the connections from the existing 1771-IAD and 1771-IMD swing-arm, through the conversion module, 1492 cable and to the 1756-IH16I and 1756-IM16I input module. The diagrams can be used as an aid in possible system troubleshooting.

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: 1771-IAD to 1756-IH16I with with 1492-CM1771-LD002



Conversion Module Installation and Application Considerations

① The input delay times for the 1771-IAD module versus 1756-IH16I module are as follows:

	1771-IAD	***1756-IH16I***
a) Off-to-On Delay	3ms @120V DC	2ms (plus selectable filter)
b) On-to-Off Delay	25ms (+/-5ms)	6ms (plus selectable filter)

② The 1771-IAD module is rated 79V to 138V AC or DC. The 1756-IH16I module is rated 90V to 146V DC. If the input spurce voltage is AC use a 1756-IA16 and 1492-CM1771-LD002 conversion module.

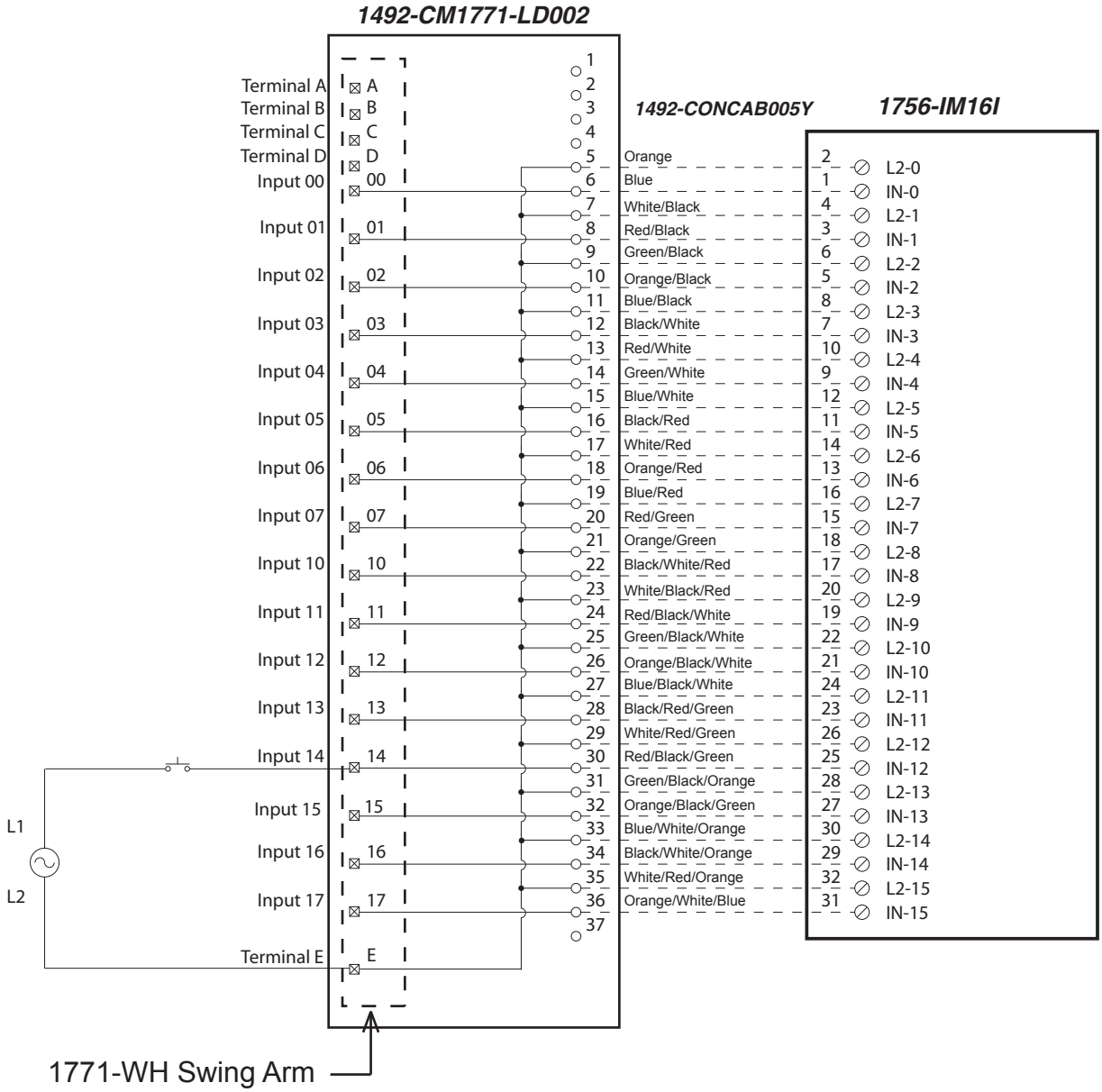
③ Refer to your 1771-IAD and 1756-IH16I Installation Manual wiring schematics and diagrams for more details.

[Reference Doc: 41170-927 (Version 01)]

IV. Conversion Module Wiring Diagram (Continued)

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: 1771-IMD to 1756-IM16I with 1492-CM1771-LD002



Conversion Module Installation and Application Considerations

① The input delay times for the 1771-IMD module versus 1756-IM16I module are as follows:

	1771-IMD	***1756-IM16I***
a) Off-to-On Delay	15ms (+/-8ms)	10ms (plus selectable filter)
b) On-to-Off Delay	172ms (+/-56ms)	8ms (plus selectable filter)

② The 1771-IMD module is rated 184V AC to 250V AC and 166V-230V DC. The 1756-IM16I module is rated 159V to 265V AC. A1756 input module with an equivalent DC voltage range to convert the 1771-IMD is not available.

③ Refer to your 1771-IMD and 1756-IM16I Installation Manual wiring schematics and diagrams for more details.

[Reference Doc: 41170-928 (Version 01)]

V. 1492-CM1771-LD002 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) x1.5 in. (width) 300 mm. (height) x 111.25 mm (depth) x 38.1 mm (width)
Approximate Shipping Weight	262.4 g (0.58 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 Operating	 50g 30g
Operating Vibration	2g at 10 to 500Hz (Agrees with 1756 I/O module specifications)
Maximum Operating Voltage	240 Vac at 47 to 63Hz or 240 Vdc
Max. Module Operating Current Per Point: Per Module:	 2 Amps 2 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

VI. Appendix A - 1771 to 1756 Chassis Conversion System Selection Process

1) Determine the number of 1771 I/O modules used in the 1771 I/O Chassis to be converted to 1756. NOTE: In some cases two 1756 modules may be required for one 1771 module. Select the applicable 1492 conversion modules from the Digital and Analog Conversion Selection Table Matrix.
2) Review the Max Slots for I/O and chassis width data from the below table, and select a 1756 I/O Chassis which meets your conversion needs from Step 1. Ensure the information from the I/O Conversion module tables are reviewed first.
3) Once the 1756 Chassis is selected, select the Conversion Assembly. The Conversion Assembly has the same dimensional foot-print as the 1771 chassis and can use the same mounting hardware. The assembly consists of a base-plate to hold the conversion modules and a cover-plate to protect the modules and to mount the selected 1756 chassis. The combined depth of the conversion assembly with the 1756 chassis mounted is 10.25 inches (Controller w/key) to 10.0 inches (Controller w/o Key).

Chassis Parameter[1]	**1771 Chassis**		**1756 Equivalent Chassis**		**1771 Chassis**		**1756 Equivalent Chassis**		**1771 Chassis**	**1756 Equivalent Chassis**	**1771 Chassis**	**1756 Equivalent Chassis**
	-A1B w/o PS	-A1B w/PS	-A4[3]	-A7	-A2B w/o PS	-A2B w/PS	-A7[4]	-A10	-A3B1	-A13[5]	-A4B	-A17[6]
Max Slots for I/O	4	4	3	6	8	8	6	9	12	12	16	16
Chassis Width[2]	9.01	12.61	10.35	14.49	14.01	17.61	14.49	19.02	19.01	23.15	24.01	29.06
Conversion Assembly	1492-MUA1B-A4-A7				1492-MUA2B-A7-A10				1492-MUA3-A10-A13		1492-MUA4-A13-A17	

Foot Notes:

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

② Two 1771 width dimensions are provided as some PLC-5 processors have integrated power supplies. Dimension w/PS includes -P1, -P2, etc. Notice that the width dimension of some 1756 chassis exceed the width of the 1771 chassis with or without the power supply. Cover-plate chassis mounting design allows the excess 1756 chassis width to be evenly distributed to both sides, or excess to right or left. Carefully consider this in the conversion

③ 1756-A4 may work in a 1771-A1B application if 4 or less I/O slots were used. Conversion cover-plate is capable to mount -A4 or -A7

④ 1756-A7 may work in a 1771-A2B application if 6 or less I/O slots were used. Conversion cover-plate is capable to mount -A7 or -A10

⑤ 1756-A10 may work in a 1771-A3B1 application if 10 or less I/O slots were used. Conversion cover-plate is capable to mount -A10 or -A13

⑥ 1756-A13 may work in a 1771-A4B application if 13 or less I/O slots were used. Conversion cover-plate is capable to mount -A13 or -A17

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