Fused Field Wire Conversion Module for A-B 1771-OD16 to 1756-OA16I

(Cat 1492-CM1771-LD010F)

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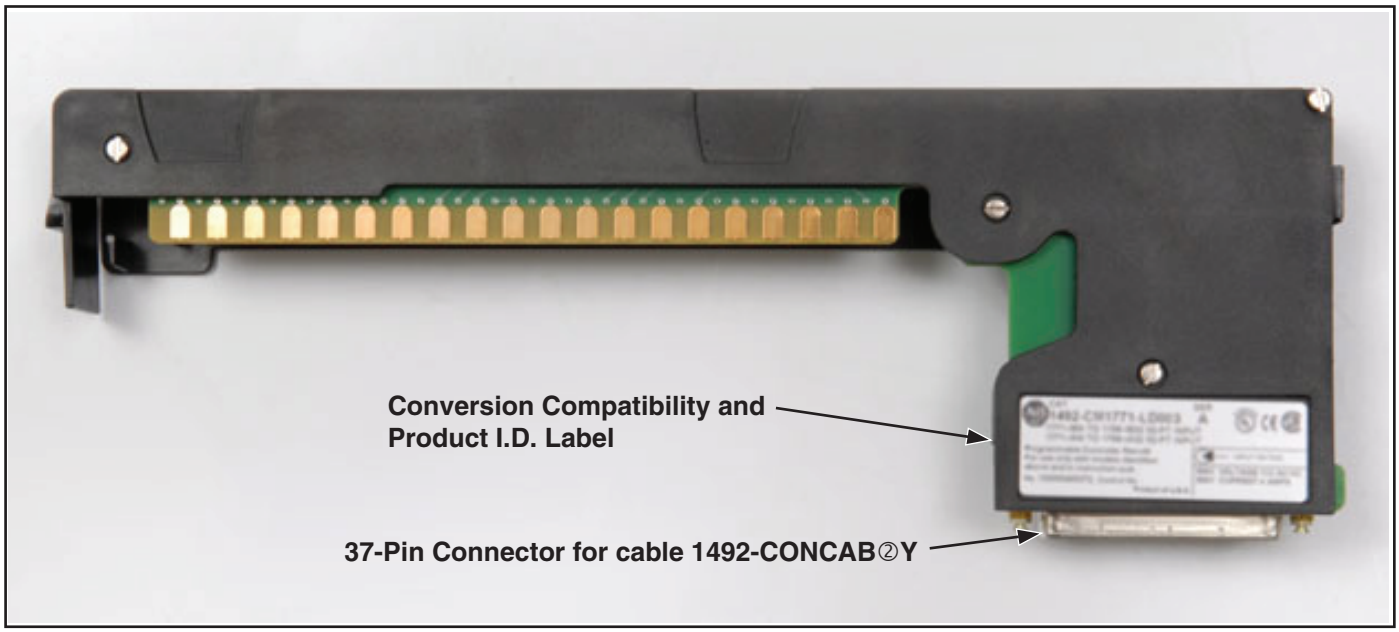
I. Module Description

The 1492-CM1771-LD010F, fused conversion module provides field wire signal conversion from an A-B 1771-OD16, 74 to 138Vac, 16 point isolated output module to a 1756-OA16I, 74 to 265Vac①, 16 point isolated output module. The conversion module provides the mating connector to the 1771-OD16 module swing-arm/terminal block with the attached field wires. It routes those signals via its 37-pin connector and a single 1492-CONCAB②Y pre-wired cable to compatible terminals on the 1756-OA16I module. To maintain the functionality of the 1771-OD16 module the conversion module provides 16 mechanical fuses; 1 for each L1 power terminal (refer to the Wiring Diagram on page 2 for details).



1492-CM1771-LD010F 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-LD010F conversion module must be installed in a 1492 conversion system 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 Output Module	Compatible 1756 Output Module	Required 1492 Cable
1492-CM1771-LD010F	1771-OD16	1756-OA16I	1492-CONCAB②Y

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

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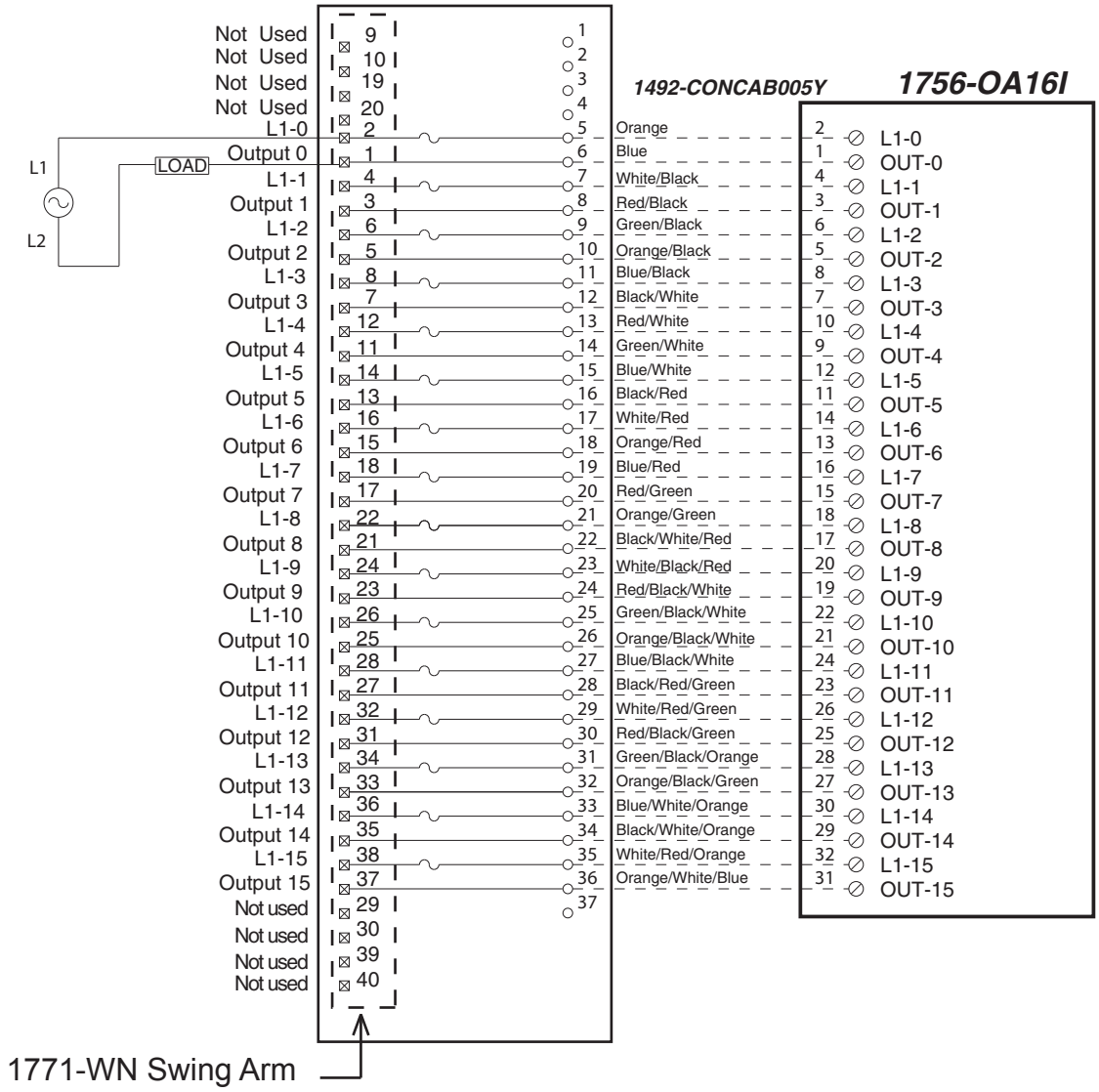
IV. Conversion Module Wiring Diagram

The following diagram shows the connections from the existing 1771-OD16 swing-arm, through the conversion module, 1492 cable and to the 1756-OA16I output module. The diagram 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 output module). Read and understand these considerations before installation. In addition, refer to the current draw requirements of the existing loads for this configuration to ensure they are within the current ratings of the 1756 output module.

Conversion: 1771-OD16 to 1756-OA16I with 1492-CM1771-LD010F



Conversion Module Installation and Application Considerations

①The 1771-OD16 module output current limits versus 1756-OA16I limits are as follows:

	1771-OD16	***1756-OA16Iw/1492-CONCAB005Y***
a) Current/Point	2A	1A
b) Current/Module	8A	4A
b) Surge Current/Point	20A for 100ms	20A for 43ms

② The 1771-OD16 has sixteen (16) 3A ,250V recifier fuses. The 1756-OA16I is NOT fused,as such sixteen (16) 2AG fuse clips are provided on the 1492-CM1771-LD010F conversion module. Max fuse rating is 1.5A based on 1756-OA16I.

③ The 1492-CONCAB005Y is limited to 3A per pin.

④The 1771-OD16 is rated 74V to 138V AC and 105V to 138V DC. The 1756-OA16I is rated 74V to 265V AC. A1756 isolated output module with an equivalent DC voltage range to convert the1771 -OD16 is not available.

⑤Refer to your 1771-OD16 and 1756-OA16I Installation Manual wiring schematics and diagrams for more details. Ensure 1756 output module rating are not exceeded. [Reference Doc: 41170-939 (Version 00)]

V. Fuse Installation and Replacement

The 1492-CM1771-LD010F conversion module has sixteen (16) mechanical fuse holders with fuses located on the circuit board inside the modules plastic case. The following explains how to replace the fuses.

1) Remove the 4 screws that hold both halves of the conversion module case together (refer to the following Figure A).

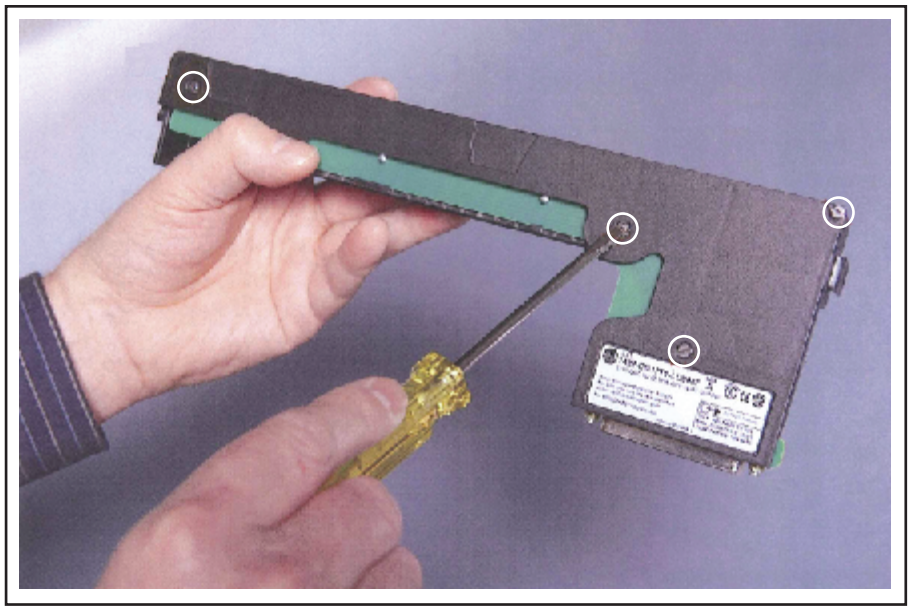


FIGURE A

2) Disassemble both case halves so you can access the module's circuit board. Remove and replace the fuse or fuses (refer to the below Figure B).

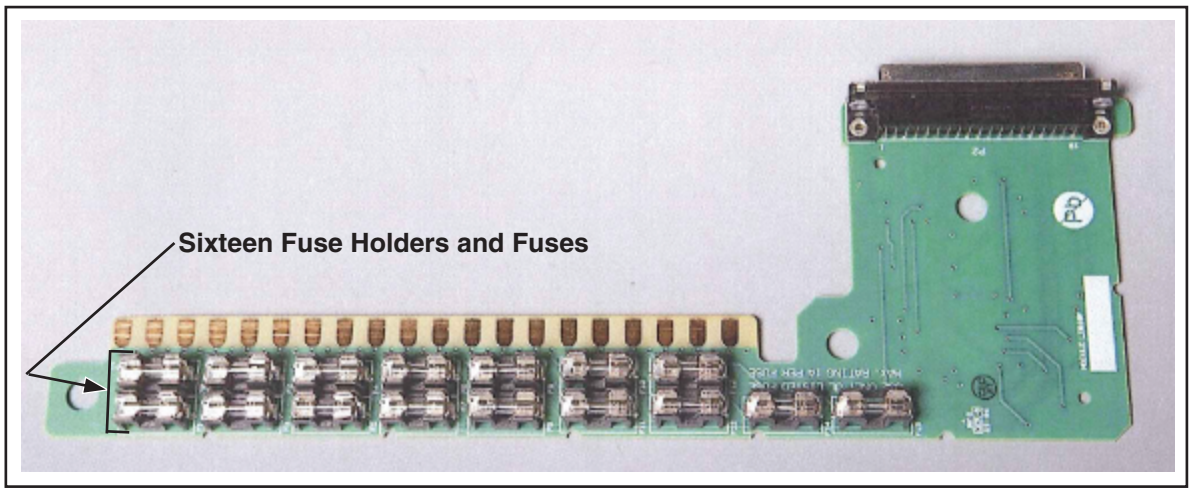


FIGURE B

3) Reassemble the two case halves to the circuit board and replace the four screws that hold the case together Do NOT over torque the screws (Maximum torque is 5.0 in-lbs.)

NOTES:

1) For module operation a fuse must be inserted into the fuse holder
2) Physical Fuse Size: 2AG
3) Possible Fuse Supplier: LittelFuse (Part Number: 22901.5P)
4) Maximum Fuse Current rating based on Conversion System Components: 1.5 Amps

VI. 1492-CM1771-LD010F 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	271.9 g (0.60 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	132 Vac at 47 to 63Hz
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.
Fusing	Sixteen, 1.5 Amps (maximum current based on convension components)
Agency Certifications	UL Classified: Under UL File Number E113724 CSA CE: compliant for all applicable directives
Pollution Degree	2
Environmental Rating	IP20

VII. Appendix A - 1771 chassis 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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