Field Wire Conversion Module for A-B 1771-OAD to 1756-OA16 or 1771-OBD to 1756-OB16E

(Cat 1492-CM1771-LD006)

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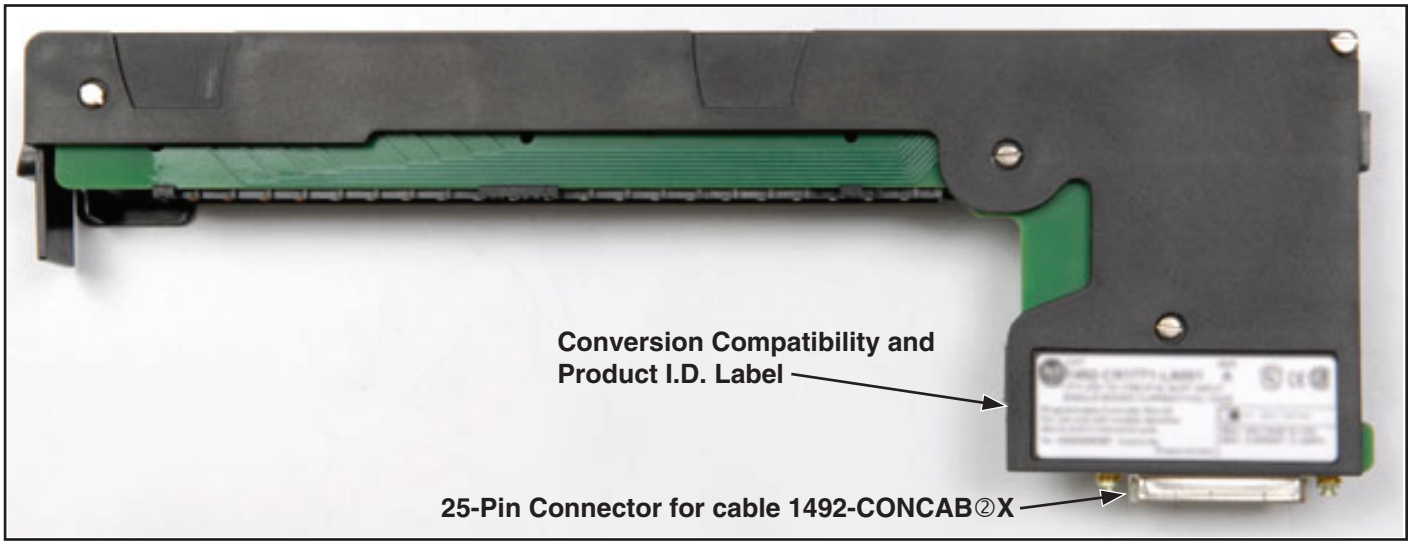
I. Module Description

The 1492-CM1771-LD006 conversion module provides field wire signal conversion from an A-B 1771-OAD, 10 to 138Vac, 16 point output module to a 1756-OA16, 74 to 265Vac(1), 16 point output module or from a 1771-OBD, 10 to 60Vdc(1) to a 1756-OB16E, 10 to 31.2Vdc output module. The conversion module provides the mating connector to the 1771-OAD and 1771-OBD module swing-arm/terminal block with the attached field wires. It routes those signals via its 25-pin connector and a 1492-CONCAB②X pre-wired cable to compatible terminals on the 1756-OA16 or 1756-OB16E (refer to Wiring Diagrams on page 2 and 3 for details).

NOTICE: The 1771-OBD module had a single on-board mechanical fuse for all outputs. The 1756-OB16E is electronically fused per group. Refer to the 1756-OB16E Installation Manual for details on electronic fusing.



1492-CM1771-LD006 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-LD006 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 Output Module	Compatible 1756 Output Module	Required 1492 Cable
1492-CM1771-LD006	1771-OAD	1756-OA16	1492-CONCAB②X
1492-CM1771-LD006	1771-OBD	1756-OB16E	1492-CONCAB②X

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

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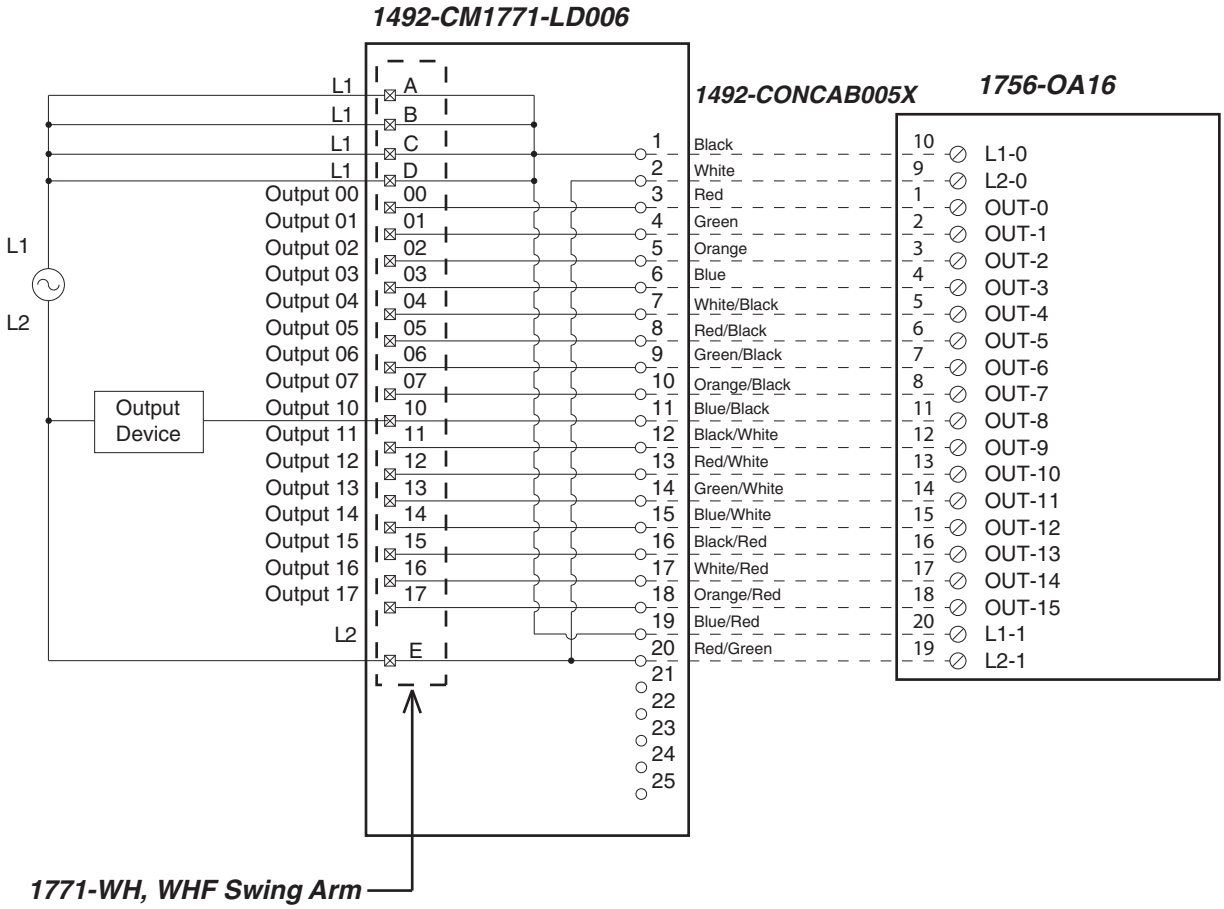
IV. Conversion Module Wiring Diagram

The following diagrams show the connections from the existing 1771-OAD or 1771-OBD swing-arm, through the conversion module, 1492 cable and to the 1756-OA16 or 1756-OB16E output 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 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-OAD to 1756-OA16 with 1492-CM1771-LD006



Conversion Module Installation and Application Considerations

① The 1771-OAD module output current limits versus 1756-OA16 limits are as follows:

	1771-OAD	*1756-OA16 w/ 1492-CONCAB005X*
a) Current/Point	2A	0.5A
b) Current/Module	8A	4A
c) Surge Current/point	25A for 100ms	5A for 43ms

② The L2 terminal (Terminal E) on the 1771-OAD module was an optional connection, but it is required for the 1756-OA16. This connection must be added if it was not connected.

③ The 1492-CONCAB005X is limited to 3A per pin.

④ The 1771-OAD is rated 10V to 138V AC. The 1756-OA16 is rated 74V to 256V AC.

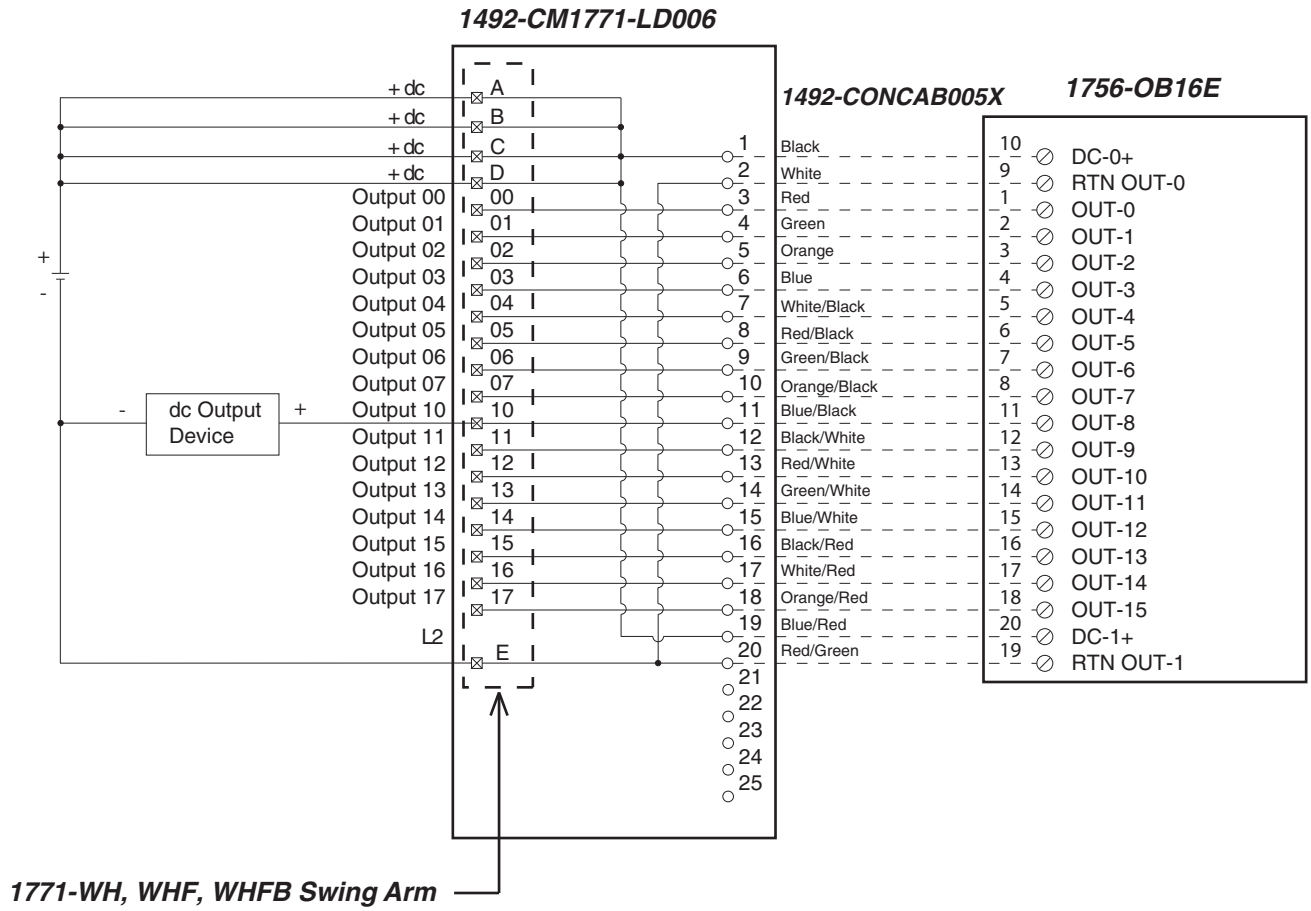
⑤ Refer to your 1771-OAD and 1756-OA16 Installation Manual wiring schematics and diagrams for more details. Ensure 1756 output module ratings are not exceeded. [Reference Doc: 41170-935 (Version 00)]

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 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-OBD to 1756-OB16E with 1492-CM1771-LD006



Conversion Module Installation and Application Considerations

① The 1771-OBD module output current limits versus 1756-OB16E limits are as follows:

	1771-OBD	*1756-OB16E w/ 1492-CONCAB005X*
a) Current/Point	2A	1A
b) Current/Module	8A	4A
c) Surge Current/point	4A for 10ms	2A for 10ms

② The 1771-OBD has a single 10A, 250V rectifier fuse (1/4 x 1 1/4 inch). The 1756-OB16E is electronically fused per group. Refer to the 1756-OB16E Installation Manual for details on electronic fusing.

③ The 1492-CONCAB005X is limited to 3A per pin.

④ The 1771-OBD is rated 10V to 60V DC. The 1756-OB16E is rated 10V to 31.2V DC. If the load source voltage is greater than 30V DC, then use the 1756-OC8 with the 1492-CM1771-LD008F conversion module.

⑤ Refer to your 1771-OBD and 1756-OB16E Installation Manual wiring schematics and diagrams for more details. Ensure 1756 output module ratings are not exceeded. [Reference Doc: 41170-936 (Version 00)]

V. 1492-CM1771-LD006 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	250.6 g (0.55 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 or 132 Vdc
Max. Module Operating Current Per Point: Per Module:	 2 Amps 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

VI. 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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