

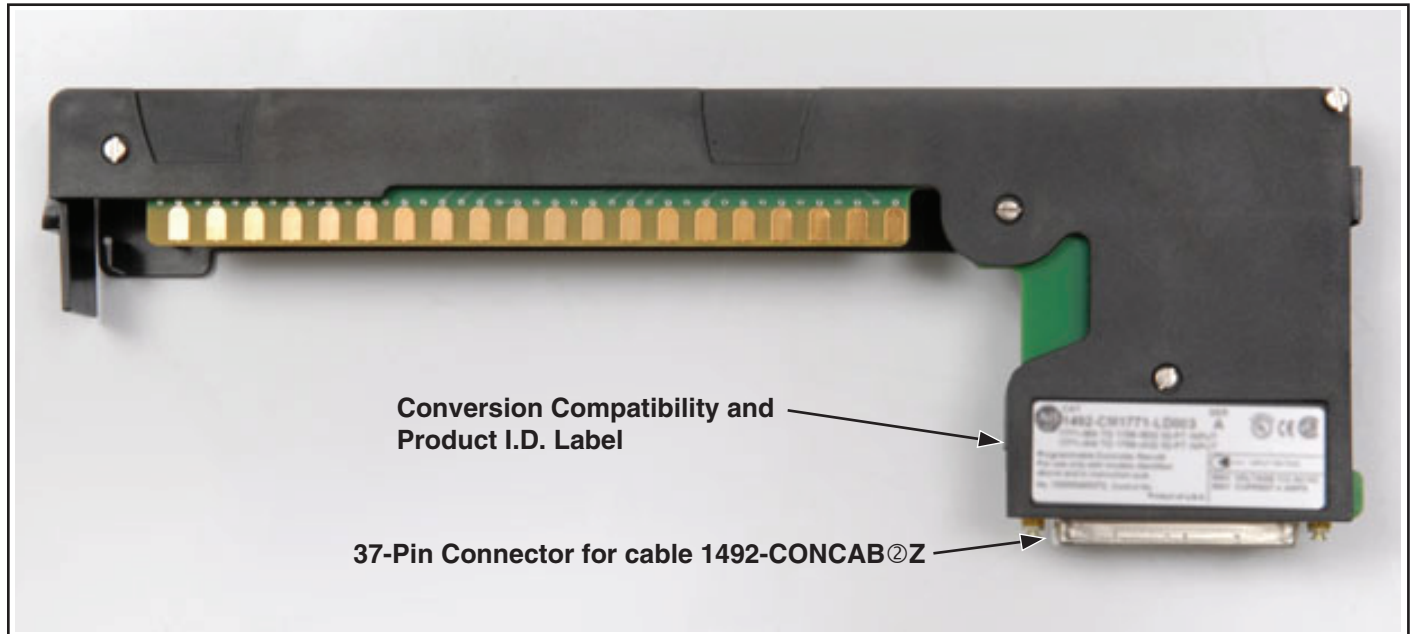


# Field Wire Conversion Module for A-B 1771-IBN to 1756-IB32 or 1771-IAN to 1756-IA32 (Cat 1492-CM1771-LD003)

Local language (French, Italian, German & Spanish) versions of this document can be downloaded by going to [www.ab.com](http://www.ab.com). In the left margin click on Publications Library and Literature Library. In the Search Area (right margin), Search by Catalog Number and in the Search box type in the catalog number of the conversion system component.

## I. Module Description

The 1492-CM1771-LD003 conversion module provides field wire signal conversion from an A-B 1771-IBN, 10 to 30Vdc, 32 point input module to a 1756-IB32, 10 to 31.2Vdc(1), 32 point input module or a 1771-IAN, 85 to 132Vac, 32 point input module to a 1756-IA32, 74 to 132Vac(1), 32 point input module. The conversion module provides the mating connector to the 1771-IBN or 1771-IAM module swing-arm/terminal block with the attached field wires. It routes those signals via its 37-pin connector and a 1492-CONCAB@Z pre-wired cable to compatible terminals on the 1756-IB32 or 1756-IA32 (refer to Wiring Diagrams on page 2 and 3 for details).



**1492-CM1771-LD003 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-LD003 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-LD003	1771-IBN	1756-IB32	1492-CONCAB@Z
1492-CM1771-LD003	1771-IAN	1756-IA32	1492-CONCAB@Z

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

## IV. Conversion Module Wiring Diagram

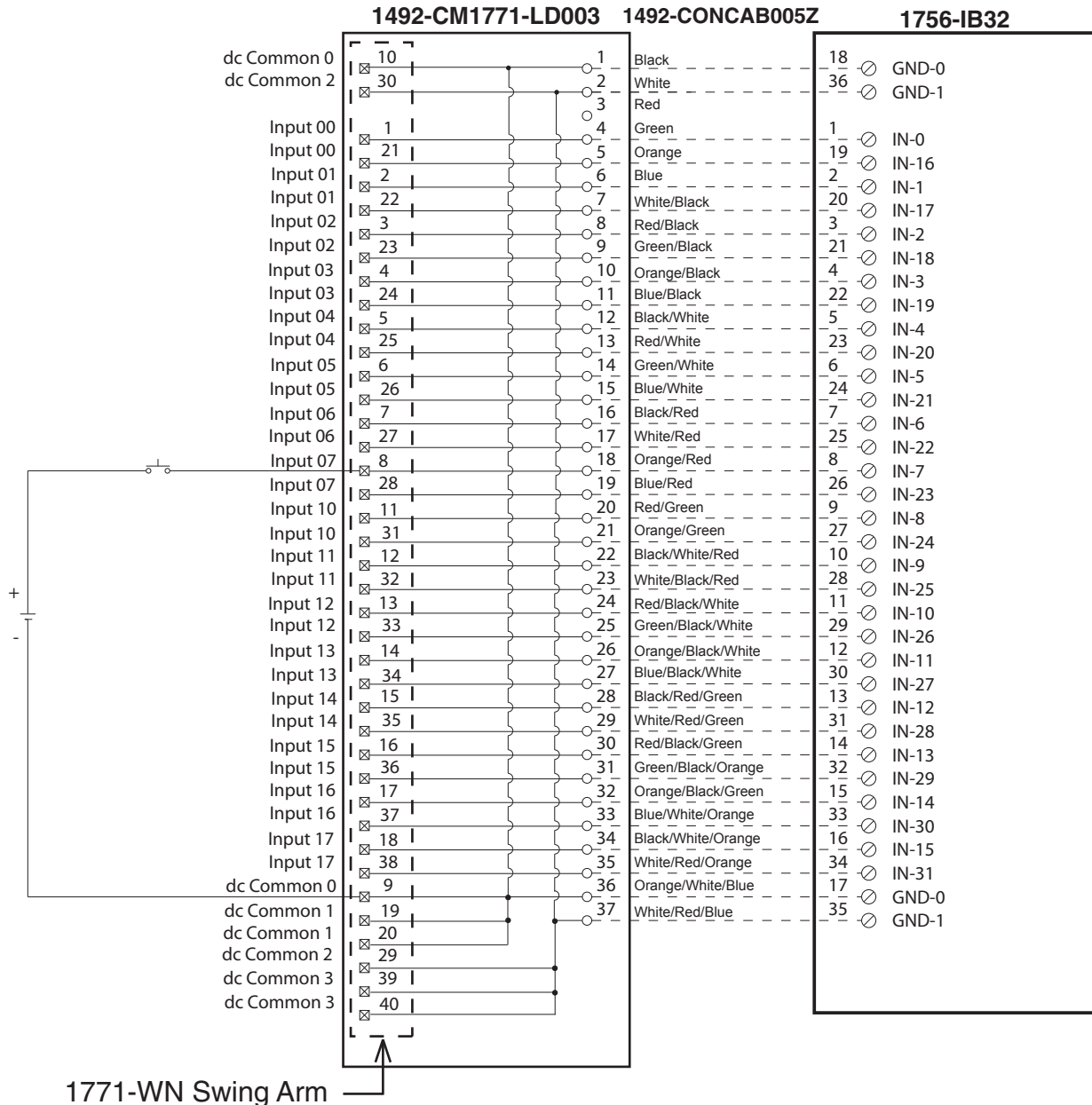
The following diagrams show the connections from the existing 1771-IBN and 1771-IAN swing-arm, through the conversion module, 1492 cables and to the 1756-IB32 and 1756-IA32 output modules. The diagram can be used as an aid in possible system troubleshooting.



### WARNING

There are several key application considerations and system specifications (bottom of drawing) when using these components (conversion module, cable and input module). Read and understand these considerations before installation.

### Conversion: 1771-IBN to 1756-IB32 with 1492-CM1771-LD003



### Conversion Module Installation and Application Considerations

① The input delay times for the 1771-IBN module versus 1756-IB32 module are as follows:

	1771-IBN	1756-IB32
a) Off-to-On Delay	6ms (+/-2ms)	1ms (plus selectable filter)
b) On-to-Off Delay	6ms (+/-2ms)	1ms (plus selectable filter)

② The 1771-IBN has 4 groups(allowing 4 separate power supplies) and the 1756-IB32 has 2 groups.

This module/cable combination ties Groups 0 & 1 from the 1771-IBN to Group 0 on the 1756-IB32 and it ties Groups 2 & 3 from the 1771-IBN to Group 1 on the 1756-IB32. 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-IBN and 1756-IB32 Installation Manual wiring schematics and diagrams for more details.

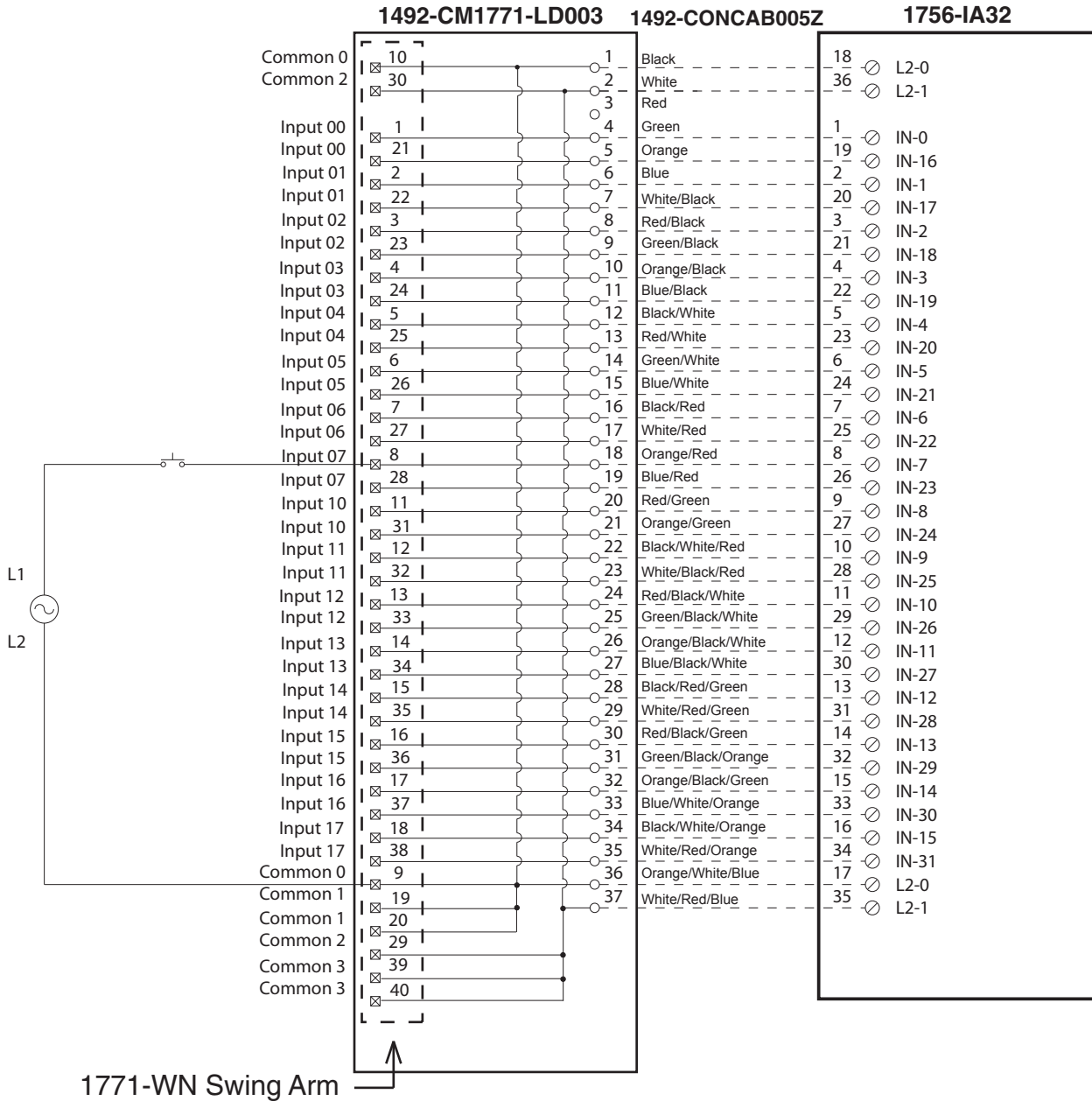
## IV. Conversion Module Wiring Diagram



### 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-IAN to 1756-IA32 with 1492-CM1771-LD003



### Conversion Module Installation and Application Considerations

① The input delay times for the 1771-IAN module versus 1756-IA32 module are as follows:

	1771-IAN	1756-IA32
a) Off-to-On Delay	10ms (+/-7ms)	10ms max (plus selectable filter)
b) On-to-Off Delay	20ms (+/-15ms)	8ms max (plus selectable filter)

② The 1771-IAN has 4 groups (allowing 4 separate power supplies) and the 1756-IA32 has 2 groups.

This module/cable combination ties Groups 0 & 1 from the 1771-IAN to Group 0 on the 1756-IA32 and it ties Groups 2 & 3 from the 1771-IAN to Group 1 on the 1756-IA32. 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-IAN and 1756-IA32 Installation Manual wiring schematics and diagrams for more details.

## V. 1492-CM1771-LD003 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	238.6 g (0.52 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:	4 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

## 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 <sup>(1)</sup>	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 <sup>(3)</sup>	-A7	-A2B w/o PS	-A2B w/PS	-A7 <sup>(4)</sup>	-A10	-A3B1	-A13 <sup>(5)</sup>	-A4B	-A17 <sup>(6)</sup>
Max Slots for I/O	4	4	3	6	8	8	6	9	12	12	16	16
Chassis Width <sup>(2)</sup>	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