Analog Cables
Pre-Wired

Bulletin 1492 pre-wired cables are designed to minimize control wiring in a panel. Pre-wired cables, when used with an analog IFM, replace the point-to-point wiring between Allen-Bradley programmable controller I/O modules and individual terminal blocks. The pre-wired cables have a removable terminal block or wiring arm from the PLC on one end of the cable and a D-Shell connector with a slide-locking mechanism on the other to connect to the IFM. Most pre-wired cables use twisted pairs and all have shield to aid noise immunity of the low-level analog signals. Most cables have a prepared drain wire with a ring lug at the I/O module end of the cable for convenient grounding of the cable shield to the chassis. They are 100% tested for continuity to make a perfect connection every time. The analog pre-wired cables are offered in four standard lengths of 0.5, 1.0, 2.5, and 5.0 m to fit a variety of applications. Other length cables are also available as build-to-order products. Pre-wired analog cables are available for many of the Bulletin 1746 SLC I/O, Bulletin 1756 ControlLogix I/O, Bulletin 1769 Compact I/O for CompactLogix, MicroLogix 1500, 1794 Flex I/O, and Bulletin 1771 PLC-5 I/O modules.

Analog Cables
I/O Ready - Not Available

Analog Cables
IFM Ready - Not Available

Cat. No. Explanation
Analog Cables for Bulletins 1746, 1756/1757, and 1771

<div align="center">

1492 – <u>ACABLE</u>   <u>010</u>   <u>A</u>

a   *b*   *c*

</div>

a

Analog Interface Cables

Important: Use tables as a product configurator for pre-wired, IFM-ready, and I/O module-ready cables for Bulletins 1746, 1756, and 1771 digital I/O module cables. All combinations of these fields make valid product cat. nos. Refer to selection tables for IFM/XIM compatibility, additional cables, and ordering.

b

Standard or Build-to-Order Length Cable		
Code	Description	
005	0.5 m (1.64 ft)	Standard
010	1.0 m (3.28 ft)	Standard
025	2.5 m (8.20 ft)	Standard
050	5.0 m (16.40 ft)	Standard
001-020	0.1…2.0 m (0.328…6.56 ft) 0.1 m (0.328 ft increments)	Build-to-Order
020-100	2.0…10.0 m (6.56…32.8 ft) 0.5 m (1.64 ft) increments	Build-to-Order
100-300	10.0…30.0 m (32.8…98.42 ft) 1.0 m (3.28 ft) increments	Build-to-Order

c

A-Cable Type	
Code	Description
A, B, C, D, K, L, P, Q, R	Pre-wired cables for Bulletin 1746 analog and RTD I/O modules.
E, F, G, H, J	Pre-wired cables for Bulletin 1771 analog and RTD I/O modules.
TA, TB, TC, TD, UA, UB, UC, UD, VA, VB, WA, WB, X, Y, Z, ZA, ZB, ZC	Pre-wired cables for Bulletin 1756 analog, RTD, and thermocouple I/O modules.
YT	Pre-wired cable for Bulletin 1756 thermocouple I/O modules.
M	Pre-wired cables for Bulletin 1757 pulse input I/O modules

Cat. No. Explanation
Analog Cables for Bulletin 1746, 1769, 700H/700S and 1794

<div align="center">

1492 –<u>ACAB</u>   <u>005</u>   <u>A46</u>

a   *b*   *c*

</div>

a

Analog Interface Cables

Important: For explanation purposes only. It is not a product configurator. All combinations of fields are not valid product cat. nos. First, select the desired AIFM using the steps in Ordering Digital and Analog Wiring Systems in publication 1492-TD008_-EN-P. Then, use this breakdown for verification and explanation only.

b

Standard or Build-to-Order Length Cable		
Code	Description	
005	0.5 m (1.64 ft)	Standard
010	1.0 m (3.28 ft)	Standard
025	2.5 m (8.20 ft)	Standard
050	5.0 m (16.40 ft)	Standard
001-020	0.1…2.0 m (0.328…6.56 ft) 0.1 m (0.328 ft increments)	Build-to-Order
020-100	2.0…10.0 m (6.56…32.8 ft) 0.5 m (1.64 ft) increments	Build-to-Order
100-300	10.0…30.0 m (32.8…98.42 ft) 1.0 m (3.28 ft) increments	Build-to-Order

c

Cable Type	
Code	Description
A46	Analog cable for SLC500
AA69, AB69, BA69, BB69, BC69, BD69, C69, CA69, CB69, CC69, D69, EA69, EB69, EC69, ED69	Analog cable for 1769 I/O
Z7H	Analog cable PowerFlex 700H
X7S, Z7S	Analog cable PowerFlex 700S
Z94	Analog cable for Flex I/O

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Allen-Bradley

Digital IFM Modules with Field-Removable Terminal Blocks (RTBs)

Select groups of standard, fused and relay digital 1492 wiring system modules (refer to Selection Tables) have field terminal blocks that can be removed (RTB). This RTB feature can provide easier wiring of field devices in a control cabinet where the IFM is located in a hard to reach area, or where hand-access is limited. It can also provide easier and faster replacement of a damaged or defective 1492 wiring system module. The removable plug portion of the RTB assembly has a screw at each end to securely fasten it to the RTB socket, which is mechanically secured to the module circuit board hand housing. Modules are shipped with the RTB socket, but without the removable plug(s). Plugs are available with screw style (e.g., 1492-RTB20N)or push-in style (e.g., 1492- RTB16P) terminals and must be ordered separately(two pieces per cat. no.). Refer to the selection tables for the particular PLC I/O system of interest to determine which modules are offered with field removable terminal blocks.

All of the features available on fixed terminal block products (e.g. labels, agency certification, etc.) are also provided for the removable terminal block 1492 wiring system modules.

Analog AIFM Modules with Field-Removable Terminal Blocks (RTBs)

Select groups of analog 1492 wiring system modules (refer to Selection Tables) have field terminal blocks that can be removed (RTB). This RTB feature can provide easier wiring of field devices in a control cabinet where the IFM is located in a hard to reach area, or where hand-access is limited. It can also provide easier and faster replacement of a damaged or defective 1492 wiring system module. The removable plug portion of the RTB assembly has a screw at each end to securely fasten it to the RTB socket, which is mechanically secured to the module circuit board and housing. Modules hare shipped with the RTB socket, but without the removable plug(s). Plugs are available with screw style (1492-RTBxxN) or push-in style (1492-RTBxxP) terminals and must be ordered separately (Two pieces per cat. no.). Refer to the Selection Tables for the particular PLC I/O system of interest to determine which modules are offered with field Removable Terminals Blocks.

All of the features available on analog fixed terminal block products (e.g. labels, agency certification, etc.) are also provided for the removable terminal block 1492 wiring system modules.

Catalog Number Explanation
RTB Plugs

Important: The following cat. no. breakdown is for explanatory purposes only. It is not a product configurator. Not all combinations of fields are valid cat. nos. Use this breakdown for verification and explanation only.

$$\underset{}{1492} - \underset{a}{\underline{RTB}} \quad \underset{b}{\underline{20}} - \underset{c}{\underline{N}}$$

a
Removable Terminal Block Plug

b
Number of Poles/Terminal
Code
8
12
14
16
17
20

c	
Connector Style	
Code	Description
N	Screw Style
P	Push-in Style

Selecting a Wiring System

Use of Selection Tables

- Locate I/O module required. The top row indicates the I/O module for the I/O platform.
- Locate the interface module required. The second and third column indicates the interface module catalog number.
- Determine if an interface module exists for the I/O module; indicated by "Letter Code" in row (interface catalog number) and the column (I/O module).
- Locate cable. This is the letter indicated by "Letter Code" in the row (interface catalog number) and the column (I/O module). The "Letter Code" represents the suffix of the pre-wired cable.
- Determine cable catalog number. Add 1492-CABLE_ _ _"Letter Code", example 1492-CABLE_ _ _A.
- Determine length of cable required, standard lengths are 0.5, 1.0, 2.5, and 5.0 m; which represents 005, 010, 025 and 050 for _ _ _ in the cable catalog number. Example 1492-CABLE010A = a 1.0 m cable with "Letter Code" A.

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![AB] **Allen-Bradley**   www.ab.com/catalogs   Preferred availability cat. nos. are **bold**.

Publication A117-CA001A-EN-P

12-141

Programmable Controller Wiring Systems
Bulletin 1769 CompactLogix Modules

Analog AIFMs and Cables for Bulletin 1769 CompactLogix I/O Standard and Combination Modules

Voltage [V]	Term. per I/O	Description	Fixed Terminal Block Cat. No.	Removable Terminal Block Cat. No.	RTB Plugs ❖ Cat. No.	1769-IF4 (Sgl-End Voltage)	1769-IF4 (Sgl-End Current)	1769-IF4 (Diff Voltage)	1769-IF4 (Diff- Current)	1769-IF8 (Sgl-End Voltage)	1769-IF8 (Sgl-End Current)	1769-IF8 (Diff - Voltage)	1769-IF4 (Diff - Current)	1769-OF2 (Voltage)	1769-OF8C (Current)	1769-OF8V (Voltage)	1769-OF4 (Current)	1769-OF4 (Voltage)
						Analog Cable Cat. No. Suffix ✦												
Feed-through																		
24	3	4-ch, 2 in or 2 out	**1492-AIFM4-3**	1492-RAIFM4-3	1492-RTB8✪	BA69	BB69	BC69	BD69					AA69			AC69	AD69
24	3	8-ch differential, 16-ch single ended	**1492-AIFM8-3**	**1492-RAIFM8-3**	1492-RTB16✪					EA69	EB69	EC69	ED69		D69	D69		
Fusible Analog																		
24	5	4-ch blown fuse LED, rest points	**1492-AIFM4I-F-5**	—	—	BA69	BB69	BC69	BD69									
24	5	8-ch blown fuse LED	**1492-AIFM8-F-5**	—	—					EA69	EB69	EC69	ED69					

Analog AIFMs and Cables for Bulletin 1769 CompactLogix I/O Specialty Modules

Voltage [V]	Term. per I/O	Description	Fixed Terminal Block Cat. No.	Removable Terminal Block Cat. No.	RTB Plugs ❖ Cat. No.	1769-HSC	1769-IF4I (Current)	1769-IF4I (Voltage)	1769-IF16C (Current)	1769-IF16V (Voltage)	1769-IT6	1769-IR6	1769-OF4CI (Current)	1769-OF4VI (Voltage)	1769-IF4XOF2 or- IF4FXOF2F (Current in & out)	1769-IF4XOF2 or - IF4FXOF2F (Voltage in & out)	1769-IF4XOF2 or - IF4FXOF2F (Current in & Voltage out)
						Analog Cable Cat. No. Suffix ✦											
Feed-through																	
24	3	8-ch differential, 16-ch single ended	**1492-AIFM8-3**	**1492-RAIFM8-3**	1492-RTB16✪				EE69	EE69							
24	4	6-ch isolated	**1492-AIFM6S-3**	**1492-RAIFM6S-3**	1492-RTB12✪										CA69	CB69	CC69
Thermocouple																	
24	3	Thermocouple	**1492-AIFM6TC-3**	—	—						E69	E69					
RTD																	
24	4	6-ch isolated	**1492-AIFM6S-3**	**1492-RAIFM6S-3**	1492-RTB12✪							C69					
High-Speed Counter/Encoder																	
24	4	2-channel input counter	**1492-AIFMCE4**	—	—	HA69											
Fused High-Speed Counter/Encoder																	
24	4	2-ch fused couter input/ 4 fused output	**1492-AIFMCE4-F**	—	—	HA69											
Fusible Analog																	
24	5	4-ch blown fuse LED, rest points	**1492-AIFM4I-F-5**	—	—		BE69	BF69							AE69	AE69	
24	5	8-ch blown fuse LED	**1492-AIFM8-F-5**												CA69	CB69	CC69
24	3	16-ch input blown fuse LED	**1492-AIFM16-F-3**	—	—				EE69	EE69							

✦ To order a Pre-wired Cable, add the **Suffix No.** from the table above to the end of the **Cat. No.** below.

0.5M Cable = 1492-ACAB005_
1.0M Cable = 1492-ACAB010_
2.5M Cable = 1492-ACAB025_
5.0M Cable = 1492-ACAB050_

Custom Length Cable = 1492-ACABXXX_. See Catalog Number Explanation on page 12-140 for available Custom Length Codes to replace XXX in Cat. No.

❖ Order plugs separately (two plugs per catalog number). Plugs are available in screw style and push in style terminal types. To order, replace the ✪ in the catalog number with the code for the desired terminal style. The code for screw style is **N** and the code for push in style is **P**.

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www.ab.com/catalogs   Preferred availability cat. nos. are **bold**.
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General Wiring System Specifications

	Catalog Number 1492-...
Agency Certifications: Modules and Cables	cULus Listed: Hazardous Locations: Class I Div 2 (all except modules with relays); Groups A, B, D, and D. Temperature Code: T3C @ 60 °C. Standard UL File No. E10314, Guide No. NRAG/NRAG7
	cULus Standard Locations; Module with relays; UL File No. E11372, Guide No. NRAQ/NRAQ7
Agency Certification Modules	Factory Mutual (FM): Hazardous Locations; Class I Div 2 (all except modules with relays): Groups A, B, C, and D. Temperature Rating: T3C @ 60 °C. FM File J.I.3000590
CE Certifications	Compliant for all applicable directives
Maximum Peak Transient Voltage	600V ‡
Maximum Current (per circuit)	2 A (except relays) §
Maximum Current (per module)	12 A (except relays) ➤§
Terminal Block Wire Range (Rated Cross Section) *	Fixed Screw Style: #12…#22 AWG (4.0...0.2 mm²) Removable Screw Style: #12 to #22 AWG 2.5...0.5 mm²) Removable Push-in Style: #12 to #26 AWG (2.5...0.2mm²)
Wire Strip Length	Fixed Screw Style:.32 in. (8.0 mm) Removable Screw Style:.28 in. (7.0 mm) Removable Push-in Style:.39 in. (10.0 mm)
Recommended Terminal Block Screw Tightening Torque	Fixed Screw Style: 3.5…4.5 lb-in. (0.38…0.50 Nm) Removable Screw Style: 3.5…4.5 lb-in. (0.38…0.50 Nm) Removable Push-in Style: NA (See Push-in RTB Plug Specifications)
Operating Temperature Range	0...+60 °C
Storage Temperature Cables	-20...+80 °C
Storage Temperature Modules	-40...+85 °C
Operating Humidity	5…95% non-condensing
Pollution Degree	2❋

Max. AWG	#22	#20	#18	#16	#14	#12
Max. No. of Wires per Terminal *	3	3	3	2	1	1

➤ Cat. Nos. 1492-IFM40F-F24AD-4 and 1492-IFM40F-F24D-2 are rated at 8 A.

* Maximum number of the same gauge stranded copper conductors allowed per wire funnel.

❋ Pollution Degree 2 is an environment where normally only non-conductive pollution occurs, except for occasional temporary conductivity caused by condensation shall be expected.

‡ For transients >600V, use UL Recognized suppression device rated at 2.5 kV withstand.

§ For relay contact ratings, refer to page 9-42.

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