

Programmable Controller Wiring Systems

Catalog Number Explanation

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

1492 – ACABLE 010 A
a *b* *c*

<i>a</i>
Analog Interface Cables

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

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

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.

Cat. No. Explanation

Analog Cables for Bulletin 1746, 1769, 700H/700S and 1794

1492 – ACAB 005 A46
a *b* *c*

<i>a</i>
Analog Interface Cables

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

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

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.



Programmable Controller Wiring Systems

Specifications

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
Agency Certification Modules	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 mm ²) Removable Screw Style: #12 to #22 AWG 2.5...0.5 mm ²) Removable Push-in Style: #12 to #26 AWG (2.5...0.2mm ²)
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.



Programmable Controller Wiring Systems

Bulletin 1756 ControlLogix Modules

Analog AIFMs and Cables for Bulletin 1756 ControlLogix 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.	Bulletin 1756 Analog I/O Module																								
						1756-IF8 (Sgl-End Voltage)	1756-IF8 (Sgl-End Current)	1756-IF8 (Diff Voltage)	1756-IF8 (Diff Current)	1756-IF16 (Sgl-End Voltage)	1756-IF16 (Sgl-End Current)	1756-IF16 (Diff Voltage)	1756-IF16 (Diff Current)	1756-OF4 (Voltage)	1756-OF4 (Current)	1756-OF8 (Voltage)	1756-OF8 (Current)	1756-IF4FXOF2F (Cur In & Out)	1756-IF4FXOF2F (Volt In & Out)	1756-IF4FXOF2F (Current In & Voltage Out)										
						Analog Cable Cat. No. Suffix +																								
Feed-through																														
24	3	4-ch input, output or 2-in/2-out	1492-AIFM4-3	1492-RAIFM4-3	1492-RTB8Ⓢ												VA	VB												
	3...4	6-ch isolated	1492-AIFM6S-3	1492-RAIFM6S-3	1492-RTB12Ⓢ																						ZA	ZB	ZC	
	3	8-ch differential, 16-ch single-ended	1492-AIFM8-3	1492-RAIFM8-3	1492-RTB16Ⓢ	TA	TB	TC	TD	UA	UB	UC	UD					WA	WB											
Fusible Analog																														
24	5	8-ch blown fuse LED	1492-AIFM8-F-5	—	—	TA	TB	TC	TD					UC	UD													ZA	ZB	ZC
	3	16-ch blown fuse LED	1492-AIFM16-F-3	—	—					UA	UB	UC	UD																	
	5	16-ch input blown fuse LED	1492-AIFM16-F-5	—	—					UA	UB	UC	UD																	
Safety Integrity Level §																														
24	3	Blown fuse LED	1492-TAIFM16-F-3	—	—					UA																				

See footnotes on the following page.

