

## Bulletin 1756 – ControlLogix

### Analog AIFMs and Cables

#### Analog Inputs

PLC Card	Wiring System Type★	Description	Terminals Per Channel	Fixed or Removable TerminalsΔ	Wiring System (IFM) Module Catalog Number	Screw RTB required	Push-in RTB required	Cable Cat. No.	Wiring Diagram	
1756-IF6CIS	Single Ended, Internal Power	6 Channel Isolated	3...4	F	1492-AIFM6S-3	—	—	1492-ACABLE***Z	41170-525	
			3...4	R	1492-RAIFM6S-3	RTB12N	RTB12P	1492-ACABLE***Z	41170-525	
	Single Ended, External Power	6 Channel Isolated	3...4	F	1492-AIFM6S-3	—	—	1492-ACABLE***Z	41170-526	
			3...4	R	1492-RAIFM6S-3	RTB12N	RTB12P	1492-ACABLE***Z	41170-526	
1756-IF6I	Current	6 Channel Isolated	3...4	F	1492-AIFM6S-3	—	—	1492-ACABLE***X	41170-496	
			3...4	R	1492-RAIFM6S-3	RTB12N	RTB12P	1492-ACABLE***X	41170-496	
	Voltage	6 Channel Isolated	3...4	F	1492-AIFM6S-3	—	—	1492-ACABLE***Y	41170-495	
			3...4	R	1492-RAIFM6S-3	RTB12N	RTB12P	1492-ACABLE***Y	41170-495	
1756-IF8	Single End Voltage	8 Channel Differential / 16 Channel Single Ended	3	F	1492-AIFM8-3	—	—	1492-ACABLE***TA	41170-497	
			3	R	1492-RAIFM8-3	RTB16N	RTB16P	1492-ACABLE***TA	41170-497	
		Fusible, 8 Channel, Blown Fuse	5	F	1492-AIFM8-F-5	—	—	1492-ACABLE***TA	41170-510	
	Single End Current	8 Channel Differential / 16 Channel Single Ended	3	F	1492-AIFM8-3	—	—	1492-ACABLE***TB	41170-498	
			3	R	1492-RAIFM8-3	RTB16N	RTB16P	1492-ACABLE***TB	41170-498	
		Fusible, 8 Channel, Blown Fuse	5	F	1492-AIFM8-F-5	—	—	1492-ACABLE***TB	41170-511	
	Differential Voltage	8 Channel Differential / 16 Channel Single Ended	3	F	1492-AIFM8-3	—	—	1492-ACABLE***TC	41170-499	
			3	R	1492-RAIFM8-3	RTB16N	RTB16P	1492-ACABLE***TC	41170-499	
		Fusible, 8 Channel, Blown Fuse	5	F	1492-AIFM8-F-5	—	—	1492-ACABLE***TC	41170-512	
	Differential Current	8 Channel Differential / 16 Channel Single Ended	3	F	1492-AIFM8-3	—	—	1492-ACABLE***TD	41170-500	
			3	R	1492-RAIFM8-3	RTB16N	RTB16P	1492-ACABLE***TD	41170-500	
		Fusible, 8 Channel, Blown Fuse	5	F	1492-AIFM8-F-5	—	—	1492-ACABLE***TD	41170-513	
1756-IF16	Single End Voltage	8 Channel Differential / 16 Channel Single Ended	3	F	1492-AIFM8-3	—	—	1492-ACABLE***UA	41170-167	
			3	R	1492-RAIFM8-3	RTB16N	RTB16P	1492-ACABLE***UA	41170-167	
		Fusible, 16 Channel, Blown Fuse	3	F	1492-AIFM16-F-3	—	—	1492-ACABLE***UA	41170-163	
			5	F	1492-AIFM16-F-5	—	—	1492-ACABLE***UA	41170-160	
	Safety Integrity Level (SIL)♣	8 Channel Differential / 16 Channel Single Ended	3	F	1492-TAIFM16-F-3	—	—	1492-ACABLE***UA	41170-185	
			3	R	1492-RAIFM8-3	RTB16N	RTB16P	1492-ACABLE***UB	41170-514	
			Fusible, 16 Channel, Blown Fuse	3	F	1492-AIFM16-F-3	—	—	1492-ACABLE***UB	41170-164
				5	F	1492-AIFM16-F-5	—	—	1492-ACABLE***UB	41170-515
	Differential Voltage	8 Channel Differential / 16 Channel Single Ended	3	F	1492-AIFM8-3	—	—	1492-ACABLE***UC	41170-166	

			3	R	1492-RAIFM8-3	RTB16N	RTB16P	1492-ACABLE***UC	41170-166	
		Fusible, 8 Channel, Blown Fuse	5	F	1492-AIFM8-F-5	—	—	1492-ACABLE***UC	41170-516	
		Fusible, 16 Channel, Blown Fuse	3	F	1492-AIFM16-F-3	—	—	1492-ACABLE***UC	41170-162	
			5	F	1492-AIFM16-F-5	—	—	1492-ACABLE***UC	41170-159	
	Differential Current	8 Channel Differential / 16 Channel Single Ended	3	F	1492-AIFM8-3	—	—	1492-ACABLE***UD	41170-165	
				3	R	1492-RAIFM8-3	RTB16N	RTB16P	1492-ACABLE***UD	41170-165
			Fusible, 8 Channel, Blown Fuse	5	F	1492-AIFM8-F-5	—	—	1492-ACABLE***UD	41170-517
			Fusible, 16 Channel, Blown Fuse	3	F	1492-AIFM16-F-3	—	—	1492-ACABLE***UD	41170-161
				5	F	1492-AIFM16-F-5	—	—	1492-ACABLE***UD	41170-091
1756-IF4FXOF2F	Current (In and Out)	6 Channel Isolated	3...4	F	1492-AIFM6S-3	—	—	1492-ACABLE***ZA	41170-904	
			3...4	R	1492-RAIFM6S-3	RTB12N	RTB12P	1492-ACABLE***ZA	41170-904	
			Fusible, 8 Channel, Blown Fuse	5	F	1492-AIFM8-F-5	—	—	1492-ACABLE***ZA	41170-897
	Voltage (In and Out)	6 Channel Isolated	3...4	F	1492-AIFM6S-3	—	—	1492-ACABLE***ZB	41170-895	
			3...4	R	1492-RAIFM6S-3	RTB12N	RTB12P	1492-ACABLE***ZB	41170-895	
			Fusible, 8 Channel, Blown Fuse	5	F	1492-AIFM8-F-5	—	—	1492-ACABLE***ZB	41170-898
	Current In and Voltage Out	6 Channel Isolated	3...4	F	1492-AIFM6S-3	—	—	1492-ACABLE***ZC	41170-896	
			3...4	R	1492-RAIFM6S-3	RTB12N	RTB12P	1492-ACABLE***ZC	41170-896	
			Fusible, 8 Channel, Blown Fuse	5	F	1492-AIFM8-F-5	—	—	1492-ACABLE***ZC	41170-899

### Temperature-Sensing Analog Inputs

PLC Card	Wiring System Type*	Description	Terminals Per Channel	Fixed or Removable Terminals $\Delta$	Wiring System (IFM) Module Catalog Number	Screw RTB required	Push-in RTB required	Cable Cat. No.	Wiring Diagram
1756-IR6I	Standard	6 Channel Isolated	3...4	F	1492-AIFM6S-3	—	—	1492-ACABLE***Z	41170-524
			3...4	R	1492-RAIFM6S-3	RTB12N	RTB12P	1492-ACABLE***Z	41170-524
1756-IT6I	Standard	6 Channel Thermocouple	3	F	1492-AIFM6TC-3	—	—	1492-ACABLE***Y	41170-527
1756-IT6I2	Standard	6 Channel Thermocouple	3	F	1492-AIFM6TC-3	—	—	1492-ACABLE***YT	41170-528

### HART Interface Analog Inputs

PLC Card	Wiring System Type★	Description	Terminals Per Channel	Fixed or Removable TerminalsΔ	Wiring System (IFM) Module Catalog Number	Screw RTB required	Push-in RTB required	Cable Cat. No.	Wiring Diagram
1756-IF8H	Voltage with HART	8 Channel Differential / 16 Channel Single Ended	3	F	1492-AIFM8-3	—	—	1492-ACABLE***UC	41170-888
			3	R	1492-RAIFM8-3	RTB16N	RTB16P	1492-ACABLE***UC	41170-888
		Fusible, 8 Channel, Blown Fuse	5	F	1492-AIFM8-F-5	—	—	1492-ACABLE***UC	41170-886
	Current with HART	8 Channel Differential / 16 Channel Single Ended	3	F	1492-AIFM8-3	—	—	1492-ACABLE***UD	41170-883
			3	R	1492-RAIFM8-3	RTB16N	RTB16P	1492-ACABLE***UD	41170-883
		Fusible, 8 Channel, Blown Fuse	5	F	1492-AIFM8-F-5	—	—	1492-ACABLE***UD	41170-885
1756-IF16H	Single Ended with HART	Fusible, 16 Channel, Blown Fuse	3	F	1492-AIFM16-F-3	—	—	1492-ACABLE***UB	41171-036
	Differential with HART‡	Fusible, 16 Channel, Blown Fuse	3	F	1492-AIFM16-F-3	—	—	1492-C005005UF	41171-037

## Analog Outputs

PLC Card	Wiring System Type★	Description	Terminals Per Channel	Fixed or Removable TerminalsΔ	Wiring System (IFM) Module Catalog Number	Screw RTB required	Push-in RTB required	Cable Cat. No.	Wiring Diagram
1756-OF4	Voltage	4 Channel Input, Output or 2 Input / 2 Output	3	F	1492-AIFM4-3	—	—	1492-ACABLE***VA	41170-493
			3	R	1492-RAIFM4-3	RTB8N	RTB8P	1492-ACABLE***VA	41170-493
	Current	4 Channel Input, Output or 2 Input / 2 Output	3	F	1492-AIFM4-3	—	—	1492-ACABLE***VB	41170-494
			3	R	1492-RAIFM4-3	RTB8N	RTB8P	1492-ACABLE***VB	41170-494
1756-OF6CI	Standard	6 Channel Isolated	3...4	F	1492-AIFM6S-3	—	—	1492-ACABLE***Y	41170-529
			3...4	R	1492-RAIFM6S-3	RTB12N	RTB12P	1492-ACABLE***Y	41170-529
1756-OF6VI	Standard	6 Channel Isolated	3...4	F	1492-AIFM6S-3	—	—	1492-ACABLE***Y	41170-530
			3...4	R	1492-RAIFM6S-3	RTB12N	RTB12P	1492-ACABLE***Y	41170-530
1756-OF8	Voltage	8 Channel Differential / 16 Channel Single Ended	3	F	1492-AIFM8-3	—	—	1492-ACABLE***WA	41170-531
			3	R	1492-RAIFM8-3	RTB8N	RTB8P	1492-ACABLE***WA	41170-531
	Current	8 Channel Differential / 16 Channel Single Ended	3	F	1492-AIFM8-3	—	—	1492-ACABLE***WB	41170-532
			3	R	1492-RAIFM8-3	RTB8N	RTB8P	1492-ACABLE***WB	41170-532

## HART Interface Analog Outputs

PLC Card	Wiring System Type	Description	Terminals Per Channel	Fixed or Removable TerminalsΔ	Wiring System (IFM) Module Catalog Number	Screw RTB required	Push-in RTB required	Cable Cat. No.	Wiring Diagram
1756-OF8H	Voltage with HART	8 Channel Differential / 16 Channel Single Ended	3	F	1492-AIFM8-3	—	—	1492-ACABLE***WA	41170-892
			3	R	1492-RAIFM8-3	RTB16N	RTB16P	1492-ACABLE***WA	41170-892
	Current with HART	8 Channel Differential / 16 Channel Single Ended	3	F	1492-AIFM8-3	—	—	1492-ACABLE***WB	41170-891
			3	R	1492-RAIFM8-3	RTB16N	RTB16P	1492-ACABLE***WB	41170-891

## Specialty Modules

PLC Card	Wiring System Type	Description	Terminals Per Channel	Fixed or Removable Terminals $\Delta$	Wiring System (IFM) Module Catalog Number	Screw RTB required	Push-in RTB required	Cable Cat. No.	Wiring Diagram
1756-HSC	12...24V DC	High Speed Counter / Encoder, 2 Channel	1	F	1492-AIFMCE4	—	—	1492-ACABLE***XA	41170-723
		Fusible High Speed Counter / Encoder, 2 Channel	1	F	1492-AIFMCE4-F	—	—	1492-ACABLE***XA	41170-718
	5V DC	High Speed Counter / Encoder, 2 Channel	1	F	1492-AIFMCE4	—	—	1492-ACABLE***XB	41170-724
		Fusible High Speed Counter / Encoder, 2 Channel	1	F	1492-AIFMCE4-F	—	—	1492-ACABLE***XB	41170-719
1757-PIM	Standard	Fusible, 8 Input, 2 Output	1	F	1492-AIFMPI	—	—	1492-ACABLE***M	—

► To order a Pre-wired Cable, add the appropriate **length code** to the end of the **Cable Cat. No.** shown in the chart above.

0.5M Cable = 005

1.0M Cable = 010

2.5M Cable = 025

5.0M Cable = 050

Custom Length Cable = 1492-ACABLE\*\*\*\_ . See Catalog Number Explanation on Cat. No. Explanation

Analog Cables for Bulletins 1746, 1756/1757, and 1771 or available Custom Length Codes to replace \*\*\* in Cat. No.

$\Delta$  If removable terminal block version is selected, the terminal plugs must be ordered separately (two plugs per catalog number). Plugs are available in screw style and push in style terminal types. To order add 1492- in front of code listed above. Example: 1492-RTB20P

\* Some analog I/O modules can be operated in up to four modes (current/voltage, single-ended/differential) based on connections. In all cases, each channel is factory-configured for the same mode. However, you can field configure any channel for another mode. You may need to alter the terminal block wiring to match the application. Refer to the *PLC I/O Module Installation Manual*.

‡ Requires two Cat. No. 1492-AIFM16-F-3, one cable, Cat. No. 1492-C005005UF, is required.

0.5M = 1492-C005005UF

1.0M = 1492-C010010UF

2.5M = 1492-C025025UF

5.0M = 1492-C050050UF

♣ This 1492 module is for use in SIL2 safety systems only. It does not satisfy the requirements for general I/O fault tolerance. To use this module in a SIL2 application, specially developed application software for the ControlLogix processor must be used. To obtain the latest revision of this application software contact Technical Support at 1-440-646-3434.