

Introduction

Digital Interface Modules (IFMs)

Digital IFMs are available with either a 20- or 40-pin cable connector. This is determined by the number of connections required for the I/O module.

The number of terminals varies with the type of IFM — from one to four terminals per I/O point.

Standard terminal IFMs provide one field-side wiring terminal per programmable controller input or output point, as well as enough terminals for the I/O module power connections. The standard terminals are ideal for applications where the I/O device commons are terminated in the field or remotely from the I/O panel.

Extra terminal IFMs provide two or four field-side terminals per input or output point. Non-isolated IFMs have two terminals per input or output point. Isolated IFMs have two or four terminals per input or output.

Isolated IFMs have terminals isolated into 8 or 16 groups, which allows each group of I/O devices to reference a different power source. The extra terminal IFMs are beneficial in applications where the I/O devices are terminated within the same panel as the I/O modules — eliminating the need for many additional terminal blocks.

Digital Interface Modules (IFMs) General Information, continued

Sensor IFMs provide three field-side terminals per input point. The middle and lower rows of the terminals are commoned together in groups of 18, and serve as power busses for 3-wire sensor types of devices — eliminating additional terminals, blocks, and jumpering systems.

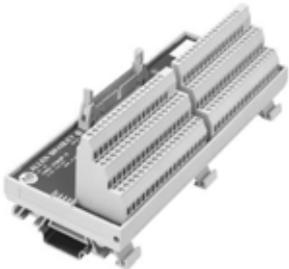
Digital Interface Modules (IFMs) Feed-Through

Feed-through IFMs provided the same capability as normal terminal blocks, but in a more condensed package.



Feed-through Standard
For 20-point: Cat. No. 1492-IFM20F
For 40-point: Cat. No. 1492-IFM40F

Feed-through Extra Terminal Products
For 20-point: Cat. No. 1492-IFM20F-2
For 40-point: Cat. No. 1492-IFM40F-2



Feed-through Sensor Terminal Products
For 20-point: Cat. No. 1492-IFM20F-3
For 40-point: Cat. No. 1492-IFM40F-3

Feed-Through Narrow
Cat. No. 1492-IFM20FN

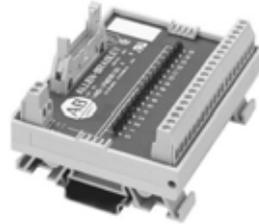


Safety Integrity Level (SIL 2)
Cat. No. 1492-TIFM40F-F24-2

Safety Integrity Level (SIL2)
Cat. No. 1492-TIFM40F-F24A-2

Digital Interface Modules (IFMs) LED-Indicating

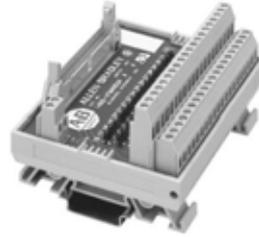
Voltage-indicating LEDs are available on standard, extra terminal, and sensor IFMs. The LEDs provide field-side troubleshooting diagnostics: the on/off status of an input device or the on/off status of the programmable controller output circuit. When used in conjunction with the logic-side programmable controller LEDs, the IFM LEDs can help determine whether a problem resides in the I/O module or in the field device/wiring. LED IFMs are available in both Isolated (Cat. No. 1492-IFM20DS24-4) and non-Isolated (Cat. No. 1492-IFM20D120) versions for 24V, 120V, and 240V applications.



40-pin cable connector ON-state LED module for 24V:
Cat. No. 1492-IFM40D24
40-pin cable connector LED module for 120V with extra terminals:
Cat. No. 1492-IFM40D120-2
40-pin cable connector LED Isolated Input module for 24V:
Cat. No. 1492-IFM40DS24A-4



20-pin cable connector
ON-state LED Narrow module for 24V:
Cat. No. 1492-IFM20D24N

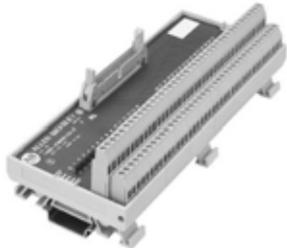


LED Indicating Extra Terminals
For 20-point: Cat. No. 1492-IFM20D24-2, 1492-IFM20D24A-2, 1492-IFM20D120-2, 1492-IFM20D120A-2, 1492-IFM20D240-2, 1492-IFM20D240A-2
For 40-point: Cat. No. 1492-IFM40D24-2, 1492-IFM40D24A-2, 1492-IFM40D120-2, 1492-IFM40D120A-2

20-point LED module for 120V:
Cat. No. 1492-IFM20D120,

LED Indicating Sensor Terminal Products
For 20-point: Cat. No. 1492-IFM20D24-3
For 40-point: Cat. No. 1492-IFM40D24-3

20-pin cable connector
LED Isolated module for 24V:
Cat. No. 1492-IFM20DS24-4



LED Indicating 4 Terminals
For 20-point: Cat. No. 1492-IFM20DS24-4, 1492-IFM20DS120-4
For 40-point: Cat. No. 1492-IFM40DS24-4, 1492-IFM40DS24A-4, 1492-IFM40DS120-4, 1492-IFM40DS120A-4, 1492-IFM40DS240-4



40-pin cable connector ON-state LED module for 24V:
Cat. No. 1492-IFM40D24
40-pin cable connector LED module for 120V with extra terminals:
Cat. No. 1492-IFM40D120-2
40-pin cable connector LED Isolated Input module for 24V:
Cat. No. 1492-IFM40DS24A-4

Digital Interface Modules (IFMs) Fusible

Fusible modules provide a convenient method of adding overcurrent protections into your programmable controller wiring. These modules have 5 x 20 fuse holders on-board and are available with and without blown fuse indication. The 24V, 120V, and 240V blown fuse indicators reduce the troubleshooting time to locate and replace a blown fuse on the IFM. Fusible modules have an easy-to-remove, transparent plexiglass cover that prevents objects from contacting fuse circuitry under normal operation. Removal of fuses from the standard fuse holder is aided by fuse pullers (fuses not provided). The fusible modules also have two or four terminals per I/O point to create a power bus for input and output load connections. Fusible modules are available in both isolated (Cat. No. 1492-IFM20F-FS24-2) and nonisolated (Cat. No. 1492-IFM20F-F24-2) versions. There are a select number of fusible IFMs available for input modules.



Fused Extra Terminals

For 20-point: Cat. No. 1492-IFM20FS-F120-4, 1492-IFM20FS-F120A-4, 1492-IFM20FS-F240-4

For 40-point: Cat. No. 1492-IFM40FS-F24-4, 1492-IFM40FS-F24A-4, 1492-IFM40FS-F120-4, 1492-IFM40FS-F120A-4, 1492-IFM40FS-F240-4, 1492-IFM40F-FS240A-4



Fused Extra Terminals

For 20-point: Cat. No. 1492-IFM20F-F-2, 1492-IFM20F-F24-2, 1492-IFM20F-F24A-2, 1492-IFM20F-F120-2, 1492-IFM20F-F120A-2, 1492-IFM20F-F240-2, 1492-IFM20FS-F-2, 1492-IFM20FS-F24-2, 1492-IFM20FS-F24A-2

For 40-point: Cat. No. 1492-IFM40F-F-2, 1492-IFM40F-F24-2, 1492-IFM40F-F120-2, 1492-IFM40FS-F-2, 1492-IFM40FS-F24-2, 1492-IFM40FS-F120-2, 1492-IFM40FS-F24-4, 1492-IFM40FS-F24A-4, 1492-IFM40FS-F120-4, 1492-IFM40FS-F120A-4, 1492-IFM40FS-F240-4

40-pin cable connector Isolated Fusible module (no fuse blown indication):

Cat. No. 1492-IFM40F-FS-2

40-pin cable connector Isolated Fusible module with 24V blown fuse indication: Cat. No. 1492-IFM40F-FS24A-2

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.

1492 – RTB 20 – N
 a b c

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

Important: Use the following tables as a product confiurator for pre-wired, and I/O module-ready cables for Bulletins 1746, 1762, 1764, 1769, and 1794 - 40 I/O controller digital I/O cables. All combination of these fields make valid product catalog numbers. Refer to selection tables for IFM compatibility, additional cables, and ordering.

Catalog Number Explanation Digital Cables for Bulletin 1762, 1764, 1769 and 1794

1492 – CAB 010 – A62

a b c

a

Digital Interface Cable

b		
Standard or Build-to-Order Length Cables		
Code	Length	Description
005	0.5 m (1.64 ft)	Standard Length
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 Length
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)	

c	
Code	Description
For use with Bulletin 1762 MicroLogix 1200 Modules	
A62, B62	Pre-wired cables for Bulletin 1762 I/O controllers
X62	I/O-ready cable for 1762-L40AWA, and -L40BWA
T62	I/O-ready cable for 1762-L40AWA, -L40BXB, and -L40BWA outputs
For use with Bulletin 1764 MicroLogix 1500 Modules	
A64, B64, C64, F64	Pre-wired cables for Bulletin 1764 I/O base units
W64	I/O-ready cable for 1762-24AWA, and -24BWA base unit inputs
T64	I/O-ready cable for 1762-24AWA, -24BWA base units outputs
U64	I/O-ready cable for 1764-28BXB base unit outputs
For use with Bulletin 1746, and 1769 Digital Modules	
A69, B69, C69, D69, E69, F69, G69, H69, J69, K69, L69, M69	Pre-wired cables for 8-, 16-, and 32-channel Bulletin 1769 digital I/O modules
RTN18	I/O-ready cable with Cat. No. 1746-RTBN18 terminal block
RTN10	I/O-ready cable with Cat. No. 1746-RTBN10 terminal block
RTN32I	I/O-ready for 32-channel 1769-IQ32
RTN32O	I/O-ready for 32-channel 1769-OB32
For Use with Bulletin 1794 Flex I/O, Cat. Nos. 1794- TB37DS, and 1794-TB62DS base units	
A94	Pre-wired cables for Bulletin 1794 Flex digital I/O using the Bulletin 1794-TB37DS base
B94	Pre-wired cables for Bulletin 1794 Flex digital I/O using the Bulletin 1794-TB62DS base
G94	Digital I/O-ready cable with Cat. No. 1746-RTBN10 terminal block
H94	Digital I/O ready cable for digital I/O using the Bulletin 1794 TB62DS base

Important: The following catalog number breakdown is for explanatory purposes only. It is not a product configurator. Not all combinations of fields are valid catalog numbers. Use this breakdown for verification and explanation only.

The cables used for Relay Master/Expander XIMs are the same as those used for Digital I/O Modules with the exception of the Cat. No. 1746-OA16 output module, which uses the 1492-CABLE*CR cable.

1492 – IFM 20 F120 – 2

a b c d

a	
Modules	
Code	Description
IFM	Digital Interface Modules with Fixed Terminal Block
RIFM	Digital Interface Modules with Removable Terminal Block
TIFM	Digital Interface Module for SIL2 (Safety Integrity Level 2)

b	
Digital Cable Connector Size	
Code	Description
20	20 pins
40	40 pins

c	
Module Type (all types do not configure a catalog number)	
Code	Description
A	Input Module
F	Feedthrough
F24	Fused 24 Volt
F120	Fused 120 Volt
FS	Fused Isolated
D	LEDs
N	Narrow
24	24 Volt
120	120 Volt
240	240 Volt

d	
Number of Field Side Wiring Terminals	
Code	Description
Blank	One per I/O connection (Standard Terminals)
2	Two per I/O connection (Extra Terminals)
3	Three per I/O connection (Sensor Terminals)
4	Four per I/O connection (Special Terminal)

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

1492 – AIFM 16F – 5
 a b c

a	
Modules	
Code	Description
AIFM	Analog Interface Module with Fixed Terminal Block
RAIFM	Analog Interface Module with Removable Terminal Block
TAIFM	Analog Interface Module for SIL2 (Safety Integrity Level 2)

b	
Module Type (all types do not configure a catalog number)	
Code	Description
4	4 channel
C	Combination
CE	Counter Encoder
6	6 channel
8	8 channel
16	16 channel
F	Fused

c	
Number of Field Side Wiring Terminals	
Code	Description
3	Three per I/O channel
5	Five per I/O channel

1492 – XIM 20 24 – 16RF
 a b c d

a	
Modules	
Code	Description
XIM	Relay Interface Module with Fixed Terminal Block
RXIM	Relay Interface Module with Removable Terminal Block
XIMTR	Mechanical High Density Relay Interface Module with Fixed Terminal Block
RXIMTR	Mechanical High Density Relay Interface Module with Removable Terminal Block
XIMTS	Solid-State High Density Relay Interface Module with Fixed Terminal Block
RXIMTS	Solid-State High Density Relay Interface Module with Removable Terminal Block

b	
No. Cable Connector Pins	
Code	Description
20	20 pins
40	40 pins
Blank	Expander module

c	
Module Type (all types do not configure a catalog number)	
Code	
F	
F-F24	
F-F120	
24	
120	

d	
No. Cable Connector Pins	
Code	Description
2	2 terminals per point
8R	8 relays
16R	16 relays
16RF	16 fused relays
32R	32 relays

Catalog Number Explanation
Digital Cables for Bulletin 1746, 1756, 1771

Important: Use the following 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.

1492 – CABLE 010 A

a b c

a

Digital Interface Cable

b		
Standard or Build to Order Lengths		
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	

c	
Cable Type - Bulletins 1746, 1756, and 1771 digital I/O module cables.	
Code	Description
For use with Bulletin 1746 I/O Modules	
A, B, C, D, E, G, N, S	Pre-wired cables for 8-point isolated and 16-point Bulletin 1746 I/O modules*
CR	Pre-wired cable for Cat. No. 1746-OA16 (XIM only)
H	Pre-wired cable for 32-point digital Bulletin 1746 I/O modules*
N3	Digital I/O module-ready cable with 40-point Cat. No. 1746-N3 cable connector
RTBB	Digital I/O module-ready cable with 16-point Cat. No. 1746-RT25B terminal block (blue)
RTBO	Digital I/O module-ready cable with 16-point Cat. No. 1746-RT25C terminal block (orange)
RTBR	Digital I/O module-ready cable with 16-point Cat. No. 1746-RT25R terminal block (red)
TBCH	Digital I/O module-ready cable with 36-pin Cat. No. 1746-TBCH removable terminal block
For use with Bulletin 1756 I/O Modules	
U, V, W, X	Pre-wired cable for 8- and 16-point digital Bulletin 1756 I/O modules§
Y, Z	Pre-wired cable for 16-point isolated and 32-point digital Bulletin 1756 I/O modules§
P	Digital IFM-ready cable with 20 conductors
Q	Digital IFM-ready cable with 40 conductors
For use with Bulletin 1771 I/O Modules	
F, T	Pre-wired cable for digital Bulletin 1771 I/O modules‡
FF	Pre-wired cable with fused wiring arm for 16-point digital Bulletin 1771 output modules‡
J, K, L, M, R	Pre-wired cables for 16-point isolated and 32-point digital Bulletin 1771 I/O modules‡
WA	Digital I/O module-ready cable with Cat. No. 1771-WA 8-point wiring arm
WD	Digital I/O module-ready cable with Cat. No. 1771-WD 6-point wiring arm
WH	Digital I/O module-ready cable with Cat. No. 1771-WH 16-point wiring arm
WHF	Digital I/O module-ready cable with Cat. No. 1771-WHF 16-point fused wiring arm
WN	Digital I/O module-ready cable with Cat. No. 1771-WN 32-point wiring arm

* To make sure the Bulletin 1746 SLC 500 digital I/O module is compatible with IFM/XIM, refer to [Digital IFMs and Cables](#)

‡ To make sure the Bulletin 1771 PLC digital I/O module is compatible with IFM/XIM, refer to [Digital IFMs and Cables](#)

§ To make sure Control Logix digital I/O module is compatible with IFM/XIM, refer to [Digital IFMs and Cables](#)

Cat. No. Explanation

Analog Cables for Bulletins 1746, 1756/1757, and 1771

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.

1492 – ACABLE 010 A

a

b

c

a

Analog Interface Cables

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)	
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	

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**

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.

1492 – ACAB 005 A46

a

b

c

a

Analog Interface Cables

b

Standard or Build-to-Order Length Cable

Code	Description
005	0.5 m (1.64 ft)
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)
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

C

Cable Type

Code

A46

AA69, AB69,
BA69, BB69,
BC69, BD69,
C69, CA69, CB69, CC69, D69,
EA69, EB69,
EC69, ED69

Z7H

X7S, Z7S

Z94