

Programmable Controller Wiring Systems

Overview

| | | | | | | | | |
|---|---|---|--|-----------------|---------------|---------------|-------------|-------------------------------|
|  |  | Bulletin 1492 Programmable Controller Wiring Systems | Table of Contents | | | | | |
| Analog Wiring Systems | Analog Wiring Systems | <ul style="list-style-type: none"> Increases machine building productivity Simplifies design and engineering time Reduces wiring time and wiring errors Benefits from quality-looking panels | Catalog Number Explanation 12-129 Selection Tables 12-141 Digital IFM Specifications..... 12-160 | | | | | |
|  |  | Standards Compliance and Certifications | Standards Compliance and Certifications, Continued | | | | | |
| Digital Wiring Systems with Field-Removable Terminal Blocks | Digital Wiring Systems with Fixed Terminal Blocks | <ul style="list-style-type: none"> Agency Certifications for Modules and Cables cULus: Hazardous Locations: Class I Div 2 (all except modules with relays); Groups A, B, D, and D. Temperature Code: T3C @ 60 °C. UL File No. E10314, Guide No. NRAG cULus: Ordinary Locations; Module with relays; UL File No. E11372 Guide No. NRAQ Agency Certification Modules Factory Mutual (FM): Hazardous Locations; Class I Div 2 (all except modules with relays); Gouprs A, B, C, and D. Temperature Rating: T3C @ 60 °C. FM file J.I.3000590 CE Certifications Compliant for all applicable directives | <ul style="list-style-type: none"> UL 508 UL 1604 CSA C22.2 No. 14 CSA C22.2 No. 213 EN/IEC 61131-2 | | | | | |
| Bulletin | 1746 | 1756 | 1762 | 1764 | 1769 | 1794 | 1771 | Bulletin 700H and 700S |
| Description | SLC 500 | ControlLogix | MircoLogix 1200 | MicroLogix 1500 | CompactLogix | Flex | PLC-5 | PowerFlex Drive |
| Product Selection | Web * | 12-142 | 12-153 | 12-153 | 12-148 | 12-154 | Web * | 12-157 |

* Information for this product is available on the Industrial Controls Catalog website: www.ab.com/catalogs

Programmable Controller Wiring Systems

Overview

Benefits

Reduced Wiring Time

Wiring is completed in a fraction of the time when wiring systems are used, as compared with the traditional method of wiring each point to the I/O swing arm and field-side terminal blocks. Pre-wired cables are factory-wired to the I/O wiring arm on one end and a connector for the Interface Module (IFM) on the other. IFMs enhance the capability of the I/O systems with added terminations, field-side LED status indicators, isolation circuits, overcurrent protection, and higher amperage outputs. Both standard and specific build-to-order length cables are available, providing the correct length for any panel in a neat, space-efficient wiring solution.

Reduced Wiring Errors

Wiring system cables are pre-tested to ensure 100% accurate connections and eliminate the need for point-to-point checking of wiring. No more crossed wires and loose connections between the I/O module and the terminal block. Even one error in wiring 128 I/O points in a point-to-point system may require a complete check of the wiring. Wiring errors can take several minutes to track down and correct before the panel is ready for startup. When IFMs and cables are snapped in place, they fit every time — no need to find the wrong or loose connection, resulting in a much higher rate of success at system startup.

Faster Troubleshooting and Easier Maintenance

Normal terminal blocks can't offer the benefits of IFMs, such as LED indication on each I/O point. Wiring systems improve system startup and ease troubleshooting and maintenance. Diagnostic capabilities in the form of fuses, blown fuse indication, and field-side ON-State LEDs — in a reduced space — allow maintenance personnel to quickly locate faults, reduce downtime, and improve overall productivity.

Increased Volume and Productivity

Cable interconnections for a wiring system can be up to 30 times faster to install than traditional point-to-point wiring, enabling OEMs and panel builders using wiring systems to build panels faster and produce more machines.

Reduced Wire Preparation and Routing

Pre-wired cables eliminate the time and costs associated with stripping and cutting wires. Routing wires is much easier with wiring systems, since engineers only have to worry about routing one pre-wired cable versus the 20 or 40 wires needed in the traditional wiring method.

Labeling and Marking

Pre-printed, I/O-specific adhesive label strips for quick marking of IFM terminals save labor compared with point-to-point wiring that requires labor-intensive wire markers. Pre-wired cables require no wire labels. Pre-printed I/O-specific labels ensure neat, easy-to-read identification of wires and I/O points for all users.

The marking of traditional terminal blocks has even caused some OEMs to move toward a high-tech approach of plotting markers, requiring additional equipment in the form of a plotter system and a PC to run the plotter software.

Simplified Design

Design engineers can simplify their panel drawings by calling out an IFM and pre-wired cable instead of having to detail every single wire and terminal block on their drawings. Simplified panel drawings aid not only the installer, but also the end customer who receives the panel.

Increased DIN Rail Density

An increasing trend in the industry is to pack more products into the same DIN Rail space. Wiring systems support this trend, as they require less DIN Rail space than traditional terminal blocks. For example, if an OEM were to use a 40-point IFM in place of 40 terminal blocks, DIN Rail space can be reduced by more than 50%. All IFMs have terminals for connecting the I/O field wiring. In addition, extra terminal, sensor, fusible, and relay IFMs contain common terminals that are used as power busses for sensor and actuators. No additional terminal blocks are needed to provide power to the sensors/actuators — saving valuable panel/DIN Rail space.

To further reduce panel space, narrow IFMs (e.g., Cat. No. 1492-IFM20FN) have been designed. They require 45% less space than the standard length IFMs, making them well-suited for tightly packed enclosures. The high density narrow IFMs have two rows of 10 field-wiring terminals with an overall length of 60 mm (2.36 in.).

Quality-Looking Panels

The pre-wired cables and IFMs organize the wiring in your panel and provide a consistent look. Pre-printed adhesive labels for the terminals neatly identify field-wiring connections, which correspond to the I/O module address. A large marking area is also available for identifying I/O information on the IFM.

Fewer Parts, Less Inventory, and Lower Carrying Cost

A wiring system involves an IFM and the cable, versus the block, barrier, jumper, markers, wires, and swing arms associated with traditional hardwired systems. Therefore, it requires fewer components and, in turn, less inventory and lower carrying costs.

Design Flexibility

To develop a cost-effective system, the hardware components must meet the needs of the design engineer. Rockwell Automation provides the broadest range of digital and analog systems in the industry. Allen-Bradley wiring systems deliver a lower life cycle cost.

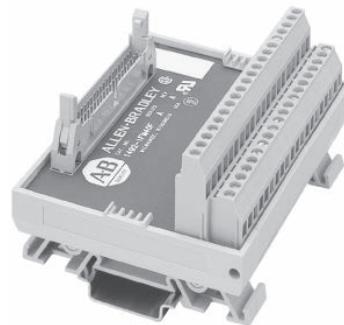


Digital Interface Modules (IFMs)**General Information**

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.

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.



40-pin Connection Interface Module

1492 - IFM 20 F120 - 2

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) |

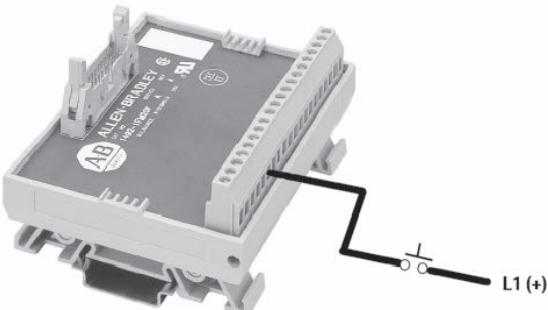
c

| 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) |

| Digital Cable Connector Size | |
|------------------------------|-------------|
| Code | Description |
| 20 | 20 pins |
| 40 | 40 pins |



Standard Terminal Interface Module

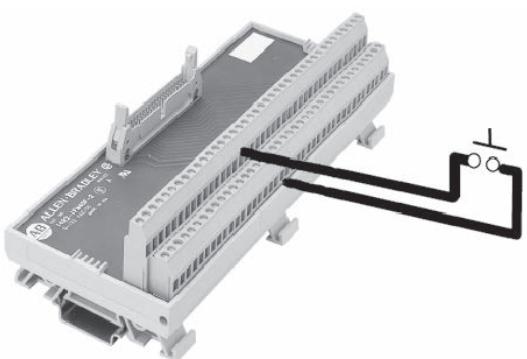
Extra terminal IFMs provide **two or four field-side** terminals per input or output point. Non-isolated IFMs have two terminals per input or output point. Isolated IFMs have two or four terminals per input or output.

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

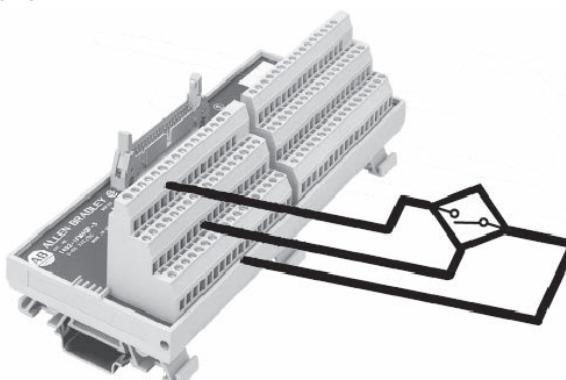
Standard terminal IFMs provide **one field-side** wiring terminal per programmable controller input or output point, as well as enough terminals for the I/O module power connections. The standard terminals are ideal for applications where the I/O device commons are terminated in the field or remotely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

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.

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.



Extra Terminal Interface Module



Three-Level Sensor Terminal Interface Module



Allen-Bradley

www.ab.com/catalogs Preferred availability cat. nos. are **bold**.

Publication A117-CA001A-EN-P

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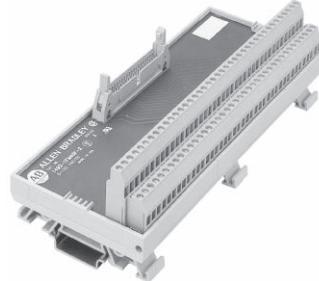
Digital Interface Modules (IFMs)

Feed-Through

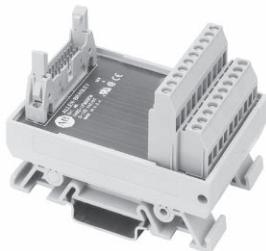
Feed-through IFMs provided the same capability as normal terminal blocks, but in a more condensed package.



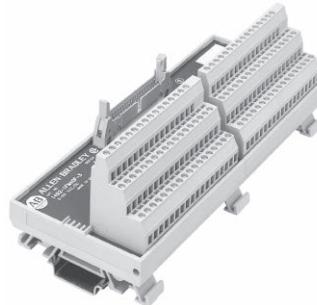
Feed-through Standard
For 20-point: Cat. No. 1492-IFM20F
For 40-point: Cat. No. 1492-IFM40F



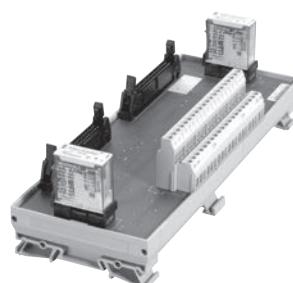
Feed-through Extra Terminal Products
For 20-point: Cat. No. 1492-IFM20F-2
For 40-point: Cat. No. 1492-IFM40F-2



Feed-Through Narrow
Cat. No. 1492-IFM20FN



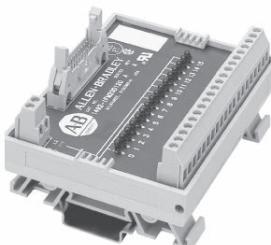
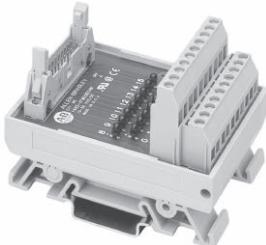
Feed-through Sensor Terminal Products
For 20-point: Cat. No. 1492-IFM20F-3
For 40-point: Cat. No. 1492-IFM40F-3



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

Digital Interface Modules (IFMs)**LED-Indicating**

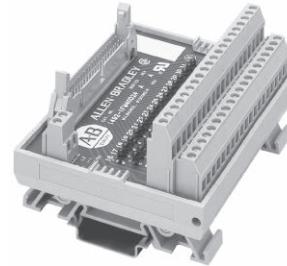
Voltage-indicating LEDs are available on standard, extra terminal, and sensor IFMs. The LEDs provide field-side troubleshooting diagnostics: the on/off status of an input device or the on/off status of the programmable controller output circuit. When used in conjunction with the logic-side programmable 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.



LED Indicating Standard
For 20-point:

Cat. No. 1492-IFM20D24,
1492-IFM20D120, 1492-IFM20D120N

For 40-point: Cat. No. 1492-IFM40D24



LED Indicating Extra Terminals

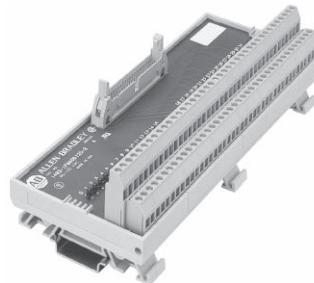
For 20-point: Cat. No. 1492-IFM20D24-2, 1492-IFM20D24A-2,
1492-IFM20D120-2, 1492-IFM20D120A-2,
1492-IFM20D240-2, 1492-IFM20D240A-2

For 40-point: Cat. No. 1492-IFM40D24-2, 1492-IFM40D24A-2,
1492-IFM40D120-2, 1492-IFM40D120A-2

LED Indicating Sensor Terminal Products

For 20-point: Cat. No. 1492-IFM20D24-3

For 40-point: Cat. No. 1492-IFM40D24-3



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



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

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

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



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

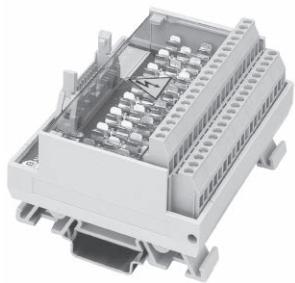
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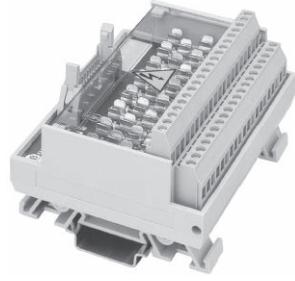
Digital Interface Modules (IFMs)

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 (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-IFM40FS-FS240A-4*

Fused Extra Terminals

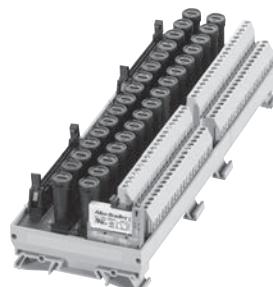
*For 20-point: Cat. No. 1492-IFM20F-F-2, 1492-IFM20F-F24-2,
1492-IFM20F-F24A-2, 1492-IFM20F-F120-2, 1492-IFM20F-F120A-2,
1492-IFM20F-F240-2, 1492-IFM20FS-F-2, 1492-IFM20FS-F24-2,
1492-IFM20FS-F24A-2*

*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*



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

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Bulletin 1756 ControlLogix Modules

Digital IFMs and Cables for Bulletin 1756 ControlLogix 16-point Isolated and 32-point I/O Modules

| Voltage [V] | Term. per I/O | Description | Fixed Terminal Block | Removable Terminal Block | RTB Plugs * | Bulletin 1756 ControlLogix I/O Module | | | | | | | | | | | | | | | |
|--|---------------|------------------------|----------------------|--------------------------|-------------|---------------------------------------|-------------|----------|---------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-----------------------|-----------------------------------|-------------|-------------|-------------|-----|
| | | | | | | Cat. No. | Cat. No. | Cat. No. | Digital Cable Cat. No. Suffix + | | | | | | | | | | | | |
| Feed-through | | | | | | | | | | | | | | | | | | | | | |
| 24... 120 | 1 | Standard | 1492-IFM40F | 1492-RIFM40F | 1492-RTB20* | Y Y Y Z Z Z Y | Y Y Y Y Y Y | Z Z Z | Y Y Y Y Y Y | Y Y Y Y Y Y | Y Y Y Y Y Y | Y Y Y Y Y Y | Y Y Y Y Y Y | Y Y Y Y Y Y | Y Y Y Y Y Y | Y Y Y Y Y Y | Y Y Y Y Y Y | Y Y Y Y Y Y | Y Y Y Y Y Y | Y Y Y Y Y Y | |
| | 2 | Extra Terminals | 1492-IFM40F-2 | 1492-RIFM40F-2 | 1492-RTB20* | Y Z Z Z | | | | | | | | | | | | | Z Z | | |
| | 3 | Sensor | 1492-IFM40F-3 | — | — | | | Z Z | | | | | | | | | | | | | |
| LED Indicating | | | | | | | | | | | | | | | | | | | | | |
| 24 | 1 | Standard | 1492-IFM40D24 | 1492-RIFM40D24 | 1492-RTB20* | | | Z Z | | | | | | | | | | Z Z | | | |
| | 2 | Extr.Term. | 1492-IFM40D24-2 | — | — | | | | | | | | | | | | | Z Z | | | |
| | 2 | Extr.Term. (input) | 1492-IFM40D24A-2 | 1492-RIFM40D24A-2 | 1492-RTB20* | | | Z Z | | | | | | | | | | | | | |
| | 3 | Sensor | 1492-IFM40D24-3 | — | — | | | Z Z | | | | | | | | | | | | | |
| | 4 | Isolated | 1492-IFM40DS24-4 | — | — | | | | | | | | | | | Y Y ¹³ Y Y | | | | | Y Y |
| | 4 | Isolated (input) | 1492-IFM40DS24A-4 | — | — | Y Y | | | | | | | | | | | | | | | |
| 120 | 2 | Extr.Term. (input) | 1492-IFM40D120A-2 | — | — | | | Z | | | | | | | | | | | | | |
| | 4 | Isolated | 1492-IFM40DS120-4 | — | — | | | | | | | | | | Y | | | | | | Y Y |
| | 4 | Isolated (input) | 1492-IFM40DS120A-4 | — | — | Y | | | | | | | | | | | | | | | |
| | 4 | Isolated (input) | 1492-IFM40DS240A-4 | — | — | | | | | | | | | Y | | | | | | | |
| Fusible | | | | | | | | | | | | | | | | | | | | | |
| 24 | 2 | Blown fuse LED | 1492-IFM40F-F24-2 | 1492-RIFM40F-F24-2 | 1492-RTB20* | | | | | | | | | | | | | Z Z | | | |
| | 2 | Blown fuse LED | 1492-IFM40F-F24D-2 | — | — | | | | | | | | | | | Y | | | | | |
| | 4 | Blown fuse LED | 1492-IFM40F-F24AD-4 | — | — | Y | | | | | | | | | | | | | | | |
| 24... 120 | 2 | Extra Terminals | 1492-IFM40F-F-2 | — | — | | | | | | | | | | | | | Z Z | | | |
| Fusible - Isolated | | | | | | | | | | | | | | | | | | | | | |
| 24 | 2 | Extr. Term. | 1492-IFM40F-FS24-2 | — | — | | | | | | | | | | Y | * | Y ₁₂ Y ₁₂ | | | | |
| | 4 | Blown fuse LED | 1492-IFM40F-FS24-4 | — | — | | | | | | | | | | Y | * | Y ₁₂ Y ₁₂ | | | | |
| | 4 | Blown fuse LED (input) | 1492-IFM40F-FS24A-4 | — | — | ‡ Y | | | | | | | | | | | | | | | |
| 24... 120 | 2 | Extr. Term. | 1492-IFM40F-FS-2 | — | — | | | | | | | | | | Y | Y | Y Y ₁₂ Y ₁₂ | | | | |
| | 4 | Extr. Term. | 1492-IFM40F-FS-4 | — | — | | | | | | | | | | Y | Y | Y Y ₁₂ Y ₁₂ | | | | |
| | 4 | Blown fuse LED (input) | 1492-IFM40F-FSA-4 | — | — | Y Y Y | | Y | | | | | | | | | | | | | |
| 120 | 2 | Blown fuse LED | 1492-IFM40F-FS120-2 | 1492-RIFM40F-FS120-2 | 1492-RTB20* | | | | | | | | | | Y | | | | | Y Y Y | |
| | 4 | Blown fuse LED | 1492-IFM40F-FS120-4 | 1492-RIFM40F-FS120-4 | 1492-RTB17* | | | | | | | | | | Y | | | | | Y Y Y | |
| | 4 | Blown fuse LED (input) | 1492-IFM40F-FS120A-4 | 1492-RIFM40F-FS120A-4 | 1492-RTB17* | Y | | | | | | | | Y | | | | | | | |
| 240 | 4 | Blown fuse LED | 1492-IFM40F-FS240-4 | — | — | | | | | | | | | Y | | | | | | | Y Y |
| | 4 | Blown fuse LED | 1492-IFM40F-FS240A-4 | — | — | | | | | | | | | Y | | | | | | | |
| Safety Integrity Level (SIL) ¹⁴ | | | | | | | | | | | | | | | | | | | | | |
| 24 | 2 | Blown fuse LED (input) | 1492-TIFM40F-F24A-2 | — | — | | | | | | | | | | | | | Z Z | | | |
| | 2 | Blown fuse LED | 1492-TIFM40F-F24-2 | — | — | | | | | | | | | | Y | | | | | | |

See footnotes on the following page.



Programmable Controller Wiring Systems

Bulletin 1769 CompactLogix Modules

Digital IFMs and Cables for Bulletin 1769 CompactLogix 32-point I/O Expansion Modules

| Voltage [V] | Term. per I/O | Description | Fixed Terminal Block | Removable Terminal Block | RTB Plugs | Bulletin 1769 CompactLogix I/O Module | | | | | |
|----------------|---------------|----------------------|--------------------------|--------------------------|-------------|---------------------------------------|---|-----|---|---|--|
| | | | Cat. No. | Cat. No. | Cat. No. | Digital Cable Cat. No. Suffix+ | | | | | |
| Feed-Through | | | | | | | | | | | |
| 24...120 | 1 | Standard | 1492-IFM40F | 1492-RIFM40F | 1492-RTB20⊕ | J69 | H | K69 | H | H | |
| | 2 | Extr. Term. | 1492-IFM40F-2 | 1492-RIFM40F-2 | 1492-RTB20⊕ | J69 | H | K69 | H | H | |
| | 3 | Sensor | 1492-IFM40F-3 | — | — | J69 | H | | | | |
| LED Indicating | | | | | | | | | | | |
| 24 | 1 | Standard | 1492-IFM40D24 | 1492-RIFM40D24 | 1492-RTB20⊕ | J69 | H | K69 | H | H | |
| | 2 | Extr. Term. (output) | 1492-IFM40D24-2 | — | — | | | K69 | H | H | |
| | | Extr. Term. (input) | 1492-IFM40D24A-2 | 1492-RIFM40D24A-2 | 1492-RTB20⊕ | J69 | H | | | | |
| 24 | 3 | Sensor | 1492-IFM40D24-3 | — | — | J69 | H | | | | |
| 24 | 2 | Extr. Term. | 1492-IFM40F-F24-2 | 1492-RIFM40F-F24-2 | 1492-RTB20⊕ | | | K69 | H | H | |
| 24...120 | 2 | Extr. Term. | 1492-IFM40F-F-2 | — | — | | | K69 | H | H | |

See footnotes on the following page.



Programmable Controller Wiring Systems

Bulletin 1794 Flex I/O Modules

Digital IFMs and Cables for Bulletin 1794 Flex I/O 8-Point and 16-Point Modules

| Voltage [V] | Term. per I/O | Description | Fixed Terminal Block | Removable Terminal Block | RTB Plugs [❖] | Bulletin 1794 Flex Digital I/O Module ³⁶ | | | | | | | | | | | |
|-------------------|---------------|-------------------------|----------------------|--------------------------|-------------------------|---|----------|---------------|-----------|-----------|------------|----------|--|-----------|------------|----------|-----|
| | | | | | | 1794-IB16 | 1794-IB8 | 1794-IB10XOB6 | 1794-IV16 | 1794-OB16 | 1794-OB16P | 1794-OB8 | 1794-OB8EP | 1794-OV16 | 1794-OV16P | 1794-OW8 | |
| Feed-Through | | | | | | | | | | | | | Digital Cable Cat. No. Suffix ⁺ | | | | |
| 24...120 | 1 | Standard | 1492-IFM20F | 1492-RIFM20F | 1492-RTB20 [❖] | A94 | A94 | A94 | A94 | A94 | A94 | A94 | A94 | A94 | A94 | A94 | |
| | 1 | Narrow | 1492-IFM20FN | 1492-RIFM20FN | 1492-RTB10 [❖] | A94 | A94 | A94 | A94 | A94 | A94 | A94 | A94 | A94 | A94 | A94 | |
| | 2 | Extr. Term. | 1492-IFM20F-2 | 1492-RIFM20F-2 | 1492-RTB20 [❖] | A94 | A94 | A94 | A94 | A94 | A94 | A94 | A94 | A94 | A94 | A94 | |
| | 3 | Sensor | 1492-IFM20F-3 | — | — | A94 | A94 | — | A94 | — | — | — | — | — | — | — | — |
| LED Indicating | | | | | | | | | | | | | | | | | |
| 24 | 1 | Standard | 1492-IFM20D24 | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 1 | Narrow | 1492-IFM20D24N | — | — | — | — | A94 | A94 | — | — | — | — | — | — | — | — |
| | 2 | Extr. Term. (output) | 1492-IFM20D24-2 | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 2 | Extr. Term. (input) | 1492-IFM20D24A-2 | — | — | — | A94 | A94 | — | — | — | — | — | — | — | — | — |
| | 4 | Isolated w/ Extr. Term. | 1492-IFM20DS24-4 | — | — | — | — | — | — | — | — | — | — | — | — | — | A94 |
| 120 | 4 | Isolated w/ Extr. Term. | 1492-IFM20DS120-4 | — | — | — | — | — | — | — | — | — | — | — | — | — | A94 |
| Fusible | | | | | | | | | | | | | | | | | |
| 24 | 2 | Blown Fuse LED | 1492-IFM20F-F24-2 | 1492-RIFM20F-F24-2 | 1492-RTB20 [❖] | — | — | — | — | — | — | — | — | — | — | — | — |
| | 2 | Blown Fuse LED (input) | 1492-IFM20F-F24A-2 | 1492-RIFM20F-F24A-2 | 1492-RTB20 [❖] | A94 | A94 | — | — | — | — | — | — | — | — | — | — |
| 24...120 | 2 | Blown Fuse LED | 1492-IFM20F-F-2 | 1492-RIFM20F-F-2 | 1492-RTB20 [❖] | — | — | — | — | — | — | — | — | — | — | — | — |
| Fusible, Isolated | | | | | | | | | | | | | | | | | |
| 24 | 2 | Blown Fuse LED | 1492-IFM20F-FS24-2 | — | — | — | — | — | — | — | — | — | — | — | — | — | A94 |
| 24...120 | 2 | Extr. Term. (output) | 1492-IFM20F-FS-2 | — | — | — | — | — | — | — | — | — | — | — | — | — | A94 |
| 120 | 2 | Blown Fuse LED | 1492-IFM20F-FS120-2 | — | — | — | — | — | — | — | — | — | — | — | — | — | A94 |

Digital IFMs and Cables for Bulletin 1794 Flex I/O 16-Point and 32-Point Modules

| Voltage [V] | Term. per I/O | Description | Fixed Terminal Block | Removable Terminal Block | RTB Plugs [❖] | Bulletin 1794 Flex Digital I/O Module ^{>} | | | | | | | | | | | |
|----------------|---------------|----------------------------|----------------------|--------------------------|-------------------------|---|------------|-----------|------------|--|-----|-----|-----|-----|-----|-----|-----|
| | | | | | | 1794-IB16D | 1794-IB16P | 1794-IB32 | 1794-OB32P | Digital Cable Cat. No. Suffix ⁺ | | | | | | | |
| Feed-Through | | | | | | | | | | | | | | | | | |
| 24...120 | 1 | Standard | 1492-IFM40F | 1492-RIFM40F | 1492-RTB20 [❖] | B94 | B94 | B94 | B94 | B94 | B94 | B94 | B94 | B94 | B94 | B94 | |
| | 2 | Extr. Term. | 1492-IFM40F-2 | 1492-RIFM40F-2 | 1492-RTB20 [❖] | B94 | B94 | B94 | B94 | B94 | B94 | B94 | B94 | B94 | B94 | B94 | |
| LED Indicating | | | | | | | | | | | | | | | | | |
| 24 | 1 | Standard | 1492-IFM40D24 | 1492-RIFM40D24 | 1492-RTB20 [❖] | — | — | — | — | — | — | — | — | — | — | B94 | |
| | 2 | Extr. Term. (output) | 1492-IFM40D24-2 | — | — | — | — | — | — | — | — | — | — | — | — | B94 | |
| | 2 | Extr. Term. (input) | 1492-IFM40D24A-2 | 1492-RIFM40D24A-2 | 1492-RTB20 [❖] | — | — | — | — | — | — | — | — | — | — | B94 | |
| Fusible | | | | | | | | | | | | | | | | | |
| 24 | 2 | Extr. Term. Blown Fuse LED | 1492-IFM40F-F24-2 | 1492-RIFM40F-F24-2 | 1492-RTB20 [❖] | — | — | — | — | — | — | — | — | — | — | B94 | |
| 24...120 | 2 | Extr. Term. (output) | 1492-IFM40F-F-2 | — | — | — | — | — | — | — | — | — | — | — | — | — | B94 |

⁺ 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-CAB005

1.0M Cable = 1492-CAB010

2.5M Cable = 1492-CAB025

5.0M Cable = 1492-CAB050

Custom Length Cable = 1492-CABXXX_. See Catalog Number Explanation on page 12-136 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**.

[‡] Uses D-Shell Base 1794-TB37DS

[>] Uses D-Shell Base 1794-TB62DS



Programmable Controller Wiring Systems

Specifications

Digital IFM Specifications

| Digital IFM Cat. No. | Voltage Range | Dimensions (W x H x D) [in.]* | Indicator Circuit Current (Nominal) [mA] | Label Card Cat. No.‡ |
|---------------------------------------|------------------|-------------------------------|--|--|
| 1492-IFM20F, -RIFM20F | 0...264V AC/DC | 4.33 x 3.27 x 2.78‡ | — | 46006-190-01, 46006-233-01 |
| 1492-IFM20FN, -RIFM20FN | 0...132V AC/DC | 2.36 x 3.27 x 2.78‡ | — | 46006-197-01, -237-01, -220-01 |
| 1492-IFM20F-2, -RIFM20F-2 | 0...264V AC/DC | 4.33 x 3.27 x 2.78‡ | — | 46006-192-01, -235-01, -221-01 |
| 1492-IFM20F-3 | 0...132V AC/DC | 4.33 x 3.27 x 2.78 | — | 46006-210-01 |
| 1492-IFM20D24 | 10...30V AC/DC | 4.33 x 3.27 x 2.78 | 2 | 46006-190-01, 46006-233-01 |
| 1492-IFM20D24N | 10...30V AC/DC | 2.36 x 3.27 x 2.78 | 2 | 46006-197-01, -237-01, -220-01 |
| 1492-IFM20D24-2 | 10...30V AC/DC | 4.33 x 3.27 x 2.78 | 2 | 46006-192-01, -235-01, -221-01 |
| 1492-IFM20D24A-2 | 10...30V AC/DC | 4.33 x 3.27 x 2.78 | 2 | 46006-211-01 |
| 1492-IFM20DS24-4 | 10...60V AC/DC | 4.33 x 3.27 x 2.78 | 1.6 | 46006-209-01 |
| 1492-IFM20D24-3 | 10...30V AC/DC | 4.33 x 3.27 x 2.78 | 2 | 46006-193-01, 46006-236-01 |
| 1492-IFM20D120 | 85...132V AC/DC | 4.33 x 3.27 x 2.78 | 2.5 | 46006-190-01, 46006-233-01 |
| 1492-IFM20D120N | 85...132V AC | 2.36 x 3.27 x 2.78 | 2.5 | 46006-197-01, -237-01, -220-01 |
| 1492-IFM20D120-2 | 85...132V AC | 4.33 x 3.27 x 2.78 | 2.5 | 46006-192-01, -235-01 |
| 1492-IFM20D120A-2 | 85...132V AC | 4.33 x 3.27 x 2.78 | 2.5 | 46006-211-01 |
| 1492-IFM20DS120-4 | 85...132V AC | 4.33 x 3.27 x 2.78 | 2.6 | 46006-209-01 |
| 1492-IFM20D240-2 | 204...264V AC | 4.33 x 3.27 x 2.78 | 2.5 | 46006-192-01, -235-01 |
| 1492-IFM20D240A-2 | 204...264V AC | 4.33 x 3.27 x 2.78 | 2.5 | 46006-211-01 |
| 1492-IFM20F-F-2, -RIFM20F-F-2 | 0...132V AC/DC | 4.33 x 3.27 x 2.78‡ | — | 46006-192-01, -235-01, -221-01 |
| 1492-IFM20F-F24-2, -RIFM20F-F24-2 | 10...30V AC/DC | 4.33 x 3.27 x 2.78‡ | 2 | 46006-192-01, -235-01, -221-01 |
| 1492-IFM20F-F24A-2, -RIFM20F-F24A-2 | 10...30V AC/DC | 4.33 x 3.27 x 2.78‡ | 2.4 | 46006-212-01, -189-01 |
| 1492-IFM20F-F120-2, -RIFM20F-F120-2 | 85...132V AC | 4.33 x 3.27 x 2.78‡ | 2.5 | 46006-192-01, -235-01, -221-01 |
| 1492-IFM20F-F120A-2, -RIFM20F-F120A-2 | 85...132V AC/DC | 4.33 x 3.27 x 2.78‡ | 1.2 | 46006-212-01, -189-01 |
| 1492-IFM20F-F240-2 | 204...264V AC | 4.72 x 3.27 x 2.78 | 1.2 | 46006-192-01, -235-01 |
| 1492-IFM20F-FS-2 | 0...132V AC/DC | 2.36 x 3.27 x 2.78 | — | 46006-204-01 |
| 1492-IFM20F-FS24-2 | 10...30V AC/DC | 2.36 x 3.27 x 2.78 | 2 | 46006-204-01 |
| 1492-IFM20F-FS24A-4 | 10...30V AC/DC | 3.15 x 3.27 x 2.78 | 2.4 | 46006-215-01 |
| 1492-IFM20F-FS120-2 | 85...132V AC/DC | 2.36 x 3.27 x 2.78 | 2.5 | 46006-204-01 |
| 1492-IFM20F-FS120-4 | 85...132V AC/DC | 4.33 x 3.27 x 2.78 | 1.2 | 46006-214-01 |
| 1492-IFM20F-FS120A-4 | 85...132V AC/DC | 3.15 x 3.27 x 2.78 | 2.2 | 46006-215-01 |
| 1492-IFM20F-FS240-4 | 204...264V AC | 4.33 x 3.27 x 2.78 | 1.2 | 46006-214-01 |
| 1492-IFM40F, -RIFM40F | 0...132V AC/DC | 4.33 x 3.27 x 2.78‡ | — | 46006-191-01, -234-01, -252-01 |
| 1492-IFM40F-2 | 0...132V AC/DC | 8.27 x 3.27 x 2.78 | — | 46006-224-01, -225-01, -239-01, -240-01, -253-01 |
| 1492-RIFM40F-2 | 0...132V AC/DC | 9.05 x 3.27 x 2.78 | — | 46006-224-01, -225-01, -239-01, -240-01, -253-01 |
| 1492-IFM40F-3 | 0...60V AC/DC | 8.27 x 3.27 x 2.78 | — | 46006-193-01, 46006-236-01 |
| 1492-IFM40D24, -RIFM40D24 | 10...30V AC/DC | 4.33 x 3.27 x 2.78‡ | 2 | 46006-191-01, -234-01, -252-01 |
| 1492-IFM40D24-2 | 10...30V AC/DC | 8.27 x 3.27 x 2.78 | 2 | 46006-194-01, -195-01, -253-01 |
| 1492-IFM40D24A-2 | 10...30V AC/DC | 8.27 x 3.27 x 2.78 | 2 | 46006-224-01, -225-01, -239-01, -240-01, -253-01 |
| 1492-RIFM40D24A-2 | 10...30V AC/DC | 9.05 x 3.27 x 2.78 | 2 | 46006-224-01, -225-01, -239-01, -240-01, -253-01 |
| 1492-IFM40DS24-4 | 10...60V AC/DC | 6.69 x 3.27 x 2.78 | 4.1 | 46006-208-01 |
| 1492-IFM40DS24A-4 | 10...30V AC/DC | 6.69 x 3.27 x 2.78 | 4.1 | 46006-208-01 |
| 1492-IFM40D24-3 | 10...30V AC/DC | 8.27 x 3.27 x 2.78 | 2 | 46006-193-01, 46006-236-01 |
| 1492-IFM40D120-2 | 85...132V AC | 8.27 x 3.27 x 2.78 | 2.5 | 46006-194-01, -195-01, -253-01 |
| 1492-IFM40D120A-2 | 85...132V AC | 8.27 x 3.27 x 2.78 | 2.5 | 46006-194-01, -195-01, -253-01 |
| 1492-IFM40DS120-4 | 85...132V AC | 6.69 x 3.27 x 2.78 | 2.6 | 46006-208-01 |
| 1492-IFM40DS120A-4 | 85...132V AC | 6.69 x 3.27 x 2.78 | 2.6 | 46006-208-01 |
| 1492-IFM40DS240A-4 | 204...264V AC | 6.69 x 3.27 x 2.78 | 2.6 | 46006-208-01 |
| 1492-IFM40F-F-2 | 0...132V AC/DC | 8.27 x 3.27 x 2.78 | — | 46006-194-01, -195-01, -253-01 |
| 1492-IFM40F-F24-2 | 10...30V AC/DC | 8.27 x 3.27 x 2.78 | 2 | 46006-224-01, -225-01, -239-01, -240-01, -253-01 |
| 1492-RIFM40F-F24-2 | 10...30V AC/DC | 8.66 x 3.27 x 2.78 | 2 | 46006-224-01, -225-01, -239-01, -240-01, -253-01 |
| 1492-IFM40F-F24D-2 | 10...30V AC/DC | 4.72 x 3.27 x 2.78 | <0.05 | 46006-201-01 |
| 1492-IFM40F-F24AD-4 | 10...30V AC/DC | 7.09 x 3.27 x 2.78 | <0.05 | 46006-206-01 |
| 1492-IFM40F-F120-2 | 85...132V AC | 8.27 x 3.27 x 2.78 | 2.5 | 46006-194-001, -195-01, -253-01 |
| 1492-IFM40F-FS-2 | 0...132V AC/DC | 4.72 x 3.27 x 2.78 | — | 46006-201-01 |
| 1492-IFM40F-FS-4 | 0...264V AC/DC | 7.09 x 3.27 x 2.78 | — | 46006-207-01 |
| 1492-IFM40F-FS24-2 | 10...30V AC/DC | 4.72 x 3.27 x 2.78 | 2 | 46006-201-01 |
| 1492-IFM40F-FS24-4 | 10...30V AC/DC | 7.09 x 3.27 x 2.78 | 2.4 | 46006-207-01 |
| 1492-IFM40F-FS120-2, -RIFM40F-FS120-2 | 85...132V AC/DC | 4.72 x 3.27 x 2.78‡ | 2.5 | 46006-201-01 |
| 1492-IFM40F-FS120-4 | 85...132V AC/DC | 7.09 x 3.27 x 2.78 | 1.4 | 46006-206-01 |
| 1492-RIFM40F-FS120-4 | 85...132V AC/DC | 7.87 x 3.27 x 2.78 | 1.4 | 46006-226-01 |
| 1492-IFM40F-FS240-4 | 204...264V AC/DC | 7.09 x 3.27 x 2.78 | 2.4 | 46006-207-01 |
| 1492-IFM40F-FS24A-4 | 10...30V AC/DC | 7.09 x 3.27 x 2.78 | 3.1 | 46006-226-01 |
| 1492-IFM40F-FS120A-4 | 85...132V AC/DC | 7.09 x 3.27 x 2.78 | 1.4 | 46006-226-01 |
| 1492-RIFM40F-FS120A-4 | 85...132V AC/DC | 7.87 x 3.27 x 2.78 | 1.4 | 46006-226-01 |
| 1492-IFM40F-FSA-4 | 85...132V AC/DC | 7.09 x 3.27 x 2.78 | — | 46006-226-01 |
| 1492-IFM40F-FS240A-4 | 85...264V AC/DC | 7.09 x 3.27 x 2.78 | 1.4 | 46006-226-01 |
| 1492-TIFM40F-F24-2 | 24V DC | 8.66 x 3.27 x 2.74 | — | 46006-230-01 |
| 1492-TIFM40F-F24A-2 | 24V DC | 9.5 x 3.27 x 2.74 | 3 | 46006-230-01 |

* To convert to millimeters, multiply inches by 25.4

‡ Ships with each module. For spare part, precede the part number with the letter "W."

† Add 0.39 in. to the width dimension for Bulletin 1492-Rxxx modules.

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Allen-Bradley