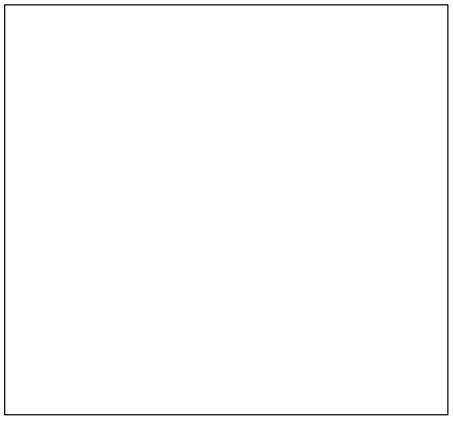
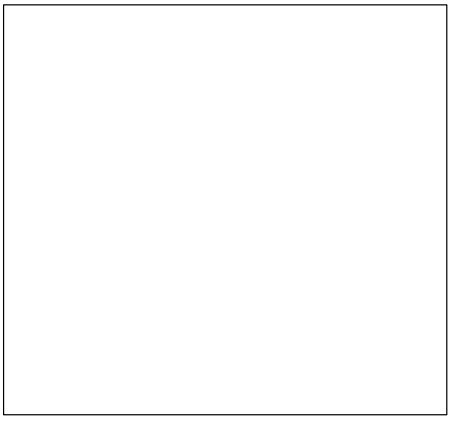
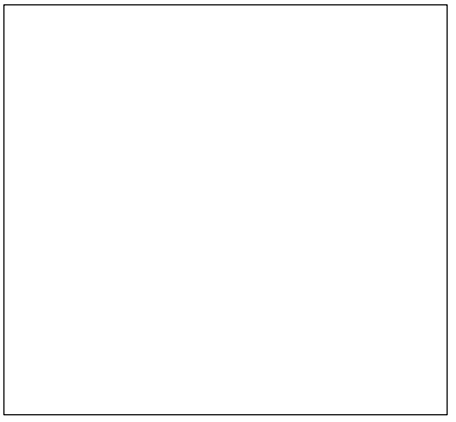
ALLEN-BRADLEY

PLC®/SLC™ Wiring Systems Interface Modules and Cables
(Bulletin 1492)

Product Data


94-593-8


93-242-2


94-593-7

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Description

The Bulletin 1492 PLC/SLC Wiring System Product Line consists of IFMs (Interface Modules), Pre-wired Cables and Ready-to-Wire Cables. These products are designed to aid in the installation of Allen-Bradley Programmable Controller I/O Modules.

Features and Benefits of IFMs (Interface Modules) and Pre-wired Cables

IFMs and pre-wired cables replace the terminal blocks and up to 50% of the point-to-point wiring between the programmable controller and field devices. They are available for over 40 different 16- and 32-point 1771 PLC and 1746 SLC Discrete I/O Modules. IFMs allow you to conveniently incorporate additional terminations, LED status indicators or overcurrent protection into your I/O circuitry.

Faster Installation Time
Pre-wired cables have the I/O module terminal block or wiring arm already wired-up on one end and a cable connector on the other. No need to measure, cut, strip, label, and terminate 20 to 40 wires per I/O module. Simply attach the wiring arm or removable terminal block end of the cable to the I/O module and snap the cable connector end of the cable into the IFM – and you are ready to wire out to field devices.

Successful System Start-ups
The pre-wired cables are 100% tested for continuity. No more crossed wires and loose connections between the I/O module and the terminal blocks on the DIN rail. With the pre-wired cable and IFM, your application will have a much higher rate of success at initial start-up.

Simplified Troubleshooting
IFMs with optional LED indicators provide the field-side status of the I/O circuitry. No more guess work determining where a problem resides. The combination of the logic-side I/O module LEDs and the field-side IFM LEDs help to determine if the problem resides in the I/O module or the field device/wiring.

Fusible IFMs provide termination for output modules as well as the ability to incorporate overcurrent protection. Optional on-board blown fuse indicators help to quickly identify which output circuit had the fault – reducing costly troubleshooting and downtime.

Reduced Panel Space
Double terminal, sensor, and fusible IFMs have terminals for connecting the I/O points as well as commoned terminals that are used as power busses for field input and output devices. No additional terminal blocks are needed to provide power to the field-devices – saving valuable panel/DIN rail space. Just bring in one power connection per group to the commoned terminals and terminate the other side of your input or output devices to the power bus. Complete and compact wiring all on one IFM!

Quality-Looking Panel
The pre-wired cables and IFMs organize your wiring and terminations for a consistent look to your panel. Pre-printed adhesive labels for the terminal wiring neatly identify field-side connections.

Features and Benefits of Ready-to-Wire Cables

Ready-to-wire cables provide one end of the cable preterminated, for either an IFM or a programmable controller I/O module. IFM-ready cables have a cable connector on one end to attach to the IFM and free conductors on the other end to wire to your own type of device. I/O module-ready cables have a wiring arm or removable terminal block wired up on one end and free conductors on the other to wire into standard terminal blocks or other types of connectors.

Cables Fit Your Panel
All of the Bulletin 1492 Cables are offered in three standard lengths of 1.0m, 2.5m, or 5.0m to fit a variety of applications.

Easy-to-Wire
Both the IFM-ready cables and the I/O module-ready cables have individually colored conductors for quick wire-to-terminal coordination.

Meets Most Panel Specifications
The I/O module-ready cables utilize #18 AWG conductors for strength and rigidity on longer cable runs.

IFM Options

IFMs, similar to groups of terminal blocks, are available with either 20 pin or 40 pin cable connectors. The number of field-side wiring terminals varies with the type of module – from one to three terminals per I/O point. LEDs and fuse clips are available on-board the IFMs to customize your wiring system to your application. The IFMs are compatible with the pre-wired cables or the IFM-ready cables.

All the IFMs have the following features:

Keyed cable connector with locking tabs for easy installation and secure connection of IFMs.

UL Component Recognized
(File E113724 Guide NRAQ2)
and CSA Certified
(File LR1234 Class 321107)

Standard DIN #3 rail mounting for quick installation.

Large rectangular write-on area acts as built-in group marking carrier for programmable controller rack, module group, and/or slot information.

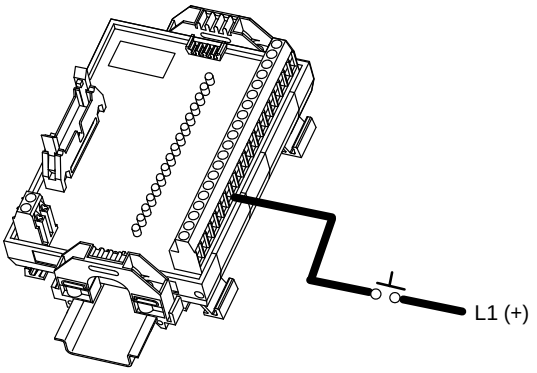
Pre-printed and blank adhesive marking strips are provided to identify either PLC/SLC I/O field-side wiring terminals or your own application requirements.

High-density field-side wiring terminals allow more connections in less space and accommodate #22-12 AWG wire.

Continuous current rating of 2 amps per circuit supports higher-current programmable controller output modules.

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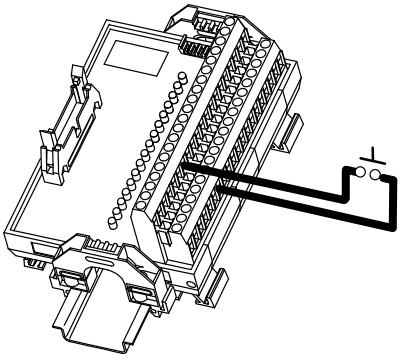
Standard Terminal Modules



Standard terminal modules 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 terminal modules are ideal for applications where the I/O device commons are terminated in the field or remotely from the I/O module panel.

Voltage indicating LEDs are available on the 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 if a problem resides in the I/O module or field device/wiring. The LED modules have unique circuitry that allows compatibility with sinking or sourcing input or output modules.

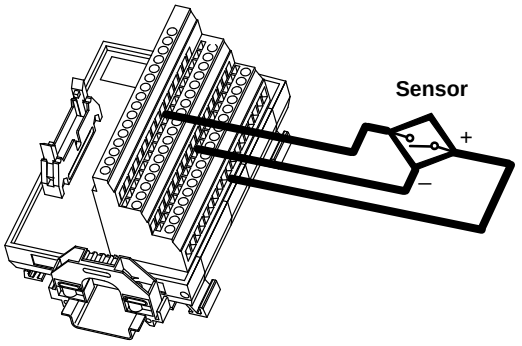
Extra Terminal Modules



Extra terminal modules provide two field-side terminals per input or output point. The lower row of extra terminals, commoned together in groups of 10❶, serves as a power bus for the field device commons. The extra terminal modules 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. These modules are also available with optional field-side status LEDs for troubleshooting inputs and outputs.

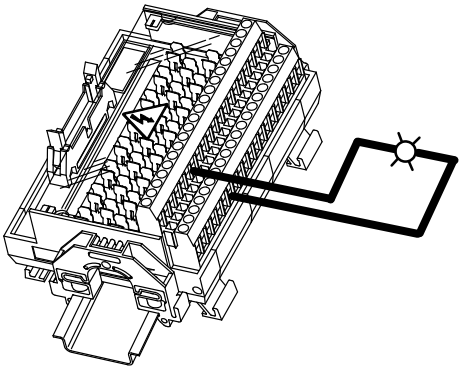
❶ Except Catalog Numbers **1492-IFM20D24A-2** and **-IFM20D120A-2** which are in groups of 20.

Sensor Modules



Sensor modules provide three field-side terminals per input point. The middle and lower rows of terminals commoned together in groups of 18, serve as power busses for 3-wire sensor types of devices – eliminating additional terminal blocks and jumpering systems. Optional field-side LEDs identify the on/off condition of the sensor signal. The sensor modules provide a compact method of terminating and powering 24V AC/DC 3–wire devices.

Fusible Modules



Fusible modules provide a convenient method of adding overcurrent protection into your programmable controller output wiring. These modules have 5 x 20mm fuse clips on-board and are available with and without blown fuse indication. The 24V AC/DC or 120V AC blown fuse indicators reduce the troubleshooting time to locate and replace a blown fuse on the IFM. The fusible modules have an easy-to-remove see-through Plexiglas cover to prevent objects from contacting fuse circuitry under normal operation. Standard fuse holders reside in the IFM aiding in the removal of fuse with a fuse puller (fuses are not included). The fusible modules also have 2 terminals per output point to create a power bus for output load connections.

How to Order PLC/SLC Pre-wired Cables and IFMs

To order the proper PLC/SLC pre-wired cable and IFM, you need to know:

1. The catalog number(s) of I/O module(s).
2. The cable length (1.0m, 2.5m, or 5.0m).
3. If LEDs or fusing (check voltage ratings for LEDs) are needed.
4. If additional terminals for field devices are needed.

Refer to the Pre-wired Cable and IFM Selection Tables on Page 10.

For more information, refer to the Technical Section on IFMs on Page 17, and to the Technical Section on Pre-wired Cables on Page 12.

How to Order IFM-Ready Cables and IFMs

To order the proper IFM-ready cable and IFM, you need to know:

1. If 20 or 40 wires/pins in the cable connection are required.
2. The cable length (1.0m, 2.5m, or 5.0m).
3. If LEDs or fusing (check voltage ratings for LEDs) are needed.
4. If additional terminals for field devices are needed.

If 20 wires/pins in the cable connector are needed:

1. Use the 20 conductor IFM-ready cable (Catalog Number **1492-CABLE_P**).
2. Replace the **"_"** in the catalog number with the code for the desired cable length (**"10"** = 1.0m, **"25"** = 2.5m, and **"50"** = 5.0m).
3. Use a 20-point IFM (Catalog Number **1492-IFM20_ _ _**). Refer to the Technical Section on 20-point IFMs on Page 17.

If 40 wires/pins in the cable connector are needed:

1. Use the 40 conductor IFM-ready cable (Catalog Number **1492-CABLE_Q**).
2. Replace the **"_"** in the catalog number with the code for the desired cable length (**"10"** = 1.0m, **"25"** = 2.5m, and **"50"** = 5.0m).
3. Use a 40-point IFM (Catalog Number **1492-IFM40_ _ _**). Refer to the Technical Section on 40-point IFMs on Page 30.

For pinout and wiring information refer to the Technical Section on IFM-Ready Cables on Page 13.

How to Order I/O Module-Ready Cables

To order the proper I/O module-ready cable, you need to know:

1. The type of connector needed for the I/O module(s) (Catalog Number of the wiring arm or removable terminal block).
2. The code for the desired cable length (**"10"** = 1.0m, **"25"** = 2.5m, and **"50"** = 5.0m).

For a listing of cables offered and their corresponding I/O module connectors and specifications and wiring, refer to the Technical Section on I/O Module-Ready Cables on Page 15.

IFM Catalog Number Explanation

IMPORTANT: The following IFM catalog number breakdown is for explanation purposes only. It is ***not*** a product configurator. All combinations of fields are not valid product catalog numbers. First, select the desired IFM using the steps in "How To Order". Then use this breakdown for verification and explanation only.

1492 – IFM20F – F120 – 2

Bulletin Number

Product Type	
IFM	Interface Module

Number of Cable Connector Pins	
20	Twenty Pins
40	Forty Pins

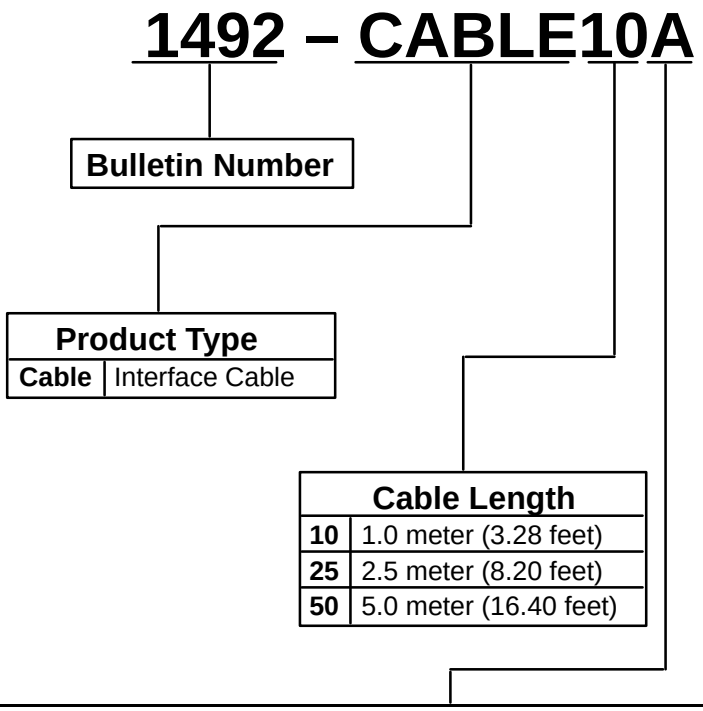
Status Indication	
F	No LEDs
D24	24V AC/DC LEDs
D24A	24V AC/DC LEDs for Input Modules
D120	120V AC LEDs
D120A	120V AC LEDs for Input Modules

Number of Field-Side Terminals	
Blank	One per I/O Point
2	Two per I/O Point
3	Three per I/O Point

Fuse Clips and Blown Fuse Indication	
Blank	No Fuse Clips
F	5 x 20mm Fuse Clips
F24	5 x 20mm Fuse Clips with 24V AC/DC Blown Fuse Indicators
F120	5 x 20mm Fuse Clips with 120V AC Blown Fuse Indicators

Cable Catalog Number Explanation

The following cable catalog number explanation may be used as a product configurator. All combinations of fields indicated produce valid product catalog numbers.



Cable Type	
A, B, C, D, E	Pre-wired Cables for 8-Point Isolated and 16-Point 1746 I/O Modules ❶
F	Pre-wired Cable for 16-Point 1771 I/O Modules ❶
FF	Pre-wired Cable with Fused Wiring Arm for 16-Point 1771 Output Modules ❶
H	Pre-wired Cable for 32-Point 1746 I/O Modules ❶
J, K, L, M, R	Pre-wired Cables for 16-Point Isolated and 32-Point 1771 I/O Modules ❶
P	IFM-Ready Cable with 20 Conductors
Q	IFM-Ready Cable with 40 Conductors
RTBB	I/O Module-Ready Cable with 16-Point 1746-RT25B Terminal Block (Blue)
RTBO	I/O Module-Ready Cable with 16-Point 1746-RT25C Terminal Block (Orange)
RTBR	I/O Module-Ready Cable with 16-Point 1746-RT25R Terminal Block (Red)
WA	I/O Module-Ready Cable with 1771-WA 8-Point Wiring Arm
WD	I/O Module-Ready Cable with 1771-WD 6-Point Wiring Arm
WH	I/O Module-Ready Cable with 1771-WH 16-Point Wiring Arm
WHF	I/O Module-Ready Cable with 1771-WHF 16-Point Fused Wiring Arm
WN	I/O Module-Ready Cable with 1771-WN 32-Point Wiring Arm

❶ Refer to Cable Selection Tables on Pages 10 and 11 for proper IFM and I/O module coordination.

Pre-wired Cable and IFM Selection Tables

Use the tables on Pages 10 and 11 to select pre-wired cables and IFMs for either Bulletin 1746 SLC or 1771 PLC Discrete I/O Modules.

1. Select the appropriate table (SLC or PLC).
2. Locate your I/O module catalog number in the shaded area.
3. Follow down the selected column to the letters that indicate compatible IFMs. If the box is blank, the I/O module and IFM are not recommended for use together.
4. Select the catalog number of the desired IFM. Refer to the page number indicated for technical information on the IFM.

IMPORTANT: The letter in the box indicates the type of pre-wired cable that is used with that particular I/O module and IFM combination. To configure a catalog number, order **1492-CABLE❶❷**.

Example: 1492-CABLE25A is the catalog number for a 2.5m cable for the 1746-IA16 I/O module.

❶ Cables are available in lengths of 1.0m, 2.5m and 5.0m. Insert the desired cable length into the Catalog Number (**"10"** = 1.0m, **"25"** = 2.5m and **"50"** = 5.0m).

❷ Add cable selection letter from box in table.

Pre-wired Cable and IFM Selection Tables

SLC 500 8-Point Isolated and 16-Point Discrete 1746 I/O Modules

Type of IFM	Description	IFM Catalog Number	Page	I/O Module Catalog Number													
				1746-IA16	1746-IB16	1746-IG16	1746-IN16	1746-ITB16	1746-ITV16	1746-IV16	1746-OA16	1746-OB16	1746-OBP16	1746-OG16	1746-OV16	1746-OVP16	1746-OW16	1746-OX8
Feed-Through	20-Point Standard	IFM20F	17	A	B	E	B	B	B	B	C	E	E	E	E	E	D	D
	20-Point Extra Terminal	IFM20F-2	18	A	B	E	B	B	B	B	C	E	E	E	E	E	D	
	20-Point Sensor	IFM20F-3	19		B		B	B	B	B								
LED Indicating	20-Point Standard with 24V LEDs	IFM20D24	20		B		B	B	B	B		E	E		E	E	D	
	20-Point Standard with 120V LEDs	IFM20D120	21	A							C						D	
	20-Point Extra Terminal with 24V LEDs for Outputs	IFM20D24-2	22									E	E		E	E	D	
	20-Point Extra Terminal with 24V LEDs for Inputs	IFM20D24A-2	23		B		B	B	B	B								
	20-Point Extra Terminal with 120V LEDs for Outputs	IFM20D120-2	24								C						D	
	20-Point Extra Terminal with 120V LEDs for Inputs	IFM20D120A-2	25	A														
	20-Point Sensor with 24V LEDs	IFM20D24-3	26		B		B	B	B	B								
Fusible	20-Point Extra Terminal	IFM20F-F-2	27								C	E	E		E	E	D	
	20-Point Extra Terminal with 24V Blown Fuse Indicators	IFM20F-F24-2	28									E	E		E	E	D	
	20-Point Extra Terminal with 120V Blown Fuse Indicators	IFM20F-F120-2	29								C						D	

SLC 500 32-Point Discrete 1746 I/O Modules

Type of IFM	Description	IFM Catalog Number	Page	I/O Module Cat. No.			
				1746-IB32	1746-IV32	1746-OB32	1746-OV32
Feed-Through	40-Point Standard	IFM40F	30	H	H	H❶	H❶
	40-Point Extra Terminal	IFM40F-2	31	H	H	H❶	H❶
	40-Point Sensor	IFM40F-3	32	H	H		
LED Indicating	40-Point Standard with 24V LEDs	IFM40D24	33	H	H	H❶	H❶
	40-Point Extra Terminal with 24V LEDs for Outputs	IFM40D24-2	34			H❶	H❶
	40-Point Extra Terminal with 24V LEDs for Inputs	IFM40D24A-2	35	H	H		
	40-Point Extra Terminal with 120V LEDs for Outputs	IFM40D120-2	36				
	40-Point Extra Terminal with 120V LEDs for Inputs	IFM40D120A-2	37				
	40-Point Sensor with 24V LEDs	IFM40D24-3	38	H	H		
Fusible	40-Point Extra Terminal	IFM40F-F-2	39			H❶	H❶
	40-Point Extra Terminal with 24V Blown Fuse Indicators	IFM40F-F24-2	40			H❶	H❶
	40-Point Extra Terminal with 120V Blown Fuse Indicators	IFM40F-F120-2	41				

❶ 5.0m cable length is not recommended for use with the **1746-OB32** and **1746-OV32** SLC Output Modules.

Pre-wired Cable and IFM Selection Tables (Continued)

PLC 16-Point Discrete 1771 I/O Modules

Type of IFM	Description	IFM Catalog Number	Page	I/O Module Cat. No.								
				1771-IAD	1771-IBD	1771-ICD	1771-IGD	1771-IND	1771-OAD	1771-OBD	1771-OGD	1771-OND
Feed-Through	20-Point Standard	IFM20F	17	F	F	F	F	F	F,FF	F,FF	F	F,FF
	20-Point Extra Terminal	IFM20F-2	18	F	F	F	F	F	F,FF	F,FF	F	F,FF
	20-Point Sensor	IFM20F-3	19		F	F						
LED Indicating	20-Point Standard with 24V LEDs	IFM20D24	20		F	F		F	F,FF	F,FF		F,FF
	20-Point Standard with 120V LEDs	IFM20D120	21	F								
	20-Point Extra Terminal with 24V LEDs for Outputs	IFM20D24-2	22						F,FF	F,FF		F,FF
	20-Point Extra Terminal with 24V LEDs for Inputs	IFM20D24A-2	23		F	F		F				
	20-Point Extra Terminal with 120V LEDs for Outputs	IFM20D120-2	24						F,FF			
	20-Point Extra Terminal with 120V LEDs for Inputs	IFM20D120A-2	25	F								
	20-Point Sensor with 24V LEDs	IFM20D24-3	26		F	F						
Fusible	20-Point Extra Terminal	IFM20F-F-2	27						F	F		F
	20-Point Extra Terminal with 24V Blown Fuse Indicators	IFM20F-F24-2	28						F	F		F
	20-Point Extra Terminal with 120V Blown Fuse Indicators	IFM20F-F120-2	29						F			

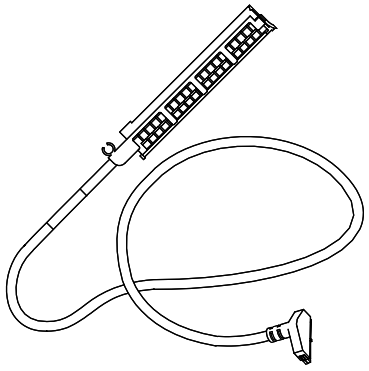
PLC 16-Point Isolated and 32-Point Discrete 1771 I/O Modules

Type of IFM	Description	IFM Catalog Number	Page	I/O Module Cat. No.												
				1771-IAN	1771-IBN	1771-ID16	1771-IQ16	1771-IVN	1771-OAN	1771-OBN	1771-OD16	1771-ODD	1771-OQ16	1771-OVN	1771-OW16	1771-OWN	1771-OWNA
Feed-Through	40-Point Standard	IFM40F	30	J	J	M	M	K	L	L	M	M	M	L	R	L	L
	40-Point Extra Terminal	IFM40F-2	31	J	J			K	L	L				L	R	L	L
	40-Point Sensor	IFM40F-3	32		J			K									
LED Indicating	40-Point Standard with 24V LEDs	IFM40D24	33		J			K		L				L		L	L
	40-Point Extra Terminal with 24V LEDs for Outputs	IFM40D24-2	34							L				L		L	L
	40-Point Extra Terminal with 24V LEDs for Inputs	IFM40D24A-2	35		J			K									
	40-Point Extra Terminal with 120V LEDs for Outputs	IFM40D120-2	36						L							L	L
	40-Point Extra Terminal with 120V LEDs for Inputs	IFM40D120A-2	37	J													
	40-Point Sensor with 24V LEDs	IFM40D24-3	38		J			K									
Fusible	40-Point Extra Terminal	IFM40F-F-2	39						L	L				L		L	L
	40-Point Extra Terminal with 24V Blown Fuse Indicators	IFM40F-F24-2	40							L				L		L	L
	40-Point Extra Terminal with 120V Blown Fuse Indicators	IFM40F-F120-2	41						L							L	L

Cable Technical Section

Both lines of the Bulletin 1492 Cables were designed to minimize control wiring in a panel. Pre-wired cables, when used with an IFM, replace the point-to-point wiring between Allen-Bradley programmable controller I/O modules and individual terminal blocks. The ready-to-wire cables provide one end of the cable preterminated, for either an IFM (IFM-ready cable) or a programmable controller I/O module (I/O module-ready cable).

Pre-wired Cables



The pre-wired cables have a 1771 Wiring Arm or 1746 Removable Terminal Block on one end and a cable connector on the other to connect to the IFM. The broad offering of pre-wired cables supports over 40 different 16- and 32-point SLC and PLC discrete I/O modules.

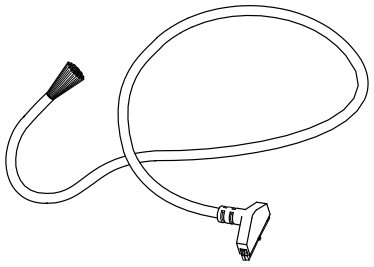
Refer to the Selection Tables on Page 10 for proper I/O module, IFM, and pre-wired cable coordination. For wiring information, refer to the IFM adhesive label cards on Pages 42 through 48.

Pre-wired Cable Specifications

Catalog Number	Cable Lengths	Insulation Rating	Conductor Size	I/O Module Connector
1492-CABLE❶A	1.0, 2.5, 5.0m	300V 80°C	#22 AWG	1746-RT25R Red Removable Terminal Block
1492-CABLE❶B	1.0, 2.5, 5.0m	300V 80°C	#22 AWG	1746-RT25B Blue Removable Terminal Block
1492-CABLE❶C	1.0, 2.5, 5.0m	300V 80°C	#22 AWG	1746-RT25R Red Removable Terminal Block
1492-CABLE❶D	1.0, 2.5, 5.0m	300V 80°C	#22 AWG	1746-RT25C Orange Removable Terminal Block
1492-CABLE❶E	1.0, 2.5, 5.0m	300V 80°C	#22 AWG	1746-RT25B Blue Removable Terminal Block
1492-CABLE❶F	1.0, 2.5, 5.0m	300V 80°C	#22 AWG	1771-WH (16-Point/21 Terminal) Wiring Arm
1492-CABLE❶FF	1.0, 2.5, 5.0m	300V 80°C	#22 AWG	1771-WHF (16-Point/21 Terminal) Fused Wiring Arm
1492-CABLE❶H	1.0, 2.5, 5.0m	300V 80°C	#26 AWG	32-Point/40 Pin Cable Connector
1492-CABLE❶J	1.0, 2.5, 5.0m	300V 80°C	#22 AWG	1771-WN (32-Point/40 Terminal) Wiring Arm
1492-CABLE❶K	1.0, 2.5, 5.0m	300V 80°C	#22 AWG	1771-WN (32-Point/40 Terminal) Wiring Arm
1492-CABLE❶L	1.0, 2.5, 5.0m	300V 80°C	#22 AWG	1771-WN (32-Point/40 Terminal) Wiring Arm
1492-CABLE❶M	1.0, 2.5, 5.0m	300V 80°C	#22 AWG	1771-WN (32-Point/40 Terminal) Wiring Arm
1492-CABLE❶R	1.0, 2.5, 5.0m	300V 80°C	#22 AWG	1771-WN (32-Point/40 Terminal) Wiring Arm

❶ Cables are available in lengths of 1.0m, 2.5m and 5.0m. To order, insert the code for the desired cable length into the Catalog Number (**"10"** = 1.0m, **"25"** = 2.5m and **"50"** = 5.0m) . **Example:** Catalog Number **1492-CABLE25A** is for a 2.5m cable for the 1746-IA16 I/O Module.

IFM-Ready Cables



IFM-ready cables have a cable connector on one end to attach to the IFM and either 20 or 40 individually colored conductors on the other (CABLE❶P and CABLE❶Q, respectively). These cables allow the IFM to be used in specialty applications that require a custom connection.

IFM-Ready Cable Specifications

Catalog Number	Cable Lengths	Insulation Rating	No. of Conductors	Conductor Size	Current/ Conductor	Compatible IFMs
1492-CABLE❶P	1.0, 2.5, 5.0m	300V 80°C	20	#22 AWG	2 Amps	IFM20_ _ _
1492-CABLE❶Q	1.0, 2.5, 5.0m	300V 80°C	40	#22 AWG	2 Amps	IFM40_ _ _

CABLE❶P Wiring

Each colored conductor is given a reference number in the tables below and on Page 14. The reference number is used in the illustrations that follow to indicate the corresponding field-side terminal.

1492-CABLE❶P

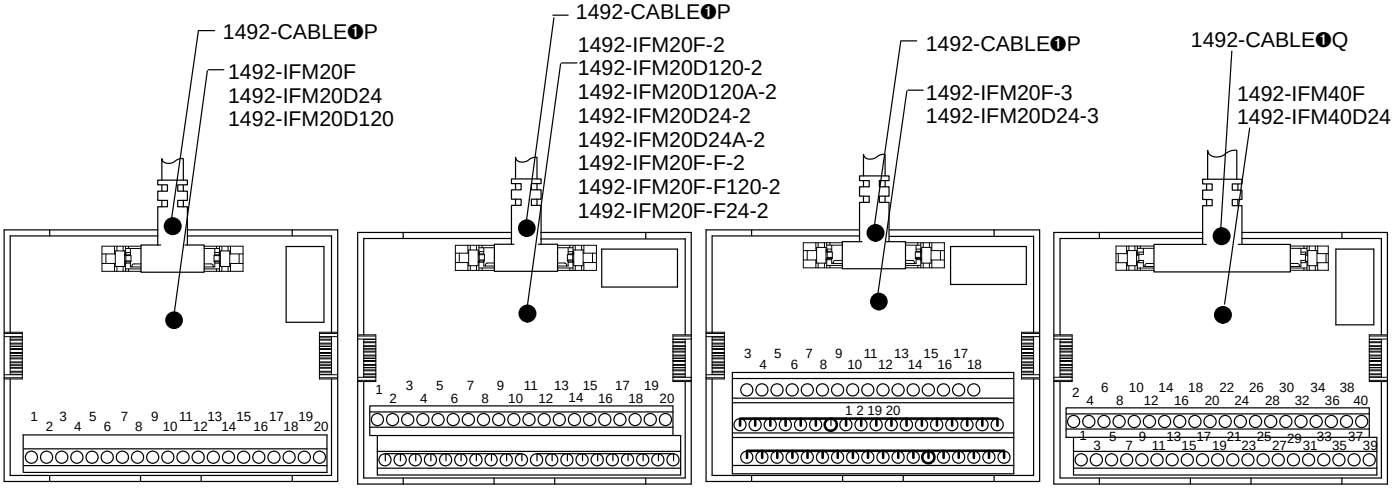
Reference Number	Wire/Stripe Color	Reference Number	Wire/Stripe Color
1	Black	11	Blue/Black
2	White	12	Black/White
3	Red	13	Red/White
4	Green	14	Green/White
5	Orange	15	Blue/White
6	Blue	16	Black/Red
7	White/Black	17	White/Red
8	Red/Black	18	Orange/Red
9	Green/Black	19	Blue/Red
10	Orange/Black	20	Red/Green

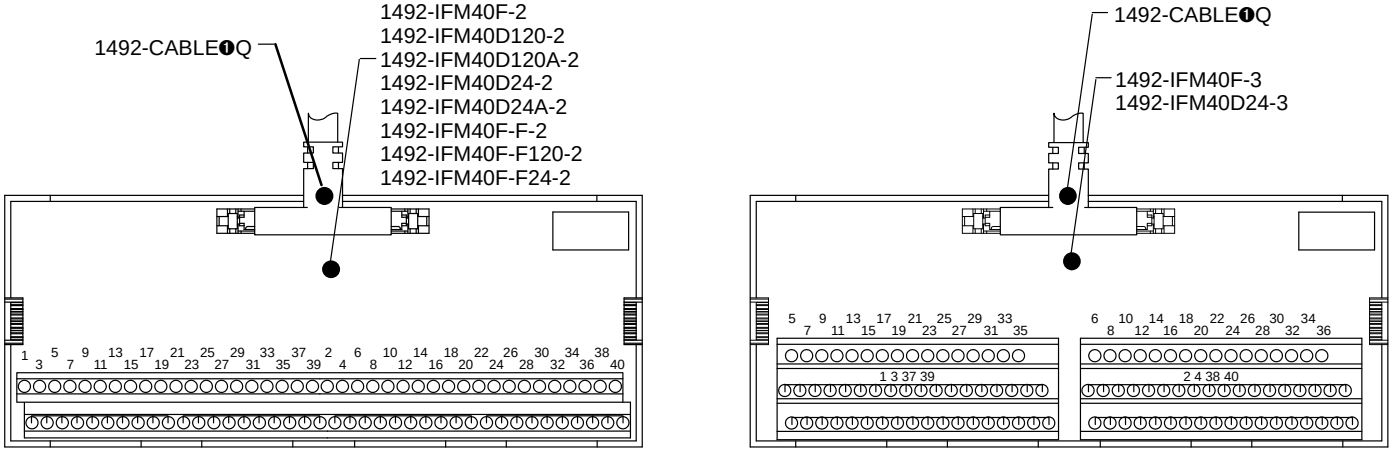
❶ Cables are available in lengths of 1.0m, 2.5m and 5.0m. To order, insert the desired cable length into the Catalog Number (**"10"** = 1.0m, **"25"** = 2.5m and **"50"** = 5.0m).
Example: Catalog Number **1492-CABLE25P** is for a 2.5m, 20 conductor IFM-ready cable.

IFM-Ready Cables (continued)
CABLE❶Q Wiring

1492-CABLE❶Q

Reference Number	Wire/Stripe Color	Reference Number	Wire/Stripe Color	Reference Number	Wire/Stripe Color
1	Black	15	Blue/White	29	White/Red - Green
2	White	16	Black/Red	30	Red/Black - Green
3	Red	17	White/Red	31	Green/Black - Orange
4	Green	18	Orange/Red	32	Orange/Black - Green
5	Orange	19	Blue/Red	33	Blue/White - Orange
6	Blue	20	Red/Green	34	Black/White - Orange
7	White/Black	21	Orange/Green	35	White/Red - Orange
8	Red/Black	22	Black/White - Red	36	Orange/White - Blue
9	Green/Black	23	White/Black - Red	37	White/Red - Blue
10	Orange/Black	24	Red/Black - White	38	Black/White - Green
11	Blue/Black	25	Green/Black - White	39	White/Black - Green
12	Black/White	26	Orange/Black - White	40	Red/White - Green
13	Red/White	27	Blue/Black - White	—	—
14	Green/White	28	Black/Red - Green	—	—

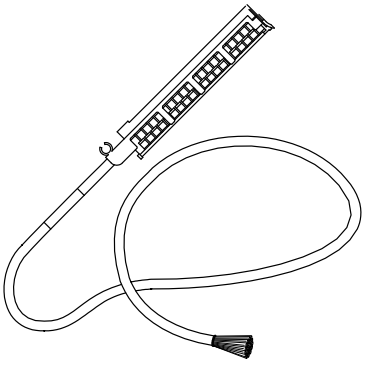




❶ Cables are available in lengths of 1.0m, 2.5m and 5.0m. To order, insert the desired cable length into the Catalog Number (**"10"** = 1.0m, **"25"** = 2.5m and **"50"** = 5.0m).

Example: Catalog Number **1492-CABLE25Q** is for a 2.5m, 40 conductor IFM-ready cable.

I/O Module-Ready Cables



The I/O module-ready cables have a pre-wired wiring arm or removable terminal block on one end to connect the programmable controller I/O module and 12 - 40 individually colored #18 AWG conductors on the other. These cables provide the convenience of a pre-wired I/O module connector while still allowing the flexibility to wire to standard terminal blocks.

Pre-wired I/O module connectors include:

1771-WH 16-point wiring arm (CABLE❶WH)
1771-WN 32-point wiring arm (CABLE❶WN)
1771-WHF 16-point fused wiring arm (with fuses) (CABLE❶WHF)
1771-WD 6-point wiring arm (CABLE❶WD)
1771-WA 8-point wiring arm (CABLE❶WA)
1746 16-point removable terminal blocks in Red, Blue and Orange (CABLE❶RTBR, ❶RTBB, ❶RTBO)

I/O Module-Ready Cable Specifications

Catalog Number	Cable Lengths	Insulation Rating	Number of Conductors	Conductor Size	I/O Module Connector
1492-CABLE❶RTBB	1.0, 2.5, 5.0m	300V 80°C	20❷	#18 AWG	1771-RT25B Blue Removable Terminal Block
1492-CABLE❶RTBO	1.0, 2.5, 5.0m	300V 80°C	20❷	#18 AWG	1771-RT25C Orange Removable Terminal Block
1492-CABLE❶RTBR	1.0, 2.5, 5.0m	300V 80°C	20❷	#18 AWG	1771-RT25R Red Removable Terminal Block
1492-CABLE❶WA	1.0, 2.5, 5.0m	300V 80°C	12❷	#18 AWG	1771-WA (8-Point/10 Terminal) Wiring Arm
1492-CABLE❶WD	1.0, 2.5, 5.0m	300V 80°C	12	#18 AWG	1771-WD (6-Point/12 Terminal) Wiring Arm
1492-CABLE❶WH	1.0, 2.5, 5.0m	300V 80°C	20	#18 AWG	1771-WH (16-Point/21 Terminal) Wiring Arm
1492-CABLE❶WHF	1.0, 2.5, 5.0m	300V 80°C	20	#18 AWG	1771-WHF (16-Point/21 Terminal) Fused Wiring Arm
1492-CABLE❶WN	1.0, 2.5, 5.0m	300V 80°C	40	#18 AWG	1771-WN (32-Point/40 Terminal) Wiring Arm

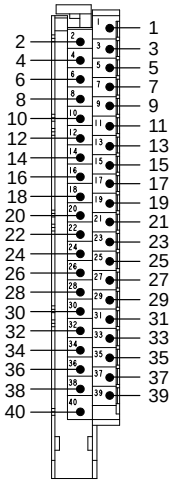
❶ Cables are available in lengths of 1.0m, 2.5m and 5.0m. To order, insert the code for the desired cable length into the Catalog Number (**"10"** = 1.0m, **"25"** = 2.5m and **"50"** = 5.0m). **Example:** Catalog Number **1492-CABLE25WH** is for a 2.5m cable with a pre-wired 1771-WH Wiring Arm on one end.

❷ Two conductors are not wired to I/O module connector.

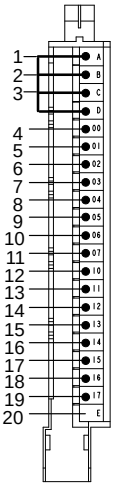
I/O Module-Ready Cables (Continued)

Below is the wire color table for I/O module-ready cables. Each colored conductor is given a reference number in the table. The reference number is used in the illustrations that follow to indicate the corresponding screw terminal.

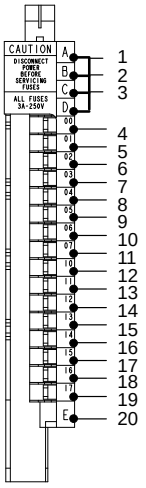
Reference Number	Wire/Stripe Color	Reference Number	Wire/Stripe Color
1	Black	21	Orange/Green
2	White	22	Black/White - Red
3	Red	23	White/Black - Red
4	Green	24	Red/Black - White
5	Orange	25	Green/Black - White
6	Blue	26	Orange/Black - White
7	White/Black	27	Blue/Black - White
8	Red/Black	28	Black/Red - Green
9	Green/Black	29	White/Red - Green
10	Orange/Black	30	Red/Black - Green
11	Blue/Black	31	Green/Black - Orange
12	Black/White	32	Orange/Black - Green
13	Red/White	33	Blue/White - Orange
14	Green/White	34	Black/White - Orange
15	Blue/White	35	White/Red - Orange
16	Black/Red	36	Orange/White - Blue
17	White/Red	37	White/Red - Blue
18	Orange/Red	38	Black/White - Green
19	Blue/Red	39	White/Black - Green
20	Red/Green	40	Red/White - Green



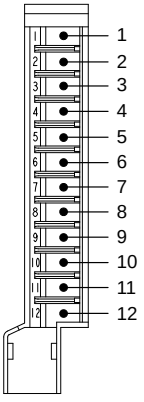
1492-CABLE❶WN



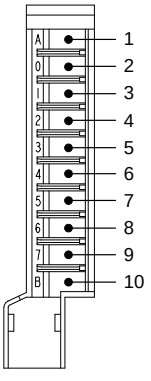
1492-CABLE❶WH



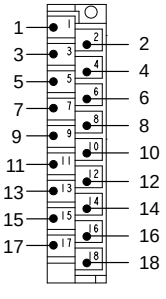
1492-CABLE❶WHF



1492-CABLE❶WD



1492-CABLE❶WA



1492-CABLE❶RTBR
1492-CABLE❶RTBB
1492-CABLE❶RTBO

❶ Cables are available in lengths of 1.0m, 2.5m and 5.0m. To order, insert the code for the desired cable length into the Catalog Number (**"10"** = 1.0m, **"25"** = 2.5m and **"50"** = 5.0m). **Example:** Catalog Number **1492-CABLE25WH** is for a 2.5m cable with a pre-wired 1771-WH Wiring Arm on one end.

Specifications (IFM20F)

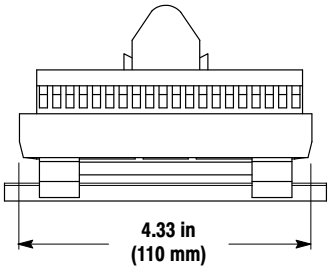
94-593-20

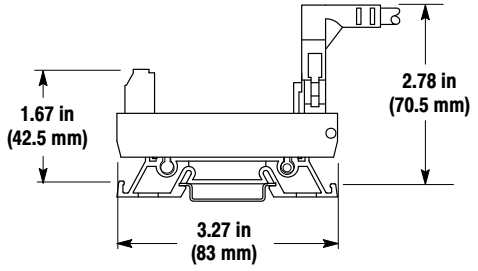
Approvals	UL Component Recognized (File E113724 Guide NRAQ2)
	CSA Certified (File LR1234 Class 321107)
Voltage Ratings	0 - 132V AC/DC
Maximum Current per Circuit	2A
Maximum Current per Module	12A
Indicator Circuit Current	NA
Number of Terminals per Device Common	NA
Wire Range (Rated Cross Section)	#22 – #12 AWG (0.2-4mm)
Wire Strip Length	0.32 in (8mm)
Recommended Screw Tightening Torque	3.5-4.5 lb-in (0.38-0.50 Nm)
Operating Temperature Range	0°C to +60°C

Application Notes

1. **Compatibility -** To ensure proper operation with the I/O module, do ***not*** exceed the voltage and current ratings of the IFM.
2. **Wiring -** Make ***all*** connections indicated on the adhesive labels. Refer to Label Section on Page 42.

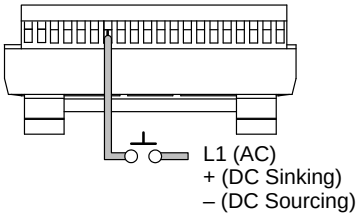
Dimensions





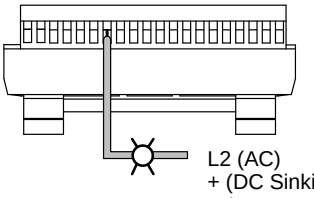
Wiring

Input Modules



AC	DC Sinking		DC Sourcing
1746-IA16	1746-IB16	1771-IAD	1746-IG16
1746-IN16	1746-IN16	1771-IBD	1746-ITV16
1771-IAD	1746-ITB16	1771-ICD	1746-IV16
1771-IND		1771-IND	1771-IGD

Output Modules



AC	DC Sinking	DC Sourcing
1746-OA16	1746-OG16	1746-OB16
1746-OW16	1746-OV16	1746-OBP16
1746-OX8	1746-OVP16	1746-OW16
1771-OAD	1771-OGD	1746-OX8
1771-OND		1771-OBD

Specifications (IFM20F-2)

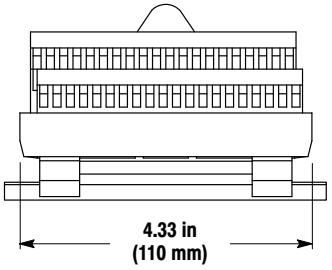
94-593-22

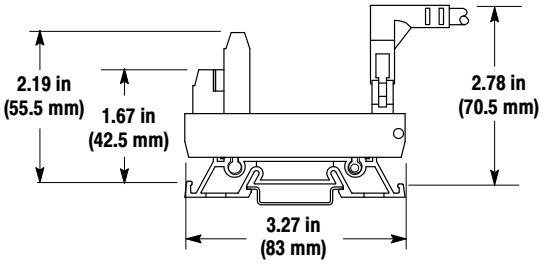
Approvals	UL Component Recognized (File E113724 Guide NRAQ2)
	CSA Certified (File LR1234 Class 321107)
Voltage Ratings	0 - 132V AC/DC
Maximum Current per Circuit	2A
Maximum Current per Module	12A
Indicator Circuit Current	NA
Number of Terminals per Device Common	10
Wire Range (Rated Cross Section)	#22 – #12 AWG (0.2-4mm)
Wire Strip Length	0.32 in (8mm)
Recommended Screw Tightening Torque	3.5-4.5 lb-in (0.38-0.50 Nm)
Operating Temperature Range	0°C to +60°C

Application Notes

1. **Compatibility -** To ensure proper operation with the I/O module, do ***not*** exceed the voltage and current ratings of the IFM.
2. **Isolation -** The power bus is isolated into 2 groups of 10 terminals. This allows each group of I/O devices to reference a different power source.
3. **Wiring -** Make ***all*** connections indicated on the adhesive labels. Refer to Label Section on Page 42. If one power source is used for all I/O devices, the power busses may be jumpered together.

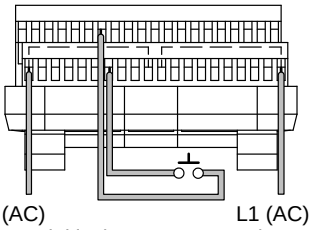
Dimensions





Wiring

Input Modules

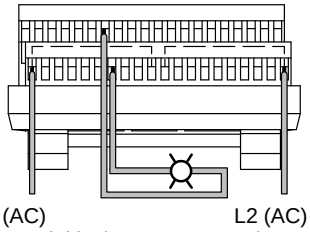


L1 (AC)
+ (DC Sinking)
– (DC Sourcing)

L1 (AC)
+ (DC Sinking)
– (DC Sourcing)

AC	DC Sinking	DC Sourcing
1746-IA16	1746-IB16	1746-IG16
1746-IN16	1746-IN16	1746-ITV16
1771-IAD	1746-ITB16	1746-IV16
1771-IND	1771-IAD	1771-IGD
	1771-IBD	
	1771-ICD	
	1771-IND	

Output Modules



L2 (AC)
+ (DC Sinking)
– (DC Sourcing)

L2 (AC)
+ (DC Sinking)
– (DC Sourcing)

AC	DC Sinking	DC Sourcing
1746-OA16	1746-OG16	1746-OB16
1746-OW16	1746-OV16	1746-OBP16
1746-OX8	1746-OVP16	1746-OW16
1771-OAD	1771-OGD	1771-OBD
1771-OND		

Specifications (IFM20F-3)

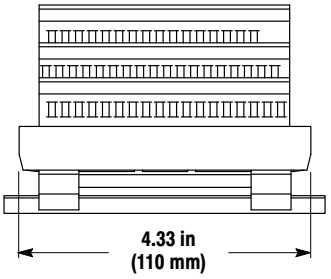
94-593-10

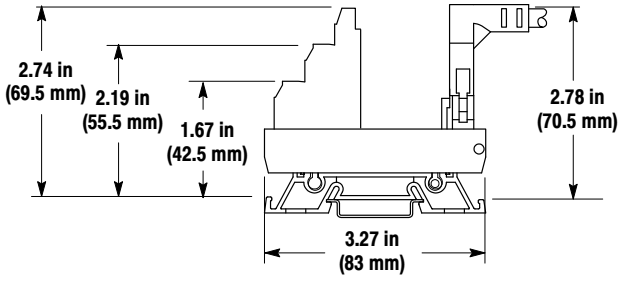
Approvals	UL Component Recognized (File E113724 Guide NRAQ2)
	CSA Certified (File LR1234 Class 321107)
Voltage Ratings	0 – 60V AC/DC
Maximum Current per Circuit	2A
Maximum Current per Module	12A
Indicator Circuit Current	NA
Number of Terminals per Device Common	18
Wire Range (Rated Cross Section)	#22 – #12 AWG (0.2-4mm)
Wire Strip Length	0.32 in (8mm)
Recommended Screw Tightening Torque	3.5-4.5 lb-in (0.38-0.50 Nm)
Operating Temperature Range	0°C to +60°C

Application Notes

1. **Compatibility -** To ensure proper operation with the I/O module, do ***not*** exceed the voltage and current ratings of the IFM.
2. **Isolation -** The power busses are connected to one common (18 terminals). All of the input devices used must reference the same power source.
3. **Wiring -** Make ***all*** connections indicated on the adhesive labels. Refer to Label Section on Page 42.

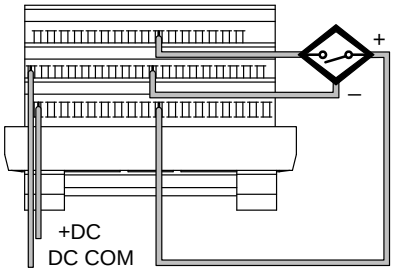
Dimensions





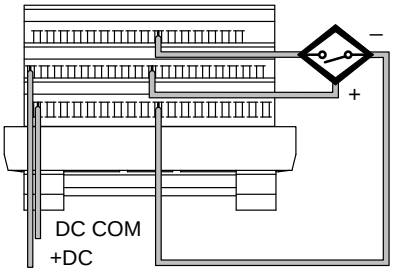
Wiring

DC Sinking Input Modules



1746-IB16
1746-IN16
1746-ITB16
1771-IBD
1771-ICD

DC Sourcing Input Modules



1746-ITV16
1746-IV16

Specifications (IFM20D24)

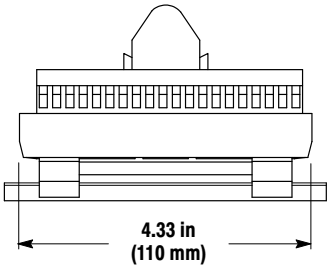
94-593-14

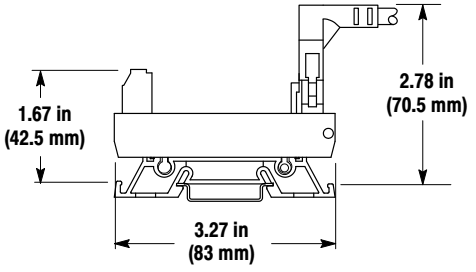
Approvals	UL Component Recognized (File E113724 Guide NRAQ2)
	CSA Certified (File LR1234 Class 321107)
Voltage Ratings	10 – 30V AC/DC
Maximum Current per Circuit	2A
Maximum Current per Module	12A
Indicator Circuit Current (Maximum)	2.0mA
Number of Terminals per Device Common	16
Wire Range (Rated Cross Section)	#22 – #12 AWG (0.2-4mm)
Wire Strip Length	0.32 in (8mm)
Recommended Screw Tightening Torque	3.5-4.5 lb-in (0.38-0.50 Nm)
Operating Temperature Range	0°C to +60°C

Application Notes

1. **Compatibility -** To ensure proper operation with the I/O module, do ***not*** exceed the voltage and current ratings of the IFM. When this IFM is used with a hard contact (relay) output circuit that switches an inductive load, surge suppression must be used (i.e., a 1N4004 diode reverse-wired across a DC load).
2. **Isolation -** The LEDs are connected to one common. All of the I/O devices used must reference the same power source.
3. **Wiring -** Make ***all*** connections indicated on the adhesive labels. Refer to Label Section on Page 42. The LEDs are powered off of the 2-position terminal block. Make only one connection to the power source for normal operation. The “test” push button and wiring connection are only used to test the LEDs.

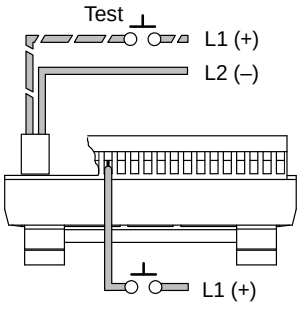
Dimensions





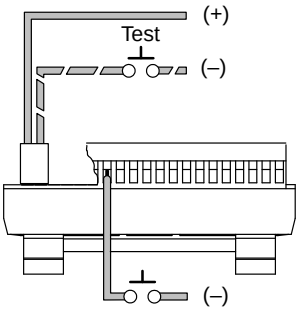
Wiring

AC or DC Sinking Input Modules



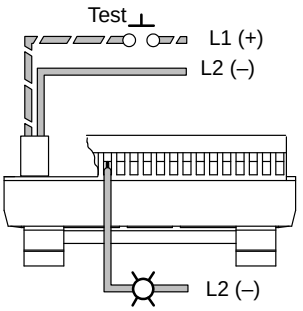
AC	DC Sinking	
1746-IN16	1746-IB16	1771-IBD
1771-IND	1746-IN16	1771-ICD
	1746-ITB16	1771-IND

DC Sourcing Input Modules



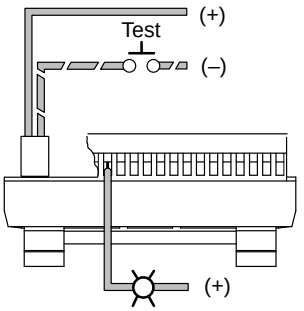
DC Sourcing
1746-ITV16
1746-IV16

AC or DC Sourcing Output Modules



AC	DC Sourcing	
1746-OW16	1746-OB16	1771-OAD
1771-OAD	1746-OBP16	1771-OBD
1771-OND	1746-OW16	1771-OND

DC Sinking Output Modules



DC Sinking
1746-OV16
1746-OVP16

Specifications (IFM20D120)

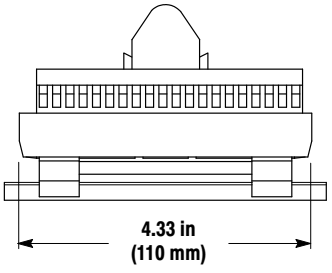
94-593-24

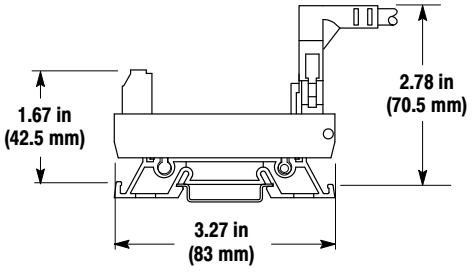
Approvals	UL Component Recognized (File E113724 Guide NRAQ2)
	CSA Certified (File LR1234 Class 321107)
Voltage Ratings	85 – 132V AC/DC
Maximum Current per Circuit	2A
Maximum Current per Module	12A
Indicator Circuit Current (Maximum)	2.5mA
Number of Terminals per Device Common	8
Wire Range (Rated Cross Section)	#22 – #12 AWG (0.2-4mm)
Wire Strip Length	0.32 in (8mm)
Recommended Screw Tightening Torque	3.5-4.5 lb-in (0.38-0.50 Nm)
Operating Temperature Range	0°C to +60°C

Application Notes

1. **Compatibility -** To ensure proper operation with the I/O module, do ***not*** exceed the voltage and current ratings of the IFM. This IFM is not recommended for use with input devices or programmable controller output circuits having an off-state leakage current exceeding 0.5mA. Use IFM20D120A-2 for input modules and IFM20D120-2 for output modules. When this IFM is used with a hard contact (relay) output circuit that switches an inductive load, surge suppression must be used (i.e., a 1N4004 diode reverse-wired across a DC load).
2. **Isolation -** The LEDs are isolated into 2 groups of 8. This allows each group of I/O devices to reference a different power source.
3. **Wiring -** Make ***all*** connections indicated on the adhesive labels. Refer to Label Section on Page 42. If one power source is used for all I/O devices, the 2 LED power terminals may be jumpered together.

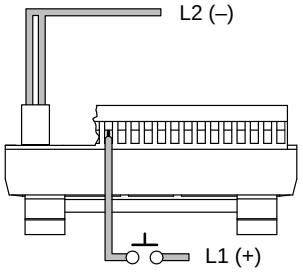
Dimensions





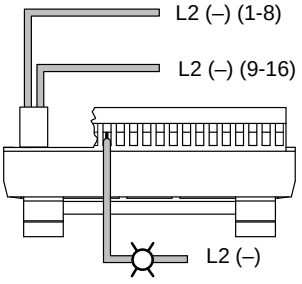
Wiring

Input Modules



1746-IA16
1771-IAD

Output Modules



1746-OA16
1746-OW16

Specifications (IFM20D24-2)

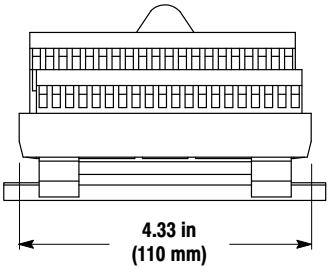
94-593-19

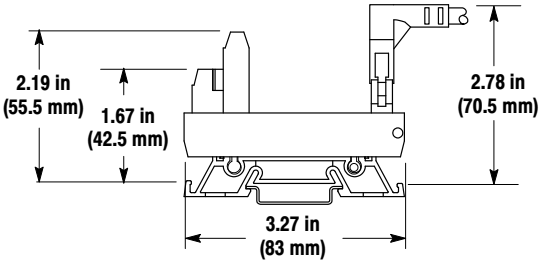
Approvals	UL Component Recognized (File E113724 Guide NRAQ2)
	CSA Certified (File LR1234 Class 321107)
Voltage Ratings	10 – 30V AC/DC
Maximum Current per Circuit	2A
Maximum Current per Module	12A
Indicator Circuit Current (Maximum)	2.0mA
Number of Terminals per Device Common	10
Wire Range (Rated Cross Section)	#22 – #12 AWG (0.2-4mm)
Wire Strip Length	0.32 in (8mm)
Recommended Screw Tightening Torque	3.5-4.5 lb-in (0.38-0.50 Nm)
Operating Temperature Range	0°C to +60°C

Application Notes

1. **Compatibility -** To ensure proper operation with the output module, do ***not*** exceed the voltage and current ratings of the IFM. When this IFM is used with a hard contact (relay) output circuit that switches an inductive load, surge suppression must be used (i.e., a 1N4004 diode reverse-wired across a DC load).
2. **Isolation -** The power bus and LEDs are isolated into 2 groups of 10 terminals (8 LEDs). This allows each group of output devices to reference a different power source.
3. **Wiring -** Make ***all*** connections indicated on the adhesive labels. Refer to Label Section on Page 42. If one power source is used for all output devices, the power busses may be jumpered together.

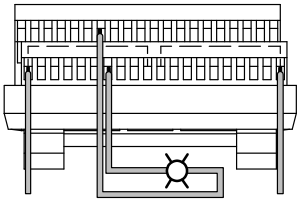
Dimensions





Wiring

Output Modules



L2 (AC)
+ (DC Sinking)
– (DC Sourcing)

L2 (AC)
+ (DC Sinking)
– (DC Sourcing)

AC	DC Sinking	DC Sourcing	
1746-OW16	1746-OV16	1746-OB16	1771-OAD
1771-OAD	1746-OVP16	1746-OBP16	1771-OBD
1771-OND		1746-OW16	1771-OND

Specifications (IFM20D24A-2)

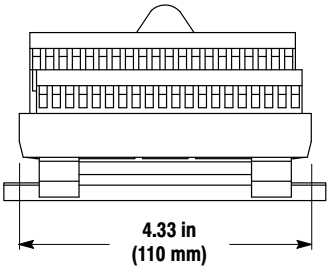
94-593-19R

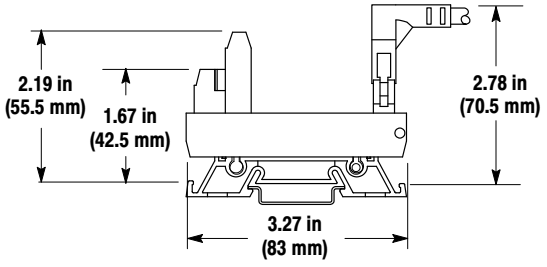
Approvals	UL Component Recognized (File E113724 Guide NRAQ2)
	CSA Certified (File LR1234 Class 321107)
Voltage Ratings	10 – 30V AC/DC
Maximum Current per Circuit	2A
Maximum Current per Module	12A
Indicator Circuit Current (Maximum)	2.0mA
Number of Terminals per Device Common	20
Wire Range (Rated Cross Section)	#22 – #12 AWG (0.2-4mm)
Wire Strip Length	0.32 in (8mm)
Recommended Screw Tightening Torque	3.5-4.5 lb-in (0.38-0.50 Nm)
Operating Temperature Range	0°C to +60°C

Application Notes

1. **Compatibility -** To ensure proper operation with the input module, do ***not*** exceed the voltage and current ratings of the IFM.
2. **Isolation -** The power bus and LEDs are connected into 1 group of 20 terminals (16 LEDs).
3. **Wiring -** Make ***all*** connections indicated on the adhesive labels. Refer to Label Section on Page 42. All 20 terminals on the lower level are internally connected.

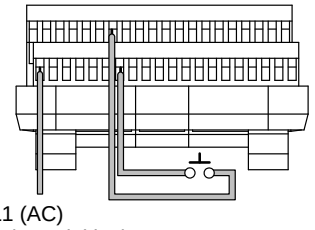
Dimensions





Wiring

Input Modules



L1 (AC)
+ (DC Sinking)
– (DC Sourcing)

AC	DC Sinking		DC Sourcing
1746-IN16	1746-IB16	1771-IBD	1746-ITV16
1771-IND	1746-IN16	1771-ICD	1746-IV16
	1746-ITB16	1771-IND	

Specifications (IFM20D120-2)

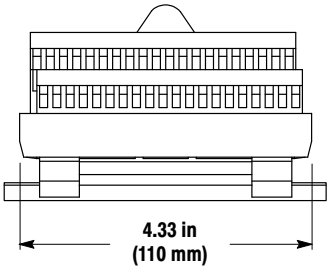
94-593-15

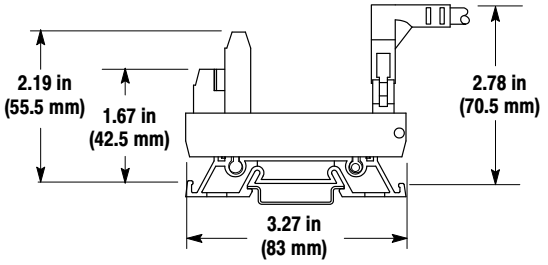
Approvals	UL Component Recognized (File E113724 Guide NRAQ2)
	CSA Certified (File LR1234 Class 321107)
Voltage Ratings	85 – 132V AC
Maximum Current per Circuit	2A
Maximum Current per Module	12A
Indicator Circuit Current (Maximum)	2.5mA
Number of Terminals per Device Common	10
Wire Range (Rated Cross Section)	#22 – #12 AWG (0.2-4mm)
Wire Strip Length	0.32 in (8mm)
Recommended Screw Tightening Torque	3.5-4.5 lb-in (0.38-0.50 Nm)
Operating Temperature Range	0°C to +60°C

Application Notes

1. **Compatibility -** To ensure proper operation with the output module, do ***not*** exceed the voltage and current ratings of the IFM. When this IFM is used with a hard contact (relay) output circuit that switches an inductive load, surge suppression must be used (i.e., a 1N4004 diode reverse-wired across a DC load).
2. **Isolation -** The power bus and LEDs are isolated into 2 groups of 10 terminals (8 LEDs). This allows each group of output devices to reference a different power source.
3. **Wiring -** Make ***all*** connections indicated on the adhesive labels. Refer to Label Section on Page 42. If one power source is used for all output devices, the power busses may be jumpered together.

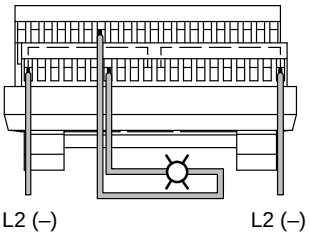
Dimensions





Wiring

Output Modules



1746-OA16
1746-OW16
1771-OAD

Specifications (IFM20D120A-2)

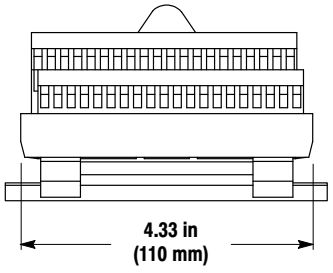
94-593-15R

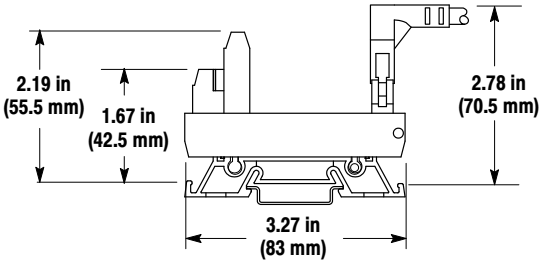
Approvals	UL Component Recognized (File E113724 Guide NRAQ2)
	CSA Certified (File LR1234 Class 321107)
Voltage Ratings	85 – 132V AC
Maximum Current per Circuit	2A
Maximum Current per Module	12A
Indicator Circuit Current (Maximum)	2.5mA
Number of Terminals per Device Common	20
Wire Range (Rated Cross Section)	#22 – #12 AWG (0.2-4mm)
Wire Strip Length	0.32 in (8mm)
Recommended Screw Tightening Torque	3.5-4.5 lb-in (0.38-0.50 Nm)
Operating Temperature Range	0°C to +60°C

Application Notes

1. **Compatibility -** To ensure proper operation with the input module, do ***not*** exceed the voltage and current ratings of the IFM.
2. **Isolation -** The power bus and LEDs are connected into 1 group of 20 terminals (16 LEDs).
3. **Wiring -** Make ***all*** connections indicated on the adhesive labels. Refer to Label Section on Page 42. All 20 terminals on the lower level are internally connected.

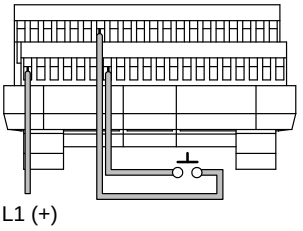
Dimensions





Wiring

Input Modules



1746-IA16
1771-IAD

Specifications (IFM20D24-3)

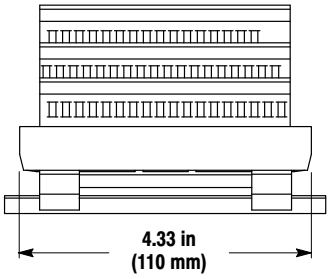
94-593-23

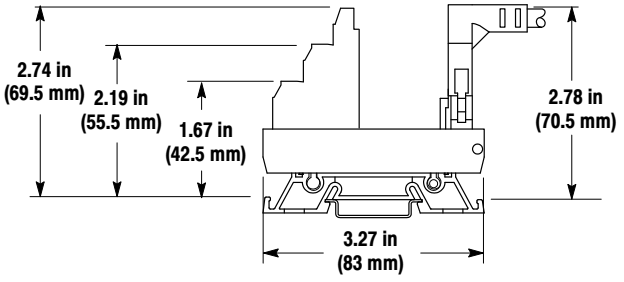
Approvals	UL Component Recognized (File E113724 Guide NRAQ2)
	CSA Certified (File LR1234 Class 321107)
Voltage Ratings	10 – 30V AC/DC
Maximum Current per Circuit	2A
Maximum Current per Module	12A
Indicator Circuit Current (Maximum)	2.0mA
Number of Terminals per Device Common	18
Wire Range (Rated Cross Section)	#22 – #12 AWG (0.2-4mm)
Wire Strip Length	0.32 in (8mm)
Recommended Screw Tightening Torque	3.5-4.5 lb-in (0.38-0.50 Nm)
Operating Temperature Range	0°C to +60°C

Application Notes

1. **Compatibility -** To ensure proper operation with the I/O module, do ***not*** exceed the voltage and current ratings of the IFM.
2. **Isolation -** The LEDs are connected to one common. All of the input devices used must reference the same power source.
3. **Wiring -** Make ***all*** connections indicated on the adhesive labels. Refer to Label Section on Page 42.

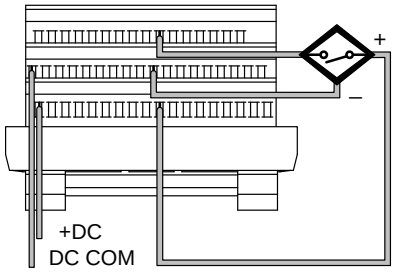
Dimensions





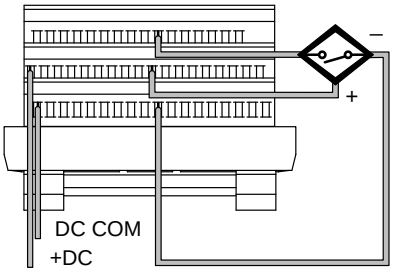
Wiring

DC Sinking Input Modules



1746-IB16
1746-IN16
1746-ITB16
1771-IBD
1771-ICD

DC Sourcing Input Modules



1746-ITV16
1746-IV16

Specifications (IFM20F-F-2)

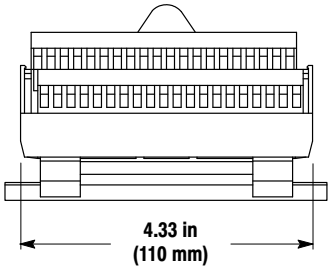
94-593-6

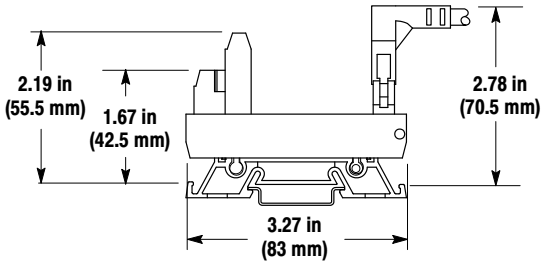
Approvals	UL Component Recognized (File E113724 Guide NRAQ2)
	CSA Certified (File LR1234 Class 321107)
Voltage Ratings	0 – 132V AC/DC
Maximum Current per Circuit	2A
Maximum Current per Module	12A
Indicator Circuit Current	NA
Number of Terminals per Device Common	10
Wire Range (Rated Cross Section)	#22 – #12 AWG (0.2-4mm)
Wire Strip Length	0.32 in (8mm)
Recommended Screw Tightening Torque	3.5-4.5 lb-in (0.38-0.50 Nm)
Operating Temperature Range	0°C to +60°C

Application Notes

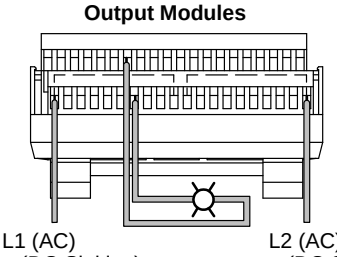
1. **Compatibility -** To ensure proper operation with the I/O module, do ***not*** exceed the voltage and current ratings of the IFM.
2. **Isolation -** The power bus and fuse clips are isolated into 2 groups of 10 terminals (8 fuse clips). This allows each group of output devices to reference a different power source.
3. **Wiring -** Make ***all*** connections indicated on the adhesive labels. Refer to Label Section on Page 42. If one power source is used for all I/O devices, the power busses may be jumpered together. Twenty fuse holders are included with the IFM. Fuses are not included. Do not exceed 2A per output, 12A per IFM.

Dimensions





Wiring



AC	DC Sinking	DC Sourcing
1746-OA16	1746-OG16	1746-OB16
1746-OW16	1746-OV16	1746-OBP16
1771-OAD	1746-OVP16	1746-OW16
1771-OND	1771-OGD	1771-OBD

Specifications (IFM20F-F24-2)

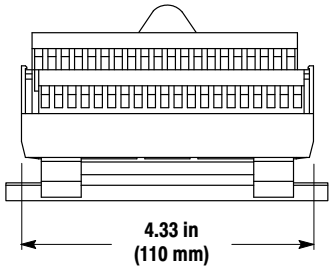
94-593-5

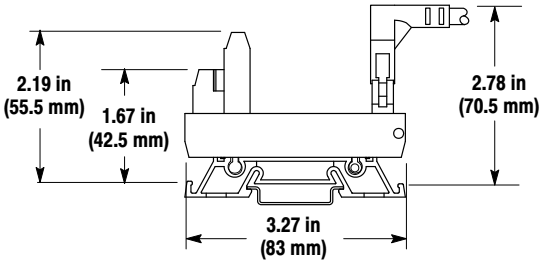
Approvals	UL Component Recognized (File E113724 Guide NRAQ2)
	CSA Certified (File LR1234 Class 321107)
Voltage Ratings	10 – 30V AC/DC
Maximum Current per Circuit	2A
Maximum Current per Module	12A
Indicator Circuit Current (Maximum)	2.0mA
Number of Terminals per Device Common	10
Wire Range (Rated Cross Section)	#22 – #12 AWG (0.2-4mm)
Wire Strip Length	0.32 in (8mm)
Recommended Screw Tightening Torque	3.5-4.5 lb-in (0.38-0.50 Nm)
Operating Temperature Range	0°C to +60°C

Application Notes

1. **Compatibility -** To ensure proper operation with the I/O module, do ***not*** exceed the voltage and current ratings of the IFM. When this IFM is used with a hard contact (relay) output circuit that switches an inductive load, surge suppression must be used (i.e., a 1N4004 diode reverse-wired across a DC load).
2. **Isolation -** The power bus, fuse clips and blown fuse indicators are isolated into 2 groups of 10 terminals (8 fuse clips and blown fuse indicators). This allows each group of output devices to reference a different power source.
3. **Wiring -** Make ***all*** connections indicated on the adhesive labels. Refer to Label Section on Page 42. If one power source is used for all I/O devices, the power busses may be jumpered together. Twenty fuse holders are included with the IFM. Fuses are not included. Do not exceed 2A per output, 12A per IFM.

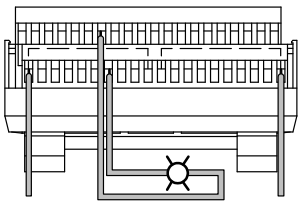
Dimensions





Wiring

Output Modules



L1 (AC)
+ (DC Sinking)
– (DC Sourcing)

L2 (AC)
+ (DC Sinking)
– (DC Sourcing)

AC	DC Sinking	DC Sourcing
1746-OW16	1746-OV16	1746-OB16
1771-OAD	1746-OVP16	1746-OBP16
1771-OND		1746-OW16
		1771-OAD
		1771-OBD
		1771-OND

Specifications (IFM20F-F120-2)

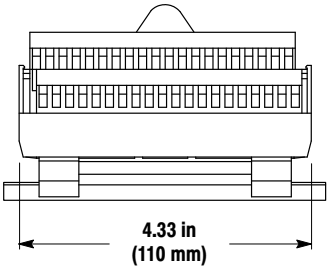
94-593-3

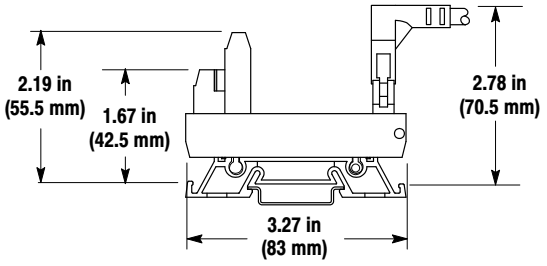
Approvals	UL Component Recognized (File E113724 Guide NRAQ2)
	CSA Certified (File LR1234 Class 321107)
Voltage Ratings	85 – 132V AC/DC
Maximum Current per Circuit	2A
Maximum Current per Module	12A
Indicator Circuit Current (Maximum)	2.5mA
Number of Terminals per Device Common	10
Wire Range (Rated Cross Section)	#22 – #12 AWG (0.2-4mm)
Wire Strip Length	0.32 in (8mm)
Recommended Screw Tightening Torque	3.5-4.5 lb-in (0.38-0.50 Nm)
Operating Temperature Range	0°C to +60°C

Application Notes

1. **Compatibility -** To ensure proper operation with the I/O module, do ***not*** exceed the voltage and current ratings of the IFM. When this IFM is used with a hard contact (relay) output circuit that switches an inductive load, surge suppression must be used (i.e., a 1N4004 diode reverse-wired across a DC load).
2. **Isolation -** The power bus, fuse clips and blown fuse indicators are isolated into 2 groups of 10 terminals (8 fuse clips and blown fuse indicators). This allows each group of output devices to reference a different power source.
3. **Wiring -** Make **all** connections indicated on the adhesive labels. Refer to Label Section on Page 42. If one power source is used for all I/O devices, the power busses may be jumpered together. Twenty fuse holders are included with the IFM. Fuses are not included. Do not exceed 2A per output, 12A per IFM.

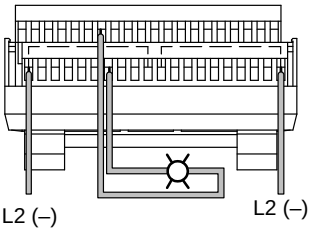
Dimensions





Wiring

Output Modules



1746-OA16
1746-OW16
1771-OAD

Specifications (IFM40F)

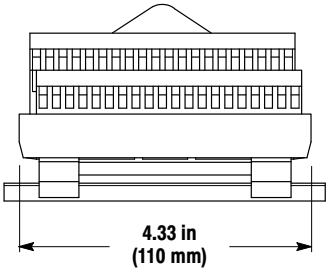
94-593-18

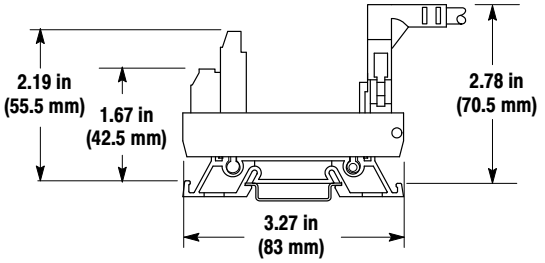
Approvals	UL Component Recognized (File E113724 Guide NRAQ2)
	CSA Certified (File LR1234 Class 321107)
Voltage Ratings	0 - 132V AC/DC
Maximum Current per Circuit	2A
Maximum Current per Module	12A
Indicator Circuit Current	NA
Number of Terminals per Device Common	NA
Wire Range (Rated Cross Section)	#22 – #12 AWG (0.2-4mm)
Wire Strip Length	0.32 in (8mm)
Recommended Screw Tightening Torque	3.5-4.5 lb-in (0.38-0.50 Nm)
Operating Temperature Range	0°C to +60°C

Application Notes

1. **Compatibility -** To ensure proper operation with the I/O module, do ***not*** exceed the voltage and current ratings of the IFM.
2. **Wiring -** Make ***all*** connections indicated on the adhesive labels. Refer to Label Section on Page 42.

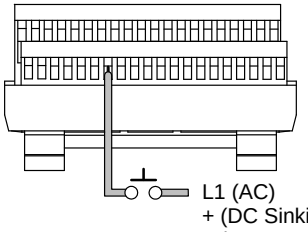
Dimensions





Wiring

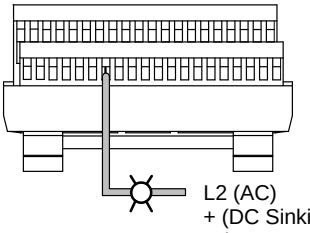
Input Modules



AC	DC Sinking	DC Sourcing
1771-IAN	1746-IB32	1746-IV32
1771-ID16	1771-IBN	1771-IQ16
	1771-ID16	1771-IVN
	1771-IQ16	

NOTE: When the **1771-IQ16** is used in a current sourcing mode, the input device is connected to the supply terminal on the IFM and the supply is connected to the input terminal (see Publication 1771-2.180).

Output Modules



AC	DC Sinking	DC Sourcing
1771-OD16	1746-OV32	1746-OB32
1771-ODD	1771-OQ16	1771-OBN
1771-OAN	1771-OVN	1771-OQ16
1771-OWN	1771-OWN	1771-OWN
1771-OWNA	1771-OWNA	1771-OWNA

NOTE: When the **1771-OQ16** is used in a current sinking mode, the input device is connected to the supply terminal on the IFM and the supply is connected to the output terminal (see Publication 1771-2.180).

NOTE: For **1771-OW16** reed relay connections, see Adhesive Label Card on Page 43 and/or Publication 1771-2.181.

Specifications (IFM40F-2)

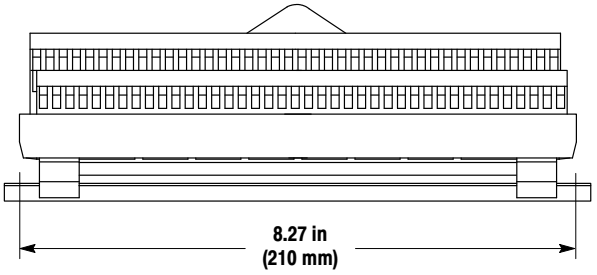
94-593-4

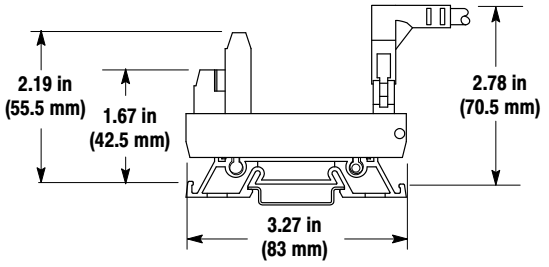
Approvals	UL Component Recognized (File E113724 Guide NRAQ2)
	CSA Certified (File LR1234 Class 321107)
Voltage Ratings	0 - 132V AC/DC
Maximum Current per Circuit	2A
Maximum Current per Module	12A
Indicator Circuit Current	NA
Number of Terminals per Device Common	10
Wire Range (Rated Cross Section)	#22 – #12 AWG (0.2-4mm)
Wire Strip Length	0.32 in (8mm)
Recommended Screw Tightening Torque	3.5-4.5 lb-in (0.38-0.50 Nm)
Operating Temperature Range	0°C to +60°C

Application Notes

1. **Compatibility -** To ensure proper operation with the I/O module, do ***not*** exceed the voltage and current ratings of the IFM.
2. **Isolation -** The power bus is isolated into 4 groups of 10 terminals. This allows each group of the I/O devices to reference a different power source.
3. **Wiring -** Make ***all*** connections indicated on the adhesive labels. Refer to Label Section on Page 42. If one power source is used for all I/O devices, the power busses may be jumpered together.

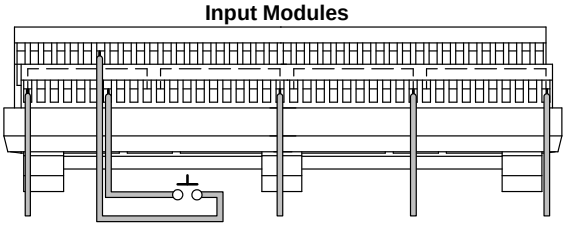
Dimensions





Wiring

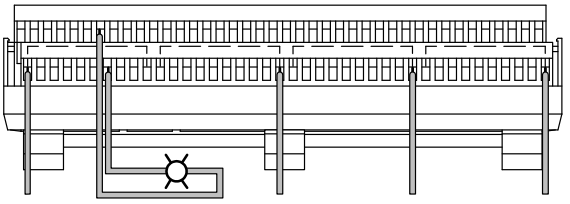
Input Modules



AC	(L1)		(L1)	(L1)	(L1)
DC Sinking	(+)		(+)	(+)	(+)
DC Sourcing	(–)		(–)	(–)	(–)

AC	DC Sinking	DC Sourcing
1771-IAN	1746-IB32	1746-IV32
	1771-IBN	1771-IVN

Output Modules



AC	(L2)		(L2)	(L2)	(L2)
DC Sinking	(+)		(+)	(+)	(+)
DC Sourcing	(–)		(–)	(–)	(–)

AC	DC Sinking	DC Sourcing
1771-OAN	1746-OV32	1746-OB32
1771-OWN	1771-OVN	1771-OBN
1771-OWNA	1771-OWN	1771-OWN
	1771-OWNA	1771-OWNA

NOTE: For **1771-OW16** reed relay connections, see Adhesive Label Card on Page 47 and/or Publication 1771-2.181.

Specifications (IFM40F-3)

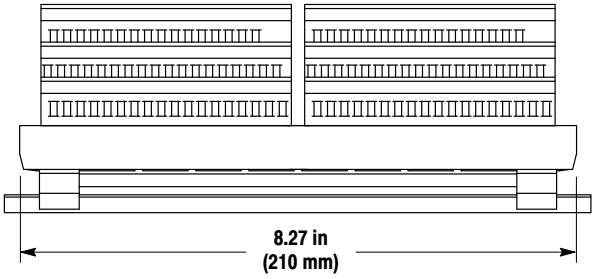
94-593-26

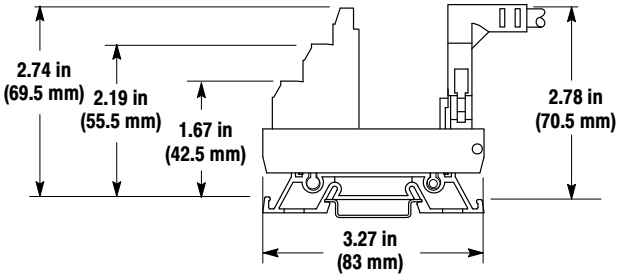
Approvals	UL Component Recognized (File E113724 Guide NRAQ2)
	CSA Certified (File LR1234 Class 321107)
Voltage Ratings	0 – 60V AC/DC
Maximum Current per Circuit	2A
Maximum Current per Module	12A
Indicator Circuit Current	NA
Number of Terminals per Device Common	18
Wire Range (Rated Cross Section)	#22 – #12 AWG (0.2-4mm)
Wire Strip Length	0.32 in (8mm)
Recommended Screw Tightening Torque	3.5-4.5 lb-in (0.38-0.50 Nm)
Operating Temperature Range	0°C to +60°C

Application Notes

1. **Compatibility -** To ensure proper operation with the I/O module, do ***not*** exceed the voltage and current ratings of the IFM.
2. **Isolation -** The power busses are isolated into 2 groups of 18 terminals. This allows the input devices connected to the left field-side terminal block to reference a different power source than the input devices connected to the right field-side terminal block.
3. **Wiring -** Make ***all*** connections indicated on the adhesive labels. Refer to Label Section on Page 42. If one power source is used for all I/O devices, the power busses may be jumpered together.

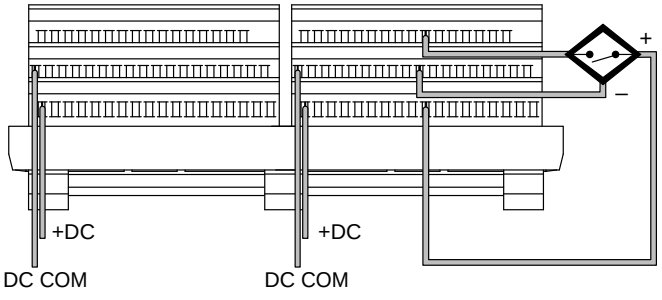
Dimensions





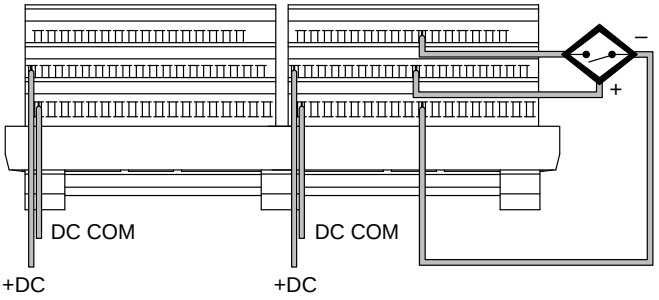
Wiring

DC Sinking Input Modules



1746-IB32
1771-IBN

DC Sourcing Input Modules



1746-IV32
1771-IVN

Specifications (IFM40D24)

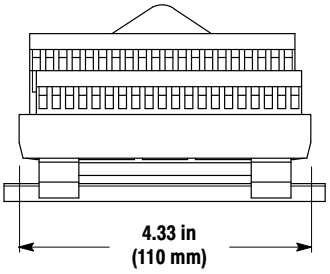
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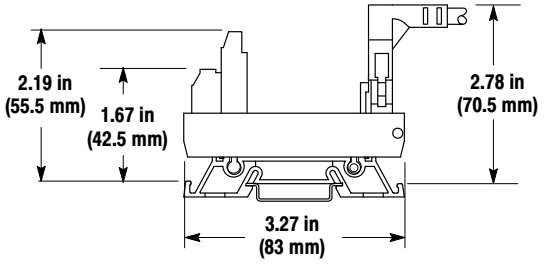
Approvals	UL Component Recognized (File E113724 Guide NRAQ2)
	CSA Certified (File LR1234 Class 321107)
Voltage Ratings	10 – 30V AC/DC
Maximum Current per Circuit	2A
Maximum Current per Module	12A
Indicator Circuit Current (Maximum)	2.0mA
Number of Terminals per Device Common	32
Wire Range (Rated Cross Section)	#22 – #12 AWG (0.2-4mm)
Wire Strip Length	0.32 in (8mm)
Recommended Screw Tightening Torque	3.5-4.5 lb-in (0.38-0.50 Nm)
Operating Temperature Range	0°C to +60°C

Application Notes

1. **Compatibility -** To ensure proper operation with the I/O module, do ***not*** exceed the voltage and current ratings of the IFM. When this IFM is used with a hard contact (relay) output circuit that switches an inductive load, surge suppression must be used (i.e., a 1N4004 diode reverse-wired across a DC load).
2. **Isolation -** The LEDs are connected to one common. All of the I/O devices used must reference the same power source.
3. **Wiring -** Make ***all*** connections indicated on the adhesive labels. Refer to Label Section on Page 42. The LEDs are powered off the 2-position terminal block. Make only one connection to the power source for normal operation. The test push button and wiring connection are only used to test the LEDs.

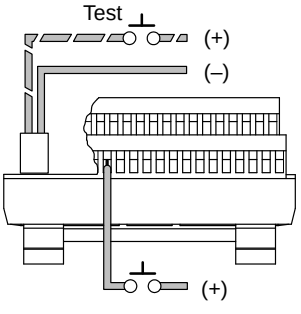
Dimensions





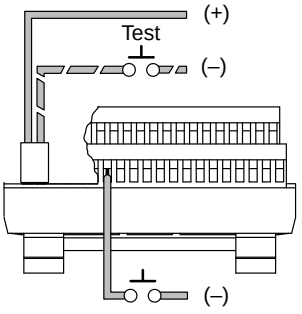
Wiring

DC Sinking Input Modules



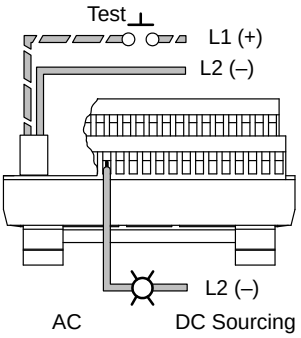
1746-IB32
1771-IBN

DC Sourcing Input Modules



1746-IV32
1771-IVN

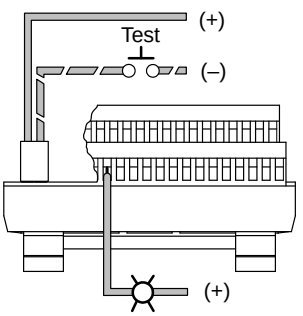
AC or DC Sourcing Output Modules



AC
1771-OWN
1771-OWNA

DC Sourcing
1746-OB32
1771-OBN
1771-OWN
1771-OWNA

DC Sinking Output Modules



1746-OV32
1771-OVN
1771-OWN
1771-OWNA

Specifications (IFM40D24-2)

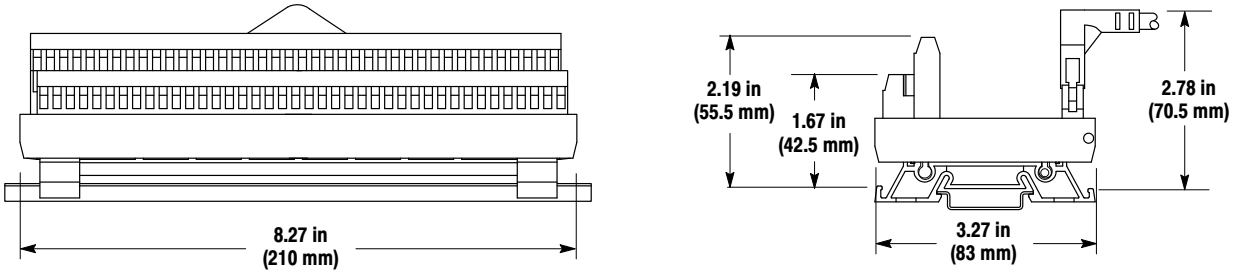
94-593-21

Approvals	UL Component Recognized (File E113724 Guide NRAQ2)
	CSA Certified (File LR1234 Class 321107)
Voltage Ratings	10 – 30V AC/DC
Maximum Current per Circuit	2A
Maximum Current per Module	12A
Indicator Circuit Current (Maximum)	2.0mA
Number of Terminals per Device Common	10
Wire Range (Rated Cross Section)	#22 – #12 AWG (0.2-4mm)
Wire Strip Length	0.32 in (8mm)
Recommended Screw Tightening Torque	3.5-4.5 lb-in (0.38-0.50 Nm)
Operating Temperature Range	0°C to +60°C

Application Notes

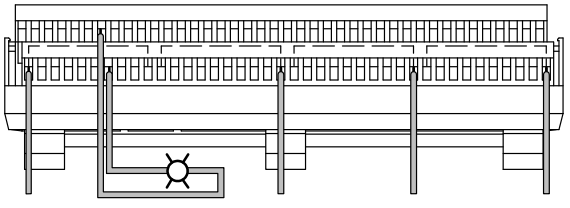
1. **Compatibility -** To ensure proper operation with the output module, do ***not*** exceed the voltage and current ratings of the IFM. When this IFM is used with a hard contact (relay) output circuit that switches an inductive load, surge suppression must be used (i.e., a 1N4004 diode reverse-wired across a DC load).
2. **Isolation -** The power bus and LEDs are isolated into 4 groups of 10 terminals (8 LEDs). This allows each group of output devices to reference a different power source.
3. **Wiring -** Make ***all*** connections indicated on the adhesive labels. Refer to Label Section on Page 42. If one power source is used for all output devices, the power busses may be jumpered together.

Dimensions



Wiring

Output Modules



AC	L2	L2	L2	L2
DC Sinking	(+)	(+)	(+)	(+)
DC Sourcing	(–)	(–)	(–)	(–)

AC	DC Sinking	DC Sourcing
1771-OWN	1746-OV32	1746-OB32
1771-OWNA	1771-OVN	1771-OBN
	1771-OWN	1771-OWN
	1771-OWNA	1771-OWNA

Specifications (IFM40D24A-2)

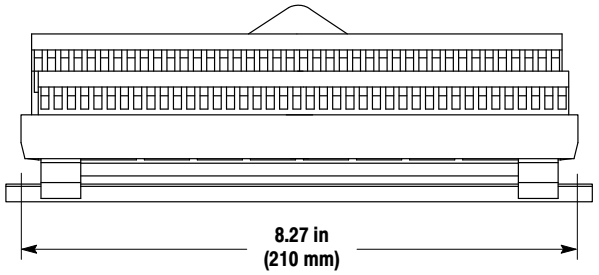
94-593-21R

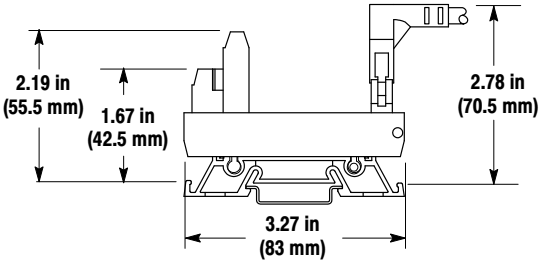
Approvals	UL Component Recognized (File E113724 Guide NRAQ2)
	CSA Certified (File LR1234 Class 321107)
Voltage Ratings	10 – 30V AC/DC
Maximum Current per Circuit	2A
Maximum Current per Module	12A
Indicator Circuit Current (Maximum)	2.0mA
Number of Terminals per Device Common	10
Wire Range (Rated Cross Section)	#22 – #12 AWG (0.2-4mm)
Wire Strip Length	0.32 in (8mm)
Recommended Screw Tightening Torque	3.5-4.5 lb-in (0.38-0.50 Nm)
Operating Temperature Range	0°C to +60°C

Application Notes

1. **Compatibility -** To ensure proper operation with the input module, do ***not*** exceed the voltage and current ratings of the IFM.
2. **Isolation -** The power bus and LEDs are isolated into 4 groups of 10 terminals (8 LEDs). This allows each group of input devices to reference a different power source.
3. **Wiring -** Make ***all*** connections indicated on the adhesive labels. Refer to Label Section on Page 42. If one power source is used for all input devices, the power busses may be jumpered together.

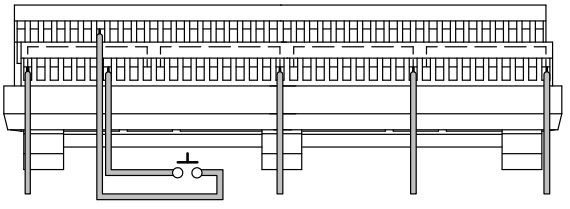
Dimensions





Wiring

Input Modules



DC Sinking	(+)	(+)	(+)	(+)
DC Sourcing	(–)	(–)	(–)	(–)

DC Sinking	DC Sourcing
1746-IB32	1746-IV32
1771-IBN	1771-IVN

Specifications (IFM40D120-2)

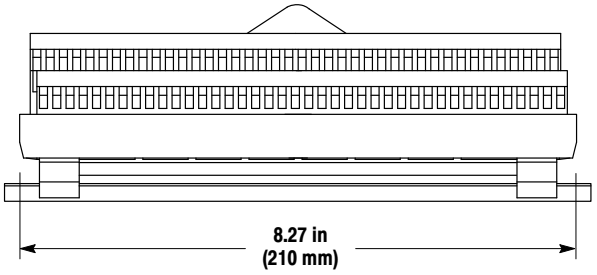
94-593-12

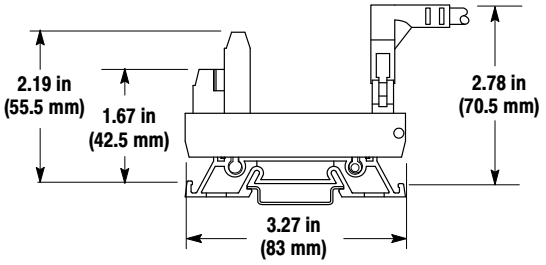
Approvals	UL Component Recognized (File E113724 Guide NRAQ2)
	CSA Certified (File LR1234 Class 321107)
Voltage Ratings	85 – 132V AC
Maximum Current per Circuit	2A
Maximum Current per Module	12A
Indicator Circuit Current (Maximum)	2.5mA
Number of Terminals per Device Common	10
Wire Range (Rated Cross Section)	#22 – #12 AWG (0.2-4mm)
Wire Strip Length	0.32 in (8mm)
Recommended Screw Tightening Torque	3.5-4.5 lb-in (0.38-0.50 Nm)
Operating Temperature Range	0°C to +60°C

Application Notes

1. **Compatibility -** To ensure proper operation with the output module, do ***not*** exceed the voltage and current ratings of the IFM. When this IFM is used with a hard contact (relay) output circuit that switches an inductive load, surge suppression must be used (i.e., a 1N4004 diode reverse-wired across a DC load).
2. **Isolation -** The power bus and LEDs are isolated into 4 groups of 10 terminals (8 LEDs). This allows each group of output devices to reference a different power source.
3. **Wiring -** Make ***all*** connections indicated on the adhesive labels. Refer to Label Section on Page 42. If one power source is used for all output devices, the power busses may be jumpered together.

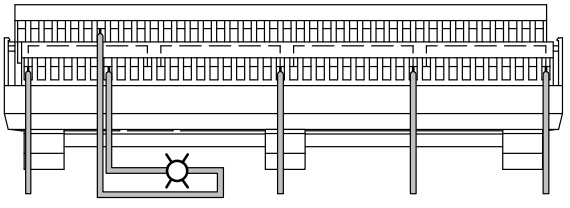
Dimensions





Wiring

Output Modules



AC	L2	L2	L2	L2
DC Sinking	(+)	(+)	(+)	(+)
DC Sourcing	(–)	(–)	(–)	(–)

AC	DC Sinking	DC Sourcing
1771-OWN	1771-OWN	1771-OAN
1771-OWNA	1771-OWNA	1771-OWN
		1771-OWNA

Specifications (IFM40D120A-2)

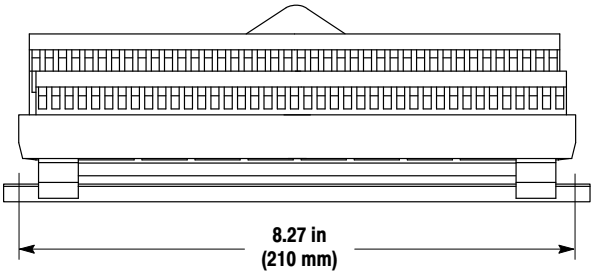
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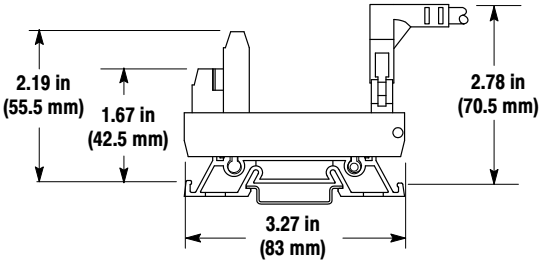
Approvals	UL Component Recognized (File E113724 Guide NRAQ2)
	CSA Certified (File LR1234 Class 321107)
Voltage Ratings	85 – 132V AC
Maximum Current per Circuit	2A
Maximum Current per Module	12A
Indicator Circuit Current (Maximum)	2.5mA
Number of Terminals per Device Common	10
Wire Range (Rated Cross Section)	#22 – #12 AWG (0.2-4mm)
Wire Strip Length	0.32 in (8mm)
Recommended Screw Tightening Torque	3.5-4.5 lb-in (0.38-0.50 Nm)
Operating Temperature Range	0°C to +60°C

Application Notes

1. **Compatibility -** To ensure proper operation with the input module, do ***not*** exceed the voltage and current ratings of the IFM.
2. **Isolation -** The power bus and LEDs are isolated into 4 groups of 10 terminals (8 LEDs). This allows each group of input devices to reference a different power source.
3. **Wiring -** Make ***all*** connections indicated on the adhesive labels. Refer to Label Section on Page 42. If one power source is used for all input devices, the power busses may be jumpered together.

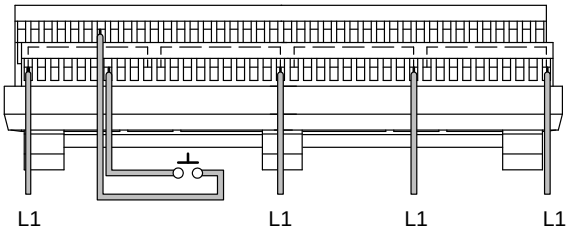
Dimensions





Wiring

Input Modules



1771-IAN

Specifications (IFM40D24-3)

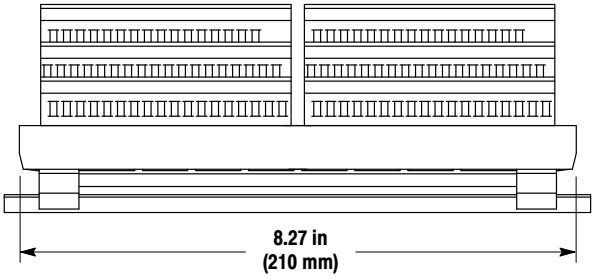
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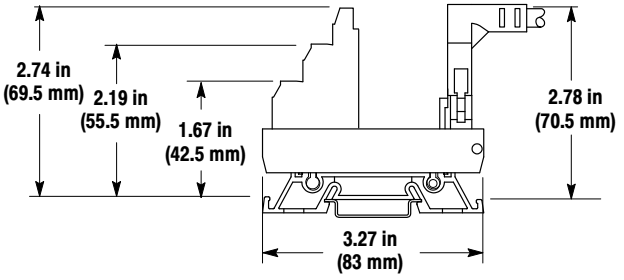
Approvals	UL Component Recognized (File E113724 Guide NRAQ2)
	CSA Certified (File LR1234 Class 321107)
Voltage Ratings	10 – 30V AC/DC
Maximum Current per Circuit	2A
Maximum Current per Module	12A
Indicator Circuit Current (Maximum)	2.0mA
Number of Terminals per Device Common	18
Wire Range (Rated Cross Section)	#22 – #12 AWG (0.2-4mm)
Wire Strip Length	0.32 in (8mm)
Recommended Screw Tightening Torque	3.5-4.5 lb-in (0.38-0.50 Nm)
Operating Temperature Range	0°C to +60°C

Application Notes

1. **Compatibility -** To ensure proper operation with the I/O module, do ***not*** exceed the voltage and current ratings of the IFM.
2. **Isolation -** The power busses and LEDs are isolated into 2 groups of 18 terminals (16 LEDs). This allows the input devices connected to the left field-side terminal block to reference a different power source than the input devices connected to the right field-side terminal block.
3. **Wiring -** Make ***all*** connections indicated on the adhesive labels. Refer to Label Section on Page 42. If one power source is used for all I/O devices, the power busses may be jumpered together.

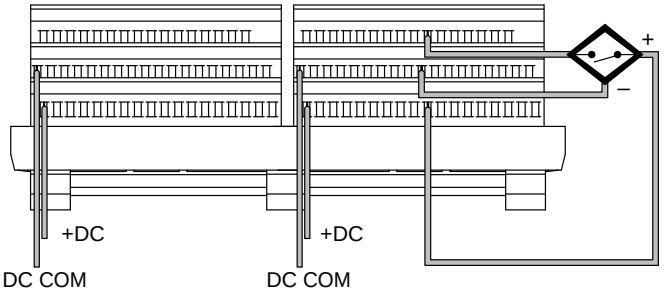
Dimensions





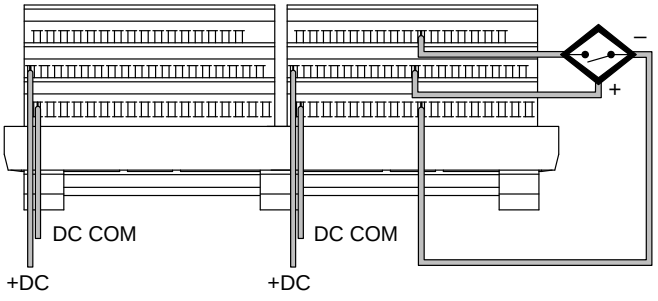
Wiring

DC Sinking Input Modules



1746-IB32
1771-IBN

DC Sourcing Input Modules



1746-IV32
1771-IVN

Specifications (IFM40F-F-2)

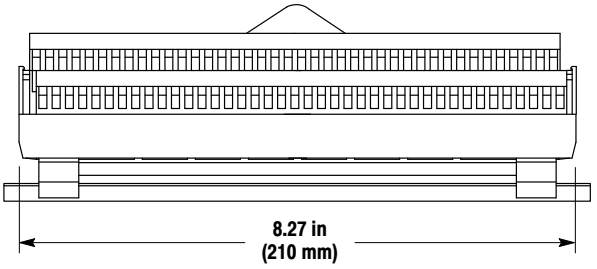
94-593-13

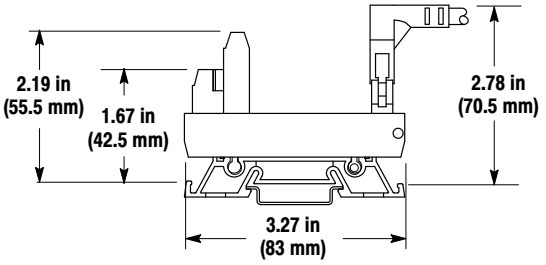
Approvals	UL Component Recognized (File E113724 Guide NRAQ2)
	CSA Certified (File LR1234 Class 321107)
Voltage Ratings	0 – 132V AC/DC
Maximum Current per Circuit	2A
Maximum Current per Module	12A
Indicator Circuit Current	NA
Number of Terminals per Device Common	10
Wire Range (Rated Cross Section)	#22 – #12 AWG (0.2-4mm)
Wire Strip Length	0.32 in (8mm)
Recommended Screw Tightening Torque	3.5-4.5 lb-in (0.38-0.50 Nm)
Operating Temperature Range	0°C to +60°C

Application Notes

1. **Compatibility -** To ensure proper operation with the I/O module, do ***not*** exceed the voltage and current ratings of the IFM.
2. **Isolation -** The power bus and fuse clips are isolated into 4 groups of 10 terminals (8 fuse clips). This allows each group of output devices to reference a different power source.
3. **Wiring -** Make ***all*** connections indicated on the adhesive labels. Refer to Label Section on Page 42. If one power source is used for all I/O devices, the power busses may be jumpered together. Forty fuse holders are included with the IFM. Fuses are not included. Do not exceed 2A per output, 12A per IFM.

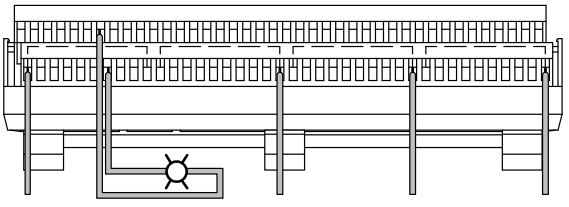
Dimensions





Wiring

Output Modules



AC	L2	L2	L2	L2
DC Sinking	(+)	(+)	(+)	(+)
DC Sourcing	(–)	(–)	(–)	(–)

AC	DC Sinking	DC Sourcing
1771-OAN	1746-OV32	1746-OB32
1771-OWN	1771-OVN	1771-OBN
1771-OWNA	1771-OWN	1771-OWN
	1771-OWNA	1771-OWNA

Specifications (IFM40F-F24-2)

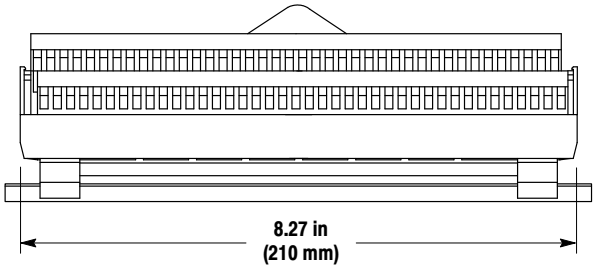
94-593-25

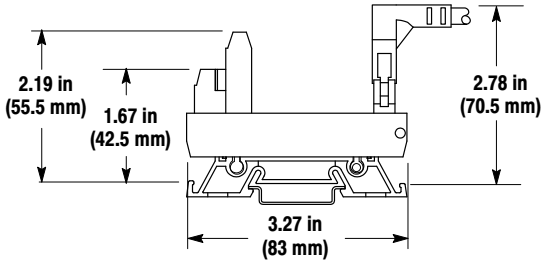
Approvals	UL Component Recognized (File E113724 Guide NRAQ2)
	CSA Certified (File LR1234 Class 321107)
Voltage Ratings	10 – 30V AC/DC
Maximum Current per Circuit	2A
Maximum Current per Module	12A
Indicator Circuit Current (Maximum)	2.0mA
Number of Terminals per Device Common	10
Wire Range (Rated Cross Section)	#22 – #12 AWG (0.2-4mm)
Wire Strip Length	0.32 in (8mm)
Recommended Screw Tightening Torque	3.5-4.5 lb-in (0.38-0.50 Nm)
Operating Temperature Range	0°C to +60°C

Application Notes

1. **Compatibility -** To ensure proper operation with the I/O module, do ***not*** exceed the voltage and current ratings of the IFM. When this IFM is used with a hard contact (relay) output circuit that switches an inductive load, surge suppression must be used (a 1N4004 diode reverse-wired across a DC load).
2. **Isolation -** The power bus, fuse clips, and blown fuse indicators are isolated into 4 groups of 10 terminals (8 fuse clips and blown fuse indicators). This allows each group of output devices to reference a different power source.
3. **Wiring -** Make ***all*** connections indicated on the adhesive labels. Refer to Label Section on Page 42. If one power source is used for all I/O devices, the power busses may be jumpered together. Forty fuse holders are included with the IFM. Fuses are not included. Do not exceed 2A per output, 12A per IFM.

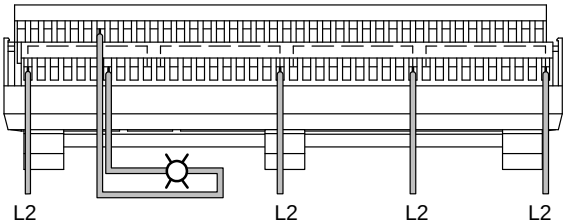
Dimensions





Wiring

Output Modules



AC	L2	L2	L2	L2
DC Sinking	(+)	(+)	(+)	(+)
DC Sourcing	(–)	(–)	(–)	(–)
	AC 1771-OWN 1771-OWNA	DC Sinking 1746-OV32 1771-OVN 1771-OWN 1771-OWNA		DC Sourcing 1746-OB32 1771-OBN 1771-OWN 1771-OWNA

Specifications (IFM40F-F120-2)

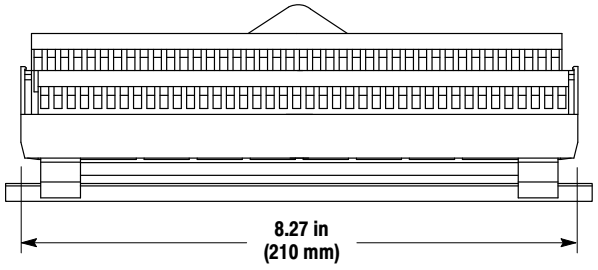
94-593-16

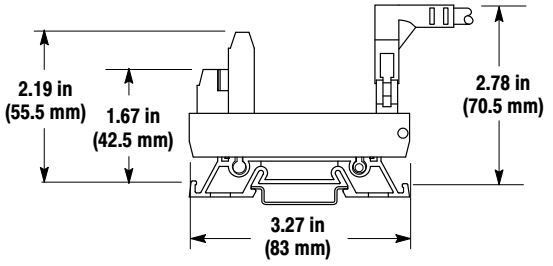
Approvals	UL Component Recognized (File E113724 Guide NRAQ2)
	CSA Certified (File LR1234 Class 321107)
Voltage Ratings	85 – 132V AC/DC
Maximum Current per Circuit	2A
Maximum Current per Module	12A
Indicator Circuit Current (Maximum)	2.5mA
Number of Terminals per Device Common	10
Wire Range (Rated Cross Section)	#22 – #12 AWG (0.2-4mm)
Wire Strip Length	0.32 in (8mm)
Recommended Screw Tightening Torque	3.5-4.5 lb-in (0.38-0.50 Nm)
Operating Temperature Range	0°C to +60°C

Application Notes

1. **Compatibility -** To ensure proper operation with the I/O module, do ***not*** exceed the voltage and current ratings of the IFM. When this IFM is used with a hard contact (relay) output circuit that switches an inductive load, surge suppression must be used (a 1N4004 diode reverse-wired across a DC load).
2. **Isolation -** The power bus, fuse clips, and blown fuse indicators are isolated into 4 groups of 10 terminals (8 fuse clips and blown fuse indicators). This allows each group of output devices to reference a different power source.
3. **Wiring -** Make ***all*** connections indicated on the adhesive labels. Refer to Label Section on Page 42. If one power source is used for all I/O devices, the power busses may be jumpered together. Forty fuse holders are included with the IFM. Fuses are not included. Do not exceed 2A per output, 12A per IFM.

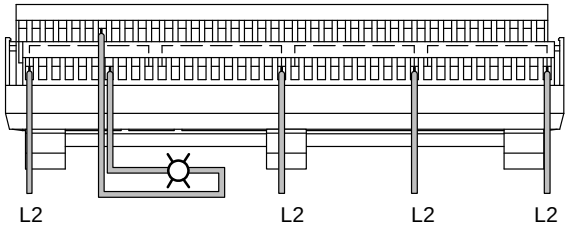
Dimensions





Wiring

Output Modules



AC	L2	L2	L2	L2
DC Sinking	(+)	(+)	(+)	(+)
DC Sourcing	(–)	(–)	(–)	(–)

AC	DC Sinking	DC Sourcing
1771-OAN	1771-OWN	1771-OWN
1771-OWN	1771-OWNA	1771-OWNA
1771-OWNA		

Labels

All Bulletin 1492 IFMs come with an adhesive label card. The label card provides the field-side connection descriptions for the programmable controller I/O module. The label strips basically copy the wiring descriptions from the I/O module in the chassis down to the IFM terminals on the DIN rail.

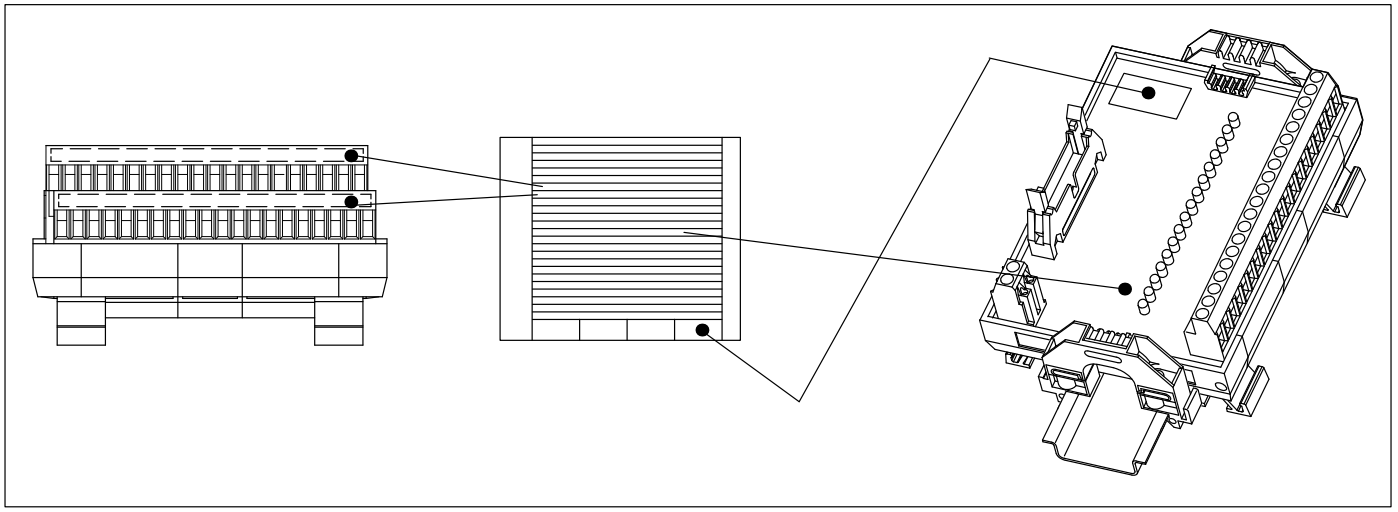
The label cards list all of the compatible I/O modules and their respective wiring descriptions. Depending on the I/O module that is used, the label strip(s) are simply peeled from the label card and applied to the field-side terminals on the IFM. Refer to the respective I/O Module Product Data for actual wiring connections and recommendations. See Reference Publications on Page 48.

Labels are provided in the octal and decimal numbering systems for 1746 I/O modules. Labels for 1771 I/O modules are supplied in the octal numbering system, like the I/O modules themselves. IFMs with LEDs or fuse clips come with the LEDs or fuse clips/blown fuse indicators numbered in decimal. LED and fuse labels are also provided in octal for use with 1771 I/O modules. The LED or fuse conversion label(s) would be placed directly on the circuit board of the IFM. For extra terminal modules, pre-printed labels are provided to identify the power bus(ses) or commoned terminals (middle and/or lower rows of terminals) on the IFM. For each I/O module, corresponding labels with L1, L2, COM, or +V are provided. The labels indicate isolated power busses or grouped commons with a different letter or number. For example, L1-A, L1-B, L1-C or CM1, CM2, CM3, etc.

In addition, if generic numbering of the field-side terminals is desired, “Numeric” labels are provided. Examples: 1-20, 1-40, and evens and odds. For write-on identification, the label cards contain blank label strips (for field-side terminals) and rectangular boxes (for the large group marking area on each IFM).

The six different labels are shown actual size on Pages 43 through 48. This information is helpful for determining field-side wiring layouts prior to installation.

An example of how the labels are applied:



Adhesive Label Card for Catalog Numbers 1492-IFM40F, -IFM40D24

I/O CAT. NO.	MODULE LABEL																				LEVEL
1746-IB32	CM3	CM3	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	CM4	CM4	Upper
	CM1	CM1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	CM2	CM2	Lower
	CM3	CM3	00	01	02	03	04	05	06	07	10	11	12	13	14	15	16	17	CM4	CM4	Upper
	CM1	CM1	00	01	02	03	04	05	06	07	10	11	12	13	14	15	16	17	CM2	CM2	Lower
1746-IV32	+V3	+V3	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	+V4	+V4	Upper
	+V1	+V1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	+V2	+V2	Lower
	+V3	+V3	00	01	02	03	04	05	06	07	10	11	12	13	14	15	16	17	+V4	+V4	Upper
	+V1	+V1	00	01	02	03	04	05	06	07	10	11	12	13	14	15	16	17	+V2	+V2	Lower
1746-OB32, OV32	+V2	+V2	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	CM2	CM2	Upper
	+V1	+V1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	CM1	CM1	Lower
	+V2	+V2	00	01	02	03	04	05	06	07	10	11	12	13	14	15	16	17	CM2	CM2	Upper
	+V1	+V1	00	01	02	03	04	05	06	07	10	11	12	13	14	15	16	17	CM1	CM1	Lower
1771-IAN	L2-C	L2-C	00	01	02	03	04	05	06	07	10	11	12	13	14	15	16	17	L2-D	L2-D	Upper
	L2-A	L2-A	00	01	02	03	04	05	06	07	10	11	12	13	14	15	16	17	L2-B	L2-B	Lower
1771-IBN	CM2	CM2	00	01	02	03	04	05	06	07	10	11	12	13	14	15	16	17	CM3	CM3	Upper
	CM0	CM0	00	01	02	03	04	05	06	07	10	11	12	13	14	15	16	17	CM1	CM1	Lower
1771-ID16, IQ16			00	01	02	03	04	05	06	07	10	11	12	13	14	15	16	17			Upper
			COM	COM	COM	COM	COM	COM	COM	COM	COM	COM	COM	COM	COM	COM	COM	COM			Lower
			L2	L2	L2	L2	L2	L2	L2	L2	L2	L2	L2	L2	L2	L2	L2	L2			Lower
1771-IVN	+V2	+V2	00	01	02	03	04	05	06	07	10	11	12	13	14	15	16	17	+V3	+V3	Upper
	+V0	+V0	00	01	02	03	04	05	06	07	10	11	12	13	14	15	16	17	+V1	+V1	Lower
1771-OAN	L1-C	L1-D	00	01	02	03	04	05	06	07	10	11	12	13	14	15	16	17			Upper
	L1-A	L1-B	00	01	02	03	04	05	06	07	10	11	12	13	14	15	16	17			Lower
1771-OBN, OVN	+V2	+V3	00	01	02	03	04	05	06	07	10	11	12	13	14	15	16	17	CM2	CM3	Upper
	+V0	+V1	00	01	02	03	04	05	06	07	10	11	12	13	14	15	16	17	CM0	CM1	Lower
1771-OD16, ODD			00	01	02	03	04	05	06	07	10	11	12	13	14	15	16	17			Upper
			L1	L1	L1	L1	L1	L1	L1	L1	L1	L1	L1	L1	L1	L1	L1	L1			Lower
1771-OQ16			00	01	02	03	04	05	06	07	10	11	12	13	14	15	16	17			Upper
			+V	+V	+V	+V	+V	+V	+V	+V	+V	+V	+V	+V	+V	+V	+V	+V			Lower
1771-OW16	11=	COM	12≠	12=	COM	13≠	13=	COM	14≠	14=	COM	15≠	15=	COM	16≠	16=	COM	17≠	17=	COM	Upper
= (N.O.) ≠ (N.C.)	00=	COM	01=	COM	02=	COM	03=	COM	04=	COM	05=	COM	06=	COM	07=	COM	10≠	10=	COM	11≠	Lower
1771-OWN, OWNA	CM2	CM3	00	01	02	03	04	05	06	07	10	11	12	13	14	15	16	17			Upper
	CM0	CM1	00	01	02	03	04	05	06	07	10	11	12	13	14	15	16	17			Lower
NUMERIC	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	
	1	3	5	7	9	11	13	15	17	19	21	23	25	27	29	31	33	35	37	39	
	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	
LED LABELS			00	01	02	03	04	05	06	07	10	11	12	13	14	15	16	17			
			00	01	02	03	04	05	06	07	10	11	12	13	14	15	16	17			

43006-253-02 (E)

Adhesive Label Card for Catalog Numbers 1492-IFM20F-2, -IFM20D24-2, -IFM20D24A-2, -IFM20D120-2, -IFM20D120A-2, -IFM20F-F-2, -IFM20F-F24-2, -IFM20F-F120-2

I/O CAT. NO.	MODULE LABEL																				LEVEL
1746-IA16, IN16,			0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	L2	L2	Upper
			00	01	02	03	04	05	06	07	10	11	12	13	14	15	16	17	L2	L2	Upper
			L1								L1										Lower
1746-IB16, IN16, ITB16			0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	COM	COM	Upper
			00	01	02	03	04	05	06	07	10	11	12	13	14	15	16	17	COM	COM	Upper
			+V								+V										Lower
1746-IG16, OB16, OBP16	+V	+V	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	COM	COM	Upper
	+V	+V	00	01	02	03	04	05	06	07	10	11	12	13	14	15	16	17	COM	COM	Upper
			COM								COM										Lower
1746-IV16, ITV16			0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	+V	+V	Upper
			00	01	02	03	04	05	06	07	10	11	12	13	14	15	16	17	+V	+V	Upper
			COM								COM										Lower
1746-OA16, OW16	L1-A	L1-A	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	L1-B	L1-B	Upper
	L1-A	L1-A	00	01	02	03	04	05	06	07	10	11	12	13	14	15	16	17	L1-B	L1-B	Upper
			L2-A								L2-B										Lower
1746-OG16, OV16, OVP16	+V	+V	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	COM	COM	Upper
	+V	+V	00	01	02	03	04	05	06	07	10	11	12	13	14	15	16	17	COM	COM	Upper
			+V								+V										Lower
1746-OW16	+V1	+V1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	+V2	+V2	Upper
	+V1	+V1	00	01	02	03	04	05	06	07	10	11	12	13	14	15	16	17	+V2	+V2	Upper
			COM1								COM2										Lower
1771-IAD, IND	L1		00	01	02	03	04	05	06	07	10	11	12	13	14	15	16	17		L2	Upper
			L1								L1										Lower
	+V		00	01	02	03	04	05	06	07	10	11	12	13	14	15	16	17		COM	Upper
			+V								+V										Lower
1771-IBD, ICD			00	01	02	03	04	05	06	07	10	11	12	13	14	15	16	17		COM	Upper
			+V								+V										Lower
1771-IGD, OBD, OGD	+V	+V	00	01	02	03	04	05	06	07	10	11	12	13	14	15	16	17	+V	COM	Upper
			COM								COM										Lower
1771-OAD, OND	L1	L1	00	01	02	03	04	05	06	07	10	11	12	13	14	15	16	17	L1	L2	Upper
			L2								L2										Lower
NUMERIC	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	
	1	3	5	7	9	11	13	15	17	19	21	23	25	27	29	31	33	35	37	39	
	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	
LED LABEL			00	01	02	03	04	05	06	07	10	11	12	13	14	15	16	17			
FUSE LABEL	00		01		02		03		04		05		06		07		10		11		
43006-253-03 (B)																					

Adhesive Label Card for Catalog Numbers 1492-IFM20F-3, -IFM20D24-3, -IFM40F-3, -IFM40D24-3

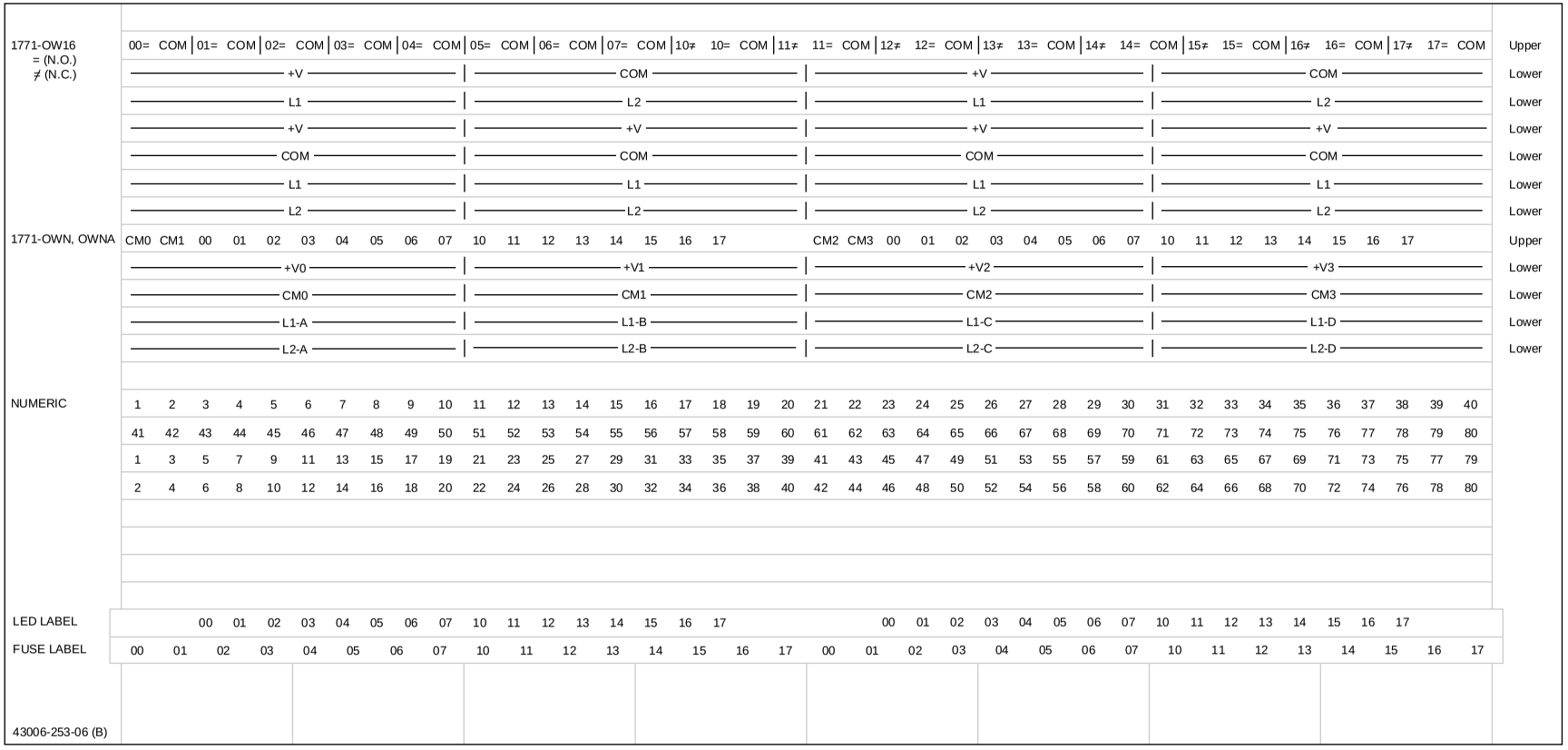
I/O CAT. NO.	MODULE LABEL	
1746-IB16, ITB16, IN16 1771-IBD, ICD	0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	Upper
	00 01 02 03 04 05 06 07 10 11 12 13 14 15 16 17	Upper
	COM	Middle
	+V	Lower
1746-IV16, ITV16	0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	Upper
	00 01 02 03 04 05 06 07 10 11 12 13 14 15 16 17	Upper
	+V	Middle
	COM	Lower
1746-IB32, 1771-IBN	0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	Upper Lf
	00 01 02 03 04 05 06 07 10 11 12 13 14 15 16 17	Upper Lf
	COM	Middle Lf
	+V	Lower Lf
	16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	Upper Rt
	00 01 02 03 04 05 06 07 10 11 12 13 14 15 16 17	Upper Rt
	COM	Middle Rt
	+V	Lower Rt
1746-IV32, 1771-IVN	0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	Upper Lf
	00 01 02 03 04 05 06 07 10 11 12 13 14 15 16 17	Upper Lf
	+V	Middle Lf
	COM	Lower Lf
	16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	Upper Rt
	00 01 02 03 04 05 06 07 10 11 12 13 14 15 16 17	Upper Rt
	+V	Middle Rt
	COM	Lower Rt

NUMERIC	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	
	17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34	
	35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52	
	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	
	17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34	
	35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52	
	53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68	
	69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86	
	87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104	
	17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32	
	33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50	
	51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68	
LED LABELS	00 01 02 03 04 05 06 07 10 11 12 13 14 15 16 17	
	00 01 02 03 04 05 06 07 10 11 12 13 14 15 16 17	
43006-253-04 (A)		

Part 1 of Adhesive Label Card for: 1492-IFM40F-2, -IFM40D24-2, -IFM40D24A-2, -IFM40D120-2, -IFM40D120A-2, -IFM40F-F-2, -IFM40F-F24-2, -IFM40F-F120-2

I/O CAT. NO.	MODULE LABEL	LEVEL
1746-IB32	CM1 CM1 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 CM2 CM2 CM3 CM3 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 CM4 CM4	Upper
	CM1 CM1 00 01 02 03 04 05 06 07 10 11 12 13 14 15 16 17 CM2 CM2 CM3 CM3 00 01 02 03 04 05 06 07 10 11 12 13 14 15 16 17 CM4 CM4	Upper
	+V1 | +V2 | +V3 | +V4	Lower
1746-IV32	+V1 +V1 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 +V2 +V2 +V3 +V3 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 +V4 +V4	Upper
	+V1 +V1 00 01 02 03 04 05 06 07 10 11 12 13 14 15 16 17 +V2 +V2 +V3 +V3 00 01 02 03 04 05 06 07 10 11 12 13 14 15 16 17 +V4 +V4	Upper
	CM1 | CM2 | CM3 | CM4	Lower
1746-OB32	+V1 +V1 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 CM1 CM1 +V2 +V2 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 CM2 CM2	Upper
	+V1 +V1 00 01 02 03 04 05 06 07 10 11 12 13 14 15 16 17 CM1 CM1 +V2 +V2 00 01 02 03 04 05 06 07 10 11 12 13 14 15 16 17 CM2 CM2	Upper
	CM1 | CM1 | CM2 | CM2	Lower
1746-OV32	+V1 +V1 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 CM1 CM1 +V2 +V2 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 CM2 CM2	Upper
	+V1 +V1 00 01 02 03 04 05 06 07 10 11 12 13 14 15 16 17 CM1 CM1 +V2 +V2 00 01 02 03 04 05 06 07 10 11 12 13 14 15 16 17 CM2 CM2	Upper
	+V1 | +V1 | +V2 | +V2	Lower
1771-IAN	L2-A L2-A 00 01 02 03 04 05 06 07 10 11 12 13 14 15 16 17 L2-B L2-B L2-C L2-C 00 01 02 03 04 05 06 07 10 11 12 13 14 15 16 17 L2-D L2-D	Upper
	L1-A | L1-B | L1-C | L1-D	Lower
1771-IBN	CM0 CM0 00 01 02 03 04 05 06 07 10 11 12 13 14 15 16 17 CM1 CM1 CM2 CM2 00 01 02 03 04 05 06 07 10 11 12 13 14 15 16 17 CM3 CM3	Upper
	+V0 | +V1 | +V2 | +V3	Lower
1771-IVN	+V0 +V0 00 01 02 03 04 05 06 07 10 11 12 13 14 15 16 17 +V1 +V1 +V2 +V2 00 01 02 03 04 05 06 07 10 11 12 13 14 15 16 17 +V3 +V3	Upper
	CM0 | CM1 | CM2 | CM3	Lower
1771-OAN	L1-A L1-B 00 01 02 03 04 05 06 07 10 11 12 13 14 15 16 17 L1-C L1-D 00 01 02 03 04 05 06 07 10 11 12 13 14 15 16 17	Upper
	L2-A | L2-B | L2-C | L2-D	Lower
1771-OBN	+V0 +V1 00 01 02 03 04 05 06 07 10 11 12 13 14 15 16 17 CM0 CM1 +V2 +V3 00 01 02 03 04 05 06 07 10 11 12 13 14 15 16 17 CM2 CM3	Upper
	CM0 | CM1 | CM2 | CM3	Lower
1771-OVN	+V0 +V1 00 01 02 03 04 05 06 07 10 11 12 13 14 15 16 17 CM0 CM1 +V2 +V3 00 01 02 03 04 05 06 07 10 11 12 13 14 15 16 17 CM2 CM3	Upper
	+V0 | +V1 | +V2 | +V3	Lower
43006-253-05 (B)		

Part 2 of Adhesive Label for: 1492-IFM40F-2, -IFM40D24-2, -IFM40D24A-2, -IFM40D120-2, -IFM40D120A-2, -IFM40F-F-2 -IFM40F-F24-2, -IFM40F-F120-2



Adhesive Label Card for Catalog Numbers 1492-IFM20F, -IFM20D24, -IFM20D120

I/O CAT. NO.	MODULE LABEL																			
1746-IA16, IN16			0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	L2	L2
			00	01	02	03	04	05	06	07	10	11	12	13	14	15	16	17	L2	L2
1746-IB16, IN16, ITB16			0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	COM	COM
			00	01	02	03	04	05	06	07	10	11	12	13	14	15	16	17	COM	COM
1746-IV16, ITV16			0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	+V	+V
			00	01	02	03	04	05	06	07	10	11	12	13	14	15	16	17	+V	+V
1746-OA16, OW16	L1-A	L1-A	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	L1-B	L1-B
	L1-A	L1-A	00	01	02	03	04	05	06	07	10	11	12	13	14	15	16	17	L1-B	L1-B
1746-IG16, OB16, OBP16, OG16, OV16, OVP16	+V	+V	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	COM	COM
	+V	+V	00	01	02	03	04	05	06	07	10	11	12	13	14	15	16	17	COM	COM
1746-OW16	+V1	+V1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	+V2	+V2
	+V1	+V1	00	01	02	03	04	05	06	07	10	11	12	13	14	15	16	17	+V2	+V2
1746-OX8		L1/+	0	L1/+	1	L1/+	2	L1/+	3		4	L1/+	5	L1/+	6	L1/+	7	L1/+		
1771-IAD, IND	L1/+		00	01	02	03	04	05	06	07	10	11	12	13	14	15	16	17		L2/-
1771-IBD, ICD			00	01	02	03	04	05	06	07	10	11	12	13	14	15	16	17		COM
1771-OAD, OND	L1	L1	00	01	02	03	04	05	06	07	10	11	12	13	14	15	16	17	L1	L2
1771-IGD, OBD, OGD	+V	+V	00	01	02	03	04	05	06	07	10	11	12	13	14	15	16	17	+V	COM
NUMERIC	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
LED LABEL			00	01	02	03	04	05	06	07	10	11	12	13	14	15	16	17		

43006-253-01 (D)

Reference Publications

Below is a list of related publications for Bulletin 1771 and 1746 I/O Modules. These publications provide more detailed wiring information and specifications for the I/O modules.

Publication 1746-2.35 – Discrete Input and Output Modules (Bulletin 1746)
Publication 1771-2.180 – 1771 Discrete I/O DC Input and Output Modules
Publication 1771-2.181 – 1771 Discrete I/O Relay Contact Output Modules
Publication 1771-2.182 – 1771 Discrete I/O AC Input and Output Modules

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