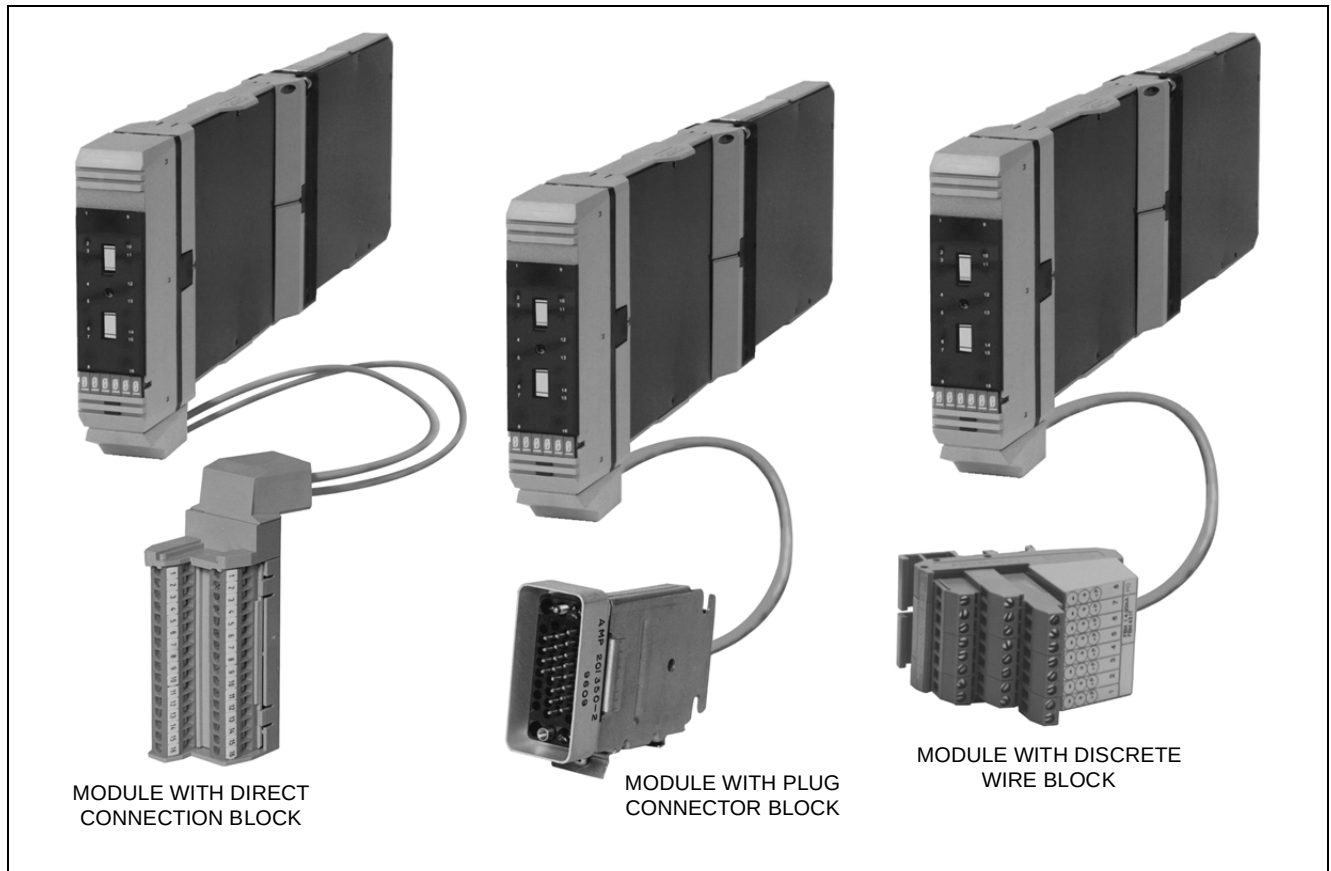


I/A Series® Hardware

0 to 20 mA Input Interface Module (FBM01)



The 0 to 20 mA Input Interface contains eight 20 mA dc analog input channels. Each channel accepts a 2-wire, analog sensor input such as a 4 to 20 mA transmitter or a self-powered 20 mA source. The module performs the signal conversion required to interface the electrical input signals from the field sensors to the redundant Fieldbus. The module is a main type, and independently connects to the redundant Fieldbus.

This module executes the analog Input application program. The configurable options for this program are Analog Input Resolution (on a per module basis), Fieldbus Switching Enable, and Fieldbus Switching Time.

FUNCTIONAL SPECIFICATIONS

Input

8 isolated and independent channels

Input Range (each channel)

0 to 20.4 mA dc

Accuracy

±0.05% of span

Communication

Via a redundant Fieldbus

Power Requirements

INPUT VOLTAGE RANGE (REDUNDANT)

26 to 42 V dc

CONSUMPTION

14 W (maximum)

HEAT DISSIPATION

12 W (maximum)

Input Connections

Two configurations (see Figure 1)

Conversion Time (software configurable)

See Table 1 (Input Specifications)

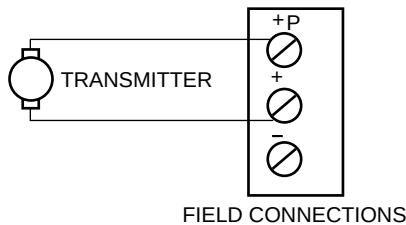
Isolation

The module will withstand, without damage, a potential of 600 V ac applied for one minute between any channel and earth (ground), or between a given channel and any other channel.

NOTE

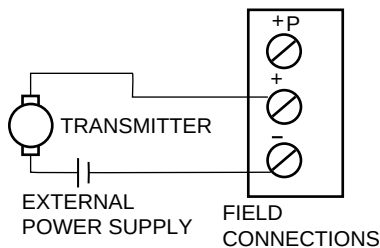
This does not imply that these channels are intended for permanent connection to hazardous voltage circuits. Connection of these channels to voltages greater than 30 V ac or 60 V dc will violate electrical safety code requirements and may expose users to electric shock.

MODULE POWERED TRANSMITTER



INPUT COMPLIANCE VOLTAGE
22 VOLTS MINIMUM AT 20 mA

EXTERNAL POWERED TRANSMITTER



INPUT RESISTANCE 50 Ω

Figure 1. Input Connections

Table 1. Input Specifications

Conversion Time (Seconds)	Update Time (Milliseconds)	Settling Time(a) (Seconds)	Linearity Error(b) (% of Range)	Resolution (Bits)
0.1	10	0.25	0.0125	12
0.2	10	0.50	0.0075	13
0.5	25	1.00	0.005	14
1.0	50	2.00	0.005	15

(a) Value settles within a 1% band of steady state for a 10 to 90% input step change.

(b) Monotonic; assures that the signal for Fieldbus communications either increases or remains the same for increasing analog input signals.

ENVIRONMENTAL SPECIFICATIONS(a)**Operating****TEMPERATURE**

0 to 60°C (32 to 140°F)

RELATIVE HUMIDITY

5 to 95% (Noncondensing)

ALTITUDE

-300 to +3,000 m (-1,000 to +10,000 ft)

Storage**TEMPERATURE**

-40 to +70°C (-40 to +158°F)

RELATIVE HUMIDITY

5 to 95% (Noncondensing)

ALTITUDE

-300 to +12,000 m (-1,000 to +40,000 ft)

Contamination

Class G3 (Harsh) as defined in ISA Standard, S71.04

(a) The environmental limits of this module may be enhanced by the type of enclosure containing the module. {Refer to the applicable Product Specification Sheet (PSS) which describes the specific type of enclosure that is to be used.}

PHYSICAL SPECIFICATIONS**Mounting****WITH Y-ADAPTER**

Installable in the 1X8 Mounting Structure, I/A Series
Industrial Enclosures and Field Enclosure 8

WITHOUT Y-ADAPTER

Installable in I/A Series Field Enclosure 4 and the
1X8 FBM Mounting Structure

Mass

1 kg (2.2 lb)

Indicators (mounted on termination connector)**OPERATIONAL STATUS**

Red and green light-emitting diodes (LEDs)

Field Termination Connections(a)**DISCRETE WIRE BLOCK**

24 screw-clamp terminals

DIRECT CONNECTION BLOCK

24 screw-clamp terminals

PLUG CONNECTOR BLOCK

34-pin connector. Mates with:

- Burndy MSD 34 PM 118
(plug with bar-type cable clamp)
- Burndy MSD 34 PM 124
(plug with clam shell hood)
- Burndy MSD 34 PM 824
(plug with suitcase hood)
- or equivalent

(a) The discrete wire or plug connector block is available on termination cable assemblies for all enclosures excluding the Local Enclosures, Field Enclosure 4, and Multiple (Bridged) Industrial Enclosure 32. The direct connection block is available only on the termination cable assembly for the Local Enclosures and Field Enclosure 4. Multiple (Bridged) Industrial Enclosure 32's use the plug connector block only.

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