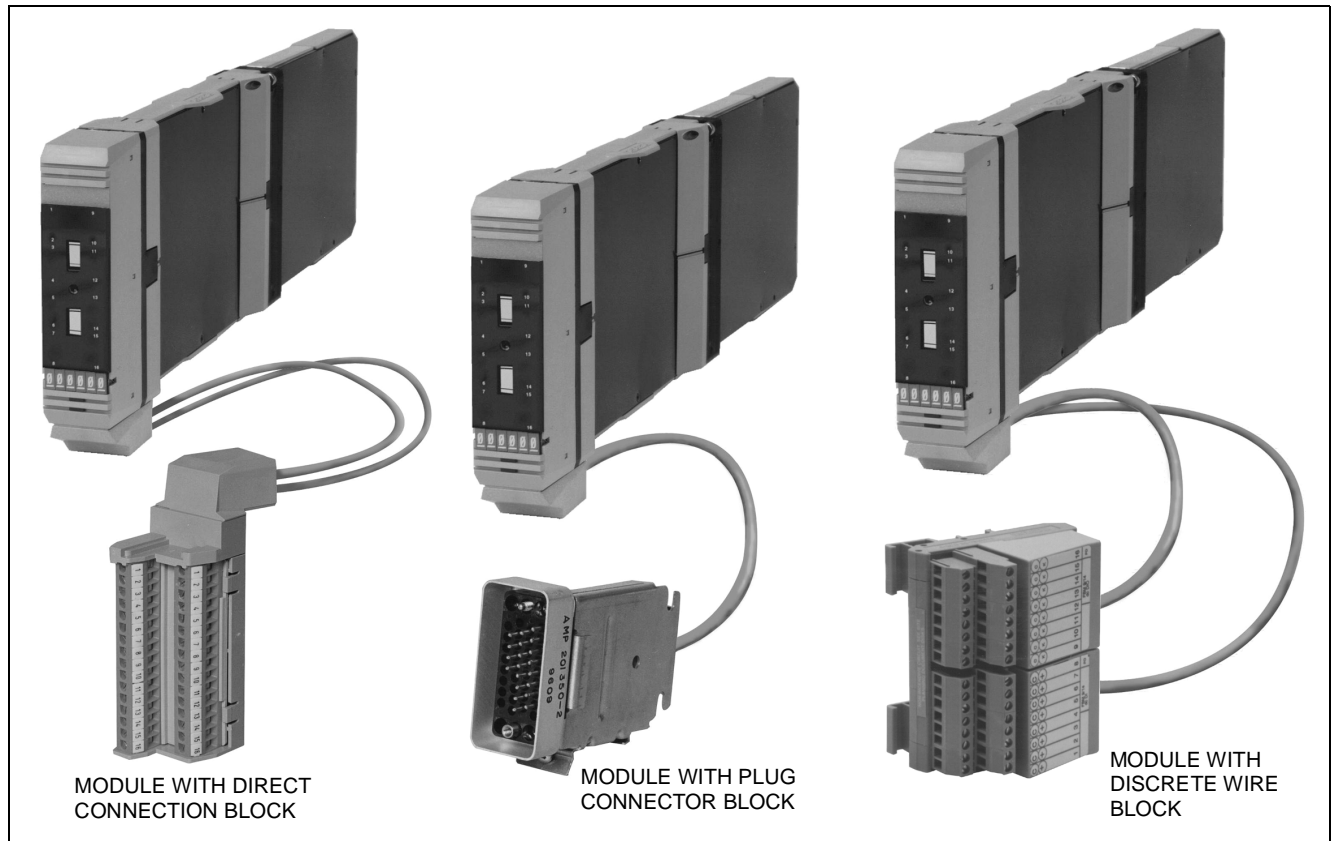


## I/A Series® Hardware

### 120 V ac Input Interface Module (FBM08) and 120 V ac Expansion Input Interface Module (FBM13)



The 120 V ac Input Interface Module (an expandable main module) and its counterpart 120 V ac Expansion Input Interface Module individually function as a 16-channel 120 V ac monitor. Each module performs the signal conversion required to interface these digital (i.e., on/off state) electrical input signals from the field sensors to the redundant Fieldbus. The expandable main module independently connects to the Fieldbus and is capable of supporting a single expansion module.

The expansion module connects to the Fieldbus via any expandable main module and is functionally dependent on the supporting main module.

The main module is capable of executing any one of the application programs identified in the following schedule:

- When used alone or in conjunction with an expansion module that interfaces field input signals only, the main module executes either the Digital I/O, Sequence of Events Monitor, Pulse Count Inputs or Ladder Logic program. The configurable option for each program is Input Filter Time.
- When used in conjunction with an expansion module that interfaces field input and output signals, the main module executes either the Digital I/O or Ladder Logic program.

The configurable options for each program are Input Filter Time, Fail Safe Configuration, Fail Safe Fallback and Sustained or Momentary Outputs. If the Momentary Output configuration is selected, then Pulse Output Interval is also configurable.

Configurable options for inputs are exercised on a per module basis; those for outputs are exercised on a per channel basis.

The functional, environmental and physical specifications are applicable to both modules.

**FUNCTIONAL SPECIFICATIONS**

**Input**

- CAPACITY
  - 16 independent channels
- ON-STATE VOLTAGE(b)
  - 79 to 132 V ac
- OFF-STATE VOLTAGE(b)
  - 0 to 20 V ac
- CURRENT
  - 2.2 mA (typical) at 20 to 132 V ac

**Source Resistance Limits**

- ON-STATE
  - 1 k $\Omega$  (maximum) at 79 V ac
- OFF-STATE
  - 100 k $\Omega$  (minimum) at 132 V ac

**Isolation**

The module will withstand, without damage, a potential of 1250 V ac applied for one minute between any channel and earth (ground), or between a given channel and any other channel.

**CAUTION**

This does not imply that these channels are intended for permanent connection to voltages of this level. Connection of these channels to voltages higher than those stated in the "Input" specification will violate electrical safety code requirements and may expose users to electric shock.

**Power Requirements**

- INPUT VOLTAGE RANGE (REDUNDANT)
  - 26 to 42 V dc
- CONSUMPTION
  - Main Module only*
    - 5 W (maximum)
  - Main Module plus Expansion Module*
    - 7 W (maximum)

**Filter Time**

Configurable (4, 8, 16, or 32 ms)

**Heat Dissipation**

- MAIN MODULE ONLY
  - 11 W (maximum)
- MAIN MODULE PLUS EXPANSION MODULE
  - 18 W (maximum)

**Indicators (mounted on termination assembly)**

- OPERATIONAL STATUS
  - Two light-emitting diodes (LEDs) (one red and one green)
- INPUT CHANNEL STATUS
  - 16 LED's (1 per channel)

**Field Termination Connections(a)**

- DISCRETE WIRE BLOCKS
  - 32 screw-clamp terminals (2 blocks using 16 terminals per block)
- 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
- DIRECT CONNECTION BLOCK
  - 32 screw-clamp terminals

**Communication**

Via a redundant Fieldbus (main module only)

(a) The discrete wire or plug connector block is available on termination cable assemblies for all enclosures excluding Local Enclosures, Field Enclosure 4 and Multiple (Bridged) Industrial Enclosure 32. The direct connection block is available only on the termination cable assembly for Local Enclosures and Field Enclosure 4. Multiple (Bridged) Industrial Enclosure 32 uses the plug connector block only.  
(b) OFF-ON and ON-OFF transitions occur between 20 and 79 V ac.

**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 ranges can be extended by the type of enclosure containing the module. {Refer to the Product Specification Sheet (PSS) applicable to the 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)

**The Foxboro Company**

33 Commercial Street  
Foxboro, Massachusetts 02035-2099  
United States of America  
<http://www.foxboro.com>

Inside U.S.: 1-508-543-8750 or 1-888-FOXBORO (1-888-369-2676)  
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