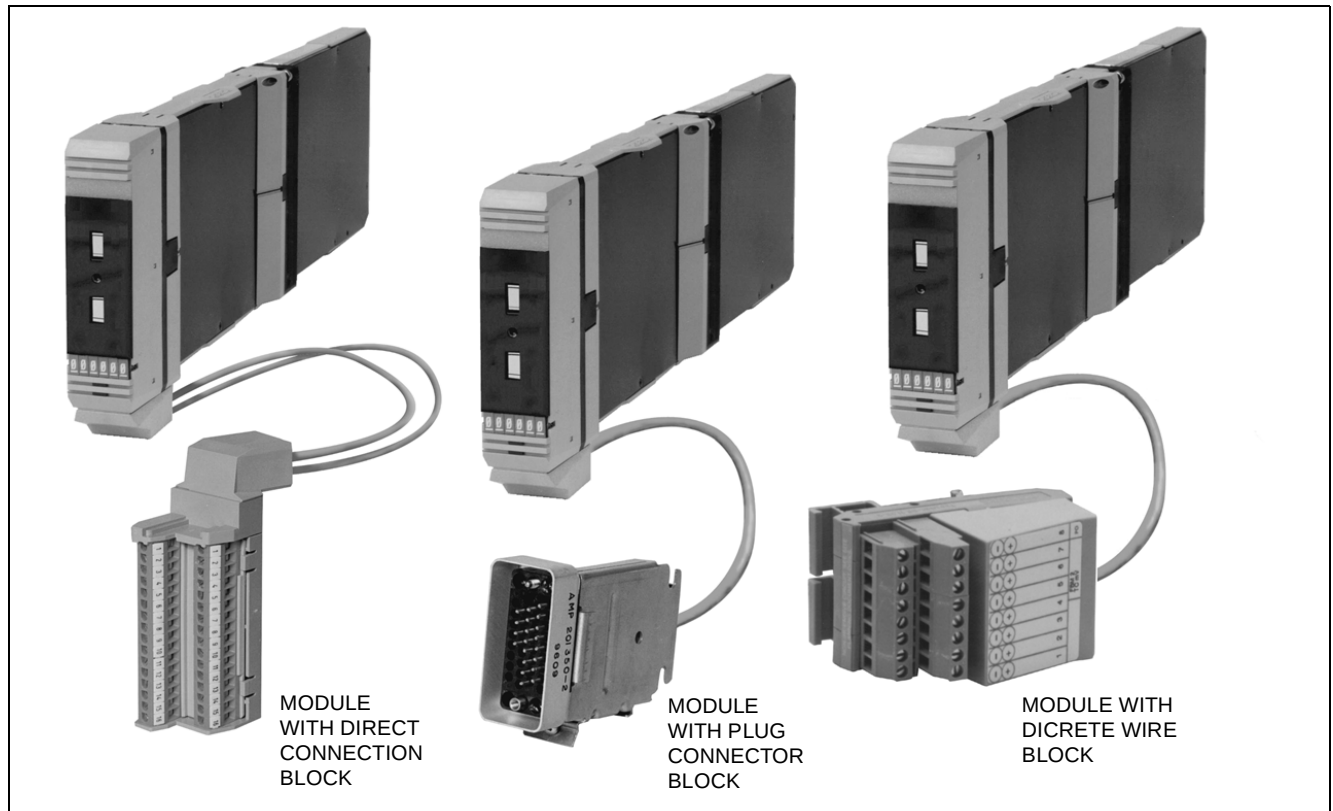


## I/A Series® Hardware

### Intelligent Transmitter Interface Module (FBM18)



The Intelligent Transmitter Interface contains eight individual channels, each providing isolated power and communication capabilities to an Intelligent Transmitter over a single pair of wires. The module provides bi-directional digital communications between the Intelligent Transmitter and the system redundant Fieldbus.

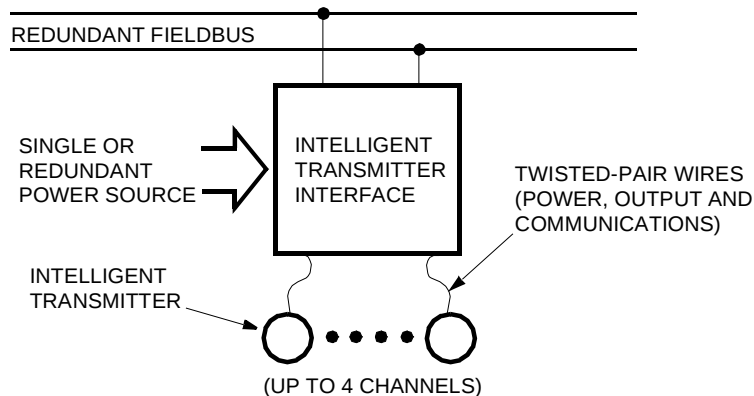
The module is a transmitter host, enabling the system to receive digital messages from the transmitter in engineering units. Each message is received ten times per second and contains:

- Up to three measured variables in IEEE 32-bit floating point
- Security information
- Diagnostics
- Message checking

This information is available to all elements of the system.

Since the communications are bi-directional, the system can display the output, transmitter temperature (°C and °F), and continuous self-diagnostics. In addition, information that can be displayed or reconfigured from the console or a Hand-Held Terminal (PSS 2A-1Z3 A) includes:

- Output in engineering units
- Fail-safe
- Tag Number, Name and Location
- Device Name (Letterbug)
- Last calibration date
- Two levels of upload/download capabilities



### FUNCTIONAL SPECIFICATIONS

#### Transmitter Channels

##### COMMUNICATIONS

Non-redundant, point-to-point, master/slave, asynchronous, half-duplex

##### ERROR CHECKING

CCITT 2 byte CRC

##### SPEED

10 messages per second

##### MAXIMUM DISTANCE (INTERFACE TO TRANSMITTER)

600 m (2000 ft) (shielded twisted-pair wires)

##### MAXIMUM LOOP RESISTANCE

420  $\Omega$

##### ISOLATION

The module can 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 violates electrical safety code requirements and may expose users to electric shock.

#### Fieldbus Channel

Communication via a redundant Fieldbus

#### Power Requirements

##### INPUT VOLTAGE RANGE (REDUNDANT)

26 to 42 V dc

##### CONSUMPTION

11 W (maximum)

##### HEAT DISSIPATION

9 W (maximum)

#### TRANSMITTER POWER

24 V dc +4%, -2%, source resistance 30  $\Omega$   
maximum

**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**

16 screw-clamp terminals

**DIRECT CONNECTION BLOCK**

16 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 clamshell hood)
- Burndy MDS 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 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.



### PRODUCT SPECIFICATION SHEETS (PSSS) FOR INTELLIGENT TRANSMITTERS

| Category             | Device Types          | Models              | PSS Numbers                                                    |
|----------------------|-----------------------|---------------------|----------------------------------------------------------------|
| Mass Flow            | Flowtubes             | CFS10; CFS20        | 1-2B1 A; 1-2B4 A                                               |
|                      | Transmitters          | CFT10; CFT15        | 1-2B3 C; 1-2B3 D                                               |
| Magnetic Flow        | Transmitters          | IMT25               | 1-6F5 A                                                        |
|                      |                       | IMT25L              | 1-6F6 A                                                        |
| Vortex Flow          | Flowmeters            | 83 Series           | 1-8A1 E (83F and 83W); 1-8A2 D (83S)                           |
| Pressure             | Transmitters          | I/A Series (-D)     | 2A-1C13 A; 2A-1C14 A; 2A-1C16 A; 2A-1C16 B; 2A-1Z9 E (Options) |
|                      |                       | I/A Series (-T)     | 2A-1C13 B; 2A-1C14 B; 2A-1C16 C; 2A-1C16 D; 2A-1Z9 E (Options) |
|                      |                       | I/A Series (-A, -I) | 2A-1C13 C; 2A-1C14 C; 2A-1C16 E; 2A-1C16 F; 2A-1Z9 E (Options) |
| Electrochemical      | Transmitters          | 870IT Series        | 6-1B1 B; 6-3N2 A                                               |
| Temperature          | Transmitters          | RTT20               | 2A-1F4 A; 2A-1Z9 F (Options)                                   |
| Valves               | Positioner            | SRD 991             | 4-40A5 A                                                       |
| Remote Communication | Configurators         | HHT                 | 2A-1Z3 A                                                       |
|                      |                       | PC10                | 2A-1Z3 C                                                       |
|                      | I/A Series Interfaces | FBM18 & FBM39       | 21H-2D5 B4; 21H-2C4 B4                                         |
|                      |                       | FBM43 & FBM44       | 21H-2D8 B4; 21H-2D4 B4                                         |

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