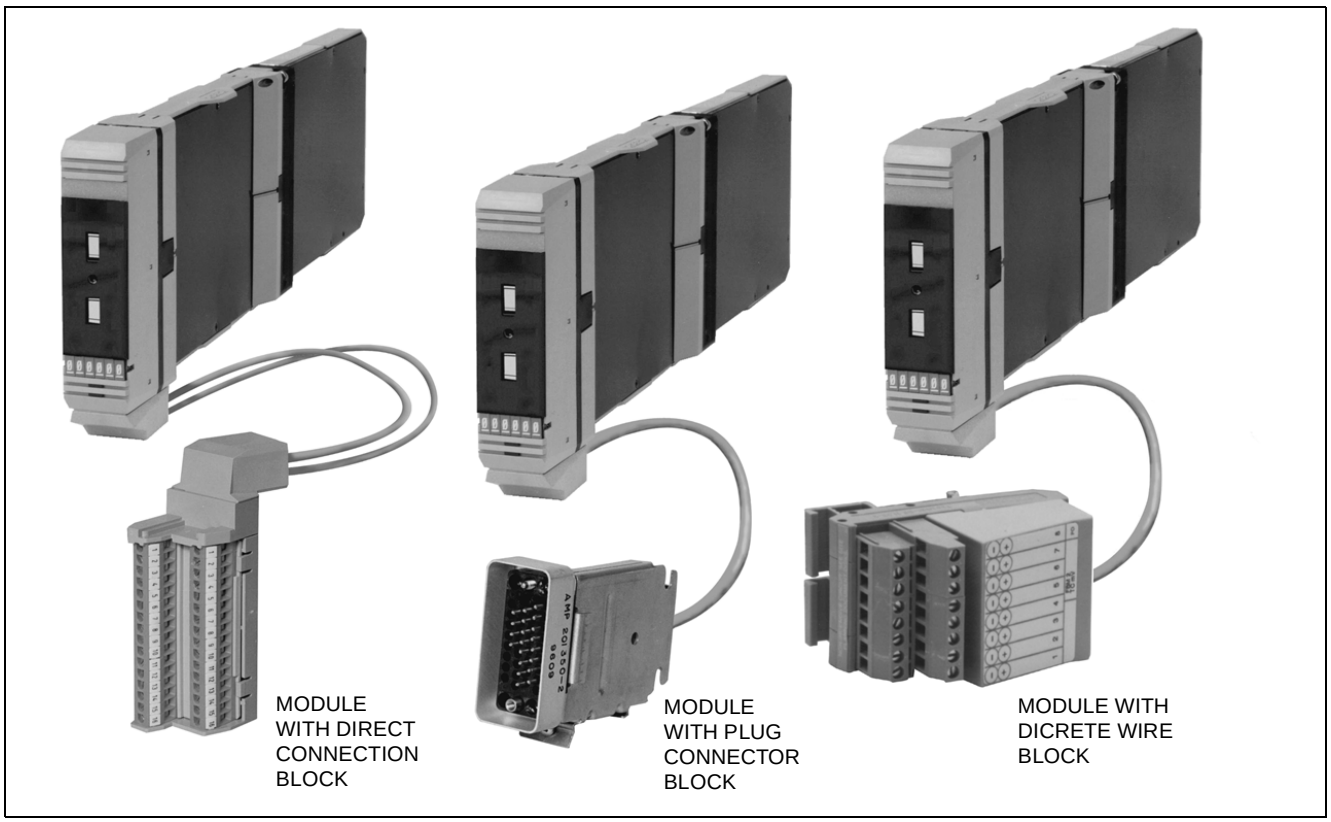
FOXBORO®

PSS 21H-2D5 B4

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

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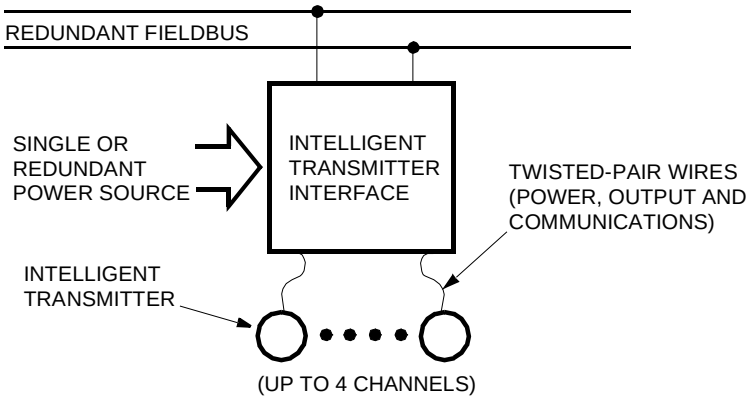
Product Specifications



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 Ω

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.

TRANSMITTER POWER

24 V dc +4%, -2%, source resistance 30 Ω maximum

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)

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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