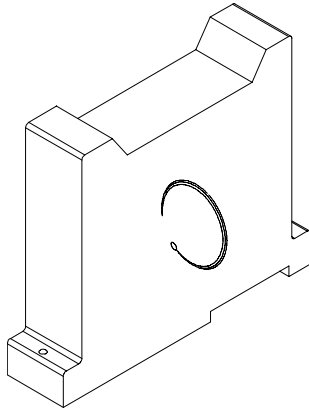


Specifications and Ordering Information
1701/15 FieldMonitor™ Proximator® Input Monitor
for Radial Vibration and Thrust Position



Description

The 1701/15 FieldMonitor™ Proximator® Input Monitor is a 2-channel device that accepts signals from proximity probes via its associated transducer I/O or internal Proximator® module, conditions these signals into the appropriate measurement units, compares them to user-programmable alarm setpoints, and generates appropriate alarm signals for communication to the host control system. It can also provide current values of its measured parameters to the control system for indication and trending. Embedded self-tests permit the monitor to assess its own integrity, and that of its connected transducers. A NOT OK condition can be detected and annunciated when problems with the monitor or its connected transducers exist.

The monitor can be programmed to provide any of the following measurements:

- Shaft relative radial vibration
- Shaft radial position (see note)
- Shaft axial position (i.e., thrust position)

Note: Shaft radial position (i.e., gap voltage) is monitored simultaneously with shaft radial vibration using the same monitor channel. However, only Alarm 1 (Alert) capabilities are provided as shaft position measurements are normally not used for machinery protection purposes.

Specifications

1701/15 Proximator® Input Monitor - Radial Vibration

Programmable Options

Proportional Values: Direct (Overall), Gap

Alarms

*Alarm 1 (Alert),
Alarm 2 (Danger):* Over Alarm 1 & 2 on Direct, Over/Under Alarm 1 on Gap

*Alarm Time
Delays:* 0.15, 0.2, 0.3, 0.5, 0.6, 1.0, 2.0, 3.0, 5.0, 6.0, 10.0, 20.0 seconds

Latching/Non-Latching Alarms: Non-Latching only



Trip Multiply: None, 1.5, 2, 3
OK Mode: Non-latching only
Timed OK Channel Defeat: Always Enabled
Alarm Hysteresis: 0.5% of full-scale

Signal Processing Options

Bandwidth / Filtering

High-Pass Corner Frequency in Hz 1, 4

Low-Pass Corner Frequency in Hz 4000, 600

Full-scale Direct Ranges

mils pp: 0 - 3 mils
 0 - 5 mils
 0 - 10 mils
 0 - 15 mils
 0 - 20 mils

micrometers pp: 0 - 100 μm
 0 - 125 μm
 0 - 150 μm
 0 - 200 μm
 0 - 250 μm
 0 - 300 μm
 0 - 400 μm
 0 - 500 μm

Full-Scale Gap Range: 24 Volts

Gap Filter: -3 db at 0.09 Hz

- Barriers:**
- Internal galvanically isolated barrier (requires the 1701/06 Isolator Terminal Base)
 - External Zener Barrier
 - External galvanically isolated barrier

Supported Transducer I/O Modules

Part Number	Description
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170133-050-XX	Internal 3300 5-metre Proximator® transducer
170133-090-XX	Internal 3300 9-metre Proximator® transducer
170133-014-XX	Internal 3300 14-metre Proximator® transducer
170150-070-00	Internal 3300 NSv 7-metre Proximator® transducer
170172-050-XX	Internal 7200 5-metre Proximator® transducer
170172-090-XX	Internal 7200 9-metre Proximator® transducer
170190-01	Internal galvanically isolated barrier (requires the 1701/06 Isolator Terminal Base)
170180-01-XX	Proximator® / Accelerometer I/O
170180-05-XX	External -18 Volt Proximator® I/O

External Proximator® Options

I/O Module Part Numbers	Description
170180-01-XX	3300 5 mm 3300 8 mm 330800 Proxpac 3300 XL 7200 5 mm 7200 8 mm 7200 11 mm 7200 14 mm 3300 RAM 3300 XL NSv
170180-05-XX	3000 -18 Volt

- Control I/O**
- Channel On/Off
 - Monitor Reset
 - Channel Inhibit
 - Trip Multiply: Enabled, Disabled

Specifications at 25°C (77°F)

Direct accuracy: 1% of full-scale max (exclusive of filters)

<i>Direct resolution:</i>	0.1% of full-scale
<i>Gap accuracy:</i>	± 20mV, -1 to -23 V
<i>Gap Resolution:</i>	1 mV
<i>Gap Setpoint Resolution:</i>	0.10 V
<i>Power input:</i>	-24 V, + 5 V, from 1701 Power Supply
<i>Power Consumption:</i>	1.5 Watt (not including transducers)
<i>Setpoint resolution:</i>	0.5% of full-scale
<i>Flex read/write rate:</i>	≥ 25 millisec (monitor to Flex adapter)
<i>Buffered Output:</i>	30 m (100 ft) cable at 60pF/ft, not isolated
	Output impedance: 200 Ω

Physical

<i>Dimensions (HxWxD)</i>	127 mm x 21.6 mm x 105 mm (5 in x 0.85 in x 4.15 in)
<i>Weight:</i>	314 g (0.69 lb)

Environmental Limits

<i>Operating Temperature:</i>	-20°C to + 70°C (-4°F to +158°F)
<i>Storage Temperature:</i>	-40°C to + 85°C (-40°F to +185°F)
<i>Operating Humidity:</i>	5% to 95% non-condensing relative humidity.
<i>Storage Humidity:</i>	5% to 95% non-condensing relative humidity.

Specifications

1701/15 Proximator® Input Monitor - Thrust Position

Programmable Options

Proportional Values: Direct, Gap

Alarms

Alarm 1 (Alert), Alarm 2 (Danger): Over/Under Alarm 1 & Alarm 2 on Direct

Alarm Time Delays: 0.15, 0.2, 0.3, 0.5, 0.6, 1.0, 2.0, 3.0, 5.0, 6.0, 10.0, 20.0 seconds

Latching/Non-Latching Alarms: Non-Latching only

OK Mode: Non-Latching only

Timed OK Channel Defeat: Always Disabled

Alarm Hysteresis: 0.5% of full-scale

Signal Processing Options

Bandwidth/Filtering

Direct Filter: -3dB at 1.2 Hz

Gap Filter: -3dB at 0.041 Hz

Full-scale Direct Range

mils: 10 - 0 - 10
25 - 0 - 25
30 - 0 - 30
40 - 0 - 40
50 - 0 - 50
75 - 0 - 75

millimeters: 0.250 - 0 - 0.250
0.500 - 0 - 0.500
0.600 - 0 - 0.600
0.800 - 0 - 0.800
1.0 - 0 - 1.0
2.0 - 0 - 2.0

Full-scale Gap Range: 24 Volts

Normal Thrust Direction: Toward probe
Away from probe

Direct Zero Position: Set using I/O data tables

Barriers:	<ul style="list-style-type: none"> ▪ Internal galvanically isolated barrier (requires the 1701/06 Isolator Terminal Base) ▪ External Zener Barrier ▪ External galvanically isolated barrier
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Transducer I/O Module Options

Part Number	Description
170133-050-XX	Internal 3300 5-metre Proximito [®] transducer
170133-090-XX	Internal 3300 9-metre Proximito [®] transducer
170133-014-XX	Internal 3300 14-metre Proximito [®] transducer
170150-070-00	Internal 3300 NSv 7-metre Proximito [®] Transducer
170172-050-XX	Internal 7200 5-metre Proximito [®] Transducer
170172-090-XX	Internal 7200 9-metre Proximito [®] transducer
170190-01	Internal galvanically isolated barrier (requires the 1701/06 Isolator Terminal Base)
170180-01-XX	Proximito [®] / Accelerometer I/O
170180-05-XX	External -18 Volt Proximito [®] I/O

External Proximito[®] Options

I/O Module	Description
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170180-05-xx	3000 -18 Volt

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<i>Direct Resolution:</i>	0.1% of full-scale
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Ordering Information


Proximitor® Input Monitor for Radial Vibration and Thrust Position

1701/15-01

Approvals

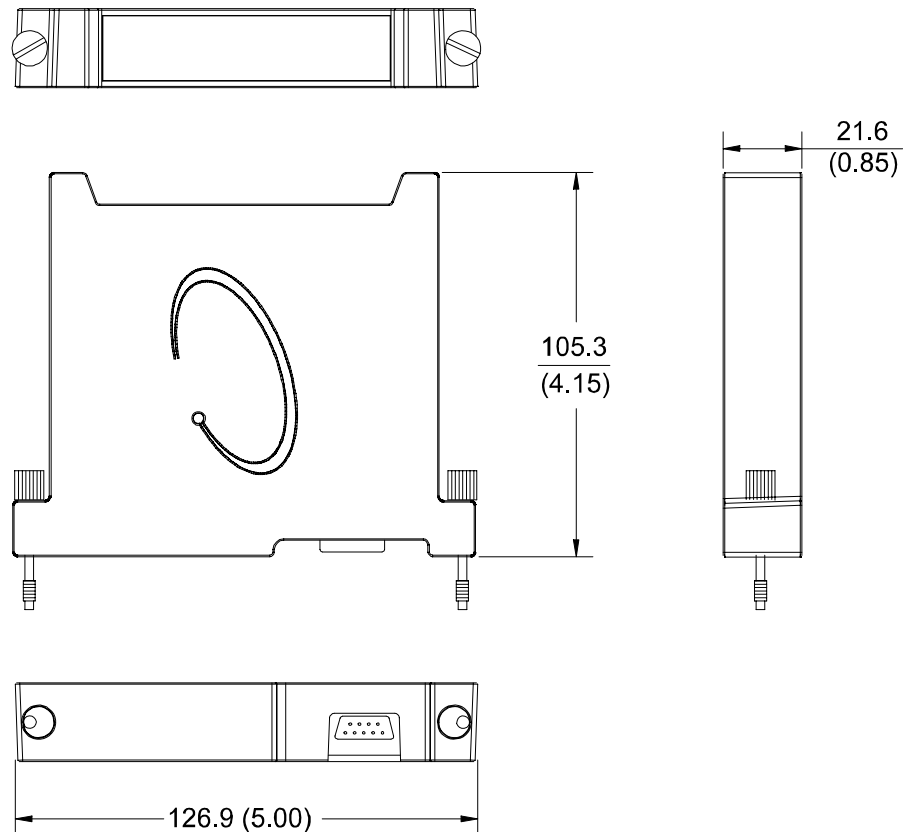
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CE₁₁₈₀  II 1/3G EEx nA [ia] ia IIC T4 @ Ta = 70° C
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Dimensional Drawing



Dimensions are in millimetres (inches)