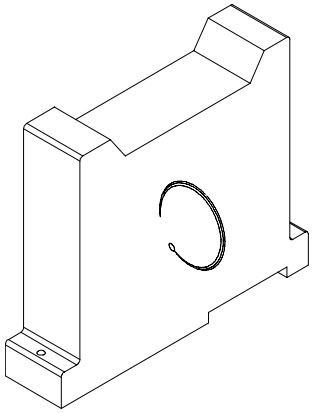
Specifications and Ordering Information

1701/15 FieldMonitor™ Proximitor® Input Monitor for Radial Vibration and Thrust Position



Description

The 1701/15 FieldMonitor™ Proximitor® Input Monitor is a 2-channel device that accepts signals from proximity probes via its associated transducer I/O or internal Proximitor® 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 Proximitor® 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

CE

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

External Proximitor® 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)

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

Physical

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

Environmental Limits

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

Specifications

1701/15 Proximitor® 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:	▪ Internal galvanically isolated barrier (requires the 1701/06 Isolator Terminal Base) ▪ External Zener Barrier ▪ External galvanically isolated barrier

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Setpoint resolution:	0.5% of full-scale
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Buffered Output:	30 m (100 ft) cable at 60pF/ft, not isolated
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