

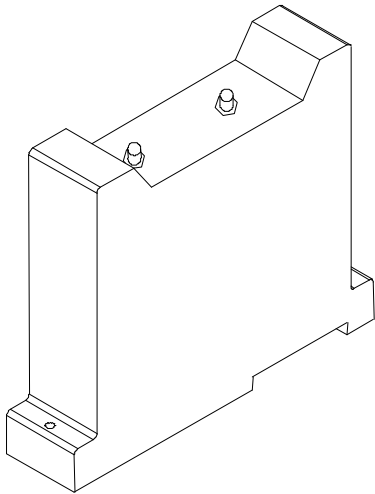
# 170172 FieldMonitor™ Internal 7200 Proximator® Module

Bently Nevada™ Asset Condition Monitoring

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## Description

The 170172 Internal 7200 Proximator Module is a dual Proximator module that will work with any standard 7200 series 5mm or 8mm probe in 5m and 9m system lengths. This module's dual internal Proximator sensors eliminate the need for external Proximator sensors, and allow direct connection of up to two proximity probes and their associated extension cables.



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Specifications and Ordering Information  
Part Number 141482-01  
Rev. D (11/08)

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## Specifications

Unless otherwise noted, the following specifications are for a proximity transducer system at +22°C (+72°F) with a -24 Vdc power supply, a 10 kΩ load, a GE supplied AISI 4140 steel target and a probe gapped at 1.27 mm (50 mils). Typical is defined as 90% of the devices built meeting the specification. The calibration range is 250 μm (10 mil) to 2250 μm (90 mil), (Approximately -1 to -17 Volt dc).

### Incremental Scale Factor:

7.87 mV/μm (200 mV/mil)  
±6.5% including interchangeability error when measured in increments of 0.25 mm (10 mils) over the linear range.

### Deviation from best fit straight line (DSL):

Less than ±38 μm (±1.5 mil) deviation from best fit straight line.

### Minimum Target Size:

15.2 mm (0.6 inch) diameter (flat target).

### Shaft Diameter:

Minimum: 50.8 mm (2 inches).

### Recommended minimum:

76.2 mm (3 inches). With XY probes in the same plane, shaft diameters smaller than 50.8 mm (2 inches) will experience electrical noise due to crosstalk.

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## Proximity Sensor

### Weight:

353 g (12.7 oz)

### Storage Temperature:

-40°C to +85°C (-40°F to +185°F)

### Operating Temperature:

-35°C to +85°C (-30°F to +185°F)

### Relative Humidity:

100% condensing non-submerged from +7°C to +85°C (+45°F to +185°F) when connectors are protected.

### Intrinsic safety:

The 1701 Proximity Sensor is designed to be used only with the 1701 Internal Galvanic Isolator.

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## Hazardous Area Approvals

### -00 Approvals Ordering Option


#### North America

Ex nA IIC T4  
Class I, Zone 2  
Class I, Div 2  
Groups A, B, C, D  
T4 @ -30°C = Ta = +70°C  
per dwg 139255

#### Certification Number

CSA 1166985

#### European/ATEX

 II 3G EEx nA [L] IIC T4  
LCIE 00ATEX6016X  
T4 @ -30°C = Ta = +70°C

#### Brazil

Br-Ex nA [nL] IIC T4  
MC, AEX-8304-X  
T4 @ -30°C = Ta = +70°C

### -05 Approvals Ordering Option

#### North America

Ex nA [ia] IIC T4  
Class I, Zone 2(0)  
Class I, Div 2

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Specifications and Ordering Information  
Part Number 141482-01  
Rev. D (11/08)

Groups A, B, C, D  
T4 @ -30°C = Ta = +70°C  
per dwg 141265

Certification  
Number

CSA 1166985

#### European/ATEX

 II 1/3 G EEx nA[ia] ia IIC T4  
LCIE 00ATEX6017X  
T4 @ -30°C = Ta = +70°C

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#### Probe

Probe dc  
resistance  
(nominal)  
( $R_{\text{PROBE}}$ ):

3.3  $\Omega$  +0.79  $\Omega$ /m (0.24  $\Omega$ /ft).

Connector  
torque  
requirement:

0.565 N•m (5 in•lb.) minimum  
(approximately 1/8 turn past  
finger tight)

Minimum Cable  
Bend Radius:

25.4 mm (1.0 in)

Probe  
Temperature  
Range:

-35°C to +177°C (-31°F to +351°F)

Relative  
Humidity:

95% non-condensing non-  
submerged from +2°C to +100°C  
(+35°F to +212°F) when  
connectors are protected.

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#### Extension Cable

Cable dc  
resistance,  
nominal:

Center  
conductor  
( $R_{\text{CORE}}$ ):

0.74  $\Omega$ /m (0.23  $\Omega$ /ft)

Shield ( $R_{\text{JACKET}}$ ):

0.06  $\Omega$ /m (0.02  $\Omega$ /ft)

Capacitance:

59.5 pF/m (15.4 pF/ft)

Temperature  
Range:

-51°C to +177°C (-60°F to +351°F)

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#### Ordering Information

Internal 7200 Series Proximito<sup>®</sup> Module  
170172-XXX-XX

A: Proximito Type

**050** 7200 Internal Dual 5-metre  
Proximito Sensor  
**090** 7200 Internal Dual 9-metre  
Proximito Sensor

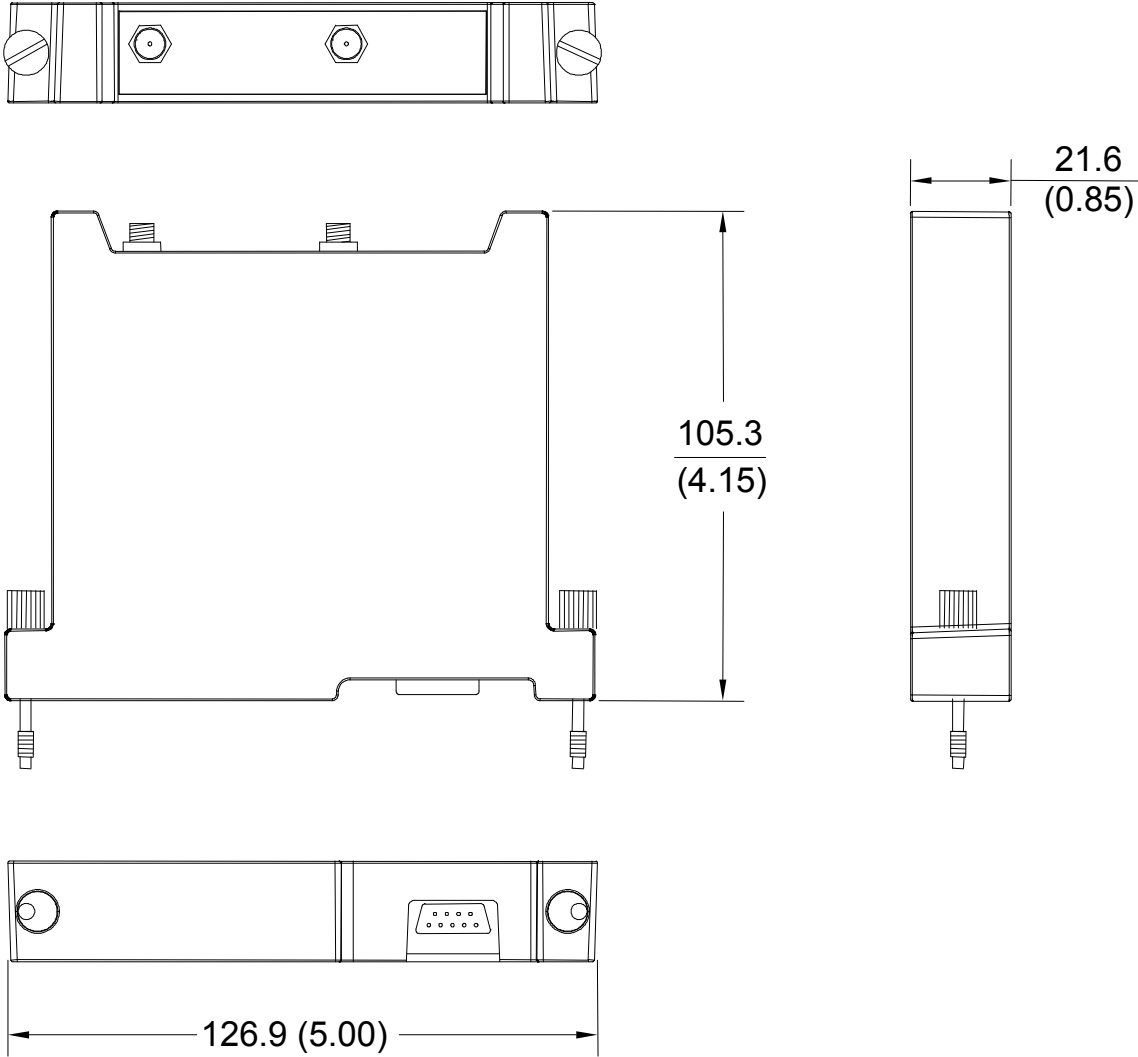
B: Hazardous Area Approval

Use the **05** option in the 1701/06 Isolator Terminal Base

**00** Division 2/Zone 2  
**05** Division 2/Zone 2 for Monitor  
**Division 1, Zone 0/1 for  
Transducers**

**Note:** For 7200 5 mm and 8 mm proximity probes  
and their associated extension cables, contact your  
sales professional.

**Dimensional Drawing**



Dimensions are in millimetres (inches)

# Performance Graphs

170172 Internal 7200 Proximitor Module

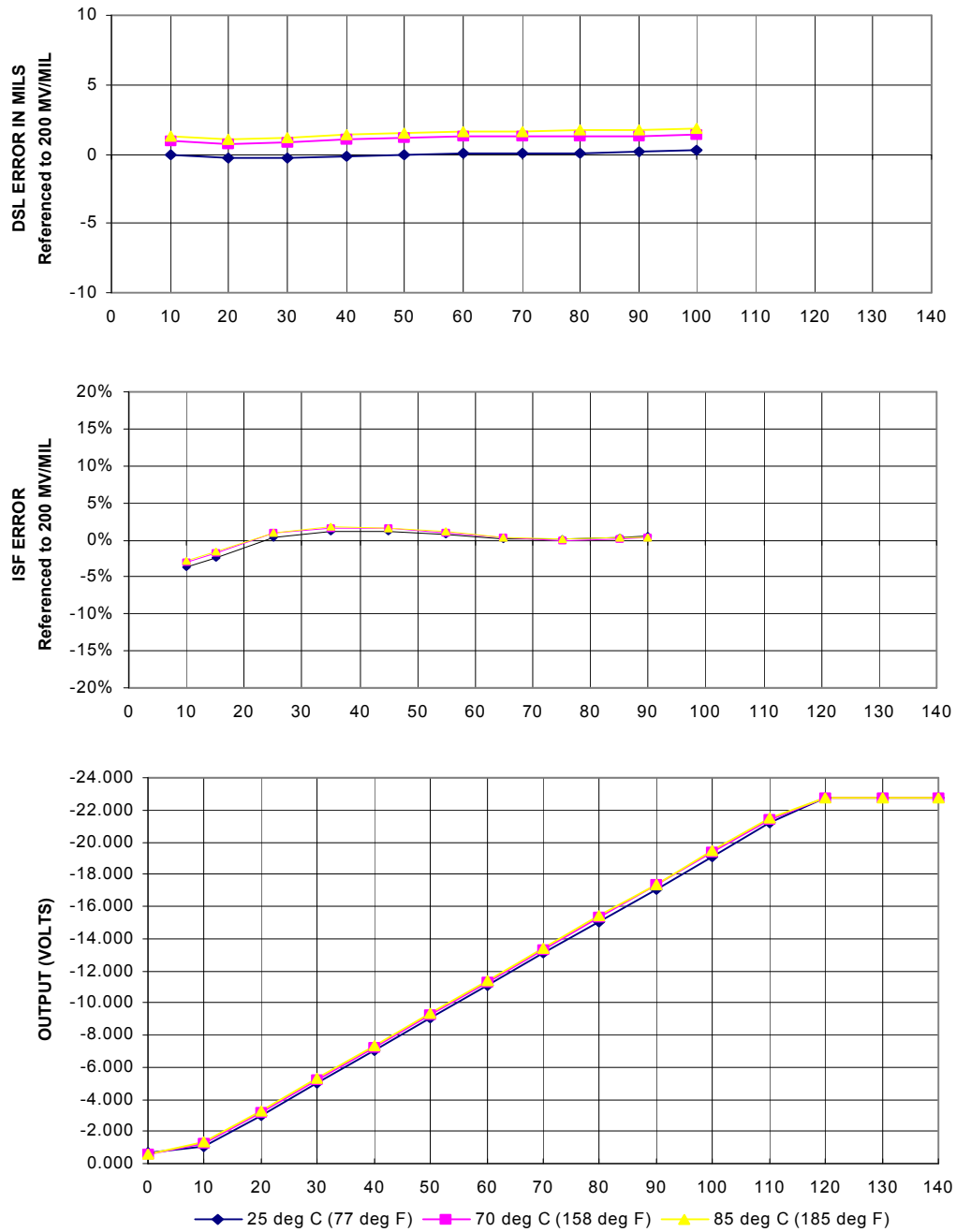
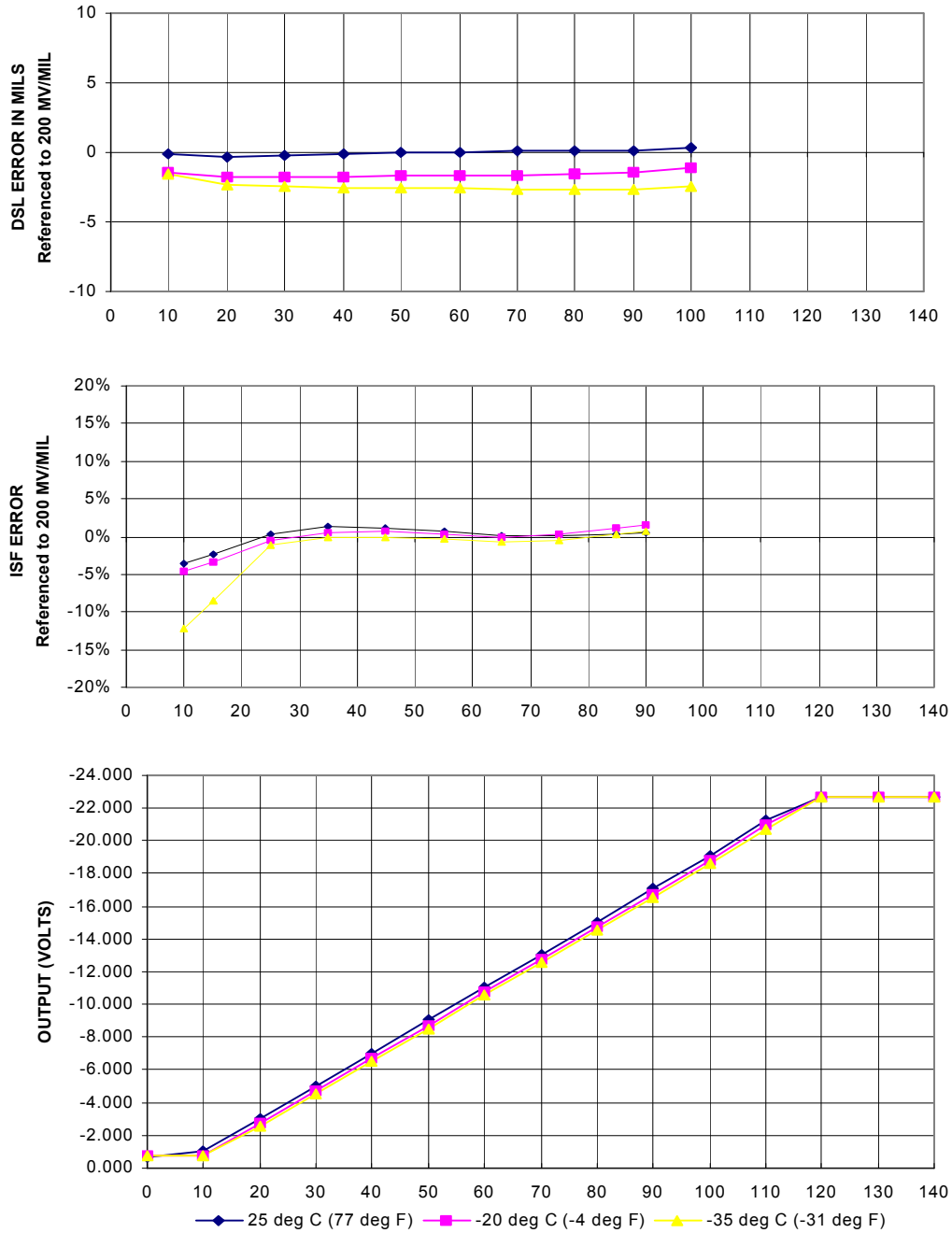


Figure 1: 5-metre Proximitor and 4-metre (13.1 feet) cable at high temperature



**Figure 2: 5-metre Proximitor and 4-metre (13.1 feet) cable at low temperature**

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