170180 FieldMonitor™ External Transducer I/O Module

Bently Nevada™ Asset Condition Monitoring

Description
An external transducer I/O module is used to connect the following transducer types to their respective 2-channel monitoring module:

- Proximity probes using external Proximitor® sensors (see note)
- All supported acceleration and velocity transducers

Each external transducer I/O module occupies one slot in a FieldMonitor terminal base, and can accommodate up to two transducer inputs.

Note: For proximity probes without external Proximitor sensors, refer to specification and ordering information sheets 141481-01 and 141482-01.
Specifications

Signal Inputs
170180-01-XX:

Channel A
One Proximitor
or
Accelerometer with -24 Vdc Supply

Channel B
One Proximitor
or
Accelerometer with -24 Vdc Supply

170180-02-XX:

Channel A
One 2-wire Velocity Transducer

Channel B
One 2-wire Velocity Transducer

170180-03-XX:

Channel A
One Velomitor® Velocity Transducer

Channel B
One Velomitor Velocity Transducer

170180-04-XX:

Channel A
One Velomitor Velocity Transducer

Channel B
One 2-wire Velocity Transducer

170180-05-XX:

Channel A
One Proximitor sensor with -18 Vdc supply

Channel B
One Proximitor sensor with -18 Vdc supply

Physical
Operating Temperature:
-34°C to +85°C (-30°F to +185°F)

Storage Temperature:
-40°C to +85°C (-40°F to +185°F)

Relative Humidity:
100% condensing nonsubmerged from +7°C to +85°C (+45°F to +185°F) when the connector is protected.

Weight:
277g (0.61 lb) typical

Proximitor Sensor/ Accelerometer Interface Module
Input Signal Voltage Range:
0 to -Vt

Output Voltage Range:
0 to -Vt

Frequency Response:
-5% at >25 kHz

Current draw (without transducer):
2.0 mA maximum

Current Limit Setpoint:
33.6 mA min, 37.6 mA max at 25°C (77°F)
### 2-Wire Velocity Transducer Interface Module

- **Input Signal Voltage Range:** 0 to -Vt
- **Output Voltage Range:** 0 to -Vt
- **Frequency Response:** -5% at >25 K Hz
- **Input Impedance:** 9.98 ± 0.02 KΩ
- **Current draw (without transducer):** 2.0 mA maximum

### Velomitor Piezo-Velocity Transducer

- **Input Signal Voltage Range:** 0 to -Vt
- **Output Voltage Range:** 0 to -Vt
- **Frequency Response:** -5% at >25 K Hz
- **Input Impedance:** 9.98 ± 0.02 KΩ
- **Current draw (without transducer):** 2.0 mA maximum

### -18 V Proximitior Interface Module

- **Input Signal Voltage Range:** 0 to -Vt
- **Output Voltage Range:** 0 to -Vt
- **Transducer Supply Voltage:** -17.75 to -18.24 Vdc
- **Frequency Response:** -5% at >25 kHz
- **Current draw (without transducer):** 2.0 mA maximum

- **Transducer Nominal Bias Voltage:** -12 Vdc
- **Transducer Regulated Current:** 3.00 to 4.10 mA
- **Current draw (without transducer):** 1.5 mA maximum
### 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**
  - Ex 3G Ex nA [L] IIC T4
  - LCIE 00ATEX6016X
  - T4 @ -30°C = Ta = +70°C

- **Brazil**
  - Br-Ex nA [nL] IIC T4
  - MC, AEX-B304-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
      - Groups A, B, C, D
      - T4 @ -30°C = Ta = +70°C
      - per dwg 141265

  - **Certification Number**
    - CSA 1166985

- **European/ATEX**
  - Ex 1/3 G Ex nA[ia] ia IIC T4
  - LCIE 00ATEX6017X
  - T4 @ -30°C = Ta = +70°C

### Ordering Information

- **Transducer I/O Module**
  - 170180-XX-XX

- **A:** I/O Module Type
  - 01 Dual Proximitor/Accelerometer I/O Module
  - 02 Dual Velocity I/O Module
  - 03 Dual Velomitor I/O Module
  - 04 Velomitor A and Velocity B I/O Module
  - 05 Dual -18V Proximitor I/O Module

- **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
Dimensional Drawing

Dimensions are in millimetres (inches)

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1631 Bently Parkway South, Minden, Nevada USA 89423
Phone: 775.782.3611 Fax: 775.215.2873
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