Bently Nevada 125680-01

Proximitor I/O Module



Bently Nevada 125680-01 is the internal-termination Proximitor I/O module used at the rear of a compatible 3500/40M monitoring assembly. It provides the field-signal interface for the proximity-transducer channels, while the front monitor conditions those signals and compares configured measurements with alarm limits. The complete assembly supports machinery vibration and position monitoring, including functions such as radial vibration, thrust position and differential expansion when appropriately configured. This part number identifies the standard rear I/O component, so the front monitor, transducer application and internal-termination arrangement remain essential to selecting the correct spare.

Technical Specifications

Product Identity	
Manufacturer	Bently Nevada
Part number	125680-01
I/O dimensions (H x W x D)	241.3 x 24.4 x 99.1 mm
Rack space	One full-height rear slot
Functional Configuration	
Module role	Proximitor rear I/O module
Applicable monitor	3500/40M
Termination	Internal terminations
I/O format	Standard non-barrier
Performance & Power	
Input impedance	10 kOhm, standard I/O
Environment	
Operating temperature	-30 to +65 degrees C with internal/external termination I/O
Storage temperature	-40 to +85 degrees C
Humidity	95%, non-condensing

Selected original manufacturer material follows on pages 3–6.

Compatibility & Selection Guide

System compatibility. Within the 3500/40M system, the connected monitor is configured using 3500 Rack Configuration Software for applicable proximity measurements such as radial vibration, thrust position, eccentricity or differential expansion. REBAM is also a supported monitor function subject to its stated firmware and software conditions. Select 125680-01 against the installed monitor type and intended measurement configuration.

Wiring & Installation Reference

Internal signal terminations

1. Confirm the I/O version Match 125680-01 on the existing module; distinguish 126615-01 external terminations and 135489-04 internal barriers.

2. Check the channel application Confirm the proximity transducer and the configured 3500/40M measurement function before reconnecting the field circuit.

Rear rack position and clearance

1. Check the rear position Match the I/O position to its associated 3500/40M monitor.

2. Verify the application environment Use the published temperature and non-condensing humidity limits; retain the installed assembly approval requirements.

Installation precautions

External termination blocks cannot be used with internal-termination I/O modules.

For REBAM, confirm the M-version Proximitor monitor and the minimum firmware/software revisions listed in the manufacturer ordering notes.

View module layout (PDF) — page 6 · View mounting reference (PDF) — page 6

Environmental Limits

Operating Temperature	When used with Internal/External Termination I/O Module: -30°C to +65°C (-22°F to +150°F) When used with Internal Barrier I/O Module (Internal Termination): 0°C to +65°C (32°F to +150°F)
Storage Temperature	-40°C to +85°C (-40°F to +185°F).
Humidity	95%, noncondensing

Physical

Monitor Module (Main Board)	
Dimensions (Height x Width x Depth)	241.3 mm x 24.4 mm x 241.8 mm (9.50 in x 0.96 in x 9.52 in)
Weight	0.91 kg (2.0 lb)
I/O Modules (non-barrier)	
Dimensions (Height x Width x Depth)	241.3 mm x 24.4 mm x 99.1 mm (9.50 in x 0.96 in x 3.90 in)
Weight	0.20 kg (0.44 lb)
I/O Modules (barrier)	
Dimensions (Height x Width x Depth)	241.3 mm x 24.4 mm x 163.1 mm (9.50 in x 0.96 in x 6.42 in)
Weight	0.46 kg (1.01 lb)

Rack Space Requirements

Monitor	1 full-height front slot
I/O Modules	1 full-height rear slot

Barrier Parameters

The following parameters apply to CSA-NRTL/C and ATEX / IECEx approvals.

Proximitor Barrier	
Circuit Parameters	Vmax (PWR) = 26.25V (SIG) = 13.65 V Imax (PWR) = 110.48 mA (SIG) = 2.74mA Rmin (PWR) = 237.6 Ω (SIG) = 4985 Ω
Channel Parameters (entity)	Vmax = 27.45 V Imax = 113.24 mA Rmin (PWR) = 237.6 Ω (SIG) = 4985 Ω

Alarms

Alarm Setpoints	Use Rack Configuration Software to set alert levels for each value measured by the monitor and Danger setpoints for any two of the values measured by the monitor. Alarms are adjustable from 0 to 100% of full-scale for each measured value. However, when the full-scale range exceeds the range of the transducer, the range of the transducer will limit the setpoint.
Accuracy of alarm setpoints	Within 0.13% of the desired value

Alarm Time Delays



You can program alarm delays using **Rack Configuration Software.**

Baker Hughes

Ordering Considerations

General

The 3500/40M Module requires the following (or later) firmware, and software revisions:

3500/01 Software – Version 2.50
3500/02 Software – Version 2.20
3500/03 Software – Version 1.21

When ordering I/O Modules with External Terminations the External Termination Blocks and Cable must be ordered separately for each I/O Module.

External Termination Blocks cannot be used with Internal Termination I/O Modules.

Internal Barrier I/O Modules

Consult the 3500 Internal Barrier specification sheet (document 141495) if the Internal Barrier Option is selected.

REBAM

The REBAM channel type requires the following (or later) firmware, and software revisions:

3500/40M Module Firmware – Revision 2.1
3500/01 Software – Version 3.30
3500/02 Software – Version 2.40
3500/03 Software – Version 1.40
DM2000 Software-Version 3.40.

Requires the M version of the 3500 Proximitor Monitor.

Ordering Information

For the detailed listing of country and product-specific approvals, refer to the *Approvals Quick Reference Guide (108M1756)*.

For additional technical documentation, please log in to bntechsupport.com and access the Bently Nevada Media Library.

Proximitor Monitor 3500/40M-AA-BB

A: I/O Module Type	
01	Proximitor I/O Module with Internal Termination
02	Proximitor I/O Module with External Terminations
03	Proximitor I/O Module with Internal Barriers and Internal Terminations
B: Hazardous Area Approval Option	
00	None
01	cNRTLus (Class 1, Division 2)
02	ATEX / IECEx / CSA (Class 1, Zone 2)

Agency Approval Option B-02 is only available with Ordering Option A-03

External Termination Blocks

125808-01	Proximitor ET Block Euro Style Connectors
128015-01	Proximitor ET Block Terminal Strip Connectors

Cables

3500 Transducer XDCR signal to External Termination (ET) Block Cable 129525-AAAA-BB

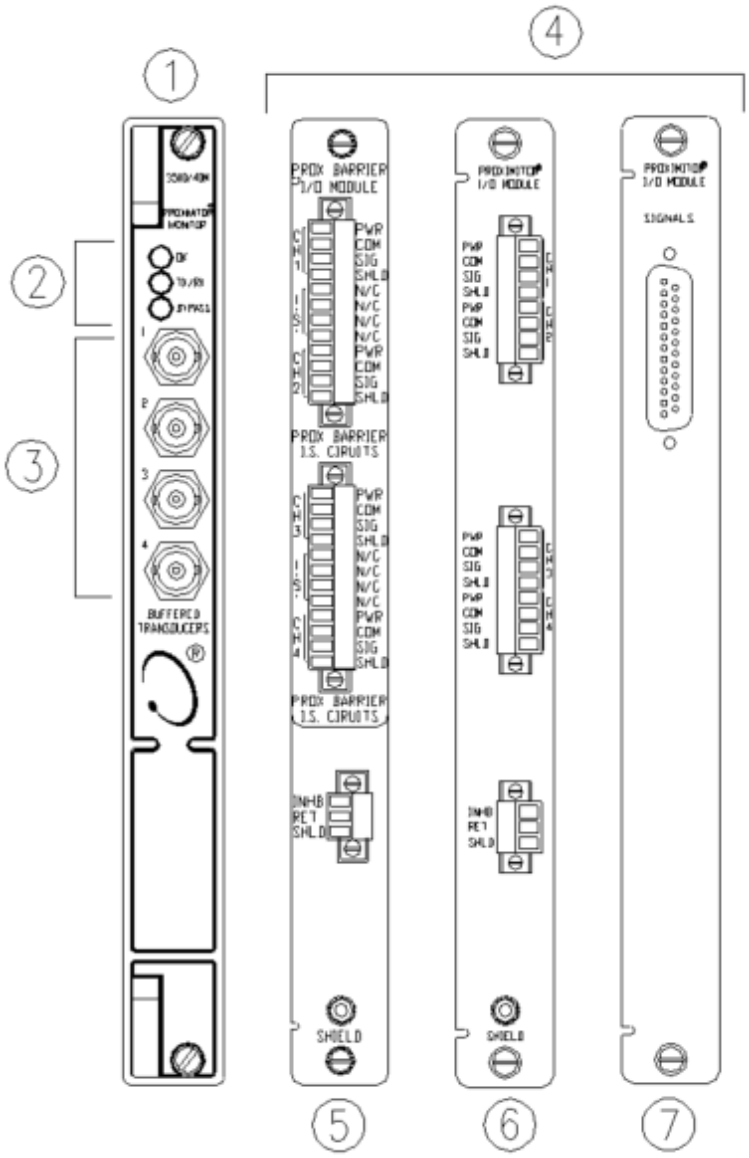
A: I/O Cable Length	
0005	5 feet (1.5 meters)

0007	7 feet (2.1 meters)
0010	10 feet(3.0 meters)
0025	25 feet (7.6 meters)
0050	50 feet (15.2 meters)
0100	100 feet (30.5 meters)
B: Assembly Instructions	
01	Not assembled
02	Assembled

Spares

176449-01	3500/40M Proximitor Monitor
125680-01	Proximitor I/O Module with Internal Terminations
126615-01	Proximitor I/O Module with External Terminations
135489-04	Proximitor I/O Module with Internal Barriers and Internal Terminations
143488	3500/40M Monitor User Guide
00580434	Internal I/O Module connector header, Euro style, 8-pin
00502133	Internal I/O Module connector header, Euro style, 12-pin
166M4363	Connector header, push-in-spring type (alternative for PN 00580441)
166M2389	Connector header, push-in-spring type (alternative for PN 00580434)

Graphs and Figures



1. Main Module Front View
2. Status LEDs
3. Buffered Transducer Outputs
4. I/O modules
5. Barrier I/O module, Internal Termination
6. I/O Module, Internal Termination
7. I/O Module, External Termination

Figure 1: Assorted 3500/40M Proximitor Monitor Views