

76683-90

35 mm Proximito Sensor

The -90 option requires a 9 m total probe-lead-plus-extension-cable electrical length and converts probe gap into a proportional dc output.

PRODUCT SNAPSHOT

BRAND

Bently Nevada

FAMILY

7200 Series 35 mm Proximity Transducer Sys

PART

76683-90

PRODUCT TYPE

35 mm Proximito Sensor

APTER POWER SALES TEAM

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PRODUCT OVERVIEW

The -90 option requires a 9 m total probe-lead-plus-extension-cable electrical length and converts probe gap into a proportional dc output.

1

Conditions the 35 mm eddy-current probe signal

2

Requires the documented 9 m electrical cable length

3

Provides proportional dc output for position measurements

4

Supports controlled calibration and fault isolation

SYSTEM COMPONENTS

7200 Series 35 mm Proximity Transducer System

documented companion probe or cable

approved field wiring and shielding

monitoring-channel configuration record

TECHNICAL NOTE

Use only with the documented 35 mm probe arrangement and a 9 m total electrical cable length; preserve single-point shield grounding and verify calibration against the installed target.



TECHNICAL DATA

PARAMETER	VALUE
Complete model	76683-90
Manufacturer	Bently Nevada
Product family	7200 Series 35 mm Proximity Transducer System
Catalog option	76683-90
Required electrical length	9 m total probe lead plus extension cable
Calibration range	500 mils (12.7 mm), approximately 50 to 550 mils
Average scale factor	20.00 mV/mil (0.787 V/mm) nominal system value
Supply voltage	-18 Vdc to -24 Vdc

PARAMETER	VALUE
Current draw	24 mA maximum with 10 kohm load
Output resistance	50 ohms
Output load	Calibrated into a 10 kohm resistive load
Frequency response	0 to 600,000 rpm, +0/-5%
Target calibration	AISI E4140 steel
System use	Shaft alignment, thrust position and differential expansion
Proximator housing	A380 aluminum; encapsulated printed-circuit assembly

ENGINEERING NOTE

Use only with the documented 35 mm probe arrangement and a 9 m total electrical cable length; preserve single-point shield grounding and verify calibration against the installed target.

RELATED BENTLY NEVADA PRODUCTS ON APTER POWER

BRAND + MODEL	RELATED PRODUCT	APTER POWER LINK
Bently Nevada 330851-04-000-040-10-01-00	Bently Nevada monitoring product	Open Bently Nevada page
Bently Nevada 330881-28-05-050-03-02	Bently Nevada monitoring product	Open Bently Nevada page
Bently Nevada 21504-00-48-10-02	Bently Nevada monitoring product	Open Bently Nevada page
Bently Nevada 129525-0050-02	Bently Nevada monitoring product	Open Bently Nevada page
Bently Nevada 102044-00-32-10-02	Bently Nevada monitoring product	Open Bently Nevada page
Bently Nevada 21000-11-05-00-085-03-02	Bently Nevada monitoring product	Open Bently Nevada page



APPLICATIONS & PRECAUTIONS

COMMON APPLICATIONS

Thrust position

Conditions the 35 mm eddy-current probe signal

Differential expansion

Requires the documented 9 m electrical cable length

Shaft alignment

Provides proportional dc output for position measurements

Controlled replacement

Supports controlled calibration and fault isolation

MORE RELATED BENTLY NEVADA PRODUCTS

[Bently Nevada 21000-15-10-00-166-03-02](#)

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[Bently Nevada 21000-28-05-00-070-01-02](#)

Bently Nevada product - open page

[Bently Nevada 84661-55](#)

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PRODUCT PRECAUTIONS

- 1 Verify the complete 76683-90 nameplate and installed system position before work.
- 2 Place the connected machine and monitoring channel in the approved maintenance state before handling 76683-90.
- 3 Isolate the documented supply and field wiring before disconnecting 76683-90.
- 4 Record every terminal, cable, shield and companion component associated with 76683-90.
- 5 Protect the coaxial connection and prevent contamination or mechanical damage during replacement of 76683-90.
- 6 Match the documented system length and target material before energizing 76683-90.
- 7 Restore power with correct polarity and review the output for fault indications after energizing 76683-90.
- 8 Complete a controlled response test and retain the final acceptance record for 76683-90.

ENGINEER FAQ

Q1 What total cable length is required for Bently Nevada 76683-90?

Bently Nevada 76683-90 requires 9 m total probe-lead-plus-extension-cable electrical length.

Q2 What supply is specified for Bently Nevada 76683-90?

The specified supply range is -18 Vdc to -24 Vdc; polarity must be verified before connection.

Q3 What measurement range is documented for Bently Nevada 76683-90?

The documented calibration range is 500 mils (12.7 mm), approximately 50 to 550 mils.

Q4 What target material is used to calibrate Bently Nevada 76683-90?

The system data are specified with an AISI E4140 steel target.

Q5 What output resistance is specified for Bently Nevada 76683-90?

The documented output resistance is 50 ohms.

Q6 How should Bently Nevada 76683-90 shielding be grounded?

Use single-point grounding and ground only one end of each field-wiring shield.

Q7 What fault output behavior should be checked on Bently Nevada 76683-90?

An open probe or extension cable drives the output more negative than -16 V; a short drives it near zero.

Q8 What final acceptance check is required for Bently Nevada 76683-90?

Verify the exact 9 m system arrangement, polarity, stable gap output and controlled response before service release.

SOURCE Bently Nevada 35 mm Proximitor Transducer System 7200 Series manual | 77290-01 Rev. F; user-authorized source copy

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