

NVISION BAROMETRIC SENSOR CALIBRATION KIT INSTALLATION INSTRUCTIONS

BARO module Accuracy: 0.00725 psiA, 0.5 mbarA
Range: 10.153 to 15.954 psiA, 700 to 1100 mbarA

Calibration Kit Contents:

Tube Retention Plate, Part Number 4604
3/16" I.D. Neoprene Tubing, (1 foot), Part Number 4605
4-40 x 5/8" Mounting Screw, Part Number 4591

Additional Tools Required:

Phillips and standard screwdrivers
USB cable
PC with CrystalControl Software installed.

Procedure:

1. Remove the 4AA battery module from the nVision chassis to access the barometric sensor.
2. Remove the plastic flat head screw that holds the barometric module in place.
3. Lift the module's protective cover out of the way to allow access to the barometric sensor.

CAUTION: Direct contact with barometric sensor may cause permanent damage.

4. Pass one end of the tubing through the larger hole in the tube retention plate.
5. Place the tubing down over and around the metallic ring of the barometric sensor. Ensure the tubing is flush against the sensor.
6. Place the tube retention plate down against the mounting boss.
7. Insert the mounting screw through the smaller hole in the tube retention plate and tighten to 16 in-ozs (0.11 N-m)

CAUTION: Do not exceed 20 in-ozs (0.14 N-m).

Note: This tubing attachment is not intended for permanent installation. Care should be taken to avoid pulling on the tube.

8. Attach the other end of the tubing to the pressure reference.

CAUTION: To avoid damage to the sensor, do not apply less than 10 psiA/689 mbarA or more than 43.5 psiA/3000 mbarA.

IMPORTANT: Any time the mounting screw is installed, subtle mechanical stresses are introduced. To avoid affecting calibration accuracy, perform the calibration within 5 minutes of installing the screw and tubing. Alternatively, calibration may be performed after waiting 12 hours for these effects to settle out and stabilize.

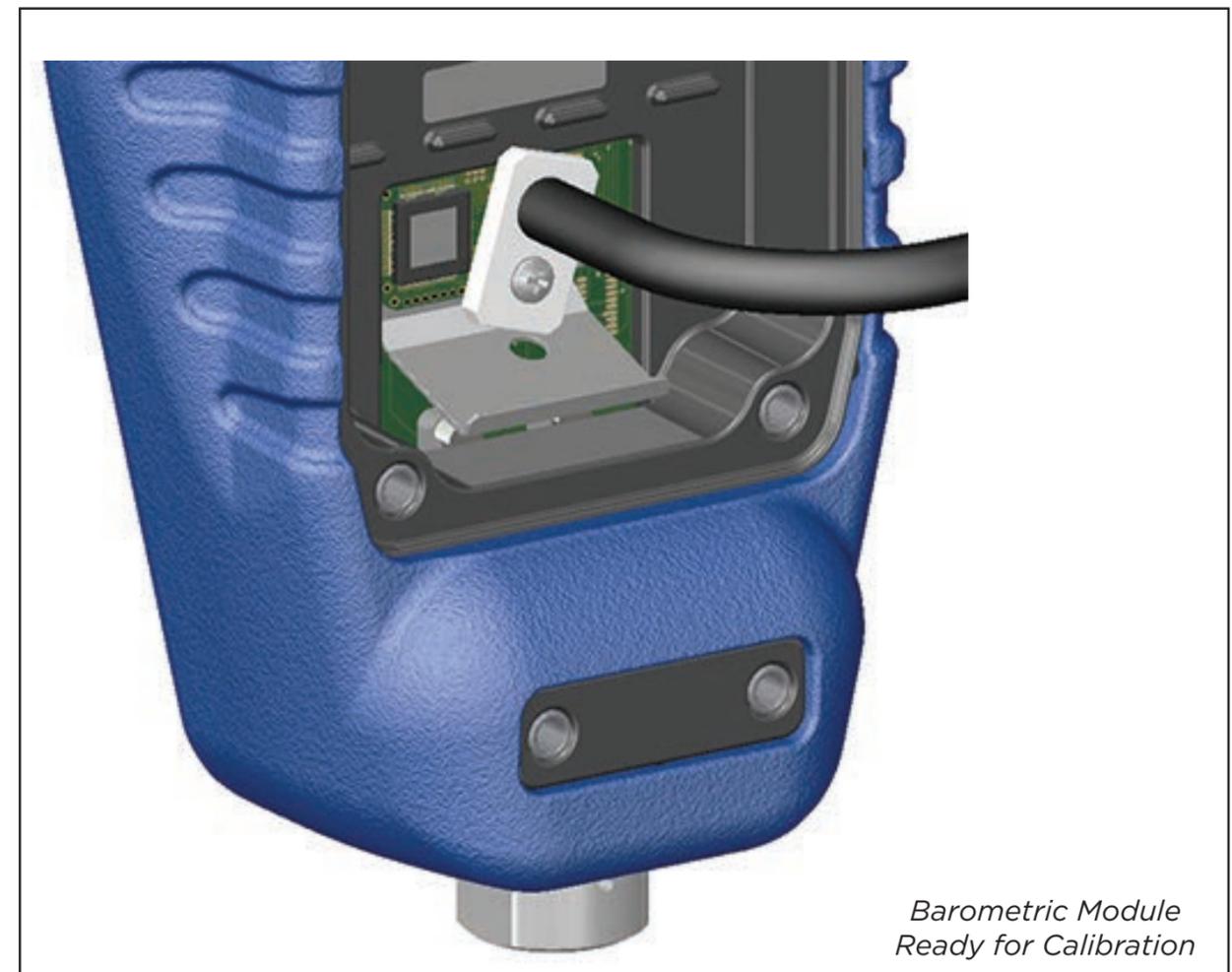
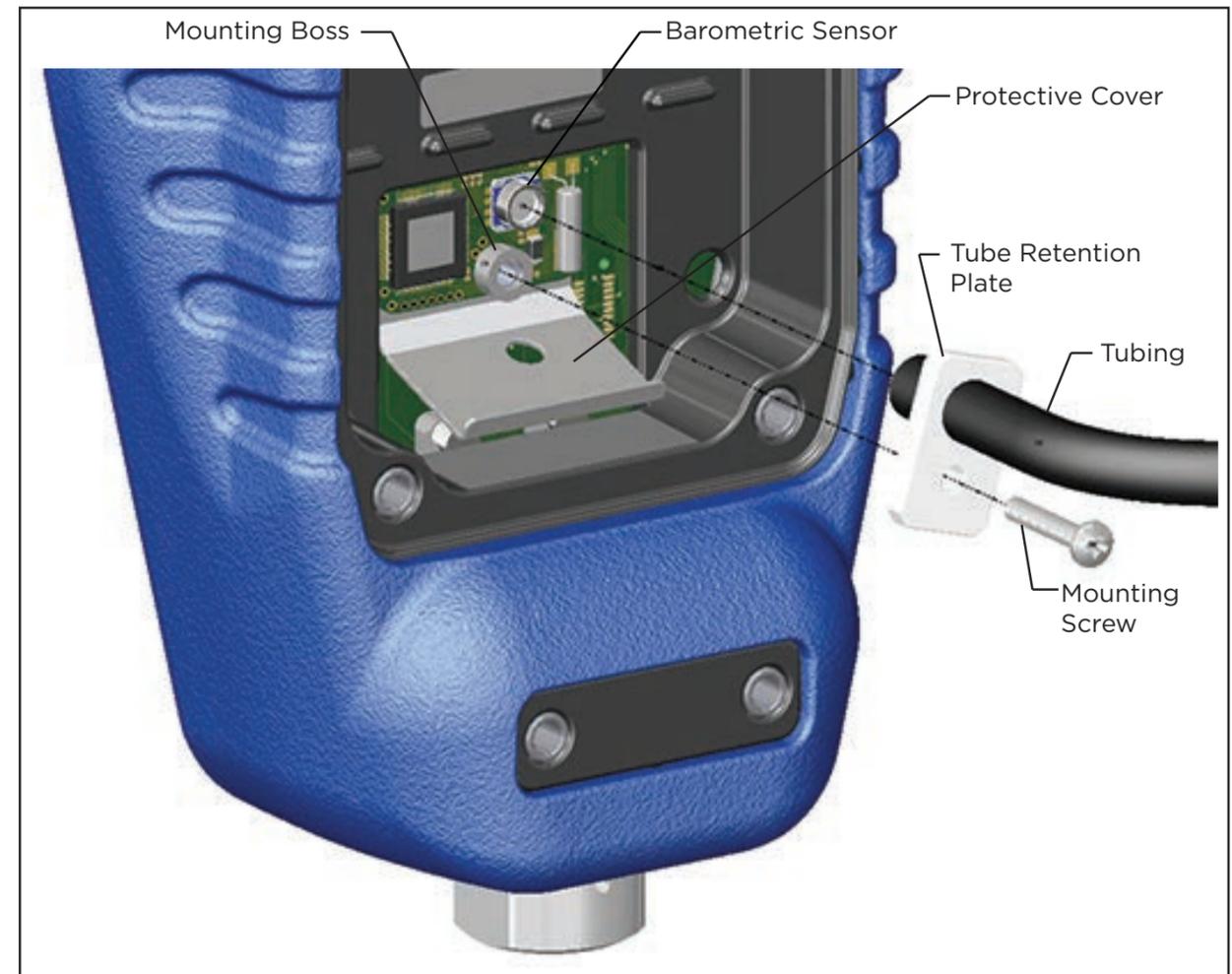
Note: Direct sunlight on exposed barometric sensor may affect readings slightly.

9. Connect the nVision chassis to a PC through the USB cable. *During calibration, power must be supplied to the nVision through the USB port.*
10. Launch CrystalControl and select the BARO sensor.
11. CrystalControl is used to adjust calibration constants. Userspan and offset can be entered manually. However, the calibration wizard is recommended to simplify the process.
12. After calibration is complete, remove USB power, tubing and tube retention plate.
13. Insert the plastic mounting screw through the cover and into the nVision. Tighten to 16 in-oz (0.11 N-m) torque to secure BARO module properly.

CAUTION: Do not exceed 20 in-ozs (0.14 N-m).

CAUTION: Plastic non-conductive screw must be used to comply with hazardous locations requirements.

Note: Induced mechanical stresses may affect accuracy for up to 12 hours after installation.



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