



NP640

RELATIVE PRESSURE TRANSMITTER – INSTRUCTIONS MANUAL – V1.0x H

PRESENTATION

The **NP640** positive relative pressure transmitter series are robust and reliable equipment suitable for general industrial applications. Its great advantage is the possibility of a fast and easy configuration of the operating range. With the aid of software, the user has access to the most important information of the transmitter and can set the most appropriate configuration for the process.

PRECAUTION

Before operating the transmitter, carefully read its specifications and operating instructions. In case of damage caused by incorrect operation or inappropriate usage, and its consequences, the guarantee becomes ineffective and null.

A specialized professional shall perform the installation.

A specific electrical power supply network should be provided for instruments use only.

UNPACKING

After unpacking the product, besides the transmitter it must be available:

- A quick guide to installation and operation.
- A sealed electrical connector.
- A screw to adjust the transmitter and the connector.

IDENTIFICATION

An identification label is attached to the equipment housing. On this label, you can find detailed information about the transmitter.

Fig. 1 shows the identification label with their respective information.

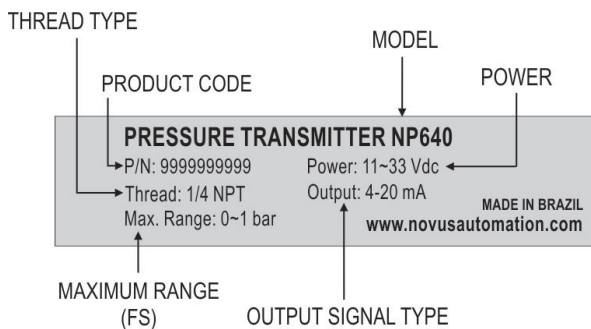


Fig. 1 – Transmitter identification

SPECIFICATIONS

Type of Measure:

Positive relative pressure

Maximum Range (Max. Range):

- 0.2 MPa (2 bar / 29.01 psi)
- 0.5 MPa (5 bar / 72.52 psi)
- 1 MPa (10 bar / 145.04 psi)
- 1.6 MPa (16 bar / 232.06 psi)
- 2 MPa (20 bar / 290.08 psi)
- 2.5 MPa (25 bar / 362.59 psi)
- 4 MPa (40 bar / 580.15 psi)
- 5 MPa (50 bar / 725.19 psi)
- 6 MPa (60 bar / 870.20 psi)
- 10 MPa (100 bar / 1450.38 psi)
- 16 MPa (160 bar / 2320.60 psi)
- 25 MPa (250 bar / 3625.94 psi)
- 40 MPa (400 bar / 5801.51 psi) (*)

Rangeability:

3:1

Measurement Accuracy:

< ±0.25 % of the maximum Range (Max. Range)
Including linearity, hysteresis and repeatability, 25 °C

Thermal Maximum Deviation:

< ±0.05 % Max. Range / °C

Overpressure Range:

Twice the value specified for the Maximum Measurement Range

Output Signal (Output):

Electric currente, 4-20 mA, 2 wires.

Power Supply (Power):

11 to 33 Vdc

Degree of Protection:

IP65

Electrical Connection:

Connector for Type A valves (DIN EN 175301-803), IP65.
Conductor 1.5 mm² (max.) and cables between 6 and 8 mm in diameter.

Operating temperature:

-20 to 70 °C

Dinamic Response:

< 30 ms

Process Conection (Thread):

¼ NPT; ½ NPT; ½ BSP, G ¼ (*)

Sensor features:

Polysilicon Piezoresistive (silicone oil filled)

Metal housing of the transmitter:

Stainless 316

Wetted parts:

- Sensor, stainless steel 316
- Metal Connection, stainless steel 316

Compatibility: Any gas or liquid compatible with the constituent materials of the wetted parts.

(*) Information available on the product identification label.

Certification:..... CE

ELECTRICAL CONNECTIONS

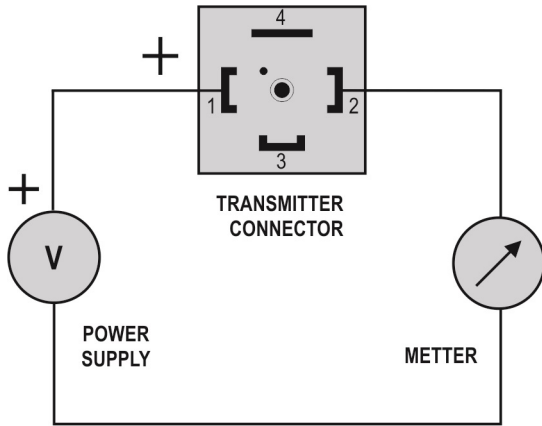


Fig. 2 – Electrical Connections

For troubleshooting, visit our FAQ at www.novusautomation.com.

Recommendations for installation

- Sensor signals conductors must go through the plant system separate from power leads (loop), if possible in grounded conduits.
- The instruments must be powered from the instrumentation power supply circuit.
- It is mandatory the use of RC FILTERS (electrical noise suppressors) in contactor coils, solenoids, etc.
- To improve the stability, immunity and safety of the measurement, it is recommended to use the system grounding.

CONFIGURATION

When the transmitter is used with the factory setting, no further action is required and the transmitter is ready to be installed.

When a new configuration is required, you should use the Transmitter Configuration Kit. This kit includes the **TxConfig-II** software, distributed free on our website, and the **TxConfig-USB-DIN43650** interface, which can be purchased in our distribution and reseller network.

To install the TxConfig-II software, run the setup file **TxConfigIISetup.exe** and follow the instructions of the installer.

The TxConfig interface must be connected to the transmitter according to Fig. 3. The interface itself provides the electrical power necessary for transmitter operation during configuration.

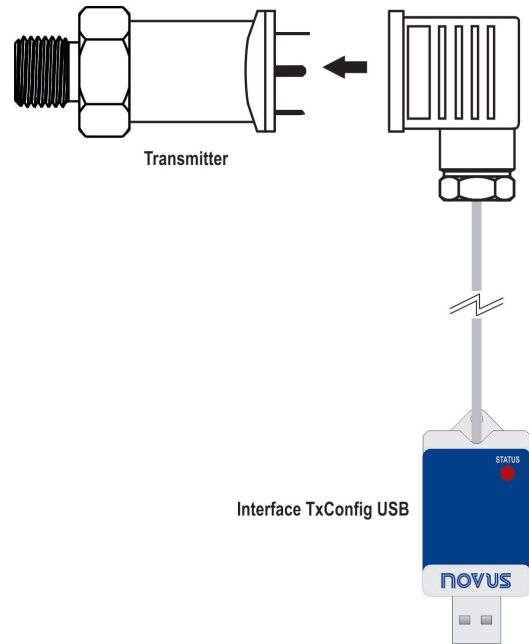


Fig. 3 – Connection of the TxConfig-USB

SOFTWARE CONFIGURATION

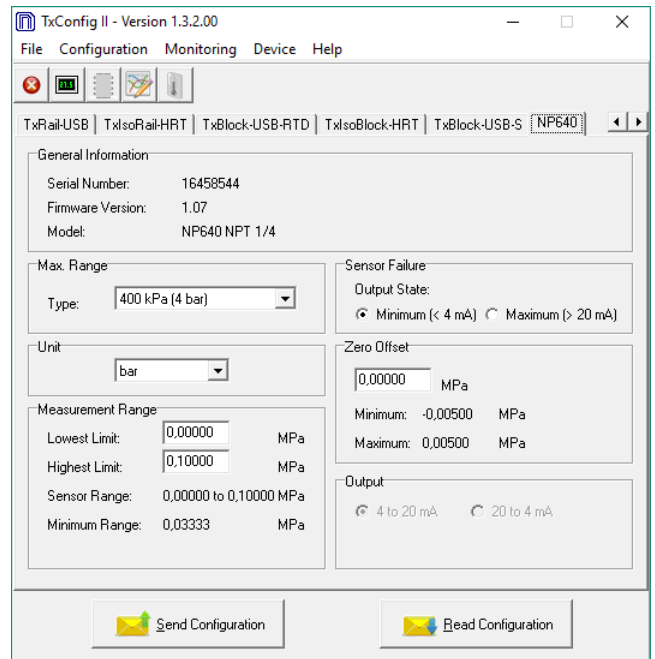


Fig. 4 – TxConfig II software main screen

When you run the **TxConfig-II** software, it will recognize automatically the transmitter and will display the following information:

1. General Information:

This field shows information that identifying the transmitter. This information should be sent to the manufacturer in an eventual request for technical assistance.

2. Unit:

Setting the pressure unit assumed for the measuring range setting fields.

3. Measuring Range:

Setting the measurement range assumed by the transmitter.

Lower Limit: Target pressure value for 4 mA current.

Upper Limit: Target pressure value for 20 mA current.

Minimum Range

Do not set a lower band (span) that the **Minimum Range** indicated below in this same field.

- 4. **Sensor Failure:** Sets the current output behaviour when the transmitter experiences a fault:
Minimum: Output current goes to < 4 mA
Maximum: Output current goes to > 20 mA
- 5. **Zero Correction:** It corrects small deviations presented in the transmitter output, when there is no applied pressure.
- 6. **Send Configuration:** It applies the new setup. Once sent, the setup will be immediately adopted by the transmitter.
- 7. **Read Configuration:** Reads the current setup in the transmitter connected. The screen now presents the current setup that may be changed by the user.

DIMENSIONS

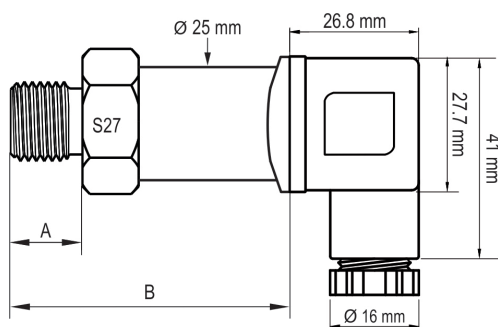


Fig. 5 – Transmitter dimensions

NOTE: Previous versions (2020) have other measurements.

THREAD	A (mm)	B (mm)	WEIGHT (g)
NPT ¼	15.5	62.9	135
NPT ½	20.0	67.2	166
BSP ½	14.0	61.0	145
G ¼	14.0	61.0	129

Table 1 – Dimensions

WARRANTY

Warranty conditions are available on our website www.novusautomation.com/warranty.