

# Ultra Low Differential Pressure Transmitter



## NP785

- ✓ Available nominal ranges: **± 50 Pa (± 0.2 inH2O)** to **± 1000 mbar (± 14.5 Psi)**
- ✓ Ranges fully **configurable by software** within rated range
- ✓ **Temperature** compensated for higher stability at low pressures
- ✓ Output signal DC **0 to 10 V** or **4 to 20 mA** and slave Modbus RTU, in **one-only-model**
- ✓ Resistant to overpressure
- ✓ Auto-zero Key
- ✓ Diagnostic LED

Ideal for HVAC, clean-room and flow measurement applications, the **NP785** is an ultra low differential pressure transmitter for measuring very small over-pressure, under-pressure and differential pressure in neutral, non-corrosive gaseous media. It provides a pressure proportional linear signal output with configurable measuring range via USB using the configuration software.

**NP785** can operate bi-directionally, providing the ability to measure differential pressure ranges from vacuum to positive pressure. It is housed in a DIN rail mountable ABS/PC enclosure and its nickel plated brass fittings accept pneumatic hoses with 4 or 6 mm internal diameter.

The analog output can be set to either 0-10 V or 4-20 mA while having an RS485 port with Modbus RTU communication protocol. Designed for HVAC and industrial environment, the **NP785** ensures temperature compensation for long-term stability and complies with EMC standards, providing robustness and reliability for a wide range of applications.

|                             | NP785-50PA                                                                                                               | NP785-100PA                   | NP785-05                     | NP785-20                    | NP785-68                  | NP785-400                     | NP785-1000                       |
|-----------------------------|--------------------------------------------------------------------------------------------------------------------------|-------------------------------|------------------------------|-----------------------------|---------------------------|-------------------------------|----------------------------------|
| Measurement Range           | -50 to 50 Pa<br>(0.2 inH2O)                                                                                              | -100 to 100 Pa<br>(0.4 inH2O) | -5 to 5 mbar<br>(2 inH2O)    | -20 to 20 mbar<br>(8 inH2O) | -68 to 68 mbar<br>(1 Psi) | -400 to 400 mbar<br>(5.8 Psi) | -1000 to 1000 mbar<br>(14.5 Psi) |
| Proof Pressure*             | 6800 Pa<br>(27.3 inH2O)                                                                                                  | 6800 Pa<br>(27.3 inH2O)       | 100 mbar<br>(40.1 inH2O)     | 300 mbar<br>(120.4 inH2O)   | 136 mbar<br>(2 Psi)       | 800 mbar<br>(11.6 Psi)        | 2000 mbar<br>(29 Psi)            |
| Burst Pressure              | 20000 Pa<br>(80.3 inH2O)                                                                                                 | 20000 Pa<br>(80.3 inH2O)      | 200 mbar<br>(80.3 inH2O)     | 400 mbar<br>(160.6 inH2O)   | 2000 mbar<br>(29 Psi)     | 4000 mbar<br>(58 Psi)         | 4000 mbar<br>(58 Psi)            |
| Line Pressure               | 6800 Pa<br>(27.3 inH2O)                                                                                                  | 6800 Pa<br>(27.3 inH2O)       | 100 mbar<br>(40.1 inH2O)     | 300 mbar<br>(120.4 inH2O)   | 136 mbar<br>(2 Psi)       | 800 mbar<br>(11.6 Psi)        | 2000 mbar<br>(29 Psi)            |
| Accuracy                    | 1.5 % of maximum range                                                                                                   | 1 % of maximum range          | 1 % of maximum range         | 0.5 % of maximum range      | 1 % of maximum range      | 0.5 % of maximum range        | 0.5 % of maximum range           |
| Effective sensor resolution | 0.005 % F.S.                                                                                                             | 0.002 % F.S.                  | 0.008 % F.S.                 | 0.008 % F.S.                | 0.032 % F.S.              | 0.013 % F.S.                  | 0.01 % F.S.                      |
| Operating Temperature       | -20 a 70 °C (-4 to 158 °F)                                                                                               |                               | -5 a 65 °C<br>(23 to 149 °F) | -20 a 70 °C (-4 to 158 °F)  |                           |                               |                                  |
| Power Supply Voltage        | PWR terminals: 12 Vdc to 30 Vdc<br>USB cable power: 4.75 Vdc to 5.25 Vdc<br>Internal protection against reverse polarity |                               |                              |                             |                           |                               |                                  |
| Consumption                 | 45 mA ± 10% @ 24Vdc                                                                                                      |                               |                              |                             |                           |                               |                                  |
| Protection Rating           | IP20                                                                                                                     |                               |                              |                             |                           |                               |                                  |
| Dimensions                  | 19 x 77.9 x 72 mm                                                                                                        |                               |                              |                             |                           |                               |                                  |
| Housing                     | ABS + PC                                                                                                                 |                               |                              |                             |                           |                               |                                  |
| EMC                         | EN/IEC 61326-1                                                                                                           |                               |                              |                             |                           |                               |                                  |
| Certification               | CE                                                                                                                       |                               |                              |                             |                           |                               |                                  |

\* **Proof Pressure** is defined as the maximum pressure at which the device can be subjected and which still maintains its performance within specifications after returning to the operating range.

\*\* **Maximum Range** at 25°C.