

ZNC-PS7865

Digital Electronic Pressure Switch



PRODUCT HIGHLIGHTS

- Pressure measurement and switching control for gases and liquids.
- Dual PNP switching outputs with configurable setpoints.
- 4–20 mA analog output and RS485/MODBUS communication support.
- Normally Open / Normally Closed logic, switching delay and hysteresis/window modes.
- High-brightness blue LED display with two red switching indicators.
- 330° rotatable housing and 180° display rotation for easier installation.

Overview

The ZNC-PS7865 digital electronic pressure switch integrates pressure measurement, dual switching control, analog transmission and local display in one compact instrument. It is designed for pressure monitoring and switching control of liquid and gas media in machinery, machine tools, hydraulic and pneumatic systems, pressure-control installations, pumps and compressors.

An industrial-grade ARM MCU, high-precision A/D conversion and a stable pressure sensor provide fast, accurate pressure measurement and reliable switching. Three front-panel tactile keys allow convenient field configuration of switching points and operating parameters. The welded stainless-steel diaphragm uses no internal seal and is suitable for a wide range of media, including corrosive applications.

Key Specifications

Measurement Range	-0.1...0.1 MPa to 60 MPa (multiple ranges available)
Accuracy	≤0.3% FS
Supply Voltage	12...30 V DC
Output Configuration	2 × PNP + 4–20 mA DC; RS485/MODBUS available by configuration
Protection Rating	IP65
Operating / Medium Temp.	-30...80 °C / -30...80 °C
Electrical Connection	M12×1 connector
Process Connection	G1/4 male shown; other process connections available

Technical Specifications

Measurement & Performance

Measurement Range	-0.1...0.1 MPa to 60 MPa
Accuracy	≤0.3% FS
Temperature Error	±0.02% FS/°C (zero / full scale)
Long-term Stability	±0.3% FS/year
Analog Output Accuracy	±0.2% FS
Measuring Media	Gas, liquid

Output Configuration

Switch + Current + Communication	2 × PNP + 4–20 mA DC + MODBUS (optional by configuration)
Output Current	1.0 A max.
Switch Type	Normally Open / Normally Closed, configurable

Switch Response	<10 ms
Switch Delay	0.00...1000.0 s
Switching Mode	Hysteresis mode or window mode
Analog Current Output	4–20 mA; load resistance $R_L \leq 0.5\text{ k}\Omega$

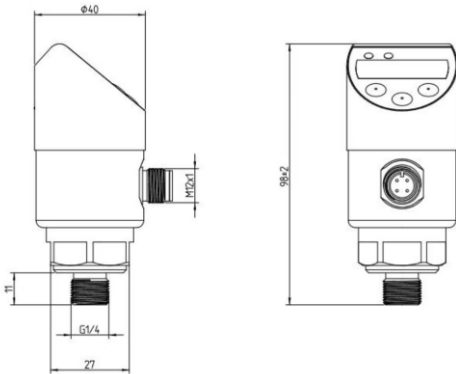
Display & User Interface

Main Display	Blue LED
Switch Indicators	2 × red LED
Pressure Units	Multiple common units, selectable
Buttons	3 industrial tactile keys
Parameter Protection	Password protection supported
Display Orientation	180° display rotation
Housing Orientation	330° housing rotation relative to process connection

Environmental & Mechanical

Operating Temperature	-30...80 °C
Medium Temperature	-30...80 °C
Storage Temperature	-40...80 °C
EMC	GB/T 17626.2/3/4-2006
Vibration	≤10 g, 10 Hz...500 Hz (IEC 60068-2-6-2007)
Shock	≤50 g / 11 ms (IEC 60068-2-27-2008)
Protection Rating	IP65

External Dimensions



Dimensions shown: body Ø40 mm; overall height 98 ± 2 mm; G1/4 male process thread; M12×1 electrical connector; wrench flat width 27 mm.

Connector & Wiring

5-pin connection

Pin	Color	Function
1	Brown	VCC (Power +)
2	White	K1 (Switch 1)
3	Blue	GND (Power -)
4	Pink	K2 (Switch 2)
5	Gray	AO (Analog output)

8-pin connection (with RS485)

Pin	Color	Function
1	Brown	VCC (Power +)
2	White	K1 (Switch 1)
3	Blue	GND (Power -)
4	Pink	K2 (Switch 2)
5	Gray	AO (Analog output)
6	Yellow	A (RS485-A)
7	Green	B (RS485-B)
8	Red	NC

Installation note: The compact housing can be rotated up to 330° relative to the process connection, while the display can be rotated 180° to improve readability after installation.