OMEGA™

DC Loop Powered Digital Pressure Gauge

DPG110

INSTRUCTION SHEET

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Introduction

DPG110 is digital pressure gauge powered by a seperate loop power supply from 12 to 30VDC. It is made for easy on-site installation. The DPG110 uses a high-precision piezo-resistive pressure sensor. The output signal is amplified by a high-precision, low-temperature drift amplifier. The signal is then fed into a high accuracy A/D converter for the microprocessor to process and then show on the LED display.

This flexible, simple to operate digital pressure gauge is safe, reliable, and easy to debug. The DPG110 is widely used in hydro-power, water, petroleum, chemical, mechanical, hydraulic, and other industries.

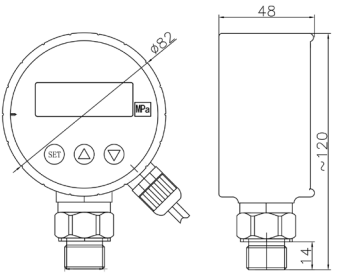
Features

- 4-20mA interface
- 4-digit 0.56" LED display
- Ceramic pressure sensor core
- Digital Calibration
- Anti-jamming design suitable for electromagnetic and harsh industrial environments.
- IP65 rated outlet port connector

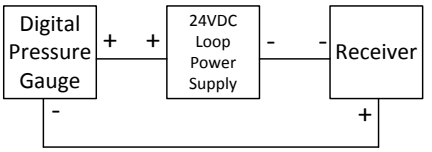
Specifications

- **Measuring Range** 0 - 20MPa
- **Overload Pressure** 150%~200%
- **Pressure Type** A/G
- **Stability** ≤0.2% FS per year
- **Power Supply** 12-30VDC
- **Display** 4 digits LED
- **Accuracy Range** ±0.25% for gauge pressure >5psi ±0.5% FS for all others including absolute, compound gauge, and Vacuum ranges
- **IP Rating** IP65
- **Output** 4-20mA Signal
- **Operating Temp** -30°C ~ 80°C
- **Relative Humidity** ≤90%
- **Thread Size** 1/4 NPT
- **Thread Material** SS316

Dimensions



Control Method



Operating Instructions

- **Wiring**
  RED: +24VDC
  Black: Ground
- **Calibration**
  Press ▼ for 5 seconds for zero callibration.
  Press ▲ for 5 seconds for full scale calibration

1. Operation panel description:

- The transmitter board provides a three-button and Led display man-machine interface to operate all transmitter Settings and calibration parameters.
- Key functions are multiplexed. A down key is a shift key when the input data is shifted.

2. Clear the zero deviation:

- Given zero standard pressure, long press increase button for 10 seconds to calibrate full degree.
- Given full standard pressure, hold down the reduce button for 10 seconds to calibrate zero.

This operation is a shortcut provided to customers, generally not end users do not enter this function to prevent calibration data damage.

3. Menu operation, as shown below:

Calibration menu is the transmitter calibration way for factory calibration and general technical supervision department, general users do not enter the setting of any data, non-professionals modify any data may lead to the transmitter completely
unable to work.

Circuit board through the panel of the three keys to achieve all the parameters input and calibration data Settings, collection. The circuit board on the meter setting and input to take a variety of optimization measures to improve customer operation speed:

- The decrease key and increase key of the meter have variable speed function
- For the menu that needs to be modified by a large number, the menu that needs to continuously input data adopts the shift mode, and the menu that needs to continuously input data adopts the incremental mode
- The meter will stop analog output in the set state, so if the user does not operate the meter within 3 minutes, it will automatically exit to the measurement state
- The shift input has a flashing prompt function

- The full meter data will flash when it exceeds 120% of the normal setting display value. Less than 0.2% of the zero-setting value, the instrument displays the zero value, which can realize the zero-shielding function of the sensor
- When the meter enters the factory password menu in the state of zero clearance, the zero-clearance value will be automatically cleared when the menu exits
- The meter saves all settings only when it exits the menu normally