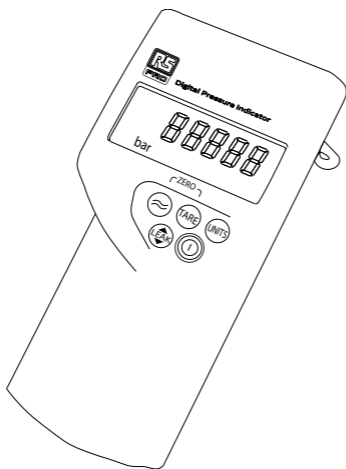




RS PRO

Digital Pressure Indicator

User Manual



Revision -



RSPRO

Digital Pressure Indicator

Introduction

The RSPRO digital pressure indicator uses a micro-machined silicon transducer to produce a pressure reading in units of pressure measurement. These user instructions include the operations for all pressure indicators and are an intended guide for safe use.

Specification

Accuracy:

Combined non-linearity, hysteresis and repeatability $\pm 0.1\%$ full-scale (FS)

Temperature effects:

Span $\pm 0.02\%$ rdg/ $^{\circ}\text{C}$

Zero ≤ 1 bar $\pm 0.05\%$ FS/ $^{\circ}\text{C}$ (absolute ranges only)

..... > 1 bar $\pm 0.02\%$ FS/ $^{\circ}\text{C}$ (absolute ranges only)

Operating range -10°C to 50°C (15°F to 120°F)

Storage range -20°C to 60°C (-5°F to 140°F)

Maximum safe working pressure 2 x full-scale

Pressure connector 6 mm o/d and 4 mm i/d hose,
..... G1/8 or 1/8" NPT female thread

Maximum torque 2.259 Nm (20 lb. in)

Environmental IP54 (NEMA 12)

Electrical safety BS EN 61010-1 as applicable

Electromagnetic compatibility BS EN 61326-1

Electrical power supply 3 x 1.5 V alkaline size AA LR6

Symbols



This symbol, on the pressure indicator, indicates that the user should refer to the user guide or manual.

Warnings

- Do not apply pressure greater than the maximum safe working pressure.
- Do not apply pressure greater than 1.1 bar (15.95 psi) absolute to the -ve pressure port of differential pressure indicators.
- Remove batteries from the pressure indicator immediately when discharged and before storage.
- Dispose of batteries in accordance with local regulations and battery manufacturers' instructions.
- When storing and transporting batteries make sure they cannot be short circuited.

Batteries

WARNING: Only replace batteries in a safe area.

Do not mix cell types. Use only 3 x AA LR6 manganese alkaline primary cells from the following list:

- Duracell Plus
- Duracell Procell
- Industrial by Duracell
- Energizer Ultimate
- GP Super

Software Version

This manual contains operating instructions for pressure indicators with software version 2.00 onwards. Further changes to the pressure indicator's software may require a change to the operating instructions and an issue number change of the manual.

Display Symbols



Batteries are low, replace observing polarity shown on case



Filter applied (10 reading rolling average)



Displayed reading - maximum values

TARE

Tare applied



Displayed reading - minimum values

A
+flashing

Alarm - pressure value more than alarm setting



Displayed reading - leakage (per minute)



Leak test in progress (count down)

Keypad Symbols



Switch on or off



Switch filter on or off



Switch TARE on or off (changes the display reading to zero)



Changes units (1 of 16 pressure units, °C or °F)




View maximum, minimum or perform leak test (max/min is reset at switch on)

Operation

Time Out


If a key is not pressed within 10 minutes then the instrument times out and switches off. To disable this automatic time out, hold the LEAK key when switching on the pressure indicator.

Zero


A zero should be performed on gauge and differential instruments before measuring pressure. To perform a zero, open all pressure ports to atmospheric pressure. Press the  and TARE keys together, the display briefly shows **ZEro** and the instrument calculates a new zero.

Note: A zero can only be performed on absolute pressure indicators if a vacuum is first applied to the pressure port.

Leak Test

To perform a leak test, press the LEAK key 3 times. The symbol  flashes on the display with the number 60. To start the leak test press the LEAK key again. The instrument counts down 60 seconds displaying the leakage at the end of the 60 second period. Press the LEAK key at any time during the leak test to quit and return to normal measurement.

Alarm

A single alarm can be set to operate when the displayed pressure value rises above the alarm setting. The alarm causes the display to flash and a beeper to sound for one minute. Pressing TARE and UNITS keys together displays the alarm value, pressing the  key increases the alarm value, pressing the UNITS key decreases the alarm value. When the display shows the required alarm value, press the TARE key to set the alarm.

Maintenance

Note: The following applies to all digital pressure instruments.

- To keep the pressure indication accurate to 0.1% full-scale a calibration check should be carried out once per year.

Return the instrument to the factory for any repairs, it cannot be repaired on-site.

Cleaning

- Clean the instrument case with a moist, lint-free cloth and weak detergent.

Calibration Instructions

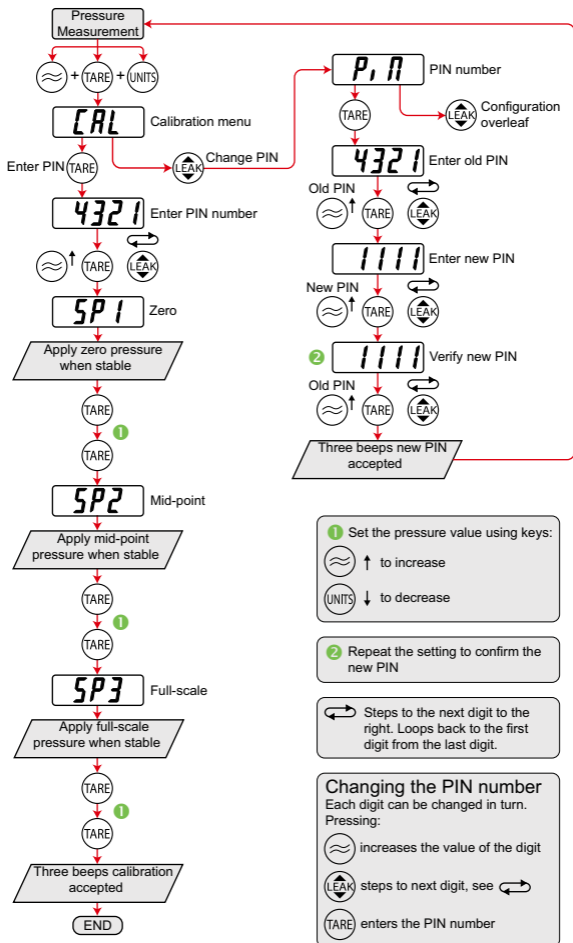
The instrument performs a three-point compensation at zero, mid-point and full-scale.

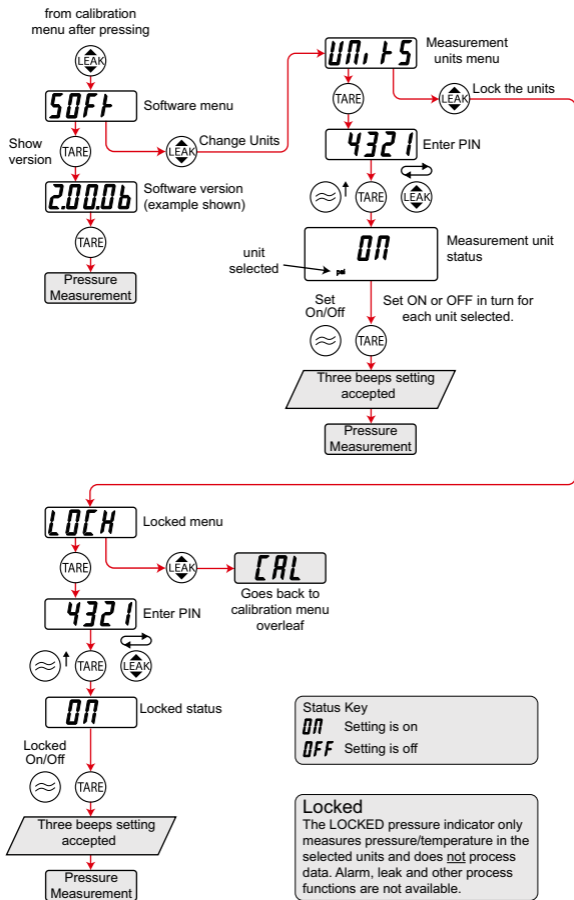
Preparation

1. Connect the instrument to a pressure source that has an accuracy three times better than the instrument. Recommended: Druck DPI 611 or DPI 620G Portable Calibrator.
2. Switch on the instrument and select the units of pressure measurement required for calibration.

Procedure

Press all three keys together to enter the calibration menu and proceed as shown in the diagram overleaf.







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