



IKA 200

DIGITAL PRESSURE MANOMETER

MANUAL



INSTRUMENTS
leyro

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1. GENERAL

The manual is a part of the scope of supply and serves to ensure proper handling and optimum functioning of the instrument.

LEYRO Instruments doesn't accept warranty and liability claims neither upon this publication nor in case of improper treatment of the described products.

For this reason, the manual must be read before start-up.

In addition, the manual is for all personnel who require knowledge concerning transport, setup, operation, maintenance and repair.

The manual must not be used for the purpose of competition without a written consent from Leyro Instruments and must also not be forwarded to third parties. Copies for personal use are permitted.

1.1 Symbol assertion



This symbol indicates a safety instruction.

These safety instructions should always be followed carefully.

By not following these instructions injuries of persons or material damage could happen.



This symbol indicates a note.

These notes should be observed to achieve optimum functioning of the equipment.

1.2 General safety Instructions



- Don't press this "CAL" key when there are no necessary calibration equipment
- Pay attention to the pressure range selected while measuring. Do not allow it work under overpressure environment; Overpressure alarm limit of the gauge is 1.1 times of the full-scale.
- The gauge uses one piece of disposable DC3.6V lithium battery as its power supply, when the screen displays the battery symbol, it indicates that the gauge is lack of battery power, replace the battery promptly.

2. PRODUCT DESCRIPTION

IKA 200 is a high-precision single-range digital pressure gauge, which is composed of high-precision measurement chips, pressure transducer module. It can be used for on line measurement and recording of the pressure in power, petrol, chemical, metallurgy, metering industries.

2.1 Features

Microprocessor in IKA 200 will be able to make automatic calibration and compensation of non-linear and zero drift. The high-stability pressure transducer and high-resolution A/D converter ensure the precision and the reliability of the instrument.

Small in size, A piece of disposable DC3.6V lithium battery is used for power supply.

3. ESPECIFICACIONES TÉCNICAS

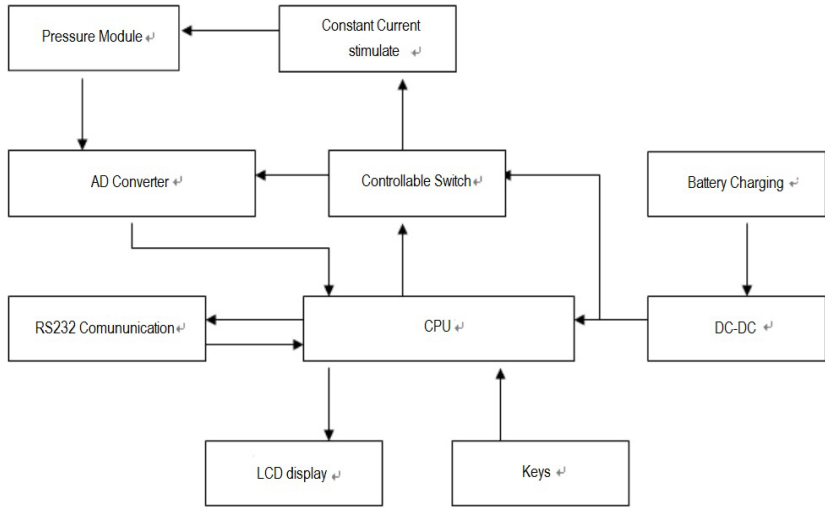
- Pressure measurement range: -1 ... 1 bar, 0 ... 700 bar (Any range within this two ranges)
- Accuracy: $\pm 0.05\%F.S.$, $\pm 0.1\%F.S$ (or according to customer demand)
- Power supply: A piece of disposable DC3.6V lithium batteries.
- Communications: RS232
- Explosion proof Class: Exia II C T4
- Working Environment
 - Ambient Temperature: -20 ... 50 °C
 - Relative Humidity <95%
 - Barometric Pressure: (86 ... 106)kPa
- Dimension: 93mm ×134mm ×40mm Weight: 0.5 kg

4. OPERATING PRINCIPLE

Having applied a pressure to the pressure sensing module it outputs a electrical signal. First the corresponding electrical signal will be amplified ,and then it will be converted to digital data by A/D converter. The microprocessor then sequentially collects data and then applies the required processing to the data, the final result will be displayed on the LCD screen.

5. INSTRUCTIONS

5.1 Panel



Keys Function Instructions

1)“UNIT”: press this key to switch pressure unit from Pa, to MPa, Pa, psi, kgf, bar, mbar, mmH₂O, mmHg.

2)“ZERO”: press this key to clear pressure value as its value drifts from zero .Then the gauge will be in a zero status when it is started next time

3)“CAL”: press this key for zero point calibration, full scale linearization and other setting of the gauge.



Note: (DON'T PRESS “CAL”KEY WHEN THERE ARE NO NECESSARY CALIBRATION EQUIPMENTS AVAILABLE)

4)“LIGHT”: press this key to turn on the white back-light

The back light turns off after 5 seconds .

5.2 Measurement

Install the pressure gauge on the pressure generator; check the range of digital pressure gauge before the connection is made. Apply pressure to the gauge up to its full scale smoothly, then after maintaining that pressure for 1 to 2 minutes, relieve the pressure until it falls back to zero.

Redo the process for three more times before the measurement.

Press “ZERO” key when the pressure falls back to zero. Press “UNIT” key to select desired pressure unit.

6. ZERO AND FULL SCALE CALIBRATION

The Calibration should be carried out under a standard Calibration condition which includes standard environment, standard temperature and necessary equipments. The test gauge has a password to protect this kind of “not allowed” access. Please operating the items according to our manual, or we will not responsible for the bad result.

For example (0-1000)kPa calibrating

Press “CAL” button to enter into the Calibration procedure

1) Input the password .Operations: press “ZERO” to select numbers and “LIGHT” to select positions. After that, press “CAL” button to confirm.

2) Calibration operation (input lower limit of pressure range Input lower limit of pressure range zero point. Use pressure generator to pressurize it to lower limit (zero point pressure value), press “CAL” to confirm after it is stable, and then back to display interface.

0000.0 **kP**

3) Input the password .Operations: press “ZERO” to select numbers and “LIGHT” to select positions. After that, press “CAL” button to confirm.

4) Calibration operation (input upper limit of pressure range Input upper limit of pressure range full scale. Use pressure generator to pressurize it to upper limit (full scale), press “CAL” to confirm after it is stable, and then back to display interface. Input full scale pressure range 1000.0kPa .and then press “CAL” to confirm full scale. Zero & full scale calibration finished.

1000.0 **kPa**

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