KELLER

High-Resolution Manometer with Peak and Recording Function LEO 5

STAINLESS STEEL HOUSING / PEAK MEASURING RATE 5 KHZ / RECORDING FUNCTION

The LEO 5 combines the notable features of Keller's successful LEO-Record and LEX 1 digital pressure gauges, featuring an IP66-rated stainless steel enclosure. This robust housing combines contemporary microcontroller-based electronics and capacitive-touch controls, operated through the environmentally-sealed safety glass front panel. The large backlit LCD display ensures readability in any lighting conditions.

Two selectable measurement modes, standard and peak, are included to ensure maximum versatility. In standard mode, high-resolution pressure measurements are taken twice per second. When operating in peak mode, sampling frequency increases to 5 kHz with 16 bit resolution.

The LEO 5 interfaces with a PC via USB connectivity, allowing access to active measurements and recorded data including pressure, peak pressure, temperature, and measurement interval. PC connection also allows device configuration, firmware updates, and recharging of the integral accumulator power supply.

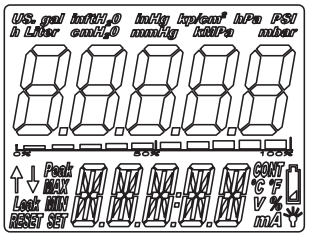
The unique modular design of the LEO 5 makes possible adaptation to customer-specific measuring requirements.

Functions and Features

- Rugged, waterproof stainless steel housing with safety glass face
- Large, easy-to-read 5-digit LCD display with 5/8" digits
- Operation by capacitive touch buttons
- Pressure peak with 5 kHz sampling frequency and high resolution measurment in standard mode
- Rechargeable accumulator power supply
- Record function (pressure, peak pressure, temperature, measurement time)
- USB-interface for configuration, download, and power recharge

Options

- External supply and RS-485 BUS Interface
- Radio interface (bluetooth) for measurements in inaccessible places
- Barosensor integrated in manometer for AA measurements
- Analog outputs 4…20 mA or 0…10 V / up to 2 contacts (PNP)
- Custom software / custom specific test procedures
- Customized front cover
- Special pressure connections



Display LEO 5

SPECIFICATIONS

Pressure Ranges rel.								
PR	-1…3	-1…10	-1…30					bar
Pressure Ranges abs.								
PA				0…100	0…300	0…700	0…1000	bar
PAA	0…4	0…11	0…31					bar
Overpressure	8	20	60	200	600	1100	1100	bar
Resolution of Pressure Disp. (LCD)	1	2	10	20	100	200	200	mbar

LCD Number of Digits upper/lower	5 (7 Segments) / 5 (14 Segments)
Accuracy*	0,05 %FS (incl. linearity, repeateability and hysteresis)
Total Error Band (0…50 °C)	0,10 %FS (Accuracy incl. temperature error)
Precision*	Optional for ≥ 20 bar: 0,025 %FS or 0,01 %FS
Storage- / Operating Temperature	-10…60 °C / 0…50 °C
Data Storage	> 56'000 measuring values with time indication
Long Term Stability	Reference: 1 mbar or 0,05 %FS Absolute: 0,5 mbar or 0,025 %FS
Compensated Temperature Range	0…50 °C
Temperature Measurement	Accuracy ± 1 °C
Accumulator	Lithium-Ion 4,2 V / 1,6 Ah
Accumulator Run Time	Standardmode ~ 1'600 hours, Peakmode ~ 160 hours
Accumulator Charge Cycles	> 300
Pressure Connection	G 1/4
Interface / Plug Type	USB / Mini USB-B
Ø x H x D / Weight / Protection	76 x 118 x 42 mm / approx. 340 g / IP 66

***Accuracy and Precision**

"Accuracy" is an absolute term, "Precision" a relative term. Dead weight testers are primary standards for pressure, where the pressure is defined by the primary values of mass, length and time. Highest class primary standards in national laboratories indicate the uncertainty of their pressure references with 70 to 90 ppM or close to 0,01%.

Commercial dead weight testers as used in our facilities to calibrate the transmitters and manometers indicate an uncertainty or accuracy of 0,025%. Below these levels, KELLER use the expression "Precision" as the ability of a pressure transmitter or manometer to be at each pressure point within 0.01 %FS relative to these commercial standards.
The manometer's full-scale output can be set up to match any standard of your choice by correcting the gain with a calibration software.

Subject to alterations

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