



## **LEO-5**

## **High-Resolution Digital Pressure Gauge**

## **Quickstart Guide**



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Electronic copies of this user's guide can be found at: <u>http://www.kelleramerica.com/manuals-and-software/</u>

#### **I. Company Information**

Keller America Inc is the North American subsidiary of Keller AG für Druckmesstechnik, which continues as the leader in level and pressure sensing. From humble beginnings, Keller now provides its products and expertise through a worldwide network of factory-trained professionals.

With the advent of inexpensive, miniaturized microprocessors, Keller continues to advance the state-of-the-art in fully packaged pressure transmitters, with Total Error Band performance not possible just a few short years ago. Annual sensor production now exceeds 1 million pieces.

Doing business with Keller is easy and most inquiries are answered within 24 hours. At Keller, providing customers with superior value is a way of life.

#### II. Contact Information

Keller America, Inc. 351 Bell King Rd Newport News, Virginia, 23606 P: 877-253-5537 F: 757-596-6659 Web: www.kelleramerica.com Email: sales@kelleramerica.com

#### III. Product Introduction:

Thank you for your purchase of the LEO 5 high resolution digital pressure gauge. The LEO 5 combines the notable features of Keller's successful LEO-Record and LEX 1 digital pressure gauges, featuring an IP67-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.

#### IV. Diagram:



#### V. Getting Started:

- 1. To turn on the gauge, press the "Select" key and then the "Enter" button.
- 2. The gauge will power up and display and the pressure and temperature readings will automatically after a few seconds of startup time and the gauge is now on.
- 3. To turn off the gauge press the "Select" key twice and "OFF" should appear and then press the "Enter" button.

#### VI. Menu Options:

- 1. Press the "Select" key 3 times or until "MENU" appears on the screen.
- 2. Press the "Enter" key when you see the "MENU" option and you have entered into the menu options.
- 3. Once in the menu options, you may keep selecting the "Select" button to scroll through the options:
  - A. Recording On or Off
  - B. Peak Pressure/Temp Start or Stop
  - C. Bluetooth On or Off (additional option)
  - D. Zero Reference Point Setting
  - E. Resetting the Gauge To Factory Display Settings
  - F. Unit of Measure
  - G. Continuous function
  - H. Display (Max/Min)
  - I. Backlight On or Off
  - J. Resolution Setting
  - K. Accumulator/Battery Info
- 4. Once you have found your menu item you may select the "Enter" button to select that menu item to either turn on or off or start or stop.

Caution! Please allow a second when selecting any items on the gauge. Selecting either button multiple times within a fraction of a second will throw the capacitive logic off and may freeze any functions for that moment.

#### VII. Explanation of Functions:

#### Recording On/Off:

This function allows the end user to start or stop a log manually in lieu of using a PC to do so.

- » The logging intervals are configured by Keller's Logger software and a communication cable.
- » Software can be found here: <u>http://www.keller-druck.com/home\_e/paprod\_e/software\_e.asp</u>

#### Peak On/Off:

This function allows the user to automatically record the peak pressure/temperature on the display only.

- » The peak values will not be recorded in the internal memory, unless the unit is in "Record" mode.
- » To reset see option "G", Continuous measurement.

#### Bluetooth On/Off (if equipped):

This function allows the user to wirelessly connect the LEO5 to a Bluetooth enabled Windows™ tablet or a PC to transfer data or live time viewing.

- » Depending on the receiving device, transmission distances are limited to approximately 30 feet.
- » The user can program the device wirelessly.

#### Zero reference point setting:

The zero reference point setting allows the user to set the reference zero point. This function is useful for users that need a higher than normal zero reference point, i.e., elevated tank level monitoring or to zeroing the gauge at that moment for testing. The second "Zero" function zeros the display from the current peak measure ment, and/or max/min measuring.

#### Resetting the gauge:

This allows the user to reset all of the gauge display variables back to factory settings.

- » Pressure will revert to "bar" units
- » Temperature will revert to °C units

#### Changing the unit of measure:

To change the unit of measure you must access into the menu options until you see the "UNIT". Once you see "UNIT" you must select the "Enter" button once and then use the "SELECT" button to scroll through the unit of measure: bar, mbar, kpa, mPa, PSI, KP/cm2, cmH20,mh20, inH20, ftH20, mmHG, inHg, Liter, H liter, °F, °C. Once you find the unit of measure that best fits your application you can select the "Enter" button.

#### **Caution!** Please change the temperature unit of measure before changing the pressure unit of measure.

#### Continuous Function:

Cont ON - The gauge will stay on continuously until the user turns off the gauge. Cont OFF - Activates the automatic off function. The gauge will turn off approximately 15mins after the last key is pressed.

#### **Display Function:**

This function allows the user to turn on or off the live time maximum and minimum pressure monitoring.

» To turn on or off this function you must go through the menu until "DISPL" appears. Then you must select the "Enter" button and then use the "Select" button to toggle between standard measuring and min/max measuring. Once the desired function is displayed, you may select the "Enter" button.

#### Backlight:

There are two back light options:

- » Backlight on for 10 seconds after you touch either the "Select" or "Enter" button.
- » Backlight on constant until you turn it off manually.

#### Resolution:

This function allows the user to set the pressure resolution accordingly.

#### Accumulator/Battery Info:

This function allows the user to view the battery voltage information.

- » 4.3V is a fully charged battery
- » 3.0V or less the battery will need charging for reliable service

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### **KELLER AMERICA INC**

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