

Digital reference pressure gauge and data logger**LR-Cal LDM 80****Accuracy $\pm 0.2\%$ FS, optional $\pm 0.1\%$ FS****Pressure ranges from 0...100 mbar to 0...3000 bar****USB interface, optional WIRELESS data transmission****Optional with Pressure Switch Test function****Incl. measurement of medium temperature
and always visible analogue bargraph display****Chargeable battery, easy charging via USB**

The digital reference pressure test gauge LR-Cal LDM 80 is featured with an outstanding longterm stability. It is perfect for reference pressure measurements, for testing and calibration purposes. Together with the portable pressure test pumps LR-Cal LPP 40, as well as LR-Cal LPP 700 or LR-Cal LPP 1000 it can be used mobile, on site. For higher pressure values we recommend our pressure comparison pumps.

The LR-Cal LDM 80 is powered by a rechargeable li-ion battery and is fitted with an USB interface. In addition, the device is featured with a data logging function (max. 60,000 values) and it measures the temperature of the pressure medium.

A transit case, an USB charger and a traceable factory certificate of calibration are included in standard delivery.

Optional, the LR-Cal LDM 80 is available with electrical connection for pressure switch tests or with WIRELESS transmission of data to PC/Laptop (instead of via USB interface).

Technical Data:**Internal resolution:** 65,000 div.**Measurements per second** (if filter is set to 0): 10 (100 ms).**Pressure measurement/indication:** see table on page 2. Accuracy $\pm 0.2\%$ FS, optional $\pm 0.1\%$ FS (Code LDM80-KL01).**Filter:** programmable digital filter for stabilisation of displayed values also at fluctuating pressures.**Temperature measurement/indication:**Resolution 0.1°C; Accuracy $\pm 1^\circ\text{C}$ (range -10...+70°C, ambient temp. 0...50°C).**Temperatures:** Reference +23°C, working range: -10...+70°C, storage -10...+80°C, influence: $\leq \pm 0.002\%/1^\circ\text{C}$.**Display:**

LCD 13 mm; with programmable backlight (1...60 seconds, or off), programmable resolution: 1, 2, 5, 10.

Interface: USB 2.0 (virtual COM port on PC/Laptop, programmable baud rate 19200, 9600 or 4800)

Optional: WIRELESS, RF frequency 433 MHz, RF transmission 200 m in free air, max. 10 transmissions per second.

ZEROing: Via key press, up to 50% of FS.**Maximal-/Minimal values:**

PEAK function, aktive at positive and negative pressures, 10 measurements per second

Pressure units: selectable; bar, mbar, psi, MPa, kPa, kg/cm², mHg, mmHg, mmH₂O, mH₂O.**Temperature units:** selectable; °C, °F.**Data logger:** max. storing frequency: 1 value per second, capacity max. 60,000 measured values (= 60,000 pressure values or 30,000 pressure values plus 30,000 temperature values)**Supply:** rechargeable inside li-ion-battery 3.7 V, type 523450, autonomy approx. 3 months (if backlight of display is switches off and without optional WIRELESS data transmission, charging time approx. 8 hours (via PC/Laptop or supplied USB charger).**Pressure port:** 1/2" BSP male, recommended gasket: USIT A 63-18. (Ranges from 1,000 bar: sealing cone 60°). Optional: 1/2" NPT male, for pressure ranges up to 700 bar also 1/4" BSP male and 1/4" NPT male.**Pressure limits:**

Static pressure up to 100% FS, max. permissible pressure up to 150% FS, breaking pressure >300% FS, at highly dynamic pressure max. 75% FS.

Pressure port mounting: Tightening wrench 27 mm, tightening torque 28 Nm.**Protection degree:** IP 40**Materials:** Indicator housing: black coated aluminium, pressure sensor and port: stainless steel.

LDM 80

Digital reference pressure gauge
Accuracy $\pm 0.1/\pm 0.2\%$ FS



Order-Codes and Pressure Ranges:

Order-Code	Pressure Range	Display	Resolution
LDM80-8010	0...100 mbar	100.0 mbar	0.1 mbar
LDM80-8025	0...250 mbar	250.0 mbar	0.1 mbar
LDM80-8050	0...500 mbar	500.0 mbar	0.1 mbar
LDM80-0001	0...1 bar	1.000 bar	0.001 bar
LDM80-0002	0...2.5 bar	2.500 bar	0.001 bar
LDM80-0005	0...5 bar	5.000 bar	0.001 bar
LDM80-0010	0...10 bar	10.00 bar	0.01 bar
LDM80-0020	0...20 bar	20.00 bar	0.01 bar
LDM80-0050	0...50 bar	50.00 bar	0.01 bar
LDM80-0100	0...100 bar	100.0 bar	0.1 bar
LDM80-0250	0...250 bar	250.0 bar	0.1 bar
LDM80-0350	0...350 bar	350.0 bar	0.1 bar
LDM80-0500	0...500 bar	500.0 bar	0.1 bar
LDM80-0700	0...700 bar	700.0 bar	0.1 bar
LDM80-1000	0...1,000 bar *)	1000 bar	1 bar
LDM80-1500	0...1,500 bar *)	1500 bar	1 bar
LDM80-2000	0...2,000 bar *)	2000 bar	1 bar
LDM80-2500	0...2,500 bar *)	2500 bar	1 bar
LDM80-3000	0...3,000 bar *)	3000 bar	1 bar
LDM80-1010	-1...+1 bar	1.000 bar	0.001 bar
LDM80-1025	-1...+2.5 bar	2.500 bar	0.001 bar
LDM80-1050	-1...+5 bar	5.000 bar	0.001 bar
LDM80-1020	-1...+20 bar	20.00 bar	0.01 bar
LDM80-1040	-1...+40 bar	40.00 bar	0.01 bar
LDM80-1060	-1...+60 bar	60.00 bar	0.1 bar
LDM80-8050-ABS	0...0.5 bar abs.	0.5000 bar	0.0001 bar
LDM80-0001-ABS	0...1 bar abs.	1.000 bar	0.001 bar
LDM80-0002-ABS	0...2.5 bar abs.	2.500 bar	0.001 bar
LDM80-0005-ABS	0...5 bar abs.	5.000 bar	0.001 bar
LDM80-0010-ABS	0...10 bar abs.	10.00 bar	0.01 bar

*) for pressure ranges from 1,00 bar 2 pcs. sealing cone 60° are supplied.

Additional sealing cones 60° are available as spare part with order-code **TLDMM-DK**

Scope of delivery: LR-Cal LDM 80 + USB battery charger + USB cable + case + calibration certificate + operating manual

Dimensions (images are showing version with WIRELESS option)



Option **LDM80-ST**
Pressure switch test, electr. male conn. 2-pin power jack 5x5 x 2.1 mm, at the bottom side of the housing.



Option **LDM80-WF**
WIRELESS data transmission (instead of via USB interface). 100 m in free air, frequency 433 MHz, max. 10 transmissions per second.



Option **LDM80-KL01**
Accuracy $\pm 0.1\%$ v.E. instead of 0.2% incl. factory certificate of calibration

Option **PC-WIRELESS**
WIRELESS receiver to be connected to P or Laptop (USB). Up to 5 LR-Cal LDM 80 at one PC/Laptop.



PC/Laptop driver for USB (virtual COM port) is available for download on our internet site www.druck-temperatur.de on the related product page.

Accessory **LDM80-GK**
Rubber protection cap to protect the device.



Additional order-codes:

(if other pressure connection as 1/2" BSP male is required)

MP-12-NPT: Connection 1/2" NPT male
For pressure ranges up to 700 bar:

MP-14-BSP: Connection 1/4" BSP male

MP-14-NPT: Connection 1/4" NPT male

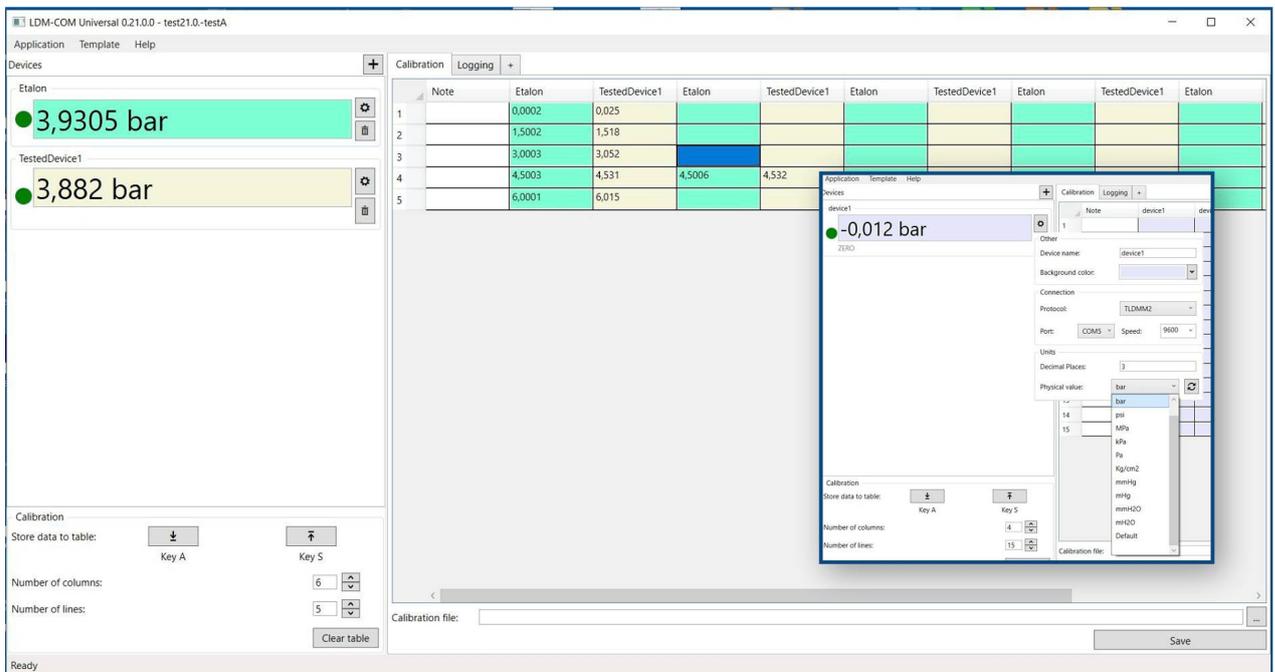
Free software LR-Cal LDM-COM

On our website we offer a free software (for Microsoft® Windows®) for download.

<https://www.druck-temperatur.de/images/software/lDM-com.zip>

The software LR-Cal LDM-COM offers you three operating modes:

- Calibration (calibration table):
Recording of the data measured during calibration of devices and
- Data recording:
Automatic recording (logging) of measured values (with date and time stamp) at an adjustable time interval.
- Read out memory:
Downloading data from the device's memory.



The data can be copied directly into spreadsheet software via Paste & Copy or saved as a comma-separated CSV file for further processing. For example, you can create a calibration certificate from the data in the calibration table.



LR-Cal LDM 80 with hydraulic pressure comparison test pump LR-Cal LSP-H



LR-Cal LDM 80 with pneumatic pressure comparison test pump LR-Cal LPP 140-P