

Autonomous Capacitive Data CollectorFor High Resolution Water Level Measurements

DCX-38VG

The DCX-38VG is an autonomous instrument for recording water level with a high resolution and full scale ranges as low as 0,5 mWC / 50 mbar. It features a rugged, gold-plated ceramic diaphragm for outstanding long-term stability and stainless steel housing with user serviceable battery for long service life.

The internal electronics of the DCX-38VG employ the latest microprocessor technology, resulting in high accuracy and resolution for pressure measurements. The use of non-volatile memory for data storage ensures high data security.

The DCX-38VG is based upon a relative pressure sensor and is designed for submersible deployment. Through the use of a vented cable, correction for atmospheric pressure variations is automatic. Therefore, the expense of deploying additional instruments for monitoring barometric pressure is avoided.

The reference pressure tube, integral to the waterproof cable, is protected from moisture intrusion through the use of an optional desiccant tube connected to the adapter nozzle, located in the data port.

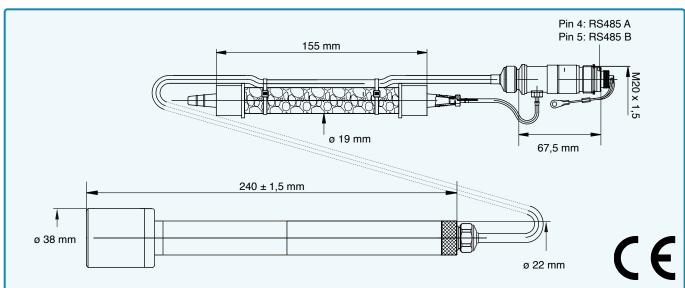
The data collector can individually be adjusted to the user's needs and offers the following advantages:

- Recording of the pressure and temperature
- Simple and well structured configuration- and read-out software (Logger 4.x) for PC or PDA
- Combination of event-controlled recording and interval recording prevents unnecessary data being recorded (i.e. only measuring the pressure changes)
- Installation data (and comments) of the measuring station can be stored in the device

Configuration / Data Retrieval:

For data readout, the serial interface is accessed via the data port located on one end of the cable, enabling on site data retrieval. Using either the K-104-A or K-103-A converter cable, the DCX-38VG connects easily to a laptop or PC via USB or serial port. Used in conjunction with Logger 4.x software, the DCX-38VG is configured and data retrieved either in the lab or the field.







Specifications

Pressure Ranges (PR) 0...50 mbar (0...0,5 mWC) 0...100 mbar (0...1 mWC) 0...300 mbar (0...3 mWC)

Overpressure Range 10 x Pressure Range 5 x Pressure Range

PR: Vented Gauge. Zero at atmospheric pressure

Supply Lithium battery / 3,6V (Type AA)
Battery Life * ~10 years @ 1 measurement/hour

Interface RS485 digital

Electrical Connection Fischer Plug DEE 103A054

Vented Cable Standard lengths: 5 m / 10 m (others on request)

Comp. Temperature Range -10...40 °C (icing not permitted)

Total Error Band ** 0,2 %FS
Resolution max. 0,002 %FS

Stability FS \geq 100 mbar: \pm 0,1 %FS FS \leq 100 mbar: \pm 0,1 mbar

Temperature Measurement Accuracy typ. ±0,5 °C
Operating Temperature -20...60 °C (icing not permitted)

Memory 114'000 measuring values @ storage interval ≤ 15 s, otherwise 56'000 meas. values (always with attributed time)

Shortest Measuring Interval 1 per second

Material Diaphragm: Gold-plated Ceramic / Housing: Stainless Steel AISI 316L / O-Ring: Viton

KOLIBRI Desktop

With the «KOLIBRI Desktop» Windows software, data recorded using KELLER instruments with a recording function can be read and visualised. This data can be exported in CSV, JSON, Excel or Word format, as an image, or in other formats for further processing or documentation. The data loggers are easy to configure, thanks to the intuitive software interface. And, the various recording functions provide an optimum level of adaptability to suit the measuring task at hand. Additionally, installation site information and other parameters necessary for water level calculations can be saved directly in the measuring device.



KOLIBRI Desktop is license-free and compatible with all products of the KOLIBRI Suite.

Configuration options

- Pressure and temperature channels, selectable
- Adjustable measurement interval (1s ... 99 Tage)
- Averaging with selectable number of measurements
- Recording modes
 - · continuous interval measurement
 - event-controlled recording
 - \cdot recording starts when value is exceeded
 - · recording starts when value is undercut
 - \cdot recording starts when value changes
 - → combination of continuous and event-controlled recording is possible
- Adjustment of pressure zero point
- Start measurements immediately or at a set time
- Water level calculation
- Data storage: linear or ring-type memory

^{*} external influences could reduce battery capacity

^{**} Linearity + Temperature Error within the compensated range