Autonomous Data Collector

Data Logging at Favorable Price

DCX-22-ECO

The DCX-22-ECO is an autonomous, battery powered instrument made of stainless steel designed to record water depth (pressure) and temperature over long periods.

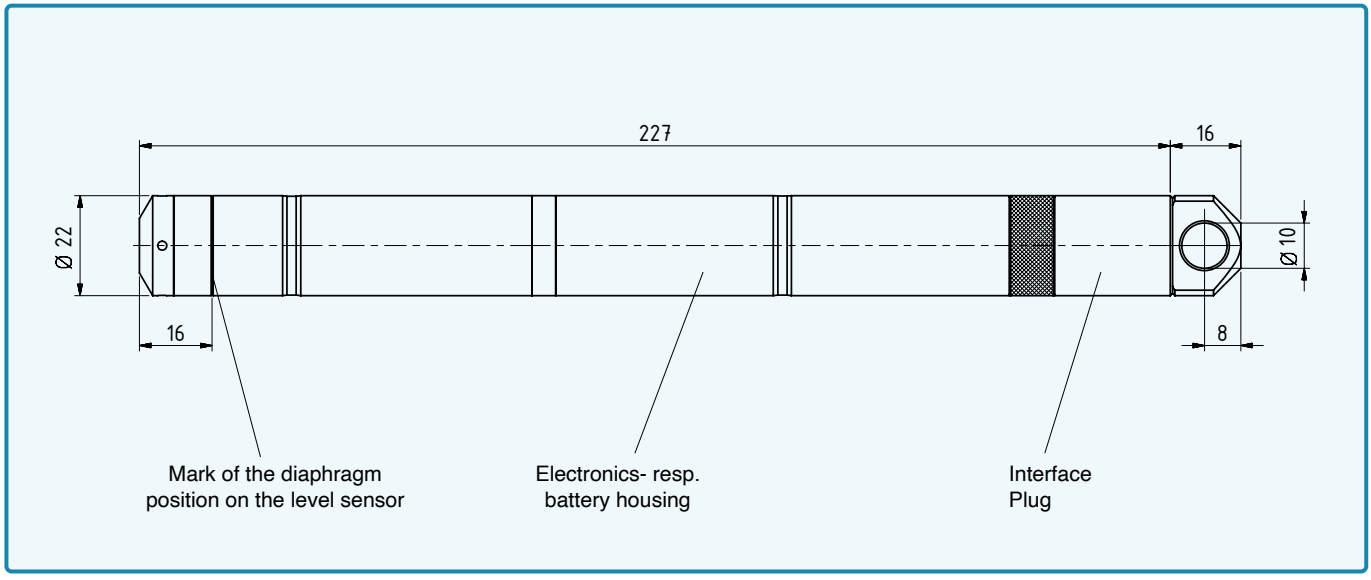
The sensor, electronics and battery are housed in a sealed stainless steel tube, for submersible deployment. For data read-out the DCX-22-ECO must be recovered from the measurement point. The O-ring sealed end cap is then removed to get access to the data connection.

The DCX-22-ECO works with an absolute pressure sensor. In shallow water depths where the influence of barometric pressure changes should be considered, it is recommended that a second data collector DCX-22 (Baro) is placed at the surface, to record the barometric pressure. The Windows software PressureSuite Desktop then calculates the differential pressure resp. the water depth by subtracting the two measured values.

The submersible level transmitter with a 22 mm diameter – suitable for installation in monitoring pipes from 1" – contains a battery compartment with a double O-ring seal (battery life approx. 10 years) as well as the electronic circuit with microprocessor technology. This records the pressure and temperature with high accuracy and resolution, mathematically correcting any linearity or temperature errors in the pressure sensor. A non-volatile memory is used to ensure a high degree of data security.

Thanks to the various configuration options, the data logger can be adapted to suit the measuring site so that only useful data is saved, or a significant event is detected and measured values are then recorded over a shorter interval. It is also possible to store installation data and comments about the measuring site in the transmitter.

DCX-22 ECO



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Subject to alterations
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Specifications

Pressure Ranges	Baro	10 mWC	20 mWC	50 mWC	100 mWC
DCX-22-ECO, PAA (bar abs.)	0,8...1,3	0,8…2	0,8…3	0,8…6	0,8…11
Overpressure	2 x Pressure Range				

PAA: Absolute, Zero at vacuum (other ranges on request)

Supply	Lithium-Battery 3,6 V (Type AA) SL-760 (AA), pre-assembled
Battery Life *	10 years @ 1 measurement/hour
Interface	USB
Electrical Connection	USB-Typ B-Micro

Pressure Sensor Specifications

Accuracy **	max. 0,1 %FS
Comp. Temperature Range	-10…40 °C (icing not permitted)
Total Error Band ***	max. 0,25 %FS ***
Resolution	max. 0,0025 %FS
Long Term Stability	max. 0,15 %FS
Temperature Measurement	Accuracy typ. ±1.0 °C
Operating Temperature	-20…60 °C
Shortest Measuring Range	1x per second
Memory	114'000 measuring values @ storage interval ≤ 15 s, otherwise 56'000 measuring values (always with attributedtime)

Material

Material	Stainless steel 316L (DIN 1.4435) O-Ring: Viton®
Weight	≈ 325 g

* exterior influences could reduce battery life

** Non-Linearity (BFSL), Pressure Hysteresis, Non-repeatability

*** Accuracy + Temperature Error

Software

PRESSURESUITE DESKTOP

PressureSuite Desktop

With the «PressureSuite 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.

PressureSuite Desktop has a free licence and is compatible with all products in the PressureSuite.

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
  - Recording starts when value is exceeded
  - Recording starts when value is undercut
  - 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

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