DCX-25PVDF

Autonomous Data Collector for aggressive media

The DCX-25PVDF is an autonomous, battery powered instrument designed to record water depth (pressure) and temperature over long periods. The housing is made of polyvinylidene fluoride and the sensing diaphragm is available in either Hastelloy C-276 or titanium 6AL-4V. This combination of wetted materials ensures compatibility with even the most aggressive media.

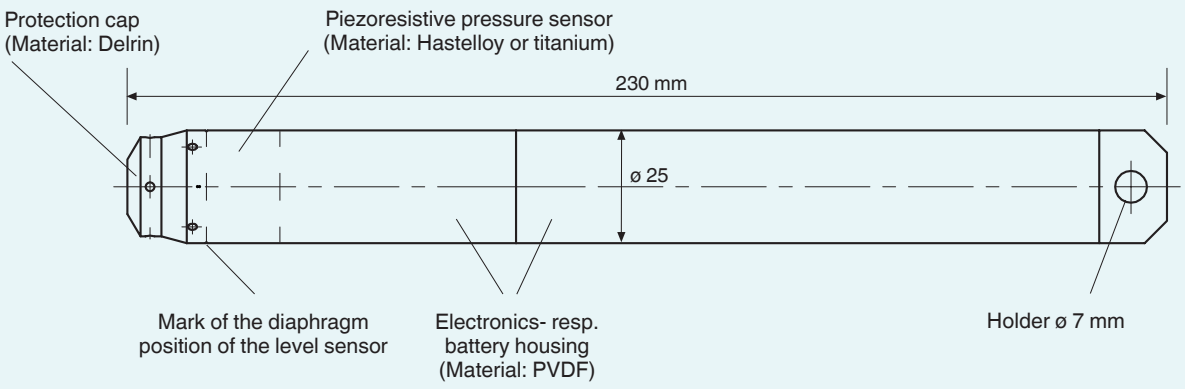
This data collector (ø 25 mm) integrates a pressure sensor, electronics and battery in one housing. The electronics employ the latest microprocessor technology, which give high accuracy and resolution for the pressure and temperature signals. The built-in pressure sensor is mathematically compensated for all linearity and temperature errors. The use of a non-volatile memory ensures high data security.

The DCX-25PVDF works with an absolute pressure sensor. For installation, the data collector is secured by a suspension cable and immersed into the media to be measured and must be recovered for data readout. In shallow water, where the influence of barometric pressure changes should be considered, it is recommended that a second data logger (e.g. DCX-22-Baro) is placed at the surface to record the barometric pressure. The Logger PC software then calculates the water depth by subtracting the two measured values. The housing of the data logger can be opened easily without any tools, thus allowing quick access to the replaceable battery and the interface connector for configuration and data download.

Interface with a PC is accomplished using one of KELLER's converter cables which are available in either RS232 connection (K-103-A) or USB connection (K-104-A). The necessary converter drivers are included with converter purchase, along with the KELLER Logger software. This intuitive software provides the capability to customize the instrument, as needed, for each installation. Users can configure the DCX-25PVDF to record at fixed time intervals, using fixed or event-based start times, in user-selectable measurement methods to ensure that only the most useful and meaningful data is collected and stored.

For applications that do not require highest compatibility with aggressive media, KELLER offers the DCX-16, DCX-18, DCX-22 and the DCX-38.

DCX-25PVDF



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Specifications

Measuring Range in Meter Water Column	10 mWC	20 mWC	30 mWC	40 mWC
Pressure Ranges in bar abs.	0,8…2,3	0,8…3,0	0,8…6,0	0,8…11,0

Supply	Lithium-Battery 3,6 V (Type AA)
Battery Life *	10 years @ 1 measurement/hour
Interface	RS485
Electrical Connection	Fischer DEE 103A054

Pressure Sensor Specifications

Linearity	typ. 0,02 %FS typ. 0,05 %FS
Error Band (-10…40 °C)	max. 0,0025 %FS max. 0,1 %FS
Resolution	0,1 x FS / year
Long Term Stability	2 x Pressure Range -10…40 °C
Overpressure	(icing not permitted) (others on request)
Temperature Compensation	

Temperature Sensor

Temperature Measurement via pressure sensor (TOB)	Accuracy typ. ±0,5 °C optional: add. PT 1000 max. ±0,3 °C
Measuring Channels	Pressure / Temperature (TOB) / Temperature PT 1000 (optional)
Operating Temperature	-20…60 °C (icing not permitted)
Shortest Measuring Range	1x per second
Memory	114'000 measuring values @ storage interval ≤ 15 s, otherwise 56'000 measuring values (always with attributed time)

Material

Electronics-/battery housing	PVDF = Polyvinylidenefluoride
O-Rings	Viton® (optional: other materials on request)
Protective Cap	Delrin
Sensor	Hastelloy C276 or titanium (optional)
Weight: Probe	≈ 200 g (without cable)
Options	Other material: e.g. Hastelloy or titanium

* exterior influences could reduce battery life

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 (1 s…99 Tage)
- Averaging with selectable number of measurements
- Adjustment of pressure zero point
- Start measurements immediately or at a set time
- Water level calculation
- Data storage: linear or ring-type memory

Recording modes

- Continuous interval measurement
- Event-controlled recording
  - Recording starts when value is exceeded
  - Recording starts when value is undercut
  - Storage of measured values when a value changes
- Combination of continuous and event-controlled recordingis possible