

AUTONOMOUS DATA COLLECTOR

DCX-25 PVDF

FOR AGGRESSIVE MEDIA

The DCX-25 PVDF 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.

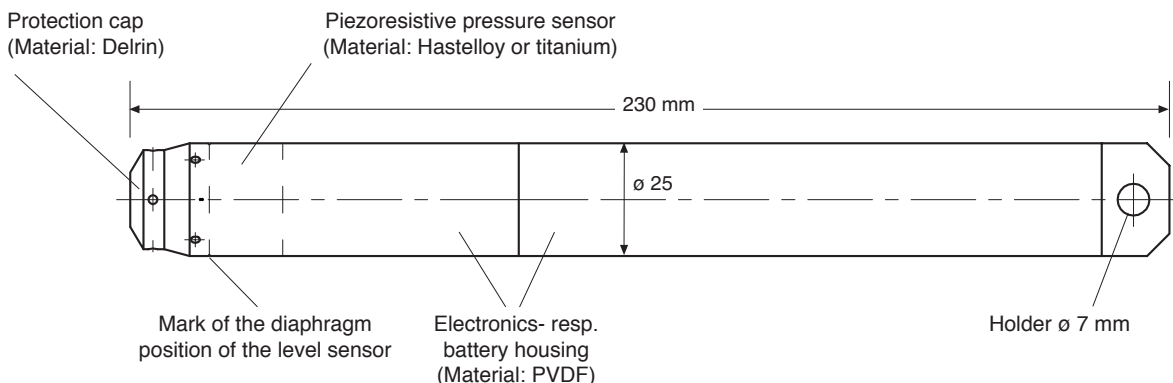
The DCX-25 PVDF works with an absolute pressure sensor. For installation, the data collector is secured by a suspension cable and immersed into the media to be measured and must be recovered for data readout. In shallow water, where the influence of barometric pressure changes should be considered, it 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 (K103A) or USB connection (K104A). 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-25 PVDF 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-25 PVDF





KELLER

SPECIFICATIONS

Measuring Range in Meter Water Column	<u>10 mWC</u>	<u>20 mWC</u>	<u>50 mWC</u>	<u>100 mWC</u>
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	RS 485
Electrical Connection	Fischer DEE 103A054

Pressure Sensor Specifications

Linearity	typ. 0,02 %FS
Error Band (-10...40 °C)	typ. 0,05 %FS max. 0,1 %FS
Resolution	max. 0,0025 %FS
Long Term Stability	0,1 %FS/year
Overpressure	2 x Pressure Range
Temperature Compensation	-10...40 °C (others on request)

Temperature Sensor

Temperature Measurement via pressure sensor (TOB)	Accuracy typ. $\pm 0,5$ °C optional: add. PT 1000 max. $\pm 0,3$ °C
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Measuring Channels

Pressure / Temperature (TOB) / Temperature PT 1000 (optional)

Shortest Measuring Range 1x per second

Memory 57'000 measuring values @ storage interval ≤ 15 s, otherwise 28'000 measuring values (always with attributed time) (optional: double storage 114'000 / 56'000)

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)

* exterior influences could reduce battery life

LOGGER 4.x

The Logger 4.x software is included with the purchase of an interface cable K103A (RS232) or K104A (USB) and allows users to configure and read data stored on all Keller data loggers (DCX and LEO Record). The software is compatible with Windows ($\geq$ Windows 95).

The measuring values may be graphically displayed, exported in different formats, air pressure compensated or converted into other units. The Online-function shows the actual values of the instrument. The Logger 4.x includes the Reader and Writer, as well as the WindowsCE-software for PDA's.

Writer

The Writer enables the configuration and start of the Logger.

General functions:

- Online display of measuring channels
- Record status indication
- Editing of installation data
- Ring buffer or normal
- Readjustment of the zero

Recording parameter:

- Pressure- and temperature channels selectable

Start methods:

- Time start
- When exceeding or dropping below a certain pressure (or temperature)
- Measuring interval for starting conditions selectable

Recording methods:

- Interval (1s...99 days)
- Combination of fixed interval and event recording possible
- Recording at pressure change
- Recording turn on or turn off at pressure threshold
- Averaging over a selectable number of measurements

Reader

The Reader allows the data to be read out onto the PC. The measured data, which can be converted (exported) into various format, also contains the following information: Serial number, measuring range, sensor name, installation data, read-out data, units, measuring values with date and clock time, read-out date...

General functions:

- Reading of the recordings' directory with starting time and storage size in %
- Read-out of the individual recordings
- Graphical display of the data
- Record status indication
- Conversion of the data into a text file for Excel import or conversion into other file formats
- Miscellaneous calculations possible

Special calculations or an export of the data into customer specific databases are possible (only on request).

