KELLER

Data Collector for Water Levels

DCX-22 AA

100% waterproof, air pressure compensated

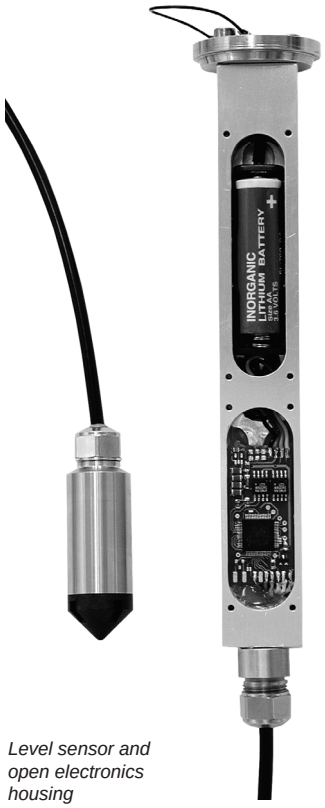
This instrument is based on the differential pressure measurement of two absolute sensors. The level sensor is connected by a cable to the electronics housing, which incorporates:

- The electronics with the latest μP-technology (16 Bit A/D converter)
- The waterproof mounted absolute pressure sensor with steel diaphragm for air pressure measurement resp. -correction
- The easily replaceable battery

The processor circuit collects the signals of the two pressure- and temperature sensors and calculates the differential pressure with an accuracy of 1...2 mbar for ranges up to 10 mWC.

The KELLER data collector DCX-22 AA allows measuring stations to be set up at considerably lower costs compared to conventional systems, offering furthermore the following advantages:

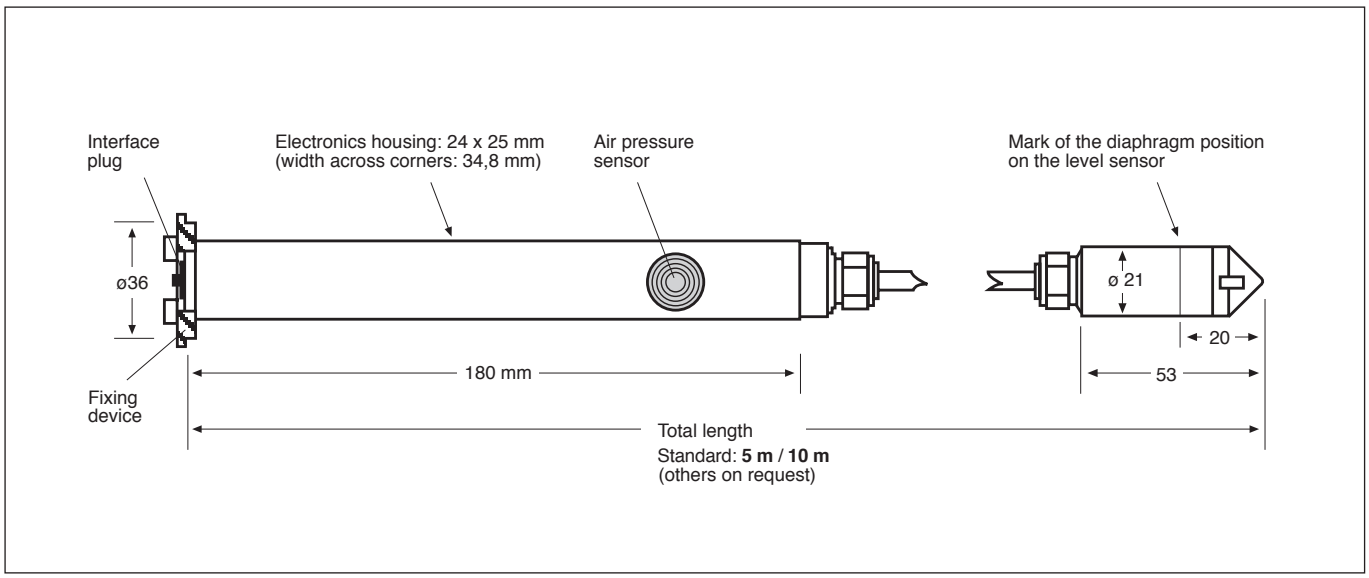
- Autonomous: Battery life ≥10 years
- High data security due to the use of a non-volatile memory
- 100% waterproof, guaranteed by the KELLER AA-technology (no ventilation tube)
- High measuring accuracy, resolution and robustness
- Combination of event-controlled recording and interval recording prevents unnecessary data being recorded (i.e. only measuring the level changes...)
- Simple and well structured configuration- and read-out PC-software
- Option of recording the barometric pressure, water- and ambient temperature
- Small level sensor diameter (21 mm)
- Installation data (and comments) of the measuring station can be stored in the level sensor
- The system is configured for a wireless data transfer via modem



Level sensor and open electronics housing

Integrated air pressure sensor with diaphragm protection

CE



Subject to alterations

09/02

KELLER AG für Druckmesstechnik St. Gallerstrasse 119 CH-8404 Winterthur Tel. 052 - 235 25 25 Fax 052 - 235 25 00
KELLER Gesellschaft für Druckmesstechnik mbH Schwarzwaldstrasse 17 D-79798 Jestetten Tel. 07745 - 9214 - 0 Fax 07745 - 9214 - 50

KELLER

SPECIFICATIONS:

Measuring-/ Pressure Ranges	800…1800 mbar abs. for ranges up to 5 mWC 800…2300 mbar abs. for ranges up to 10 mWC

Supply	Lithium-Battery 3,6 V
Battery Life	10 years @ 1 measurement/hour
Output	RS 485 digital
Electrical Connection	Fischer DEE 103A054
Linearity	typ. 0,05 %FS
Error Band (0…30 °C)	typ. 1 mbar (max. 2 mbar)
Resolution	max. 0,0025 %FS
Long Term Stability	typ. 0,5 mbar
Overload	2 x nominal range

Temperature Measurement	Accuracy typ. 1 °C
Shortest Measuring Cycle	1x per second
Memory	16'000 or 28'000 measuring values with attributed time (depending on storing method)
Material in Media Contact	Stainless steel 316L (DIN 1.4435) Viton®
Material of Electronics Housing	Anodized Aluminium
Weight: Housing / Level Sensor	≈ 300 g / ≈ 70 g (without cable)

INSTALLATION NOTES

The dip pipe is firmly mounted at the measuring place. If the dip pipe is being sunk into the ground, openings have to ensure that water can enter the pipe.

The level sensor, connected by a cable to the electronics housing, is immersed into the pipe. The housing incorporates the electronics, the battery and the air pressure sensor.

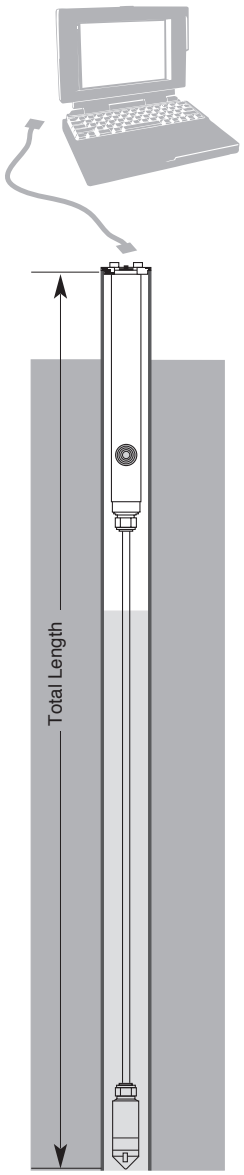
The electronics housing is mounted onto the end of the pipe.
The protective cap of the interface must be cleaned from dirt and water prior to removing.

Via data cable, a Laptop is connected to the system on site. The stored measuring values with the programmed parameters can now be read out or the instrument can be reconfigured.

The system is set up for a wireless data transfer via modem.

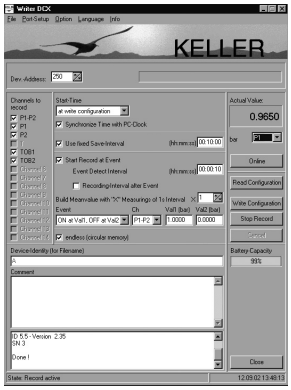
A vandal-proof metal cap mounted at the end of the system prevents unauthorised access.

The level sensor and the electronics housing form a leak-proof unit and are thus protected against flooding and brackish water.



HARDWARE / SOFTWARE

The configuration- and read-out software is delivered together with the interface cable (K103A). The software is compatible with Windows 2000/NT/XP/ME and 9X.



Writer

The Writer enables the start and configuration of the DCX-data collector.

General functions:
- Online-display of measuring channels
- Status-indication and indication of battery condition
- 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
- Measuring interval for starting conditions selectable

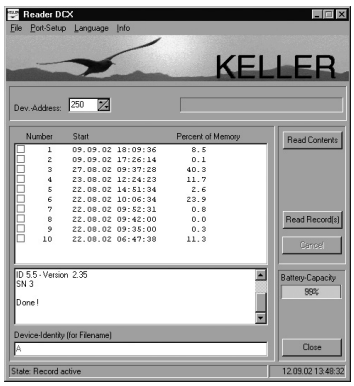
Recording methods:
- Interval (1s…18h) and event-controlled recording
- Recording at pressure change
- Turn on/Turn off at pressure thresholds
- Averaging over selectable number of measurements

Reader

The Reader allows the data to be read out into a file and to be be saved onto a Laptop or PC.

The data file, which can be imported by programs such as Excel, contains the following data recorder information:

Serial number, measuring range, sensor name, installation data, read-out data, units, measuring values with date and clock time,…



General functions:
- Status-indication and indication of battery condition
- Reading of the recordings' directory
- Read-out of the individual recordings

Subject to alterations 09/02

KELLER AG für Druckmesstechnik St. Gallerstrasse 119 CH-8404 Winterthur Tel. 052 - 235 25 25 Fax 052 - 235 25 00
KELLER Gesellschaft für Druckmesstechnik mbH Schwarzwaldstrasse 17 D-79798 Jestetten Tel. 07745 - 9214 - 0 Fax 07745 - 9214 - 50