

AUTONOMOUS DATA COLLECTOR

100% WATERPROOF

DCX-22, DCX-22 SG
DCX-22 VG

The DCX-22 is an autonomous battery powered instrument designed to record water depth (pressure) and temperature over long periods. Two versions are offered:

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

The DCX-22 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 PC then calculates the water depth by subtracting the two measured values.

DCX-22 SG/VG: The sensor is connected by waterproof cable to a surface mounted housing with the data read-out port. This arrangement allows for easier data recovery from fixed installations. The DCX-22 SG/VG does not have to be removed from the dip pipe for data read out. The DCX-22 SG/VG is supplied with a 2" diameter fixing plate to enable mounting at the top of the dip pipe. The sensor can be sealed gauge SG, or vented gauge VG, the cable carries the vent tube for VG version sensors, vent port in the housing is protected by a breathable Gore-Tex® membrane.

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

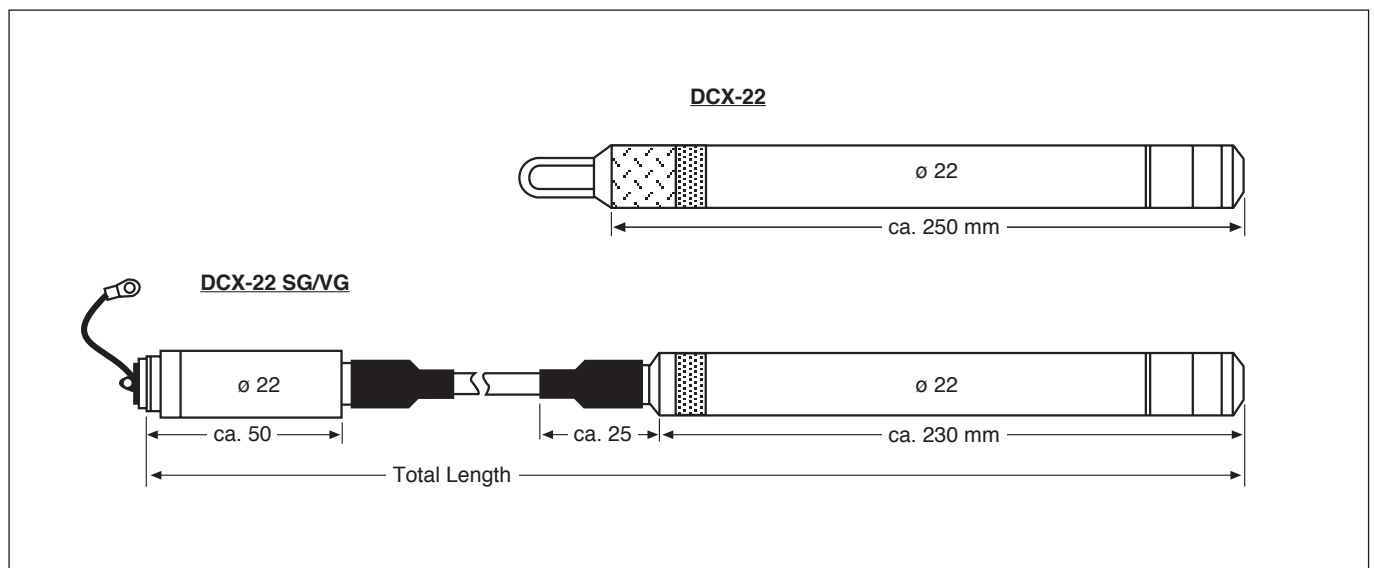
- Autonomous: Battery life ≥ 10 years
- High data security due to the use of a non-volatile memory
- 100% waterproof (DCX-22) due to the use of a double O-ring sealed battery compartment
- High measuring accuracy, resolution and robustness
- Combination of event-controlled recording and interval recording 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 water level (pressure) and water temperature
- Small level sensor diameter (22 mm)
- Installation data (and comments) of the measuring station can be stored in the level sensor
- Optional: Pressure connection with thread



Version DCX-22



Version DCX-22 SG
DCX-22 VG



Subject to alterations

2/03



KELLER

SPECIFICATIONS

DCX-22 BARO

PAA 0,8...1,3 bar

DCX-22

PAA 0,8...2 0,8...3 0,8...6 0,8...11 bar abs.

**DCX-22 SG
VG**

PAA 0,8...2 0,8...3 0,8...6 0,8...11 bar abs.
PR 1 2 5 10 bar

PAA: Absolute. Zero at vacuum PR: Vented Gauge. Zero at atmospheric pressure (other ranges on request)

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 (-10...40 °C)	typ. 0,1% FS (max. 0,2% FS)
Error Band (-10...40 °C) Baro	typ. 1 mbar
Resolution	max. 0,0025 %FS
Long Term Stability	typ. 0,5 mbar
Overload	2 x nominal range

Temp. Compensation	-10...40 °C (other ranges on request)
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	Stainless steel 316L (DIN 1.4435), O-ring Viton®
Cable Length DCX-22 SG/VG	According to customer specification
Weight: Sensor	355 g (without cable)
Optional:	Fixing plate with other diameter Pressure connection G 1/4" or others

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.

DCX-22 SG/VG

The data logger, connected by a cable to the electronics housing, is immersed into the pipe. A fixing plate is fastened to the housing of the read-out plug and rests upon the edge of the dip pipe.

Attention for VG-version!
The venting hole must be free and protected against submerging.

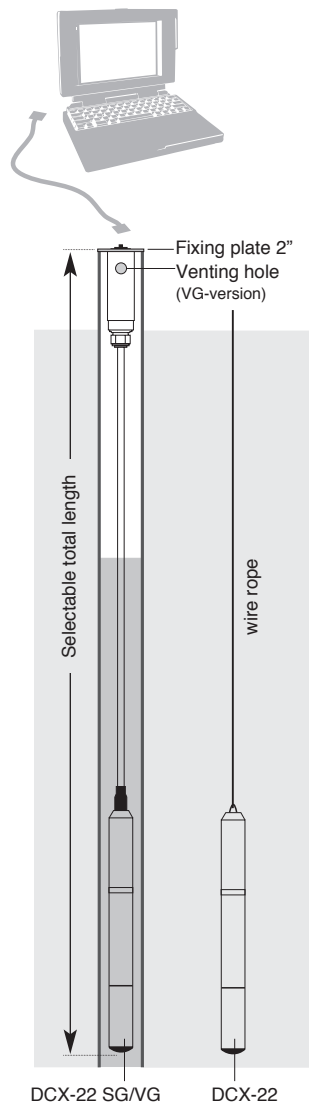
Data read-out:

The protective cap of the interface must be cleaned from dirt and water prior to removing. Connect the cable. The data logger must not be removed for read-out.

DCX-22

The entire data logger is immersed on a wire rope into the measuring point. The logger is removed for the data read-out.

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.



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

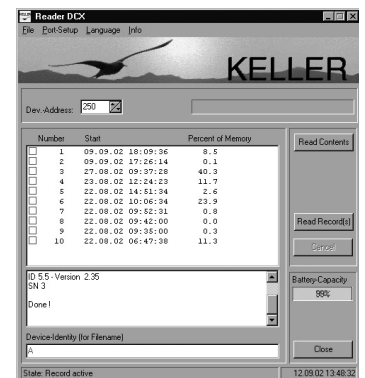
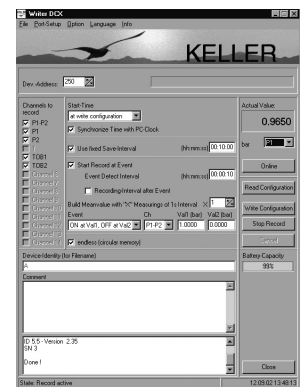
The Reader allows the data to be read out into a file and to be saved onto a Laptop or PC.

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



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