

## AUTONOMOUS DATA COLLECTOR

DATA LOGGING AT FAVORABLE PRICE - Ø 18 MM

The DCX-18 ECO is an autonomous, rechargeable battery powered instrument. It features a stainless steel 18 mm in diameter housing designed to record pressure (water depth) and temperature over long periods at a very economical price. Its small size, rechargeable battery, fully welded housing and the relative sensor option are just a few of the many advantages provided by the DCX-18 ECO.

The electronics employ the latest microprocessor technology which give high accuracy and resolution for the pressure and temperature signals. The measured values are mathematically compensated for all linearity and temperature errors of the pressure sensor.

The use of a non-volatile memory for data storage ensures high data security.

### DCX-18 ECO

The sensor, electronics and the rechargeable battery are housed in a fully welded stainless steel tube for submersible deployment. For data read-out, the DCX-18 ECO must be recovered from the measurement point. The end cap, sealed by two O-Rings, must then be removed to access the serial interface.

The DCX-18 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 logger (Baro) is placed at the surface, to record the barometric pressure. The PC then calculates the differential pressure resp. the water depth by subtracting the two measured values.

### DCX-18 ECO with cable (DCX-18 ECO SG or DCX-18 ECO VG)

An optional cable is available for the DCX-18 ECO, enabling data retrieval or configuration and charging the battery without removing the data logger. For relative measuring devices, the cable incorporates a capillary tube which enables venting the relative sensor.

### Rechargeable Battery:

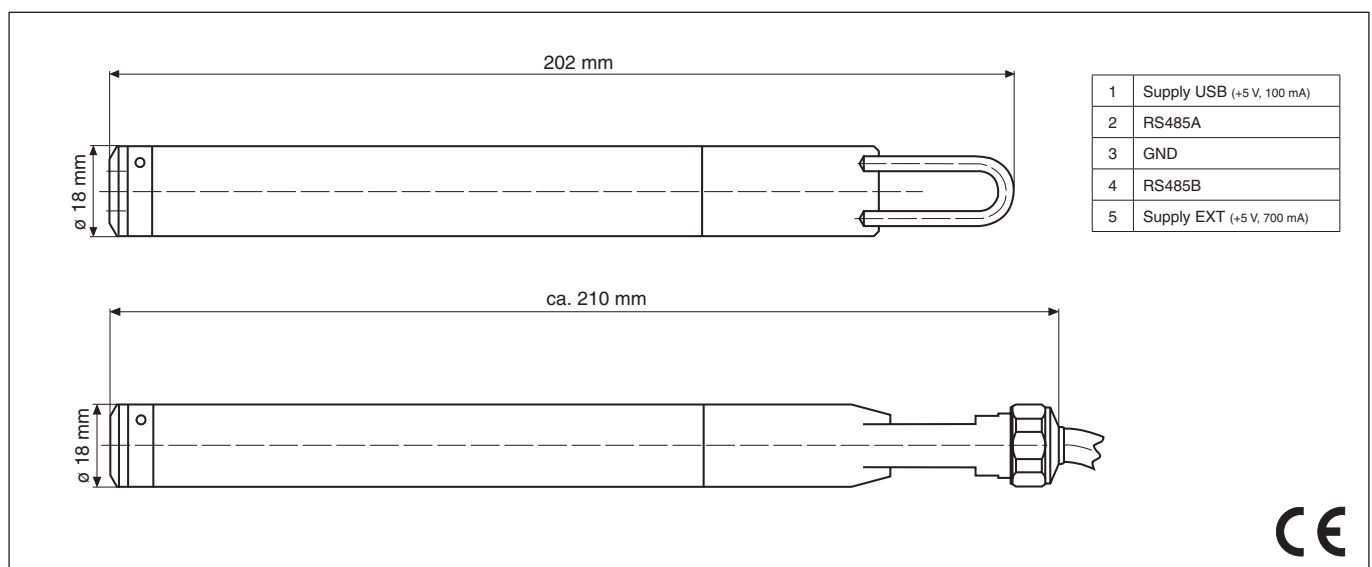
The DCX-18 ECO is charged over the USB connection with the K-104M converter connected to PC. For fast charging, connect the power supply unit or the car charging adapter to the converter. The charge status is displayed in the logger software.

## DCX-18 ECO

DCX-18 ECO



DCX-18 ECO with cable





# KELLER

## Specifications

Pressure Ranges	PAA 10 mWC (0,8...2 bar)	20 mWC (0,8...3 bar)	50 mWC (0,8...6 bar)	100 mWC (0,8...11 bar)
	PR 10 mWC (0...1 bar)	20 mWC (0...2 bar)	50 mWC (0...5 bar)	100 mWC (0...10 bar)

Overpressure 2 x Pressure Range

PAA: Absolute. Zero at vacuum PR: Vented Gauge. Zero at atmospheric pressure

Supply	Rechargeable battery	Long Term Stability typ.	Range ≤ 2 bar: 2 mbar (0,02 mWC)
Battery Running Time *	~3 years @ 1 measurement/hour	Temperature Measurement	Range > 2 bar: 0,2 %FS
Charging time	~7 h normal charge (USB) ~1 h fast charge (AC/DC or car adapter)	Shortest Measuring Interval	Accuracy typ. ±1 °C
Output Interface	RS 485	Memory	1 per second
Electrical Connection	M12 / 5-pole	Material	57'000 measuring values @ storage interval ≤ 15 s, otherwise 28'000 measuring values (always with attributed time)
Cable Option (SG/VG)	Fixed lengths: 10, 20, 50, 100 m	Probe Weight	Stainless steel AISI 316L O-Ring: Viton® Protective Cap: Delrin®
Linearity	typ. 0,1 %FS		
Comp. Temperature Range	-10...40 °C		
Error Band **	max. 0,2 %FS		
Resolution	max. 0,0025 %FS		

\* external influences could reduce battery capacity \*\* Linearity + Temperature Error

## LOGGER 4.x

The Logger 4.x-software is free available (web download). The software is compatible with Windows (≥ Windows 95) and allows to configure and read out our KELLER data loggers (DCX and Leo Record).

The measuring values may be graphically displayed, exported, air pressure compensated or converted into other units. The Online-function shows the actual values of the instrument. The Logger includes the Reader and Writer and other modules.

## Writer

The Writer enables the configuration and start of the Logger.

General functions:

- Online display of measuring channels and battery charge status
- 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) and event-controlled recording
- Recording at pressure change
- Turn on or turn off at pressure threshold
- Averaging over selectable number of measurements
- Combination of fixed interval and event recording possible

## Reader

The Reader allows the data to be read out into a file. 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
- Miscellaneous calculations possible

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

