AUTONOMOUS CAPACITIVE DATA COLLECTOR

DCX-38 VG

FOR HIGH RESOLUTION WATER LEVEL MEASUREMENTS

The DCX-38 VG is an autonomous instrument for recording water level with a high resolution and full scale ranges as low as 0,5 mWC / 50 mbar. It features a rugged, gold-plated ceramic diaphragm for outstanding long-term stability and stainless steel housing with user serviceable battery for long service life.

The internal electronics of the DCX-38 VG employ the latest microprocessor technology, resulting in high accuracy and resolution for pressure measurements. The use of non-volatile memory for data storage ensures high data security.

The DCX-38 VG is based upon a relative pressure sensor and is designed for submersible deployment. Through the use of a vented cable, correction for atmospheric pressure variations is automatic. Therefore, the expense of deploying additional instruments for monitoring barometric pressure is avoided.
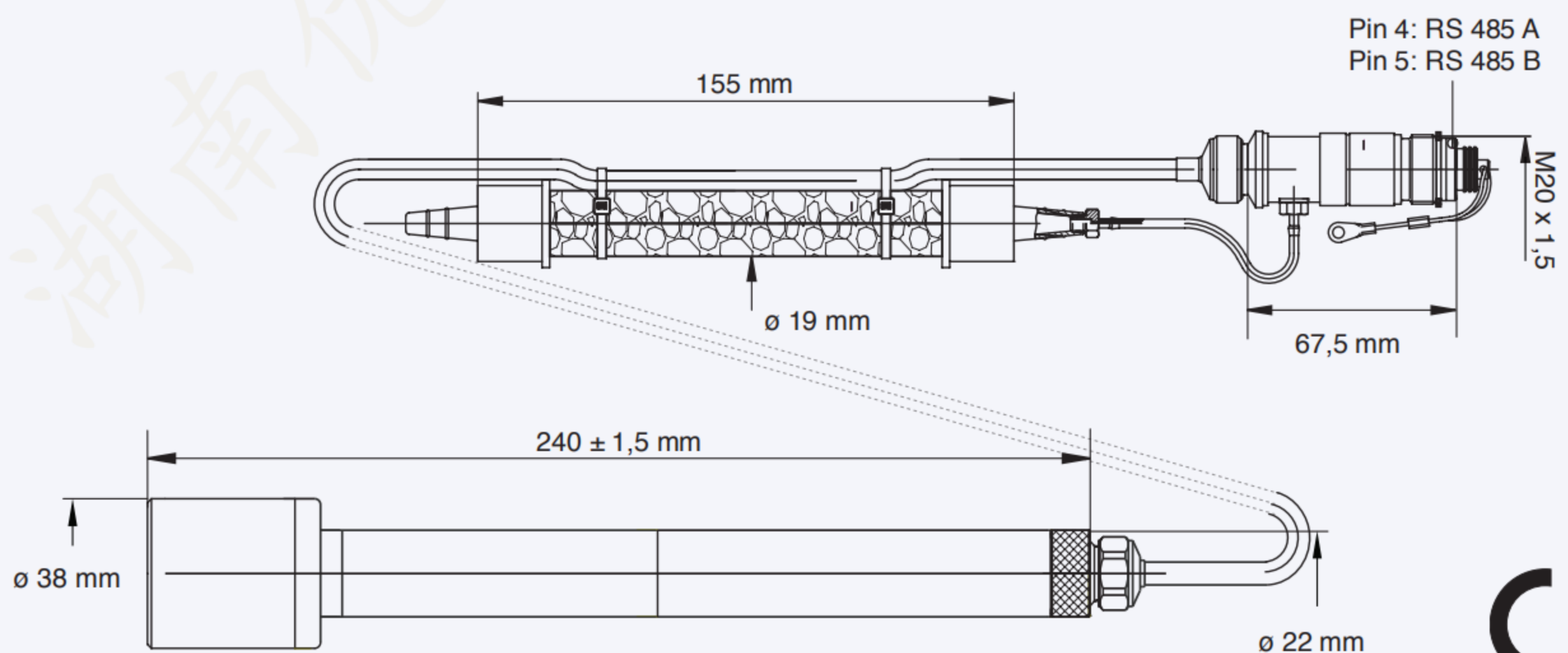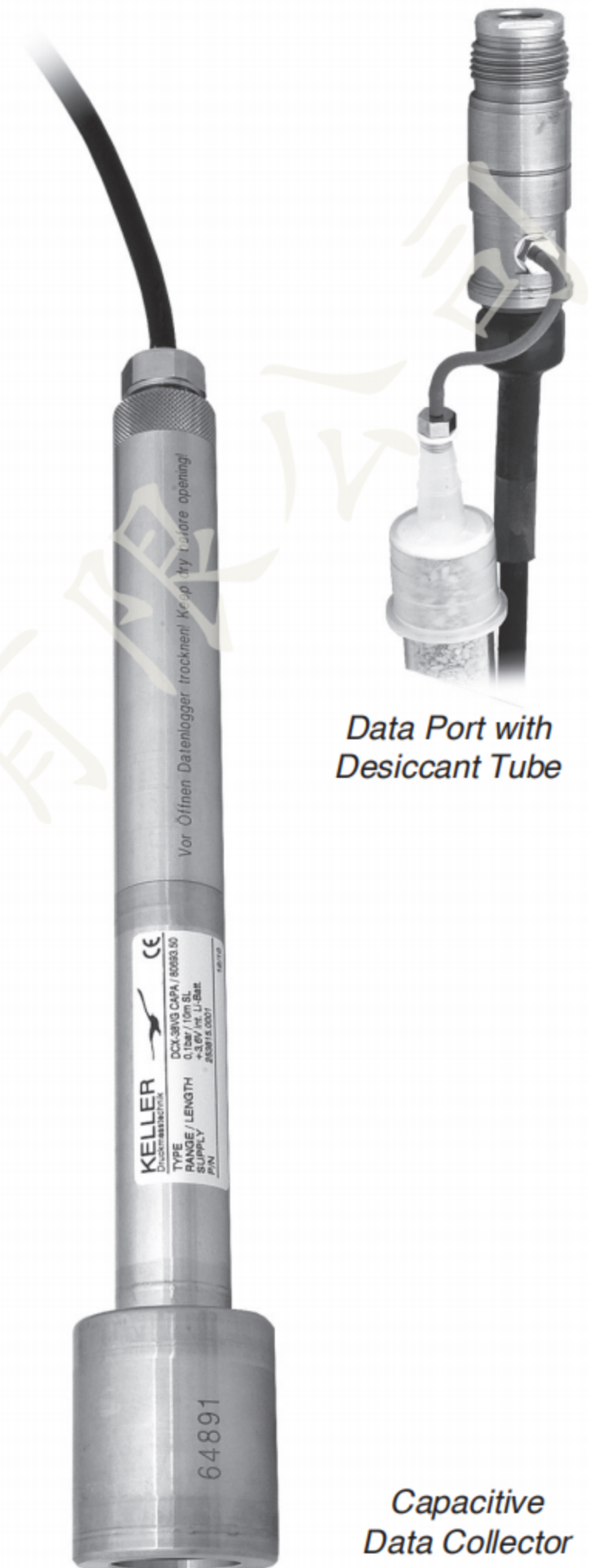
The reference pressure tube, integral to the waterproof cable, is protected from moisture intrusion through the use of an optional desiccant tube connected to the adapter nozzle, located in the data port.

The data collector can individually be adjusted to the user's needs and offers the following advantages:

- Recording of the pressure and temperature
- Simple and well structured configuration- and read-out software (Logger 4.x) for PC or PDA
- Combination of event-controlled recording and interval recording prevents unnecessary data being recorded (i.e. only measuring the pressure changes)
- Installation data (and comments) of the measuring station can be stored in the device

Configuration / Data Retrieval:

For data readout, the serial interface is accessed via the data port located on one end of the cable, enabling on site data retrieval. Using either the K-104A or K-103A converter cable, the DCX-38 VG connects easily to a laptop or PC via USB or serial port. Used in conjunction with Logger 4.x software, the DCX-38 VG is configured and data retrieved either in the lab or the field.

Data Port with Desiccant Tube

Capacitive Data Collector

Pin 4: RS 485 A
Pin 5: RS 485 B

155 mm

ø 19 mm

M20 x 1,5

67,5 mm

240 ± 1,5 mm

ø 38 mm

ø 22 mm

CE

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Specifications

Pressure Ranges (PR)	0...50 mbar (0...0,5 mWC)	0...100 mbar (0...1 mWC)	0...300 mbar (0...3 mWC)
Overpressure	10 x Pressure Range	10 x Pressure Range	5 x Pressure Range

PR: Vented Gauge. Zero at atmospheric pressure

Supply	Lithium battery / 3,6V (Type AA)
Battery Life *	~10 years @ 1 measurement/hour
Interface	RS 485 digital
Electrical Connection	Fischer Plug DEE 103A054
Vented Cable	Standard lengths: 5 m / 10 m (others on request)
Comp. Temperature Range	-10...40 °C (icing not permitted)
Total Error Band **	0,2 %FS
Resolution	max. 0,002 %FS
Stability	FS ≥ 100 mbar: ± 0,1 %FS FS ≤ 100 mbar: ± 0,1 mbar
Temperature Measurement	Accuracy typ. ±0,5 °C
Memory	57'000 measuring values @ storage interval ≤ 15 s, otherwise 28'000 meas. values (always with attributed time)
Shortest Measuring Interval	1 per second
Material	Diaphragm: Gold-plated Ceramic / Housing: Stainless Steel AISI 316L / O-Ring: Viton

* external influences could reduce battery capacity   ** Linearity + Temperature Error within the compensated range

LOGGER 4.x

The Windows-compatible Logger 4.x-software, if needed, is delivered along with the interface cable or may be downloaded from our web site. It allows to configure and read out KELLER data loggers.

The measuring values may be graphically displayed, exported or converted into other units. The Online-function shows the actual values of the instrument.

The Logger includes the Reader and Writer.

WRITER

The Writer enables the start and configuration of the device.

General functions:
- Online-display of measuring channels
- Status-indication
- Editing of installation data
- Ring buffer record storage 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...99 days) and event-controlled recording; also combinable
- Recording at pressure change
- Averaging over selectable number of measurements

Logger 4.x also includes the Windows Mobile for PDA's.

READER

The Reader allows the data to be read out into a file and to be saved onto a PDA 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 / Reading of the recordings' directory with starting time and storage size in % / Read-out of the individual recordings / Graphical display of the data / 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).