

# CDL-B

## CDL Data-Logger Data logger for level measurement



### Description

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The CDL Data-Logger for level measurement (CDL-B) is specially designed for measuring and logging water levels and depths.

Mains power is not required for measurement.

### Application

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Recording water table levels

Borehole draw down level measurement

Well level measurements

Capture of reservoir/tank levels

### Special Features

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Long term recording of up to 2 years

Logger is located in the borehole

Can be installed in boreholes as small as 2" diameter

Various sensors are available

Battery powered (Standard batteries)

Compatible with CDLWin software

Data logger and level sensor can be inserted separately.

### Available Options

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CD-Logger with stainless steel housing  
waterproof IP 68

Well logger CDL-B

CDL-BS sensor for 10 m immersion depth, Cable length 15 m

Complete well logger (CDL-B and CDL-BS)

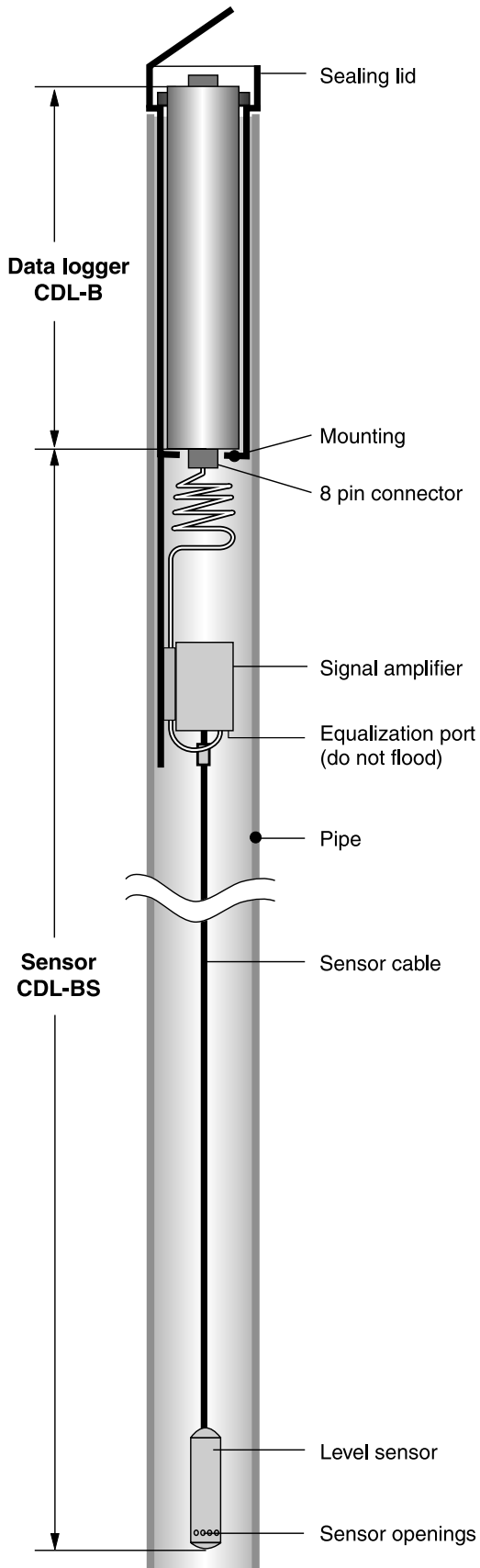
Other designs on request

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[www.sensus.com](http://www.sensus.com)  
[info.int@sensus.com](mailto:info.int@sensus.com)



## Technical Data



### Data logger

Type:	CDL-B
Ports:	1 analogue
Memory:	512 kB; split into 3 memory blocks for daily, hourly and detailed values
Waterproofing:	IP 68
Housing material:	Stainless steel V4A / galvanized brass
Dimensions:	Ø 43 x 404 mm
Weight:	1350 g
Operating temp.:	0 ... 50 °C
Storage temp.:	-10 ... +70 °C
Batteries:	2 x 9V Block (6 LR61, E Block)
Battery life:	1/2 ... 2 years (depending on the application)
Battery warning:	6.3 V
System clock:	Real time (Deviance <math>< 3 \times 10^{-5}</math> at <math&gt;10\text{ 30\text{="" \leq="" math&gt;)<="" t="" td="" °c}="" °c}&lt;=""> </math&gt;10\text{>
Interface:	V.24 / RS 232 - compatible interface for connection to PC.  All connectors waterproof to IP 68.
Alarm contact:	FET open drain, I max 100 mA; U max 50 V



CDL-B Well logger



CDL-BS Sensor with mounting

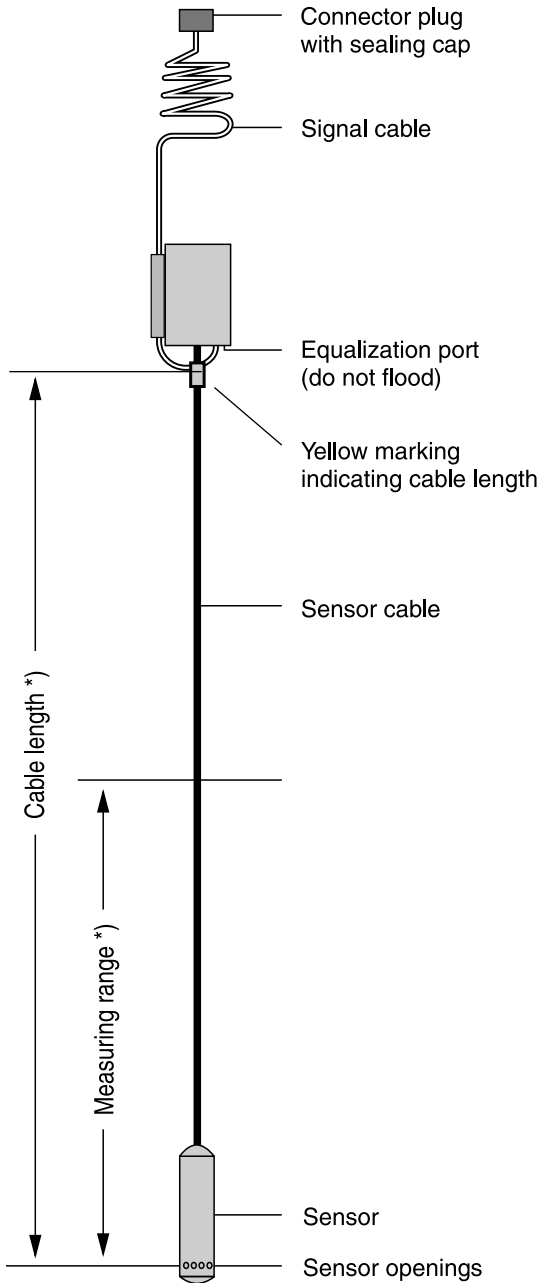
# CDL-BS Well Level Sensor

The CDL-BS is a specially adapted borehole pressure sensor. It is connected directly to the Well Data Logger.

The power is supplied by the CD-Logger.

## Application

- Level control
- Level measurement
- Water and sewage measurement



## Technical Data

These specifications are only valid when connected to a CDL-B or CDL-1U ... 4U logger.

Measuring range (for example a 10m sensor)

for water at 3 ... 10°C:	Water depth 0...10 m (0...0.98 bar)
Resolution:	1 cm over a 10 m measuring range
Overload limit:	30 mWg (approx. 3 bar)

Deviance through fluctuation of

ambient temperature: typ. ±1cm, max. ±2 cm within the compensated range

water temperature: -0.2cm/°C at 10 m head (-0.02cm/°C m)

sensor characteristic curve: max. ±2.5 cm deviance

Cut off ranges

Zero point: ±2% of max. value (±20 cm)

Amplification: +1.5 % of measured value (±15 cm at 10 m head)

Temperature range

Storage temperature: -30 °C ... +80 °C

Operating temperature in the compensated range of the sensor:

0 °C ... 25 °C

Signal amplifier:

-20 °C ... 70 °C

CD-Logger:

-20 °C ... 70 °C

Dimensions

Sensor head diameter: approx. 25 mm

Sensor cable diameter: approx. 6 mm

Signal amplifier Ø x L: Ø 30 x 65 mm

Signal cable Ø / L: Ø 4 mm / 1 m

Weight: 1300 g with a 15 m sensor cable (Cable mass of 45 g/m)

Environmental protection: IP 68 sensor and sensor cable

Pressure equalization: through the sensor cable

Mounting

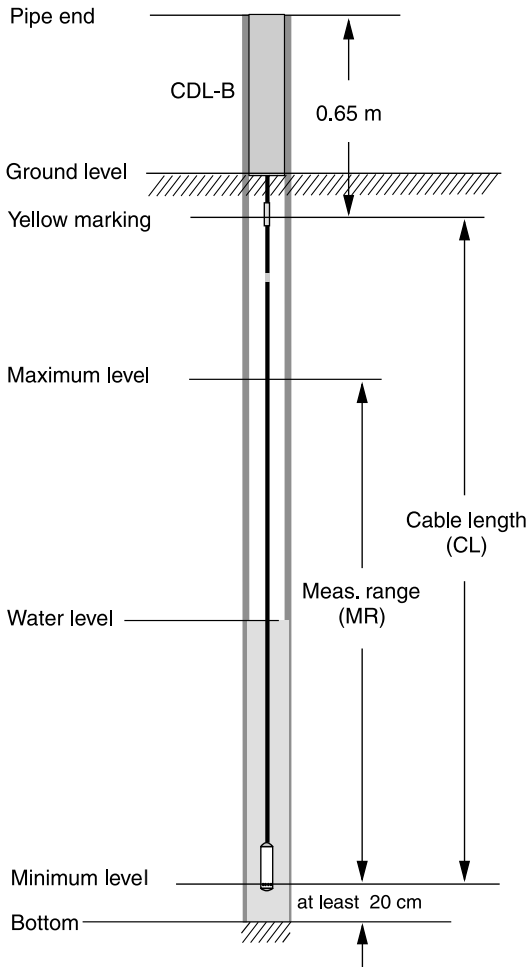
Weight: 400 g

Dimensions: Ø 55 x 675 mm

\*) Options available

Cable length (CL) 1 ... 200 m

Measuring range (MR) 1 ... 200 mWS



## Note

The level sensor is supplied pre-calibrated.

Pressure equalization to the surroundings must be ensured. Therefore care must be taken when assembling to ensure that the equalization port at the signal amplifier is kept clear and is not flooded. The signal amplifier must not be built into an air-tight housing.

The sensor cable must not be pinched or kinked.

After installation, the pressure and temperature equalization can take up to 30 minutes. Only after equalization can stable measurements be ensured.

To check the functioning of the sensor, the on-line monitor of the CDLWin software can be used to check the current level indicated by the sensor.

## Ordering Information

1. Complete well logger
  - comprising:
  - Well logger CDL-B
  - Sensor CDL-BS with mounting
  - Cable length (CL) ..... m
  - Measuring range (MR) .....m
2. CDL-B Well logger (independent)
3. CDL-BS Sensor with mounting (independent)
  - Cable length (CL) ..... m
  - Measuring range (MR) .....m
4. Accessories
  - Adapter for 3"-pipe
  - Adapter for 4"-pipe
  - Adapter for 6"-pipe
5. PC-Evaluation software CDLWin
6. CDL/PC-Connection cable