

Cera-Diver DATA SHEET

Water Level and Temperature Measurement for Corrosive Conditions, with Internal Data Logger



Description

The ceramic Schlumberger Cera-Diver is designed specifically for monitoring groundwater in potentially corrosive conditions, such as brackish water and seawater. Robust and durable, the Cera-Diver is a perfect partner for projects using the CTD-Diver.

The Cera-Diver is available in four ranges for monitoring the following depths:

- 0 - 33 ft (0 - 10 m)
- 0 - 66 ft (0 - 20 m)
- 0 - 164 ft (0 - 50 m)
- 0 - 328 ft (0 - 100 m)

Measuring 3.54 inches (90mm) in length and 0.86 inches (22mm) in diameter, this highly reliable and compact Diver registers groundwater levels with an accuracy of 0.05% (Full Scale). It is equipped with a memory capable of storing 48,000 measurements per parameter. This is sufficient enough to perform one measurement every ten minutes for an entire year.

In addition to internal data storage, the Cera-Diver can be connected to an external data logger, such as the Stevens DataLog_c 3000, or data telemetry systems with the Diver-DCX SDI-12 output adapter, allowing the Diver to be used for real-time data monitoring applications.

Manual data download in the field from a Diver's internal storage can be done by utilizing the optional USB Interface Cable and connecting the diver directly to a desktop or laptop PC.

Features

- Long-term and frequent measurements
- Temperature corrected measurement
- Compact size for small wells
- Non-volatile memory
- Compact size
- Ceramic body resists corrosion
- Built-in data logger for storing up to 5 million measurements
- Optional SDI-12 adapter for connection to data logger or radio/modem
- Battery powered for long-term, unattended operation
- Maintenance free
- 3 year warranty

Applications

- Pumping and slug tests
- Watershed, drainage basin and recharge areas
- Stream gauging, lake levels and reservoirs
- Harbour and tidal fluctuation monitoring
- Wetlands and stormwater run-off monitoring
- Long term water level monitoring
- All intensive monitoring of groundwater levels
- Groundwater monitoring projects
- Groundwater monitoring network automation

Technical Specifications

Power Requirements

Battery powered with the capacity to perform:

- 5 million measurements;
- 2,000 readout cycles;
- 2,000 programming cycles.

The maximum lifespan for the Diver battery is 10 years of “typical” use, excluding extreme temperature situations or excessively fast measurements that may prematurely drain the battery.

Sample Interval

0.5 seconds to 99 hours

Output Options

- SDI-12 output when connected to Diver-DCX converter box.
- Manual data download using USB interface cable connected to computer.

Operating Temperature, Compensated

32 °F to 122 °F (0 °C to 50 °C)

Temperature Accuracy

± 0.18 °F

Temperature Resolution

0.018 °F

Physical Size (Length x Diameter)

3.54 in x Ø0.86 in
(90 mm x Ø22 mm)
incl. suspension eye

Wetted Parts Materials

Housing: ceramic (ZrO₂)

O-rings: Viton ®

Pressure Sensor: ceramic (Al₂O₃)

Cap / nose cone: Nylon PA6 30% glass fiber

Weight

1.94 oz (55 grams)

Depth Range	Typical Accuracy	Long-Term Stability	Resolution
33 ft (10 m)	± 0.05% FS	± 0.1% FS	0.07 in (0.2 cm)
66 ft (20 m)	± 0.05% FS	± 0.1% FS	0.15 in (0.4 cm)
164 ft (50 m)	± 0.05% FS	± 0.1% FS	0.39 in (1 cm)
328 ft (100 m)	± 0.05% FS	± 0.1% FS	0.78 in (2 cm)

Diver Accessory Items

All Schlumberger Divers are sold as self-contained units, as every diver is equipped with internal memory and battery power and can be deployed as-is. Stevens Water offers a full line of cables and data download accessories to facilitate the easy transfer of data to data loggers, telemetry communication systems, or field computers.

Optional Cables: Diver Data Cables allow any Diver unit to be deployed down a well, bore hole, or any other location, while giving the end-user the ability to configure or download data from the Diver without removing it.

SDI-12 Diver-DCX Output Adapter: Connects to any Diver, giving the sensor the ability to output readings in standard SDI-12 format, for communication with a data logger or telemetry device.

USB Interface Cable: Connects to the end of the Diver Data Cable, allowing for data download via connection to any computer with a USB Port, using Diver Office software.

Diver Mate: This small handheld storage device connects to any Diver or Diver Data Cable, and automatically downloads stored readings to onboard memory for later analysis.

Diver USB Reading Unit: A small USB-powered cradle that allows the connection a Diver (without cable) to a PC for data download or configuration.

Cera-Diver DATA SHEET

Ordering Information

Corporate Headquarters

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Since 1911, Stevens Water Monitoring Systems, Inc. has provided complete water monitoring solutions including:

- Water Level Sensors
- Water Quality Sensors
- Soil Moisture Sensors
- Chart Recorders
- Staff Gages
- Telemetry Systems
- Data Collection Platforms

Part #	Description
91144-701	Schlumberger Cera-Diver, 33 ft (10 m) range
91144-702	Schlumberger Cera-Diver, 66 ft (20 m) range
91144-705	Schlumberger Cera-Diver, 164 ft (50 m) range
91144-710	Schlumberger Cera-Diver, 328 ft (100 m) range
51144-337	SDI-12 Diver-DCX Output Adapter
51144-327	USB Interface Cable, for manual data download from Diver
51144-420	Diver Mate hand-held data download and storage drive
51144-330	Diver USB Reading Unit, for Diver units without cable

Part #	Optional Cables
51152-6001	Diver Data Cable - 3.28 ft (1 m)
51152-6005	Diver Data Cable - 16.4 ft (5 m)
51152-6010	Diver Data Cable - 32.8 ft (10 m)
51152-6015	Diver Data Cable - 49.21 ft (15 m)
51152-6020	Diver Data Cable - 65.61 ft (20 m)
51152-6030	Diver Data Cable - 98.42 ft (30 m)
51152-6040	Diver Data Cable - 131.23 ft (40 m)
51152-6050	Diver Data Cable - 164.04 ft (50 m)
51152-6060	Diver Data Cable - 196.85 ft (60 m)
51152-6080	Diver Data Cable - 262.46 ft (80 m)
51152-6100	Diver Data Cable - 328.08 ft (100 m)



SDI-12 Diver DCX Adapter
attached to Stevens DL3000 logger



USB Interface Cable
attached to Diver Data Cable
from laptop computer



Diver USB Reading Unit
shown attached to laptop



Diver Mate
hand-held data download and storage drive