

CTD Deck Unit & PDIM

SBE 36 & PDIM



SUMMARY

- Surface power and real-time data acquisition for Sea-Bird CTDs; two-way CTD communication over single- or multi-conductor sea cable and ample power for auxiliary sensors
- NMEA interface and Surface PAR interfaces



SBE 36 Deck Unit



Power and Data Interface Module (PDIM)

DESCRIPTION

The **SBE 36 Deck Unit** provides surface power and real-time data acquisition for an SBE 19, 19*plus*, 19*plus* V2, 25, 25*plus*, or 49 CTD, or SBE 50 Pressure Sensor, interfacing with a **Power and Data Interface Module (PDIM)**. The SBE 36 remains at the surface, while the PDIM is installed on or near the CTD (the term *CTD* refers to the listed CTDs as well as the SBE 50 Pressure Sensor). The system allows for two-way communication for the CTD over a single- or multi-conductor sea cable, and provides ample power for auxiliary sensors that may not otherwise be supportable by a battery-powered CTD.

The rack-mountable SBE 36 supplies DC power for the underwater units, decodes the serial data, and passes the data to a computer. The SBE 36 rear-panel switch permits operation from 120 VAC or 240 VAC 50/60 Hz input power. Other features include:

- NMEA Interface for navigational data — The SBE 36 decodes messages output from navigation devices supporting NMEA 0183 protocol. Decoded Latitude and Longitude are appended to the CTD data stream in the SBE 36, and are passed to the computer for storage and/or display with the CTD data.
- A/D converter for Surface PAR sensor — The SBE 36 supplies 12 volts to power the sensor. Surface PAR data is appended to the CTD data stream in the SBE 36, and is passed to the computer for storage and/or display with the CTD data.

The PDIM completes the underwater interface to the CTD. The PDIM housing is anodized aluminum rated to 6,800 meters depth.

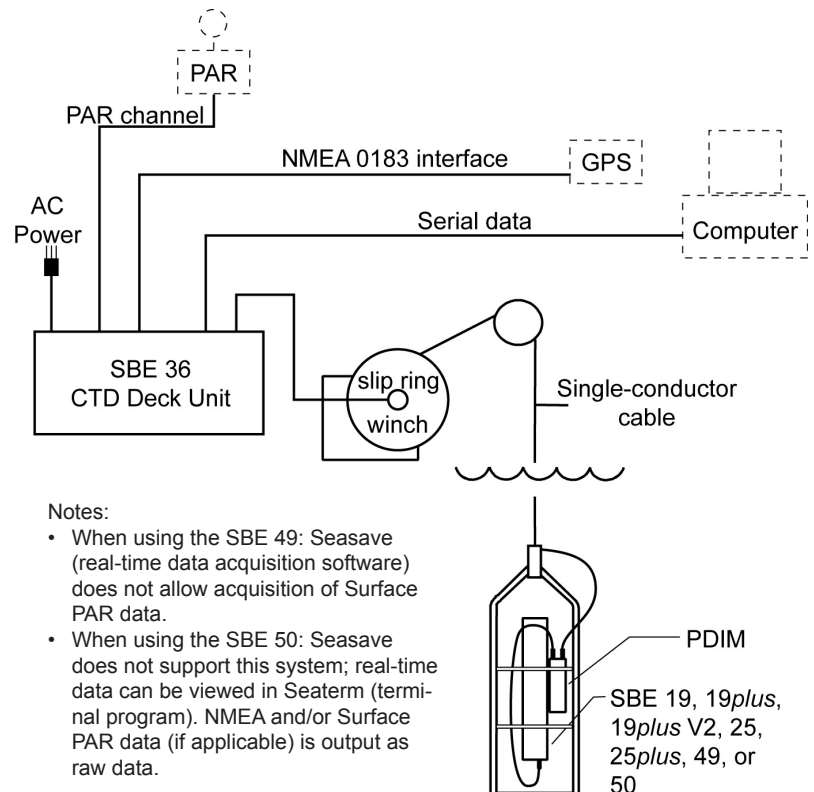
POWER SUPPLY AND REGULATION

The SBE 36 presents a constant 250 VDC to the sea cable. The PDIM receives this voltage (minus the sea cable I-R drop) and regulates it to a constant 64 VDC. This 64 VDC is the input for a high-efficiency DC/DC converter, which outputs +15 VDC. The +15 VDC is the supply voltage to the CTD; approximately 1 amp, in addition to CTD power, is available at the CTD for support of auxiliary sensors.

SOFTWARE

The SBE 36 is supplied with a powerful Windows software package, Seasoft® V2, which includes:

- **Seaterm®** and **SeatermV2** — terminal programs for easy communication and data retrieval.
- **Seasave®** — program for real-time data acquisition and water sampler bottle firing control.
- **SBE Data Processing®** — modules for calculation, display, and plotting of temperature, conductivity, pressure, auxiliary sensor data, and derived variables such as salinity and sound velocity.



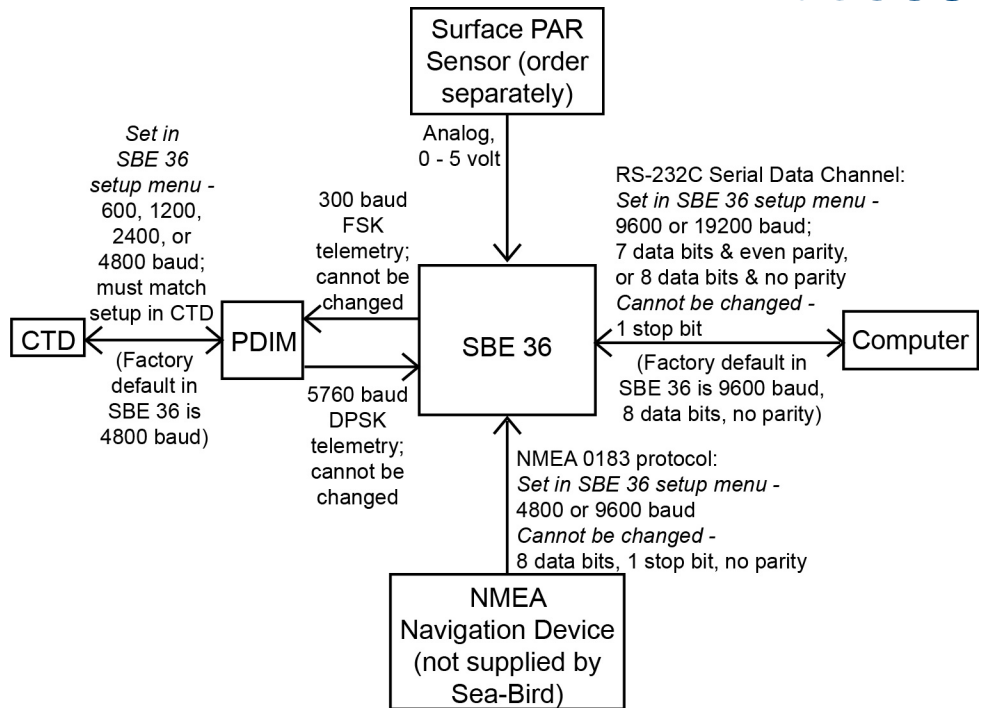
CTD Deck Unit & PDIM



DATA TELEMETRY

Notes:

1. DPSK = differential phase shift keyed, FSK = frequency shift keyed
2. Seasave also supports acquisition of data from a NMEA device connected directly to the computer.
3. When using the SBE 49 with the SBE 33, Seasave (real-time data acquisition software) does not allow acquisition of Surface PAR data.



SPECIFICATIONS

Power requirement:

120 VAC at 60 Hz and 1.75A or
240 VAC at 50 Hz and 1A (switchable)

Cable compatibility:

Single or multi-core armored cable up to 10 km (32,800 ft) long with inner core resistance up to 350 ohms and armor used as return

SBE 36 Dimensions & Weight:

89 mm (3.5 in.) high cabinet with standard 48 mm (1.9 in.) electronics rack mounting brackets.

Detailed information:

89 mm high x 432 mm wide x 381 mm deep

(3.5 inches x 17 inches x 15 inches);

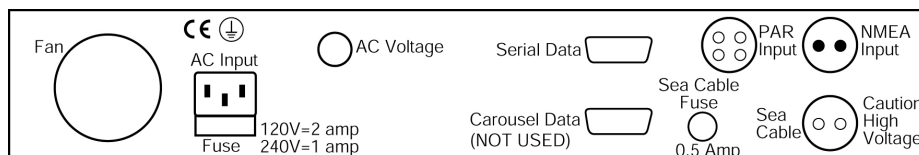
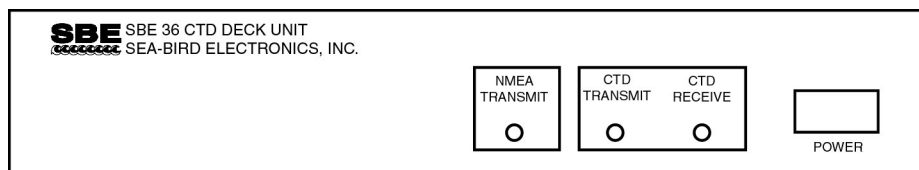
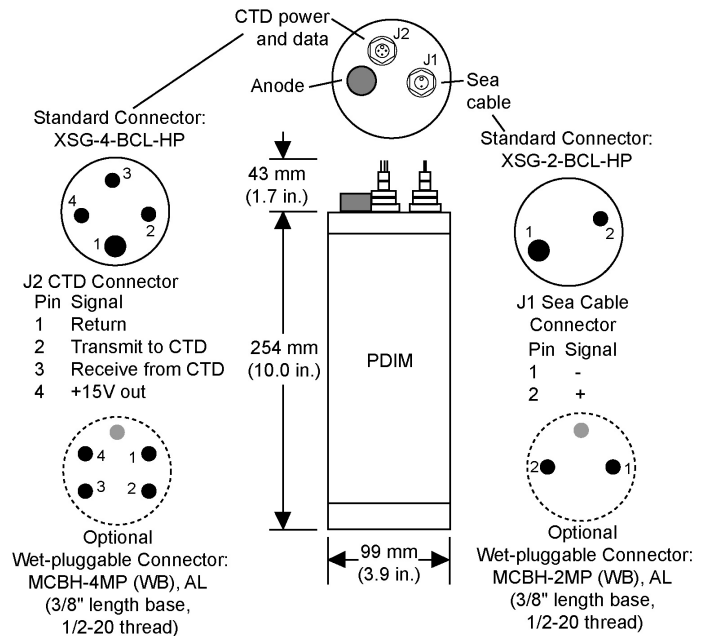
Feet add 13 mm (0.5 inches) to height;

Rack mount ears add 51 mm (2 inches) to depth.

Weight 9.0 kg (20 lbs)

PDIM Weight:

3.6 kg (8 lbs) in air; 1.6 kg (3.6 lbs) in water



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