



**APPLIED MICROSYSTEMS
LTD.**



BAR CHECK Smart Sensor System



The **SV Bar Check System** is a low cost, high accuracy hand held package that includes a Sound Velocity (SV) Smart Sensor, 20 m data/power cable and the Smart View display/data logger unit (NEMA 4X) packaged and is supplied in a case the size of a toolbox. The SV Bar Check System is ideal for performing bar checks and harbor surveys from small boats. The system can display sound velocity in real time, calculate an average sound velocity in real time and store multiple profiles in memory. Options include a pressure sensor, a variety of cable lengths, and a serial interface for downloading profiles to a computer.

SENSORS

SOUND VELOCITY

- "Time of Flight" technology
- 1400 to 1550 m/s measuring range
- 0.015 m/s resolution
- 0.050 m/s accuracy (RMS)

PRESSURE (optional)

- Semiconductor strain gauge
- Available ranges: 0- 10, 20, 50, 100, 200, 500 dbars
- Resolution: 0.01 dbar
- Accuracy: $\pm 0.05\%$ full scale

ELECTRICAL

- Low power R.I.S.C. processor
- 15 samples per second maximum
- RS-232 communications, from 2,400 to 38,400 baud
- Optional half duplex addressable RS-485 or TTL

CABLE

- 20 meters non load-bearing data/power cable
- Micro-6 line connector
- 0.25" (6.4mm) cable diameter, 22AWG, 6 conductor
- Polypropylene, Profax type SE191 outer jacket

SMART VIEW

- RS-232C autobauding communications
- 16 Kbytes internal memory (1000 records)
- 4 x AA alkaline batteries
- Internal programming firmware

POWER

- 55 mA sampling current
- External 8 - 16 Vdc (12 Vdc nominal)
- Optional power configurations available upon request

MECHANICAL

- Weight: 920 grams in air
50 grams in water
- Dimensions: 69.9 mm (2.75") \varnothing x 345 mm (13.6")
- Construction: Acetal endcap and housing rated to 500 meters. Optional Type 316 stainless steel housing rated to 4,500 meters.
- Connector: IMPULSE Micro Series 6 pin bulkhead.
- Environment: Operating: -20°C to 50°C
Storage: -40°C to 60°C