Sensortec - the Oceanographic Instruments Company

UCM-60DL

- **High precision 3D Current Metering.**
- **Built-in compass and tilt sensors allow output of absolute current values as well as current values relative to the instrument.**
- **Direct measurement of sound velocity.**
- **Optional sensors include conductivity, temperature and pressure.**
- **Built in real-time clock with alarm function.**
- **Up to 16 MB of Flash file system for storing measurements.**
- **Self-contained battery operation, utilize real-time clock and Flash file system to do measurements at pre-programmed intervals.**
- **Operated from a standard terminal (VT-100) or terminal emulator. Selectable human interface: Menu or Command Line mode.**
- **Data output in scientific units -- fully calibrated and compensated. Additional output of parameters such as salinity and depth.**
- **Maximum operating depth is 2000 meter. Optional 6000 meter version is available.**

UCM-60DL, sixth generation current meter from Sensortec as, is in fact a stand-alone system that may include additional sensors. This unit measures 3D water flow as well as CTD. Measuring principle for the current is the well proven acoustic travel time difference (ATT).

Current is continuously corrected for variations in sound velocity and the turbulence and wake effects are compensated automatically in software.

The system is fully configured via a menu. The instrument can for instance be set to transmit data at a 2 Hz rate or vector average data for a time period up to 24 hours. A start time (alarm) can be preset up to 30 days to initialize current meter operation.

Communication with the UCM-60DL is via RS232. All data processing is done in the instrument, and it is designed to communicate with any standard terminal (characters in ASCII code). Data output is presented as numbers in engineering units.

Both direct reading and recording configurations are available. The direct reading configuration provides online communication via cable to external terminal, enabling real-time data output as well as user-interaction.

The recording configuration contains a FLASH-RAM memory module. Computed data stored in the memory enables data retrieval without opening the current meter housing.

The absence of moving parts reduces mechanical wear to a

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minimum and makes it less sensitive to marine growth and pollution in the sea.

Current velocity sensors	
Programmable Range	+/-3 m/s or +/-6 m/s
Resolution:	1 mm/s 2 mm/s at 6 m/s range
Accuracy, normal operation	1% of reading +/- 5 mm/s whichever is greater
Accuracy, worst case	3% of range +/-5mm/s heavy tilted

Sound velocity sensor (standard)	
Range:	1380 - 1580 m/s
Resolution:	2 m/s
Accuracy:	5 m/s

Temperature sensor (optional)	
Range:	-5°C to +45°C
Resolution:	0.01°C
Resolution:	0.01°C
Accuracy:	0.1°C
Response:	< 1s
Option	
Resolution:	0.01°C
Accuracy:	0.02°C

Pressure sensor (optional)	
Range:	Various ranges up to 0-600 bar
Resolution:	0.04% FS
Accuracy:	0.25% FS
Drift:	0.7% TEB (0-50°C)
Response:	0.05 sec.

Conductivity sensor (optional)	
Range:	2-74 mmoh/cm
Resolution:	0.01 mmoh/cm
Accuracy:	0.06 mmoh/cm
Response:	0.05 sec.

Fluxgate compass (standard)	
Range:	0-360 deg.
Resolution:	1 deg.
Accuracy:	+/- 1 deg.
Response:	0.05 sec.

Tilt sensor (standard)	
Range:	0-30 deg.
Resolution:	10% of reading
Response:	0.05 sec.

Depth capability	
Depth:	2000m (standard) 6000m (optional)

Communication	
Standard:	RS232-C
Baud rate:	300, 600, 1200, 2400, 4800 and 9600

Sampling and Data rate	
Sampling frequency:	Up to 20 Hz.
Data output rate:	Max 2 Hz.

Power Requirements	
External power supply:	12 to 28 V DC
Power consumption:	Approx. 1W

Housing

Stainless steel AISI 316 L

Flash memory capacity	
Standard:	4 Mbytes
Option:	up to 16 Mbytes

Battery

Alkaline, 14 Ah (at room temperature.)

Sensortec reserves the rights to alter specifications without giving prior notice

Optional frame.

Optional temperature sensor.

Optional Conductivity sensor

Optional Pressure Sensor

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