

ODAM ORBCOMM DATA ACQUISITION MODULE



Features:

- Titanium or Delrin housing
- Up to 2 years life
- Powered by 4, 8, 12 or 16 D-type Lithium batteries
- Water depth up to 1000 metres
- Double O-ring seals
- Interface to ORBCOMM Monitor OM
- Campbell CR10X Data Logger:
 - SDI-12 interface
 - 12 analog inputs, 13 bit resolution
 - 8 digital I/O ports
 - 3 excitation outputs
 - pulse counter

The ODAM unit is a versatile data logger for analog and digital data acquisition as well as an actuator control unit.

It is a fully programmable data logger/controller with nonvolatile memory, internal power supply and a battery backed clock in an titanium underwater housing. It is based on the powerful CR10X data logger from Campbell Scientific Inc.. Up to 12 single ended analog inputs, any pair differential, 8 digital I/O ports, 3 excitation outputs, pulse counter and SDI-12 interface are available. Sampling may be continuous, depth increment, burst or event driven. A wide spectrum of sensors is available and existing instrumentation may be adapted. Power supply for the sensors and instruments with warm-up capability is provided. An interface to the ORBCOMM Monitor OM for satellite communication is standard.

ORBCOMM DATA ACQUISITION MODULE

Flexible Programming and Data Management

Windows-based data logger support software packages simplify the programming of the unit. The programme is entered via computer or satellite link. Data can be transferred to a computer using short-haul modem, telephone, radio telemetry, underwater acoustic link, satellite transmitter or storage module. Additional software packages allow to monitor and display real-time measurements in tabular or graphical form or the processing and splitting of data files.

Long Life

The unit has four racks for 4 Lithium or Lithium Thionyl Chloride D cells in each rack. A life for more than 2 years depending on the sampling intervals is possible if all battery racks are used.

Connecting Sensors

In the standard version the unit is supplied with 2 underwater connectors to plug sensors or external units. Up to 8 connectors are possible. One additional connector is used for the serial link between the ODAM module and a computer or a communication link.

Housing

During development, the long term aspect of mooring was born in mind resulting in the use of titanium for the housing because this material suffers absolutely no corrosion in seawater, even around the sealing areas. Double O-ring seals are used throughout. The beacon has four racks for 4 Lithium or Lithium Thionyl Chloride D cells in each rack.

A surface version with Delrin housing is available.

Mechanical Specification:

	Subsurface	Surface
Mooring depth	1000 m	10 m
Dimensions (l x d)	463 x 140 mm	466 x 150 mm
Mass without batteries	8.7 kg	5.7 kg
Displacement	5.0 dm ³	5.3 dm ³

Electrical Specification:

Power supply	4, 8, 12, or 16 pcs. Lithium D cells
Typical current	1 mA quiescent 13 mA during processing 46 mA during measuring

CR10X Specification:

Programme execution	max. 64 Hz
Analog inputs	6 differential or 12 single-ended
Resolution	up to 13 bit
Ranges	5 from ± 2.5 to ± 2500 mV
Excitation outputs:	3
Range	± 2.5 V
Resolution	0.67 mV
Pulse counters	2 x 8 bit or 1 x 16 bit
Count rate	max. 16 / 500 kHz @ 8 / 16 bit
Digital I/O	8
Memory	up to 2 MByte
Temperature range	-25 °C to +50°C

PRELIMINARY

SiS reserves the right to change specifications without prior notice



SiS Sensoren Instrumente Systeme GmbH
Mühlenkoppel 12, D-24147 Klausdorf, Germany
Tel.: +49-431-79972-0 Fax: +49-431-79972-11
Email: info@sis-germany.com
WWW: <http://www.sis-germany.com>