EnviroTech Instruments

ESM-1 series

High Spec Miniature Dataloggers

Compact, high spec controllers for system building

The new ESM range of highly specified multi-channel dataloggers and system controllers includes variants from a miniature 4 channel analog datalogger to a fully featured total monitoring package equipped with real-time satellite telemetry. The ESM is the ideal solution for most diverse data acquisition and control applications including environmental monitoring buoys, traditional sub-surface moorings, towed systems and seabed deployed packages. The ESM offers high-precision, high resolution data acquisition and multiple RS232 channels for smart sensor integration.

EnviroTech Instruments LLC

1517 Technology Drive Suite 101
Chesapeake, VA 23320
Tel: (757) 549-8474
Fax: (757) 410-2382
Email: mail@envirotechinstruments.com

envirotechinstruments.com

Benefits

- Rapid, cost-effective system engineering
- Complete control of logging and system operation
- Compact, rugged and reliable
- Great value high precision data acquisition
- Versatile, capability building modules

Applications

- All remote hostile-environment data logging applications
- System host, data logging and power control
- Real-time telemetry systems
- Environmental monitoring
- Tide, waves, meteorological and other physical measurements

Description

The new ESM series of data loggers may be deployed within taut-line moorings, on surface buoys or seabed-mounted packages. The ESM is supplied as a stand-alone device or as part of a suite of sensors such as fluorometers, turbidity sensors, CTDs, dissolved oxygen and many others, as well as being used to control pumps, valves and other electromechanical devices. The ESM-1 takes a new approach to data logging and control applications where high quality / specification hardware design is uniquely coupled with the new Eco-Script control language. This significant change from the traditional and very limiting system of user programmable variables enabling the ESM-1 logger to be used in a wide range of applications with infinitely programmable sampling and system control. This includes irregular timing within burst samples, many burst samples of different types within a sampling regime and incredible variability of timing and control functions. However, Eco-Script can also implement any regime that can be configured via a conventional data logger. This all enables users with no special training or additional equipment to design and implement bespoke hardware systems. Re-configuration is also straightforward and allows the ESM to be a versatile, cost effective, future-proof data gathering tool. Sensor and data acquisition configurations may be changed between deployments and most proprietary oceanographic instruments may be simply plugged into the data logger. A telemetry-enabled ESM may be configured to transmit synoptic data direct to your desktop. The ESM-1 may also optionally include a integral temperature and pressure sensors and addition of a precision pressure sensor enables the ESM to be configured as a very flexible and cost effective wave recorder or tide gauge. A wide range of configurations include, pressure housings, enclosures, battery packs, power supplies and peripheral sensors. Models are available for submersed or terrestrial use and powered from internal batteries, external DC sources or a mains supply.

Specification

	ESM-1 Plus	ESM-1 Micro
Analogue Data Acquisition	4 or 8 channels of 16-bit resolution input	4 or 8 channels of 16-bit resolution input
Memory	Removable Compact Flash cards up to 128 Mb	4 Mb Flash chip memory
Data extraction	Compact Flash card reader or serial port	Serial port
Serial Ports	5 RS232	2 RS232
Serial Peripheral System	Yes	No
Digital Outputs	Up to 12	4
Power Switching	Regulated 1A total Unregulated 3A max	Regulated 500 mA Unregulated 2A max
Integral Sensors (optional)	Pressure & Temperature	None
Control Scripting	Eco-Script Plus	Eco-Script
Weight	From: 2 lbs (0.9 kg) - 300 m version	
Dimensions	From: 2.6″ (65 mm) diameter x 10.4″ (265 mm) - 300 m version	
Depth capability	300 / 1500 / 6000 m versions (also bare circuit boards)	
Materials	PVC (200 m version) / Titanium (1500 & 6000 m versions)	