

Easy-to-Use, Affordable Datalogger

MONITOR-1



- ▶ Iridium® & GPRS Logger
- ▶ SDI-12, Analog, Digital Inputs
- ▶ SD Card for Set Up & Download
- ▶ Full Access Through Front Panel

Description

The Monitor, Sutron's easy-to-use and affordable datalogger, is designed to measure common hydrologic and meteorological sensors and log the data in its flash memory. The general purpose Monitor supports up to 16 measurements with its analog, digital, and SDI-12 sensor interfaces. The built-in display/keypad makes it simple to set the station up and perform routine maintenance. Monitor includes an SD memory slot for downloading data or setups. Monitors can be used stand-alone or can be connected to wireless modems for integration into an automatic data collection system.

Features

- Set up 16 independent measurements
- EQUATION PROCESSING!
- Full featured command line interface (RS-232)
- SD Card can download data & read/write set-ups.
- View data & set-up entirely from front panel
- Advanced Averaging
- Operates standalone or connected to wireless modem

Inputs

Supports the following input types:

- 4 (four) 0-5 V Analog Inputs
- 1 (one) digital input for tipping bucket
- A 2nd digital input for frequency counter
- One SDI-12 port (supports up to 16 SDI-12 sensors)

SENSOR COMPATIBILITY EXAMPLES

AIR TEMPERATURE/ RELATIVE HUMIDITY	: Including non-linear analog sensors that require equation processing
PRECIPITATION	: Using tipping bucket
ANEMOMETER	: RM Young or Gill Ultrasonic via analog, frequency, or SDI-12
STAGE	: Via Sutron SDI-12 Shaft Encoder or Bubbler
OTHER SENSORS	: Barometric Pressure, Solar Radiation, etc. : Accepts majority of hydro-met sensors (up to 16 measurements) irrespective of manufacturer

SPECIFICATIONS

CLOCK	: Internal real-time clock w/battery backup (5-year coin cell) ± 2 minutes a month (0 to +50C).
LOG CAPACITY	: >250,000 Readings Flash Memory
TEMPERATURE	: -40 to +60 °C (LCD operates -10° C)
DATA CONNECTION	: RS232 DB9 (female) connect PC/PDA/modem/radio : +5V or +12V on pin 9 (71 mA at +5V)
POWER CONSUMPTION	: <1mA to <1.5mA @ 12 VDC quiescent : <20 mA @ 12 VDC active

ANALOG INPUT SPECIFICATIONS

	NUMBER OF BITS - 24	
	SINGLE ENDED	DIFFERENTIAL
Full Scale	: 0 to 5 Volts	: +/- 0.0390625 V
Resolution	: 0.298 μ V	: 4.657 nV
Noise (p/p) @25C	: 6.5 μ V (p/p)	: 1.6 μ V (p/p)
Noise (rms) @25 C	: 3.4 μ V RMS	: 0.38 μ V
Accuracy @25C	: 0.02%	: <.01%
Input Impedance	: >2M Ohm	: >3M Ohm
	: 4-20mA INPUT	
Full Scale	: 20ma	
Resolution	: <1nA	
Accuracy @25C	: .02%	
24 Volt Current Loop Pwr	: 24 Volt +/- 5%	
24 Volt	: Short Protected	
Resistor	: 100 Ohm built-in	

Specifications subject to change without notice



SUTRON CORPORATION

22400 Davis Drive
GS-25F604D SBSA

Sterling, VA 20164
NESDIS Certified

(703) 406-2800
ISO Certified

(703) 406-2801 Fax
EUMETSAT Certified

www.sutron.com
CE Certified

sales@sutron.com
INSAT Certified

page 1
2/23/2011

Easy-to-Use, Affordable Datalogger Inside an Enclosure

MONITOR-4

Monitor-4

All the features of Monitor-1 Datalogger including SDI-12, Analog, Digital, MODBUS, mounting for radio/modem, SD Card Slot ready to deploy plus it's HOUSED IN FIBERGLASS ENCLOSURE WITH 7 AH BATTERY & SOLAR REGULATOR INCLUDED.

NEMA-4X Fiberglass Enclosure with raised twist latch & stress relieving glands

Height (In.):	14.0
Width (In.):	12.0
Depth (In.):	6.0
Standard Weight (Lbs.):	12.0

- ▶ Material: Cover/Base - Ultraguard® Fiberglass reinforced polyester (Color RAL 7035).
- ▶ Construction meets NEMA/EEMAC Type 1, 2, 3, 4, 4X, 12 and 13. UPC: 085339914518
- ▶ UL® 508 listed; Type 1, 2, 3, 3R, 4, 4X, 12, and 13
- ▶ CSA-C22 No. 14; Type 1, 2, 3, 3R, 4, 4X, 12, and 13
- ▶ IEC60529 Type IP66
- ▶ Compliant with RoHS (Restriction of Hazardous Substances)



Solar Regulator

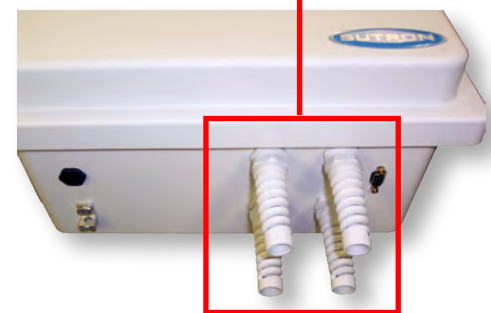
Input Voltage	12 to 20 VDC
Output Voltage	13.7 VDC
Output Current Limit	3 Amps
Operating Temp Range	-40 F to 140 F (-40 C - 60 C)
Max/Min Wire Size	12AWG / 24 AWG
Size	1.5" x 1.5" x 3"



Solar Panel Options*

- 5100-0400-1 Solar Panel, 10 Watt Unregulated with 10 ft. Cable
- 5100-0410-1 Solar Panel, 20 Watt Unregulated

*Solar panels are sold separately.



7 AH Battery

- ▶ Rechargeable sealed lead-acid batteries
- ▶ Maintenance-free
- ▶ Overcharge protection
- ▶ Leak-proof
- ▶ Easy handling
- ▶ No special shipping container required
- ▶ Long service life
- ▶ Trouble-free, safe operation in any position.
- ▶ No need to add electrolyte, as gasses generated during overcharge are recombined in a unique "Oxygen Cycle"
- ▶ High-impact resistant case made of non-conductive ABS plastic with superior resistance to shock, vibration, chemicals and heat



SUTRON CORPORATION

22400 Davis Drive
GS-25F604D SBSA

Sterling, VA 20164
NESDIS Certified

(703) 406-2800
ISO Certified

(703) 406-2801 Fax
EUMETSAT Certified

www.sutron.com
CE Certified

sales@sutron.com
INSAT Certified

page 2
2/23/2011