7310 Datalogger

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Overview

Scaled-down, affordably-priced version of the 8310 that does _not_ include ethernet, I^{2}C expansion, COM2, or COM3.

Features

▶ Simple Front panel setup without PC or other devices.

▶ Built-in measurement circuitry to handle sensors commonly used.

▶ Flexible measurement schedules and logging schemes.

▶ Built-in BASIC to support custom measurements, processing and communications.

▶ Built-in support for GOES, Iridium, GPRS, and telephone modems including speech.

▶ Remote operation without using custom PC programs.

▶ Weatherproof packaging to promote long product life in the field.

▶ Wide temperature operation for reliability in extreme conditions.

▶ Battery operation with low power consumption.

▶ SDI-12 support functions.

▶ Real-time data views.

▶ Single and dual point calibration methods.

▶ Useful diagnostic logs.

▶ 32 MB RAM logging memory.

Applications

▶ Meteorology & Climatology

▶ Agrometeorology

▶ Natural Resources

▶ Oceanography

▶ Aviation (AWOS)

▶ Emergency Management

▶ Water Level & Flow

▶ Water Quality

▶ Hydrology

▶ Air Quality

▶ Visibility

▶ Geotechnical

   ✓ Dam Safety

   ✓ Structural Stability

▶ Energy

   ✓ Solar Farms

   ✓ Wind Farms

SPECIFICATIONS
Specifications subject to change without notice

Measurement Interval	1.0 second to 24 hours (programmable)
Measurements Supported	Unlimited
Analog Channels	8
Input Voltage	-0.1 to 5V with respect to ground, single ended or differential
Range	
Single-Ended	0-5 V, ±78 mV (with respect to ground)
Differential	±2.5V, ±78 mV (+ input with respect to – input)
Accuracy	0.002% of 5V typ 0.003% of 78mV typ
Resolution	16 bit
Expandable	via SDI-12
Digital Inputs	6 (2 Bi-Directional)
Functions Supported	Inputs: status, counter, frequency, quadrature
Pulse Counter	8KHz, minimum pulse width 100 micro-sec w/ programmable debouncing
Expandable	via SDI-12
Digital Outputs	2 (Bi-Directional)
Output Type	Open collector with 100 ohm current limiting resistor, 100 mA max, 15V max
Excitation Channels	5 Channels
Type(s)	Precision voltage reference, switched battery, switched +5, protected +12V, protected +5V
Communication Ports	1 RS232 for communications
Telemetry	Satlink2, Sutron Data & Voice Modem, Radio, Direct Connect, GPRS, IRIDIUM, MODBUS, & custom devices via BASIC
Communications	1 communication type
Operating Temperature	-40°C to +60°C
Display Operating Temp.	LCD operates to -20°C
Display Type	2x20 character sunlight-readable backlit LCD
Keypad Type	6 buttons
Memory	
Built-In	Non-volatile memory: 65MB (1 to 3 million readings), RAM: 32 MB
SD Card	Download data & read/write setups or additional log memory
Clock Accuracy	5.4 sec/month (at 0°C – 40°C)
Power Requirements	10-16VDC (20VDC max)
Current Drain	Typically 3mA standby, 40mA active
Communication Protocols Supported	SSP (Sutron Standard Protocol), MODBUS, YMODEM, Telnet, HTTP, FTP, DHCP, DNS, SLIP, PPP, and custom protocols via Basic using RS-232, TCP, and UDP
Programming	Menu driven setup, Expanded complexity via BASIC, Custom capability via C++
Device Dimensions	
Height	11.5 in. (30 cm)
Length	6 in. (15.3 cm)
Width	3.5 in. (8.9 cm)
Weight	3.1 lbs. (1.5 Kg)

ORDERING

7310-0	7310 Datalogger with non-NEMA enclosure & built in solar panel regulator

SHIPPING

Shipping Height	14 in. (35.6 cm)
Shipping Length	10 in. (25.4 cm)
Shipping Width	6 in. (15.3 cm)
Shipping Weight	5 lbs. (2.3 Kg)

ACCESSORIES

	Part #	Description
ADDITIONAL MEMORY		
SD Card, 2 GB	6661-1293	SD Card with 2 Gigabytes memory.
SURGE PROTECTION MODULES		
Module, Telephone	6461-1240-1T	Provides connection and surge protection for one twisted pair.
Module, Power	6461-1242-1T	Provides channels for monitoring solar panel voltage, battery voltage and AC current.
Module, RS232	6461-1239-1T	Provides termination & surge protection for one sensor with RS-232 output.
Module, Digital	6461-1238-2T	Provides surge protection for sensors with digital outputs.
SDI-12 MODULE		
SDI-12, Analog Plus Module	6661-1248-1	5 ports for a vast array of sensors
VOICE MODEMS		
Voice Modem Module	8080-0005-1B	Telephone modem (V.34, V.42bis) with voice