IridiumLink Logging Transmitter

Overview

▸ Sutron is an authorized Iridium® Valued Added Reseller.

▸ Complete Two-Way Communications with Remote Stations Anywhere in the World

▸ WiFi capability for complete station set-up & data access

Features

1. GUI setup program.

2. Terminal strip with screw terminals for I/O and power connections

3. Operates 8-16VDC -- 12V recommended for SDI-12 sensors

4. TCXO real-time clock with battery backup (+/-4ppm)

5. Solar panel regulator for panels up to 30 watts.

6. Support for up to 16 measurements of the following inputs:

   ▸ SDI-12/RS485 (shared as is done in the Sutron Bubbler)

   ▸ 5 Analog inputs:

      ✓ Two (2) single ended inputs (range 0-5V)

      ✓ Two (2) differential inputs (range +/-39mv, +/-312mV, +/-2.5V)

      ✓ One (1) 4-20mA input

   ▸ 2 digital inputs. They can be used for tipping bucket, frequency, and on/off inputs

   ▸ 2 internal SPI for future expansion

   ▸ Internal temperature

   ▸ Battery voltage

   ▸ Meta measurement

7. Options to average or accumulate

8. Lightning protection (Gas Tube) on all external inputs.

9. User specified equation on any measurement .

10. User specified alarm detection on any measurement.

11. 2 LED for verification/diagnostics.

12. Log capacity of 240K of data accessible via Iridium® and direct connect

13. Switched Battery Output

14. Also operates as a standalone recorder without telemetry

15. USB slave for connection to PC. THE USB PORT WILL NOT WORK with USB devices like memory sticks, modems, etc.

16. Real Time Clock operates with internal lifetime battery.

Logging Transmitter with 2-way *Iridium Short Burst Data Transceiver IridiumLink dimensions are 3.8"x5.3"x1.3" (about the size of an iPhone).*

Applications

▸ Surface Water Level, Flow & Quality

▸ Groundwater Level & Quality

▸ Offshore X-Linking

▸ Mining / Geotechnical

▸ Weather X-Linking & Warning

▸ Oceanic X-Linking & Warning

▸ Oil & Gas Production

▸ Any Low-Power, Remote Data Acquisition System

Telemetry via Iridium

▸ Periodic transmissions at user set times with data in user selectable format (pseudobinary B, C, SHEF & ASCII)

▸ Support for primary and secondary master stations via Iridium®

▸ Alarm transmissions as they are detected.

▸ Diagnostics to help track of the amount of data being sent and the performance of the telemetry

▸ Iridium® station is Alert compatible via SutronWIN.

▸ Support for remote commands for data collection, maintenance or control of two on/off devices

▸ Optional authentication of incoming messages to insure they are from a trusted source

SPECIFICATIONS
Specifications subject to change without notice

Measurement Interval	1 second to 24 hours
Number of Measurements	16 supported
ANALOG	2 Single ended, 2 Differential, 1 4-20ma
Single-Ended Analog	0-5 V (with respect to ground)
Number available	2
Input Range	0 to 5V (with respect to ground)
Resolution	0.298 µV
Noise (p/p) @25ºC	12.0 µV (p/p)
Accuracy @25ºC	0.003% (typ) Midscale 0.004% Max
Input Impedence	> 1 MegOhm @25ºC
Differential Analog	
Number Available	2
Range (SW selectable)	±39mV; Common Mode Voltage Range .3 to 3.9 Volts ±312mV; Common Mode Voltage Range .3 to 3.9 Volts ±2.5V ; Common Mode Voltage Range .1 to 4.9 Volt
Resolution	4.657 nV @ ±39mv scale, 37.25 nV @ ±312mv scale, 298 nV @ ±2.5v scale.
Noise (p/p) @25ºC	1.6 µV (p/p) ±39 mv / 312 mv scale 5.0 µV (p/p) ±2.5 v scale
Accuracy @25ºC	0.004% max @±2.5v scale
Input Impedance @25ºC	>5 Meg Ohm 312mV FS Differential
4-20 mA Analog	
Range Resolution Accuracy @25ºC Loop Power Loop Resistance	0 - 22mA <1nA 0.02% External 200 Ohm

DIGITAL INPUTS/ OUTPUTS

Digital Input 1, 2 Tipping Bucket Type	Switch Contact Type. Pulse Width: 30ms - 120ms. Range: DC to 120 tips/min. (min).

Digital Input 1,2 Frequency Type

Minimum Frequency Maximum Frequency Input Range	2.8 Hz 10 KHz 0 - 5 V

Digital Input 1,2 Counter Type

Maximum Frequency	10 kHz (with no debouncing) 300 Hz (with debouncing)
Input Range	0- 5 Volts

INTERNAL TEMPERATURE

Range	-40 to +60°C
Accuracy	±3 degrees

ELECTRICAL

Input Voltage	8-16VDC 10V min for SDI-12 sensor support Reverse power protected
Current Consumption	0.5mA standby typ (all sensors unpowered) 8 to 20mA active typ
Iridium Transmission	1 A @ 12 Volts
Power Connection	2 position terminal strip
SDI-12 Port	3 position terminal strip
Red Warning LED	Indicates setup or operation error
Green Heartbeat LED	Indicates unit operating properly
Earth GND	.2" screw terminal

ENVIRONMENTAL

Temperature	-40°C to +60°C
Humidity	0-95% Non-condensing

KEY FEATURES

Clock	Internal real-time clock w/battery backup.
Accuracy	±9.3 s /month(Max) -40 to +60°C. (First Year)
Accuracy	±2.4 min /year (Max) -40 to +60°C. (First Year)
Accuracy	±4.5 min / 10 years (Max) -40 to +60°C. (10 Years)
Log Capacity	240,000 readings, flash memory
USB Port Connector	Serial Communications / USB port
	Mini-B Male USB connector on logger to be connected to USB Type-A Male (Windows PC). LinkComm software included for USB port communications
Internal Solar Panel Battery Charger	5 - 20W Panels. (Max 30 Watts) Automatic charge & float modes protect gel cell & acid batteries.
Iridium modem SMA-F Output RF Jack	Modem factory installed, internal with RF output jack for antenna.

COMMUNICATIONS

Interfaces

1 USB Mini-B Male (5 pin) Connector Serial Communications - USB. Not full function USB port. Iridium Modem SDI-12. RS485 (future support)
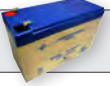
SDI-12 interface V1.3 compliant recorder

Supports up to 16 SDI-12 sensors Automatically combines requests to the same device +12V @ 500mA

DIMENSIONS	Operating	Shipping
Height	5.3" (13.5 cm)	14 in. (35.6 cm.)
Length	3.8" (9.7 cm)	10 in. (25.4 cm.)
Width	1.3" (3.4 cm)	6 in. (15.3 cm.)
Weight	1 lbs. (.46 kg)	2 lbs. (0.9 Kg)

NOTES: Please refer to the XLink Product Family User Manual for full product specifications and variations.

ORDERING

Part #	Description	
IRIDIUMLINK MODELS		
IridiumLink-1	Basic Datalogger & Iridium Modem in one unit. Includes 4 Mounting Screws for holes located on back of Unit. No enclosure.	
IridiumLink-1E	Basic IridiumLink w/ Internal Antenna & Mounting Ears for Wall includes 7AH Battery	
IridiumLink-1C	Basic IridiumLink w/ External Antenna Connector & Mounting Ears for Wall. Includes 7AH Battery (Antenna not included)	
IridiumLink-1L	Basic IridiumLink w/External Antenna Connector, Lightning Protection & Mounting Ears for Wall includes 7AH Battery (Antenna not included)	

MOUNTING KITS

Pole Mounting Kit

Part #	Pole Outside Dia.	Schedule 40 Pipe
2911-1365-1	2.38" **Most Common**	2.0"
2911-1365-2	2.88"	2.5"
2911-1365-3	1.90"	1.5"
2911-1365-4	1.66"	1.25"
2911-1365-5	1.32"	1.0"

Din Rail Mounting Kit

2911-1362-1	Installs on Back of Unit (Din Rail not included.)

Wall Mounting Kit

2911-1361-1	Wall Mount Kit for Basic Unit

ANTENNAS

1291-1031-T-G	Iridium Antenna TNC (F) (external)
1291-1036	Iridium-only Antenna (external) (direct to unit connect, not thru enclosure)
1291-1034	3dB Iridium Antenna (internal)

CABLES - For Basic Models SMA-(F)

LL400-15-S-T	Iridium Antenna Cable (15 ft) SMA to TNC
LL400-20-S-T	Iridium Antenna Cable (20 ft) SMA to TNC

CABLES - For Enclosure Models w/ N-(F)

LL400-15-N-T	Iridium Antenna Cable (15 ft) N to TNC
LL400-20-N-T	Iridium Antenna Cable (20 ft) N to TNC

SOLAR PANELS

5100-0412	2 Watt Solar Panel
2271-1087	2 Watt Solar Panel Mounting Panel
3911-1050	5 Watt Solar Panel
2271-1037	5 Watt Solar Panel Mounting Bracket
3911-1037	10 Watt Solar Panel
2271-1036	10 Watt Solar Panel Mounting Bracket

BATTERY

5100-0030	7 Ah Gel Cell Rechargable Battery (NP7-12) 151mm x 65mm x 98 mm

GROUNDING KIT

5100-0600-1	Ground Kit w/8ft. ground rod, copper wire, clamps & plate.

IRIDIUM ACTIVATION & SERVICE PLANS

ISBD.SACT	Station Activation
ISBD.OK.1	Min. Monthly Fee, no Data Plan
ISBD.12K.1M. PLAN	Min. Monthly Fee, 12 KB Data
ISBD.100K.1M. PLAN	Min. Monthly Fee, 100 KB data

DATABASE MANAGEMENT

SutronWIN	Real-Time Web Hosting, Data Processing, Delivery, Storage, Alarms & Data Display
9400-0400	SutronWIN Client Set Up (1-time fee for new Account)
9400-0401	Custom Starter Page (optional)
9400-0402	SutronWIN Station Set Up (1-time fee/new Station)
9400-0403	SutronWIN /Station Annual Fee, first 10 Stations

LinkComm Software for IridiumLink

Overview

For user-friendly communications and easy set-up/maintainenance of your Xlink Product (IridiumLink, IridiumLink, etc.) install LinkComm software directly via a USB or remotely over cell, satellite or Wi-Fi connections. LinkComm runs on Windows PC, iPhone/iPad and Android platforms.

Features

LinkComm can be used to:

▸ Set up an XLink station

▸ Download the log from XLink

▸ Upgrade XLink firmware

▸ Check XLink status

▸ Calibrate connected sensors

There are several ways to connect to an XLink:

▸ Directly via USB cable

▸ Remotely via TCP/IP

▸ Remotely through the Sutron Redirector

▸ Locally via XLink Wi-Fi