X-Link Datalogger

Little Box. Big Data. *X-Link dimensions are 3.8" x 5.3" x 1.3" (96.5mm x 134.6mm x 33.0mm - approximately the size of an iPhone).*

Overview

Sutron's X-Link Datalogger, a Multi-Sensor Input Logger, has WiFi capability for complete station set-up & data access.

Features

- Multi-Sensor Input
- Easy-to-use Software includes setup program.
- Terminal strip with screw terminals for I/O and power connections
- Operates 8-16VDC
- TCXO real-time clock with battery backup (+/-4ppm)
- Built-in solar panel regulator
- Support for up to 16 measurements of the following inputs:
  - SDI-12/RS485 (shared as done in the Bubbler)
  - 5 Analog Inputs:
    - 2 single ended inputs (range 0-5V)
    - 2 differential inputs (range ±39mv, ±312mV, ±2.5V)
    - 1 4-20mA input
  - 2 Digital Inputs. Use for tipping bucket, frequency, & on/off
  - Internal temperature
  - Battery voltage
- Options to average or accumulate any measurement.
- Lightning protection (Gas Tube) on all external inputs.
- User specified equation on any measurement .
- User specified alarm detection on any measurement.
- 2 LED for verification/diagnostics.
- Log capacity: 240K of data accessible via direct connect
- Switched Battery Output
- USB slave for serial connection to PC (USB port does not support typical USB devices like memory sticks, modems, etc.)
- RealTime Clock operates with internal lifetime battery.

Advanced Features

- Equation processing & multiple level averaging
- GUI Interface for intuitive programming (See LinkComm)
- Command-line interface for operation without custom programs
- Separate schedules for each measurement
- Upgrade firmware via USB.
- Supports SDI-12, Analog, 4-20ma input
- Switched Power Output w/overload protection & Digital Output
- Gas Tube Protection on Inputs
- Max min or average computations on measurements
- LED operational status feedback

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

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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) @25°C	12.0 µV (p/p)
Accuracy @25°C	0.003% (typ) Midscale 0.004% Max
Input Impedence	> 1 MegOhm @25°C
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) @25°C	1.6 µV (p/p) ±39 mv / 312 mv scale 5.0 µV (p/p) ±2.5 v scale
Accuracy @25°C	0.004% max @±2.5v scale
Input Impedance @25°C	>5 Meg Ohm 312mV FS Differential
4-20 mA Analog	
Range **Resolution** **Accuracy @25°C** **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 10 V minimum for SDI-12 sensor support Reverse power protected
Current Consumption	0.5mA standby typ (all sensors unpowered) 8 to 20mA active typ
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.
COMMUNICATIONS	
Interfaces	
1 USB Mini-B Male (5 pin) Connector Serial Communications - USB. Not full function USB port. 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)

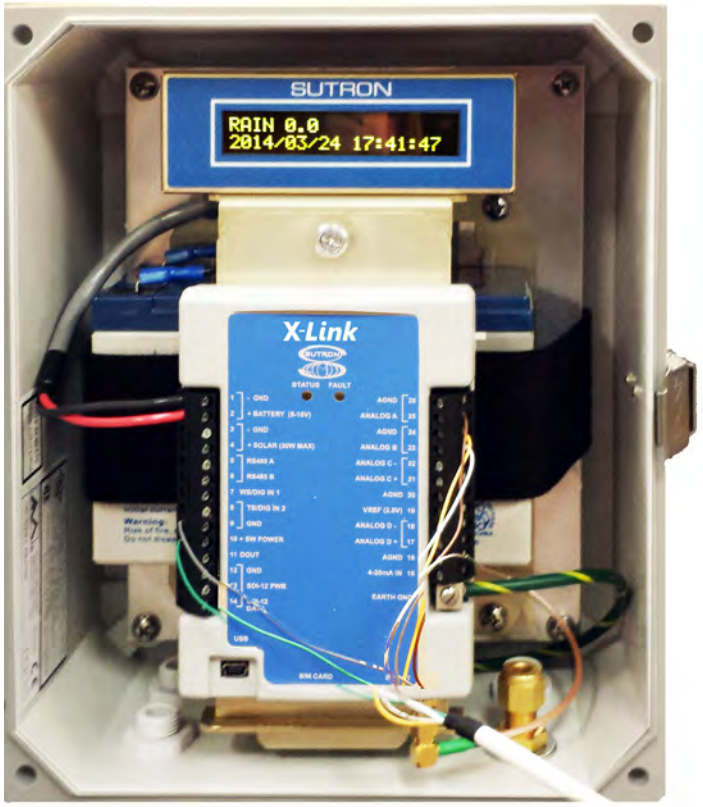
NOTES: Please refer to the XLink Product Family User Manual for full product specifications and variations.

ORDERING

Part #	Description	
X-Link Models		
X-Link-1	Basic datalogger plus 4 Mounting Screws for Holes Located on the Back of the Unit. **No enclosure.**	
X-Link-1E	Basic X-Link with NEMA enclosure & Mounting Ears for Wall includes 7AH Battery	
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	
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.	

If you want to include a Display with your new X-Link, please inform your Sutron representative or the Sutron Sales Administrator when you place your order.

If you are interested in up-grading an existing X-Link with a Display, please contact Sutron Customer Service as some factory re-work will be necessary in order to accept the cable connection to the X-Link Display. Customer Service - (703)406-2800 or CS@sutron.com.



ORDERING X-LINK DISPLAY

X-Link Display is an accessory that can be mounted in a Station in order to read values at the DCP site.

Features

Character Format	5x8 dots
Display Type	OLED
Text Color	Yellow
Background Color	Black
Operating Temperature	-40°C to +60°C
Size (HxWxD)	1.65" x 4.79" x 1.55"
Current in Sleep	1mA @ 12VDC
Compatible with all X-Link products	

Easy Operation

- Pressing the WiFi button will turn the display on and repeated presses will cycle through Station Name, Errors, M1, M2...Signal Strength.
- Display turns off after 5 minutes since the last button press to conserve power.
- Displayed readings are live values.

LinkComm Software for X-Link

Overview

For user-friendly communications and easy set-up/maintainenance of your X-Link, 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 X-Link station
- Download the log from X-Link
- Upgrade X-Link firmware
- Check X-Link status
- Calibrate connected sensors

There are several ways to connect to an X-Link:

- Directly via USB cable
- Remotely via TCP/IP
- Remotely through the Sutron Redirector
- Locally via X-Link Wi-Fi

ANDROID APP ON Google play

Available on the App Store