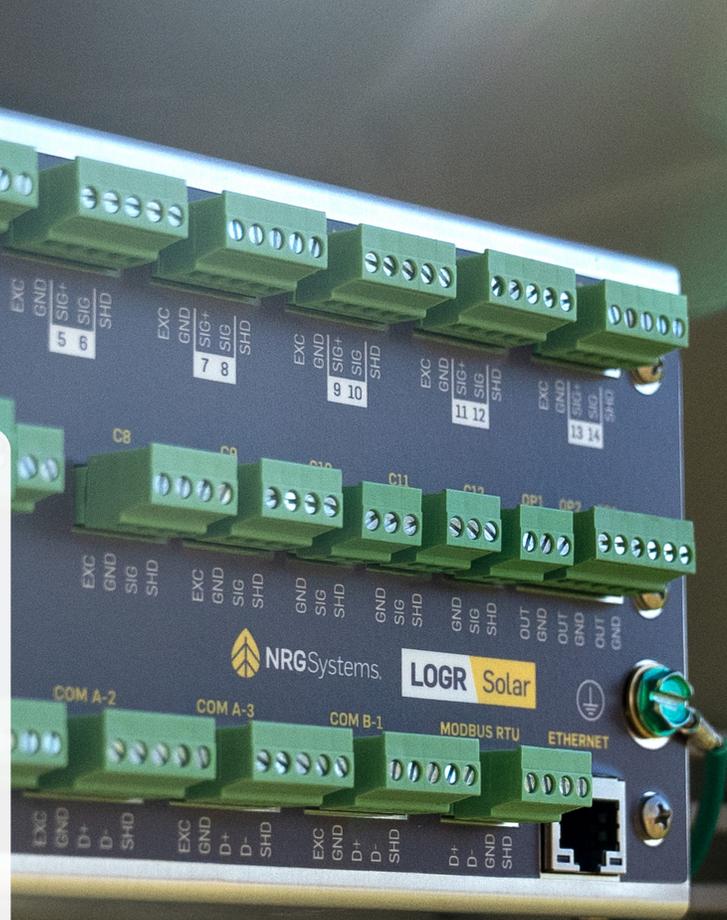


NRG LOGR | SOLAR DATA LOGGER

A versatile data logging solution, purpose-built for solar resource assessment and monitoring on utility-scale PV plants.

The LOGR|Solar Data Logger from NRG Systems is a state-of-the-art data logging solution for pre- and post-construction solar resource measurements. Leveraging decades of data logger design and manufacturing experience, LOGR|Solar features the same user-friendliness that has come to define NRG's data logger line, optimized for today's demanding solar applications. This advanced data logger provides the features you need to deliver premium performance at an optimal price point.



SPECIFICATIONS:

DESCRIPTION	
INSTRUMENT TYPE	High utility data logger and real-time sensor interface
APPLICATIONS	Solar resource monitoring and solar resource assessment
DATA COLLECTION	
SAMPLING INTERVAL	1 Hz (IEC 61724-1 compliant)
AVERAGING INTERVAL	1-minute (IEC 61724-1 compliant)
REAL TIME CLOCK	Internal battery-backed with time synchronization
STORAGE MEDIUM	8 GB microSD
MAXIMUM DATA STORAGE	90 days at 1 second intervals, or 365 days at 1-minute intervals
CHANNEL CAPACITY	Fourteen (14) analog channels (single-ended); Seven (7) differential
	Twenty-four (24) serial channels via two (2) RS-485 communication ports
	Two (2) PV Input channels (soiling measurement)
	Ten (10) calculated channels plus dedicated soiling ratio calculation
	Five (5) counter channels (two with sensor excitation)
	Three (3) outputs to control 12 V loads or relays
COUNTER CHANNELS SENSOR COMPATIBILITY	Compatible with a wide array of industry-standard anemometers, tipping bucket rain gauges, and other accumulator sensors (Refer to user manual for a complete list of supported sensors)
ANALOG CHANNELS SENSOR COMPATIBILITY	Compatible with a wide array of sensors including, NRG meteorological sensor suite and pyranometers (Refer to user manual for a complete list of supported sensors)
ANALOG MEASUREMENT ACCURACY	Uncertainty (k=2): <ul style="list-style-type: none"> • 450 μV @ (-10 to +10) V • 61 μV @ (-1 to +1) V • 8.5 μV @ (-70 to +70) mV
RS-485 CHANNELS SENSOR COMPATIBILITY	Supports configurable Modbus RTU data acquisition. (Contact NRG to discuss support for additional model types or protocols.)
PARAMETERS RECORDED FOR EACH CHANNEL	Average
	Standard deviation
	Minimum/Maximum 1-sec sample
	3-second Wind gust
	<i>Note: Statistics reported on each channel are dependent on measurement type</i>
DATA DELIVERY	Real-time data delivery via Modbus registers (TCP via Ethernet or RTU via RS-485)
	Scheduled delivery of historical data via FTP
	On-demand transfer of historical data via internal web server to FTP
SECURITY	Password-protected web server access
RESOLUTION	
ANALOG MEASUREMENT RESOLUTION	24-bit signed A/D conversion
SOFTWARE	
TYPE	Onboard web server for logger configuration and administration
	Modbus Demo Client to test configured unit prior to connecting to SCADA
CONFIGURATION	
USER INTERFACE	Web-based user interface via Ethernet-connected computing device with web browser (such as Google Chrome)
	Recessed reset button on front panel
	Audible beeper for user feedback



CONNECTIONS

SENSOR WIRING	<p>Integrated wiring panel featuring removable terminal blocks:</p> <ul style="list-style-type: none"> • Seven (7) dedicated analog sensor wiring ports • Four (4) dedicated RS-485 sensor wiring ports • Two (2) dedicated PV input ports • Five (5) Counter input ports • Three (3) Output ports • Enclosure ground lug connects to earth ground with included ground cable
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COMMUNICATION PORTS	<p>Ethernet port for web browser, FTP, Modbus TCP (server)</p> <p>RS-485 port for Modbus RTU (server)</p>
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POWER REQUIREMENTS

BATTERIES	Coin cell battery for clock backup
EXTERNAL POWER INPUT	16 to 28 V DC
EXTERNAL SOLAR INPUT	Contact NRG sales for accompanying backup power supply system options
EXTERNAL POWER OUTPUT	Constant 12 V source for powering analog sensors (50 mA per excitation port, 7 ports)
	Constant 12 V source for powering modbus sensors (1000 mA shared by three COM-A ports and additional 1000mA to COM-B port)
	Three (3) outputs to control external devices, 12 V DC (500 mA each, 1000 mA total maximum current)

INSTALLATION

MOUNTING	35 mm DIN Rail
TOOLS REQUIRED	<ul style="list-style-type: none"> • Screwdriver for wiring input terminals (included) • Ethernet-connected computing device with web browser (such as Google Chrome)

ENVIRONMENTAL

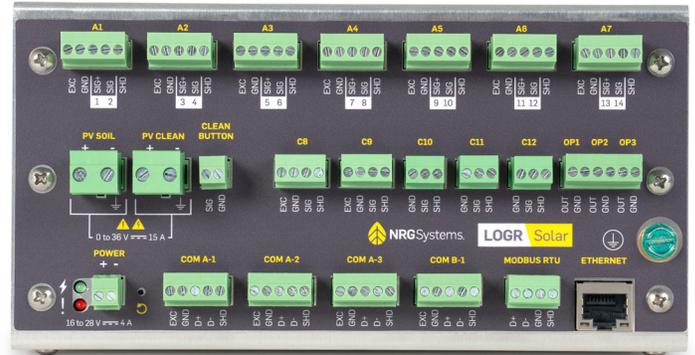
OPERATING TEMPERATURE RANGE	-40 °C to 65 °C (-40 °F to 149 °F)
OPERATING HUMIDITY RANGE	0 to 100% relative humidity non-condensing
	IP65 ingress protection with proper installation in NRG shelter box enclosure

PHYSICAL

DIMENSIONS	190.5 x 101.6 x 101.6 mm
MATERIALS	Enclosure: Formed aluminium enclosure
SHIPPING WEIGHT	0.91 kg (includes grounding wire and sensor plug set)

USER-CENTRIC HARDWARE BACKED BY OVER FOUR DECADES OF INDUSTRY EXPERIENCE

- **Five Counter channels:** Simplified connectivity with a wide range of industry-standard sensors.
- **User programmable outputs:** Precise control of external power loads allows you to tailor system-level power consumption to your needs.
- **Internal data storage:** Historical real-time data can be stored at user's choice of 90 days of 1-second data or 365 days of 1-minute data.
- **Built-in and optional PV input:** Accommodates user's preferred method for acquiring soiling data by offering a built-in, module-based soiling solution for cost-effective soiling measurements as well as PV input to support the integration of NRG's IEC-compliant Soiling Measurement Kit.



BANKABLE DATA MADE EASY

- **Straightforward configuration via local web application:** Navigate to and save channel configurations, update firmware, and check basic functionality without proprietary configuration software.
- **Flexible communication:** Configurable Modbus communication protocol facilitates seamless SCADA integration.
- **NRG Cloud integration:** Automated data delivery to NRG Cloud enables fleet-level monitoring of LOGRISolar sites.
- **Accurate, high-resolution measurements:** Analog measurements are recorded at IEC-compliant 1 Hz sample rate.
- **Firmware is backwards compatible with NRG LOGR-S Data Logger:** Firmware updates are available as soon as new features are released and can also be installed on the NRG LOGR-S, extending the lifespan of those devices while also facilitating an effortless transition to LOGRISolar.

For more information:

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