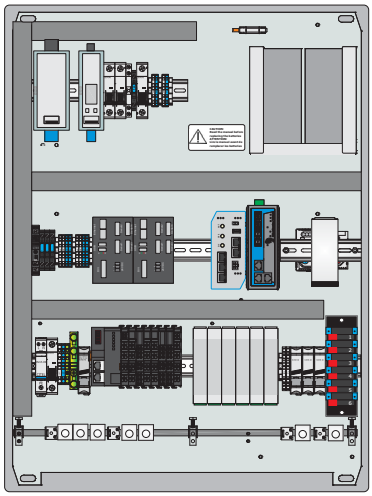
DATASHEET

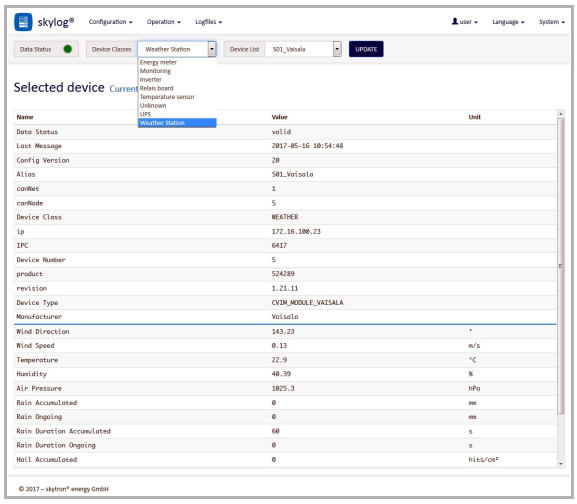
skylog®

Data Logger System

Our powerful data logging system for utility-scale PV installations, skylog, has been designed with robustness and versatility in mind, for both indoor and outdoor use. Communicating with the plant using the standard bus technologies (RS485 and Ethernet), skylog can read and save data from a variety of terminal devices, irrespective of make. Its integrated uninterruptable power supply (UPS) provides power to all other monitoring components, ensuring dependable operation even in the event of a power failure. In locations having unreliable Internet connections, local data storage is secured by skylog's internal data buffer. skylog therefore forms an indispensable component of any monitoring system where dependable operation is key.



skylog® System Architecture



skylog® Dashboard

HARDWARE FEATURES

- Modular design
- Data logger component of a complete monitoring system for utility-scale photovoltaic power plants
- Data buffer in case of loss of Internet connection, depending on system configuration (string or central inverters and connected weather devices): 1–4 weeks
- Basis for verification of long-term energy production
- Uninterrupted power supply (optional)
- UV-resistant, glass-reinforced polyester cabinet
- Peltier climate device for harsh environmental conditions (optional)
- Support of inverters from various manufacturers as listed in the skytron® energy compatibility list

SOFTWARE FEATURES

- On-board dashboard displays data from all connected devices
- Easy installation and configuration of inverters, weather devices or energy meters
- Seamless integration with PVGuard®
- Data push of up to 3 destinations at the same time (push cycle every 5/15/30 minutes, hourly or daily)
- Data compression and SSL transport encryption
- User management with dedicated access levels
- Separate logfiles for: system & events, inverters and connected sensors

MONITORED DEVICES

- Inverters, for example:
  - inverter state, failure state, energy production
- DC UPS
  - battery charge condition and battery temperature
- Combiner boxes
  - bipolar currents, system voltage, status of overvoltage protector
- Energy meters
- Digital weather sensors
- skyCONNi, data gateway for the connection of several devices such as:
  - inverters
  - energy meters
  - temperature sensors
  - reference cells
  - pyranometers
  - analog sensors and actuators
  - alarm systems and process control systems (inputs and outputs)

Intertek

skytron® energy GmbH / Ernst-Augustin-Str. 15 / D-12489 Berlin
phone: +49 (0)30 338 430-0 / fax: +49 (0)30 338 430-99
info@skytron-energy.com / www.skytron-energy.com

skytron® pioneers of energy

skylog®

Data Logger System

TECHNICAL DATA

OPTIONS	PRODUCT CODE											DESCRIPTION
skylog-	X	X	X	X	-	X	X	X	X	X	X	
Cabinet	1											Cabinet with cable inlets, 865 x 675 x 300 mm / 34.1 x 26.6 x 11.8 in
	2											Cabinet without cable inlets, 835 x 675 x 300 mm / 32.9 x 26.6 x 11.8 in
Embedded Computer		0										-
		1										1 x Embedded computer (System memory 2 GB, internal watchdog, Linux OS)
		2										2 x Embedded computer
Network			0									-
			1									1 x Multimode industrial managed Ethernet switch large [2x 100BaseFX MM optical fiber, 6x 10/100BaseT(X)]
			2									1 x Single-mode industrial managed Ethernet switch large [2x 100BaseFX SM optical fiber, 6x 10/100BaseT(X)]
			3									1 x Multimode industrial managed Ethernet switch small [2x 100BaseFX MM optical fiber, 3x 10/100Base]
			4									1 x Single-mode industrial managed Ethernet switch small [2x 100BaseFX SM optical fiber, 3x 10/100BaseT(X)]
			5									1x Industrial managed Ethernet switch [8 x 10/100BaseT(X)]
Router				0								-
				1								Service Access Interface
				2								LTE-Router / VPN Gateway EU
				3								LTE-Router / VPN Gateway US
Power Supply						0						24 V DC
						1						Power supply 85 to 264 V AC / 44 to 66 Hz mains
						2						Power supply 85 to 264 V AC / 44 to 66 Hz mains & UPS with 2 batteries (17 Ah AGM integrated)
						3						Power supply 85 to 264 V AC / 44 to 66 Hz mains & UPS with 2 batteries (40 Ah AGM external enclosure)
RS485 Overvoltage Protection							0					-
							1					3 x RS485 fieldbus interfaces, overvoltage protected
							2					5 x RS485 fieldbus interfaces, overvoltage protected
							3					6 x RS485 fieldbus interfaces, overvoltage protected (2nd IPC necessary)
Ethernet Overvoltage Protection								0				-
								1				1 x Ethernet overvoltage protection
								2				2 x Ethernet overvoltage protection
								3				3 x Ethernet overvoltage protection
Splice Box									0			-
									1			Multimode splice box with SC Connector
									2			Single-mode splice box with SC Connector
Heating/Cooling										0		-
										1		Fan heater, 150 W AC heater incl. 24 V DC fan, 2 x thermostats
										2		Peltier cooling device 70 W, 1 x climate controller
Fieldbus Coupler / Controller											0	-
											1	Fieldbus coupler to connect several I/O modules
											2	Programmable fieldbus controller to connect several I/O modules

ADDITIONAL INTERFACES	I/O MODULES	
Up to seven I/O modules can be connected to the fieldbus coupler / controller in any arrangement	2 channels RTD: PT100, PT1000	2 S0 counter channels
	8 digital input channels: 2wire SE 24V input	4 analog output channels: 4-20mA SE output
	4 analog input channels: 4-20mA SE sink	2 analog input channels: 4-20mA differential input
	2 relay channels: NO+NC	4 analog input channels: ±10V SE input

INTERNAL PLANT COMMUNICATION	
Protocol	IP Ethernet, skytron® energy specific communication
Connection	Multimode 50/125 µm, e.g. HITRONIC® HQN outdoor cable with SC connector 4G50/125 multimode up to 4 km / 2.5 miles Single mode 9/125 µm, e.g. HITRONIC® HQN outdoor cable with SC connector 4E9/125 single mode up to 20 km / 12.5 miles

MECHANICAL DATA	CABINET	BATTERY CABINET
Protection Class	IP 66 / Nema 4,4x	
UL listing / Marks	CE / cETLus	
Standards	EN 60950-1, EN 61000-6, UL 62368-1:2014 Ed.2, CSA C22.2#62368-1:2014 Ed.2	
Dimensions h x w x d	865 x 675 x 300 mm / 34.1 x 26.6 x 11.8 in (865 x 679 x 300 mm / 31.5 x 26.7 x 11.8 in with mounting brackets)	535 x 455 x 230 mm / 21.1 x 17.9 x 9.1 in 535 x 495 x 230 mm / 21.1 x 19.5 x 9.1 in
Weight	32 kg / 70.554 lb; 35 kg / 77.16 lb with package	11 kg / 24.25 lb without batteries
Material of Cabinet	UV-resistant, glass-reinforced polyester	UV-resistant, glass-reinforced polyester

AMBIENT CONDITIONS	
Operating Temperature	-20 °C to +50 °C / -4 °F to +122 °F
Operating Temperature with Peltier Cooling Device	-20 °C to +60 °C / -4 °F to +140° F
Storage Temperature	-20 °C to +70 °C / -4 °F to +158 °F

skytron® energy GmbH / Ernst-Augustin-Str. 15 / D-12489 Berlin
phone: +49 (0)30 338 430-0 / fax: +49 (0)30 338 430-99
info@skytron-energy.com / www.skytron-energy.com

skytron® pioneers of energy