Locus ENERGY
A GENSCAPE COMPANY

LGate 101E

SINGLE-PHASE SOLAR MONITORING SOLUTION

Locus Energy's LGate 101E is a revenue-grade energy meter and web-enabled datalogger for monitoring residential solar photovoltaic systems. It is designed to collect, store and upload a wide array of energy data allowing both system installers and owners to efficiently manage solar assets.

The LGate 101E can monitor nearly any type of solar energy system. Regardless of inverter or panel type, it can measure energy production with a 0.5% degree of accuracy. As a datalogger, it has a variety of digital and analog inputs enabling direct communication with third-party devices such as inverters and meteorological sensors. Performance data is aggregated and uploaded automatically to the Solar-OS™ and SolarNOC™ platforms, which provide custom tools and analytics to all project stakeholders.

DATA COLLECTION

The LGate 101E uses a hard-wired voltage reference and a current transducer (CT) to measure power. There are inputs for up to three CTs, allowing the LGate to measure both solar energy generation and the energy consumption of the building. It can also gather data from up to 16 third-party devices, which is collected via RS485 protocol. All data feeds are stored in non-volatile memory and then uploaded with unique identifiers to provide maximum flexibility as to how the data is presented on the Solar-OS and SolarNOC platforms.

NETWORK CONNECTIVITY

The LGate 101E is a plug-and-play device that supports both Local Area Network (LAN) and cellular network options. For LAN-based installations, a hard-wired Ethernet cable is the preferred connection method, but if this is unavailable, the LGate 101E features a built in 110V outlet for easy installation of an Ethernet-over-Powerline adapter.

Data is transmitted only in outbound sessions over open ports, requiring no additional network or firewall configuration. The connection and commissioning process is further simplified by the LED lights, which indicate communication status without installers having to log in.

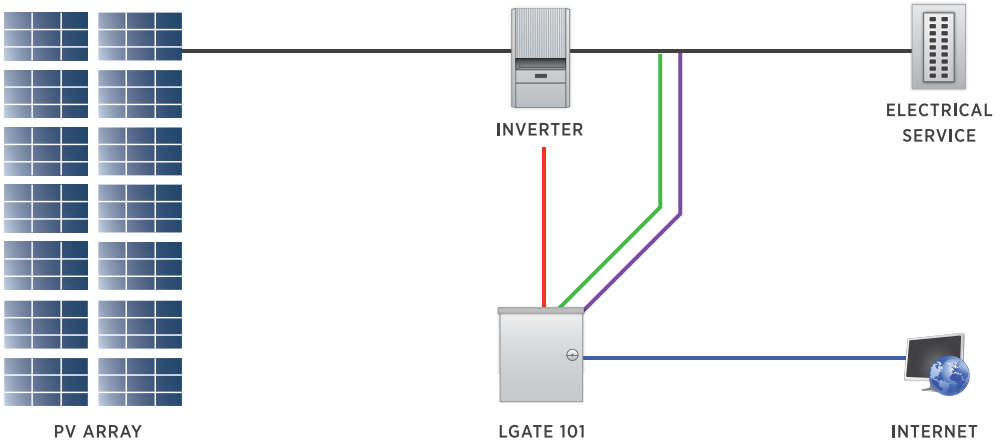
ABOUT LOCUS ENERGY:

Locus Energy is a solar monitoring and data analytics platform provider for the distributed solar PV market — spanning the residential, commercial and utility sectors. Locus Energy's cloud-based software aggregates and organizes large amounts of performance data from multiple sources, making it easier to access, manage and analyze, while its powerful PVIQ suite has the unique ability to identify the causes of a solar system's failure to meet performance expectations.

By providing actionable operations and management data that optimizes SperfOLormancUTIONSe yields, Locus Energy's PVIQ helps project stakeholders increase profitability, and also helps investors assess the value of solar PV assets.

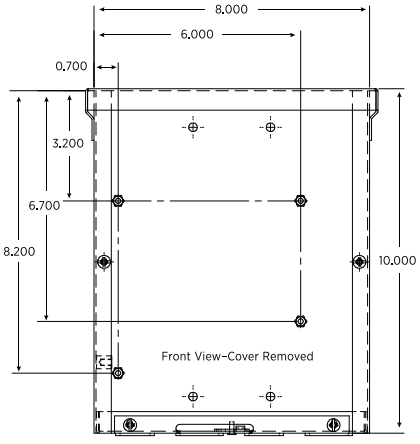
Founded in 2007, Locus Energy has offices in Hoboken, NJ, and San Francisco, CA.

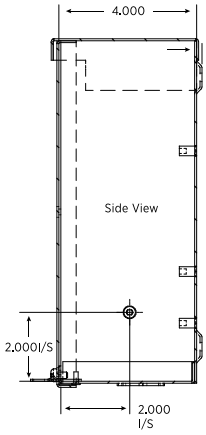
DIAGRAM – TYPICAL CONFIGURATION

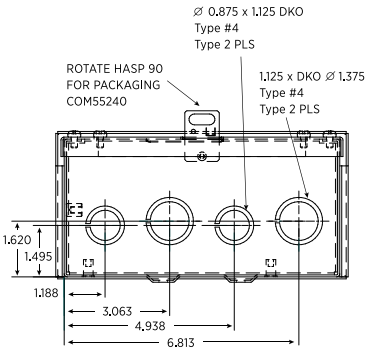


LEGEND
Shielded CAT5
Current Transducers
Voltage Reference
Standard CAT5

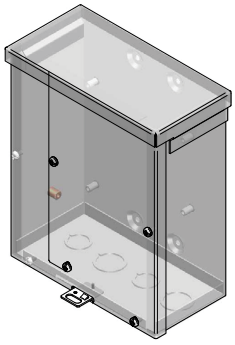
DIMENSIONS







Bottom View



Isometric View

SPECIFICATIONS

DATALOGGER	
Processor	ARM9 embedded CPU
OS	Custom version of Linux 2.6, OTA firmware updates
Memory	128 MB RAM
Logging interval	5 minutes
Display	USB-based handheld LCD (optional)

I/O	
RS485	2-wire, 4-wire
Modbus RTU	
USB	
KY Pulse	

COMMUNICATIONS	
LAN	RJ45 Ethernet, auto polarity
Cellular	GSM modem (optional)
Power-line	Compatible with 3rd-party Ethernet-over-Powerline devices
Networking	DHCP or static IP

POWER	
Voltage Inputs	84 - 264VAC Line-to-Line
Service Type	Single phase, Split Phase 55 or 60 Hz
Max. Current Input (Generation)	mA Solid-Core CTs 200 Amp .75" internal diameter (standard), mA Solid-Core CTs 450 Amp 1.28" internal diameter (option)
Max. Current Input (Consumption)	mV Split-Core CTs 200 Amp .75" internal diameter (standard), mV Split-Core CTs 600 Amp 1.25" internal diameter (option)

COMPLIANCE
ANSI C12.20 (Class
0.5%) UL 61010
FCC Part 15B

PHYSICAL	
Enclosure	NEMA Type 3R
Weight	6 lb 12 oz
Dimensions	10" x 8.25" x 4.25"
Environment	-20 to 70C, all-weather
Warranty	5-year limited warranty