morgansolar

IV DAQ + Gateway

Si-PV Panel Performance Monitor

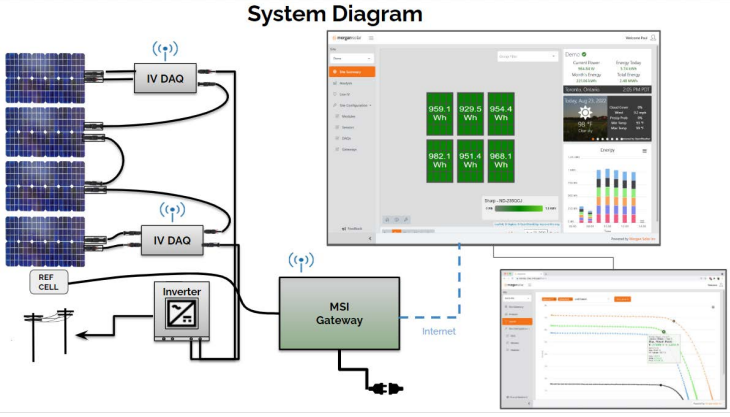
Groundbreaking panel-level monitoring

The IV DAQ is an in situ panel IV curve tracer. Devices distributed across solar fields record continuous and contemporaneous measurements which capture a 'pulse' of DC-side field health.

High Fidelity Module Performance Data: Maximum Power Point (Pmp), Short Circuit Current (Isc) Open Cir-cuit Voltage (Voc) Operating Power Point (Pop) Module Temperature.

Plug and Play: Simple set up requires no calibration, and no in-field wiring for power or communication.

No Downtime: Measurements taken during operation, with no revenue lost from costly string, combiner box or inverter downtime.



MSI Gateway

The MSI gateway receives data wirelessly from IV DAQs and with other Modbus sensors including reference calls, met stations, pyranometers and more.

Synchronized data is then sent to the cloud-based Analytic Portal where it can be stored and analyzed.

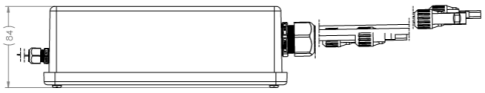
Specifications

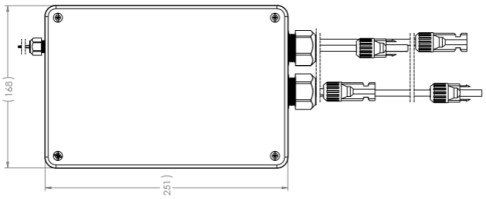
IV DAQ Specifications

Module Voltage Range	15 V - 50 V	**Dimensions**	81 mm x 168 mm x 251 mm
Module/String Current Range	0 A - 12 A	**Weight**	1.65 kg
Power Input Range	15-450 w	**Operating Environment**	- 20˚C to + 50˚C
Accuracy - Current	± 1%	**Voltage Isolation**	1500 V
Accuracy - Voltage	± 0.5%	**Enclosure Rating**	IP 67
IV Sweep Direction	Isc → Voc	**Connection to Module**	2 x MC4 on lead
Sweep Time	< 200 ms	**Connection to String**	2 x MC4 on lead
Sweep Interval (Standard)	15 min	**Power Consumption**	~1W
Sweep Interval (Max)	1 min	**Power Source**	PV module under test
Built in Sensors	K Type Thermocouple	**Insertion Resistance**	~30 mΩ

Gateway Specifications

Architecture	Embedded Linux Computer
Wireless Protocol to Tracers	XBee Mesh Network
Integration Input/Output	RS-485 / MODBUS
Maximum Range	100 m
Power Source	100-240 VAC
Dimensions	254 mm x 203 mm x 102 mm
Weight	2.7 kg





EST. 2007

Communication Protocols

Communications	XBee PRO900-HP Mesh network, 902-928 MHZ. Transmit power: up to 24 dB

Certifications (IV DAQ & Gateway)

Certified by CSA Groupp to CAN/CSA C22.2 No. 6101-1:2012, CSA C22.2 No. 61010-2-030, UL 61010-2-30:2018
Compliant with FCC Part 15.247, RSS-247, ICES-001, ANSI C63.10: 2013.

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