NORTHERN ELECTRIC

Reliability by design
Simplicity in use

NORTHERN ELECTRIC

NEP is a leading company driven by innovation and commitment to quality and reliability.

Founded in 2010, as a US based manufacturer, located in San Jose, California, NEP develops and builds inverters and module-level power electronics.

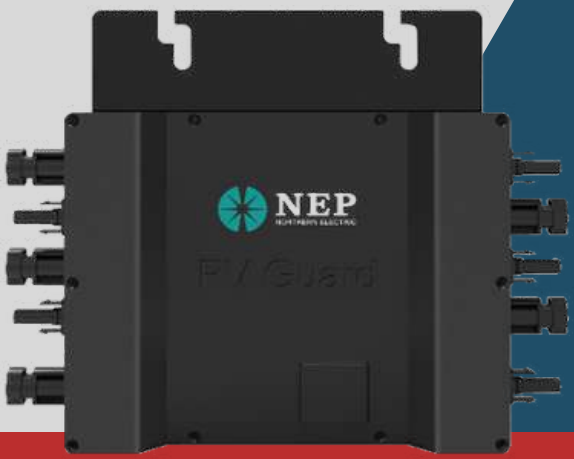
For over 10 years, NEP has worked tirelessly to develop a cost-effective, simple, and reliable RSD+ and micro-inverter products that are now being used in over 25 countries worldwide.

2570 N First St, Suite 200
San Jose, CA 95131
(888) 598-9901
info@northernep.com

NORTHERN ELECTRIC

PV Guard

PVG-4



Complete Compatibility
Works out of the box with any inverter manufacturer

Built-in I-V Curve Trace Capabilities
Commission system immediately

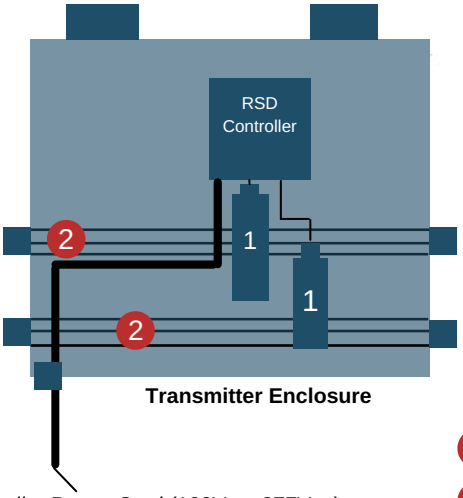
Dual-Channel Powerline Communication
Increased reliability and safety

Globally certified
(UL1741, TUV)

Outdoor protection class
NEMA-6, IP-66 y IP-67

High efficiecyy

Technical Specifications

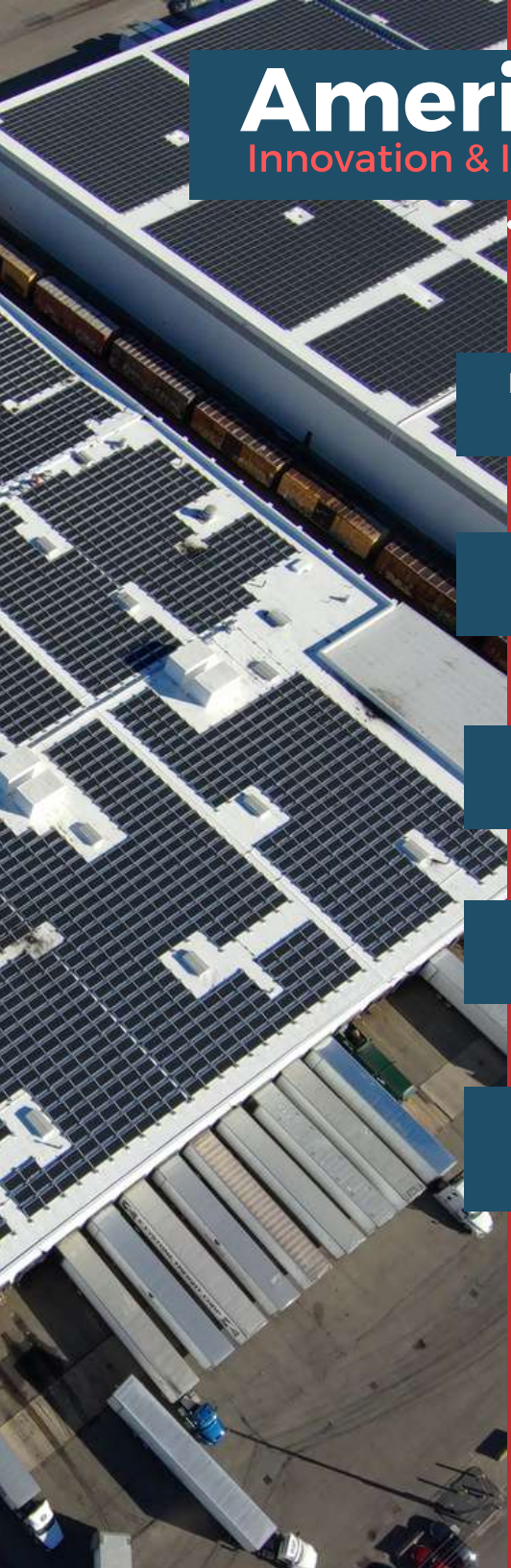


1 PLC Signal Ring

2 PV Cables - Pass Thru

	MODEL (PVG-1/2/3/4)	PV-GUARD
INPUT (DC)	Max DC Open Circuit Voltage per Input (Vdc)	90
	Max DC Current per Input (Adc)	14
OUTPUT (DC)	Maximum Output Voltage (Vdc)	0 ~ Voc * n (n=1/2/3/4
SYSTEM	Maximum System Voltage (Vdc)	1500
	Maximum Series Fuse Raiting (Adc)	20
MECHANICS	Size	6.60' x 4.75' x 1.2' (PVG-1) 10.5' x 8.25' x 1.2' (PVG-4)
	Production Degree	NEMA-6
	Operating Ambient Temperature	-400 ____+ 85C
SIGNAL	Communications	DC Power Line Compatible with SunSpec
CERTIFICATION	Productive Safely Compliance	NEC 2017/2020 690.12 Canada CEC 2015 64-218


YASKAWA
SOLECTRIA SOLAR
PVG-C



American
Innovation & Ingenuity

Ultra Durable

Industry top reliability index of greater than 99.99%

Ultimate Power Design

Future-proof for any upcoming module wattages

Unparalleled Performance

Most uptime of any MLPE

Advanced Thermal Solution

Rapid heat dissipation and embedded thermal safety sensors

Next Generation Connectivity

Industry first dual channel and bi-direction powerline communication

NORTHERN ELECTRIC

Ultra Durable

To fully support our clients, NEP's PVGs are equipped with the ultimate power solution – A true direct dual-channel SunSpec power line communication.

- **Highest Reliability Index in the industry (>99.99%).**
- **Immediate RMA approval with overnight shipping direct to job-site – no waiting.**

NORTHERN ELECTRIC

Ultimate Power Design

The PVGs can accommodate any modules that are currently on the market and will help future-proof designers for upcoming wattage increases.

- **1500V Ready**
- **Highest Max DC Open Circuit Voltage per input (Vdc) – 90V**

NORTHERN ELECTRIC

Advanced Thermal Solutions

Taking full advantage of our superior communication, the PVGs can detect with extreme accuracy the thermal operating conditions and can trigger automatic shut-offs of the system in the event of catastrophic thermal runaway.

The PVGs are cool even on full loading.

NORTHERN ELECTRIC

Full Commissioning without Power to Site

The only MLPE capable of I-V curve trace and Isolation (Megaohm) testing without having utility power to the site – This allows EPC's to achieve payment milestones –Accepted by thrid party engineering firms nationwide.

The PVG-4 can be used with:

- Solemetric (PV Analyzer (PVA-1000S & PVA-1500 V3, MIT430/2, MIT2500
- Seaward I-V curve tracers (PV200, PV210, Utility Pro 1500V)

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