

Enphase Microinverter Family: Similarities and Differences

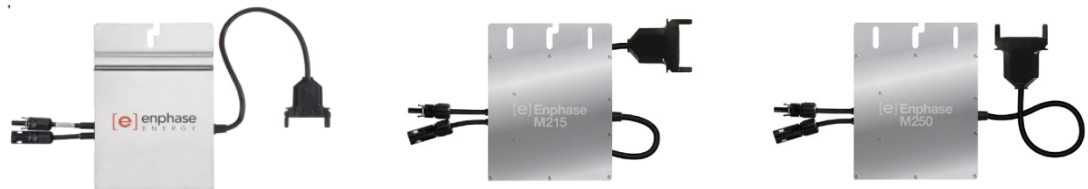
Enphase is pleased to offer a **new M215 Microinverter based on our fourth-generation platform**. In early 2014, the new M215 will replace the old M215 to complete a microinverter product family that features high efficiency, easy installation, and industry-leading reliability for pairing with any 60-cell module on the market.

What's changed

- The new family of products feature:
- **Higher efficiency:** 96.5% CEC
 - **Integrated Ground (IG):** Both the new M215 and the M250 feature IG technology, do not require a Grounding Electrode Conductor (GEC), and meet National Electrical Code 2008+ requirements for Ungrounded PV Power Systems (Sections 690.35 and 690.41)
 - **New look:** Flat lid without a grounding lug, for easy identification

What's the same

- **Product quality:** rigorous design, manufacturing, and test standards deliver industry-leading reliability
- **25-year warranty:** extremely low failure rates enable industry-leading limited warranty
- **Fast, simple installation:** plug-and-play Engage Cable system enables rapid, flexible installs
- **Durability:** rugged, NEMA 6 rated enclosure



FEATURE	PREVIOUS M215	NEW M215	M250
Integrated Ground?	No	Yes	Yes
Lid type?	Grooved for GEC	Flat	Flat*
Ground symbol etched on lid?	Yes	No	No
Recommended input power (STC)	190 – 270W	190 – 270W	210 – 300W
CEC weighted efficiency (240VAC)	96.0%	96.5%	96.5%
Peak output power	225 W	225 W	250 W
Maximum units per 20A branch circuit (240 VAC / 208 VAC)	17 / 25	17 / 25	16 / 24
Part number	M215-60-2LL-S22/S23 M215-60-2LL-S22-NA/S23-NA (Ontario)	M215-60-2LL-IG-S22/S23/S24	M250-60-2LL-S22/S23/S24
Unit label text	215 Watt Utility-Interactive Inverter with Integrated GFDI	M215 Utility-Interactive Inverter	M250 Utility-Interactive Inverter

*For M250s manufactured post-January 2014.

To learn more about the Enphase Microinverter System, visit enphase.com

M250 vs. M215: Module Pairing Considerations

There are instances where either the M250 or the M215 is an appropriate choice for pairing with a given module. For higher power 60-cell modules, the M250 is the logical choice. For lower rated modules, select the M215. However, for modules with STC output ratings between 250W and 270W, there are **several factors to weigh when deciding which microinverter to select for the application.**

MODULE POWER RANGE	Below 250W	Between 250W and 270W	Above 270W
MICROINVERTER SELECTION	M215	Installer preference	M250

Factors to consider when pairing with 250W – 270W modules

Local temperature: cooler climates result in higher module output and selecting the M250 takes advantage of these gains.

Module quality and performance: not all modules are created equal. Even modules from different brands with the same nameplate rating can often vary widely in actual DC output, given variance in manufacturing and quality assurance testing standards. Keep module quality in mind when assessing expected output.

Perspective on clipping: depending on the module brand selected and the installation location, an M215 can clip when paired with a module with an output rating above 250W. Depending on the installer's calculations of the system's financial performance, such clipping loss can be either inconsequential or significant when installing modules in the 250W – 270W output range.

A note about RMAs

Starting in January 2014, Enphase will furnish the new M215 as a replacement unit for authorized merchandise returns received for the previous M215. Note that the new M215 unit does not require a GEC. Contact Enphase.com/support for assistance regarding returns.