

IQ8MC Microinverters

The smart grid-ready IQMC Microinverters^{1,2} are designed to match the latest generation high-output PV modules. These microinverters have the best in class energy production and highest reliability standards in the industry, and with rapid shutdown functionality, they meet the highest safety standards.



| Key specifications | IQ8MC-72-M-ACM-INT |
|--|---|
| Maximum AC output power | 330 VA |
| Nominal grid voltage | 230 V |
| Nominal frequency | 50 Hz |
| European weighted efficiency | 96.7% |
| Minimum/Maximum input voltage | 18/58 V |
| Minimum/Maximum MPP voltage | 25/45 V |
| Maximum short-circuit DC input current | 25 A Maximum short-circuit current for modules (I_{sc}) allowed being paired with IQ8 Series Microinverters: 20 A (calculated with 1.25 safety factor as per IEC 62548). |
| Ambient temperature range | -40°C to 60°C (-40°F to 140°F) |

Compatible

- Compatible with existing IQ7 systems. Seamlessly expand your solar capacity as your energy requirements increase¹
- Supports latest high-current PV modules
- IQ8 Series Microinverters support all common PV module powers and cell architectures

Easy

- Lightweight and compact with integrated Stäubli MC4 connectors for easy installation
- Fast installation with simple AC cabling
- New integrated circuit technology enables faster firmware upgrades

Reliable

- Produces power even when the grid is down³
- More than 1 million power-on hours of reliability testing
- Patented Burst Mode technology provides increased energy production
- Low-voltage DC and rapid shutdown for the ultimate fire safety

¹ For details, see the "Compatibility with IQ7 Series Microinverters" section.

² A 25-year limited warranty is valid, provided an internet-connected IQ Gateway is installed.

³ Only when installed with IQ System Controller 3 INT and IQ Battery 5P.

| Input data (DC) | Parameters | Units | IQ8MC-72-M-ACM-INT |
|--|---------------------------|-------|---|
| Typical module compatibility | — | — | 54-cell/108-half-cell, 60-cell/120-half-cell, 66-cell/132-half-cell, 72-cell/144-half-cell No enforced DC/AC ratio and maximum input power. Modules can be paired as long as the maximum input voltage is not exceeded and the maximum input current of the inverter at the lowest and highest temperatures is respected. See the module compatibility calculator at: https://enphase.com/en-au/installers/microinverters/calculator . ⁴ |
| Minimum/Maximum input voltage | $U_{dc,min}/U_{dc,max}$ | V | 18/60 |
| Start-up input voltage | $U_{dc,start}$ | V | 22 |
| Rated input voltage | $U_{dc,r}$ | V | 35.0 |
| Minimum/Maximum MPP voltage | $U_{mpp,min}/U_{mpp,max}$ | V | 25/45 |
| Minimum/Maximum operating voltage | $U_{op,min}/U_{op,max}$ | V | 18/58 |
| Maximum input current | $I_{dc,max}$ | A | 14 |
| Maximum short-circuit DC input current | $I_{sc,max}$ | A | 25 Maximum short-circuit current for modules (I_{sc}) allowed being paired with IQ8 Series Microinverters: 20 A (calculated with 1.25 safety factor as per IEC 62548). |
| Maximum input power ^{4,5} | $P_{dc,max}$ | W | 480 |
| Output data (AC) | Parameters | Units | IQ8MC-72-M-ACM-INT |
| Maximum apparent power | $S_{ac,max}$ | VA | 330 |
| Rated apparent power | $P_{ac,r}$ | VA | 325 |
| Nominal grid voltage | $U_{ac,nom}$ | V | 230 |
| Minimum/Maximum grid voltage | $U_{ac,min}/U_{ac,max}$ | V | 184/276 |
| Rated/Maximum output current | $I_{ac,max}$ | A | 1.41/1.43 |
| Nominal frequency | f_{nom} | Hz | 50 |
| Minimum/Maximum frequency | f_{min}/f_{max} | Hz | 45/55 |
| Maximum units per single-phase 20 A circuit | — | — | 12 (L+N) Single-phase |
| Maximum units per multi-phase 25 A circuit | — | — | 42 (3L+N) Multi-phase |
| Recommended maximum units per single/multi-phase IQ Cable section to reduce voltage rise in IQ Cable | — | — | For IQ Cable with 2.5 mm ² stranded conductors and using a 1.20 safety factor. The safety factors applied may vary based on local regulations or best practices, as well as upon the characteristics of the OCPD selected. 8 (L+N) Single-phase 18 (3L+N) Multi-phase |

⁴ The installer should not exceed the small-scale technology certificate (STC) limit on PV module wattage for claiming the STC.

⁵ Pairing PV modules with wattage above the limit may result in additional clipping losses. See the compatibility calculator at <https://enphase.com/en-au/installers/microinverters/calculator>.

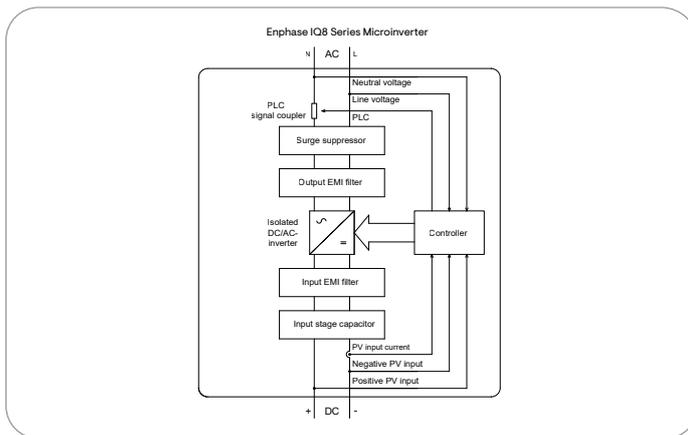
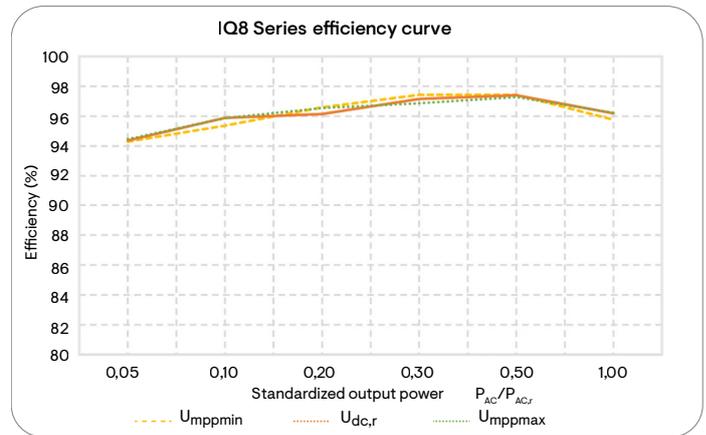
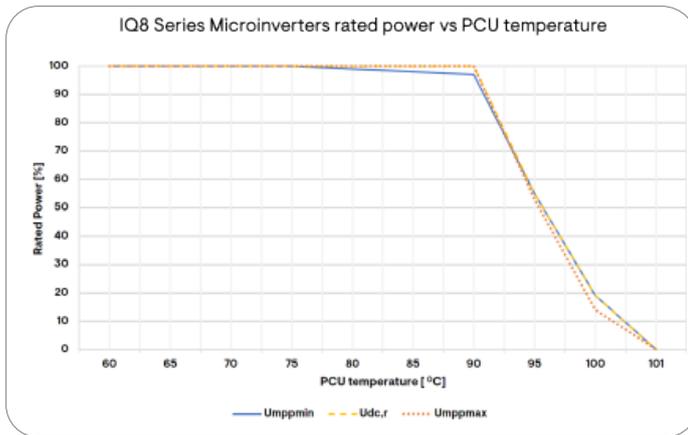
| Output data (AC) | Parameters | Units | IQ8MC-72-M-ACM-INT |
|--|--------------|-------|--|
| | | | It is recommended to centre-feed the IQ Cable within microinverter branch circuits to minimize the voltage rise. These design limits should ensure voltage rise and line conductor resistance on the IQ Cable are maintained within acceptable limits. In locations with a risk of high grid voltage at the point of connection, it may be necessary to decrease the maximum number of microinverters on the IQ Cable section by as much as 50%. |
| Protective class (all ports) | — | — | II |
| Total harmonic distortion | — | % | <5 |
| Power factor setting | — | — | 1.0 |
| Power factor range | cos phi | — | 0.8 leading ... 0.8 lagging |
| Inverter maximum efficiency | η_{max} | % | 97.5 |
| European weighted efficiency | η_{EU} | % | 96.7 |
| Inverter topology | — | — | Isolated (HF transformer) |
| Nighttime power loss | — | mW | 50 |
| Mechanical data | | | IQ8MC-72-M-ACM-INT |
| Ambient air temperature range | | | -40°C to 60°C (-40°F to 140°F) |
| Relative humidity range | | | 4% to 100% (condensing) |
| Overvoltage class AC port/DC port | | | III/II |
| Number of input DC connectors (pairs) per single MPP-tracker | | | 1 |
| AC connector type | | | IQ Cabling (refer to the IQ Cable and accessories data sheet) |
| DC connector type | | | Stäubli MC4 |
| The decisive voltage class (DVC) | | | AC: DVC C DC: DVC B |
| Dimensions (H × W × D) | | | 212 mm (8.3") × 175 mm (6.9") × 30.2 mm (1.2") (without mounting brackets) |
| Weight (with mounting plate) | | | 1.1 kg (2.4 lb) |
| Cooling | | | Natural convection – no fans |
| Enclosure | | | Class II double-insulated, corrosion-resistant polymeric enclosure |
| IP rating | | | Outdoor - IP67 |
| Altitude | | | <2,600 m (8530 ft) |
| Calorific value | | | 37.5 MJ/unit |
| Standards | | | IQ8AC-72-M-ACM-INT |
| Grid compliance (with IQ Relay) | | | AS/NZS 4777.2:2020 + A2 |
| Safety | | | EN IEC 62109-1, EN IEC 62109-2 |
| EMC | | | EN IEC 61000-3-2, 61000-3-3, 61000-6-2, 61000-6-3, EN IEC 50065-1, 50065-2-1, EN 55011 ⁶ |
| Product labelling | | | CE, RCM |
| Advanced grid functions ⁷ | | | Power export limiting (PEL), phase imbalance management (PIM), loss of phase detection (LOP), power factor control Q (U), cos (phi) (P) |

⁶ At STC within MPP range.

⁷ Some of these functions require IQ Gateway Metered with current transformers and/or IQ Relay installed.

Compatibility with IQ7 Series Microinverters

- IQ8 Series Microinverters can be added to existing IQ7 systems on the same IQ Gateway/IQ Combiner/IQ System Controller only in the following configurations: (i) Solar Only or (ii) Solar + Battery (IQ Battery 5P) grid-tied or Solar + Battery (IQ Battery 5P) with backup with IQ System Controller 3 INT.
- IQ7 Series Microinverters cannot be added to a site with existing IQ8 Series Microinverters on the same gateway.
- A mixed system with both IQ7 and IQ8 Series Microinverters does not support the IQ8-specific Sunlight Jump Start feature.
- The peak power output of the IQ7, IQ8 Microinverter arrays must not exceed 150% of the IQ Battery's rated power output. If the microinverter array exceeds this ratio, PV shedding must be implemented to shed excess PV when the system transitions to off-grid mode.



Components of the Enphase Energy System



IQ Gateway

The IQ Gateway is the platform for energy management and integrates with IQ Microinverters and IQ Batteries to provide complete control and insights into the Enphase Energy System.



IQ Relay single-phase and multi-phase

Production and storage circuit, integrated neutral sensing-protection device with PLC-phase coupler (multi-phase) and DC current injection monitoring.



Integrated MC4 connectors

Connect PV modules quickly and easily to the IQ8 Series Microinverters that have integrated MC4 connectors.



IQ Cabling

Install microinverters quickly and safely with IQ Cabling. With multi-phase IQ Cabling, the installed capacity is automatically distributed evenly across all three phases.



IQ Battery 5P

Part of the Enphase Energy System, the IQ Battery 5P integrates with the IQ8 Series Microinverters, IQ System Controller 3 INT, and the Enphase App monitoring and analysis software.

Revision history

| Revision | Date | Description |
|---------------|----------------|---|
| DSH-00069-5.0 | August 2025 | Updated information on backward compatibility for IQ8/IQ7 Series Microinverters. |
| DSH-00069-4.0 | July 2025 | Added the compatibility of IQ8 Series Microinverters with existing IQ7 systems. |
| DSH-00069-3.0 | September 2024 | Updated warranty information. |
| DSH-00069-2.0 | July 2023 | <ul style="list-style-type: none">• Added rated apparent power, rated output current, and overvoltage class DC port details.• Removed extended warranty details from data sheet. For extended warranty, contact Enphase Support. |
| DSH-00069-1.0 | June 2023 | Initial release. |