

Enphase IQ System Controller 2

The **Enphase IQ System Controller 2** connects the home to grid power, the IQ Battery system, and solar PV. It provides microgrid interconnection device (MID) functionality by automatically detecting and seamlessly transitioning the home energy system from grid power to backup power in the event of a grid failure. It consolidates interconnection equipment into a single enclosure and streamlines grid independent capabilities of PV and storage installations by providing a consistent, pre-wired solution for residential applications.



Reliable

- Durable NEMA type 3R enclosure
- Ten-year limited warranty

Smart

- Controls safe connectivity to the grid
- Automatically detects grid outages
- Provides seamless transition to backup

Simple

- Connects to the load or service equipment¹ side of the main load panel
- Centered mounting brackets support single stud mounting
- Supports conduit entry from the bottom, bottom left side, and bottom right side
- Supports whole home and partial home backup and subpanel backup
- Up to 200A main breaker support
- Includes neutral-forming transformer for split phase 120/240V backup operation
- IQ System Controller supports backward compatibility with older generation of PV microinverters (M215, M250 and S series), making it simple for home owners to upgrade their systems
- Easy integration with generator from major manufacturers

1. IQ System Controller 2 is not suitable for use as service equipment in Canada.

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MODEL NUMBER

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| EP200G-SC2-RSD-KIT | Kit of IQ System Controller 2 (EP200G101-M240US01) with rapid shut down switch and necessary cables for wiring rapid shutdown switch. |
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ACCESSORIES and REPLACEMENT PARTS

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| EP200G-NA-XA-E3 | Replacement IQ System Controller 2 printed circuit board |
| EP200G-NA-HD-200A | Eaton type BR circuit breaker hold-down screw kit, BRHDK125 |
| CT-200-SPLIT | 200 A split core current transformers for Generator metering (+/- 2.5%) |
| Circuit breakers (as needed) ^{2,3} | Not included, must order separately: |
| • BRK-100A-2P-240V : Main breaker, 2 pole, 100A, 25kAIC, CSR2100 | • BRK-20A-2P-240V-B: Circuit breaker, 2 pole, 20A, 10kAIC, BR220B |
| • BRK-125A-2P-240V: Main breaker, 2 pole, 125A, 25kAIC, CSR2125N | • BRK-30A-2P-240V: Circuit breaker, 2 pole, 30A, 10kAIC, BR230B |
| • BRK-150A-2P-240V: Main breaker, 2 pole, 150A, 25kAIC, CSR2150N | • BRK-40A-2P-240V: Circuit breaker, 2 pole, 40A, 10kAIC, BR240B |
| • BRK-175A-2P-240V: Main breaker, 2 pole, 175A, 25kAIC, CSR2175N | • BRK-60A-2P-240V: Circuit breaker, 2 pole, 60A, 10kAIC, BR260 |
| • BRK-200A-2P-240V: Main breaker, 2 pole, 200A, 25kAIC, CSR2200N | • BRK-80A-2P-240V: Circuit breaker, 2 pole, 80A, 10kAIC, BR280 |
| EP200G-HNDL-R1 | IQ System Controller 2 installation handle kit (order separately) |
| EP200G-LITKIT | IQ System Controller 2 literature kit, including labels, feed-through headers, screws, filler plates, and QIG |
| BRK-20A40A-2P-240V | 2 pole, 20A/40A, 10kAIC, BQC220240 |

ELECTRICAL SPECIFICATIONS

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| Assembly rating | Continuous operation at 100% of its rating |
| Nominal voltage / range (L-L) | 240 VAC / 100 - 310 VAC |
| Voltage measurement accuracy | ±1% V nominal (±1.2V L-N and ±2.4V L-L) |
| Auxiliary contact for load control, excess PV control, and generator two-wire control | 24V, 1A |
| Nominal frequency / range | 60 Hz / 56 - 63 Hz |
| Frequency measurement accuracy | ±0.1 Hz |
| Maximum continuous current rating | 160A |
| Maximum input overcurrent protection device | 200A |
| Maximum output overcurrent protection device | 200A |
| Maximum overcurrent protection device rating for Generator circuit ⁴ | 80A |
| Maximum overcurrent protection device rating for storage branch circuit ⁴ (the storage branch circuit can be replaced with PV) | 80A |
| Maximum overcurrent protection device rating for IQ8 PV combiner branch circuit ⁴ | 80A |
| Neutral Forming Transformer (NFT) | <ul style="list-style-type: none"> • Breaker rating (pre-installed): 40A between L1 and Neutral; 40A between L2 and Neutral • Continuous rated power: 3600VA • Maximum continuous unbalance current: 30A @ 120V • Peak rated power: 8800VA for 30 seconds • Peak unbalanced current: 80A @ 120V for 30 seconds |

MECHANICAL DATA

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|--------------------------------|---|
| Dimensions (WxHxD) | 50cm x 91.6cm x 24.6cm (19.7 in x 36 in x 9.7 in) |
| Weight | 39.4 kg (87 lbs) |
| Ambient temperature range | -40° C to +50° C (-40° F to 122° F) |
| Cooling | Natural convection, plus heat shield |
| Enclosure environmental rating | Outdoor, NEMA type 3R, polycarbonate construction |
| Altitude | To 2500 meters (8200 feet) |

WIRE SIZES

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| Connections (All lugs are rated to 90C) | <ul style="list-style-type: none"> • Main lugs and backup load lugs • CSR breaker bottom wiring lugs • BR breakers (wire provided) • AC combiner lugs, Encharge lugs, and generator lugs • Neutral (large lugs) | Cu/Al: 1 AWG – 300 KCMIL Cu/Al: 2 AWG – 300 KCMIL 6 AWG 14 AWG – 2 AWG Cu/Al: 6 AWG - 300 KCMIL |
| Neutral and ground bars | Large holes (5/16-24 UNF) Small holes (10-32 UNF) | 14 AWG – 1/0 AWG 14 AWG – 6 AWG |

COMPLIANCE

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| Compliance | UL 1741, UL 1741 SA, UL 1741 PCS, UL1998, UL869A ⁵ , UL67 ⁵ , UL508 ⁵ , UL50E ⁵ CSA 22.2 No. 107.1, 47 CFR, Part 15, Class B, ICES 003, AC156. IQ System Controller 2 is approved for Use as Service Equipment in the United States ⁵ IFETEL homologation number: RCPENEP22-2078 |
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2. Compatible with BRHDK125 Hold-Down Kit to comply with 2017 NEC 710.15E for back-fed circuit breakers.

3. The IQ System Controller 2 is rated 22 kAIC

4. Not included. Installer must provide properly rated breaker per circuit breaker list above.

5. Sections from these standards were used during the safety evaluation and included in the UL 1741 listing.

To learn more about Enphase offerings, visit enphase.com

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