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NORTH AMERICA | DATA SHEET

IQ Battery 5P

The IQ Battery 5P all-in-one AC-coupled system is powerful, reliable, simple, and safe. It has a total usable energy capacity of 5.0 kWh and includes six embedded grid-forming microinverters with a continuous power rating of up to 3.84 kVA. It provides backup capability, and installers can quickly design the right system size to meet the customer needs.

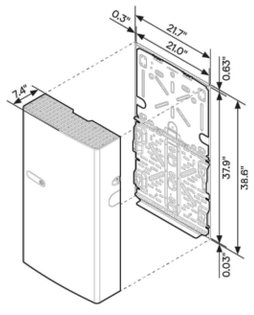
Enphase 15 year limited warranty

UL CERTIFIED SAFETY US-CA E488100

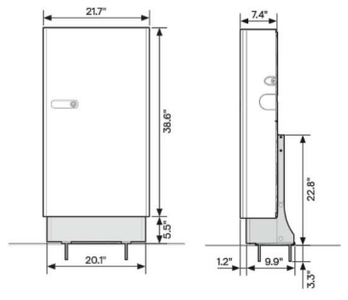
Key specifications		
Rated (continuous) output power	3.84 kVA	3.33 kVA
Nominal voltage	240 VAC	208 VAC
Rated output current	16 A	
Interconnection	Single-phase	
Nominal frequency	60 Hz	
Usable capacity	5.0 kWh	
Ambient operating temperature range (charging)	–20°C to 50°C (–4°F to 122°F) Non-condensing	
Ambient operating temperature range (discharging)	–20°C to 55°C (–4°F to 131°F) Non-condensing	
Chemistry	Lithium iron phosphate (LFP)	
Mounting	Wall-mount or pedestal-mount (sold separately)	

Dimensions in inches

Wall-mounted



Floor-mounted with pedestal



Powerful

- Provides up to 3.84 kVA continuous and up to 7.68 kVA peak power
- Doubles the power per kWh compared to previous IQ Battery models
- Features six embedded microinverters

Reliable

- 15-year limited warranty
- Passive cooling with no moving parts or fans
- Wired communication for stable and fast connection
- Remote software and firmware updates

Simple

- Integrated AC battery system
- Quick installation and commissioning
- Supports Backup, Self-Consumption, and time-of-use (TOU) modes
- Remote monitoring via the Enphase App
- Field replaceable components

Safe

- Evaluated to UL 9540A, the highest industry standard for battery safety
- Uses lithium iron phosphate (LFP) chemistry for safety and longevity

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Product details	IQ Battery 5P
Model number	IQBATTERY-5P-1P-NA or B05-T02-US00-1-3
Ordering SKU	IQBATTERY-5P-1P-NA: Standard ordering SKU IQBATTERY-5P-1P-NA-DOM[1]: Ordering SKU with US domestic content
Description	The IQ Battery 5P system with integrated IQ Microinverters (SKU: IQ8D-BAT or IQ8D-BAT-DOM) and battery management system (BMS) with battery controller
Limited warranty	
IQ Battery 5P unit	>60% capacity, up to 15-year or 6,000 cycles[2]

Output (AC)	@240 VAC[3]	@208 VAC[4]
Rated (continuous) output power	3.84 kVA	3.33 kVA
Peak output current	32 A (three seconds), 25.6 A (10 seconds)	–
Nominal voltage/range	240/211–264 VAC	208/183–229 VAC
Nominal frequency/range	60/57–63 Hz	
Rated output current	16 A	
Power Start capability	Up to 48 A LRA[5]	
Power factor (adjustable)	0.85 leading ... 0.85 lagging	
Maximum units per 20 A branch circuit	One unit (single-phase)	
Maximum conductor size supported	3 AWG	
Overcurrent protection device (OCPD) for 3 AWG cable	80 A	
Interconnection	Single-phase	
AC round-trip efficiency[6]	90%	

Battery	
Total capacity	5.0 kWh
Usable capacity[7]	5.0 kWh
DC round-trip efficiency	96%
Nominal DC voltage	76.8 V
Maximum DC voltage	86.4 V
Ambient operating temperature range (charging)	–20°C to 50°C (–4°F to 122°F) non-condensing
Ambient operating temperature range (discharging)	–20°C to 55°C (–4°F to 131°F) non-condensing
Optimum operating temperature range	0°C to 30°C (32°F to 86°F)
Chemistry	Lithium iron phosphate (LFP)

Mechanical data	
Dimensions (H × W × D)	980 mm × 550 mm × 188 mm (38.6 in × 21.7 in × 7.4 in)

[1] This ordering SKU is manufactured in the US with some imported parts. The battery cover kit, chassis, BMS, inverter electrical parts, and enclosures are domestically manufactured to qualify for the ITC domestic content bonus adder.
[2] Whichever occurs first. Restrictions apply.
[3] Supported in both grid-tied and backup/off-grid operations.
[4] Backup/off-grid is not supported for 208 V single phase operation.
[5] Power Start capability may vary.
[6] AC to the battery to AC at 50% power rating.
[7] The battery's usable capacity supports loads, and turns PV on, in normal daily operation. The usable capacity includes a safety critical limit of 2% that safeguards the customer's asset in case of a long-duration grid outage. An additional 3% capacity is maintained for battery electronic sustenance at night. Refer to https://enphase.com/en-gb/download/iq-battery-5p-usable-capacity-tech-brief for more information.

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Mechanical data	
Lifting weight	66.3 kg (146.1 lb)
Total installed weight	78.9 kg (174 lb)
Enclosure	Outdoor-NEMA 3R
IQ8D-BAT Microinverter enclosure	NEMA type 6
Cooling	Natural convection
Operating noise @1 m	<30 dBA maximum
Altitude	Up to 2,500 meters (8,202 feet)
Mounting	Wall-mount or pedestal-mount (sold separately)

Features and compliance	
Compatibility	Compatible with IQ and M Series Microinverters, IQ System Controller 3/3G, IQ Combiner 5/5C, and IQ Gateway for grid-tied and backup operation
Communication	Wired control communication
Services	Backup, Self-Consumption, TOU, and NEM integrity
Monitoring	Enphase Installer Platform and Enphase App monitoring options; API integration
Compliance	CA Rule 21 (UL 1741-SA), IEEE 1547:2018 (UL 1741-SB, 3rd Ed.) CAN/CSA C22.2 No. 107.1-16 UL 9540[8], UL 9540A[9], UN 38.3, UL 1998, UL 991, NEMA Type 3R, AC156 EMI: 47 CFR, Part 15, Class B, ICES 003 Cell module: UL 1973, UN 38.3 Inverters: UL 62109-1, IEC 62109-2

What's in the box	
IQ Battery 5P unit	IQ Battery 5P unit (B05-T02-US00-1-3)
ID cover and conduit cover	IQ Battery 5P cover with two conduit covers for the left and right sides of the unit
Bottom mounting bracket and top shield	Bottom mounting bracket for mounting the battery on the wall. One top shield is required for UL 9540A
M5 seismic screws	Two M5 seismic screws for securing the battery unit on the bottom mounting bracket
M4 grounding screws	Two M4 grounding screws for securing the top shield on the bottom mounting bracket
M5 ID cover grounding screws	Two M5 ID cover grounding screws for the EMI/EMC requirement
Cable ties	Six cable ties for securing field cables to the unit
Control (CTRL) connector	Spare CTRL connector without resistor for CTRL wiring
Control (CTRL) connector with resistor	Spare CTRL connector with resistor for CTRL wiring
Quick install guide (QIG)	QIG for IQ Battery unit installation instructions

Optional accessories and replacement parts	
IQ8D-BAT-RMA	IQ8D-BAT Microinverter for field replacement
B05-T02-US00-1-3-RMA	IQ Battery 5P Battery unit for field replacement
B05-CX-0550-O	IQ Battery 5P cover for field replacement
B05-PI-0550-O	IQ Battery 5P pedestal mount

[8] Following local standards, choose a well-ventilated, non-habitable indoor location (like a 2-car garage) or an outdoor location where the ambient temperature and humidity are within –4°F to 131°F (–20°C to 55°C) and 5% to 95% RH, non-condensing. Avoid direct sunlight to ensure the temperature stays in the optimal operating range. This ensures charging and discharging currents are not de-rated due to temperature. The full performance will occur within 59°F to 113°F (15°C to 45°C) while charging and within 41°F to 122°F (5°C to 50°C) while discharging.

[9] Evaluated to UL 9540A for thermal runaway fire propagation and reduced separation distance as required in 2021 IRC R328.3.1, 2021 IFC 1207.1.5, and 2023 NFPA 855 15.3.1 and 9.1.5. Follow all installation instructions and local codes and requirements of the Authority Having Jurisdiction (AHJ) when installing the Enphase Energy System.

Optional accessories and replacement parts	
B05-CP-096-O	IQ Battery 5P conduit plates for field replacement. Includes one left-side and one right-side conduit plate
B05-WB-0543-O	IQ Battery 5P wall bracket for field replacement. Includes one bottom mounting bracket and one top shield
IQBATTERY-HNDL-5	IQ Battery 5P lifting handles. Includes one left-side and one right-side lifting handle
B05-ACFB-080-O	IQ Battery 5P AC filter board for field replacement
B05-BMSNA-0490-O	IQ Battery 5P BMS board for field replacement
B05-CANB-063-O	IQ Battery 5P control communication board for field replacement
B05-NICS-0524-O, B05-NUCS-0524-O	IQ Battery 5P control switch is preinstalled on the wiring cover for field replacement

Components of the Enphase Energy System

IQ Microinverters

IQ Series Microinverters pack more power into less space than other rooftop solar systems and make rooftop solar more productive, reliable, smart, and safe.

IQ Gateway

The IQ Gateway with current transformers provides complete control and insight into the Enphase Energy System.

Communications Kit 2 INT

The Communications Kit 2 INT enables wired communication between the battery and gateway for grid-tied operation.

IQ Battery 5P accessories

The IQ Battery 5P lifting handles are reusable and ease the installation process. The IQ Battery 5P pedestal enables floor mounting of the IQ Battery 5P.

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ENPHASE

DATASHEET

IQ System Controller 3/3G

The Enphase IQ System Controller 3/3G connects the home to grid power, the IQ Battery system, and solar PV. It provides microgrid interconnect 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.

IQ Series Microinverters
The high-powered smart grid-ready IQ Series Microinverters (M Series, IQ6, IQ7, and IQ8 Series) dramatically simplify the installation process

IQ Battery 5P
Fully integrated AC battery system. Includes six field-replaceable IQ8D-BAT microinverters

IQ Combiner 5/5C
Consolidates PV interconnection equipment into a single enclosure and streamlines IQ Series Microinverters and IQ Gateway installation by providing a consistent, pre-wired solution for residential applications

IQ Load Controller
Helps prioritize essential appliances during a grid outage to optimize energy consumption and prolong battery life

Enphase 10 year limited warranty

10-year limited warranty

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Easy to install

- Connects to service entrance[1] or main load center
- Includes neutral-forming transformer
- Mounts on single stud with centered brackets
- Provides conduit entry from the bottom, left, or right
- Includes color-coded wires for ease of wiring the System Shutdown Switch
- Integrates hold-down functionality to eliminate the need for hold-down kits and special breakers

Flexible

- Can be used for Sunlight Backup, Home Essentials Backup, or Full Energy Independence
- IQ System Controller 3 integrates with IQ Battery 5P
- IQ System Controller 3G integrates with select AC standby generators. See the Generator integration tech brief for a list of generators
- Provides a seamless transition to backup

Safe and reliable

- System Shutdown Switch can be used to disconnect PV, battery, and generator systems
- System Shutdown Switch acts as a rapid shutdown initiator of grid-forming IQ8 PV Microinverters for the safety of maintenance technicians/first responders
- 10-year limited warranty

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(1) IQ System Controller 3 is not suitable for use as service equipment in Canada.

IQ System Controller 3/3G

DATASHEET

MODEL NUMBER	DESCRIPTION
SC200D111C240US01	IQ System Controller 3 streamlines the grid-independent capabilities of PV and storage installations. Integrates hold-down capability. Supports IQ Battery 5P units up to 40 kWH (without PCS*) and 80 kWh (with PCS*). **Does not support generator integration**
SC200G111C240US01	IQ System Controller 3G streamlines the grid-independent capabilities of PV and storage installations. Integrates hold-down capability. Supports IQ Battery 5P units up to 20 kWH (without PCS*) and 40 kWh (with PCS*). **Supports generator integration**
WHAT'S IN THE BOX	
IQ System Controller 3/3G	Includes neutral-forming transformer (NFT) and microgrid interconnect device (MID)
System Shutdown Switch	Includes pre-wired red, black, orange, and purple 12 AWG wire (EP200G-NA-02-RSD)
Wall-mounting bracket	Screws provided in the accessories kit for mounting
4-pole circuit breaker	Pre installed Quad breaker (BRK-20A40A-4P-240V), 20 A-40 A, 10 kAIC, Eaton BQC220240[2]
Accessories kit	IQ System Controller 3/3G literature kit, including labels, CTRL headers, screws, filler plates, and Quick Install Guide (QIG) (EP200G-LITKIT)
OPTIONAL ACCESSORIES AND REPLACEMENT PARTS	
CT-200-SPLIT	200 A split core current transformers for metering (accuracy: ±2.5%)[3]
CT-200-CLAMP	200 A clamp-type current transformers for metering (accuracy: ±2.5%)[3]
Main or load circuit breakers (order separately, as needed)[4]	• BRK-100A-2P-240V : 2-pole, 100A, 25kAIC, CSR2100N or CSR2100 • BRK-125A-2P-240V: 2-pole, 125A, 25kAIC, CSR2125N • BRK-150A-2P-240V: 2-pole, 150A, 25kAIC, CSR2150N • BRK-175A-2P-240V: 2-pole, 175A, 25kAIC, CSR2175N • BRK-200A-2P-240V: 2-pole, 200A, 25kAIC, CSR2200N
Distributed energy resource (DER) circuit breakers (order separately, as needed)[5]	• BRK-20A-2P-240V-B: 2-pole, 20 A, 10 kAIC, BR220B/BR220 • BRK-30A-2P-240V-B: 2-pole, 30 A, 10 kAIC, BR230 • BRK-40A-2P-240V-B: 2-pole, 40 A, 10 kAIC, BR240B/BR240 • BRK-60A-2P-240V: 2-pole, 60 A, 10 kAIC, BR260 • BRK-80A-2P-240V: 2-pole, 80 A, 10 kAIC, BR280
EP200G-HNDL-R1	IQ System Controller 3/3G installation handle kit (order separately)
CTRL-SC3-NA-01	Control cable, 500 ft. spool (order separately)
ALTERNATE DER CIRCUIT BREAKERS	
GE/ABB	THQL21xx (20/40/60/80 A)
Siemens	Q2xx (20/40/60/80 A)
Siemens (quad breaker)	Q24020CT2 (20/40 A)
ELECTRICAL SPECIFICATIONS	
Nominal voltage/Range (L-L)	240 V~[6]/±20%
Voltage measurement accuracy	±1% V nominal (±1.2V L-N and ±2.4V L-L)
Auxiliary (dry) contact for load control, excess PV control, and generator two-wire control	24 V, 1 A
Nominal frequency/Range	60 Hz/56–63 Hz
Frequency measurement accuracy	±0.1 Hz
Maximum continuous current rating	160 A
Maximum input overcurrent protection device	200 A
Maximum output overcurrent protection device	200 A
Maximum overcurrent protection device rating for generator circuit	80 A (IQ System Controller 3G only - SC200G111C240US01)
Maximum overcurrent protection device rating for storage circuit	2 x 80 A (IQ System Controller 3 - SC200D111C240US01), 1 x 80 A (IQ System Controller 3G - SC200G111C240US01)

(2) Factory installed quad breaker (Siemens or Eaton). NFT pre-wired to 40 A terminal of the quad breaker.
(3) Two units of CT-200-SPLIT or CT-200-CLAMP must be bought separately for generator integration.
(4) The IQ System Controller 3 is rated at 22 kAIC.
(5) Integrated hold-down kit support breakers (BR230/BR230/BR240) without predrilled hole.
Integrated hold-down kit also supports GE/ABB and Siemens as mentioned under section alternate DER circuit breakers.
(6) "~" indicates alternating current (AC) supply.
(*) Power Control System.

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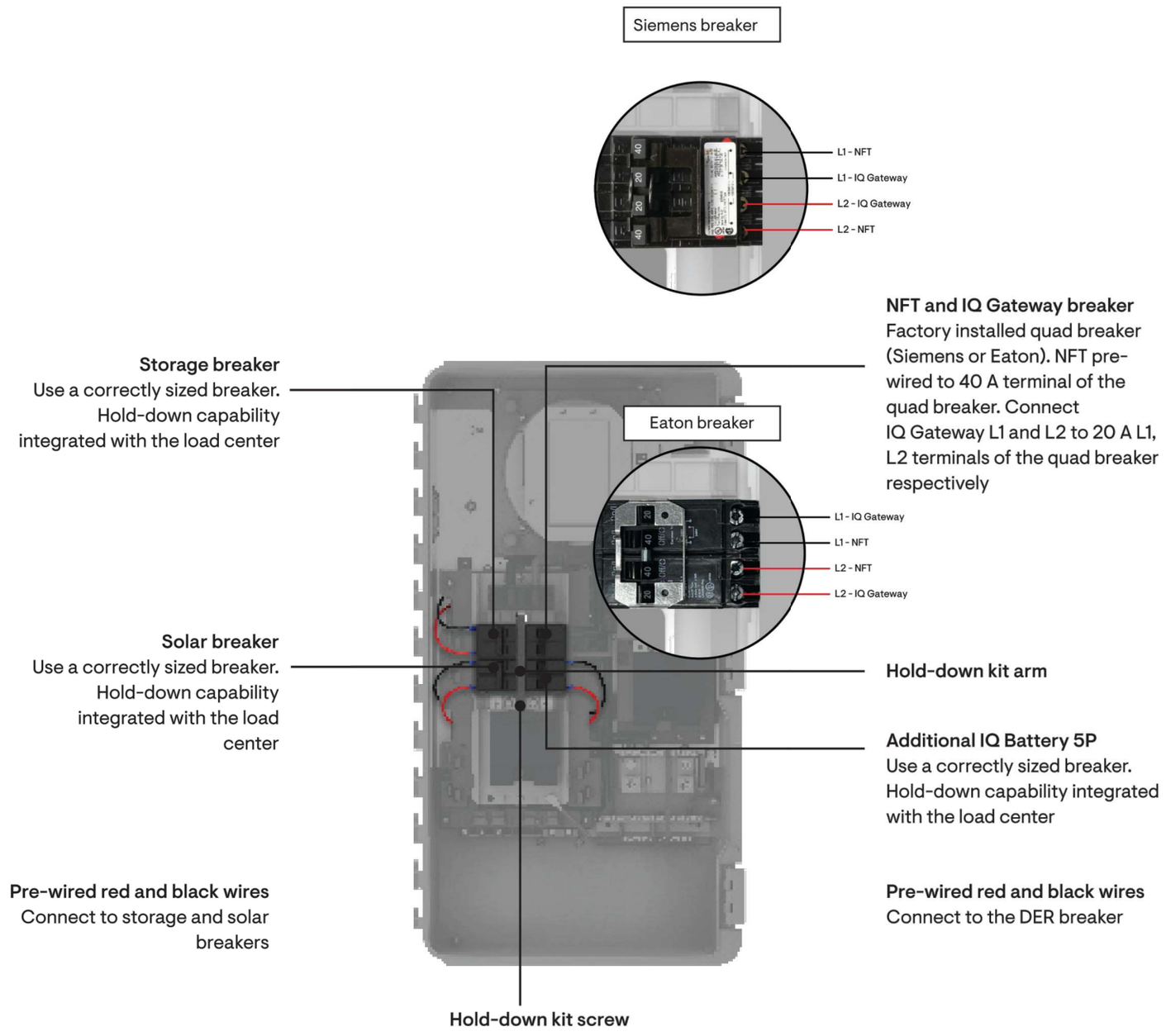
ELECTRICAL SPECIFICATIONS		
Maximum overcurrent protection device rating for PV combiner unit	80 A	
Internal busbar rating	200 A	
Neutral-forming transformer (NFT)	• Breaker rating (pre-installed): 40 A between L1 and Neutral; 40 A between L2 and Neutral • Continuous rated power: 3,600 VA • Maximum continuous unbalance current: 30 A @ 120 V • Peak unbalanced current: 80 A @ 120 V for two seconds	
MECHANICAL DATA		
Dimensions (WxHxD)	50 cm x 91.6 cm x 24.6 cm (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 and a heat shield	
Enclosure environmental rating	Outdoor, NEMA type 3R, polycarbonate construction	
Maximum altitude	2500 meters (8200 feet)	
WIRE SIZES		
Connections (All lugs are rated to 90°C)	Main lugs and backup load lugs CSR breaker bottom wiring lugs AC combiner lugs, IQ Battery lugs, and generator lugs Neutral (large lugs)	Cu/Al: 6 AWG–300 kcmil Cu/Al: 2 AWG–300 kcmil 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		
Compliance (under progress)	UL 1741, UL 1741 SA, IEEE 1547:2018 (UL 1741-SB, 3rd Ed.), UL 1741 PCS CRD, UL1 998, UL 869A, UL 675, UL 508[7], UL 50E[7] CSA 22.2 No. 107.1, 47 CFR Part 15 Class B, ICES 003, ICC ES AC156. The IQ System Controller 3/3G is approved for use as service equipment in the United States	
WARRANTY		
Limited warranty (restrictions apply)	Up to 10 years (EP200G-NA-02-RSD has a 5-year warranty)	
COMPATIBILITY[8]		
Battery	IQ Battery 5P (IQBATTERY-5P-1P-NA)	
Microinverters	IQ8, IQ7, IQ6, and M Series Microinverters[9]	
IQ Combiner	IQ Combiner 5/5C (X-IQ-AM1-240-5C, X-IQ-AM1-240-5)	
Communications Kit 2	COMMS-KIT-02	

(7) Sections from these standards were used during the safety evaluation and included in the UL 1741 listing.
(8) For more details, refer to IQ System Controller 3/3G Quick Install Guide.
(9) M Series Microinverters can only be supported in states that have not yet adopted IEEE 1547:2018.
Enphase does not support mixing IQ8 Series Microinverters with other series on the same IQ Gateway.

Figure 1A: Installing DER breakers for IQ8 System without generator



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