

IQ System Controller 3M

The Enphase IQ System Controller 3M connects the home to grid power, the IQ Battery system, and solar PV. It integrates with the IQ Meter Collar to enable whole home backup solutions without any need for load relocation or rewiring.



Key specifications	SC200D111CMC1US01	
Nominal voltage	240 V, ±20% (Line-to-Line) 120 V, ±20% (Line-to-Neutral)	
Voltage measurement accuracy	±1% V nominal (±1.2 V L-N and ±2.4 V L-L)	
Nominal frequency/range	60 Hz/56–63 Hz	
Dimensions (W × H × D)	50 cm × 91.6 cm × 24.6 cm (19.7 in × 36 in × 9.7 in)	
Weight	40.2 kg (88.6 lb)	
Ambient temperature range	–40°C to 50°C (–40°F a 122°F)	
Enclosure environmental rating	Outdoor, NEMA type 3R, polycarbonate construction	
	Back-fed breaker	Branch circuit
Maximum continuous input/output current	160 A	3 × 64 A
Maximum input/output overcurrent protection device	200 A	3 × 80 A
Short-circuit interrupt rating	22 kA	10 kA

Simple

- Supports IQ Meter Collar, enabling easy whole home backup solution on homes with meter-main combo panels without load relocation and rewiring
- Avoids service rewiring by connecting to breaker or lug kit on load panel and backfeeding power
- 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

Flexible

- Can be used for whole home backup
- Integrates with IQ Battery 5P
- Supports 15.4 kVA of PV and 80 kWh of batteries or 30.7 kVA PV and 40 kWh of batteries

Reliable

- System Shutdown Switch can be used to disconnect PV and battery
- 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

Model number	SC200D111CMC1US01
SC200D111CMC1US01	IQ System Controller 3M streamlines the grid-independent capabilities of PV and storage installations. Supports IQ Battery 5P units up to 40 kWh (without PCS ¹) and 80 kWh (with PCS ¹). Supports IQ Meter Collar integration. Does not support generator integration.
What's in the box	SC200D111CMC1US01
IQ System Controller 3M	Includes neutral-forming transformer (NFT) and supports Enphase IQ Meter Collar (order separately)
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/Siemens Q24020CT2 ²
Accessories kit	EP200G-LITKIT-R3M - IQ System Controller 3M literature kit, including labels, control headers, screws, filler plates, and quick install guide (QIG)
Accessories and replacement parts	SC200D111CMC1US01
CT-200-SPLIT	200 A split-core current transformers for metering (accuracy: ±2.5%)
CT-200-CLAMP	200 A clamp-type current transformers for metering (accuracy: ±2.5%)
CT-200-SOLID	200 A solid-core current transformers for metering (accuracy: ±0.5%)
Main or load circuit breakers (order separately, as needed)	<ul style="list-style-type: none"> BRK-100A-2P-240V: 2-pole, 100 A, 25 kAIC, CSR2100N or CSR2100 BRK-125A-2P-240V: 2-pole, 125 A, 25 kAIC, CSR2125N BRK-150A-2P-240V: 2-pole, 150 A, 25 kAIC, CSR2150N BRK-175A-2P-240V: 2-pole, 175 A, 25 kAIC, CSR2175N BRK-200A-2P-240V: 2-pole, 200 A, 25 kAIC, CSR2200N
Distributed energy resource (DER) circuit breakers (order separately, as needed)	<ul style="list-style-type: none"> 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
IQ Meter Collar	MC-200-011-V01
EP200G-HNDL-R1	IQ System Controller Handles (order separately)
CTRL-SC3-NA-01	Enphase Control Cable, 500 ft. spool (order separately)
Alternate right switches	SC200D111CMC1US01
GE/ABB	THQL21xx (20/40/60/80 A)
Siemens	Q2xx (20/40/60/80 A)
Siemens (quad breaker)	Q24020CT2 (20/40 A)
Electrical specifications	SC200D111CMC1US01
Nominal voltage/range (L-L)	240 V ^{~3} /±20%
Nominal voltage/range (L-N)	120 V ^{~3} /±20%
Voltage measurement accuracy	±1% V nominal (±1.2 V L-N and ±2.4 V L-L)

¹ Power control system.

² Factory-installed quad breakers (Siemens or Eaton). NFT pre-wired to 40 A terminal of the quad breaker. Figure 1 shows Siemens or Eaton factory-installed quad breakers with NFT pre-wired to 40 A.

³ ~ indicates alternating current (AC) supply.

Electrical specifications	SC200D111CMC1US01	
Auxiliary (dry) contact for load control and excess PV control	24 V, 1 A	
Nominal frequency/range	60 Hz/56–63 Hz	
Frequency measurement accuracy	±0.1 Hz	
Internal busbar rating	200 A	
	Back-fed breaker^{4,5}	Branch circuit
Maximum continuous input/output current	160 A	3 × 64 A ⁶
Maximum input/output overcurrent protection device	200 A	3 × 80 A ⁶
Short-circuit interrupt rating	22 kA	10 kA
Neutral-forming transformer (NFT)	<ul style="list-style-type: none"> • 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	SC200D111CMC1US01	
Dimensions (W × H × D)	50 cm × 91.6 cm × 24.6 cm (19.7 in × 36 in × 9.7 in)	
Weight	88.6 lb (40.2 kg)	
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	2,500 meters (8,200 feet)	
Wire sizes	SC200D111CMC1US01	
Connections (all lugs are rated to 90°C)	Main lugs and backup load lugs	Cu/Al: 6 AWG–300 kcmil
	CSR breaker bottom wiring lugs	Cu/Al: 2 AWG–300 kcmil
	IQ Combiner lugs, IQ Battery lugs, and additional IQ Battery or PV lugs	14 AWG–2 AWG
	Neutral (large lugs)	Cu/Al: 6 AWG–300 kcmil
Neutral and ground bars	Large holes (5/16–24 UNF)	14 AWG–1/0 AWG
	Small holes (10–32 UNF)	14 AWG–6 AWG
Compliance	SC200D111CMC1US01	
Grid compliance	IEEE 1547-2018, IEEE 1547.1 2020 (UL 1741 SB)	
Safety	UL 1741, UL 1741 SA, UL 1741 PCS CRD, UL 1998, UL 869A, UL 508, UL 50E, CSA 22.2 No. 107.1, ICC ES AC156	
EMC	FCC 47 CFR Part 15 Class B	
Warranty	SC200D111CMC1US01	
Limited warranty (restrictions apply)	Up to 10 years (EP200G-NA-02-RSD has a 5-year warranty)	
Compatibility	SC200D111CMC1US01	
Battery	IQ Battery 5P (IQBATTERY-5P-1P-NA)	

⁴ Back-fed breaker can be in the electrical panel and/or in the Internal Point-of-Connection breaker spot.

⁵ If required, only CSR breaker can be used in the Internal Point-of-Connection breaker spot.

⁶ DER port can be used for PV or battery up to 64 A.

Compatibility	SC200D111CMC1US01
Microinverters	IQ8, IQ7, IQ6 Series Microinverters
IQ Combiner (or) IQ Gateway	IQ Combiner 5/5C (X-IQ-AM1-240-5C, X-IQ-AM1-240-5, X-IQ-AM1-240-5-HDK, X-IQ-AM1-240-5C-HDK), IQ Combiner 4/4C ⁷ (X-IQ-AM1-240-4, X-IQ-AM1-240-4C, X2-IQ-AM1-240-4, X2-IQ-AM1-240-4C) IQ Gateway ⁷ (ENV-IQ-AM1-240, ENV2-IQ-AM1- 240)
Communications Kit 2	COMMS-KIT-02 ⁷
IQ Meter Collar	MC-200-011-V01

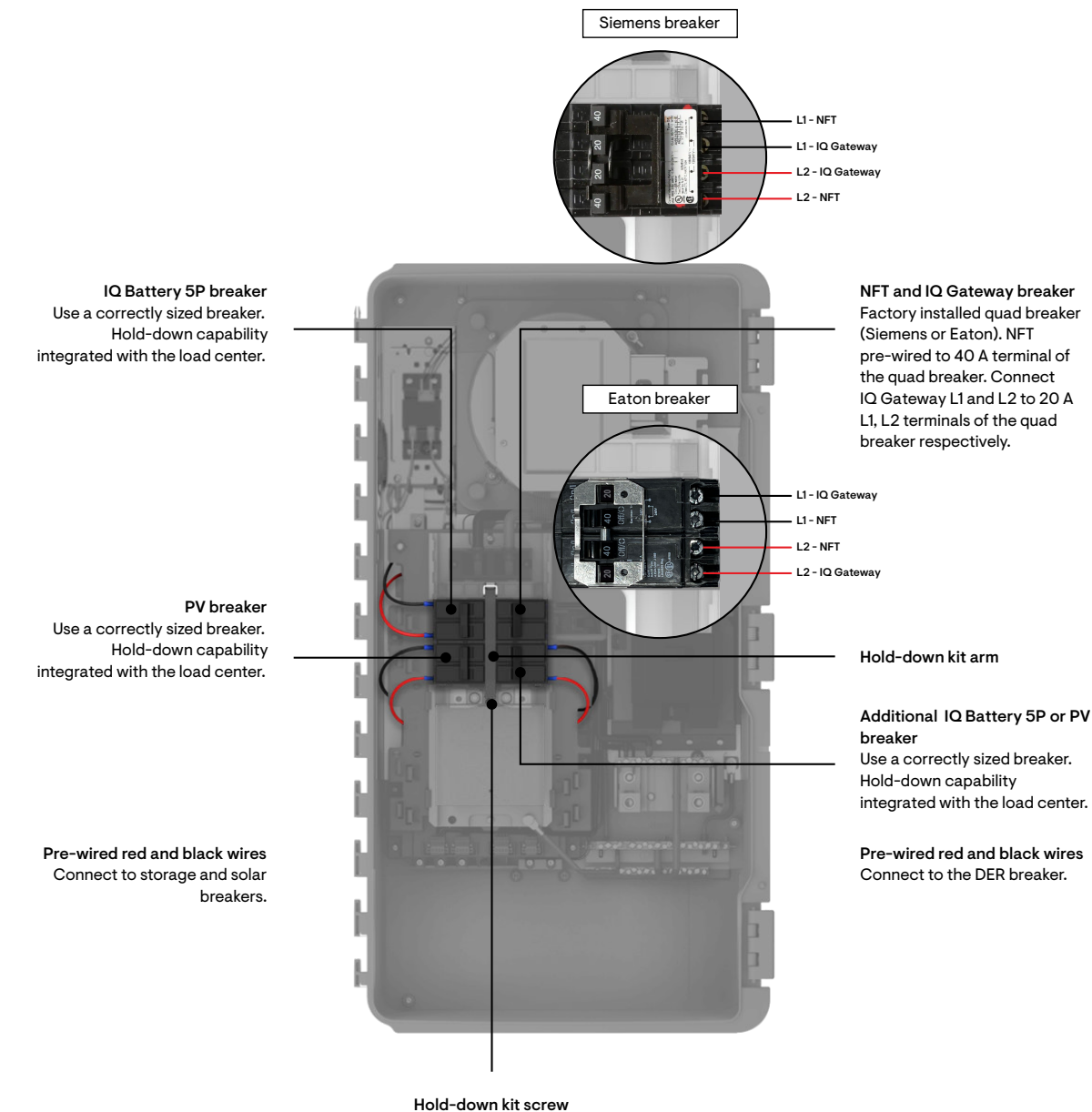


Figure 1: Installing DER breakers for IQ8 system

⁷ IQ Combiner 4/4C and the IQ Gateway require a COMMS-KIT-02 sold separately, to enable communication with the IQ Battery 5P, IQ System Controller 3M, and the IQ Meter Collar. IQ Combiner 5/5C does not require an additional COMMS-KIT-02 to be bought and can directly communicate with the IQ Battery 5P, IQ System Controller 3M, and the IQ Meter Collar.

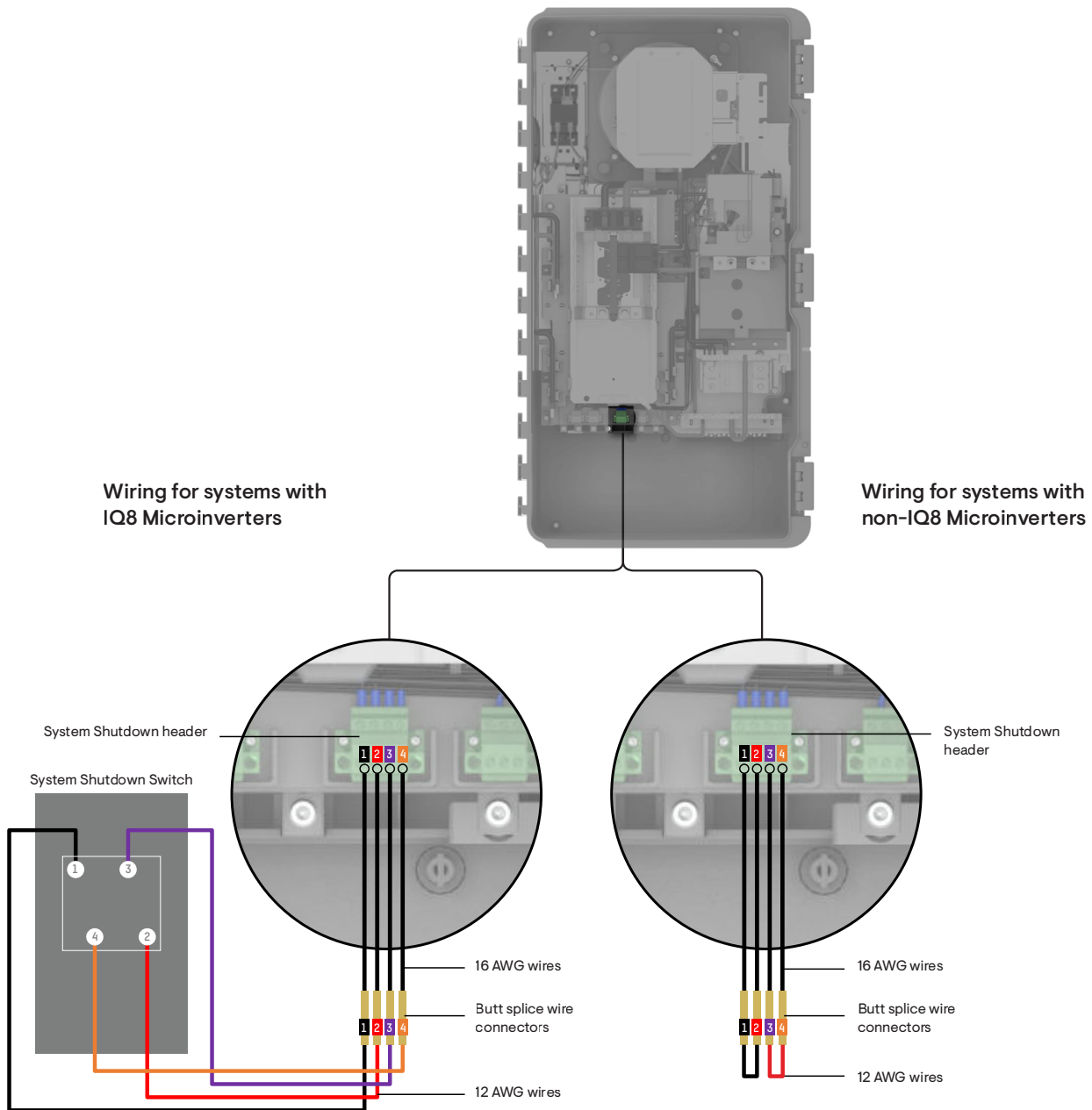


Figure 2: Wiring the System Shutdown Switch

Components of Enphase Energy System



IQ Series Microinverters

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



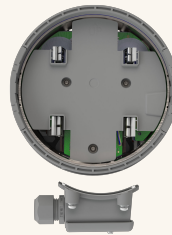
IQ Battery 5P

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 Meter Collar

Integrates the microgrid interconnection device (MID) and consumption metering, enabling whole-home backup while reducing expensive labor costs of load rewiring and avoiding wiring of Consumption Current Transformers (CTs).



IQ Load Controller

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

Revision history

Revision	Date	Description
DSH-00484-4.0	March 2025	Removed IQ Combiner 3 and Generator details.
DSH-00484-3.0	January 2025	Initial release, removed preliminary tag.
DSH-00484-2.0	November 2024	Updated the “What’s in the box” section.
DSH-00484-1.0	September 2024	Preliminary release.