Enphase IQ Combiner 3-ES/3C-ES

X-IQ-AM1-240-3-ES X-IQ-AM1-240-3C-ES The Enphase IQ Combiner 3-ES/3C-ES[™] with Enphase IQ Envoy[™] and integrated LTE-M1 cell modem (included only with IQ Combiner 3C-ES) consolidates interconnection equipment into a single enclosure and streamlines PV and storage installations by providing a consistent, pre-wired solution for residential applications. It offers up to four 2-pole input circuits and Eaton BR series busbar assembly.



Smart

- Includes IQ Envoy for communication and control
- Includes LTE-M1 cell modem (included only with IQ Combiner 3C-ES)
- Includes solar shield to match Ensemble esthetics and deflect heat
- Flexible networking supports Wi-Fi, Ethernet, or cellular
- Optional AC receptacle available for PLC bridge
- Provides production metering and consumption monitoring

Simple

- Reduced size from IQ Combiner+ (X-IQ-AM1-240-2)
- Centered mounting brackets support single stud mounting
- · Supports back and side conduit entry
- Up to four 2-pole branch circuits for 240 VAC plug-in breakers (not included)
- 80 A total PV or storage branch circuits

Reliable

- Durable NRTL-certified NEMA type 3R enclosure
- Five-year limited warranty
- Two years labor reimbursement program coverage included
- UL listed



To learn more about Enphase offerings, visit enphase.com

Enphase IQ Combiner 3-ES / 3C-ES

solar shield to match the Encharge storage system and Enpower amer switch and to deflect heat. IQ Combiner 3C-ES (X-IQ-AM1-240-3C-ES) IQ Combiner 3C-ES with Enphase Mobile (D Enwo printed circuit board for integrated evenue grade P production metering (ANSI C12.20 +/- 0.5%) and consumption motioning (+/- 2.5%). Includes Enphase Mobile Connect LTE-MI (ELLMODER-MI), a plug-and-play industril-grade cell moder for systems up to 60 microinverters. (Available in the US, Canada, Mexico, Puerfo Rico, and the US, Canada (Mexico, Puerfo Rico, And Seconda (Mexico, Puerfo Rico, Puerfo Rico, And Seconda (Mexico, Puerfo Rico, And Seconda (Mexico, Puerfo Rico, Puerfo Ric	MODEL NUMBER	
production metering (ANSI 01:22.0 + 0.5%) and consumption monitoring (+-2.5%), includes production metering (ANSI 01:22.0 + 0.5%) and consumption monitoring (+-2.5%), includes ACCESSORIES and REPLACEMENT PARTS (not included, order separately) Commonitoriation KI (not included, order separately) COMMS-CELLMODEM-MI) Includes COMMS-KIT-01 and CELLMODEM-MI with 5-year data plan for Ensemble sites COMMS-CELLMODEM-MI Includes COMMS-KIT-01 and CELLMODEM-MI with 5-year data plan for Ensemble sites COMMS-CELLMODEM-MI Includes COMMS-KIT-01 and CELLMODEM-MI with 5-year data plan for Ensemble sites COMMS-CELLMODEM-MI Construct The sets, 2.50(and BR210, BR210, BR210, BR220, BR220	IQ Combiner 3-ES (X-IQ-AM1-240-3-ES)	production metering (ANSI C12.20 +/- 0.5%) and consumption monitoring (+/- 2.5%). Includes a silver
Ensemble Communications Kit (COMMS-KIT-01 and CELLMODEM-M1) Includes COMMS-KIT-01 and CELLMODEM-M1 with 5-year data plan for Ensemble sites (COMMS-CELLMODEM-M1) Circuit Breakers BNK-10A-2240 Supports Eaton BR210, BR216, BR220, BR240, BR250, and BR260 circuit breakers. Circuit Breaker, 2 pole, 15A, Eaton BR210 BR20A-2740 BNK-10A-2240 Circuit breaker, 2 pole, 15A, Eaton BR210 BR20A-2740 Circuit breaker, 2 pole, 15A, Eaton BR220 BR20A-2740 Circuit breaker, 2 pole, 20A, Eaton BR220 Circuit breaker, 2 pole, 20A, Eaton BR210 BR20A-2740 EPLC-01 Power line carrier (communication bridge pair), quantity - one pair XA-SOLARSHELD-ES Replacement loar sheld for Combiner 3-ES / 3C-ES ELECTICAL SPECIFICATIONS Rating Continuous duty System votage 120/240 VAC, 60 Hz Eaton BR series busbar rating 65 A Max. continuous current rating (nopt from PV/storage) Up to four 2-pole Eaton BR series Distributed Generation (0C) breakers only (not included) Max. total branch circuit breaker rating (input) 90 A BrechAnicat Data 200 A split core current trainsformers MECHANICAL DATA 200 A split core current trainsformers MECHANICAL DATA 200 A split core current trainsformers MECHANICAL DATA 200 A table or to 150° F) Cooling<	IQ Combiner 3C-ES (X-IQ-AM1-240-3C-ES)	production metering (ANSI C12.20 +/- 0.5%) and consumption monitoring (+/- 2.5%). Includes Enphase Mobile Connect LTE-M1 (CELLMODEM-M1), a plug-and-play industrial-grade cell modem for systems up to 60 microinverters. (Available in the US, Canada, Mexico, Puerto Rico, and the US Virgin Islands, where there is adequate cellular service in the installation area.) Includes a silver solar
(COMMS-CELLMODER-MT) (Cruch Breakers BRK-15A-2:40 Supports Eaton BR210, BR210, BR220, BR230, BR260, and BR260 circuit breakers. Circuit breaker, 2 pole, 15A, Eaton BR210 BRK-12A-2:40 Circuit breaker, 2 pole, 15A, Eaton BR210 BRK-20A-2:40-A Circuit breaker, 2 pole, 15A, Eaton BR210 StA-SOLARSHIELD-ES Replacement solar shield for Combiner 3-ES / 3C-ES XA-FUG-120-3 Accessory receptacle for Power Line Carrier in IQ Combiner 3-ES / 3C-ES (required for EPLC-01) XA-ENV-PCBA-3 Replacement IQ Envoy printed circuit board (PCB) for Combiner 3-ES / 3C-ES ELECTRICAL SPECIFICATIONS E Rating Continuous duty System voltage 120/240 VAC, 60 H2 Eaton BR series bushar rating 125 A Max. continuous current rating (input from PV/storego) 64 A Max. fuse/circuit rating (uptut) 90 A of distributed generation / 90A with IQ Envoy breaker included Productis (solar and/or storage) Up to four 2-pole Eaton BR series Distributed Generation (DG) breakers only (not included) Max. total branch circuit breaker rating (input) 80A of distributed generation / 90A with IQ Envoy breaker included Oresumption monitoring CT (Cr-200-SPLIT) A pair of 200 A split core current transformers MECHANICAL DATA Dimensions(Widsh0) 37.5x 49.5x 16.8 cm (ACCESSORIES and REPLACEMENT PARTS	(not included, order separately)
BRK:16A.2:40 Circuit breaker, 2 pole, 10A, Eaton BR210 BRK:20A,2P:240 Circuit breaker, 2 pole, 10A, Eaton BR220 EPLC-01 Power line carrier (communication bridge pair), quantity - one pair XA-SOLARSHIELD-ES Replacement solar shield for Combiner 3-ES / 3C-ES XA-PLUG-120-3 Accessory receptacle for Power Line Carrier in IQ Combiner 3-ES / 3C-ES (required for EPLC-01) XA-SOLARSHIELD-ES Replacement IQ Envoy printed circuit board (PCB) for Combiner 3-ES / 3C-ES ELECTRICAL SPECIFICATIONS ELECTRICAL SPECIFICATIONS Rating Continuous duty System voltage 120/240 VAC, 60 Hz Eaton BR series busbar rating 65 A Max. continuous current rating (input from PV/storage) 64 A Max. continuous current rating (input from PV/storage) 64 A Max. total branch circuit breaker rating (input from PV/storage) 64 A Max. total branch circuit breaker rating (input from PV/storage) 64 A Max. total branch circuit breaker rating (input from PV/storage) 64 A Max. total branch circuit breaker rating (input from PV/storage) 64 A Max. total branch circuit breaker rating (input from PV/storage) 64 A Max. total branch circuit breaker rating (input from PV/storage) 64 A		Includes COMMS-KIT-01 and CELLMODEM-M1 with 5-year data plan for Ensemble sites
XA-SOLARSHIELD-ES Replacement solar shield for Combiner 3-ES / 30-ES XA-FLUG-120-3 Accessory receptacle for Power Line Carrier in IQ Combiner 3-ES / 30-ES (required for EPLC-01) XA-FLUG-120-3 Replacement IQ Erwoy printed dircuit board (PCB) for Combiner 3-ES / 30-ES ELECTRICAL SPECIFICATIONS E Rating Continuous duty System voltage 120/240 VAC, 60 Hz Eaton BR series busber rating 125 A Max. continuous current rating (input from PVstorage) 64 A Max. trusc/circuit rating (input from PVstorage) 64 A Max. fuse/circuit rating (input) 90 A Branch circuits (solar and/or storage) Up to four 2-pole Eaton BR series Distributed Generation (DG) breakers only (not included) Max. tuse/circuit rating (input) 80 A of distributed generation / 90 A with IQ Envoy breaker included Production metering CT 200 A solid core pre-installed and wired to IQ Envoy Consumption monitoring CT (CT-200-SPLIT) A pair of 200 A split core current transformers MECHANICAL DATA 75 kg (16.5 lbs) Dimensions (WxHxD) 75 ks (16.8 cm (14.75" x 19.5" x 6.63"). Height is 21.06" (53.5 cm) with mounting brackets. Weight 7 bo to A breaker inputs 1 ho 20.40% Gopper conductors - 40.40% C to 446° C (40° to 115° F) Cooling Natural convecting 4, NEMA type 3R, polycarbonate construction Weight 7 20 A b So A breaker	BRK-10A-2-240 BRK-15A-2-240	Circuit breaker, 2 pole, 10A, Eaton BR210 Circuit breaker, 2 pole, 15A, Eaton BR215
XA-PLUG-120-3 Accessory receptacle for Power Line Carrier in IQ Combiner 3-ES / 3C-ES (required for EPLC-01) XA-ENV-PCBA-3 Replacement IQ Envoy printed circuit board (PCB) for Combiner 3-ES / 3C-ES ELECTRICAL SPECIFICATIONS Continuous duty Rating Continuous duty System voltage 120/240 VAC, 60 Hz Eaton BR series busbar rating 125 A Max. continuous current rating (nput from PV/storage) 64 A Max. fuse/circuit ratin (ginput from PV/storage) Up to four 2-pole Eaton BR series Distributed Generation (DG) breakers only (not included) Max. fuse/circuit ratin (ginput) 90 A Branch circuits (solar and/or storage) Up to four 2-pole Eaton BR series Distributed Generation (DG) breakers only (not included) Max. fuse/circuit rating (with by the Carbon	EPLC-01	Power line carrier (communication bridge pair), quantity - one pair
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MECHANICAL DATA Dimensions (WxHxD) 37.5 x 49.5 x 16.8 cm (14.75" x 19.5" x 6.63"). Height is 21.06" (53.5 cm) with mounting brackets. Weight 7.5 kg (16.5 lbs) Ambient temperature range -40° C to +46° C (-40° to 115° F) Cooling Natural convection, plus heat shield Enclosure environmental rating Outdoor, NRTL-certified, NEMA type 3R, polycarbonate construction Wire sizes - 20 A to 50 A breaker inputs: 14 to 4 AWG copper conductors • 60 A breaker branch input: 4 to 1/0 AWG copper conductors • Nain lug combined output: 10 to 2/0 AWG copper conductors • Neutral and ground: 14 to 1/0 copper conductors sizing. Altitude To 2000 meters (6,560 feet) INTERNET CONNECTION OPTIONS 802.11b/g/n Cellular CELLMODEM-M1 4G based LTE-M1 cellular modem (included only with IQ Combiner 3C-ES). Note that an Enphase Mobile Connect cellular modem is required for all Ensemble installations. Ethernet Optional, 802.3, Cat5E (or Cat 6) UTP Ethernet cable (not included) COMPLIANCE UL 1741, CAN/CSA C22.2 No. 107.1, 47 CFR, Part 15, Class B, ICES 003 Production metering: ancuracy class 2.5	Production metering CT	200 A solid core pre-installed and wired to IQ Envoy
Dimensions (WxHxD) 37.5 x 49.5 x 16.8 cm (14.75" x 19.5" x 6.63"). Height is 21.06" (53.5 cm) with mounting brackets. Weight 7.5 kg (16.5 lbs) Ambient temperature range -40° C to +46° C (-40° to 115° F) Cooling Natural convection, plus heat shield Enclosure environmental rating Outdoor, NRTL-certified, NEMA type 3R, polycarbonate construction Wire sizes - 20 A to 50 A breaker inputs: 14 to 4 AWG copper conductors - 60 A breaker branch input: 4 to 1/0 AWG copper conductors - Main lug combined output: 10 to 2/0 AWG copper conductors - Neutral and ground: 14 to 1/0 copper conductors - Neutral and ground: 14 to 1/0 copper conductors sizing. Altitude To 2000 meters (6,560 feet) INTERNET CONNECTION OPTIONS 802.11b/g/n Cellular CELLMODEM-M1 4G based LTE-M1 cellular modem (included only with IQ combiner 3C-ES). Note that an Enphase Mobile Connect cellular modem is required for all Ensemble installations. Ethernet Optional, 802.3, Cat5E (or Cat 6) UTP Ethernet cable (not included) COMPLIANCE UL 1741, CAN/CSA C22.2 No. 107.1, 47 CFR, Part 15, Class B, ICES 003 Production metering: ANSI C12.20 accuracy class 0.5 (PV production) Consumption metering: accuracy class 2.5	Consumption monitoring CT (CT-200-SPLIT)	A pair of 200 A split core current transformers
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CoolingNatural convection, plus heat shieldEnclosure environmental ratingOutdoor, NRTL-certified, NEMA type 3R, polycarbonate constructionWire sizes· 20 A to 50 A breaker inputs: 14 to 4 AWG copper conductors · 60 A breaker branch input: 4 to 1/0 AWG copper conductors · Main lug combined output: 10 to 2/0 AWG copper conductors · Neutral and ground: 14 to 1/0 copper conductors Always follow local code requirements for conductor sizing.AltitudeTo 2000 meters (6,560 feet)INTERNET CONNECTION OPTIONSIntegrated Wi-Fi802.11b/g/nCellularCELLMODEM-M1 4G based LTE-M1 cellular modem (included only with IQ Combiner 3C-ES). Note that an Enphase Mobile Connect cellular modem is required for all Ensemble installations.EthernetOptional, 802.3, Cat5E (or Cat 6) UTP Ethernet cable (not included)COMPLIANCEUL 1741, CAN/CSA C22.2 No. 1071, 47 CFR, Part 15, Class B, ICES 003 Production metering: ANSI C12.20 accuracy class 0.5 (PV production) Consumption metering: ANSI C12.20 accuracy class 2.5	Weight	7.5 kg (16.5 lbs)
Enclosure environmental rating Outdoor, NRTL-certified, NEMA type 3R, polycarbonate construction Wire sizes • 20 A to 50 A breaker inputs: 14 to 4 AWG copper conductors • 60 A breaker branch input: 4 to 1/0 AWG copper conductors • Main lug combined output: 10 to 2/0 AWG copper conductors • Main lug combined output: 10 to 2/0 AWG copper conductors • Neutral and ground: 14 to 1/0 copper conductors • Neutral and ground: 14 to 1/0 copper conductors • Neutral and ground: 14 to 1/0 copper conductors • Neutral and ground: 14 to 1/0 copper conductors • Neutral and ground: 14 to 1/0 copper conductors • Neutral and ground: 14 to 1/0 copper conductors • Neutral and ground: 14 to 1/0 copper conductors • Neutral and ground: 14 to 1/0 copper conductors • Neutral and ground: 14 to 1/0 copper conductors • Neutral and ground: 14 to 1/0 copper conductors • Neutral and ground: 14 to 1/0 copper conductors • Neutral and ground: 14 to 1/0 copper conductors • Neutral and ground: 14 to 1/0 copper conductors • Neutral and ground: 14 to 1/0 copper conductors • Neutral and ground: 14 to 1/0 copper conductors • Neutral and ground: 14 to 1/0 copper conductors • Neutral and ground: 14 to 1/0 copper conductors • Neutral and ground: 14 to 1/0 copper conductors • Neutral and ground: 14 to 1/0 coper conductors • Outral and ground: 14 to 1/0 copper conductors • Neutral and gr	Ambient temperature range	-40° C to +46° C (-40° to 115° F)
Wire sizes 20 A to 50 A breaker inputs: 14 to 4 AWG copper conductors 60 A breaker branch input: 4 to 1/0 AWG copper conductors Main lug combined output: 10 to 2/0 AWG copper conductors Neutral and ground: 14 to 1/0 copper conductors Note Cellular Cellular Cellular Cellular Cellular Modem is required for all Ensemble installations. Ethernet Optional, 802.3, Cat5E (or Cat 6) UTP Ethernet cable (not included) COMPLIANCE Compliance, Combiner UL 1741, CAN/CSA C22.2 No. 107.1, 47 CFR, Part 15, Class B, ICES 003 Production metering: ANSI C12.20 accuracy class 0.5 (PV production) Consumption metering: accuracy class 2.5 <td>Cooling</td><td>Natural convection, plus heat shield</td>	Cooling	Natural convection, plus heat shield
 60 A breaker branch input: 4 to 1/0 AWG copper conductors Main lug combined output: 10 to 2/0 AWG copper conductors Neutral and ground: 14 to 1/0 copper conductors Always follow local code requirements for conductor sizing. Altitude To 2000 meters (6,560 feet) INTERNET CONNECTION OPTIONS Integrated Wi-Fi 802.11b/g/n CelLLMODEM-M1 4G based LTE-M1 cellular modem (included only with IQ Combiner 3C-ES). Note that an Enphase Mobile Connect cellular modem is required for all Ensemble installations. Ethernet Optional, 802.3, Cat5E (or Cat 6) UTP Ethernet cable (not included) COMPLIANCE Compliance, Combiner UL 1741, CAN/CSA C22.2 No. 107.1, 47 CFR, Part 15, Class B, ICES 003 Production metering: ANSI C12.20 accuracy class 0.5 (PV production) Consumption metering: accuracy class 2.5 	Enclosure environmental rating	Outdoor, NRTL-certified, NEMA type 3R, polycarbonate construction
INTERNET CONNECTION OPTIONS Integrated Wi-Fi 802.11b/g/n Cellular CELLMODEM-M1 4G based LTE-M1 cellular modem (included only with IQ Combiner 3C-ES). Note that an Enphase Mobile Connect cellular modem is required for all Ensemble installations. Ethernet Optional, 802.3, Cat5E (or Cat 6) UTP Ethernet cable (not included) COMPLIANCE UL 1741, CAN/CSA C22.2 No. 107.1, 47 CFR, Part 15, Class B, ICES 003 Production metering: ANSI C12.20 accuracy class 0.5 (PV production) Consumption metering: accuracy class 2.5	Wire sizes	 60 A breaker branch input: 4 to 1/0 AWG copper conductors Main lug combined output: 10 to 2/0 AWG copper conductors Neutral and ground: 14 to 1/0 copper conductors
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Cellular CELLMODEM-M1 4G based LTE-M1 cellular modem (included only with IQ Combiner 3C-ES). Note that an Enphase Mobile Connect cellular modem is required for all Ensemble installations. Ethernet Optional, 802.3, Cat5E (or Cat 6) UTP Ethernet cable (not included) COMPLIANCE UL 1741, CAN/CSA C22.2 No. 107.1, 47 CFR, Part 15, Class B, ICES 003 Production metering: ANSI C12.20 accuracy class 0.5 (PV production) Consumption metering: accuracy class 2.5	INTERNET CONNECTION OPTIONS	
that an Enphase Mobile Connect cellular modem is required for all Ensemble installations. Ethernet Optional, 802.3, Cat5E (or Cat 6) UTP Ethernet cable (not included) COMPLIANCE UL 1741, CAN/CSA C22.2 No. 107.1, 47 CFR, Part 15, Class B, ICES 003 Production metering: ANSI C12.20 accuracy class 0.5 (PV production) Consumption metering: accuracy class 2.5	Integrated Wi-Fi	802.11b/g/n
COMPLIANCE Compliance, Combiner UL 1741, CAN/CSA C22.2 No. 107.1, 47 CFR, Part 15, Class B, ICES 003 Production metering: ANSI C12.20 accuracy class 0.5 (PV production) Consumption metering: accuracy class 2.5		
Compliance, Combiner UL 1741, CAN/CSA C22.2 No. 107.1, 47 CFR, Part 15, Class B, ICES 003 Production metering: ANSI C12.20 accuracy class 0.5 (PV production) Consumption metering: accuracy class 2.5	Ethernet	Optional, 802.3, Cat5E (or Cat 6) UTP Ethernet cable (not included)
Production metering: ANSI C12.20 accuracy class 0.5 (PV production) Consumption metering: accuracy class 2.5		
	Compliance, Combiner	Production metering: ANSI C12.20 accuracy class 0.5 (PV production)
	Compliance, IQ Envoy	

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