

EN-240 for the Enphase® Envoy®



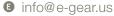
The ACXIS® AC Combiner (EN-240) dramatically simplifies the installation and communication setup of any PV system using Enphase® microinverters and the Envoy® monitoring gateway. Combining up to 5 incoming AC branch circuits, it eliminates the need for traditional PV load centers allowing the Envoy to be mounted at the point of branch circuit interconnection, maximizing Power Line Communication strength between the inverters and Envoy gateway. This patented solution includes ferrite filters that keep line-noise from interfering with PLC communication, LED branch circuit current indicators, surge protection and other trouble shooting features all enclosed in a NEMA 3RX weather resistant enclosure.

The ACXIS® AC Combiner will not only turn your PV interconnection, monitoring setup and troubleshooting into a time saving, predictable process, but can eliminate costly post-install service calls due to communication and interconnection issues.

E-GEARengineered energy solutions







US Patent 8,847,614 B2



Benefits

PERMANENTLY ELIMINATE THE TIME-CONSUMING HUNT FOR A VIABLE ENVOY LOCATION

Eliminate Customer frustration, time-consuming and costly searches throughout your customer's home for an acceptable Envoy location that allows only minimum communication strength between the Envoy and roof-mounted Microinverters due to line noise and other interference.

ELIMINATE INTERMITTENT SIGNAL LOSS BETWEEN THE ENVOY AND MICROINVERTERS

Allowing the Envoy to be mounted as close to the Microinverters as possible, directly at the point of Branch Circuit interconnection, maximizes Power Line Communication (PLC) signal strength between the Envoy Communications Gateway™ and the Microinverters. This means maximum Envoy signal strength to "every" inverter, First Time - Every Time.

ELIMINATE "CROSS TALK" INTERFERENCE FROM OTHER PV SYSTEMS IN THE NEIGHBORHOOD

PV systems using PLC communication protocols in close proximity to each other can contaminate each system's data collection and reporting capabilities. The included Ferrite Rings, properly installed, filter outside PLC communication devices from interfering with PLC communication inside the ACXIS® AC Combiner.

REDUCE TROUBLE SHOOTING TIME WITH THE CHOICE OF EITHER PLC OR WIRELESS COMMUNICATION TO THE ROUTER

The ACXIS® AC combiner accommodates either Envoy Wireless or PLC bridge adaptor configurations allowing you to easily swap to the most effective router communication methods, avoiding costly troubleshooting time.





SHIPS READY FOR YOUR CONFIGURATION

ELIMINATE UNPREDICTABLE POWER LINE COMMUNICATION (PLC) INTERFERENCE ISSUES

The included Ferrite Rings prevent regional line noise created from lighting ballasts, touch lamps, dimmers, ceiling fans, inductive loads, etc. from interfering with consistent PLC communication between the Microinverters and Envoy Communications Gateway.

REDUCE FRUSTRATING "ENVOY NOT REPORTING" EMAILS TO YOUR CUSTOMER AND TECH TEAM

Placing the Communication Gateway in a dedicated and secure location removes the possibility that a family member inadvertently unplugs or moves the Envoy to a power strip or location that prevents consistent and effective communication to the router or microinverters.

REDUCE LABOR COSTS THROUGH REDUCED INSTALL TIMES

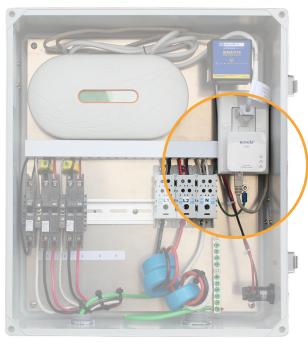
The ACXIS® AC Combiner simplifies the interconnection and monitoring setup process, dramatically reducing installer time on site, allowing each PV installation to become a repeatable and predictable process.

DRAMATICALLY REDUCE THE TRAINING TIME REQUIRED FOR NEW INSTALLERS

Standardizing your interconnection and monitoring setup process allows you to standardize new installer training methods, reducing the time it takes to get productive installers in the field.

PERMANENTLY SOLVE RECURRING COMMUNICATION ISSUES ON "PAST" INSTALLS

Easily retrofittable, the ACXIS® AC Combiner can be integrated into troublesome PAST installations, effectively eliminating future truck rolls due to recurring communication or interconnection challenges.



ACCOMMODATES POPULAR CONFIGURATIONS



ADAPTS TO THE MOST EFFECTIVE CONFIGURATIONS

ELIMINATE COSTLY TRUCK ROLLS DUE TO COMMUNICATION RELATED SERVICE CALLS

The ACXIS® AC Combiner can eliminate the vast majority of tech support truck rolls related to communication issues by filtering out, supply side and demand side line noise caused by home appliances, electronics and other conflicting PLC devices.

REDUCE TRUCK ROLLS DUE TO INTERCONNECTION & ELECTRICAL ISSUES

Customer viewable LED branch circuit current indicators, circuit breakers, surge trip indicator and exterior grid-up indicator light allow your service technician to work with the customer over the phone remotely, to diagnose many common causes of system downtime.

REDUCE DESIGN COMPLEXITY AND THE NEED FOR PRE-INSTALL SERVICE UPGRADES

Because the ACXIS® AC Combiner does NOT incorporate a common AC buss, PV designers can avoid over-current protection limitations that often require multiple PV load centers and other costly pre-install service upgrades. Install up to 100 Amps of PV Breakers in a single enclosure.

SAVE MONEY AND CUSTOMER WALL SPACE BY CONSOLIDATING INTERCONNECTION EQUIPMENT

All in one fiberglass construction includes the UL Certified AC Combiner with installed breakers, LED branch circuit current indicators, surge protection, dedicated Envoy® mounting and GFI power protection, exterior grid-up indicator light and other integrated features reduce the cost and space needed for additional interconnection equipment.

INSTALL UP TO 20kW AC WITH A SINGLE ACXIS® AC COMBINER

Each EN-240 can accommodate up to 5 Enphase branch circuits or approximately 20kW AC from a single ACXIS® AC Combiner.

INCREASE YOUR COMPETITIVE ADVANTAGE

Standardized Installation and Setup processes across all installation crews means less install errors, shorter more predictable install times and fewer service related truck rolls. Lower customer support costs lead to better margins and/or the ability to offer more competitive pricing. Happy customers generate more post-sale customer referrals.

ADDITIONAL FEATURES:

- NEMA 3RX fiberglass construction prevents bending or warping in hot or cold climates.
- Passive ventilation eliminates the need for fans or other moving parts while keeping bugs and spiders out.
- Integrated GFI receptacle protects the Envoy gateway from power supply damage.
- Accommodates Envoy Wireless or Bridge Adaptor communication to the router.
- Lockable stainless steel closures keep settings and components secure while providing authorized homeowner access.
- Lightweight 15.44 lbs., 14"W x 17.5"H x 5"D
- Combines up to 5 AC Branch Circuits or approximately 20kW AC. (for example: 80 Enphase M250-240v Microinverters)
- Integrated supply side surge protection, protects the Envoy and other internal components.

ACXIS® AC CIRCUIT COMBINER

DESIGN

EN-240 for the Enphase® Envoy®



	DESIGN
NEMA 3RX Enclosure	An appreciable upgrade from common Nema 3 enclosures. Provides an additional, significant level of protection against corrosion in challenging environments.
Heat Vents	Allows the heat out, but prohibits critters from getting in. Passive ventilation means no moving parts.
Lockable Enclosure	Provides security for internal components.
Aesthetically Pleasing	It looks great. Dimensions are: 14"W x 17.5"H x 5"D
	INSTALLATION
5 Back-fed Breakers	Handles up to 5 individual branch circuits, allowing for significant system expansion—20 kW+ system sizes. ACXIS'® generous number of breakers allows wide installation versatility. For example, in some installations, where it may be desirable to split branch circuits due to physical roof limitations, the two individual split circuits can be run directly to the ACXIS® without having to first join them on the roof.
	TROUBLESHOOTING
External Status Light	Large external indicator quickly confirms connection to voltage from the utility.
Current Indicators	LED lights confirm electrical current flow from each independent branch circuit.
Surge Arrester	Includes surge suppression from severe transient activity.
	SYSTEM MONITORING
Compatibility	Specifically designed to house the industry-leading Enphase Envoy® system monitoring device.
Ferrite Rings	Assures strong and noise-free Ethernet bridge communication, while filtering out undesired transients and noise.
Device Placement	The placement of the monitoring device is optimally located within the ACXIS® to prevent site noise and system cross-talk from other closely located PV systems. Cross-talk disrupts communication between the microinverters and the monitoring device.
	COST SAVINGS
Accelerated Training	Train more personnel faster. ACXIS® streamlines the training process to allow your company to keep pace with the fast growth of the industry.
Reduced Trouble Calls	Thanks to the ACXIS'® simple troubleshooting status indicators, the end-user can troubleshoot the system and often determine the cause of problems before placing a trouble call. Owner's manual can be downloaded at: www.e-gear.us.
Consistent Installation	Multiple crews means multiple processes and approaches to installation. ACXIS® reduces installation variables to a single, simple installation process.

for more information visit: e-gear.us

