

Model ZPCI

Universal Inverting Phase Couplers

Boosts signals between split-phases

The ZPCI series of Universal Inverting Phase Couplers is unique in many ways (patent pending). Unlike conventional phase couplers, multiple ZPCI units can be used in a home (e.g. one ZPCI per breaker panel). This is not the case for 'conventional' phase couplers where only one can be used per home. Two or more 'conventional' phase couplers will reduce (attenuate) signals, as will a mix of 'conventional' and 'inverting' phase coupler types.

Phase couplers boost powerline signals by providing a bridge between the two, 120 VAC electrical phases (A and B) in a split-phase, 240 VAC home. Without a phase coupler signals travel out to the street-side transformer on one phase and come back in the home 'inverted' on the other phase; usually at a lower (attenuated) level. In homes up to 2000 Sq. Ft. and within 100 feet of the transformer, phase coupling may not be needed for UPB. However, as the size of the home and distance from the transformer increase, phase coupling becomes more important. A Universal Inverting Phase Coupler is recommended in every main breaker panel and sub-panel to ensure maximum signal strength.

The Universal Inverting Phase Couplers are 'universal' in the sense that they pass UPB, X10 and other higher frequency signals. They are unique because they use an internal transformer to invert the signal between phases and isolate the internal capacitance. The inverted signal, phase coupled at the breaker panel, adds signal strength to the inverted signal returning from the street-side transformer. Because the internal transformer of the inverting phase coupler isolates the capacitance of the phase coupler, more than one can be used in a home without the additional capacitance attenuating signals. The net effect is higher signal strength and less attenuation. The Inverting Phase Coupler avoids the issues of conventional phase couplers: 1) avoids additional capacitance that attenuates signals, and 2) avoids non-inverted signals cancelling inverted signals. Inverting phase couplers can eliminate the need of split phase repeaters.



Phase coupling is most effective at the main breaker panel and sub-panels where models ZPCI-B and ZPCI-W fit. Both of these models have surge suppression and status LEDs. For quick and easy installation in small (one main breaker panel) homes, the plug in model ZPCI-Px0A can be used. Models include:

- Model ZPCI-B – Breaker-box Mount Universal Inverting Phase Coupler for most standard power centers (Murray/Crouse Hinds – MP; Siemens – QP; Cutler Hammer / Eaton – BR, CL; GE – THQL, THQP; SquareD – HOM) that have available space for a 220V circuit breaker.
- Model ZPCI-W – Wire-in Universal Inverting Phase Coupler is designed for mounting inside a junction box, beside the breaker panel.
- Model ZPCI-P30A or -P50A — Plug-in Universal Inverting Phase Coupler connects to a 30Amp (-P30A) or 50Amp (-P50A), 220 VAC, 3 prong receptacle used for clothes dryers, air conditioning units or stoves (see dimensions for plug difference).

For commercial, 3-phase power applications, refer to Model UTR, Three Phase Repeater.

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Model ZPCI

Specifications

Operating Voltage: two-phase, 120VAC +/- 10% per phase
 Voltage Suppression: 500V L-N, 900V L-L (ZPCI-B / -W only)
 Peak Surge Current: 27,000A per phase (ZPCI-B / -W only)
 Operating Temp: -40 to 50°C

ZPCI-B

Dimensions: 3.67"H x 1.97"W x 2.58"D (93 x 50 x 66mm)
 Weight: 7 oz (184g)
 Mounting: breaker box
 Compatibility: GE, Murray/Crouse, Cutler-Hammer/Eaton, Siemens, Square D Homeline®

ZPCI-W

Dimensions: 4.10"H x 1.75"W x 1.44"D (104 x 45 x 37mm)
 Weight: 3.8 oz (108g)
 Mounting: standard junction box

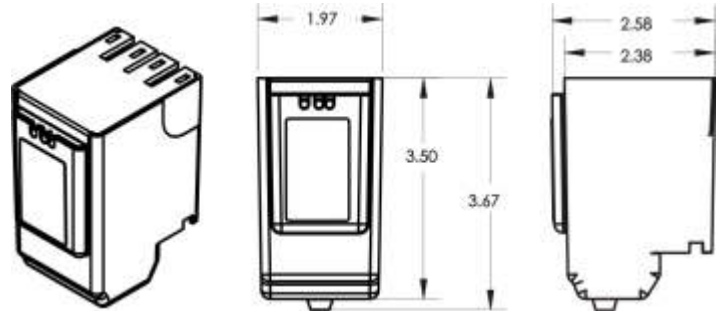
ZPCI-Px0A

Dimensions: 2.0"H x 2.5"W x 16.9"D (51 x 63 x 429mm)
 Weight: 1.57 lbs. (2.22 Kg)
 Mounting: Receptacle; 220 VAC, NEMA 10-30 or 10-50

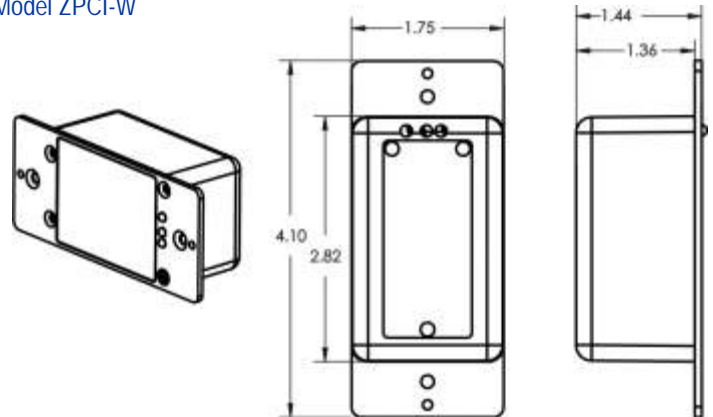
Prices and specifications are subject to change without notice.

Dimensions (inches)

Model ZPCI-B

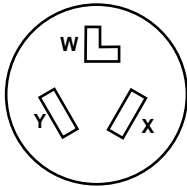


Model ZPCI-W

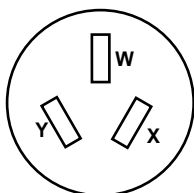


Receptacles

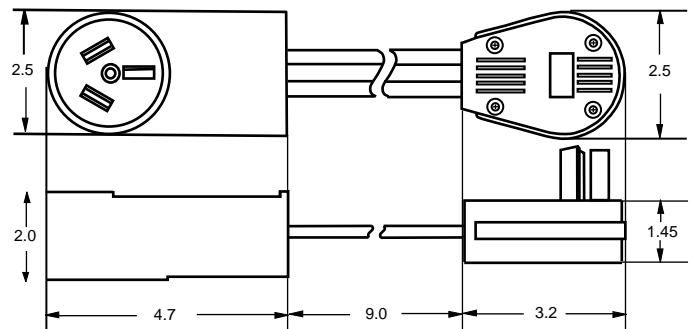
ZPCI-P30A



ZPCI-P50A



Model ZPCI-P30A or -P50A



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