

PDA6405

Split Core AC Current Transformers



FEATURES

- 100 A, 200 A, 400 A, 600 A, and 1000 A AC Ranges
- 0-5 AAC Output
- Split Core Convenience
- Compact Design
- 1% Accuracy
- UL recognized for US and Canada (E341727)

OVERVIEW

The PDA6405 split core AC current transformers convert the high AC current flowing through a cable or wire to a 0-5 AAC output and are available in ranges of 100, 200, 400, 600, and 1000 AAC. These nonintrusive devices feature split core convenience for easy installation and are a cost-effective solution for monitoring load or proof of operation. These current transformers are ideal for monitoring current loads on pumps, driving fans and blowers, and sensing the status of heating coils and lighting.

SPECIFICATIONS

Current Range: 100 A, 200 A, 400 A, 600 A, and 1000 A AC (based on model)

Output: 0-5 AAC

Accuracy: +/- 1%

Burden: 2 VA

Insulation Voltage: CAT IV 250 or CAT III 600 VAC

Maximum Primary Voltage: 5000 VAC

(Insulated Conductor)

Phase Angle: Less than 2 degrees at 50% of rated current

Frequency Range: 50/60 Hz

Operating Temperature: -40 to 55°C

Humidity: 0-95% RH non-condensing, Indoor use only

Pollution Degree: 2

Leads: 18AWG, Length: 39.4" (1.0 m)

UL File Number: UL recognized for US and Canada (E341727)

IMPORTANT: The PDA6405 current transformer is intended to provide an input to equipment under normal operating conditions. Where failure or malfunction of the current transformer could lead to personal injury or property damage to the controlled equipment or other property, additional precautions must be designed into the control system. Incorporate and maintain other devices, such as supervisory or alarm systems or safety or limit controls, intended to warn or protect against failure or malfunction of the current transducer device.

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DIMENSIONS

Model	Input	Overall Dimensions	Opening Dimensions	Weight
PDA6405-100	100 A	2.6" x 1.8" x 1.4" (65 mm x 46 mm x 35 mm)	0.9" X 0.9" (24 mm X 24 mm)	8 oz (227 g)
PDA6405-200	200 A	2.6" x 1.8" x 1.4" (65 mm x 46 mm x 35 mm)	0.9" X 0.9" (24 mm X 24 mm)	8 oz (227 g)
PDA6405-400	400 A	3.3" x 2.2" x 1.6" (85 mm x 57 mm x 41 mm)	1.4" X 1.4" (36 mm X 36 mm)	13.6 oz (385 g)
PDA6405-600	600 A	3.3" x 2.2" x 1.6" (85 mm x 57 mm x 41 mm)	1.4" X 1.4" (36 mm X 36 mm)	15.2 oz (430 g)
PDA6405-1000	1000 A	4.7" x 3.1" x 2.4" (120 mm x 80 mm x 60 mm)	2.0" X 2.0" (50 mm X 50 mm)	2.2 lb (1 kg)

INSTALLATION



WARNING: Risk of Electrical Shock. Disconnect the power supply before making electrical connections. Contact with components carrying hazardous voltage can cause electric shock and may result in severe personal injury or death.

WIRING

1. Disconnect the conductor cable from the power source.
2. Snap the split core around the power conductor cable and close the core until the core snaps shut.
3. Wire the output leads to desired device per Figure 2
4. Reconnect the power conductor cable. See Figure 3 for a wiring example.

If the measured current is too low to be detected or it is higher than the maximum current rating of the transformer, use the following methods to increase or decrease the current:

If the measured current is too low to be detected use the following method to increase the current:

Wrap the conductor (wire) through the sensing hole and around the current transformer body to produce multiple turns to increase the measured current. The measured current is equal to the actual current multiplied by the number of turns. See Figure 1.

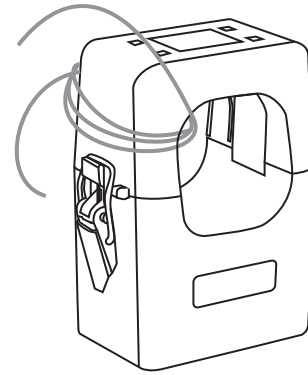


Figure 1: PDA6405 Current Transformer Shown with Four Turns

The controller must be scaled to account for the extra turns. If four turns pass through the transducer as shown in figure 1, the normal controller reading must be divided by 4.

IMPORTANT: Failure to derate the current capacity could result in damage to the current transformer when using multiple turns to increase the measured current. Use the following formula to determine the new maximum current:

Example: If the maximum current rating of the CT is 100 A and the number of turns used is 4, then:
Maximum Line Current: $100 \text{ A} / 4 = 25 \text{ A}$

The new maximum current is equal to the current transformer current rating divided by the number of turns.

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CONNECTIONS

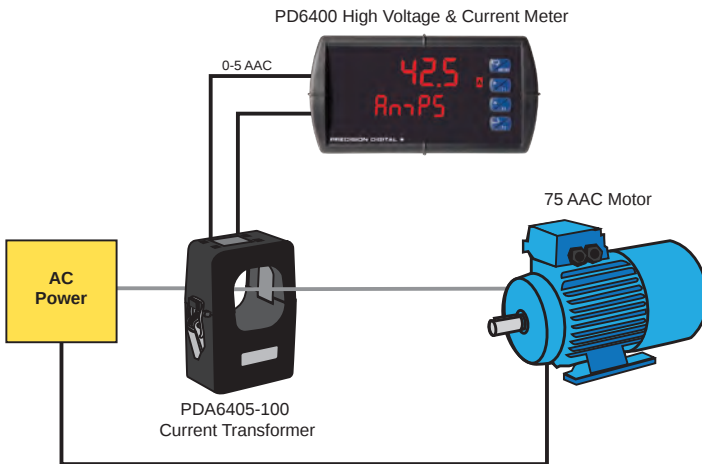


Figure 2: Measuring Current with PDA6405-100 Current Transformer and PD6400 digital panel meter.

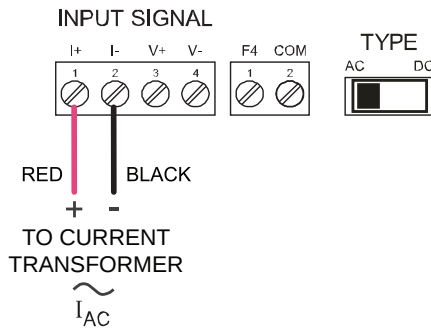


Figure 3: PD6400 Connections from PDA6405 Current Transformer with AC Switch Selected.

DIGITAL METERS FOR AC CURRENT

Precision Digital offers digital meters that will accept the 0-5 Amp AC output from its PDA6405 line of current transformers. These meters feature a dual line display that can show the current on the upper display and the units on the lower display. They can also be equipped with relays for alarm and control purposes and a 4-20 mA output signal. All AC current meters feature:

- (1) 0-300 V and (1) 0-5 A Inputs
- Multiplication for Apparent Power Calculation
- UL Listed
- 4 Relays & 4-20 mA Output
- Free Programming Software

PD6400 ProVu 1/8 DIN Panel Meter



- NEMA 4X Front Panel
- 0.6" (15 mm) Digits

PD2-6400 Helios Large Display Meter



- NEMA 4X Field Enclosure
- 1.8" (46 mm) Digits

ORDERING INFORMATION

Model	Description
PDA6405-100	100 AAC Current Transformer with 0-5 AAC Output
PDA6405-200	200 AAC Current Transformer with 0-5 AAC Output
PDA6405-400	400 AAC Current Transformer with 0-5 AAC Output
PDA6405-600	600 AAC Current Transformer with 0-5 AAC Output
PDA6405-1000	1000 AAC Current Transformer with 0-5 AAC Output