Phase Control





Description

The PHS series relays are designed for changing lamp intensity, varying the speed of a fan, or controlling the temperature of a heater. The effective output voltage is adjusted with an accessory external potentiometer suitable for line voltage applications.

Operation

Upon application of input voltage, effective output voltage can be adjusted by changing the external resistance value. As the external resistance increases, the effective output voltage decreases, and the inverse is also true.

Features & Benefits

Solid-state design	Longer life	
Single hole surface mounting	Provides quick and easy installation	
Up to 20 A steady state – 200 A inrush	Allows direct control of heavy loads	
External adjustment – potentiometer rated at 230 V ac	Allows direct control of heavy loads	
FEATURES	BENEFITS	

Applications

• Protection, control and/or monitoring of generators and other devices

Single Function Relays PHS Series

Specifications

Output

Type Variable voltage phase angle control

Rating Steady State (at 100 % On) Inrush*

1 A 10 A 6 A 60 A 10 A 100 A 20 A 200 A

Minimum LoadCurrent 100 mAVoltage Drop $\approx 2.0 \text{ V}$ at rated current

Input

 Voltage
 120 or 230 V ac

 Tolerance
 ±20%

AC Line Frequency 50/60 Hz

Protection

Output Contact Rating-SPST A300, 720VA @ 240 V ac (10 A max.)

General Characteristics

Dielectric Breakdown ≥ 2000 V RMS terminals to mounting surface

Insulation Resistance ≥100MΩ

Mechanical

Mounting *Surface mount with one #10 (M5 x 0.8) screwDimensionsH 50.8 mm (2"); W 50.8 mm (2"); D 38.4 mm (1.51")Termination0.25 in. (6.35 mm) male quick connect terminals

Environmental

 $\begin{array}{ll} \textbf{Operating/Storage Temperature} & -20 \ ^{\circ}\text{C to } 60 \ ^{\circ}\text{C} \ / \ -40 \ ^{\circ}\text{C to } 85 \ ^{\circ}\text{C} \\ \textbf{Humidity} & 95\% \ \text{relative, non-condensing} \\ \end{array}$

Weight 1 A: \approx 2.4 oz (68 g)

6, 10, & 20 A: \approx 3.9 oz (111 g)

External Adjustment Potentiometer

120 V ac 100KΩ rated at 1W

230 V ac 200KΩ rated at 2W; Must have insulation resistance suitable for line voltage applications.

Certification & Compliance

Accessories

P1004-174 (100kΩ 1W), **P1004-175** (200kΩ 2W) **Versa-Pot**

Panel mountable, industrial potentiometer recommended for remote time delay adjustment.

P0700-7 Versa-Knob

Designed for 0.25 in (6.35 mm) shaft of Versa-Pot. Semi-gloss industrial black finish.

P1015-64 (AWG 14/16) **Female Quick Connect**

These 0.25 in. (6.35 mm) female terminals are constructed with an insulator barrel to provide strain relief.

P1015-18 Quick Connect to Screw Adapter

Screw adapter terminal designed for use with all modules with 0.25 in. (6.35 mm) male quick connect terminals.



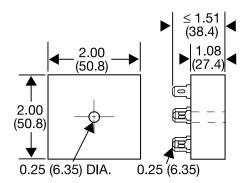
^{*}Units rated > 6 A must be bolted to a metal surface using the included heat sink compound. The maximum mounting surface temperature is 90 °C. Inrush: Non-repetitive for 16 ms.

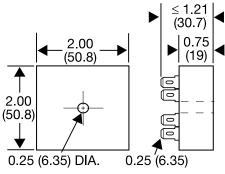
Ordering Information

MODEL	INPUT VOLTAGE	RATING
PHS120A10	120 V ac	10 A
PHS120A20	120 V ac	20 A
PHS120A6	120 V ac	6 A
PHS230A10	230 V ac	10 A
PHS230A20	230 V ac	20 A
PHS230A6	230 V ac	6 A

If you don't find the part you need, call us for a custom product 800-843-8848

Dimensions Inches (mm)

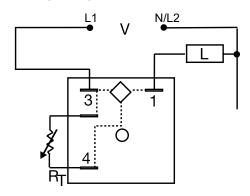




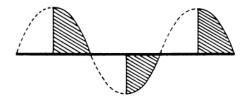
For units rated @ 1 A

Single Function Relays PHS Series

Wiring Diagram



Typical Output Waveform



Disclaimer Notice — Information furnished is believed to be accurate and reliable. However, users should independently evaluate the suitability of and test each product selected for their own applications. Littelfuse products are not designed for, and may not be used in, all applications. Read complete Disclaimer Notice at www.littelfuse.com/product-disclaimer.

