

Phase Control

PHS Series

AC Phase Control



10
YEAR
WARRANTY

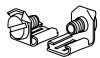
- External Adjustment - 230 V AC Rated Potentiometer
- 120 or 230 V AC Input Voltages Available
- Up to 20 A Steady State - 200 A Inrush
- Single Hole Surface Mounting

Approvals:

Accessories



Female quick connect
P/Ns:
P1015-13 (AWG 10/12)
P1015-64 (AWG 14/16)
P1015-14 (AWG 18/22)



Quick connect to
screw adaptor
P/N: **P1015-18**



Versa-knob
P/N: **P0700-7**

See accessory pages for specifications.

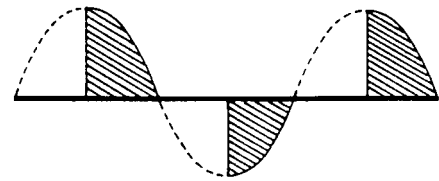
Description

The PHS Series is an ideal method of changing lamp intensity, varying the speed of a fan/motor, or controlling the temperature of a heater. The effective output voltage is adjusted with an accessory external potentiometer suitable for line voltage applications.

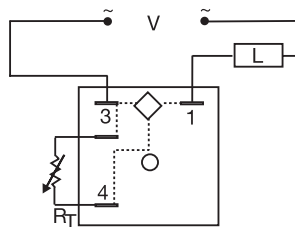
Operation

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

Typical Output Waveform



Connection



Triac Output Device

V = Voltage L = Load R_t = External Adjustment
Dashed lines are internal connections.

Ordering Table

| PHS Series | X Input | X Rating |
|---------------|------------------|-------------|
| | -120A - 120 V AC | - 1 A |
| | -230A - 230 V AC | - 6 A |
| | | - 10 A |
| | | - 20 A |

Example P/N: **PHS120A10**, **PHS230A6**

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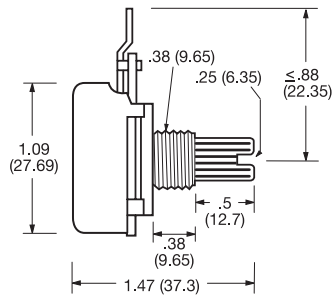
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Technical Data

| | | | |
|---|--|----------------|---|
| Output Type Rating | Variable voltage phase angle control | | *Units rated $\geq 6A$ 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. |
| | Steady State (at 100% On) | Inrush* | |
| | 1 A | 10 A | |
| | 6 A | 60 A | |
| | 10 A | 100 A | |
| | 20 A | 200 A | |
| Minimum Load Current | 100 mA | | |
| Voltage Drop | ≈ 2.0 V at rated current | | |
| Input Voltage Tolerance Frequency | 120 or 230 V AC +/-20% 50 ... 60 Hz | | |
| Protection Dielectric Breakdown Insulation Resistance | ≥ 2000 V RMS terminals to mounting surface ≥ 100 M Ω | | |
| Mechanical Mounting * Termination | Surface mount with one #10 (M5 x 0.8) screw 0.25 in. (6.35 mm) male quick connect terminals | | |
| Environmental Operating / Storage Temperature Humidity Weight | -20°C ... +60°C / -40°C ... +85°C 95% relative, non-condensing 1A: ≈ 2.4 oz (68 g) 6, 10, & 20A: ≈ 3.9 oz (111 g) | | |
| External Adjustment Potentiometer 120 V AC 230 V AC | 100K Ω rated at 1 W 200K Ω rated at 2 W Must have insulation resistance suitable for line voltage applications | | |

Potentiometer

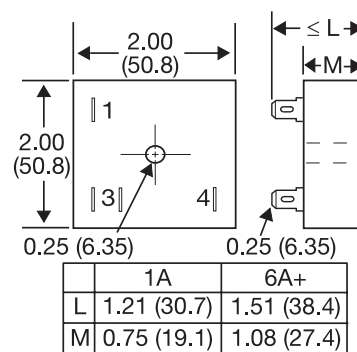


| Part Number | Value (Ohms) | Wattage |
|-------------|--------------|---------|
| P1004-174 | 100K | 1 W |
| P1004-175 | 200K | 2 W |

A durable conductive plastic potentiometer. Recommended for use with the PHS Series. It is designed to withstand high temperature and harsh environments. The shaft is slotted for screwdriver adjustment and can be panel mounted.

- Resistance values 100K and 200K +/-10%
- Rated Wattage at 70°C
- Linear taper
- Shaft rotation: 312° +/-3°
(effective rotation 275° +/-5°)

Mechanical View



Inches (Millimeters)