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

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

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

Output
Type: Variable voltage phase angle control
Rating: Steady State (at 100 % On)  Inrush*

<table>
<thead>
<tr>
<th>Current</th>
<th>1 A</th>
<th>6 A</th>
<th>10 A</th>
<th>20 A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inrush</td>
<td>10 A</td>
<td>60 A</td>
<td>100 A</td>
<td>200 A</td>
</tr>
</tbody>
</table>

Minimum Load: Current 100 mA
Voltage Drop: ≅ 2.0 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) screw
Dimensions: H 50.8 mm (2”); W 50.8 mm (2”); D 38.4 mm (1.51”)
Termination: 0.25 in. (6.35 mm) male quick connect terminals

Environmental
Operating/Storage Temperature: -20 °C to 60 °C / -40 °C to 85 °C
Humidity: 95% relative, non-condensing
Weight: 1 A: ≅ 2.4 oz (68 g)
6, 10, & 20 A: ≅ 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.

*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.

Certification & Compliance
UL Recognized: File E57310 UL508

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.
Ordering Information

<table>
<thead>
<tr>
<th>MODEL</th>
<th>INPUT VOLTAGE</th>
<th>RATING</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHS120A10</td>
<td>120 V ac</td>
<td>10 A</td>
</tr>
<tr>
<td>PHS120A20</td>
<td>120 V ac</td>
<td>20 A</td>
</tr>
<tr>
<td>PHS120A6</td>
<td>120 V ac</td>
<td>6 A</td>
</tr>
<tr>
<td>PHS230A10</td>
<td>230 V ac</td>
<td>10 A</td>
</tr>
<tr>
<td>PHS230A20</td>
<td>230 V ac</td>
<td>20 A</td>
</tr>
<tr>
<td>PHS230A6</td>
<td>230 V ac</td>
<td>6 A</td>
</tr>
</tbody>
</table>

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