

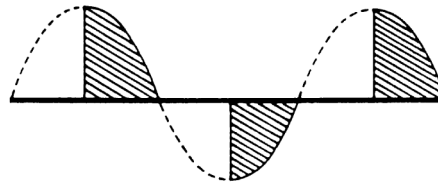
The PHS Series is an ideal method of changing lamp intensity, varying the speed of a fan/motor, or controlling the temperature of a heater. The effective output voltage is adjusted with an accessory external potentiometer suitable for line voltage applications.

For more information see:  
Appendix B, page 165, Figure 4 for dimensional drawing.  
Appendix C, page 172, Figure 40 for connection diagram.

### 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



### Features:

- External adjustment - 230VAC rated potentiometer
  - 120 or 230VAC input voltages available
  - Up to 20A steady state - 200A inrush
  - Single hole surface mounting
- Approvals:

### Auxiliary Products:

- **Versa-knob:** P/N: P0700-7
- **Quick connect to screw adaptor:** P/N: P1015-18
- **Female quick connect:** P/N: P1015-13 (AWG 10/12)  
P/N: P1015-64 (AWG 14/16)  
P/N: P1015-14 (AWG 18/22)
- **Potentiometers:** P/N: P1004-174 (100kΩ 1W)  
P/N: P1004-175 (200kΩ 2W)

### Available Models:

PHS120A10	PHS230A10
PHS120A20	PHS230A20
PHS120A6	PHS230A6
PHS230A1	

If desired part number is not listed, please call us to see if it is technically possible to build.

### Order Table:

<b>PHS</b>	<b>X</b>	<b>X</b>
	<b>Input Voltage</b>	<b>Rating</b>
	-120A - 120VAC	-1 - 1A
	-230A - 230VAC	-6 - 6A
		-10 - 10A
		-20 - 20A

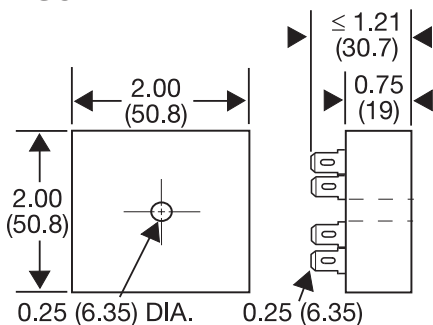
### Specifications

<b>Output</b>		<b>Mechanical</b>	
Type	Variable voltage phase angle control	Mounting *	Surface mount with one #10 (M5 x 0.8) screw
Rating	Steady State (at 100% On)	Dimensions	2 x 2 x 1.51 in. (50.8 x 50.8 x 38.4 mm)
	1A	Termination	0.25 in. (6.35 mm) male quick connect terminals
	6A		
	10A	<b>Environmental</b>	
	20A	Operating / Storage Temperature	-20° to 60°C / -40° to 85°C
Minimum Load Current	100mA	Humidity	95% relative, non-condensing
Voltage Drop	≅ 2.0V at rated current	Weight	1A: ≅ 2.4 oz (68 g) 6, 10, & 20A: ≅ 3.9 oz (111 g)
<b>Input</b>		<b>External Adjustment Potentiometer</b>	
Voltage	120 or 230VAC	120VAC	100KΩ rated at 1W
Tolerance	±20%	230VAC	200KΩ rated at 2W
AC Line Frequency	50/60Hz		Must have insulation resistance suitable for line voltage applications.
<b>Protection</b>			
Dielectric Breakdown	≥ 2000V RMS terminals to mounting surface		
Insulation Resistance	≥ 100MΩ		

\*Units rated ≥ 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 16ms.

# Appendix B - Dimensional Drawings

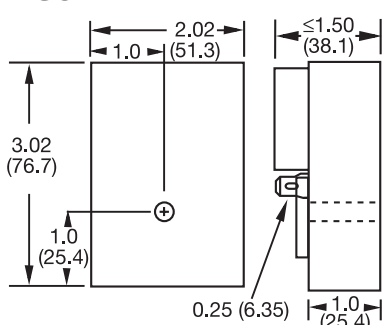
**FIGURE 1**



0.25 (6.35) DIA. 0.25 (6.35)

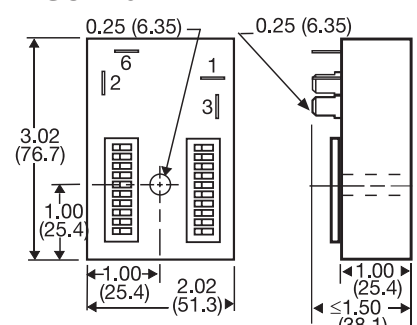
CT; ESD5; ESDR; FS100; FS200; FS300; KR3; KR9;  
KRDB; KRDI; KRDM; KRDR; KRDS; KRPD; KRPS;  
KSD1; KSD2; KSD3; KSD4; KSDB; KSDR; KSDS;  
KSDU; KSPD; KSPS; KSPU; KVM; T2D; TA; TAC1;  
TAC4; TDU; TDUB; TDUI; TDUS; TL; TMV8000;  
TS1; TS2; TS4; TS6; TSB; TSD1; TSD2; TSD3; TSD4;  
TSD6; TSD7; TSDB; TSDR; TSDB; TSDS; TSS; TSU2000

**FIGURE 2**



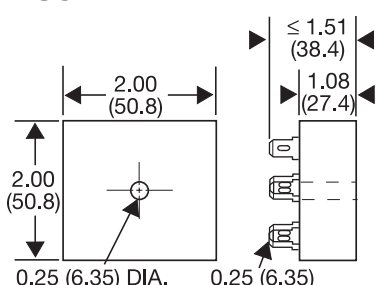
HLV; HRD3; HRD9; HRDB; HRDI;  
HRDM; HRDR; HRDS; HRID; HRIS;  
HRIU; HRPD; HRPS; HRPD; HRV; RS

**FIGURE 3**



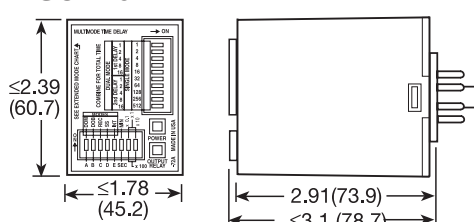
HSPZ

**FIGURE 4**



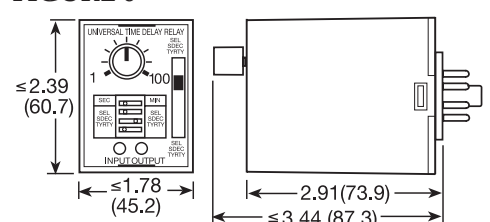
FA; FS; FSU1000\*; NHPD; NHPS; NHPU;  
NLF1\*; NLF2\*; PHS\*; PTHF\*; SIR1; SIR2;  
SLR1\*; SLR2\*; TH1; TH2; THC; THD1;  
THD2; THD3; THD4; THD7; THDB; THDM;  
THDS; THS

**FIGURE 5**



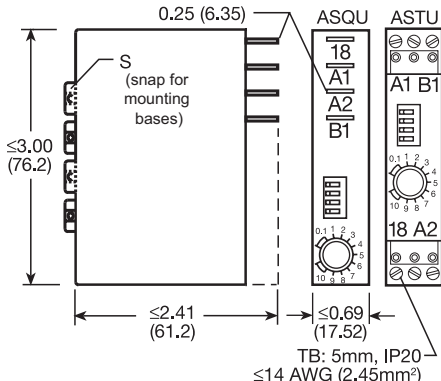
TRDU

**FIGURE 6**



TRU

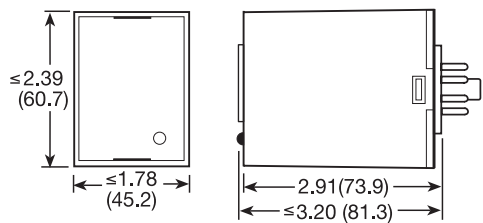
**FIGURE 7**



ASQU; ASTU; DSQU; DSTU

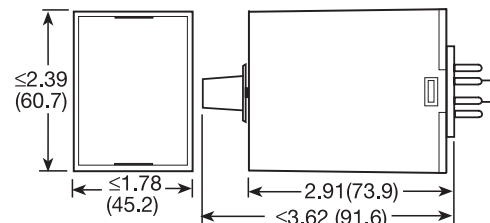
TB: 5mm, IP20  
≤14 AWG (2.45mm<sup>2</sup>)

**FIGURE 8**



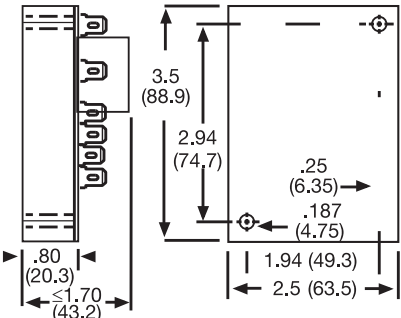
PLM; PLR; TDB; TDBH; TDBL; TDI; TDIH;  
TDIL; TDM; TDMB; TDMH; TDML; TDR;  
TDS; TDSH; TDSL

**FIGURE 9**



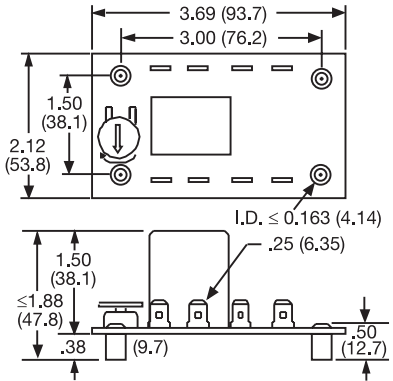
FS500; PRLB; PRM; PRLS; TRB; TRM; TRS

**FIGURE 10**



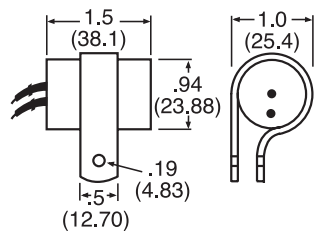
ERD3; ERDI; ERDM

**FIGURE 11**



ORB; ORM; ORS

**FIGURE 12**

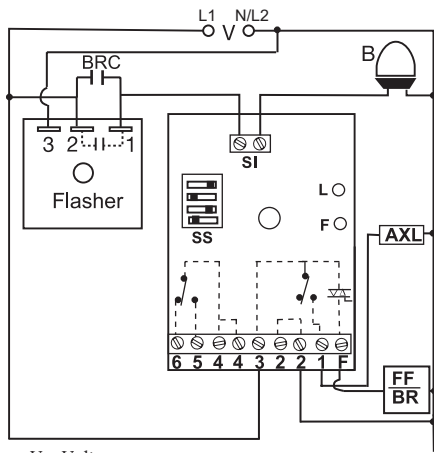


FS100; FS400

inches (millimeters)

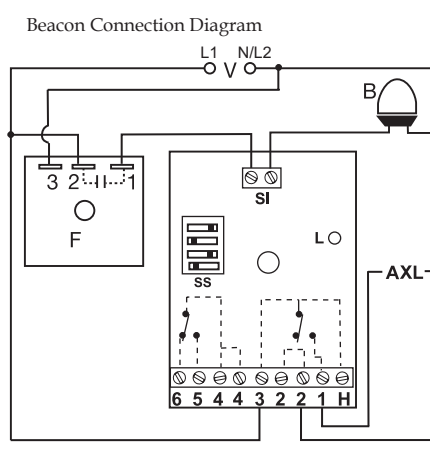
# Appendix C - Connection Diagrams

FIGURE 34 - FB9L



V = Voltage  
 B = LED Beacon  
 SS = Selector Switch  
 SI = Sensor Input  
 L = Indicator  
 F = Flasher Failure LED  
 AXL = Auxiliary Load/Alarm  
 FF = Flasher Failure/Bypass Relay  
 BR = Bypass Relay Contacts

FIGURE 35 - SCR9L



V = Voltage  
 B = Beacon Lamps  
 SS = Selector Switch  
 L = LED Indicator  
 F = Flasher  
 AXL = Auxiliary Load/Alarm  
 SI = Sensor Input  
 H = "3" Spare AC Hot Connection (2A max.)

Obstruction Lamp Connection Diagram

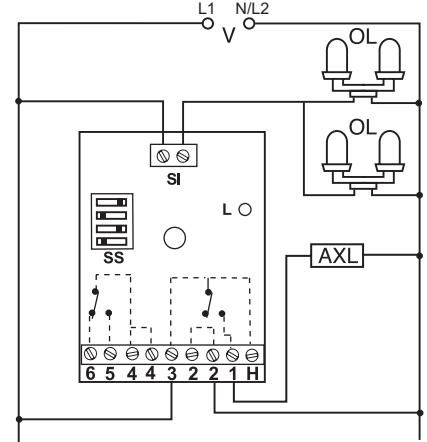
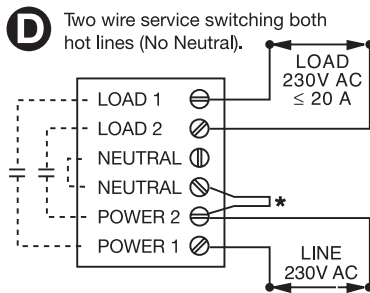
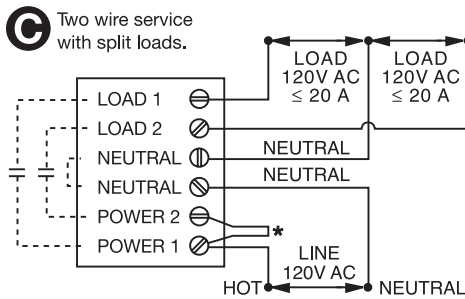
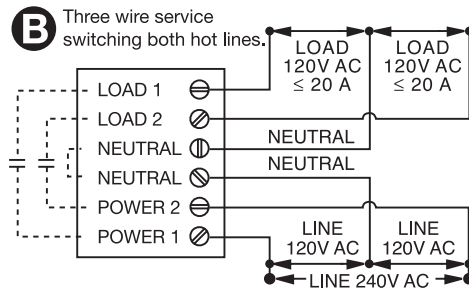
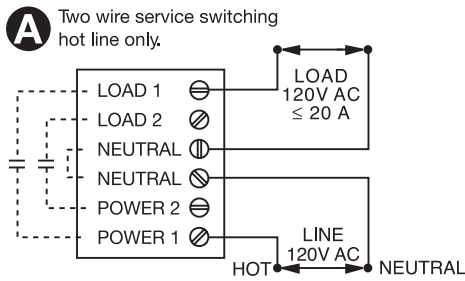
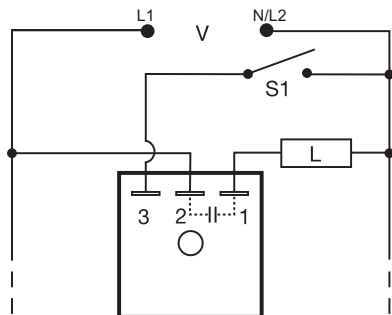


FIGURE 36 - PCR Series



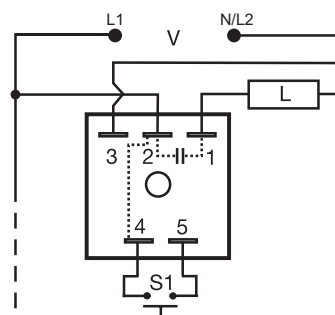
\* Customer Supplied Jumper    - - - - Internal Connection

FIGURE 38 - SLR Series



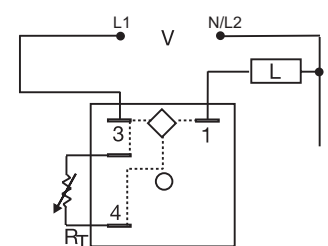
L = Load  
 S1 = Initiate Switch  
 Note: Normally open output is shown. Normally closed output is also available.

FIGURE 39 - NLF1/NLF2 Series



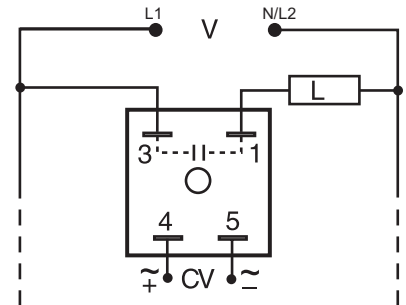
L = Load  
 S1 = Control Switch  
 Internal connections between terminals 2 & 4.

FIGURE 40 - PHS Series



Triac Output Device  
 V = Voltage  
 L = Load  
 R<sub>T</sub> = External Adjustment

FIGURE 37 - SIR1/SIR2 Series



V = Voltage  
 CV = Control Voltage  
 R = Reset  
 NC = Normally Closed Output  
 NO = Normally Open Output  
 —||— = Undefined time

Load may be connected to terminal 3 or 1.  
 Note: Normally open output is shown. Normally closed output is also available.