



The PLS Series is a low cost phase sensitive control that provides an isolated contact closure when the proper A-B-C phase sequence is applied. Protects sensitive 3-phase equipment and equipment operators from reverse rotation. Designed to be compatible with motor overloads or other 3-phase equipment protection devices. Protection for equipment control centers where frequent reconnection or electrical code makes reverse rotation protection essential. Examples include: mobile refrigerated containers, construction equipment, hoists, pumps, conveyors, elevators and escalators.

For more information see:  
Appendix B, page 166, Figure 19 for dimensional drawing.  
Appendix C, page 168, Figure 13 for connection diagram.

## Operation

The internal relay and LED are energized when the phase sequence is correct. The output relay will not energize if the phases are reversed. Reset is automatic upon correction of the fault.

## Features:

- Protects against phase reversal
- Low cost protection, one unit for all sized motors
- 3-wire connection for delta or wye systems
- Octal base connect - industry standard wiring
- Isolated, SPDT output contacts
- Factory calibrated - no adjustments required

Approvals:   

## Auxiliary Products:

- **Panel mount kit:** P/N: BZ1
- **Octal 8-pin socket:** P/N: OT08PC
- **3-phase fuse block/disconnect:** P/N: FH3P
- **2 Amp fuse:** P/N: P0600-11
- **Din rail:** P/N: C103PM (AI)

## Available Models:

PLS120A  
PLS240A  
PLS480A

## Order Table:

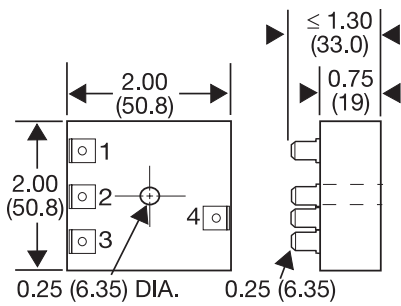
<u>Voltage</u>	<u>Part Number</u>
120VAC	PLS120A
208/240VAC	PLS240A
380/415VAC	PLS380A
440/480VAC	PLS480A

## Specifications

Line Voltage	3-phase delta or wye with no connection to neutral			Maximum Voltage	250VAC
Type	Nominal Voltage	Minimum Voltage	Maximum Voltage	<b>Protection</b>	
	120VAC	95VAC	135VAC	Isolation Voltage	120 & 240VAC ... ≥ 1500V RMS input to output
	208/240VAC	175VAC	255VAC		380 & 480VAC ... ≥ 2500V RMS input to output
	380/415VAC	310VAC	430VAC	<b>Mechanical</b>	
	440/480VAC	380VAC	500VAC	Mounting*	Plug-in socket
AC Line Frequency	50/60 Hz			Dimensions	3.2 x 2.39 x 1.78 in. (81.3 x 60.7 x 45.2 mm)
Phase Sequence	ABC			Termination	Octal 8-pin plug-in
<b>Response Times</b>	<b>Environmental</b>				
Pull-in	≤ 300ms			Operating / Storage Temperature	-40° to 55°C / -40° to 85°C
Drop-out	≤ 50ms			Weight	≈ 6 oz (170 g)
<b>Output</b>	*CAUTION: Select an octal socket rated for 600VAC operation.				
Type	Electromechanical relay, energized when the phase sequence is correct				
Form	Isolated SPDT				
Rating	120 & 240VAC	10A resistive @ 240VAC			
	380 & 480VAC	8A resistive @ 240VAC			

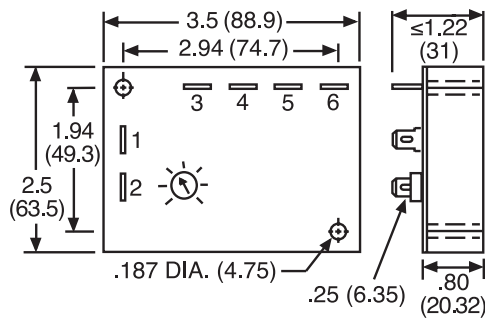
# Appendix B - Dimensional Drawings

FIGURE 13



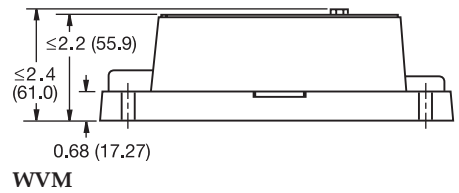
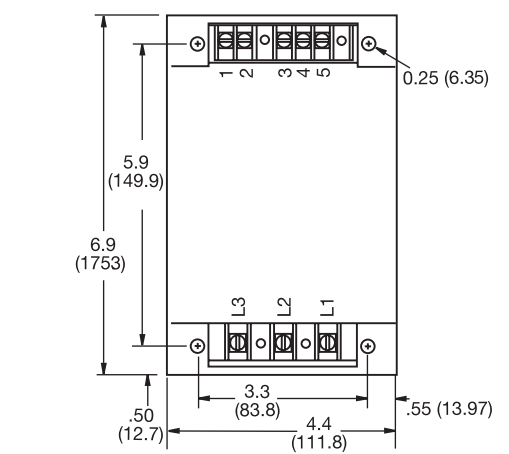
AF

FIGURE 14



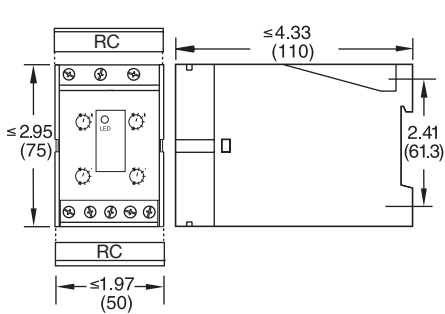
SC3; SC4; SQ

FIGURE 15



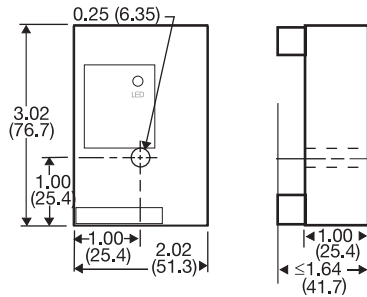
WVM

FIGURE 16



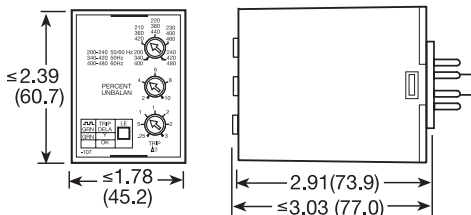
DLMU

FIGURE 17



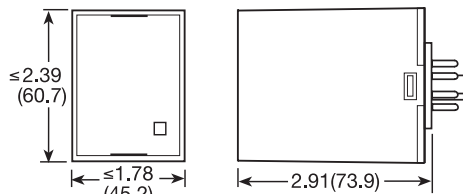
FB9L; HLMU; SCR9L

FIGURE 18



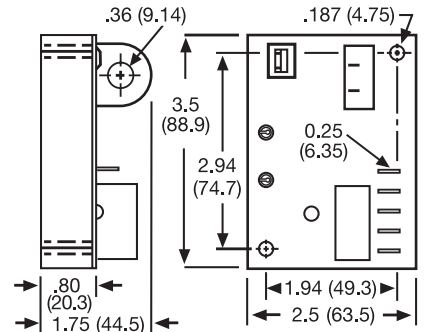
PLMU

FIGURE 19



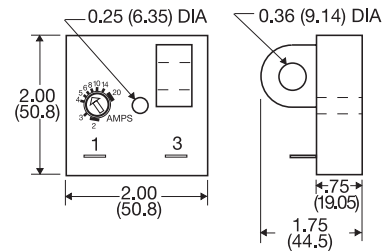
LLC4; LLC6; PLS

FIGURE 20



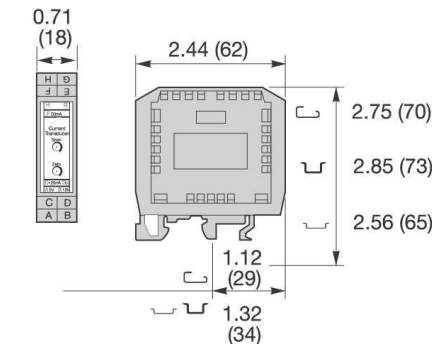
ECS; ECSW (ECS has spade connectors and ECSW has terminal board)

FIGURE 21



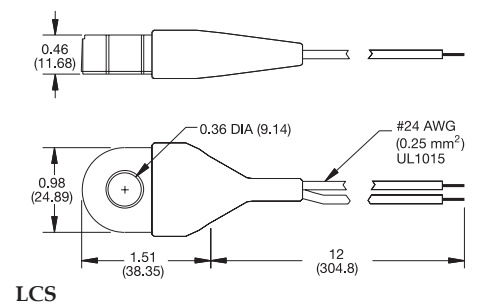
TCS; TCSA

FIGURE 22



DCSA

FIGURE 23

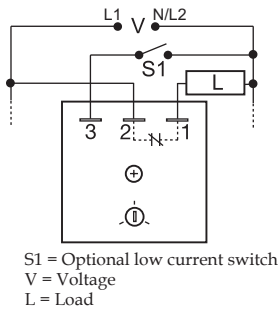


LCS

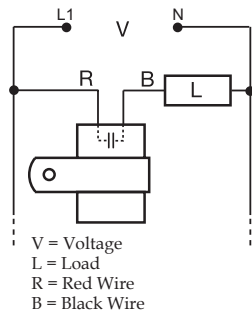
inches (millimeters)

# Appendix C - Connection Diagrams

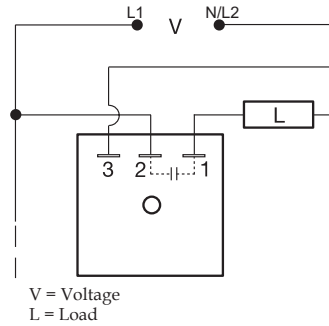
**FIGURE 1 - FSU1000 Series**



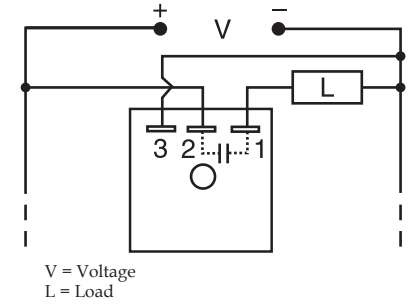
**FIGURE 2 - FS100 Series**



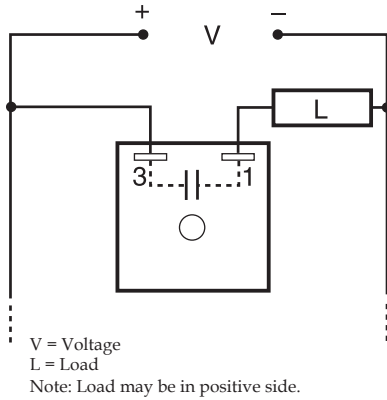
**FIGURE 3 - FS100 Series**



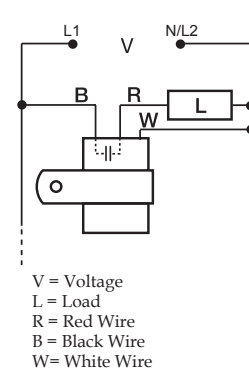
**FIGURE 4 - FS200 Series**



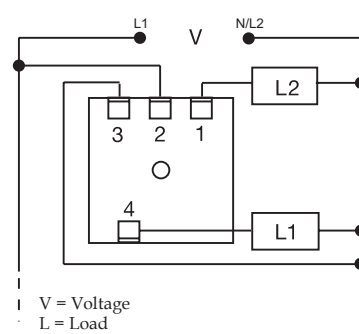
**FIGURE 5 - FS300 Series**



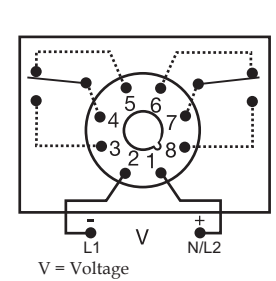
**FIGURE 6 - FS400 Series**



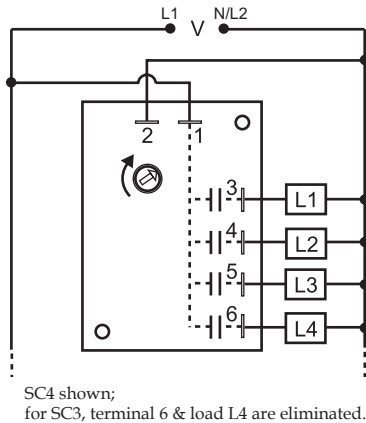
**FIGURE 7 - AF Series**



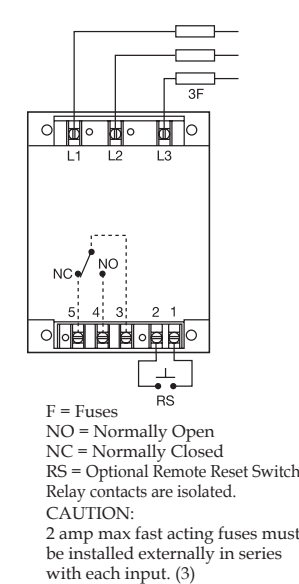
**FIGURE 8 - FS500 Series**



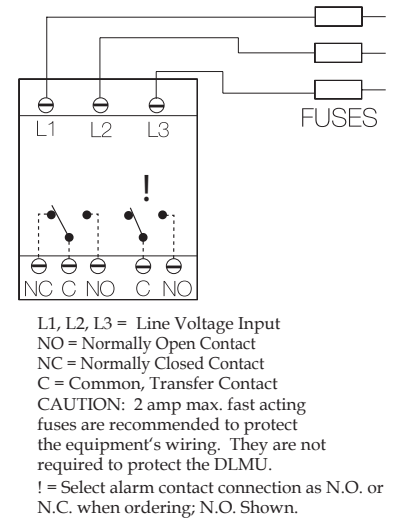
**FIGURE 9 - SC3/SC4 Series**



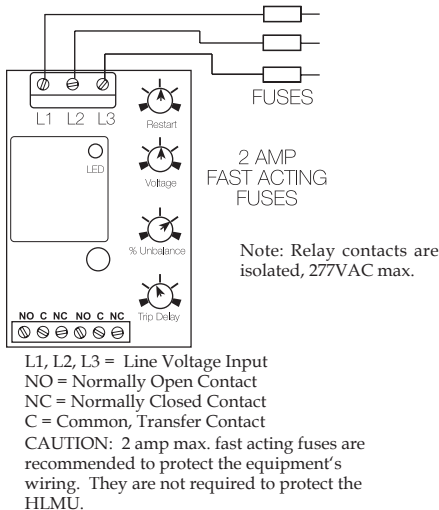
**FIGURE 10 - WVM Series**



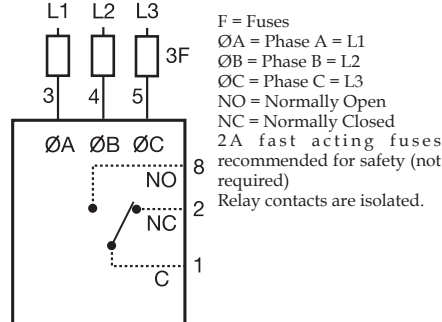
**FIGURE 11 - DLMU Series**



**FIGURE 12 - HLMU Series**



**FIGURE 13 - PLMU/PLM/PLR/PLS Series**



**FIGURE 14 - TVM/TVW Series**

