

## INSTALLATION INSTRUCTIONS FOR SYMCOM'S MODEL LSRU

### DANGER!

HAZARDOUS VOLTAGES MAY BE PRESENT DURING INSTALLATION. Electrical shock can cause death or serious injury. Installation should be done by qualified personnel following all national, state and local electrical codes.

#### BE SURE POWER IS DISCONNECTED PRIOR TO INSALLATION! FOLLOW NATIONAL, STATE, AND LOCAL CODES! READ THESE INSTRUCTIONS ENTIRELY BEFORE INSTALLATION!

## ! WARNING !

UNEXPECTED OUTPUT ACTUATION CAN OCCUR. Use hard-wired safety interlocks where personnel and/or equipment hazards exist. Failure to follow this instruction can result in death, injury or equipment damage.

The Model LSRU Load Sensor uses current levels to determine feed rates, tool wear, loss of prime on pumps, mixer viscosity, and all types of over and under load conditions. The LSRU may also be used to stage pump motors, chillers, and other machinery.

- 1. Mount the Model LSRU near one of the conductors of the load being monitored. If the unit will be used in a dusty or wet environment, an appropriate NEMA rated enclosure should be used.
- 2. Insert one of the conductors of the load through the sensor hole in the LSRU.
  - a) For currents greater than 1 amp, proceed to step #3.
  - b) For currents less than 1 amp, the conductor must be looped. Refer to the table below to determine the number of conductors needed through the sensor window.

## NOTE: The OC and/or UC trip points must be set based on 'leff' for current range 1.5 units.

ACTUAL CURRENT	NUMBER OF CONDUCTORS	EFFECTIVE CURRENT (Ieff)	
0.5 – 1.0	3	1.5 – 3.0	
0.25 – 0.5	5	1.25 –2.5	
For values less than 0.25 consult the factory.			
<ol> <li>Turn the user adjustments to the desired settings.</li> <li>Wire the appropriate control voltage to L1 and L2.</li> <li>Connect the output relay to the control circuitry. The proper wiring scheme may vary depending on the required action when a fault occurs. (A wiring diagram is shown in Figure 1 that utilizes the NO contact.)</li> </ol>			
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6. Energize the load to be monitored. Verify normal running amps have been achieved. The LED will be lit under normal operating conditions (the current sensed is at an acceptable level) indicating the output contacts are energized (NO is closed and NC is open). If the current drops to zero, the LSRU will recognize a normal stop, and will not de-energize its relay.

## NOTE: The standard LSRU is a fail-safe design, meaning the NO (normally open contact) will be open if the LSRU fails or control power is interrupted.

- L1 THREE PHASE POWER MAGNETIC CONTA CTOR L2 MOTOR L3 拓 -START STOP CONTROL POWER м 0L FIGURE 1: TYPICAL WIRING DIAGRAM Unit Description Model # Voltage Range Options Current Range .SRU 024 - 18 to 30 VAC O – Overcurrent 1.5 - 0 to 10 Amps 115 - 90 to 135 VAC U - Undercurrent 2 - 5 to 25 Amps 3 - 25 to 100 Amps T - Trip Delay R - Restart Delay (seconds)
- 7. The installation is now complete.



E - Extended Restart Delay (minutes)

SymCom warrants its microcontroller based products against defects in material or workmanship for a period of five (5) years from the date of manufacture. All other products manufactured by SymCom shall be warranted against defects in material and workmanship for a period of two (2) years from the date of manufacture. For complete information on warranty, liability, terms, and conditions, please refer to the SymCom Terms and Conditions of Sale document.

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MODEL L SPLU SPECIFICATIONS			
SRU-024-xx-x	18 – 30 VAC		
SRU-115-xx-x	90 – 135 VAC		
FREQUENCY	50 to 60 Hz		
POWER	2 Watts (Maximum)		
CURRENT RANGE			
LSRU-xxx-xx-1.5	0 – 10 Amps		
LSRU-xxx-xx-2	5 – 25 Amps		
LSRU-xxx-xx-3	25 – 100 Amps		
ADJUSTMENTS	· · · · · · · · · · · · · · · · · · ·		
Overcurrent (cannot be set below UC)	Adjustable through entire current range		
Undercurrent (cannot be set above OC)	Adjustable through entire current range		
Adjustable Trip Delay	0.5 – 60 Seconds		
Adjustable Restart Delay (standard)	0.5 – 300 Seconds		
Adjustable Restart Delay (extended)	0.5 – 300 Minutes		
FIXED TRIP DELAY (not selected as an option)	0.5 Second		
FIXED RESTART DELAY (not selected as an option)	2 Seconds		
REPEATABILITY			
Current	±2%		
Timing	±10%		
ISOLATION	600 VAC		
OUTPUT CONTACT RATING – SPDT			
Pilot Duty Rating	480 VA @ 240 VAC		
General Purpose Rating	10 A @ 240 VAC		
OPERATING TEMPERATURE	-40° to +70° C		
TERMINALS			
Wire AWG	#12 - #24		
Maximum Torque	7 inch-pounds		
STANDARDS PASSED			
CSA and CSA-NRTL/C	LR 46510-35		





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