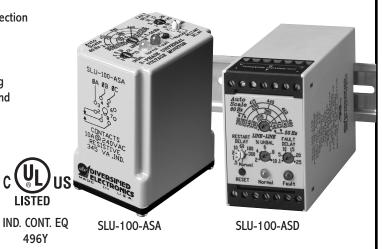
Phase Monitor Relays (3-Phase Monitors) provide cost-effective protection against premature equipment failure caused by voltage faults on 3-Phase systems (Wye or Delta). The SLU Series multi-mode phase monitoring relay, was designed for the convenience of electrician's, maintenance managers and engineers. A single SLU Phase Monitoring Relay can be easily adjusted for the voltage, imbalance percentage and time delay requirements to protect against unbalanced voltages or single phasing regardless of any regenerative voltages.

Both **DELTA** and **WYE** systems may be monitored. In Wye systems, connections to neutral are NOT required. The SLU-100 Series is UL Listed under UL File Number E55826.

**NOTE:** Not recommended for generator or variable frequency drive applications. Call technical support for application assistance.

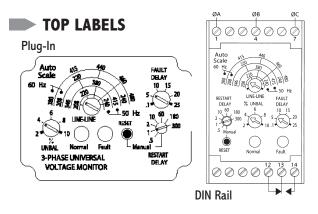


## **Universal Phase Monitor**

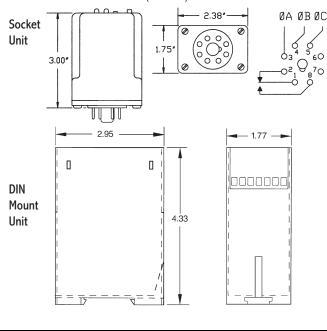
AUTO   RANGING   SCALES   Frequency   Nominal Line-to-Line   Range   Range   SCALES   60Hz   208, 220, 240, 380, 200-250   415, 440, 460, 480   360-500   208, 220, 240   300-250   346, 380, 415   330-430   300-430	SPECIFICA	<b>SPECIFICATIONS</b>				
Continuous		Frequency				
VOLTAGE BAND	SCALES	60Hz		200-250		
VOLTAGE BAND  Drop-out ±10% of Range Setting (Under/Over) Pick-up ±7% of Range Setting (Under/Over)  MAXIMUM VOLTAGE  PHASE SEQUENCE  POWER REQUIRED  POWER REQUIRED  PHASE UNBALANCE  PHASE UNBALANCE  PHASE SHIFT  13° Drop-out, 12° Pick-up (Ø-Loss)  FREQUENCY SHIFT  Drop-out ± 4% Pick up ± 3%  RESET  Automatic or Manual Mode  RELAY OUTPUT  SPDT, 10A @ 240VAC Resistive, 1/2 HP @240VAC  INDICATORS  Flashing Continuous Normal Fault Delay Active (Green LED) Fault (Red LED) Fault (Red LED)  RESPONSE  Power Up 2.5 SEC Minimum Fault Delay Active Relay (Red LED) Severe Fault 100mS (Phase-Loss, Unbalance or Phase Reversal) Restart 0.5 to 300 S, Adjustable (Auto Reset)  RESPORSE  TEMPERATURE RATINGS Storage 49° to 185°F (-45° to +85°C)  TERMINALS (DIN)  Slotted Screw Terminal Clamps, 12AWG Max.  ENCLOSURE  Style "A" LEXAN® Dust Cover DIN 35mm DIN Rail, 14 Term	-					
VOLTAGE BAND         Drop-out ±10% of Range Setting (Under/Over) ±7% of Range Setting (Under/Over)           MAXIMUM VOLTAGE         ±7% of Range Setting (Under/Over)           PHASE SEQUENCE         ABC (Will Not Operate On CBA Sequence)           POWER REQUIRED         90VA Max.           PHASE UNBALANCE         2% to 10%, Adjustable Drop-out Hysteresis 10% of Setting           PHASE SHIFT         13° Drop-out, 12° Pick-up (Ø-Loss)           FREQUENCY SHIFT         50/60 Hz           SHIFT         Drop-out ± 4% Pick up ± 3%           RESET         Automatic or Manual Mode           RELAY OUTPUT         SPDT, 10A @ 240VAC Resistive, 1/2 HP @240VAC           INDICATORS         Flashing Continuous Relay (Green LED)         Continuous Relay Energized           Fault Restart Delay Active Relay (Red LED)         Relay De-energized           RESPONSE         Power Up 2.5 SEC Minimum Fault Delay 1 to 25 SEC., Adjustable Severe Fault 100mS (Phase-Loss, Unbalance or Phase Reversal)           Restart 0.5 to 300 S, Adjustable (Auto Reset)           RESTAT ACCURACY         1% @ Fixed Condition           TERMINALS (DIN)         Slotted Screw Terminal Clamps, 12AWG Max.           ENCLOSURE         Style "A" LEXAN® Dust Cover DIN 35mm DIN Rail, 14 Term		50Hz				
Pick-up ±7% of Range Setting (Under/Over)   MAXIMUM VOLTAGE			346, 380, 415	330-430		
MAXIMUM VOLTAGE PHASE SEQUENCE  POWER REQUIRED  90VA Max.  PHASE UNBALANCE Hysteresis 10% of Setting PHASE SHIFT 13° Drop-out, 12° Pick-up (Ø-Loss)  FREQUENCY SHIFT  50/60 Hz Drop-out ± 4% Pick up ± 3%  RESET Automatic or Manual Mode  RELAY OUTPUT  SPDT, 10A @ 240VAC Resistive, 1/2 HP @240VAC  INDICATORS  Flashing Continuous Normal Fault Delay Active Relay (Green LED) Fault (Red LED) Fault (Red LED) Fault (Red LED)  RESPONSE  Power Up 2.5 SEC Minimum Fault Delay 1 to 25 SEC., Adjustable Severe Fault 100mS (Phase-Loss, Unbalance or Phase Reversal) Restart 0.5 to 300 S, Adjustable (Auto Reset)  TEMPERATURE RATINGS  TEMPERATURE Operate 32° to 131°F (0° to +55°C) Storage -49° to 185°F (-45° to +85°C)  REPEAT ACCURACY 1% @ Fixed Condition  ENCLOSURE  Style "A" LEXAN® Dust Cover DIN 35mm DIN Rail, 14 Term	<b>VOLTAGE BAND</b>	Drop-out				
PHASE SEQUENCE  POWER REQUIRED  90VA Max.  PHASE UNBALANCE  Hysteresis 10% of Setting  PHASE SHIFT 13° Drop-out, 12° Pick-up (Ø-Loss)  FREQUENCY SHIFT  Drop-out ± 4% Pick up ± 3%  RESET  Automatic or Manual Mode  RELAY OUTPUT  SPDT, 10A @ 240VAC Resistive, 1/2 HP @240VAC  INDICATORS  Flashing  Continuous  Normal Fault Delay Active Relay (Green LED) Fault Restart Delay Active Relay (Red LED)  RESPONSE  Power Up 2.5 SEC Minimum Fault Delay 1 to 25 SEC., Adjustable Severe Fault 100mS (Phase-Loss, Unbalance or Phase Reversal)  Restart  0.5 to 300 S, Adjustable (Auto Reset)  TEMPERATURE RATINGS  Storage 49° to 185°F (-45° to +85°C)  REPEAT ACCURACY 1% @ Fixed Condition  TERMINALS (DIN)  Slotted Screw Terminal Clamps, 12AWG Max.  ENCLOSURE  Style "A" LEXAN® Dust Cover DIN 35mm DIN Rail, 14 Term		Pick-up	±7% of Range Settin	g (Under/Over)		
POWER REQUIRED  POWER REQUIRED  PHASE UNBALANCE  PHASE SHIFT  13° Drop-out, 12° Pick-up (Ø-Loss)  FREQUENCY SHIFT  50/60 Hz  Drop-out ± 4% Pick up ± 3%  RESET  Automatic or Manual Mode  RELAY OUTPUT  SPDT, 10A @ 240VAC Resistive, 1/2 HP @240VAC  INDICATORS  Flashing  Continuous  Normal Fault Delay Active (Green LED) Fault (Red LED)  Fault Restart Delay Active Relay De-energized  RESPONSE  Power Up 2.5 SEC Minimum Fault Delay 1 to 25 SEC., Adjustable Severe Fault 100mS (Phase-Loss, Unbalance or Phase Reversal) Restart  O.5 to 300 S, Adjustable (Auto Reset)  TEMPERATURE RATINGS  REPEAT ACCURACY  1% @ Fixed Condition  TERMINALS (DIN)  Slotted Screw Terminal Clamps, 12AWG Max.  ENCLOSURE  Style "A" LEXAN® Dust Cover DIN 35mm DIN Rail, 14 Term		550 VAC (Line-to-Line)				
PHASE		ABC (Will Not Operate On CBA Sequence)				
UNBALANCE       Hysteresis       10% of Setting         PHASE SHIFT       13° Drop-out, 12° Pick-up (Ø-Loss)         FREQUENCY       50/60 Hz         SHIFT       Drop-out ± 4%         Pick up       ± 3%         RESET       Automatic or Manual Mode         RELAY OUTPUT       SPDT, 10A @ 240VAC Resistive, 1/2 HP @240VAC         INDICATORS         Flashing       Continuous         Normal       Fault Delay Active       Relay         Energized         Fault       Restart Delay Active       Relay         De-energized         RESPONSE       Power Up       2.5 SEC Minimum         Fault Delay       1.1 to 25 SEC., Adjustable         Severe Fault       100mS (Phase-Loss, Unbalance or Phase Reversal)         RESTATIONS       Restart       0.5 to 300 S, Adjustable (Auto Reset)         TEMPERATURE       Operate       32° to 131°F (0° to +55°C)         REPEAT ACCURACY       1% @ Fi	POWER REQUIRED	90VA Max.				
PHASE SHIFT	PHASE					
FREQUENCY SHIFT  Drop-out ± 4% Pick up ± 3%  RESET  Automatic or Manual Mode  RELAY OUTPUT  SPDT, 10A @ 240VAC Resistive, 1/2 HP @240VAC  INDICATORS  Flashing  Continuous  Normal Fault Delay Active Relay (Green LED)  Fault Restart Delay Active Relay (Red LED)  RESPONSE  Power Up 2.5 SEC Minimum Fault Delay 1 to 25 SEC., Adjustable Severe Fault 100mS (Phase-Loss, Unbalance or Phase Reversal) Restart 0.5 to 300 S, Adjustable (Auto Reset)  TEMPERATURE RATINGS  Storage 49° to 185°F (-45° to +85°C)  REPEAT ACCURACY 1% @ Fixed Condition  TERMINALS (DIN)  Slotted Screw Terminal Clamps, 12AWG Max.  ENCLOSURE  Style "A" LEXAN® Dust Cover DIN 35mm DIN Rail, 14 Term	UNBALANCE	Hysteresis 10% of Setting				
Drop-out ± 4%   Pick up ± 3%	PHASE SHIFT	13° Drop-out, 12° Pick-up (Ø-Loss)				
RESET Automatic or Manual Mode  RELAY OUTPUT SPDT, 10A @ 240VAC Resistive, 1/2 HP @240VAC  INDICATORS Flashing Continuous Normal Fault Delay Active Relay (Green LED) Fault Restart Delay Active Relay (Red LED) RESPONSE Power Up 2.5 SEC Minimum Fault Delay 1 to 25 SEC., Adjustable Severe Fault 100mS (Phase-Loss, Unbalance or Phase Reversal) Restart 0.5 to 300 S, Adjustable (Auto Reset)  TEMPERATURE RATINGS REPEAT ACCURACY 1% @ Fixed Condition  TERMINALS (DIN) Slotted Screw Terminal Clamps, 12AWG Max.  ENCLOSURE Style "A" LEXAN® Dust Cover DIN 35mm DIN Rail, 14 Term	FREQUENCY	50/60 Hz				
RESET Automatic or Manual Mode  RELAY OUTPUT SPDT, 10A @ 240VAC Resistive, 1/2 HP @240VAC  INDICATORS Flashing Continuous  Normal Fault Delay Active Relay (Green LED) Fault Restart Delay Active Relay (Red LED) De-energized  RESPONSE Power Up 2.5 SEC Minimum Fault Delay .1 to 25 SEC., Adjustable Severe Fault 100mS (Phase-Loss, Unbalance or Phase Reversal) Restart 0.5 to 300 S, Adjustable (Auto Reset)  TEMPERATURE RATINGS REPEAT ACCURACY 1% @ Fixed Condition  TERMINALS (DIN) Slotted Screw Terminal Clamps, 12AWG Max.  ENCLOSURE Style "A" LEXAN® Dust Cover DIN 35mm DIN Rail, 14 Term	SHIFT		**			
SPDT, 10A @ 240VAC Resistive, 1/2 HP @240VAC		Pick up	± 3%			
RESPONSE   Power Up   2.5 SEC Minimum   Fault Delay Active   Relay   Energized	RESET	Automatic or Manual Mode				
Normal (Green LED)   Energized	RELAY OUTPUT	SPDT, 10A @ 240VAC Resistive, 1/2 HP @240VAC				
Company	INDICATORS		<u>~</u>	Continuous		
Fault   Restart Delay Active   Relay   De-energized			Fault Delay Active	•		
RESPONSE						
Power Up   2.5 SEC Minimum   Fault Delay   .1 to 25 SEC., Adjustable   Severe Fault   100mS (Phase-Loss, Unbalance or Phase Reversal)   Restart   0.5 to 300 S, Adjustable (Auto Reset)			Restart Delay Active	•		
Fault Delay .1 to 25 SEC., Adjustable Severe Fault 100mS (Phase-Loss, Unbalance or Phase Reversal) Restart 0.5 to 300 S, Adjustable (Auto Reset)  TEMPERATURE Operate 32° to 131°F (0° to +55°C) Storage -49° to 185°F (-45° to +85°C)  REPEAT ACCURACY 1% @ Fixed Condition  TERMINALS (DIN) Slotted Screw Terminal Clamps, 12AWG Max.  ENCLOSURE Style "A" LEXAN® Dust Cover DIN 35mm DIN Rail, 14 Term						
Severe Fault   100mS (Phase-Loss, Unbalance or Phase Reversal)	RESPONSE					
Phase Reversal     Restart						
Restart 0.5 to 300 S, Adjustable (Auto Reset)  TEMPERATURE Operate 32° to 131°F (0° to +55°C)  Storage -49° to 185°F (-45° to +85°C)  REPEAT ACCURACY 1% @ Fixed Condition  TERMINALS (DIN) Slotted Screw Terminal Clamps, 12AWG Max.  ENCLOSURE Style "A" LEXAN® Dust Cover  DIN 35mm DIN Rail, 14 Term		Severe raun	•	Unbalance of		
RATINGS Storage -49° to 185°F (-45° to +85°C)  REPEAT ACCURACY 1% @ Fixed Condition  TERMINALS (DIN) Slotted Screw Terminal Clamps, 12AWG Max.  ENCLOSURE Style "A" LEXAN® Dust Cover DIN 35mm DIN Rail, 14 Term		Restart		ble (Auto Reset)		
RATINGS Storage -49° to 185°F (-45° to +85°C)  REPEAT ACCURACY 1% @ Fixed Condition  TERMINALS (DIN) Slotted Screw Terminal Clamps, 12AWG Max.  ENCLOSURE Style "A" LEXAN® Dust Cover DIN 35mm DIN Rail, 14 Term	TEMPERATURE	Operate 32° to 131°F (0° to +55°C)				
TERMINALS (DIN) Slotted Screw Terminal Clamps, 12AWG Max.  ENCLOSURE Style "A" LEXAN® Dust Cover DIN 35mm DIN Rail, 14 Term						
ENCLOSURE Style "A" LEXAN® Dust Cover DIN 35mm DIN Rail, 14 Term	REPEAT ACCURACY	1% @ Fixed	Condition			
DIN 35mm DIN Rail, 14 Term	TERMINALS (DIN)	Slotted Screw Terminal Clamps, 12AWG Max.		G Max.		
DIN 35mm DIN Rail, 14 Term	ENCLOSURE	Style "A"	LEXAN® Dust Cover			
Polycarbonate Housing	-		35mm DIN Rail, 14 Te	rm		
			Polycarbonate Housin	g		

## **ORDERING INFORMATION**

MODEL NUMBER	DESCRIPTION
SLU-100-ASA	Universal Phase Monitor
SLU-100-ASD	Din Rail Mount Universal Phase Monitor



## **DIMENSIONS** (INCHES)



0.35 to 0.5 lbs.

**WEIGHT**