



Model HLS-110 SYNC

LED Synchronoscope



Features

- Input voltage: 110V AC, 120V AC or 240V AC.
- Standard 4.5-inch switchboard case.
- Front panel mount.
- 3 bi-colored LED indicators for "SYNC", "GEN" and "BUS".
- 24 LEDs in a circle display the phase angle and the frequency differences between 2 networks.
- 360° indication.
- 12 o'clock position LED is bi-colored

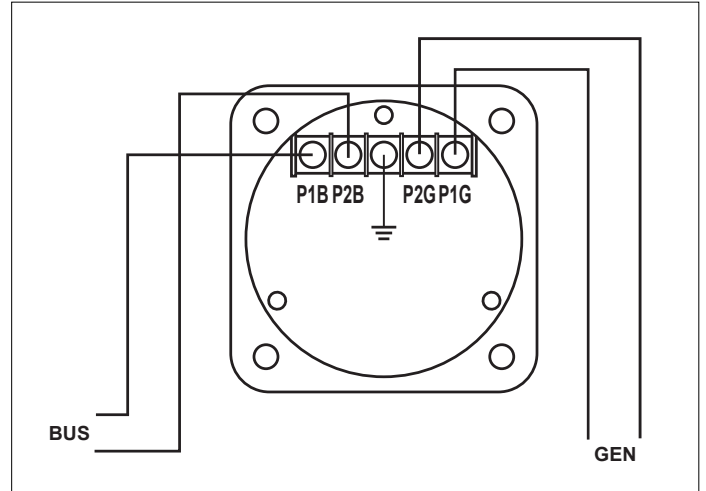
Operation Principle

- Initially, SYNC, BUS and GEN LED's are lit Red and the outer ring will show a single Red traveling LED. When voltage and phase angle are unmatched the outer ring LED rotates according to the system phase difference.
- When the BUS voltage is at $\pm 10\%$ of nominal system voltage, the BUS LED will change from Red to Green signifying proper BUS voltage has been established. When the GEN voltage is at $\pm 10\%$ of nominal system voltage the GEN LED will change from Red to Green signifying proper GEN voltage has been established.
- Finally, once all system voltages match and the systems are synchronized, the SYNC LED will change from Red to Green. All LED's are now Green when the systems are synchronized.

Specifications

	HLS-110 SYNC (110V)	HLS-110 SYNC (120V)	HLS-110 SYNC (240V)
Nominal Input Voltage	110V AC	120V AC	240V AC
Overload	1.25 × Nominal voltage		
Frequency Range	35~70Hz		
Scale	SLOW / FAST		
Pointer LED	15 degrees / LED		
BUS LED (Bi-colored)	Green : 100V-121V AC	Green : 108V-132V AC	Green : 216V-264V AC
	Red: <100V or >121V AC	Red: <108V or >132V AC	Red: <216 or >264V AC
GEN LED (Bi-colored)	Green : 100V-121V AC	Green : 108V-132V AC	Green : 216V-264V AC
	Red: <100V or >121V AC	Red: <108V or >132V AC	Red: <216 or >264V AC
SYNK LED (Bi-colored)	Green : "GEN" and "BUS" are synchronized		
	Red : "GEN" and "BUS" are not synchronized		

Wiring Diagram



Dimensions

