



# Model HLS-110A SYNC

## Analog Synchroscope



### Operation Principle

- A synchroscope indicates the synchronization point (scale center) when the frequencies and the phases at a generator side and a bus line side are matched.
- If the frequencies of both side are equal, the position at which the needle is stationary indicates the phase difference between the two.
- When the generator side (starting side) frequency is  $f_g$  and the bus line side (operating side) frequency is  $f_b$ , the direction of rotation of the needle is as follows:  
When  $f_g = f_b$  The needle is stopped  
When  $f_g > f_b$  The needle rotates in the FAST direction  
When  $f_g < f_b$  The needle rotates in the SLOW direction

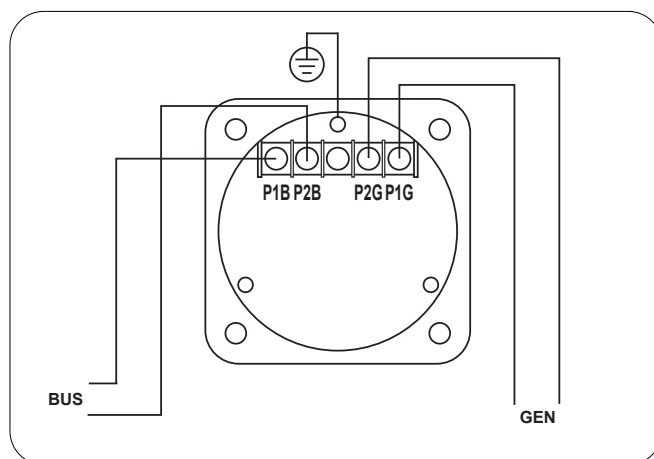
### Features

- Input voltage: 120V AC or 240V AC.
- Standard 4.5 inch switchboard.
- Front panel mount
- 360° indication.
- Plastic case.
- UL # E486912

### Specifications

Nominal Input Voltage: 120V AC | 240V AC  
Frequency Range: 50Hz or 60Hz  
Scale: SLOW / FAST  
Indication: Moring pointer  
Angle of rotation: 360°

### Wiring Diagram



### Dimensions

