

DIGITAL SINGLE PHASE VOLTAGE RELAY – SPHD V1.3

FEATURES

Single phase monitoring for over voltage and under voltage
3-Digit numeric display for the voltage
True RMS voltage measurement
Digital presettable thresholds for over voltage and under voltage
Presettable response delays to over voltage and under voltage
Presettable ON delay timer
Three push buttons for accessing the menu
Colored status indicators
Wide operating voltage range
Wiring through plug in connector
Case conforms to DIN 43 880 of the British Standard
Fits onto 35mm symmetric DIN rail to BS5584 (EN 50 022, DIN 46277-3)
Humidity class, DIN 40040
Environmental protection, DIN 40 050



ABSOLUTE MAXIMUM RATINGS

Supply voltage (line-to-neutral)	330 volts
Auxiliary contact	8A ac1
Operating temperature	0 to 70°C

OPERATION

True RMS voltage is measured and displayed. Following is a description of the operation of the SPHD:

- 1. Normal condition:** This condition is indicated by green led labeled TIMER. Output relay energizes after elapse of time set in **ond**. Yellow led labeled RELAY ON lights simultaneously.
- 2. Undervoltage:** This condition is signaled by the red led labeled LOW when voltage drops below value set in **uuS**. Output relay deenergizes after the elapse of the time set in **uud**. Under voltage status persists until voltage increases to 10 volts above setting.
- 3. Overvoltage:** This condition is signaled by the red led labeled HIGH when voltage increases above value set in **ouS**. Output relay deenergizes after the elapse of the time set in **oud**. Over voltage status persists until voltage drops to 3 volts below setting.

SETTING

Press the push button on the right to access the parameters menu. The up and down push buttons are used to scroll up and down respectively in the menu list. Pressing the push button on the right will edit the value of the parameter displayed. Use the up and down push buttons to respectively increase and decrease the value. Press the push button on the right to save new value. Following is a description of the parameters:

Display	Description	Range	Factory setting
ouS	Over voltage threshold setting in volts Set to 0 to disable this feature.	0, (uuS+10) to 999	253 volts
oud	Over voltage response delay in seconds	0 to 25.5	2 sec
uuS	Under voltage threshold setting in volts Set to 0 to disable this feature.	0 to (255 or ouS-10) ¹	187 volts
uud	Under voltage response delay in seconds	0 to 25.5	6 sec
ond	ON delay setting in seconds	0 to 255	10 sec
FST	Load factory setting	-	-
out	Exit menu	-	-

SPECIFICATION

Operating voltage (line-to-neutral)	150 to 294 volts
Auxiliary contact rating	5A 250V ac1 – 2A 415V ac1

INSTALLATION

Connect terminal 1 to the line.

Connect terminal 4 to the neutral.

Connect terminals 5, 6 and 7 as desired to disconnect the circuit when an abnormal condition is detected.

¹ Whichever is smaller