

DVW3

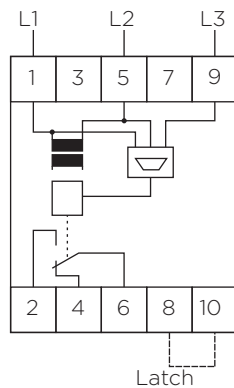
Three Phase Voltage Window Comparator



Description

Three Phase Voltage Window Comparator for monitoring supply voltage between two levels. The unit ideal is for all three phase voltage monitoring applications to protect valuable equipment. With the wide range of delays, the protection is extended to prevent immediate re-starts. Over and under voltage can be set via front panel dials. The latch facility prevents unmonitored fault conditions. Hysteresis is fixed at 5%.

Wiring Diagram



FEATURES

- High resolution analogue microprocessor
- Front face adjustable over and under voltage levels
- Monitors own supply
- Detects phase reversal
- 4 Front face selectable delays
- Optional latch facility
- Modular 35.5mm DIN rail mountable
- 10A SPDT output relay
- LED indication for over and under voltage
- LED indication for power supply ON

Input Specifications

Input	Pin 1, 5 & 9 L1, L2 & L3
Measuring Ranges (VAC)	
Power Supply Range	400V
Range	340 - 460V
Upper Limit	420 - 460V
Lower Limit	380 - 340V
Scale	± 5 - 15%
Voltage Interruption	>500 ms
Dielectric Voltage	None (supply/electronics)
Rated Impulse Withstand	4 kV (50 us line/line)

Supply Specifications

Power Supply AC Type	110, 230, 400V
(Galvanic)	525V ± 10%
	50 / 60 Hz ± 5Hz
Isolation	4kV
Consumption	± 3VA
	± 6VA 525 V
Power Supply DC Types	12,24,48 V ± 10%
(Non-galvanic)	
Isolation	None
Consumption	± 100 mA

Output Specifications

Output Specifications	SPDT
Rated Isolation Voltage	6000 VAC
	(contact / electric)
Nominal Rate in Act	1000 VAC
(Ag-Ni)	(contact / contact)
	2500 VA
Rated Current	10A
Rated Voltage	250V
Mechanical Life	10x10 ⁶ cycles
Electrical Life	110x10 ³ cycles (at max load)
Operation Frequency	≤ 1800 cycles/h

General Specifications

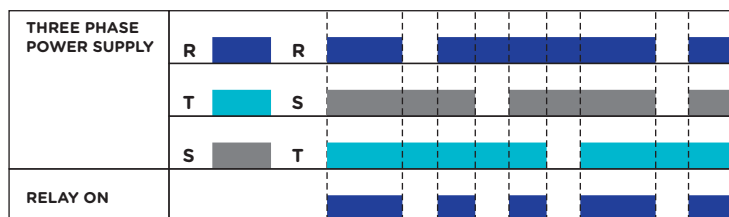
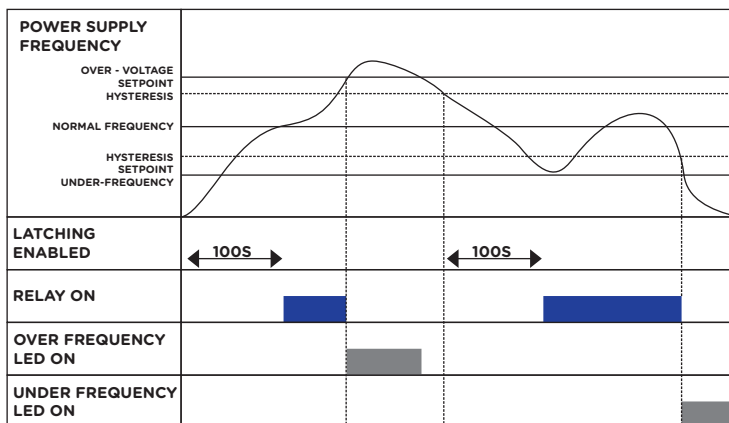
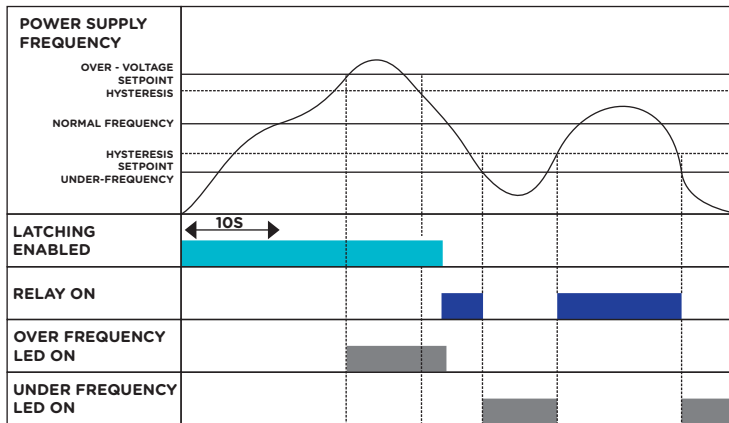
Power ON Delay	≤ 300 ms
Power OFF Delay	≤ 200 ms
Indication for	
Power Supply ON	LED green
Over Voltage	LED yellow
Under Voltage	LED yellow
Environment	
Degree Of Protection	IP 20
Operating Temperature	-10 to + 50°C
Storage Temperature	-50 to + 85°C
Weight	200g

Three Phase Voltage Window Comparator

Mode of Operations

The relay will release if the voltage between the three phases exceeds the set upper limit or fall below the set lower limit or if the phases are out of sequence. If the phase voltages returns to within the set values and the phases are in sequence the relay will operate. Both over and under LED's are on if phases are reversed. Refer to the delay settings for operation delays.

Operations Diagram



Delay Functions

1) No Delay

Measurement start immediately and relay responds directly normal acquisition delay apply)

2) 10s start up

Relay operates immediately and power LED flashes when power supply is applied. Measurement starts after 10 sec and power LED stops flashing.

3) 180s recovery delay

When power is applied relay does not operate and power LED flashes. After 180sec measurement starts and power LED stops flashing. If relay releases, time delay start, power LED flashes and relay will only operate again after 180 sec.

4) 10s response delay

Relay operates immediately and power LED flashes when power supply is applied. Measurement starts after 10 sec and power LED stops flashing. The relay will only release after a fault condition has been present for 10 sec.