

# VOLTAGE BAND (WINDOW)

12-120V | VW SERIES



- ◆ Monitors AC single phase and DC voltages
- ◆ Provides voltage band (window) protection
- ◆ Wide range of user-adjustable Over Voltage and Under Voltage settings
- ◆ Fixed or adjustable time delay on drop-out
- ◆ LED indicates output relay status
- ◆ Compact plug-in case utilizing industry standard 8 pin octal socket
- ◆ 10A DPDT output contacts



(with appropriate socket)



Better. By Design.

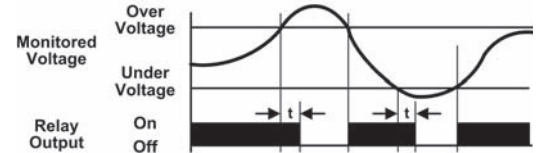
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Voltage Band Relays provide protection to equipment that is required to operate within an upper and lower voltage limit. As long as the operating voltage remains within an OVER and UNDER voltage range, the internal relay stays energized. If the operating voltage falls outside this range, the relay will drop-out.

When nominal operating voltage with a value between the UPPER and LOWER setting is applied, the internal relay will energize (Pick-up). If the operating voltage falls outside the preset OVER trip point (adjustable 100-125% of nominal) or UNDER trip point (adjustable 75-100% of nominal) for a period longer than the drop-out time delay (t), the relay will de-energize (Drop-out). When the voltage returns to normal (within the preset OVER and UNDER trip points), the unit automatically resets and the relay energizes. Choose between a unit with fixed drop-out time of 500ms or one with an adjustable 0.5-10 second drop-out time.



## Fixed Drop-Out Time Delay (500ms)

NOMINAL VOLTAGE	OVER VOLTAGE RANGE	UNDER VOLTAGE RANGE	PRODUCT NUMBER	WIRING/ SOCKET
24V AC 120V AC	24-30V AC 120-150V AC	18-24V AC 90-120V AC	VWP024A VWP120A	8 Pin Octal <b>70169-D</b>  MONITORED VOLTAGE <b>DIAGRAM 20</b>
12V DC 24V DC 48V DC 110V DC	12-15V DC 24-30V DC 48-60V DC 110-137V DC	9-12V DC 18-24V DC 36-48V DC 83-110V DC	VWP012D VWP024D VWP048D VWP110D	

## Adjustable Drop-Out Time Delay 0.5 - 10 Seconds

NOMINAL VOLTAGE	OVER VOLTAGE RANGE	UNDER VOLTAGE RANGE	PRODUCT NUMBER	WIRING/ SOCKET
24V AC 120V AC	24-30V AC 120-150V AC	18-24V AC 90-120V AC	VWKP024A VWKP120A	8 Pin Octal <b>70169-D</b>  MONITORED VOLTAGE <b>DIAGRAM 20</b>
12V DC 24V DC 48V DC 110V DC	12-15V DC 24-30V DC 48-60V DC 110-137V DC	9-12V DC 18-24V DC 36-48V DC 83-110V DC	VWKP012D VWKP024D VWKP048D VWKP110D	

Sockets & Accessories available

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## APPLICATION DATA

### Voltage Tolerance:

+25%/-50% of nominal voltage; AC voltages are 50-60Hz;  
No separate supply (input) voltage is required.

**Load (Burden):** Less than 3VA

### Voltage Settings:

Over Voltage: 100-125% of Nominal Voltage

Under Voltage: 75-100% of Nominal Voltage

**Temperature:** Operating: -28° to 55°C (-18° to 131°F)

Storage: -40° to 85°C (-40° to 185°F)

**Indicator LED:** Red Steady when Relay is energized; Green when Relay is Off.

**Reset:** Automatic

### Response Times:

Operate: 500ms

Release: Fixed 500 ms (VWP Series)

Adjustable 0.5 -10 Seconds (VWKP Series)

### Output Contacts:

10A @ 240V AC/30V DC, 1/2HP @ 120/240V AC (N.O.),

1/3HP @ 120/240V AC (N.C.) B300

### Life:

Mechanical: 10,000,000 operations

Full Load: 100,000 operations

### Transient Protection:

10,000 volts for 20 microseconds

### Approvals:

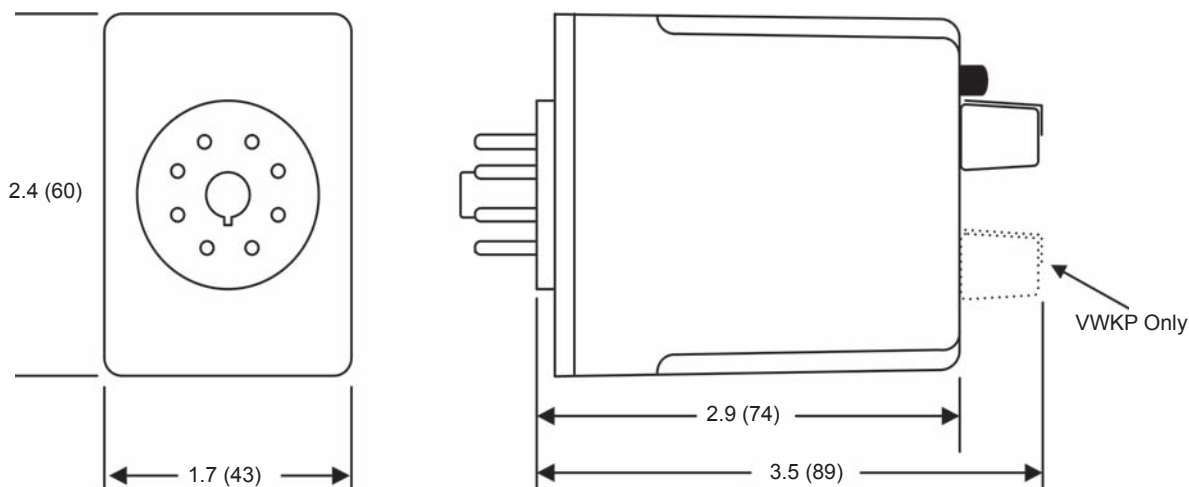
**UL**  
File #E109466

**CE**

Low Voltage & EMC Directives  
EN60947-1, EN60947-5-1

**UL LISTED**  
IND. CONT. EQUIP.  
SOLUT  
with  
appropriate  
socket  
File #E109466

## DIMENSIONS



All Dimensions in  
Inches (Millimeters)