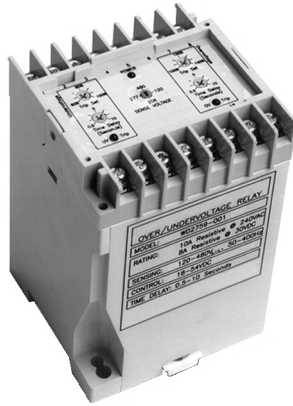


## KILOVAC WD Series, DIN Rail or Screw Mounted Protective Relays

### Product Facts

- WD25 Paralleling (Synch Check) Relays
- WD2759 Over/undervoltage Relays
- WD32 Reverse Power Relays
- WD47 Phase Sequence Relays
- WD5051 Single- or Three-Phase Overcurrent Relays
- WD810U Over/Underfrequency Relays
- File E58048, DIN EN50022-35



The WD series offers several different models of protective relays in a common package that is suitable for either DIN rail or screw mounting. These flexible, multifunction devices offer user selectable voltages, sense currents and frequencies. Adjustable time delays are standard. This allows a single part number to be suitable for multiple applications, thereby reducing inventory costs.

### Specifications Common to All Models

**Power Consumption** — 2.5VA, maximum.

**Contact Ratings** —  
5 amps, resistive, at 120VAC.  
5 amps, resistive, at 30VDC.

**Isolation from Control to Sense Inputs** — 2,500VAC.

**Mechanical Life** — 10 million operations.

**Shock** — 10g.

**Vibration** — 0.062 (1.57) double amplitude at 10-55 Hz.

**Terminals** — M3.5 screws.

**Maximum Wire Size** — 2 x 24 AWG (2.5mm<sup>2</sup>) solid to DIN 46288 or 2 x 16 AWG (1.5mm<sup>2</sup>) stranded w/end sleeves.

**Operating Temperature Range** — -40°C to +60°C.

**Enclosure** — Plastic case (not sealed).

**Mounting Options** — Snap mounts on standard DIN rail (DIN-EN 50022-35) or panel mounts with M4, M5, #8 or #10 screws.

**Weight** — 14.4 oz. (400g) approximately.

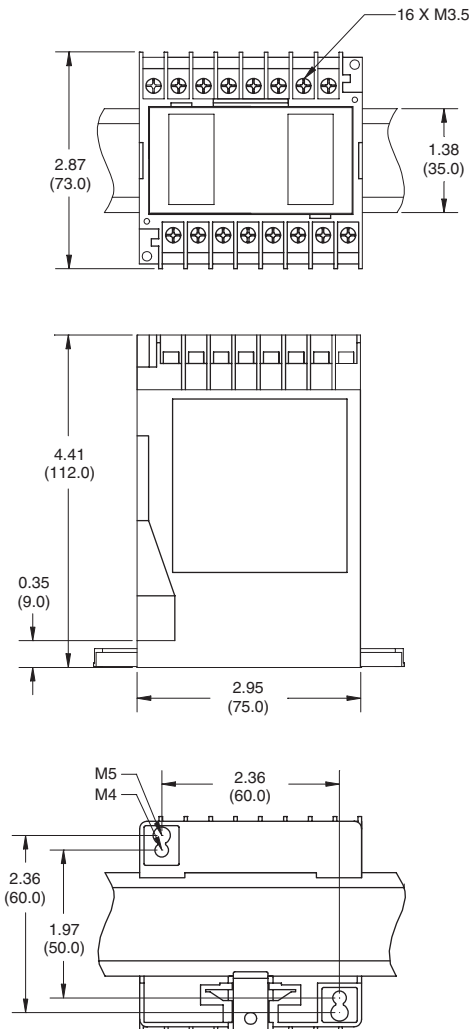
### Installation and Maintenance Information

**Installation** — To mount the WD series protective relay on a DIN rail, hook the top edge of the cutout on the base of the case over one edge of the DIN rail, then press the opposite side of the cutout containing the release clip over the opposite side of the DIN rail. To remove or reposition the relay, lever the release clip and move the relay as required. WD series relays should be installed in a dry location where the ambient temperature will be within the operating temperature range.

**Maintenance** — WD series protective relays are solid state devices that require no maintenance. They are not designed to be serviced by the user. Consult KILOVAC customer service at 805-220-2023 if repairs should be necessary.

Users should thoroughly review the technical data before selecting a product part number. It is recommended that user also seek out the pertinent approvals files of the agencies/laboratories and review them to ensure the product meets the requirements for a given application.

### Outline Dimensions



## KILOVAC WD25 Paralleling Relays

### Product Facts

- **Function 25**
- **ANSI/IEEE C37.90-1978**

### WD25 Operation

WD25 paralleling relays are used to ensure that two circuits are synchronized. When voltage, phase relationship and frequency are within the selected synchronizing limits, the output relay will energize. The WD25 paralleling relay allows for a generator to be brought online without damage or system disturbance. WD25 series with a "dead bus" feature will energize for a synchronized condition or an "on line" generator, "dead bus" condition. This "dead bus" feature allows the generator to energize a dead bus. The "double dead bus" feature permits paralleling of two buses when: (a) both the line voltages are equal and in phase, or (b) when either bus is "hot" and the other bus is "dead."

### WD25 Specifications

**Nominal Operating Range** — 120, 208, 277 or 480 VAC, selectable.

**Maximum Sensing Range** — 575VAC.

**Nominal Frequency Range** — 40-400 Hz.

**Contact Form** — 2 form C (DPDT).

### WD25 Calibration

The calibration marks on the faceplate are provided only as guides. Proper calibration requires using an accurate voltmeter. Use the following procedure to calibrate the WD25:

1. Remove the cover.
2. Adjust the SYNC VOLTAGE control fully counterclockwise (CCW). Apply nominal voltage to the LINE B (bus) sensing terminals.
3. Apply the maximum desired synchronization voltage to the LINE A (generator) terminals. This voltage should be in phase with LINE B (bus) voltage and have the same frequency.
4. Slowly adjust the SYNC VOLTAGE control clockwise (CW) until the relay energizes.

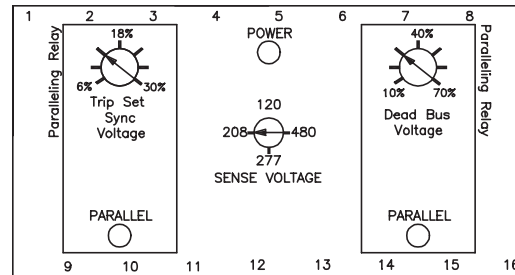
### Sense Voltage

Voltage (nominal)	120	208	277	480
Synch Voltage (% of nom.)	6 - 30% (= 4°- 20° electrical degree)			
Dead Bus Voltage (% of nom.)	10 - 70% (Dead Bus)			

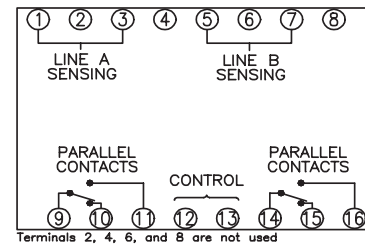
### Control Voltage

Model WD25	-0X1	-0X2	-0X3
Input Voltage (VDC)	18 to 54	13.5 to 32	100 to 200
Input Voltage (VAC)	—	—	100 to 140

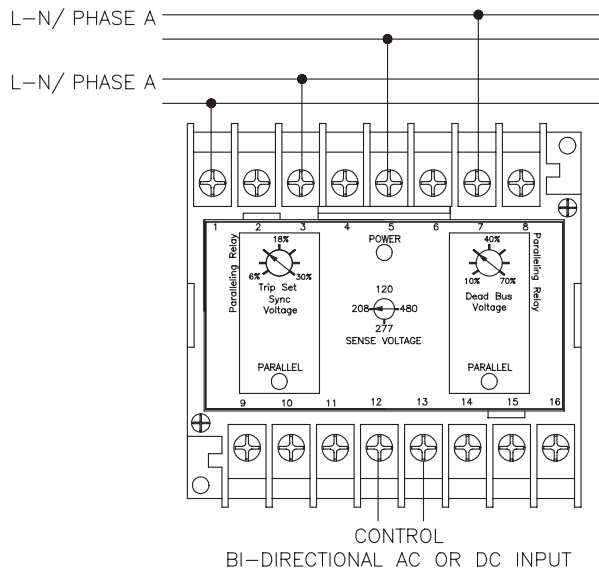
### WD25 Controls



### WD25 Connections



### WD25 Typical Hookup



**NOTE:** For single dead bus option, connect the generator to 1 & 3 and the bus to 5 & 7.

### Ordering Information

#### Typical Part Number ►

**1. Basic Series:** WD = DIN mount Protective Relay.

**2. Type:** 25 = Paralleling Relay.

**3. Dead Bus:** -00  
 00 = Double Dead Bus  
 01 = Single Dead Bus  
 02 = Generator to Generator

**4. Control Voltage:** 2  
 1 = 18 to 54VDC  
 2 = 13.5 to 32 VDC  
 3 = 100-200VDC or 100-140VAC.

**Our authorized distributors are more likely to stock these items.**

WD25-001  
 WD25-013