

FVD-2

FAILED VOLTAGE DETECTOR

SPECIFICATIONS

Physical

Size

Length: 5.75"

Width: 2.25"

Height: 4.1"

Weight

14 oz.

Environmental

Storage

Temperature: -50°C to +85°C

Humidity: 0% to 95%, non-condensing

Operating

Temperature: -40°C to +72°C

Humidity: 0% to 95%, non-condensing

Mounting

Shelf or desktop

Construction

Chassis

Fully enclosed, anodized aluminum, removable screws allow access inside

Externally accessible connectors, controls and LEDs

Electrical

Single printed circuit board inside chassis

Power

Voltage

Input: 8 to 36 Vdc (12 to 24 Vac)

Consumption

150 mA at 12 Vdc (less than 2 W typical)

Fuse

1 A (3 AG), secured in twist-off holder mounted on PCB, accessible with cover removed

Protection

Isolation

Minimum 4,000 Vdc to ground, infinite duration

Minimum 2,500 Vdc Vin to power inputs, infinite duration

Input Impedance

Minimum 12 Mohm Vin to power inputs

Minimum 100 Kohm across Vin inputs

Infinite from Vin to all other terminals

Capacity

Dual voltage detectors, form C relay per voltage detector

Separately adjustable upper and lower limits per detector

Range

Voltage Inputs (Vin)

.5 to 48 Vdc, .5 to 36 Vac

Limit Values

Same as Vin range

Detection Time

2, 10, 40 or 120 minutes

Value of Vin must persist for detection time before a change in failure status is reported

Connectors

Power

Detachable, screw-down with 5 terminals, 12 to 22 AWG

Terminals 1 & 2: battery B voltage

Terminal 2: no connection

Terminals 4 & 5: battery N voltage

Input / Output (2)

Detachable, screw-down with 7 terminals, 12 to 22 AWG

Terminals 1 & 3: Vin

Terminal 2: no connection

Terminal 4: relay N.C. contact

Terminal 5: relay N.O. contact

Terminals 6 & 7: relay common

Alarm Relays

Type

Form C, one per detector

Operation

Latching or non-latching, user selected

Contact Ratings

Rated Load: 1 A at 24 Vdc, .5 A at 125 Vac

Minimum Load: 1 mA at 5 Vdc

Maximum Operating Voltage: 60 Vdc, 125 Vac

Maximum Switching Capacity: 62.5 VA, 30 W

Service Life: 5 million mechanical (minimum), 1 million electrical (typical)

Controls

Internal

Potentiometers: 20-turn, 2 per voltage detector, used to adjust upper and lower limit values

Test points: red, 2 per voltage detector plus a common (green), used to measure limit values during adjustment

Piano switches: 2 total, 2 positions each, one used to set detection time, second used to enable relay latching

External

Reset switch: clears pending failure indication

LED Indicators

Voltage Status

Red, 1 per detector, illuminates when Vin is below lower limit or above upper limit, duration exceeding detection time

Power

Green, flashes to indicate power is applied and unit is operating

Accuracy

The greater of $\pm 1.5\%$ or .5 V (typical)