



233

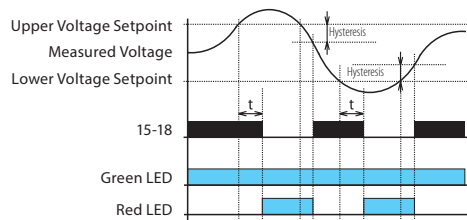
VOLTAGE MONITOR

11/14/14

FEATURES

- Voltage monitor / Band (window) voltage relay
- Controls supply voltage for equipment sensitive to supply tolerance and offers protection against under- and over-voltage conditions.
- Monitors voltage range of 48 to 276VAC
- Adjustable time delay up to 10 seconds to avoid nuisance tripping
- Minimum voltage setting as a percentage of the maximum voltage
- Red and green LEDs indicate 3 conditions, normal operation and 2 fault conditions
- DIN rail mounting
- UL and CE approvals, RoHS compliant

MODE OF OPERATION



The 233 Voltage Monitoring Relay senses voltage level in single phase AC and DC circuits. Sensed voltage also serves as supply voltage. Two independent levels of voltage (upper and lower) can be set.

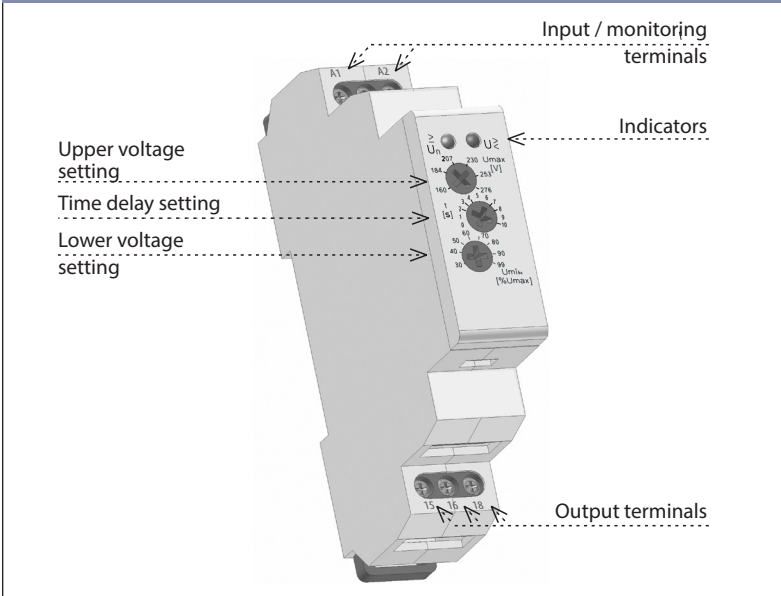
The 233 has an active output during normal operation and turns off when a fault is sensed. Loss of supply voltage therefore is a recognized fault.

Built-in hysteresis eliminates chattering at the transition point. SPDT (Form C) contacts allow various connection options. Red and green LED indicators allow quick identification of various fault conditions.

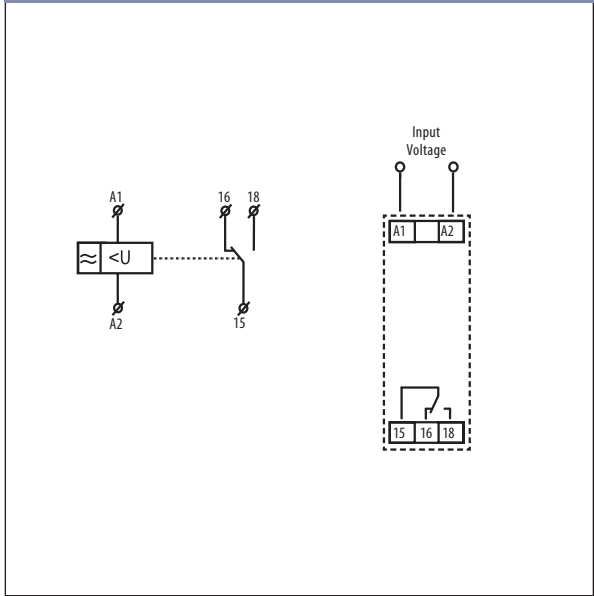
SPECIFICATIONS

- Input/monitoring terminals** A1-A2
- Supply voltage** ..... 48-276VAC
- Power consumption (ACmax)** 1.2 VA
- Upper voltage setting** ..... 160-276VAC
- Lower voltage setting** ..... 30-95% of maximum
- Maximum constant voltage** . 276VAC
- Peak overload <1ms** ..... 290VAC
- Time delay** ..... adjustable, 0-10s
- Setting accuracy** ..... 5%
- Repeatability** ..... <1%
- Dependence on temperature** <0.1% / °C
- Limit tolerance** ..... 5%
- Hysteresis** ..... 2-6% of set value
- Relay output form** ..... SPDT Form C (AgNi)
- Rated current** ..... 16 A/ AC
- Switching capacity** ..... 4000 VA/ AC, 384 W/ DC
- Inrush current** ..... 30 Amps / <3s
- Switching voltage** ..... 250VAC / 24VDC
- Switching capacity DC (min)** 500mW
- Indication of state** ..... Red and Green LEDs
- Mechanical life** ..... 30 million operations
- Electrical life** ..... 70,000 operations
- Operating temperature** ... -20°C to +55°C
- Storage temperature** ..... -30°C to +70°C
- Dielectric strength** ..... 4 kV
- Operating position** ..... any
- Mounting** ..... DIN rail EN 60715
- Protection degree** ..... IP 40 from front panel
- Max. cable size** ..... 14AWG
- Standards** ..... EN 60255-6, EN 61010-1, UL, CE, RoHS

FEATURES



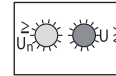
WIRING DIAGRAM



LED INDICATORS



**Normal state**  
 $U_{min} < U < U_{max}$   
 Green LED = ON  
 Red LED = OFF



Exceeded  $U_{max}$  (**Over voltage**)  
 Drop below  $U_{min}$  (**Under voltage**)  
 $U > U_{max}$  or  $U < U_{min}$   
 Green LED = ON  
 Red LED = ON