

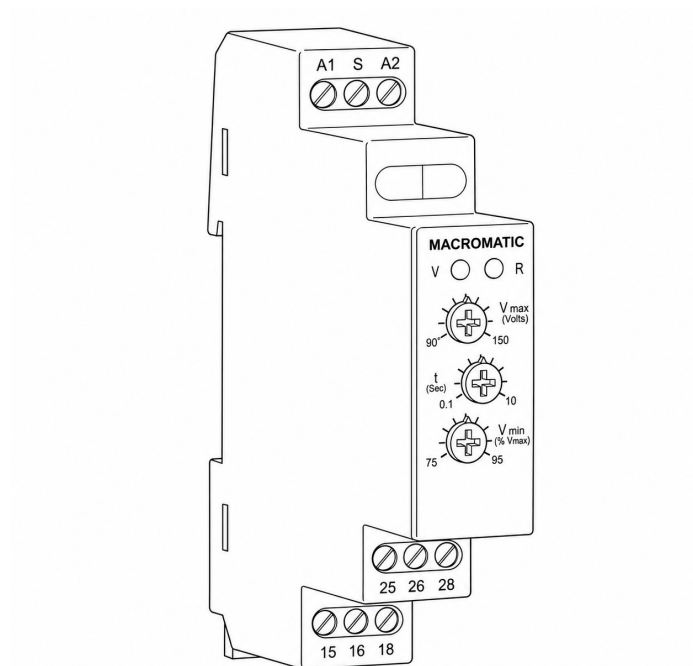


VxE VOLTAGE MONITORING RELAYS

17.5MM DIN-RAIL MOUNTED

Data Sheet

Voltage Monitoring Relays - VxE Series



PRODUCT INTRODUCTION

Macromatic/Trystar voltage monitors protect critical equipment by continuously monitoring AC or DC supply voltage and signaling abnormal conditions. Depending on the model, the product detects undervoltage and/or overvoltage, providing an output to alarm, inhibit start, or drop out a contactor to prevent equipment damage. Adjustable thresholds and time delays allows coordination with process requirements and help avoid nuisance trips from brief disturbances. Available in compact 17.5MM design, voltage monitors are easy to integrate into modern control panels for HVAC, water/wastewater, industrial processing, and commercial building systems.

Key Features

- Undervoltage/overvoltage monitoring
Prevents equipment damage and controls malfunctions caused by line conditions
- Adjustable thresholds and time delays
Tunes response to application needs and reduces nuisance trips
- Compact DIN-rail footprint
Saves panel space and supports high-density designs
- LED status indication
Speeds commissioning and troubleshooting
- Industrial-grade construction
Designed for continuous-duty applications
- Easy integration
Interfaces with contactors, starters, and PLC/controls to reduce engineering time

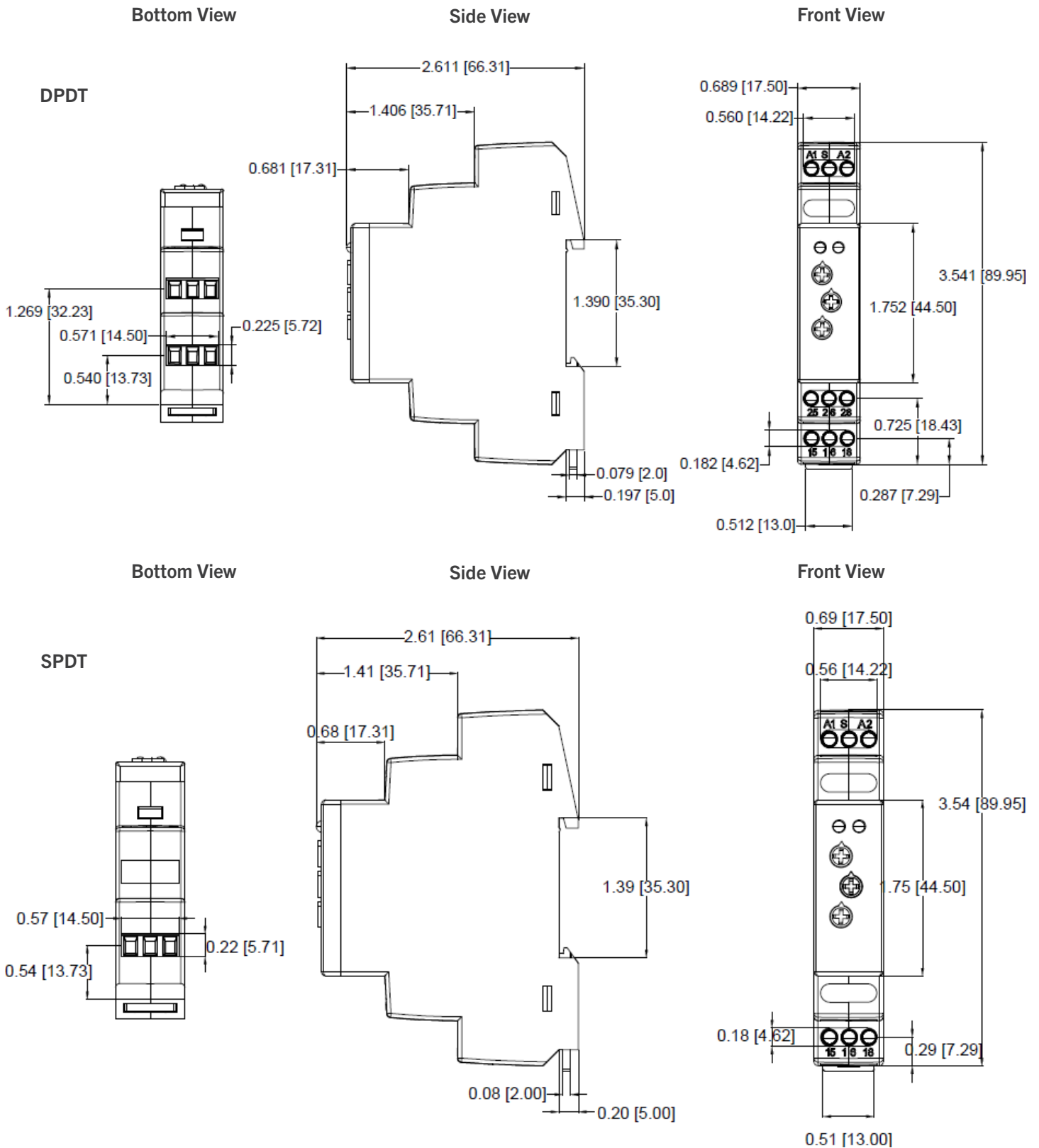
VOLTAGE MONITORING FUNCTIONS

VAE012D(X) VAE024D(X) VAE048D(X) VAE110D(X) VAE120A(X)	Adjust the pick-up voltage setting (Vmax) between the full range as shown on the product nameplate. Then adjust the drop-out voltage setting (Vmin) between 75% and 95% of the pickup-setting. When the monitored voltage is applied, the Green LED will illuminate. The relay energizes (and the Red LED is on) when the monitored voltage is above the pick-up setting for a period longer than the fixed pick-up time delay of 0.5 seconds. The relay de-energizes (and the Red LED is off) when the monitored voltage is below the drop-out setting for a period longer than the (adjustable) drop-out time delay (t) which is adjustable between 0.1-10 seconds.
VWE012D(X) VWE024D(X) VWE048D(X) VWE110D(X) VWE120A(X)	Adjust the over voltage setting (Vmax) between the full range as shown on the product nameplate. Adjust the under voltage setting (Vmin) between 75% and 95% of the over voltage setting. When the monitored voltage is applied, the Green LED will illuminate. The relay energizes (and the Red LED is on) when the monitored voltage is between the over and under voltage settings. The relay de-energizes (and the Red LED is off) when the monitored voltage rises above or falls below the over or under voltage settings for a period longer than the drop out time delay (t), which is adjustable between 0.1-10 seconds. The relay will re-energize once the monitored voltage rises above or falls below the hysteresis level of either Vmax or Vmin settings for a period longer than the pick-up time delay, which is fixed at 0.5 seconds.

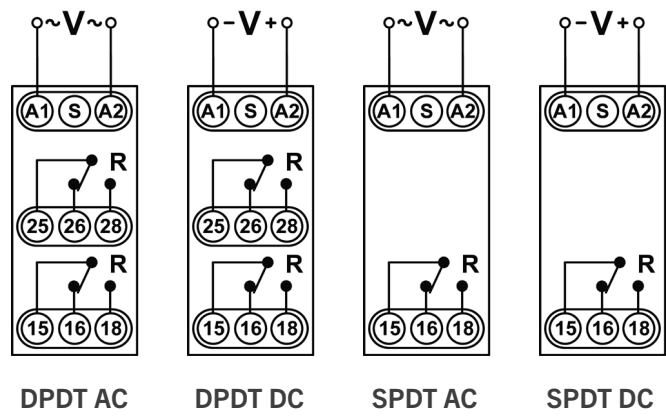
PRODUCT SPECIFICATIONS

Voltage Tolerance:		
	50 - 150% of nominal product voltage continuous	
Load (Burden):		
	Maximum	3VA
Sensing Accuracy:		
	Constant Conditions within Specifications	± 2%
	Variable Conditions within Specifications	± 5%
	(Percentage based on nominal voltage)	
Setting Accuracy:		
	Maximum Setting (Adjustable)	+ 5% / - 0%
	Minimum Setting (Adjustable)	+ 0% / - 50%
	Fixed Voltage Setting	± 2%
Repeatability:		
	<1%	
Life:		
	Mechanical	10,000,000 operations
	Full Load	100,000 operations
Output Contact Ratings:		
	SPDT/DPDT: 10A @ 250V AC / 8A @ 30V DC	
Approvals:		
	cULus - E236146	
Trip Delay:		
	Dropout	Adjustable 0.1–10 seconds (fixed option available)
	Pick-up	Fixed 0.5 seconds fixed
	Start-up	0.5 seconds
LED Indicators:		
	Green	Power is applied
	Red	Relay is energized
Transient Protection:		
	2000V per IEC 61000-4-5 Level 3 (+/- 2kV)	

DIMENSIONAL DRAWINGS



WIRING DIAGRAMS



ORDERING INFORMATION

VxE 17.5MM Single-Phase Monitoring Relays

Family		Function		Form Factor		Monitored Voltage		Output Configuration	
V	Voltage monitor	A	Over/Under voltage relay	E	17.5MM DIN	012D	12V DC	X	DPDT
						024D	24V DC	(Blank)	SPDT
W	Voltage band relay					048D	48V DC		
						110D	110V DC		
						120A	120V AC		



TRYSTAR®