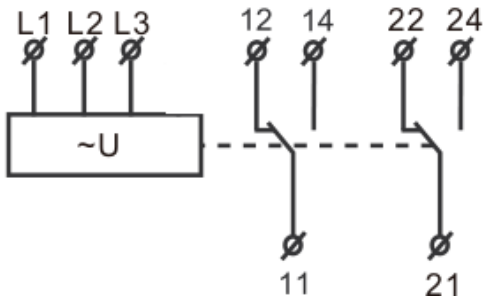
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RV8-SP LCD Three-Phase Voltage Monitoring Relay

NewTrend RV8-SP displays three-phase voltage on an LCD and monitors overvoltage, undervoltage, phase failure, phase sequence and voltage asymmetry. This three-wire version measures phase-to-phase voltage and provides 2 SPDT contacts rated 8A (AC-1). Voltage thresholds and separate protection delays are programmable; voltage-window and asymmetry protection can be disabled when the application requires it.

Parameter	Specification
Model	RV8-SP
Voltage system	3P3W / AC 220-460V; phase-to-phase
Nominal-voltage settings	220 / 230 / 240 / 380 / 400 / 415 / 440 / 460V
Monitoring / supply terminals	L1-L2-L3
Supply frequency	45-65Hz
Measuring range	130-650V
Measurement error	Maximum 1%
Output contacts / rating	2 SPDT / 8A (AC-1)
Switching voltage / minimum DC power	250VAC / 24VDC; 500mW
Overvoltage setting	OFF or (Un + 1V) to 600V; 1V step
Undervoltage setting	150V to (Un - 1V), or OFF; 1V step
Voltage hysteresis	2%
Overvoltage / undervoltage delays	Each 0.1-20 seconds; 0.1s step; factory 2s
Asymmetry setting	OFF or 5-20%; 1% step; factory 8%
Asymmetry trip delay	0.1-20 seconds; 0.1s step; factory 2s
Phase-failure threshold	50% of selected Un
Phase-sequence protection	ON / OFF; factory ON
Start / reset time	0.3-30 seconds; 0.1s step; factory 0.3s
Automatic reset	ON / OFF; factory ON
Factory nominal voltage	380V
Factory OV / UV thresholds	437V / 323V
Time deviation	Maximum 5%
Temperature coefficient	0.05%/degree C at 20 degrees C
Mechanical / electrical life (AC-1)	10,000,000 / 100,000 operations
Operating / storage temperature	-20 to +55 / -35 to +75 degrees C
Mounting / operating position	DIN rail to EN/IEC 60715; any position
Protection	IP40 front panel; IP20 terminals
Overvoltage category / pollution degree	III / 2
Maximum conductor size	Solid: 1 x 2.5mm2 or 2 x 1.5mm2; with sleeve: 1 x 2.5mm2 (AWG 12)
Tightening torque	0.4Nm
Weight	109g
Dimensional drawing	90mm body / 95mm overall height; 36mm width; 70mm depth; confirm housing version

Connections and operation

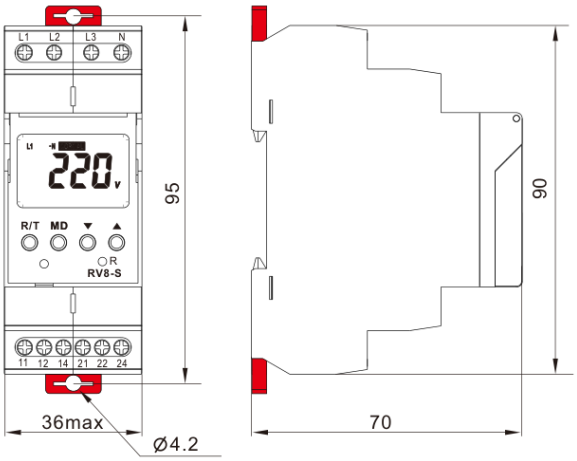


The arrow keys display the three phase voltages. Hold MD for 3 seconds to enter parameter settings; use the arrow keys to adjust the selected value.

When an individual voltage or asymmetry protection is disabled, its trip-delay setting is omitted from the menu. Automatic reset and phase-sequence protection have separate ON/OFF settings.

Press R/T for 0.5 seconds to test relay action only with normal supply conditions.

Dimensions and adjustment





Native dimensional drawing: 90mm body height, 95mm overall height, 36mm maximum width and 70mm depth.

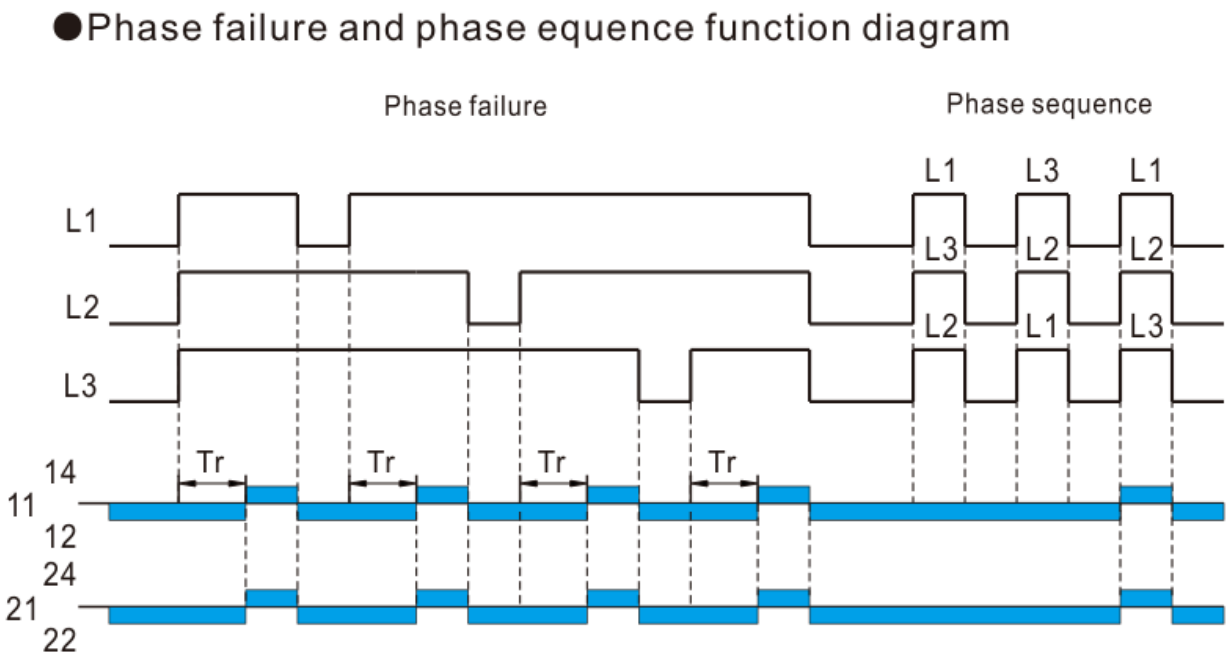
Shared RV8-S housing drawing, four-terminal front view shown; use the model-specific wiring diagram. Parameter table depth 64mm differs from the native drawing depth 70mm; confirm the supplied housing.

The native parameter-range table controls the numeric values above: a simplified setting-flow illustration uses different example limits, so confirm firmware-specific available limits before setting protection. The native housing drawing shows 70mm depth, whereas the parameter table lists 64mm. Confirm the delivered housing before enclosure layout.

Installation

Installation and wiring must be performed by qualified electricians in accordance with applicable safety standards. Isolate the circuit before wiring and use the appropriate electrical-waste collection route.

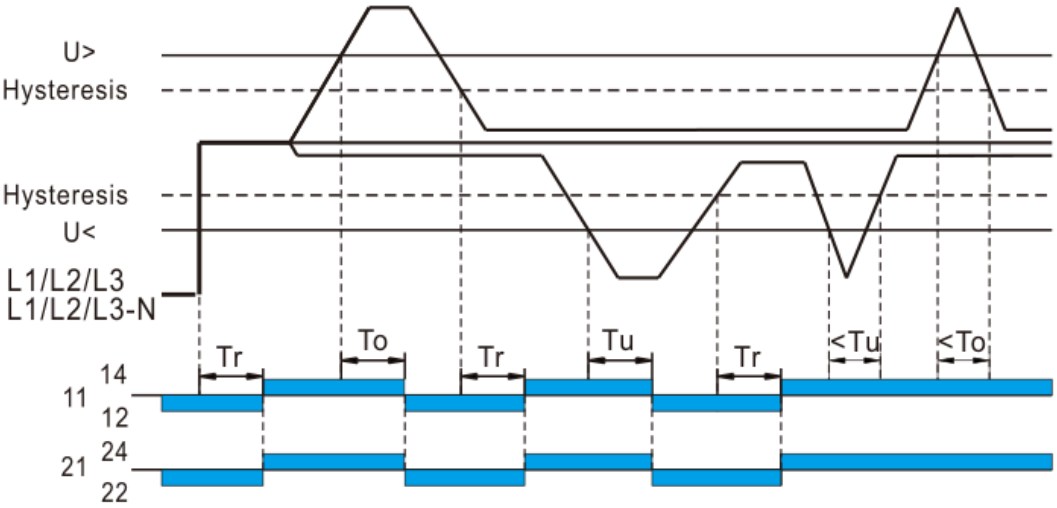
Phase-failure and phase-sequence operation



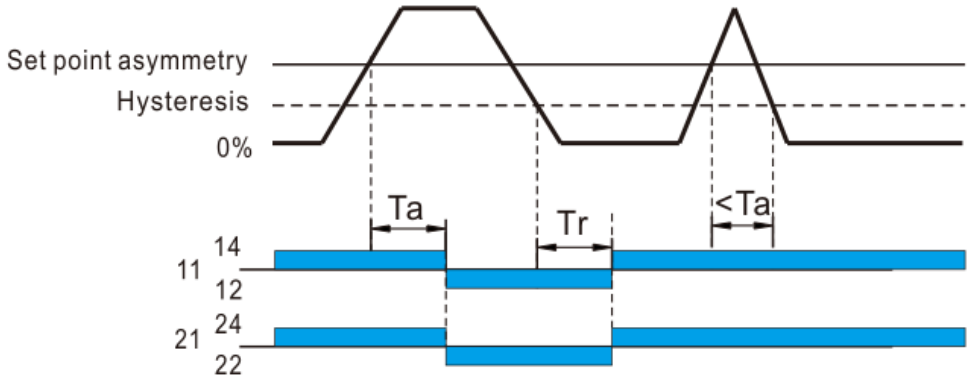
Tr: start/reset delay. The relay monitors its own three-phase supply. The phase-sequence function can be enabled or disabled.

Voltage-window and asymmetry operation

● Overvoltage and undervoltage function diagram



● Asymmetry function diagram



To:Overvoltage threshold tripping delay.
Tu:Undervoltage threshold tripping delay.
Ta:Asymmetry threshold tripping delay.
Tr:Power up delay