



General

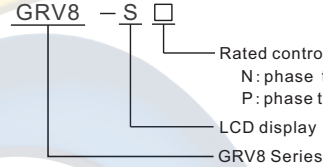
Applications

- Control for connection of moving equipment(site equipment,agricultural equipent,refrigerated trucks).
- Control for protection of persons and equipment against the consequences of reverse running.
- Normal/emergency power supply switching.
- Protection against the risk of a driving load(phase failure).

Function Features

- Controls its own supply voltage(True RMS measurement).
- LCD display.
- Measuring frequency range:45Hz-65Hz.
- Voltage measurement accuracy<1%.
- 2-MODULE,DIN rail mounting.

Model and connotation



Technical parameters

Technical parameters	GRV8-SN	GRV8-SP
Function	Monitoring 3-phase voltage	
Monitoring terminals	L1-L2-L3-N	L1-L2-L3
Voltage range(Un)	127-132-138-220-230 -240-254-265(P-N)	220-230-240-380-400 -415-440-460(P-P)
Rated supply frequency	45Hz-65Hz	
Measuring range	70V-400V	130V-650V
Measurement error	≤1%	
Hysteresis	2%	
Phase failure value	50% of Un selected	
Time deviation	≤5%	
Temperature coefficient	0.05%/°C, at=20°C(0.05°F , at=68°F)	
Output	2×SPDT	
Current rating	8A/AC1	
Switching voltage	250VAC/24VDC	
Min.breaking capacity DC	500mW	
Mechanical life	1×10 ⁷	
Electrical life(AC1)	1×10 ⁵	
Operating temperature	-20°C to +55°C (-4°F to 131°F)	
Storage temperature	-35°C to +75°C (-22°F to 158°F)	
Mounting/DIN rail	Din rail EN/IEC 60715	
Protection degree	IP40 for front panel/IP20 terminals	
Operating position	any	
Overvoltage cathegory	III.	
Pollution degree	2	
Max.cable size(mm ²)	solid wire max.1×2. 5or 2×1. 5/with sleeve max.1×2. 5 (AWG 12)	
Tightening torque	0.4Nm	
Dimensions	90×36×64mm	
Weight	100g	109g

Parameter setting range

Parameters		Setting range	Step	Factory default	Remarks
Rate voltage(Un)		127-132-138-220-230 -240-254-265(P-N)		220V	GRV8-SN
		220-230-240-380-400 -415-440-460(P-P)		380V	GRV8-SP
Over voltage	Operation value	OFF,(Un+1)...350	1V	253V	GRV8-SN
		OFF,(Un+1)...600	1V	437V	GRV8-SP
	Delay time	0.1...20s	0.1s	2s	
Under voltage	Operation value	80...(Un-1),OFF	1V	187V	GRV8-SN
		150...(Un-1),OFF	1V	323V	GRV8-SP
	Delay time	0.1...20s	0.1s	2s	
Asymmetry	Operation value	OFF-5%...20%	1%	8%	
	Delay time	0.1...20s	0.1s	2s	
Phase sequence protection		ON-OFF		ON	
Start-reset delay time		0.3...30s	0.1s	0.3s	
Auto-reset		ON-OFF		ON	

Note: "ON" means activating protection function, and "OFF" means inactivating protection function.

Note:

$$Asy = \frac{U_{max} - U_{min}}{U_{avr}} \times 100\%$$

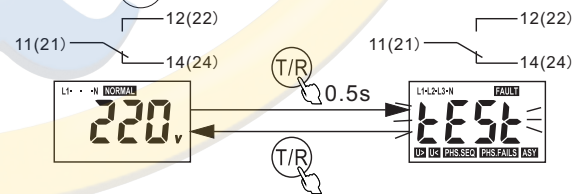
$$U_{avr} = \frac{U_1 + U_2 + U_3}{3}$$

$$U_{max} = \max(U_1, U_2, U_3)$$

$$U_{min} = \min(U_1, U_2, U_3)$$

Operation description

- Short press T/R 0.5s can test relay action.



NOTE:

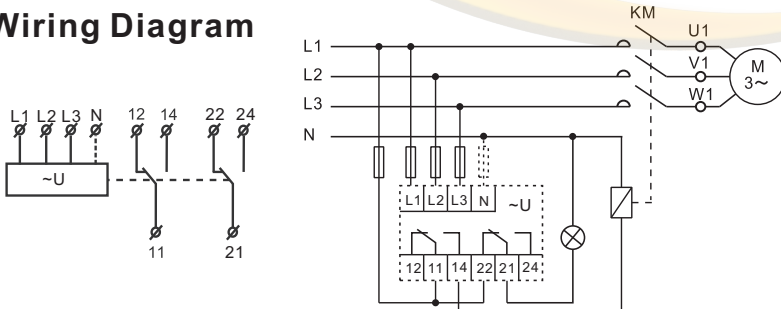
Only when the power supply is normal, press the button.

- Phase voltage inquiry

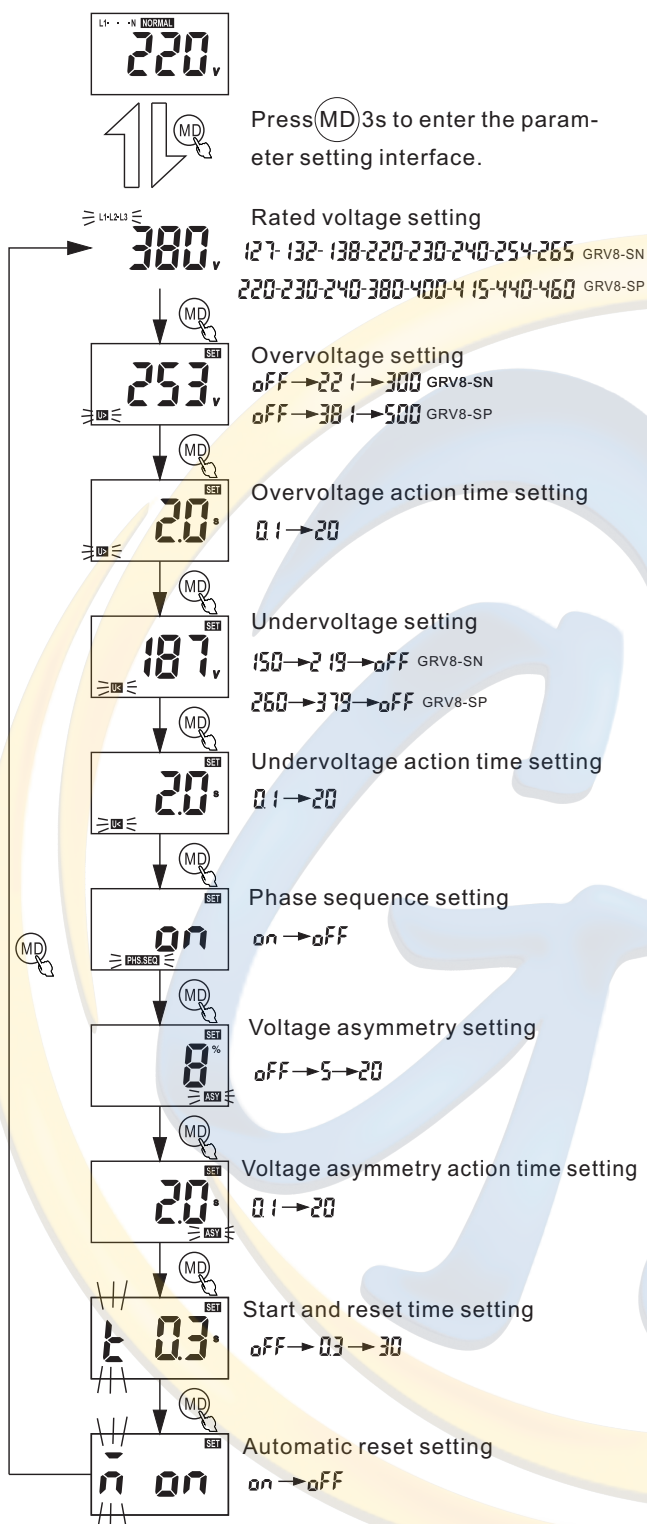
Short press $\blacktriangledown$ $\blacktriangle$ to see the value of 3- phase voltage.



Wiring Diagram



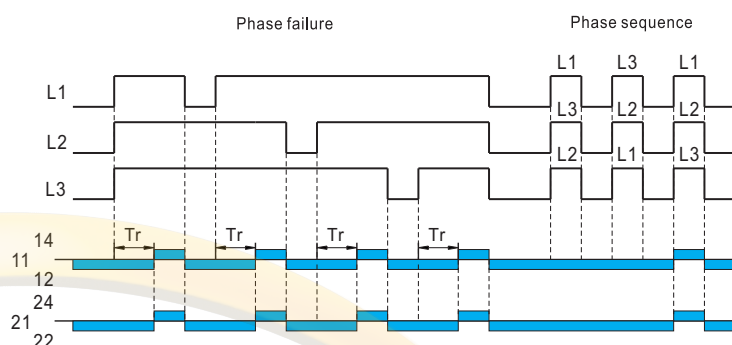
- Parameter setting



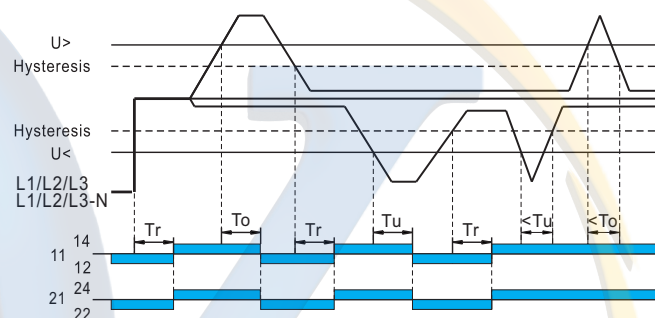
NOTE:
Short press   can add and drop parameters, long press can be quickly set. If 60s does not operate the key, it will exit automatically. When over-voltage protection, undervoltage protection or unbalanced protection are switched off, The menu is not showing the action time setup process.

Functions Diagram

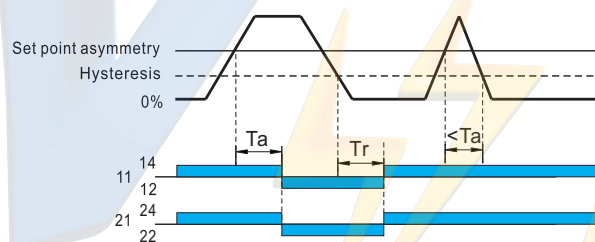
●Phase failure and phase equence function diagram



- 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

Dimensions(mm)

