3-Phase display voltage relay

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

GRV8 – S □
- Rated control supply code: N: phase to neutral; P: phase to phase
- LCD display
- GRV8 Series

Technical parameters

Technical parameters	GRV8-SN	GRV8-SP
Function	Monitoring 3-phase voltage	
Monitoring terminals	L1-L2-L3-N	L1-L2-L3
Supply voltage limits	70V-400V	130V-650V
Rated supply frequency	45Hz-65Hz	
Voltage hysteresis	2% Un	
Measuring range	80V-350V	150V-600V
Measurement error	≤1%	
Phase failure	50% Un	
Start-reset delay time	0.3-30s	
Temperature coefficient	0.05%/℃,at=20℃(0.05%℉, at=68℉)	
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℃ to +55℃ (-4℉ to 131℉)	
Storage temperature	-35℃ to +75℃ (-22℉ to 158℉)	
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)	
Dimensions	90×36×64mm	
Weight	90g	
Standards	EN60255-1,IEC60947-5-1	

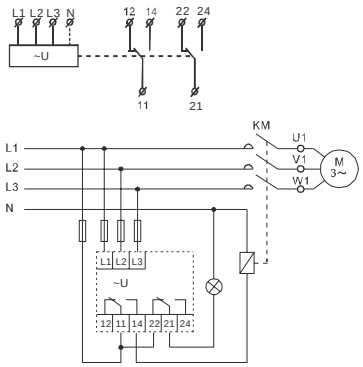
Note:

$$Asy=\frac{Umax-Umin}{Uavr}\times100\%$$

$$Uavr=\frac{U_1+U_2+U_3}{3}$$

Umax=Max(U_1,U_2,U_3)
Umin=Min(U_1,U_2,U_3)

Wiring Diagram

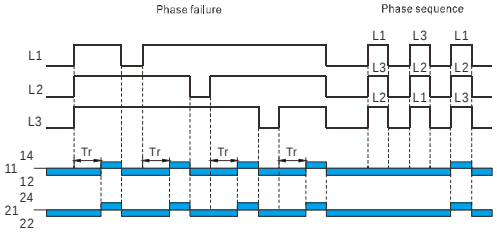


Parameters		Setting range	Step	Factory default	Remarks
Rated voltage(Un)		127-132-138-220-230-240-254-265(P-N)		220V	GRV8-SN
		220-230-240-380-400-415-440-460(P-P)		380V	GRV8-SP
Over voltage	Operation value	OFF-(Un+1)...350	1V	253V	GRV8-SN
		OFF-(Un+1)...600	1V	437V	GRV8-SP
	Delay time	0.1...20s	0.1s	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	

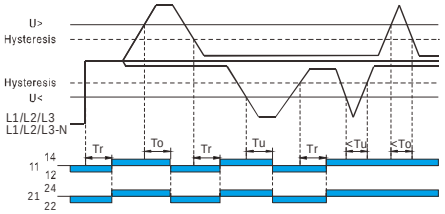
Note: "ON"means activating protection function,and"OFF"means inactivating protection function.

Functions Diagram

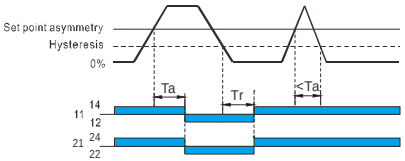
●Phase failure and phase equence function diagram



●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)