

3-Phase voltage relay

General

■ Applications

- Control for connection of moving equipment(site equipment,agricultural equipment,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).
- Set 8-level rated operating voltage through knob.
- Set the reset delay time through the knob.
- 2 C/O output
- Measuring frequency range:45Hz-65Hz.
- Voltage measurement accuracy<1%.
- Relay status is indicated by LED.
- 2-MODULE,DIN rail mounting.

■ Model and connotation



Table 1

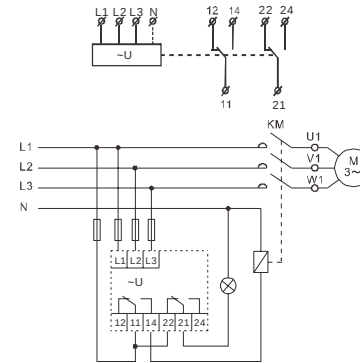
Function code	Over-voltage	Under-voltage	Asymmetry	Delay time	Phase sequence	Phase failure	Reset time
09			8%		●	●	
10	2%...20%	-20%...2%	5%...15%	0.1s...10s	●	●	0.1s...10s

Note:●the function is available

Technical parameters

Technical parameters	M460	M265
Function	Monitoring 3-phase voltage	
Monitoring terminals	L1-L2-L3	L1-L2-L3-N
Supply terminals	L1-L2	L1-N
Voltage range	220-230-240-380-400-415-440-460(P-P)	127-132-138-220-230-240-254-265(P-N)
Rated supply frequency	45Hz-65Hz	
Measuring range	176V-552V	101V-318V
Threshold adjustment voltage	2%-20% of Un selected	
Adjustment of asymmetry threshold	5%-15%	
Hysteresis	2%	
Supply indication	green LED	
Time delay	Adjustable 0.1s-10s,10%	
Measurement error	<1%	
Run up delay at power up	Adjustable 0.1s-10s,10%	
Knob setting accuracy	10% of scale value	
Reset time	Adjustable 0.1s-10s,10%	
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	
Output indication	red LED	
Mechanical life	1 × 10 ⁷	
Electrical life(AC1)	1 × 10 ⁵	

Wiring Diagram



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 category	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	80g
Standards	EN 60255-1, IEC 60947-5-1

Note:

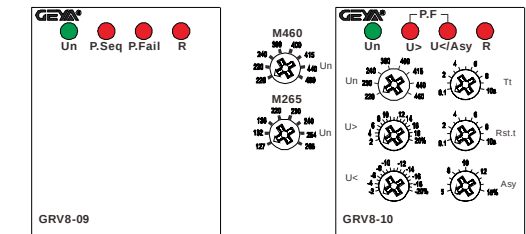
$$Asy = \frac{U_{max} - U_{min}}{U_{avr}} \times 100\%$$

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

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

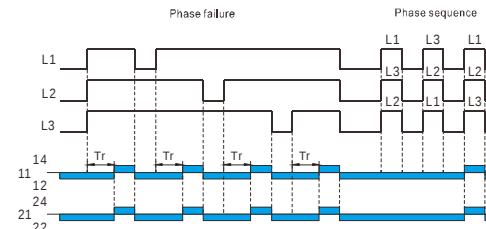
$$U_{min} = \min(U_1, U_2, U_3)$$

Panel Diagram

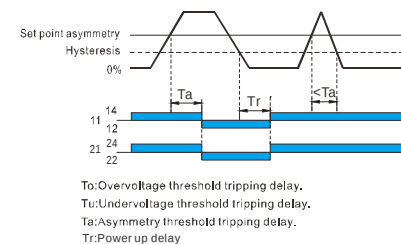


Functions Diagram

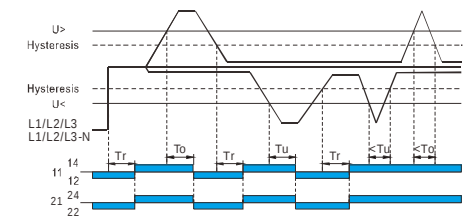
● Phase failure and phase sequence function diagram



● Asymmetry function diagram



● Overvoltage and undervoltage function diagram



Dimensions(mm)

