

An aerial, top-down view of a city at night. The buildings are rendered in a golden-yellow color, glowing from within. The streets are also illuminated with a golden light, creating a grid pattern. The overall scene is dark, with the city lights providing the primary illumination. In the center of the image, the word "EVENTS" is written in large, bold, white, sans-serif capital letters. The letters are slightly transparent, allowing the city lights to be seen through them.

EVENTS

Phase Failure Relay

- ❑ MKC-30 Phase Failure Relay is designed to prevent overheating and damage of 3-phase motors due to phase failure or unbalance in industrial facilities.
- ❑ MKC-30 protects your equipment and systems against phase failure.



MKC-30 Phase Failure Relay

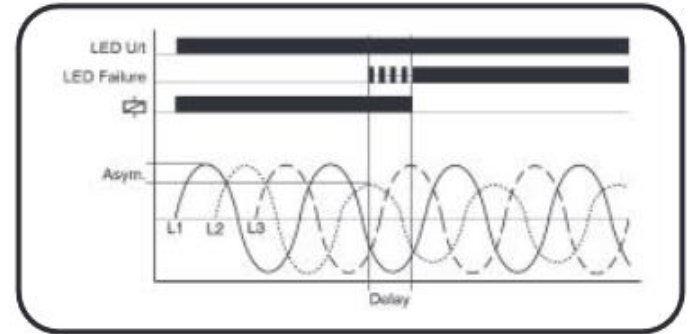
Multi-function

MKC-30 is used for;

- ❑ Asymmetry(Voltage Unbalanced) Protection
- ❑ Under/Over Voltage Protection
- ❑ Phase Sequence Protection
- ❑ Lack of Supply Voltage Protection
- ❑ Neutral Failure Protection

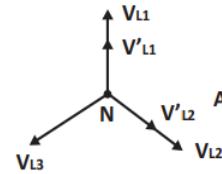
With easily adjustable asymmetry range (from 5% to 25%) and adjustable delay time (0.1s to 20s) for asymmetry.

Asymmetry monitoring



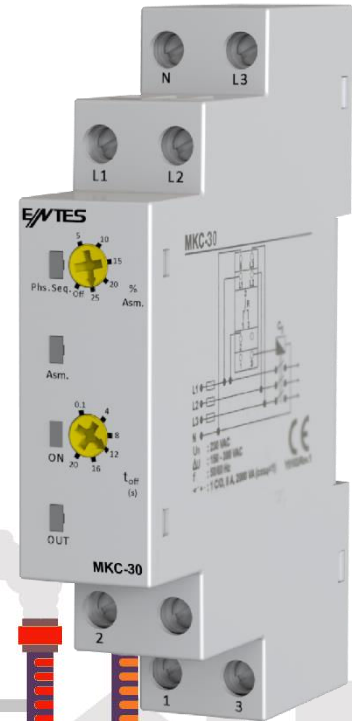
Asymmetry(Voltage Unbalanced) Protection

- If the asymmetry(voltage unbalance) is higher than the value set by the user, the relay switches OFF.


$$\text{Asymmetry \%} = \frac{\text{Max}(V_{L1}, V_{L2}, V_{L3}) - \text{Min}(V_{L1}, V_{L2}, V_{L3})}{\text{Average}(V_{L1}, V_{L2}, V_{L3})} \times 100$$

Under/Over Voltage Protection

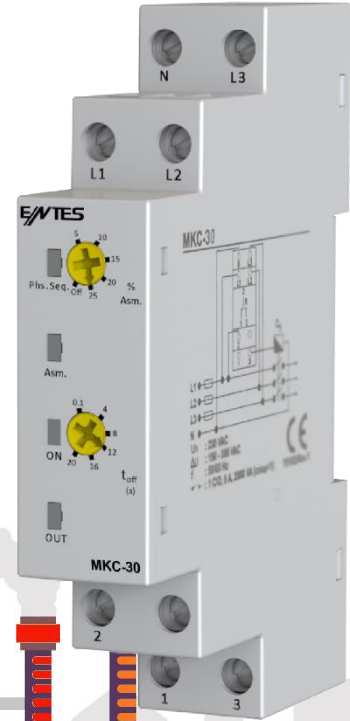
- **Under Voltage Protection:** If one or many of the measured voltage values at 3-phase decrease under $(0.5 \times U_n)$ V value, the relay output switches OFF without any delay.
- **Over Voltage Protection:** If one or many of the measured voltage values at 3-phase increase over $(1.5 \times U_n)$ V value, the relay output switches OFF without any delay.



MKC-30 Phase Failure Relay

Phase Sequence Protection

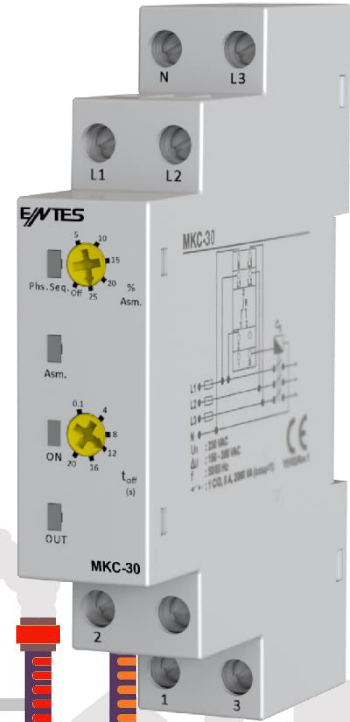
- When the phase sequence is correct, the relay output is ON; however, if the sequence changes, the output relay automatically switches OFF.



MKC-30 Phase Failure Relay

Insufficient Supply Voltage Fault

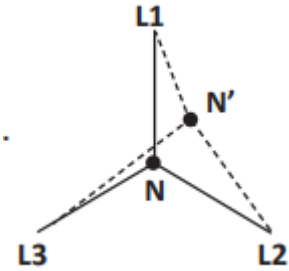
- ❑ The device is supplied from a 3-phase capacitive source. When the average of the supply voltage decreases below 115V value, the output relay switches into OFF without any delay.



MKC-30 Phase Failure Relay

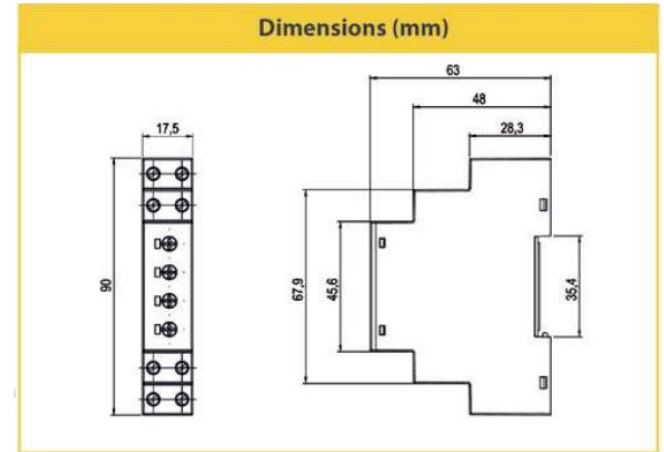
Neutral Failure Protection

- Voltage value is measured between phase – neutral with capacitive supply. When the neutral connection fails, the reference point of the voltage measurement shifts. Neutral fault occurs by detecting of the shift. In that situation the relay output switches OFF.



Slim Design

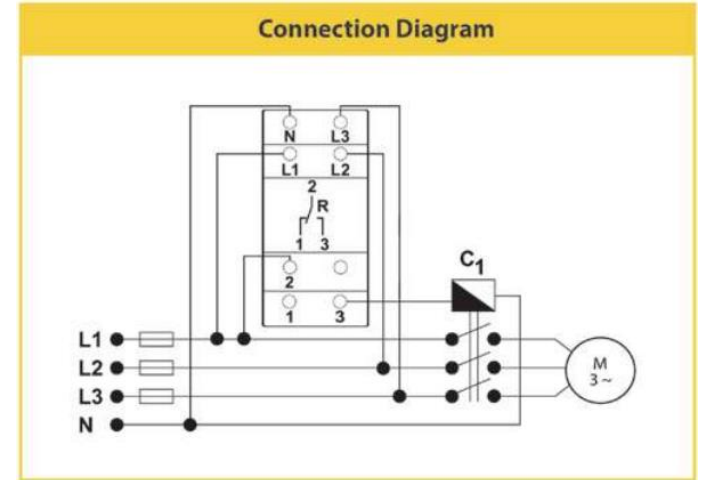
- ❑ The MKC-30 is designed to be easily used in small panels in DIN1 size. (Rail Mounting)
- ❑ Dimensions(mm): 17.5 X 90 X 63



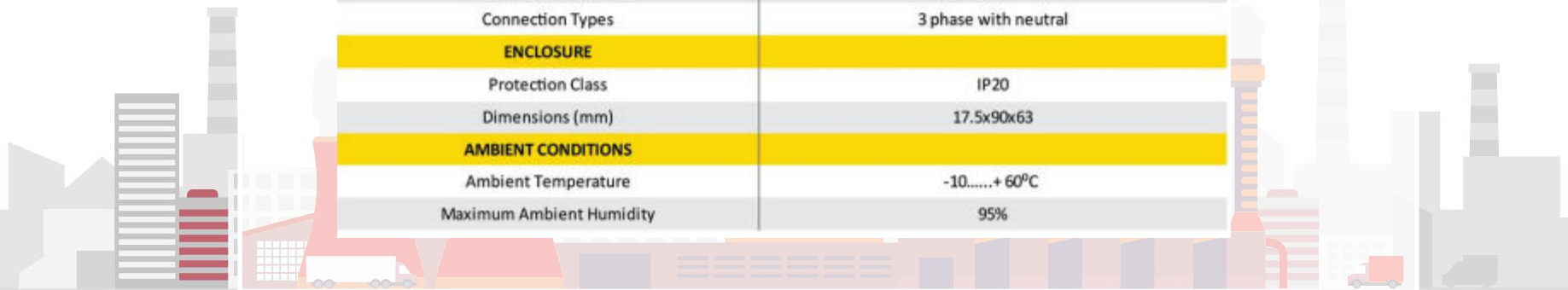
3 Phase Connection

MKC-30 has ;

- ❑ 3-Phase Connection with Neutral
- ❑ 1 CO which is 8A, 2000VA



SPECIFICATIONS	MKC-30
SUPPLY & MEASUREMENT	
Nominal Voltage (Un)	230 VAC (±10%)
Operating Frequency	50/60 Hz
Measurement Voltage Range (ΔU)	150 - 300 VAC
Measurement Accuracy	±3%
SETTINGS & OUTPUT	
Asymmetry Setting Range	5-25 % ; Off
Extreme Under Voltage Limit	< 115 VAC
Extreme Over Voltage Limit	> 345 VAC
Hysteresis	30% of the adjusted asymmetry value
Delay-off Time (toff)	0.1 - 20 sec
Delay-on Time (ton)	fixed 0.5 sec
Contact Output	1 CO, 8 A, 2000 VA (cos φ=1)
CONNECTIONS	
Mounting Type	Rail mounting
Connection Terminals	Screw terminal
Connection Types	3 phase with neutral
ENCLOSURE	
Protection Class	IP20
Dimensions (mm)	17.5x90x63
AMBIENT CONDITIONS	
Ambient Temperature	-10.....+ 60°C
Maximum Ambient Humidity	95%



An aerial, top-down view of a futuristic city at night. The city is composed of numerous rectangular buildings of varying heights, all illuminated with a warm, golden-yellow glow. The streets are also lit up, creating a grid of light. The overall atmosphere is one of a vibrant, high-tech urban environment. In the center of the image, the word "EVENTS" is written in large, bold, white, sans-serif capital letters, which are semi-transparent, allowing the city lights to be seen through them.

EVENTS