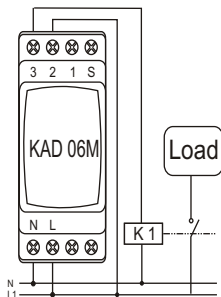
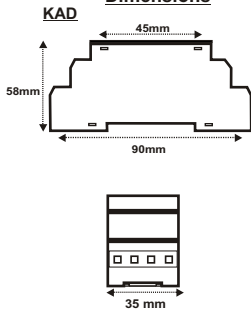


## Connection diagram



## Dimensions



## Technical specifications

<b>Supply voltage</b>	: 220 Vac $\pm$ % 35, 50 / 60 Hz (L-N)
<b>Under voltage setting</b>	: 210V, 150V adjustable.
<b>Over voltage setting</b>	: 230V, 300V adjustable.
<b>Hysteresis</b>	: 5V (on the delay on)
<b>Delay off time</b>	: (t-off) : Between .1sec...20sec adjustable.
<b>Delay On time</b>	: (t-on) : Between 0.1sec...15 min adjustable.
<b>Power consumption</b>	: < 7 VA
<b>Operating temperature</b>	: -5°C...+55°C
<b>Electrical life</b>	: 100.000 On/ Off (Resistive load)
<b>Control output</b>	: Relay, 1 inversör, 10A/ 250 Vac (Omron)
<b>Electrical connection</b>	: PCB clamp
<b>Installation</b>	: DIN 35 rail or Vertical installation.

# KRK®

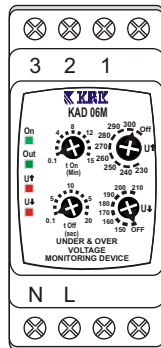
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## UNDER AND OVER VOLTAGE PROTECTION RELAY

True RMS



### KAD 06M



## User guide

## General specifications

The devices are used for single phase and three phase systems from : Phase loss, Phase sequence failure , Under voltage, Over voltage

## Protection Functions

**1- Under and Over Voltage Protection:** Under Over voltage tolerances can be adjusted seperately.If the phase-neutral voltage values are between the adjusted levels "out" led is on. ( 2-3 contacts are closed ). Otherwise device close the output. ( 1-2 contacts are closed )During normal operation any of phase voltage value decreases under the adjusted value "Umin, U↓ " led is on, increases "Umax, U↑ " led is on.If one of the phase is over the limit and one of the under the limit both Umin " U↓ " and Umax " U↑ " leds are on. If these condition continues more than adjusted delay time "out" Is off.( 1-2 contacts are closed).Related warning leds remain on. If these condition continues less than adjusted time, warning leds are off.Device operating normally.

**Note: If under and over buttons are off , Control is not possible**

**2-** If any phases values decreases under  $0.5 \times U_n$  or increases over  $1.5 \times U_n$  device will closed the system without delay. Warning leds will light on accordingly. If phase value is big "Umax, U↑ " led is on, if small "Umin, U↓ " led is on

**3-**if supply voltage (L) drops under 150 V device will closed the system without delay. And " U↓ " led is on. .

**4- t-off time :** If phases values out of adjusted value , at the end of t-off time "out" led is off and 1-2 contacts are closed. The fault led or leds during t-off time is on

**5- t-On delay on time :** If the voltages is out of adjusted value device wait during t-off time. At the end of t-off time "out" led is off.( 1-2 contacts are closed ). When the voltages are between adjusted value device wait during t-on time. At the end of t-on time "out" led is on.( 2-3 contacts are closed )

## Device Leds

On	Umin (U↓)	Umax (U↑)	Out	( ● LED ON )	( ◐ FLASH )	( ⊗ LED OFF )	
⊗	⊗	⊗	⊗				N or L ( supply line ) is not connected or corrupted
●	⊗	⊗	●				Voltages are adjusted value
●	◐	⊗	●				Temporarily under voltage warning
●	●	⊗	⊗				Continuously under voltage warning
●	⊗	◐	●				Temporarily over voltage warning
●	⊗	●	⊗				Continuously over voltage warning
●	◐	◐	●				Respectively flash :temporarily over and under voltage warning
●	●	●	⊗				Continuously over and undr volage warning
●	◐	◐	⊗				Leds flash together phase sequence fault
●	⊗	⊗	⊗				T-On Delay On time
●	⋮	⊗	⊗				( ⋮ fast flasher ) Phase fault warning