General

Voltage control relays are designed to protect devices with sensitive operating voltage values from failures that may be caused by mains voltage.

Device Usage and Working Principle

Make the connections of the device in accordance with connection scheme. Set the required settings of the device according to the operating voltage values of the load. When the device is energized, if the voltage values are normal according to the set values, the relay gets activated and the relay LED (⇄) is turned on. When the voltage values go out of the set values, the related fault LED is on, it waits until the delay time (**DT**), after the time has elapsed, the relay gets de-activated and the relay LED goes out. When the voltages return to their normal values, the device waits until the reset time (**RT**), after the time has elapsed the relay gets activated and the relay LED is turned on.

Disable to Protection

The **High Voltage Protection** function is deactivated when the **HV** control knob is set to **Off**. **(It's only on GKM-11.)**

The **Low Voltage Protection** function is deactivated when the **LV** control knob is set to **Off**. **(It's only on GKM-11.)**
The Off stage is limited to 140V. If the voltage falls below 140V while in this stage, the relay is deactivated and the LV Led is flashes.

Relay Activated/De-activated Status

Relay is Activated: 2 (COM) and 3 (NC) short circuit, 1 (NC) and 2 (COM) open circuit.
Relay is De-activated: 2 (COM) and 1 (NC) short circuit, 3 (NC) and 2 (COM) open circuit.

Required Settings and Error Notifications

HV Control Knob: High Voltage Set Value, when the voltage rises above this value, HV LED is on.
LV Control Knob: Low Voltage Set Value, when the voltage drops below this value, LV LED is on.
DT Control Knob: Delay Time, is the time to wait before entering the failure.
RT Control Knob: Reset Time, is the time to wait for the relay to pull when the voltages return to normal.

Led Notifications By Errors

Error Name	LV LED	HV LED	⇄ LED
No error. Voltages are normal.	☐	☐	■
It counting the delay time for low voltage error.	■	☐	■
Low voltage error.	■	☐	☐
It counting the delay time for high voltage error.	☐	■	■
High voltage error.	☐	■	☐

Led is Off : ☐ Led is On: ■

Protection Functions

High Voltage Protection - To enter the error state: If the voltage, goes above the high voltage set value, the **HV LED** is on, the device waits until the set delay time (**DT**), after the time has elapsed the relay gets de-activated and the relay LED is off.

High Voltage Protection - Exiting the error state: When voltage, lower than 5 volts of the set high voltage set value, the device waits for the reset time (**RT**). After the time passes, the **HV LED** is off, the relay gets activated and the relay LED is on.

Low Voltage Protection - To enter the error state: If the voltage, goes below the low voltage set value, the **LV LED** is on, the device waits until the set delay time (**DT**), after the time has elapsed the relay gets de-activated and the relay LED is off.

Low Voltage Protection - Exiting the error state: When voltage is higher than 5 volts of the set high voltage set value, the device waits for the reset time (**RT**). After the time passes, the **LV LED** is off, the relay gets activated and the relay LED is on.

Contact:
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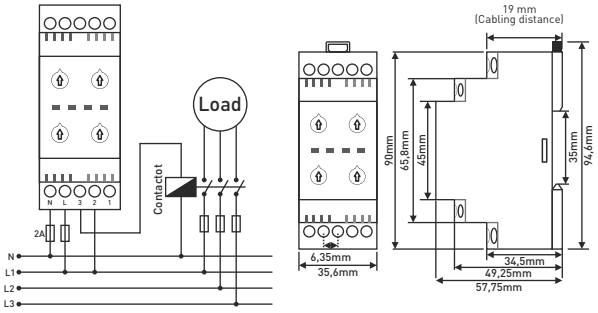
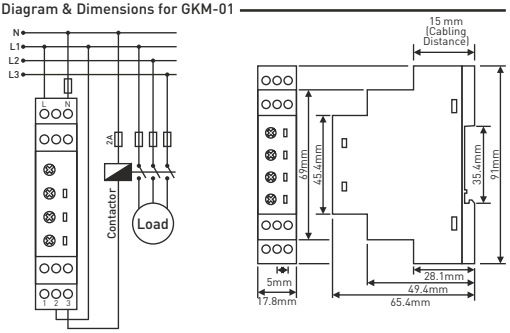
Connection Diagram & Dimensions for GKM-11



Connection Diagram & Dimensions for GKM-01



Maintenance

Switch off the device and release from connections. Clean the trunk of device with a swab. Don't use any conductor or chemical might damage the device. Make sure device works after cleaning.

Warnings

- -Please use the device according to the manual.
- -Don't use the device in wet.
- -Include a switch and circuit breaker in the assembly.
- -Put the switch and circuit breaker nearby the device, operator can reach easily.
- -Mark the switch and circuit breaker as releasing connection for device.

Technical Specifications

Nominal Operating Voltage	:	220V AC 50/60 Hz.
High Voltage	:	230V-300V + Off (GKM-11), 230V-270V (GKM-01)
Low Voltage	:	150V-210V + Off (GKM-11), 150V-210V (GKM-01)
Delay Time	:	0,5 sec. - 20 sec.
Reset Time	:	0,5 sec. - 20 sec.
Operating Power	:	<6VA
Operating Temp.	:	-20°C.....+55°C
Display	:	3x LEDs
Connection Type	:	Assembled on the din rail.
Weight	:	<0,080 kg. (GKM-01), <0,100 kg. (GKM-11)
Contact	:	5A 250VAC (Resistive Load)
Operating Altitude	:	<2000m
Cable Diameter	:	2,5mm²

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