

Voltage and Motor Protection Relays

Adjustable Over / Under Voltage Protection Relay (GR-XXX)

Application and Operation Principles

GR-XXX : Main problems for Industrial type electric motors are phase-voltage unbalance, fluctuations and overload occurrences. GR-XXX is developed to protect the motors against such inconvenient occurrences. GR-XXX is secured against instantaneous voltage peaks causing faulty tripping. GR-XXX is normally switched on and the LED is turned on when R-S-T phase voltages are having nominal values. When the phase-phase voltage fall under U_{min} or rise above U_{max} , the LED the turns on and the delay time counting starts. If, during the delay time period, the phase-phase voltage reaches at the pre-set value the relay is switched on and the LED is turned on. In case of family tripping continues then the relay is reached. Motor remains out of operation. When the voltage have the normal level, motor starts to run again.

GR-ADF : GR-ADF in addition with phase sequence is designed to protect three phase systems in where the inverse phase is critically important. When R-S-T phases are sequenced correctly the relay switches off and the LED turns on. Wrong or inversed sequenced may cause the relay be switched off and the LED be turned off. In this case, interchanging two phases will enable the relay be switched on and the LED be turned on. Thus motor will start running.

PTC : PTC is used to prevent motors internal overheating. When the motor winding (coil) temperature exceeds PTC the output relay switches off in a way to protect against motor burning.

Technical Datas

Supply Voltage	: 3x380 V AC 50-60Hz
Contact Output	: 250 V AC - 5 A
Under Voltage Level	: 270 - 370 V AC (Adjustable)
Over Voltage Level	: 390 - 440 V AC (Adjustable)
Relay On and Off Delay	: 0 - 12 sn. (Adjustable)
Hysteresis	: max. 15V
Setting Error	: $\pm 5\%$
Operation Temperature	: -40C ... 50C
Net Weight	: 310 gr

Order Informations

Model	
GR-A	(Over Voltage Protection Relay)
GR-D	(Under Voltage Protection Relay)
GR-AD	(Over-Under Voltage Protection Relay)
GR-ADF	(Phase Sequence & Over-Under Voltage Protection Relay)

Supply Voltage

3x380V 50-60 Hz

Voltage Ranges

V_U	390-440V (Adjustable)
V_U	200V/5 (Fixed)
V_U	440V/5 (Fixed)
V_U	270-370V (Adjustable)
V_U	390-440V (Adjustable)
V_U	270-370V (Adjustable)
V_U	390-440V (Adjustable)
V_U	270-370V (Adjustable)

Front View Informations



Dimensions



Connection Diagram

