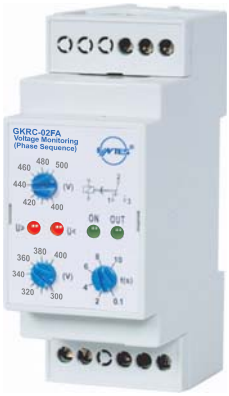
GKR / DGRC / MCC Series (Under / Over Voltage)



GKRC-02FA

GKRC-20F

MCC-1D

General

GKRC type over and under / over voltage monitoring relays are designed to protect single phase or three phase systems from voltage variations and phase sequence failure.

Note: These relays include the feature of switching OFF immediately if any of the phases exceeds (or reduces from) the nominal voltage by 50%.

DGRC type under voltage monitoring relays are designed to protect single phase or three phase systems from lasting under voltage variations.

- Non-flammable enclosure
- Rail-mounted or surface mounted with clips
- Protection Degree: IP20
- Ambient Operating Temperature : -5°C, +50°C
- IEC 60255-3, IEC 60255-6, IEC 60870-5, IEC 60529

Product Code		3-Phase	Single-phase	Over Voltage	Under Voltage	Phase Seq. Failure	Delay-On	Delay-Off	Without Neutral	Auxiliary Supply	DIN 2 Rail Mount	DIN 1 Rail Mount	pcs / carton
DGRC-01		●			●			●			●		10
GKRC-01		●		●				●			●		10
GKRC-02		●		●	●			●			●		10
GKRC-02F		●		●	●	●		●			●		10
GKRC-02FA		●		●	●	●		●		●	●		10
GKRC-03		●		●	●			●	●		●		10
GKRC-03F		●		●	●	●		●	●		●		10
GKRC-M2			●	●	●			●			●		10
MCC-1D	5-15 min. Delay-Off		●		●			●				●	24
MCC-3D	5-15 min. Delay-Off	●			●		●	●				●	24
GKRC-20F		●		●	●	●		●				●	10

Operating Principle

The relay is directly connected to the network and the required under / over voltage limit is adjustable by knobs.

When the monitored voltages of all 3-phase are within the preset limits, then the output relay switches ON. Faulty tripping operations effected from instantaneous voltage peaks are prevented with the adjustable delayed tripping between 0,1 and 10 seconds.

If any of the monitored phase voltage exceeds the set value, delay time starts to count.

If any of the phase voltages exceed 1,5xUn, the relay switches OFF without delay (within less than 500msec.). If any of the phase voltages falls below 0,5xUn, the relay switches OFF without delay (within less than 500 msec.)

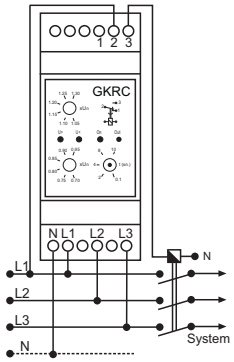
If the voltage value returns within preset limits before the end of counting time, the delay time ends and relay continues to its normal operation.

MODELS

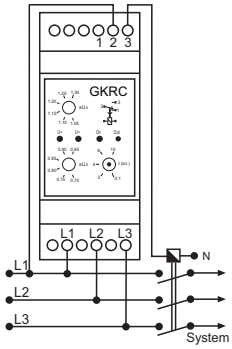
SPECIFICATIONS	GKRC-02	GKRC-02F	(new) GKRC-20F	GKRC-02FA	GKRC-03	GKRC-03F	GKRC-M2	DGRC-01	MCC-1D	MCC-3D
Electrical Parameters										
Operating Voltage (Un)	230 V AC, ±10%		230 V AC, ±30% 400 V AC, ±30%	400 V AC, ±10%			230 V AC, ±10%			
Operating Frequency	50/60 Hz									
Network Type	3-phase / 4 wire (Star)		1-phase / 2 wire 3-phase / 4 wire (Star)	3-phase / 3 wire (Delta)			1 phase / 2 wire	3-phase / 4 wire (Star)	1 phase / 2 wire	3-phase / 4 wire (Star)
Under Voltage Adj. Interval	(0,70-0,95)xUn		(0,80-1,30)xUn	(0,70-0,95)xUn				(0,70-0,95)xUn	-	
Over Voltage Adj. Interval	(1,05-1,30)xUn		(0,70-1,20)xUn	(1,05-1,30)xUn						
Instant Tripping	≤0,5xUn ≥1,5xUn							≤0,5xUn	168 V AC	
Instant Tripping Time	< 500 msec									
Hysteresis	3%								-	
Output Contact	1 C/O, 8 A, 2000 VA (cosφ =1)								1 N/O, 8 A, 2000 VA (cosφ =1)	
Mechanical Parameters										
Dimensions	PK25		PK22 (DIN1)	PK25					PK22 (DIN I)	
Weight / each	0,25 kg		0,1 kg	0,25 kg					0,1 kg	
Quantity in 1 package	24 pcs									

Connection Diagram

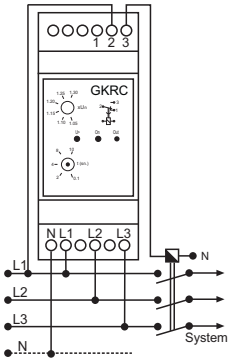
GKRC-01



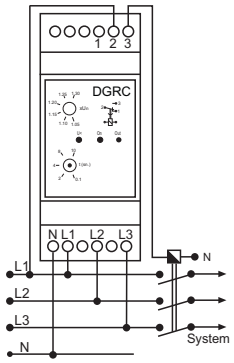
GKR-03 / GKRC-03F



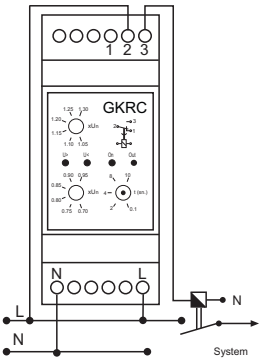
GKRC-02 / GKRC-02F



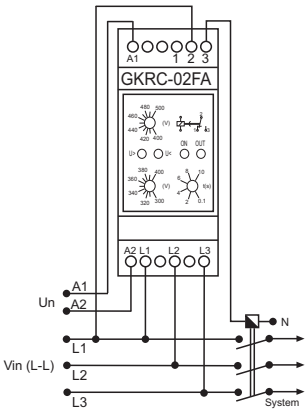
DGRC-01



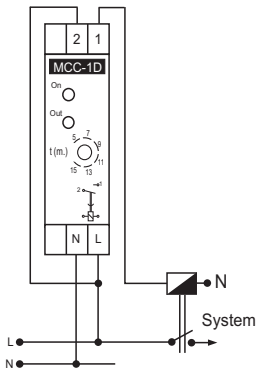
GKRC-M2



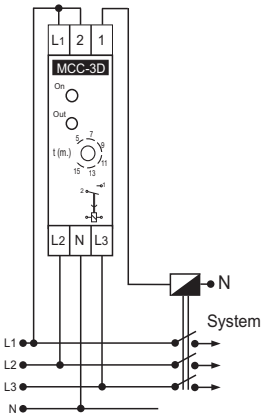
GKRC-02FA



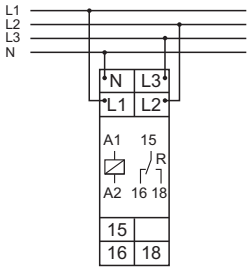
MCC-1D



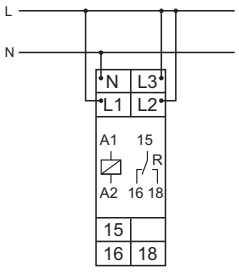
MCC-3D



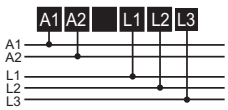
GKRC-20F



GKRC-20F

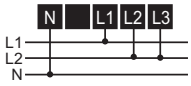


Auxiliary Supply Connection Diagram (For only GKRC-02FA)



Utilization with Single-Phase and Two-Phase Systems
(For only GKR-01/02, GKRC-01/02, DGR-01, DGRC-01)

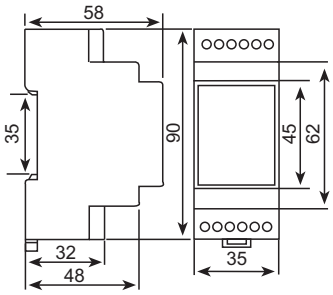
See following connection diagrams for both cases:



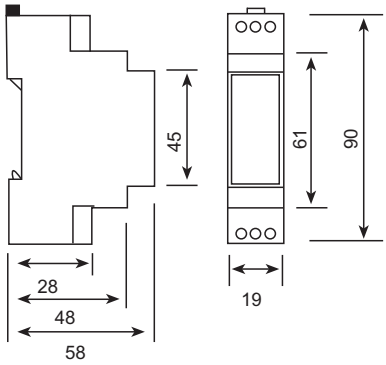
Two Phase Connection Diagram

Single Phase Connection Diagram

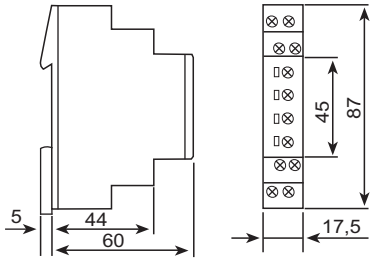
Dimensions



TYPE PK25



TYPE PK 22



TYPE PK 27