

ZP-OP4 Digital Phase Protector

3Ø Under, Over and Voltage unbalance with adjustable time delay & selectable voltage Code

The ZP-OP4 Phase Protection Relay is a digital electronic instrument designed for AC voltage monitoring and protection in 3 phase 4 wire system. Used in application such as main failure, phase sequence, phase unbalance, under and over voltage.

The ZP-OP4 is a designed to monitor the correct phase sequence of 3 phase system. With correct phase sequence applied the output relay will energizes and remains de-energized if an incorrect sequence is applied, the display will show "Pr".

When the measured voltage moves outside the setpoint limit, the relay will de-energize after the time delay. It operates automatically and shut down your motor before any damage is done.

When the input voltage enters the safe range of the set value, the relay is started after a delay of two seconds.

Should any phase fail, the output relay will de-energize.

AC voltage protectors offer user adjustable set-point. The set-point adjustment between 10% and 20% of the nominal supply for over voltage unit and between 2% and 20% for the under and voltage unbalance. The time delay function can be used to prevent nuisance tripping due to any phase fail. The last fault can be checked by pressing "▲" and the LED will show the fault condition. Line voltage is selected with Dip switch on top 380, 400 or 415 VAC. The trip-point is automatically calculated by the microcontroller.

The case can be mounted on a DIN rail 35mm and adapter plate is available for wall mounting.



CE

System Parameter Setting:

1. Press "SET" key the LED will indicate the first system parameter (ie OV), this means the controller goes to modify phase. after that, each time press the "SET" key, the controller goes to modify the next parameter.
2. After entering the modifying phase, use "▲" key to increase the value by one unit, respectively.
3. Use "SET" key to end current parameter setting, and move to the next parameter. After four system parameters, the procedure of the system parameter setting is ended. At this time the display show "On".

System Parameter Table:

No	LED	Description	Range	Requirement	Default
1	OV	Set Over Voltage	10 to 20%	10 to 25%	12%
2	UV	Set Under Voltage	2 to 20%	2 to 25%	12%
3	UB	Set Voltage Unbalance	2 to 20%	2 to 25%	12%
4	Time	Set Time delay for UV,UB	0 to 5 sec.	0 to 5 sec.	2 sec.

Specification

Feature

Approved standard	: CE Mark
Power consumption	: 2VA
Input voltage	: 380, 400 or 415VAC 3Ø (Selectable)
System frequency	: 50/60 Hz.
Accuracy	: ± 1% of normal voltage
Display	: 7-segment Red LED Letter 0.36"
Phase sequence	: L1 L2 L3

Range

Over voltage(OV)	: Adjustable from 10%-20% (Requirement 10-25%)
Under voltage(UV)	: Adjustable from 2%-20% (Requirement 2-25%)
Unbalance voltage(UB)	: Adjustable from 2%-20% (Requirement 2-25%)

Time

Delay off	: UV and UB Adjustable 0-5 sec. OV preset at 2 sec.
Delay on	: Time to 2 sec.

Relay output

Output type	: 2-pole change over (DPDT)
Contact rating	: 5A at 250VAC
Operations	: Mechanical : 2 x 10 ⁵ times Electrical : 2 x 10 ⁴ times
Relay reset	: Automatic

Environmental

Operating temperature	: -10°C to +55°C
Storage temperature	: -10°C to +85°C
Ambient humidity	: Max 85%RH

Enclosure

Mounting	: DIN rail 35 mm
Housing	: ABS
Protection class	: IP20
Wire fixing	: Screw terminal block (3.5mm, self lifting)
Indicator	: LED 3mm
Dimension in mm	: 56 x 70 x 107
Weight	: 275g

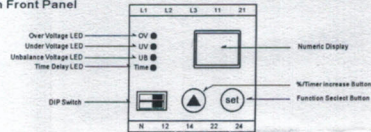
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The product should not be dispose of a household refuse.

Made in China

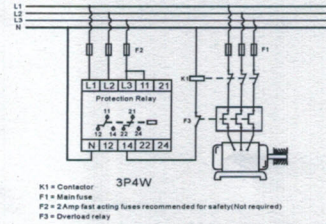
Operation Front Panel



Binary for select voltage with Dip switch

DIP Switch	Voltage
1 On, 2 Off	380VAC
1 Off, 2 On	400VAC
1 On, 2 On	415VAC

Wiring Diagram



Dimension in mm:

