

- Under-voltage monitoring with or without time-delay
- Over-voltage monitoring with or without time-delay
- Single-pole relay output 8 A - 250 VAC
- Made in accordance with the CE and EMC regulations

The C-mac® 1-phase monitoring relay FP10 is a variant of the 3-phase monitoring relay FP30, made particularly to meet the requirements for safe and cost-effective monitoring of the quality of the 1-phase supply voltage and to protect electrical devices connected to the mains supply.

The unit is enclosed in a DIN-rail housing, 35 mm wide and front height 45 mm, which makes it very suitable in industrial installations as well as domestic switchboard panels.

The unit is connected to the supply voltage and have a 1-pole relay output. The unit is made in accordance with the EMC regulations for use in industrial environment.

When the supply voltage is connected and within the selected limits, the output relay is activated. If the supply voltage is outside the limits, the relay will release.

Technical data:

Supply voltage: 1 x 230 VAC +/- 25 %

Supply frequency: 45 - 65 Hz

Power consumption: Approx. 1.5 W

Operating temperature: -20°C to +60°C

Isolation voltage: Supply - relay output: 4 kV

Humidity: 0-90% RH, non condensing

Indications:

Green LED, Activated: Supply ON and levels are OK
Flashing: Supply ON and level error

Red LED: Relay activated

Relay output: 1-pole change-over contact
max. load: 8 A / 250 VAC,
ohmic load

Accuracy: set point <2%
Time delay <1%

Dimensions: 90 x 35 x 57 mm

EMC and safety regulations:

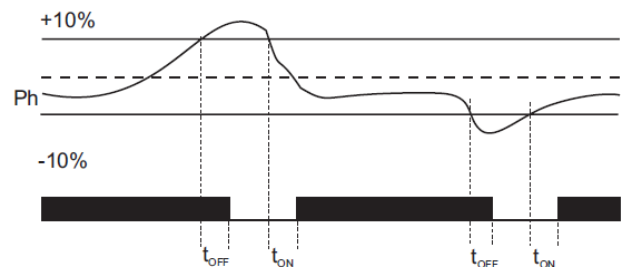
Emission: EN 50 081 - 1

Immunity: EN 50 082 - 2

Safety: EN 60 730 - 1



Functional diagram:



Example: setpoint adjusted to +/- 10%

Ordering guide:

FP10-230-ab-cd

If the standard unit is ordered, only the type number and the supply is used, e.g. FP10-230.

Standard unit:

FP10-230: ON- and OFF-delay: fixex 1 sec.
setpoint adjustable +/- 5% to +/- 25%

If a special unit is ordered, the whole number must be used, e.g. FP10-230-33-31

a = under-voltage range *b* = over-voltage range

0 = not used	5 = fixed 5 %	Note: If both under- and over voltage monitoring is used, both ranges must be the same, e.g. 5-15%
1 = 5 - 10 %	6 = fixed 10 %	
2 = 5 - 15 %	7 = fixed 15 %	
3 = 5 - 20 %	8 = fixed 20 %	
4 = 5 - 25 %	9 = fixed 25 %	
x = special		

c = *t_{on}* delay *d* = *t_{off}* delay

0 = 100 msec	3 = 3 sec	6 = 1 min
1 = 300 msec	4 = 10 sec	7 = 3 min
2 = 1 sec	5 = 30 sec	8 = 10 min
x = special		