

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.

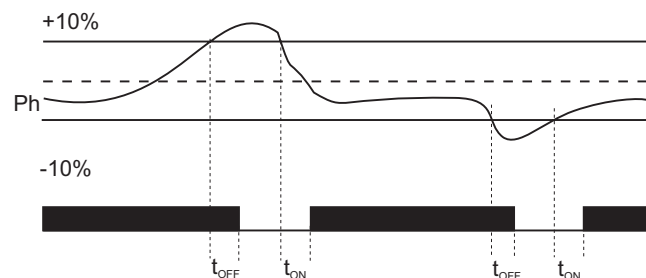
Technical data:

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

EMC and safety regulations:

Emission: EN 50 081 - 1
Immunity: EN 50 082 - 2
Safety: EN 60 730 - 1
Approvals: The module is produced in accordance with CE and high voltage regulations

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 %	<u>Note:</u>
1 = 5 - 10 %	6 = fixed 10 %	If both under- and over
2 = 5 - 15 %	7 = fixed 15 %	voltage monitoring is
3 = 5 - 20 %	8 = fixed 20 %	used, both ranges must
4 = 5 - 25 %	9 = fixed 25 %	be the same, e.g. 5-15%
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		