AC CURRENT IMBALANCE GUARD

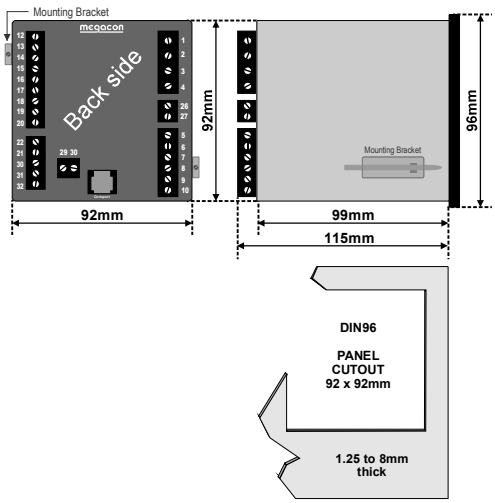
KPC110x

- **2-level AC Current Imbalance Protection**
- **True RMS measurement not affected by heavily distorted waveforms**
- **3 or 4-wire systems. Definite time trip delays**
- **Very fast analogue output (<50mS), (F-version)**
- **Total processing time less than 50mS**

Specifications

Auxiliary Voltage:	100-120V, 200-240V, 380-415V, 440-460 or 480VAC 40-70Hz (Fuse 0,5A)
Optional Aux.Voltage:	24, 48 or 110VDC (Fuse 2A)
Supply tolerance:	± 10%
Power rating:	1,5VA
Current Input:	1A CT or 5A CT, <0,1VA (class 0,5 or better)
Contact rating:	AC: 100VA -250V/2A max. DC: 50W -100V/1A max.
Adjustments:	
Trip level Warning:	0-100% of set alarm trip level
Trip delay Warning:	0-30 secs
Trip level Alarm:	0-40% of CT rating
Trip delay Alarm:	0-3 secs
Analogue outputs: (other on request)	Up to 20mA, max 500ohm Up to 10V, min 100kohm
Temperature:	-20 to +70ºC
Weight:	0.64kgs
Front protection:	IP52 (IP65 optional)

Dimensions



Description

The digitally controlled KPC110x series monitor and convert the three current transformer (CT) inputs into a signal proportional to the difference between the Highest and the Lowest input level.

The difference (imbalance) is displayed as a percentage of the CT rating. 1A secondary class 0.5 transformers should preferably be used. The standard scale range is **0 to 40%CT**. The warning and alarm trip relays are settable over the same range.

Relay R1 is used for early warning. R2 (fail safe) can be used for generator breaker trip. R3 can be used for local indication, input to PMS, alarm system etc. Alarm trip must be sufficiently high to ensure that generator magnetisation current does not cause tripping.

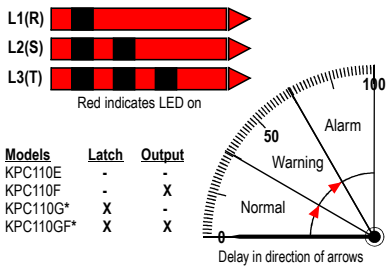
The alarm delay is to be set so that the initial inrush current have returned to normal level before the delay period elapses. The warning trip level and delay can be set as required to give early warning.

Fast response analogue output signal proportional to a range (KPC110F & KPC110GF).

User settable trip levels and delays. Colour of LEDs indicate alarm status. LEDs flash during count-down. The meter and the triple-zone status LEDs at a glance gives the clear safety message: NORMAL / WARNING / ALARM.

Pathfinder Function

The "Pathfinder" (only on latching models) indicates the phase causing the trip by flashing pattern of the relevant LED. When either short circuit or over current trips have operated the relevant LED will flash in the following pattern to indicate the phase producing the trip.

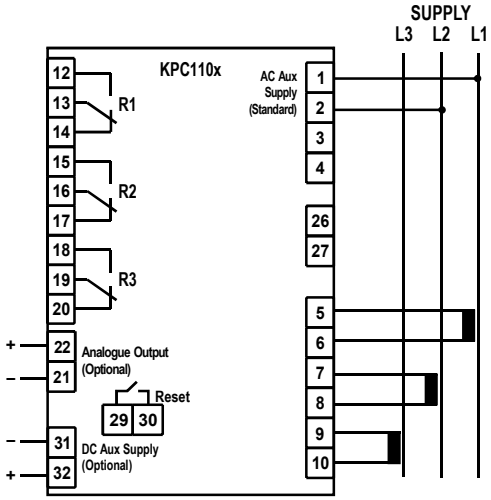


Models	Latch	Output
KPC110E	-	-
KPC110F	-	X
KPC110G*	X	-
KPC110GF*	X	X

	Warning	Alarm	Fail safe	Latch
R1	√			*√
R2		√	√	*√
R3	√	√	√	*√

Relays shown de-energised.
R2 & R3 are fail-safe and energises when unit is powered.

Relay Reset
Any latched relay is reset by linking terminals 29 and 30 or by interrupting the voltage input to terminal 1.



The unit meets EN 61010-1 Cat. III, Pollution degree 2 and the relevant environmental and EMC tests specified in EN 61326-2-4 to comply with the requirements of the major Classification Societies.

The MEGACON policy is one of continuous improvement, consequently equipment supplied may vary in detail from this publication.

ORDERING EXAMPLE:

Type:	KPC110F
Aux. Supply:	200-240V
Input Current:	1500/1A
Range:	0-40%CT
Analogue O/P:	4-20mA

IS range

CE