THREE PHASE AC OVERCURRENT GUARD

KEC112x

- **Generator Overcurrent Protection with definite time trip delay**
- **Two individually settable overcurrent relays**
- **"Pathfinder" function eases faultfinding**
- **Triple relay operation give more flexibility**
- **For use with 1A or 5A current transformers**
- **Optional fast analogue output, <50mS)**
- **Independent ammeter with full current scale**

Specifications

Auxiliary Voltage:	100-120V, 200-240V, 380-415V, 440-460 or 480VAC 40-70Hz (Fuse 0,5A)
Optional Auxiliary Voltage:	24, 48 or 110VDC (Fuse 2A)
Supply tolerance:	± 10%
Power rating:	1,5VA
Current Input:	1A CT or 5A CT, <0,1VA
Contact rating:	AC: 100VA - 250V/2A max. DC: 50W - 100V/1A max.
Adjustments:	
Trip level O/C1:	0-150% of FLC (FLC = Full Load Current)
Trip delay O/C1:	0-30 secs
Trip level O/C2:	0-150% of FLC
Trip delay O/C2:	0-30 secs
FLC:	50-100% of FSD (FLC = Full Scale Deflection)
Hysteresis:	2-50%
Analogue outputs: (other on request)	Up to 20mA, max 500ohm Up to 10V, min 100kohm
Temperature:	-20 to +70°C
Weight:	0.64kgs
Front protection:	IP52 (IP65 optional)

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.

Description

KEC112x series provides overcurrent guard for overload protection of AC motors, transformers etc. for alarms or tripping of non-essential load or breaker.

True RMS measurement not affected by heavily distorted waveforms provides highest up precision (1.0%) protection. Less than 50mS overcurrent detection.

User settable trip levels and delays. Colour of LEDs indicates alarm status. LEDs flash during count-down.

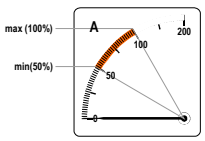
The independent class 1,5 moving iron ammeter input (term. 26 & 27) MUST be externally connected in serie with one of the C.T. inputs OR via an external selector switch to read phase current.

Fast response analogue output signal proportional to a range (KEC112F & KEC112GF).

The DIN96 instrument reads the current level directly in Ampere. The ammeter and the triple-zone status LEDs at a glance gives the clear safety message:

- OVERCURRENT (O/C) 2
- OVERCURRENT (O/C) 1
- NORMAL

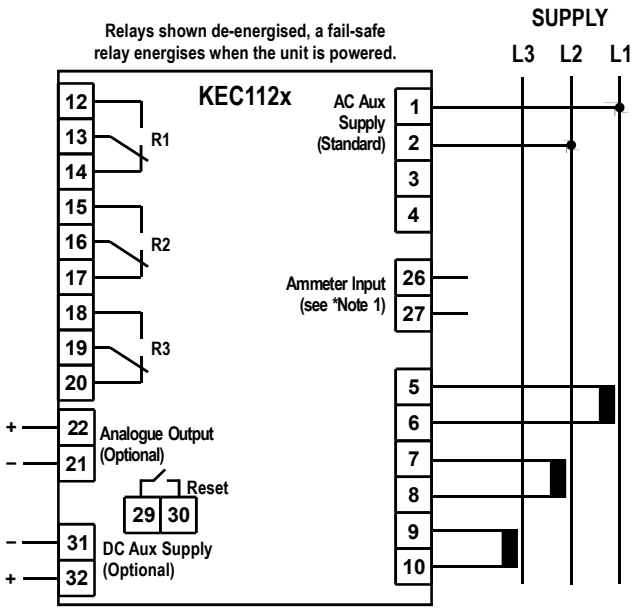
Full Load Current adjustment (FLC)
The FLC potmeter (Pot.5) adjust the 100% alarm level O/C1 and O/C2 from 50-100% of the Full Scale Deflection (FSD).



Related information
The KEC112x-range is also available for rail mounting as KOC112x or KOC114x.

© All rights reserved to Megacon
Megacon reserves the right to make any changes to the information at any time

KEC112x



Analogue Output

The **KEC112F and KEC112GF** has an analogue output proportional to the highest up ampere-meter reading.

The signal is specifically intended as an input to a control system for monitoring or control. Add suffix from table below to type designation to specify output required:

O/P1	**0 - 10mA**	O/P6	N/A
O/P2	**0 - 20mA**	O/P7	N/A
O/P3	**4 - 20mA**	O/P8	**0 - 10V**
O/P4	N/A	O/P9	**0,2 - 10V**
O/P5	N/A	O/P10	**4,3 - 20mA**

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

***Note 1:**
Ammeter input is either connected in serie with one of the C.T. inputs OR via an external selector switch.

Description

KEC112E - KEC112F & KEC112G - KEC112GF

R1 energises when trip level one (Overcurrent 1) is exceeded and R2 trips when trip level two (Overcurrent 2) is exceeded.

R3 is an extra status relay that energises if either alarm relay 1 or 2 is active and can be used for local indication, PMS input, alarm system input etc.

Relay Operation

	O/C 1	O/C 2	N/A	Fail Safe	Latch	FLC	Adjustable Hysteresis
R1	√				*√	√	√
R2		√		√	*√	√	√
R3	√	√			*√		

Models	Latch	Output
KEC112E	-	-
KEC112F	-	X
KEC112G*	X	-
KEC112GF*	X	X

Adjustments	Trip level	Delay
O/C2 (Pot. 1):	0-150% of FLC	0-30secs (Pot. 2)
O/C1 (Pot. 3):	0-150% of FLC	0-30secs (Pot. 4)
FLC (Pot. 5):	50-100% of FSD	
Hysteresis (Pot. 6):	2-50%	

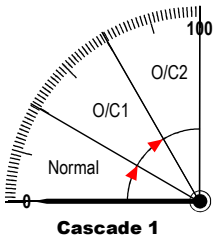
Pathfinder Function

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

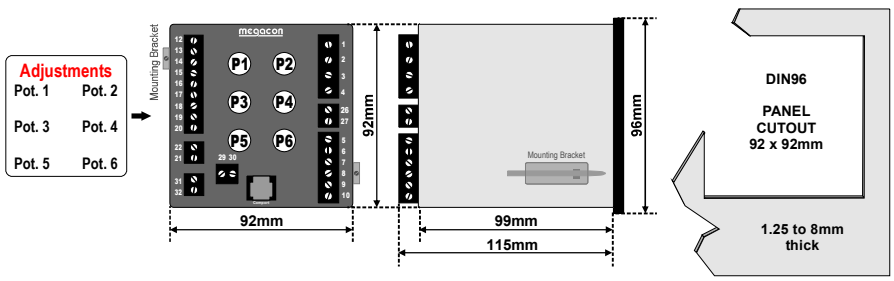
Red indicates LED on

Relay Configurations

The relay operation is delayed in the arrow direction. Both trip levels can, independently, individually set over the scale range.



Dimensions



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

ORDERING EXAMPLE:

Type:	KEC112F
Aux. Supply:	200-240V
Input Current:	500/5A
Range:	0-500/1000A
Analogue O/P:	4-20mA

IS range