SINGLE PHASE OVERCURRENT GUARD

KCC101x

- **Single Phase Overcurrent Protection with Definite Time Trip Delay**
- **Two individually settable overcurrent relays**
- **For use with 1A or 5A current transformers**
- **Up to two individual very fast analogue output signals (<50mS), (optional)**
- **DIN96 Slave Indicator with full current scale (optional)**

Specifications

Standard Auxiliary Voltage:	100-120V, 200-240V, 380-415V, 440-460V, 480VAC, 40-70Hz (Fuse 0,5A)
Optional Auxiliary Voltage:	24-60VDC (Fuse 0,5A) 110-220VDC (Fuse 1A)
Supply tolerance:	+10%, -20%
Power rating:	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 FSD
Trip time O/C1:	0-30 secs
Trip level O/C2:	0-150% of FSD
Trip time O/C2:	0-30 secs
Hysteresis:	2-50% (FSD = Full Scale Deflection)
Ampere range:	Any % of the CT value
Analogue output 1:	mA: Up to 20mA, max 500R V: Up to 10V, min 100kohm (other on request)
Analogue output 2: (see page 2 for available outputs)	mA: Up to 20mA, max 500R V: Up to 10V, min 5kohm or optional 500ohm (other on request)
Accuracy:	Class 0,5
Temperature:	-20 to +70°C
Humidity, relative:	0-95%
Weight:	0.6kgs
Front protection:	IP21
Flammability:	UL94-V0

The unit meets EN 60255-27 Cat. III, Pollution degree 2 and the relevant environmental and EMC tests specified in EN 60255-26 to comply with the requirements of the major Classification Societies.

Related information:
The KCC101x series are also available for panel mounting as KEC101x series.

Description

The digitally controlled KCC101x series provides current overload protection of single phase generators or motors.

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. Alarm LEDs flash during count-down.

Up to two individual very fast analogue output signals (optional) proportional to a range (see page 2 for available outputs). The analogue output is isolated from the CT and auxiliary power.

Relay Configurations

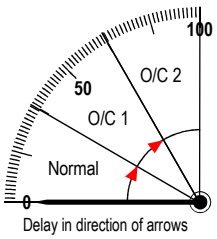
R1 energises when trip level one (Overcurrent 1) is exceeded and R2 trips when trip level two (Overcurrent 2) is exceeded.

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.

The relay operation is delayed in the arrow direction. Both trip levels can Independently and individually set over the scale range (0-150% FSD). The reset is instantaneous.

Relay	O/C 1	O/C 2	Fail Safe	Latch
R1	X			*X
R2		X	X	*X
R3	X	X		*X

LED status		
Power	O/C 1	O/C 2
●	●	●
Normal	Alarm	Alarm



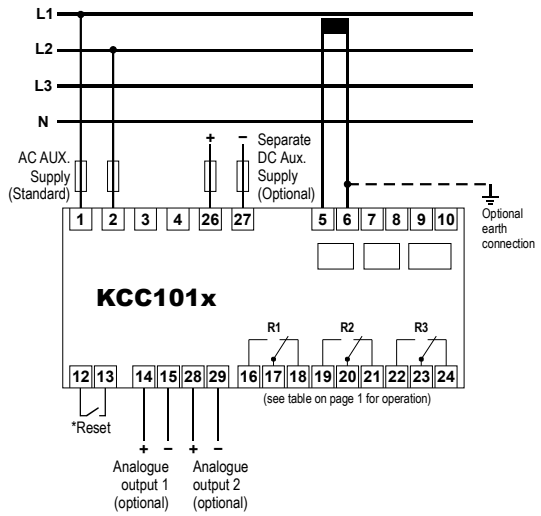
Relays shown de-energised.
R2 is fail-safe and energises when unit is powered.
*X) See the table below for models with latch function

Models	Latch	O/P 1	O/P 2	Hysteresis
KCC101E	-	-	-	X
KCC101FA	-	X	-	X
KCC101FB	-	X	X	X
KCC101G	X	-	-	-
KCC101GFA	X	X	-	-
KCC101GFB	X	X	X	-

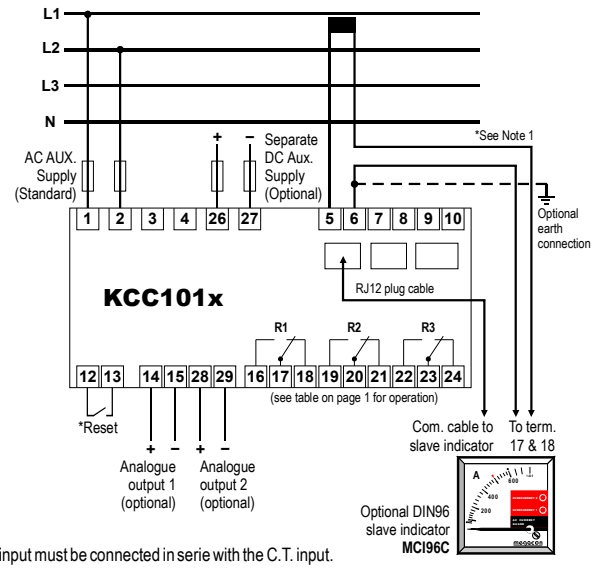
KCC101x

Connection Diagram

Connection Diagram without optional slave instrument



Connection Diagram with optional slave instrument



***Note 1**
Slave Ammeter input must be connected in serie with the C.T. input.

***Reset**
Any latched relay is reset by linking terminals 12 and 13 or by interrupting the auxiliary voltage supply.

Analogue Output

The output signals are proportional to the meter reading (see page 1 for an overview of models and functions).

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:

Outputs 1		Outputs 2	
O/P1	**0 - 10mA**	O/P11	**0 - 10mA**
O/P2	**0 - 20mA**	O/P12	**0 - 20mA**
O/P3	**4 - 20mA**	O/P13	**4 - 20mA**
O/P4	N/A	O/P14	N/A
O/P5	N/A	O/P15	N/A
O/P6	N/A	O/P16	N/A
O/P7	N/A	O/P17	N/A
O/P8	**0 - 10V**	O/P18	**0 - 10V**
O/P9	**0,2 - 10V**	O/P19	**0,2 - 10V**
O/P10	**4,3 - 20mA**	O/P20	**4,3 - 20mA**

Relay Contacts

Burden on supply	: 170mW per relay
Switching voltage (Max)	: 600V AC, 300V DC
Switching voltage (Rated)	: 250V AC, 30V DC
Max I continuous	: 6A RMS, 6A DC
Max breaking capacity	: 1500VA AC, 18-120W DC
Dielectric strength across Open contacts	: 1000V RMS

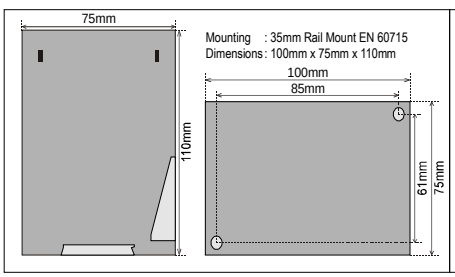
Connection

Terminal type	: Terminal Clamp and Screw
Wire max.	: T1-T4, T26-T27: AWG 24-14, T5-T10: AWG 12, other terminals: AWG 24-12
Screw Torque	: 0.5Nm

Overload

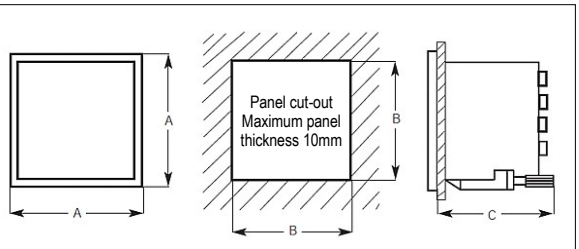
Voltage	: 1.2 x Un continuous 2 x Un for 10secs
Current	: 2.5 x In continuous 5 x In for 1secs (max 25A)

Dimensions



Slave Indicator

	A	B	C
DIN96	96 x 96mm	92 x 92mm	64mm



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

ORDERING INFORMATION

Type	: KCC101FB
Aux. Supply	: 200-240VAC
Input Current C.T.	: 1500/5A
Range	: 0-1,5/3kA
Analogue output 1 (Optional A)	: O/P3: 4-20mA
Analogue output 2 (Optional B)	: O/P18: 0-10VDC

IS range