



- Generator Over/Under Voltage Guard, not affected by heavily distorted waveform
- Total processing time less than 50mS
- Integral true RMS transducer
- Triple relay operation gives more flexibility
- Up to two individual very fast analogue output signals (<50mS), (optional)
- DIN96 Slave Indicator with status LEDs (optional)

**Specifications**

Monitored Voltage:	100-120V, 200-240V, 380-415V, 440-460V, 480VAC 40-70Hz (Fuse 0,5A)
Optional Separate Auxiliary Voltage AC:	100-120V, 200-240V, 380-415V, 440-460V, 480VAC 40-70Hz (Fuse 0,5A)
Optional Separate Auxiliary Voltage DC:	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:	Depending on the selected model (see page 2)
Voltage range: (as standard)	0-150V, 0-300V, 0-500V or 0-600V
Analogue output 1: (see page 3 for available outputs)	mA: Up to 20mA, max 500R V: Up to 10V, min 100kohm (other on request)
Analogue output 2: (see page 3 for available outputs)	mA: Up to 20mA, max 500R V: Up to 10V, min 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 KCV114x series are also available for panel mounting as KEV114x series.

**Description**

The digitally controlled KCV114x provides precision protection of single-phase generators, motors, pumps etc.

True RMS measurement not affected by heavily distorted waveforms provides precision (1.0%) protection. Less than 50mS process time. The independent moving iron voltmeter accuracy is class 1,5.

The standard models takes the auxiliary supply voltage from the monitored voltage (terminal 1 & 2).

It can also be delivered with optional separate AC or DC auxiliary voltage (terminal 26 & 27), but that must be specified when ordering (see page 3 for ordering code for separate Aux. Supply).

User settable trip levels and delays (definite time delays). Colour of LEDs indicate alarm status. Alarm LEDs flash during count-down.

LED status		
Power	Low	High
Normal	Alarm	Alarm

Start of monitoring function is delayed when power is switched on (default 2 secs delay). In this way false tripping during power up is avoided.

The DIN-rail mounted instrument reads the voltage level directly in Volt. The optional slave volt-meter and the triple-zone status LEDs at a glance gives the clear safety message:

- HIGH (Over Voltage)
- NORMAL
- LOW (Under Voltage)

**OUTPUTS**

Up to two individual very fast analogue output signals (optional) proportional to Volt range (see page 2 for models with outputs). If output is used for remote meter reading, we recommend 0-1mA for the slave indicator.

**RELAY OUTPUTS**

Relay operation depends on the selected model (see page 2). Other combinations are available on request.

**Description**

**KCV114E - KCV114FA - KCV114FB**

Over and under voltage protection with a third relay (R3) that operates if either the over voltage relay (R2) and/or under voltage relay (R1) operate.

A timer will reset if fault is removed during count-down. Fixed hysteresis prevents relay "chatter".

Full functionality control during power-up/power-down, with 500mS power-out reservoir.

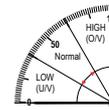
**Relay Operation**

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

**Configuration: Single Phase**

Relay	UV	O/V	N/A	Fail Safe	Latch	Fixed Hysteresis	Adjustable Hysteresis	N/A	N/A
R1	X			X		X			
R2		X		X		X			
R3	X	X				X			

Models	Latch	Output 1	Output 2
KCV114E	-	-	-
KCV114FA	-	X	-
KCV114FB	-	X	X



**Adjustments** Trip level Delay  
 Over Voltage: 0/+20% 0-30secs  
 Under Voltage: 0/-20% 0-30secs  
 Relays shown de-energised. R1 & R2 are fail-safe and energises when unit is powered.

**KCV114G - KCV114GFA - KCV114GFB**

Over and under voltage protection with a third relay (R3) that operates if either the over voltage relay (R2) and/or under voltage relay (R1) operate.

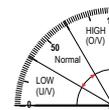
A timer will reset if fault is removed during count-down.

Full functionality control during power-up/power-down, with 500mS power-out reservoir.

**Configuration: Single Phase**

Relay	UV	O/V	N/A	Fail Safe	Latch	Fixed Hysteresis	Adjustable Hysteresis	N/A	N/A
R1	X			X	X				
R2		X		X	X				
R3	X	X							

Models	Latch	Output 1	Output 2
KCV114G	X	-	-
KCV114GFA	X	X	-
KCV114GFB	X	X	X



**Adjustments** Trip level Delay  
 Over Voltage: 0/+20% 0-30secs  
 Under Voltage: 0/-20% 0-30secs  
 Relays shown de-energised. R1 & R2 are fail-safe and energises when unit is powered.

**KCV114B - KCV114BFA - KCV114BFB**

Over and under voltage protection with a third relay (R3) that operates if either the over voltage relay (R2) and/or under voltage relay (R1) operate.

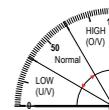
A timer will reset if fault is removed during count-down. Fixed hysteresis prevents relay "chatter".

Full functionality control during power-up/power-down, with 500mS power-out reservoir.

**Configuration: Single Phase**

Relay	UV	O/V	N/A	Fail Safe	Latch	Fixed Hysteresis	Adjustable Hysteresis	N/A	N/A
R1	X			X		X			
R2		X		X		X			
R3	X	X				X			

Models	Latch	Output 1	Output 2
KCV114B	-	-	-
KCV114BFA	-	X	-
KCV114BFB	-	X	X



**Adjustments** Trip level Delay  
 Over Voltage: 0/+20% 0-1secs  
 Under Voltage: 0/-20% 0-1secs  
 Relays shown de-energised. R1 & R2 are fail-safe and energises when unit is powered.

**KCV114HB - KCV114HBFA - KCV114HBFB**

Over and under voltage protection with a third relay (R3) that operates if either the over voltage relay (R2) and/or under voltage relay (R1) operate.

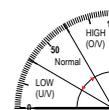
A timer will reset if fault is removed during count-down. Fixed hysteresis prevents relay "chatter".

Full functionality control during power-up/power-down, with 500mS power-out reservoir.

**Configuration: Single Phase**

Relay	UV	O/V	N/A	Fail Safe	Latch	Fixed Hysteresis	Adjustable Hysteresis	N/A	N/A
R1	X			X		X			
R2		X		X		X			
R3	X	X				X			

Models	Latch	Output 1	Output 2
KCV114HB	-	-	-
KCV114HBFA	-	X	-
KCV114HBFB	-	X	X



**Adjustments** Trip level Delay  
 Over Voltage: 0/+20% 0-1secs  
 Under Voltage: 0/-20% 0-1secs  
 Relays shown de-energised. All relays are non fail-safe.

**KCV114C - KCV114CFA - KCV114CFB**

Over and under voltage protection with a third relay (R3) that operates if either the over voltage relay (R2) and/or under voltage relay (R1) operate.

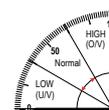
A timer will reset if fault is removed during count-down. Fixed hysteresis prevents relay "chatter". Full functionality control during power-up/power-down, with 500mS power-out reservoir.

Can **only** be delivered with separate aux supply.

**Configuration: Single Phase**

Relay	UV	O/V	N/A	Fail Safe	Latch	Fixed Hysteresis	Adjustable Hysteresis	N/A	N/A
R1	X			X		X			
R2		X		X		X			
R3	X	X				X			

Models	Latch	Output 1	Output 2
KCV114C	-	-	-
KCV114CFA	-	X	-
KCV114CFB	-	X	X



**Adjustments** Trip level Delay  
 Over Voltage: 0/+50% 0-30secs  
 Under Voltage: 0/-50% 0-30secs  
 Relays shown de-energised. R1 & R2 are fail-safe and energises when unit is powered.

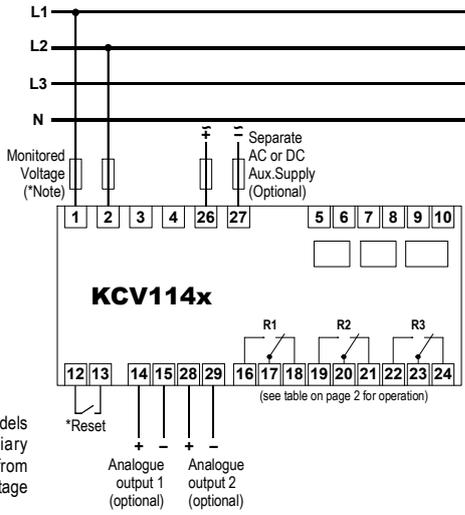
The MEGAcon policy is one of continuous improvement, consequently equipment supplied may vary in detail from this publication.

Depending on application, select the model that matches the electrical installation. If none of the listed models fit your purpose please contact Megacon for customer adaptation.



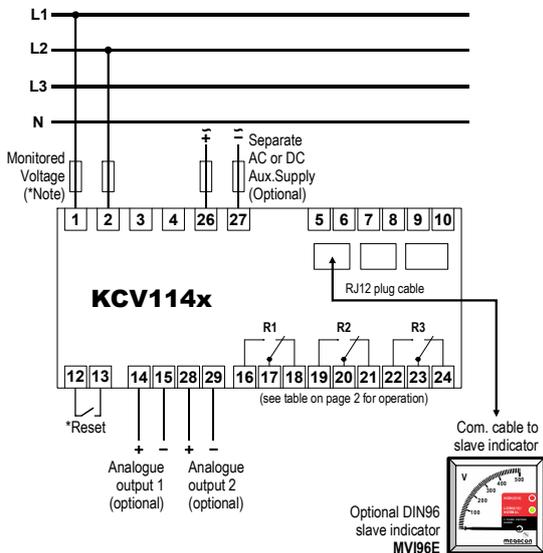
Connection Diagram

Connection Diagram without optional slave instrument



**\*Note:**  
The standard models takes the auxiliary supply voltage from the monitored voltage (terminal 1 & 2).

Connection Diagram with optional slave instrument



**\*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 2 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

O/P1	0 - 10mA
O/P2	0 - 20mA
O/P3	4 - 20mA
O/P4	N/A
O/P5	N/A
O/P6	N/A
O/P7	N/A
O/P8	0 - 10V
O/P9	0,2 - 10V
O/P10	4,3 - 20mA/O/P20

Outputs 2

O/P11	0 - 10mA
O/P12	0 - 20mA
O/P13	4 - 20mA
O/P14	N/A
O/P15	N/A
O/P16	N/A
O/P17	N/A
O/P18	0 - 10V
O/P19	0,2 - 10V
O/P20	4,3 - 20mA

Relay Contacts

Burden on supply	: 170mW per relay
Switching voltage (Max)	: 400V 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

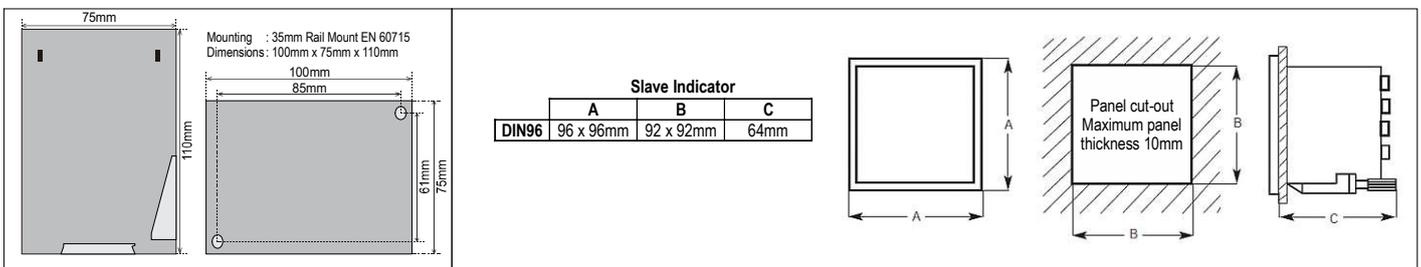
Connection

Terminal type	: Terminal Clamp and Screw
Wire max.	: T1-T4, 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



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

**ORDERING INFORMATION (Example)**

Type	: KCV114FB	Optional Separate Aux. Supply:
Aux. Supply	: 200-240VAC	Add -SA for models with Separate AC Aux. Supply. (Example: KCV114FB-SA)
Monitored Voltage	: 230V	Add -SD for models with Separate DC Aux. Supply. (Example: KCV114FB-SD)
Range	: 0-300V	
Analogue output 1	: O/P3: 4-20mA	
Analogue output 2	: O/P18: 0-10VDC	

