



- Precision Under/Over Voltage Protection, not affected by heavily distorted waveform
- Voltage Imbalance Protection
- 3- or 4- wire systems. Definite time trip delays
- Pathfinder function identifies faulty phase
- Complies with G59 requirements
- Optional fast “highest up” analogue output (F-version)

**Specifications**

Monitored voltage range:	100-120V, 200-240V, 380-415V or 440-460VAC, 40-70Hz	
Optional separate aux. voltage: (E2, F2, G2 and GF2 versions)	AC 100-120V, 200-240V, 380-415V, 440-460V (Fuse 0.5A)	DC 24, 110VDC (Fuse 2A)
Voltmeter standard scale:	0-150V, 0-300V, 0-500V or 0-600V	
Contact rating:	AC: 100VA - 250V/2A max. DC: 50W - 100V/1A max.	
Adjustments:	Trip level	Delay
Trip level High:	(Vn) 0% to +20%	0-30 Sec
Trip level Low:	(Vn) 0% to -20%	0-30 Sec
Analogue outputs: (F-versions) :	0-10, 0-20 or 4-20mA, max 500ohm 0-10V, min 10kohm	
Temperature:	-20 to +70°C	
Weight:	0.6kgs	
Front protection:	IP54 (IP65 optional)	

**Description**

The digitally controlled KEV233x and KEV234x provide precision (0.5% repeatability) high/low line voltage and phase voltage protection respectively to any three phase generator or motor.

A digitally controlled voltage window discriminator controls operation and delay of the voltage low/high alarm relays. The unit measures the zero point crossing and the true r.m.s. voltage value, and accuracy is independent of any wave form distortion.

The auxiliary voltage is supplied from the unit voltage inputs. A DC or AC auxiliary voltage input is optionally available. A green LED indicates POWER on. Start of monitoring function is delayed when the power is switched on (default 2 secs delay). In this way false tripping during power up is avoided.

The voltmeter and the triple-zone status LEDs give the clear safety message:

- HIGHALARM
- NORMAL
- LOWALARM

Red alarm lamps LOW (under voltage) and/or HIGH (over voltage) flash instantly (approx. 1 flash per second) on passing the lower and/or upper voltage differential set points. The lamp changes state and the trip relay operates after the pre-set delay. If a fault condition ends during the delay interval, the timer will automatically reset.

The voltage differential set points can be user-adjusted to suit most applications. Trip levels and delays are settable on unit rear. Operation of the status trip relay is inverted (fail safe), i.e. the relays are energised during normal conditions.

If one phase voltage is below the low trip level and, simultaneously, another phase voltage exceeds the high trip level then both relays will operate.

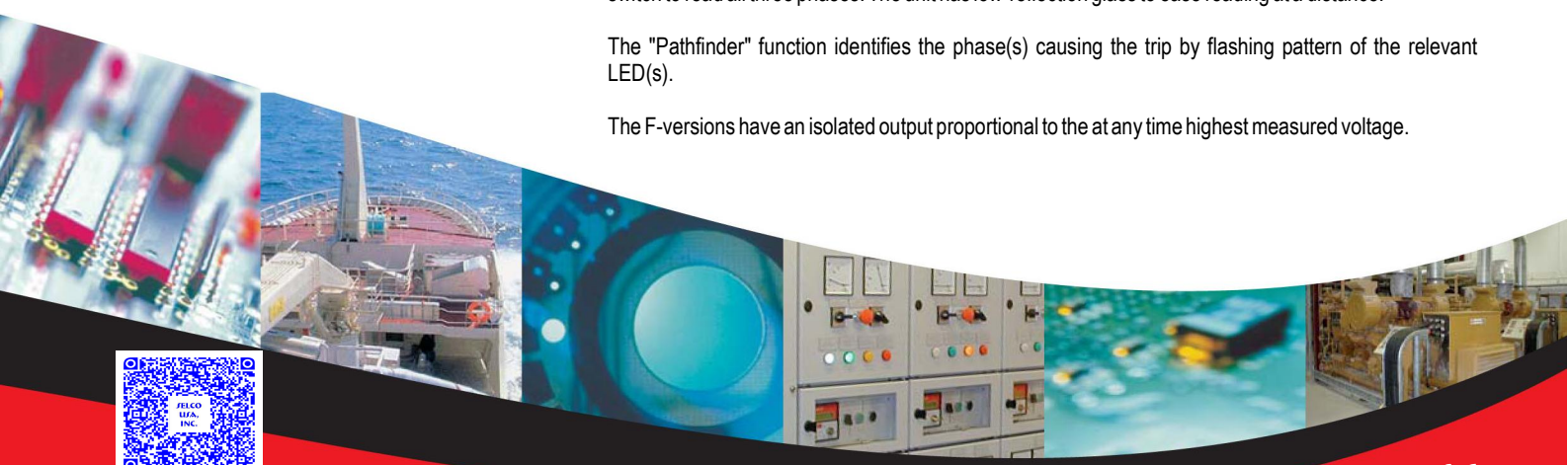
The class 1,5 moving iron DIN96 voltmeter must be connected directly to any phase or via a selector switch to read all three phases. The unit has low-reflection glass to ease reading at a distance.

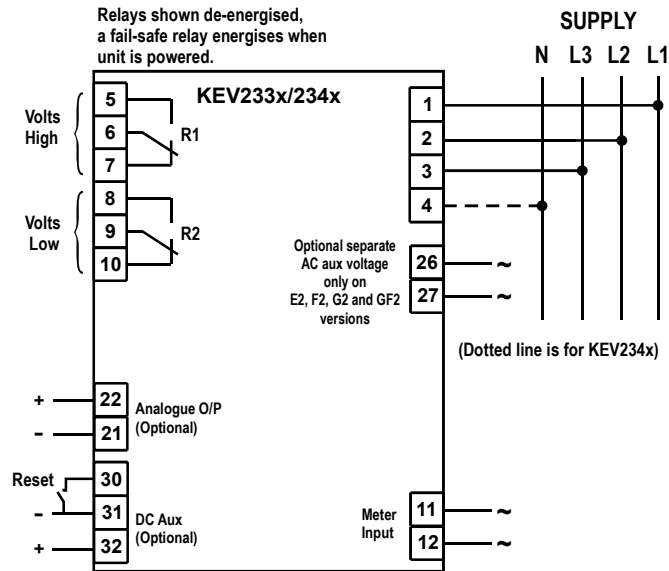
The "Pathfinder" function identifies the phase(s) causing the trip by flashing pattern of the relevant LED(s).

The F-versions have an isolated output proportional to the at any time highest measured voltage.

**KEV233x - Three Phase 3-wire system  
KEV234x - Three Phase 4-wire system**

The unit meets IEC60092-504 and the relevant environmental and EMC tests specified in IEC60068/60092 and IEC61000/60533 respectively, to comply with the requirements of the major Classification Societies.





## Analogue Output

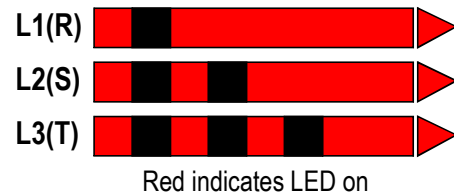
The KEV233F, KEV233F2, KEV233GF, KEV233GF2, KEV234F, KEV234F2, KEV234GF and KEV234GF2 have an isolated output proportional to the highest measured voltage at any time.

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

## Pathfinder Function

The "Pathfinder" function identifies the phase(s) causing the trip by the flashing pattern of the relevant LED(s).



## Relay Reset

Any latched relay is reset by linking terminals 30 and 31.

Model	Latch	Output	Separate Aux.	Supply	System
KEV233E	-	-	-	-	3-wire
KEV233F	-	X	-	-	3-wire
KEV233E2	-	-	X	-	3-wire
KEV233F2	-	X	X	-	3-wire
KEV233G	X	-	-	-	3-wire
KEV233GF	X	X	-	-	3-wire
KEV233G2	X	-	X	-	3-wire
KEV233GF2	X	X	X	-	3-wire

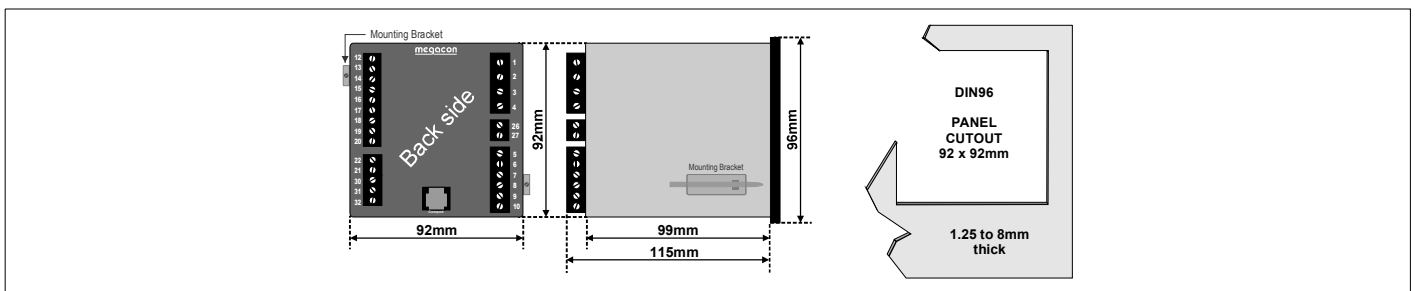
Model	Latch	Output	Separate Aux.	Supply	System
KEV234E	-	-	-	-	4-wire
KEV234F	-	X	-	-	4-wire
KEV234E2	-	-	X	-	4-wire
KEV234F2	-	X	X	-	4-wire
KEV234G	X	-	-	-	4-wire
KEV234GF	X	X	-	-	4-wire
KEV234G2	X	-	X	-	4-wire
KEV234GF2	X	X	X	-	4-wire

## Relay Operation

	O/V	U/V	Fail safe	Latch
R1	✓		✓	*✓
R2		✓	✓	*✓

\*All G-versions have latching relays.

## Dimensions



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

### ORDERING EXAMPLE:

Type: KEV233F  
 Aux. Supply: 200-240V  
 System Voltage: 230V (nom.)  
 Range: 0-300V  
 Analogue O/P: O/P 3:4-20mA

