



- **Precision 2-Step Overload Protection, not affected by heavily distorted waveforms**
- **3 or 4-wire systems. Definite time trip delays**
- **Triple relay operation gives more flexibility**
- **Fast response analogue kW-signal output <50mS (F version)**
- **Wide range setting of high overload contact hysteresis**

Specifications

Auxiliary Voltage:	100-120, 200-240, 380-415 or 440-460VAC, 40-70Hz	
Optional DC Auxiliary Voltage:	Nom. 12, 24, 48 or 110VDC	
Current Input:	1 or 5A C.T. <0,1VA	
Contact rating:	AC: 100VA - 250V/2A max. DC: 50W - 100V/1A max.	
Adjustments	Trip level	Delay
Overload level 2:	0-100% of FSD	0-30secs
Overload level 1:	0-100% of O/L 2	0-30secs
Hysteresis		
Overload level 2:	2-50% of FSD	
Overload level 1:	Fix 2% of FSD	
Analogue Output:	Up to 20mA, max 500R or Up to 10V, min 100kohm (other on request)	
*F version		
Temperature:	-20 to +70°C	
Weight:	0.6kgs	
Front protection:	IP54 (IP65 optional)	

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.

Related information:

The KPW19x-range is also available for rail mounting as KCW19x.

Application

The digitally controlled KPW19x range provides precision (1.0%) 2-step overload protection and monitoring of three phase generators or motors.

The unit measures the voltage and current true r.m.s. value, and accuracy is independent of any wave form distortion. The auxiliary voltage is supplied from the unit voltage input. ADC auxiliary voltage input is optionally available.

A green LED indicates POWER on. 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 DIN96 instrument reads the power level directly in kW. The wattmeter and the triple-zone status LEDs give the clear safety message: NORMAL/LEVEL 1 /LEVEL 2 at a glance.

Relay Outputs

The unit has relay outputs for overload level 1 (R1), Overload level 2 (R2) and R3 activates if either R1 or R2 is active. Overload 2 relay (R2) is fail to safety configured. A trip LED flashes when the trip level is passed, the relay trips when the delay has elapsed. The timer resets if the fault is removed during countdown. Hysteresis, Trip levels and delays are settable on unit rear.

Description

KPW191E For use in three phase 3-wire configuration

Both overload relays can be used for non-essential load release or as an alarm indication.

A wide range overload contact hysteresis can be set to enable R2 to be used for a non-essential load to be reconnected or as a standby generator stop signal. Relay R3 is an additional relay that can be used for local indication, as an input to an alarm system etc.

KPW191F

Similar to KPW191E but also includes an **analogue output** proportional to the generator kW-load.

KPW194E For use in three phase 4-wire configuration

Both overload relays can be used for non-essential load release or as an alarm indication.

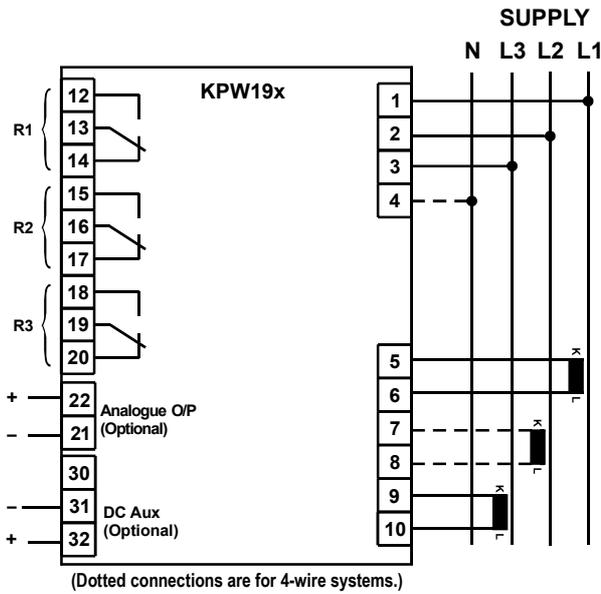
A wide range overload contact hysteresis can be set to enable R2 to be used for a non-essential load to be reconnected or as a standby generator stop signal. Relay R3 is an additional relay that can be used for local indication, as an input to an alarm system etc.

KPW194F

Similar to KPW194E but also includes an **analogue output** proportional to the generator kW-load.



To ensure correct kW measurement voltage phase sequence and CT connections MUST be as shown on connection diagram.



NOTE: Details in individual connection diagram supplied with unit may differ from the general diagram shown above.

Relay

	OVERLOAD 1	OVERLOAD 2	FAIL SAFE	LATCH
R1	✓			
R2		✓	✓	
R3	✓	✓		

Fail-safe

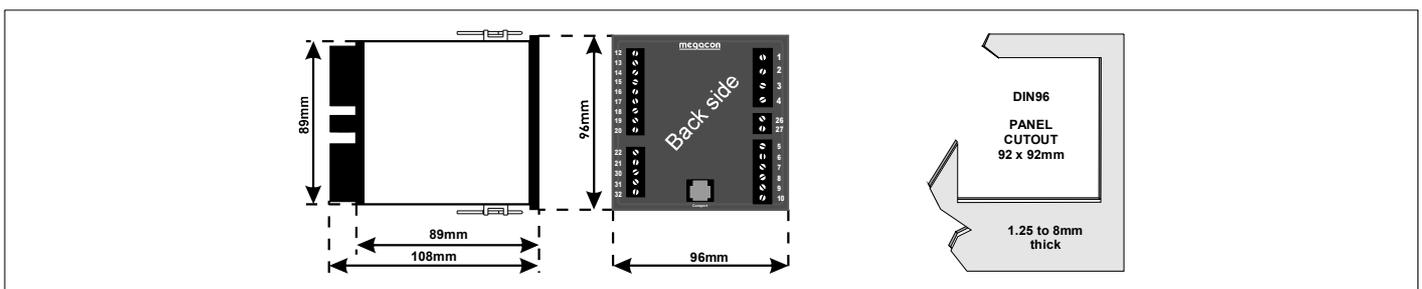
All fail-safe relays will energise and change state when unit is powered.

Analogue Output

KPW191F and KPW194F have an analogue output proportional to the kW-meter reading. The signal is specifically intended as an input to a control system for kW monitoring, load sharing, load shedding etc.

Add to type designation suffix from table below to designate 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



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

ORDERING EXAMPLE:

Type: KPW191F
 Aux. Supply: 200-240V
 Input Voltage: 690/230V
 Input Current: 1500/5A
 Range: -150/0/+1500kW
 Analogue O/P: 4-20mA

