multitek

KILOWATT HOUR METERS
**SAVING COST**

**SAVING SPACE**

**SAVING INSTALLATION TIME**

**COMPATIBLE TO WORLDWIDE ELECTRICITY SUPPLIES**

**THE PRODUCTS**

The kilowatt hour meter is one of the latest additions to the Multitek range of power measuring products. The kW.h meter has Class accuracy of 1% to IEC 1036. With the advent of the deregulation of electricity supplies and the ever increasing cost of electricity, the requirement for measuring kW.h is becoming paramount. With the savings made by monitoring and using electricity at the optimum time, the cost of the Multitek kW.h products can be redeemed within a few weeks.

The DIN 96 x 96 case means the product can be mounted on individual machines as well as control switchboards for complete or part installations.

**DIN 96 X 96 MECHANICAL COUNTER**

The mechanical counter version provides an ideal replacement unit for the traditional Ferraris disc kW.h meter, offering numerous advantages over the Ferraris disc:

- Standard DIN 96 x 96 cutout, smaller size, matched other DIN instruments.
- The mechanical counter is 7 digit non-resetable when counter passes 9999999 it resets to zero. Optional pulsed output of kW.h, is available to send to remote counters, PLCs data loggers and computers. Analogue mA output of the instantaneous Watt, kW or MW is also an option.

**TRANSUCER 100mm CASE**

An alternative to the DIN panel mount is the DIN rail 100 mm case kW.h transducer. This allows the mounting of kW.h meters inside switchboards and control panels. This model has a 7 digit mechanical counter, and offers options of pulsed output of kW.h and analogue mA output of the instantaneous Watt, kW or MW reading.

The instantaneous watt signal can be fed to analogue or digital instruments on the same panel, or remotely transmitted to meters or computers.

**SYSTEM PRODUCT CODES**

<table>
<thead>
<tr>
<th>Single Phase</th>
<th>DIN 96 x 96</th>
<th>Transducer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mech. Counter</td>
<td>M600-WM1</td>
<td>M100-WT1</td>
</tr>
<tr>
<td>Mech. Counter</td>
<td>M600-WM2</td>
<td>M100-WT2</td>
</tr>
<tr>
<td>Mech. Counter</td>
<td>M600-WM3</td>
<td>M100-WT3</td>
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<tr>
<td>Mech. Counter</td>
<td>M600-WM4</td>
<td>M100-WT4</td>
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<tr>
<td>Mech. Counter</td>
<td>M600-WM9</td>
<td>M100-WT9</td>
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</table>

**ORDERING INFORMATION**

<table>
<thead>
<tr>
<th>Product Code</th>
<th>M600-WM4</th>
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<tbody>
<tr>
<td>C.T. ratio</td>
<td>500/5 AMP</td>
</tr>
<tr>
<td>Frequency</td>
<td>50Hz</td>
</tr>
<tr>
<td>Auxiliary Voltage</td>
<td>230V</td>
</tr>
<tr>
<td>Options</td>
<td>Pulsed output</td>
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</tbody>
</table>

**OPTIONS**

1. Pulsed output.
2. Analogue output of instantaneous watts
3. Non standard pulsed width.
4. Calibration at temperature other than 23 °C
5. Calibration at nominal Hz 35 ..... 450 Hz.
GENERAL SPECIFICATION

INPUT
Rated Un 57 to 500V specify nominal voltage.
Range 80-120% Un
Burden <0.2VA per phase
Overload 1.5 x Un continuous
4 x Un for 1 second
Rated In 1 or 5 amp
Range 10-120% In
Burden <0.5VA per phase
Overload 4 x In continuous
50 x In for 1sec
Frequency 50 / 60 Hz nominal range
45/65Hz

SYSTEMS
Single phase
3 phase 3 wire balanced load
3 phase 4 wire balanced load
3 phase 3 wire unbalanced load
3 phase 4 wire unbalanced load

INSULATION
Test Voltage 4 kV RMS 50 Hz for 1 min
(3kV if analogue output required)
Impulse Test EMC 5kV transient comply with
IEC 801 / EN 55020 HF
H.F. interference EHF 2.5 kV 1MHz complying with
IEC 255-4
Protection Class II complying with IEC348 / BS 4743
DIN 57411 / VDE 0411

STANDARDS
Designed to IEC 1036 accuracy BS 5685 (IEC 521)

AUXILIARY
A. C. Voltage 115 or 230 or 400 V

ANALOGUE OUTPUT
Accuracy Class 1%
Rated value 0-1mA into <5 kOhm
Rated value 0-20mA into <250 Ohms

OUTPUT RELAY
kW.h pulsed output Normally open volt free contact 50V
150mA 5W ac/dc
Pulse rate Standard 1 pulse per kW.h (1 pulse = 10
kW.h on higher CT & VT ratios
Pulse duration Standard 250 msec other values optional on
request
Led flash rate 0.1 kW.h per flash

ENVIROMENTAL
Working Temperature 0 to +60 deg C
Function Temperature - 25 to +70 deg C
Storage Temperature -55 to +85 deg C
Temperature Coefficient 0.01% per deg C
Relative Humidity 0-95% non condensing
Warm up time 1 min.
Shock 30G in 3 planes

ENCLOSURE
Standard DIN case 96 x 96 x 98mm
Panel mount Via retaining side brackets and screws
Panel cutout 92 + 0.8mm x 92 + 0.8mm
Material Black Polycarbonate complying with
UL 94 VO
Enclosure code IP54

TERMINALS
96 x 96 MM CASE DIMENSIONS

<table>
<thead>
<tr>
<th>FRONT</th>
<th>96 mm</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>SIDE</td>
<td>94 mm</td>
<td>83 mm</td>
</tr>
<tr>
<td>PANEL CUTOUT</td>
<td>92 mm (+ 0.8 mm)</td>
<td></td>
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</tbody>
</table>

96 x 96 MM CASE DIMENSIONS

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CONNECTION DIAGRAMS

M600-WM1 / M100-WT1

M600-WM2 / M100-WT2

M600-WM3 / M100-WT3

M600-WM4 / M100-WT4

M600-WM9 / M100-WT9

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