

# multitek

## MultiPower DC measuring multifunction meter



### PARAMETERS MEASURED

- \* dc Voltage (V)
- \* dc Current (I)
- \* dc Power (kW)
- \* dc Import Energy (kW.h)
- \* dc Export Energy (kW.h)
- \* dc Ampere Hours (A.h)
- \* dc Amp Demand (Ad)
- \* dc Max Amp Demand
- \* dc Power Demand (kWd)
- \* dc Max Power Demand

### DISPLAY

The unique 3 colour option LCD FSTN display is designed to be read in a variety of conditions over wide viewing angles and distances. There are 3 colour options of the back lighting available Blue, Green or White which are user selectable through the front control buttons.

### PROGRAMMING

The following can be programmed by the front buttons or via the RS485 port: Current inputs, Demand times, relay divisor.

### PULSED OUTPUT

An optional pulsed output can be ordered. The relay can be assigned to kW.h (import/export) or A.h

### MultiPower DC M850LDD

The M850LDD is a DC measuring multifunction power meter measuring all DC parameters, with the option of providing RS485 Modbus communication and a pulsed output in a 96x96mm Din panel mount Case.

The M850LDD has a universal power supply which is suitable for ac or dc auxiliary voltages. The M850 LDD covers a wide range of voltage inputs and current inputs. The current input can be up to 5 amps direct or any value using a mV input Example: a shunt of 2000A dc with 50mV output.

### COMMUNICATION

The M850LDD has the option of providing RS485 ouput using the well established Modbus protocol. This enables remote reading and programming of the M850LDD using a host computer.

The RS485 network allows up to 32 units to be connected in parallel, enabling them to be used with PC, PLC, RTU, Data loggers and Scada programs.

The M850LDD communication port incorporates an auto-configure function which, when connected to an existing Modbus network, will automatically detect the network's parameters.

### SOFTWARE

MultiView set-up and monitoring software is available free of charge from our web-site: [www.multitek-ltd.com](http://www.multitek-ltd.com)

### ORDERING INFORMATION

|             |                 |
|-------------|-----------------|
| M850LDD     | Standard meter  |
| M850LDDRS   | +RS485          |
| M850LDDPO   | + Pulsed output |
| M850LDDRSPo | RS485 & Pulsed  |

| Information required  | Example   |
|-----------------------|-----------|
| Product Code          | M850LDDRS |
| Nominal input current | 50mV      |
| Nominal voltage       | 800V      |

Standard nominal inputs:

Voltage

60V, 150V, 300V, 800V

Current (using external shunt)

50mV, 60mV, 75mV, 100mV

## GENERAL SPECIFICATION

### INPUT

|                 |                                        |
|-----------------|----------------------------------------|
| <b>Rated Un</b> | <b>Directly connected:</b>             |
| <b>Specify</b>  | <b>800Vdc, 300Vdc, 150Vdc or 60Vdc</b> |
| <b>Range</b>    | <b>2-120% Un</b>                       |
| <b>Overload</b> | <b>120% Un</b>                         |
| <b>Rated In</b> | <b>mVdc, 1Adc or 5A dc</b>             |
| <b>Range</b>    | <b>2-120% In</b>                       |
| <b>Overload</b> | <b>120% In</b>                         |
| <b>Overload</b> | <b>2 x In for 1 second</b>             |

### OPTIONS

#### RS458 Modbus

*Solid-state, low voltage relay.*  
**Rated:** 100Vpk, 120mA  
**Low voltage DC auxiliary**  
**19-69V DC**

## ACCURACY

*Specified @ 23°C 10-100% Un, 10-100% In*

*Parameters unless stated*

|                             |                                     |
|-----------------------------|-------------------------------------|
| <b>Volts and Amps</b>       | <b>0.5% of reading +/- 2 digits</b> |
| <b>Energy</b>               | <b>Class 1% to IEC 1036</b>         |
| <b>All other parameters</b> | <b>1% of reading +/- 2 digits</b>   |

## AUXILIARY

*Standard: 100-440Vac/100-420Vdc*

*Optional: 19-69Vdc*

## INSULATION

|                                                             |                                |
|-------------------------------------------------------------|--------------------------------|
| <b>Installation category</b>                                | <b>III</b>                     |
| <b>Degree of pollution</b>                                  | <b>2</b>                       |
| <b>Rated impulse withstand voltage IEC60947-1-V imp:4kV</b> |                                |
| <b>Electrical security</b>                                  | <b>IEC 61010-1</b>             |
| <b>Inputs + Aux to case</b>                                 | <b>3kV rms 50Hz for 1 min</b>  |
| <b>Inputs + Aux to RS485</b>                                | <b>3kV rms 50Hz for 1 min</b>  |
| <b>Inputs + Aux to relay</b>                                | <b>1k5V rms 50Hz for 1 min</b> |

## ENVIRONMENTAL

|                                |                         |
|--------------------------------|-------------------------|
| <b>Working Temperature</b>     | <b>0 to +60 deg C</b>   |
| <b>Storage Temperature</b>     | <b>-30 to +65 deg C</b> |
| <b>Temperature Coefficient</b> | <b>0.01% per deg C</b>  |

## ELECTROMAGNETIC COMPATIBILITY

|                                                |                                |
|------------------------------------------------|--------------------------------|
| <b>Immunity to :</b>                           |                                |
| <b>electrostatic discharges:</b>               | <b>IEC 61000-4-2-Level III</b> |
| <b>radiated radio-Hz fields:</b>               | <b>IEC 61000-4-3-Level III</b> |
| <b>electrical fast transient/bursts:</b>       | <b>IEC 61000-4-4-Level III</b> |
| <b>impulse waves:</b>                          | <b>IEC 61000-4-5-Level III</b> |
| <b>conducted disturbances:</b>                 | <b>IEC 61000-4-6-Level III</b> |
| <b>voltage dips &amp; short interruptions:</b> | <b>IEC 61000-4-11</b>          |
| <b>Emissions to:</b>                           |                                |
| <b>Conducted and radiated</b>                  | <b>CISPR11-Class A</b>         |

## APPLIED STANDARDS

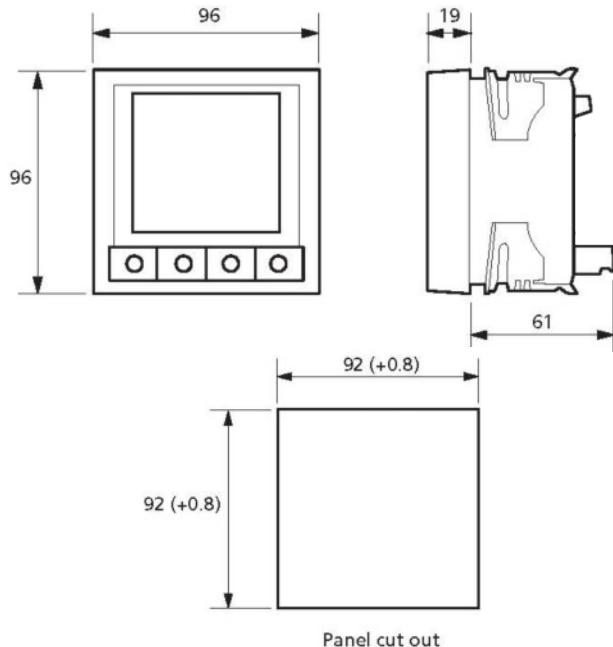
|                |                          |
|----------------|--------------------------|
| <b>General</b> | <b>IEC 688 BSEN60688</b> |
|                | <b>BS4889 IEC 359</b>    |
| <b>Safety</b>  | <b>IEC 6101-1 2010</b>   |

## APPROVALS

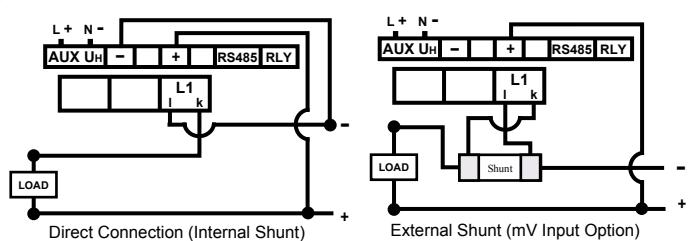
*UL, File No 3377521*

## CASE DIMENSIONS

*All Dimensions in mm*



## CONNECTION DIAGRAMS



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