M850 MULTIFUNCTION METERS

HOBUT

DESCRIPTION

The new range of Hobut multifunction panel meters feature 96 x 96mm sizes complete with unique blue LED screen, which can be seen in direct sunlight. The range is easy to use, features user-programmable CT & VT ratios, and can be used on any single or 3 phase system with any input voltage without re-programming.

APPLICATION

The range is a cost effective replacement for traditional panel meters and is suitable for low, medium and high voltage control panels, gensets, building management systems, power management and more.

ISO 9001:2000

CE

RANGE

STANDARD FUNCTIONS:

Phase Voltage (V)	Power Factor (PF)
Phase to Neutral Voltage (V)	Instantaneous Amp Demand
Phase Current (I)	Instantaneous Watt Demand
Frequency (Hz)	Instantaneous VA Demand
Active Power (W)	Maximum Amp Demand
Active Energy (kWh)	Maximum Watt Demand
Reactive Power (VAr)	Maximum VA Demand
Apparent Power (VA)	Neutral Current Measurement
Reactive Energy (VArh)	

PROGRAMMABLE FUNCTIONS

All models feature the following user-programmable functions:

- Current Transformer Ratio
- Voltage Transformer Ratio
- Baud Rate, Parity, Stops
- AC or DC AUX
- 1A or 5A CT
- Single or 3 phase system
- Input voltage range 28-570V
- RS485 address, 1-247
- Security code access for programming

ORDERING INFORMATION

STANDARD PRODUCT | **OPTIONAL EXTRAS**

M850-MP1 – **P** – **RS** – **1** – **MV**

Suitable for any 1 or 3 phase system, AC aux 100-440V or DC aux 100-420V

Input 28/330V L-N
48/570V L-L
5A

Pulsed Output

RS 485 Output

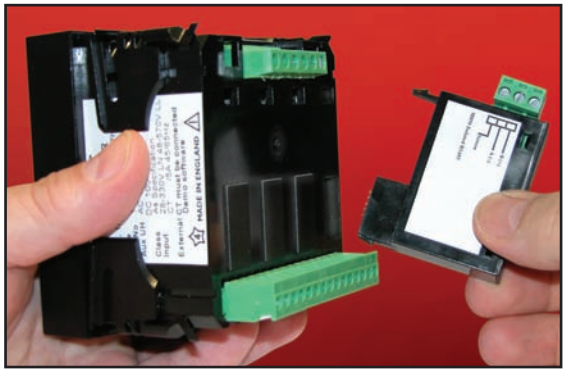
1A input (instead of 5A)

330mV Input
(instead of 1A or 5A CT)

Order example: a standard product with RS 485 output is part number M850-MP1-RS

PLUG-IN OPTIONS

Both pulsed output (for Wh or VArh) and RS 485 output (Modbus protocol) are plug in options which can be supplied with the multifunction meter. If purchased separately please use ordering codes on right.



Pulsed Output when ordered separately use part PULSE-M850

RS 485 Output when ordered separately use part RS485-M850

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SPECIFICATIONS

ACCURACY

Volts/Amps:	0.5% of reading
Frequency:	0.1 Hz
Active Power:	1% of reading
Apparent Power:	1% of reading
Power Factor:	2% of range
Energy:	IEC 1036 Class 1

INPUT

Rated Un:	28-330V LN, 48-570V L-L
Overload:	800V continuous
Burden:	0.5VA per phase
Rated In:	0.5-6A
Overload:	10 In for 1 sec
Burden:	0.5VA per phase
Auxiliary:	100-440V AC / 100-420V DC
Frequency:	45/65Hz

DISPLAY

Digits:	3 lines 9999
Size:	14.2mm 7 segment
Brightness:	user adjustable

OUTPUT RELAY (Wh or VArh)

Pulse output:	SPST-NO (10 watt, 300VDC, 500mA)
Pulse duration:	programmable from 40msec-200msec

INSULATION

Test Voltage:	3kV RMS 50Hz for 1 minute between case, input and aux. 1kV between case, input, aux, relay output & RS485 output.
Impulse test:	EMC 5kV transient complies with IEC801/ EN55020 HF
Surge withstand:	IEC801/EN55020 Ansi C37.90A
Interference:	EHF 2.5kV 1Mhz complying to IEC255-4
Protection class II:	Complying to IEC348 / BS4753 / DIN57411 / VDE

STANDARDS

General:	IEC688, BSEN60688, BS4889, IEC359
EMC:	BSEN61000-6-3:2007, BSEN61000-6-4:2007,
Safety:	IEC1010, BSEN601010

ENVIRONMENT

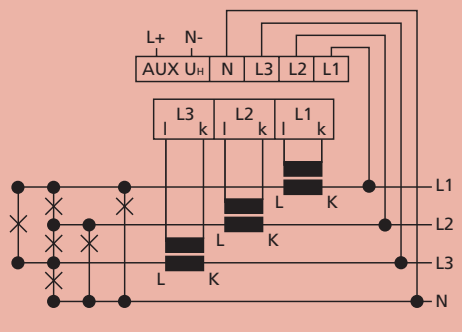
Working temp:	0-60°C
Storage temp:	-40 to +85°C
Relative humidity:	0-95% non condensing
Shock:	30G in 2 planes

MATERIAL

Black polycarbonate case to UL94V0

Weight: 0.35kg

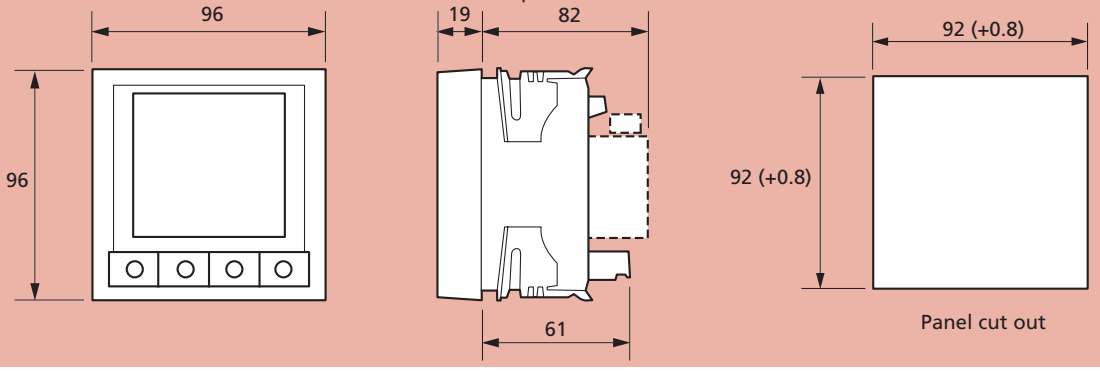
CONNECTION DIAGRAM



	VOLTAGE				CURRENT		
	L1	L2	L3	N	L1	L2	L3
1ph	✓	-	-	✓	✓	-	-
1ph 3W	✓	✓	-	✓	✓	✓	-
3ph 3W	✓	✓	✓	-	✓	-	✓
3ph 4W	✓	✓	✓	✓	✓	✓	✓
3ph 3W BAL	✓	✓	✓	-	✓	-	-
3ph 4W BAL	✓	-	-	✓	✓	-	-

Unused Voltage terminals are internally connected

DIMENSIONS (mm)



Our policy is one of continuous development and therefore specifications may change without notice.

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