

M850-LTHN POWER METERS

DESCRIPTION

The new range of Hobut power meters feature 96 x 96mm moulded cases and selectable three colour backlight LCD screens. 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.



The user can select the colour screen preferred, either blue, green or white

RANGE

STANDARD FUNCTIONS:

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

PROGRAMMABLE FUNCTIONS

All models feature the following user-programmable functions:

- Selectable Screen Colour
- Current Transformer Ratio
- Voltage Transformer Ratio
- Baud Rate, Parity, Stops

- AC or DC AUX
- Single or 3 phase system
- Input voltage range 28-570V
- RS485 address, 1-247
- Security code access for programming

ORDERING INFORMATION

STANDARD PRODUCT

M850-LTHN

LCD power meter with THD, suitable for any 1 or 3 phase system, AC aux 100-440V, or DC aux 100-420V, 5A input

Inbuilt RS485 (Modbus) & pulse output

1A input

DC AUX 10-70V

333mV Input (instead of 5A standard)

Inbuilt RS485 (Bacnet MSTP)

OPTIONAL EXTRAS

RS-PO

1

D

MV

BAC

Order example: a standard product with RS485 (Modbus) and pulsed output is part number M850-LTHN-RS-PO

CONTROLS AND PROGRAMMING

CONTROLS: 4 front buttons are used for scrolling through parameters and programming

DISPLAY: A unique large custom LCD, with 3 user-programmable colour options

COMMUNICATIONS: An optional RS485 port allows communication via Modbus RTV or BACNET (MSTP) protocol

PULSED OUTPUT: A relay output can be assigned to either W.h or Var.h

INSTALLATION: Supplied with installation guide or download complete installation manual and RS485 Modbus register address at www.hobut.co.uk/power-meters

M850-LTHN POWER METERS

HOBUT

SPECIFICATIONS

ACCURACY

Volts/Amps: 0.5% of reading
 Frequency: 0.1 Hz
 Active Power: 1% of reading
 Apparent Power: 1% of reading
 Power Factor: 1% 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 (5A nominal)
 Overload: 10 In for 1 sec
 Burden: 0.5VA per phase
 Auxiliary: 100-440V AC / 100-420V DC
 (or 10/70V DC)
 Frequency: 45/65Hz

DISPLAY

Digits: 4 lines 9999
 Custom LCD
 Brightness: User adjustable

OUTPUT RELAY

Wh or VArh: SPNO rated 50V
 Pulse output: 150mA 5W AC/DC
 Pulse duration: Programmable from 40msec-200msec

INSULATION

Installation category: III (480 V AC ph/ph)
 Degree of pollution: 2
 Rated impulse withstand voltage: IEC 60947-1-V imp: 4kV
 Class II
 Electrical security: IEC 61010-1
 Inputs + Aux to case: 4kV rms 50Hz for 1 min
 Inputs + Aux to RS485 port: 3kV rms 50Hz for 1 min
 Inputs + Aux to relay output: 1k5V rms 50Hz for 1 min
 Low voltage dc Aux to Inputs: 1k5V rms 50Hz for 1 min

ELECTROMAGNETIC COMPATIBILITY

Immunity to:
 electrostatic discharges: IEC 61000-4-2-Level III
 radiated radio-Hz fields: IEC 61000-4-3-Level III
 electrical fast transient/bursts: IEC 61000-4-4-Level III
 impulse waves: IEC 61000-4-5-Level III
 conducted disturbances: IEC 61000-4-6-Level III
 voltage dips & short interruptions: IEC 61000-4-11

Emissions to:

conducted and radiated: CISPR11-Class A

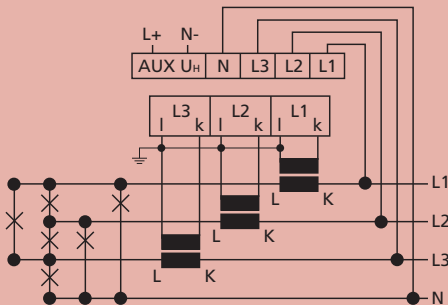
ENVIRONMENT

Working temp: -20 to +70°C
 Storage temp: -40 to +85°C
 Relative humidity: 0-95% non condensing
 Shock: 30G in 2 planes

ENCLOSURE

Black polycarbonate case to UL94V0
 Weight: 0.3kg
 IP Rating: IP52 (front)

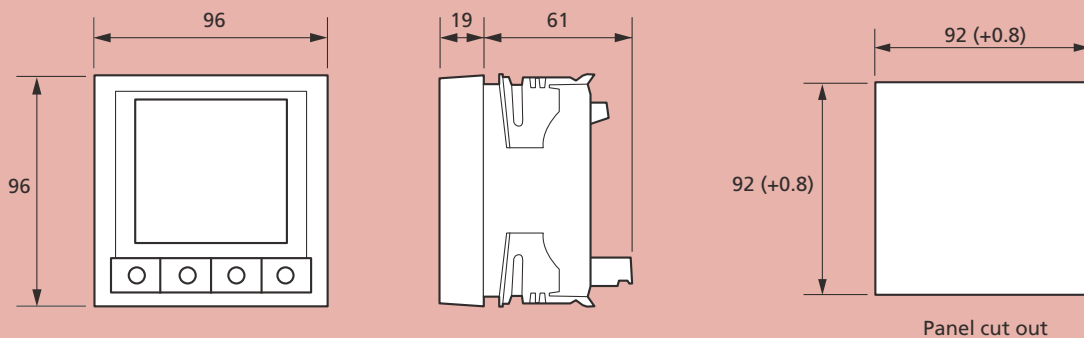
CONNECTION DIAGRAM



	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
 Secondary of CTs must be connected to earth

DIMENSIONS (mm)



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

HOWARD BUTLER LTD

CROWN WORKS, LINCOLN ROAD
 WALSALL WS1 2EB ENGLAND

Tel: 01922 640003 Fax: 01922 723626
 International Tel: +44 1922 640003 E-mail: sales@hobut.co.uk
 Web: www.hobut.co.uk