ELINKS PAKISTAN

HOBUT UK

Multifunction Meter + Rogowski Coil

M850-LRC

Description

The M850-LRC is a unique combination of a 3 phase digital universal metering system and Rogowski coils. It can be used on any voltage system with a wide range of inputs, and incorporates a universal AC or DC auxiliary power supply.

One unit covers the majority of applications and wiring systems without any modification required, making the M850-LRC ideal for stocking. The M850-LRC has a LCD display with user selectable options of Blue, Green, or White back-lighting.

The M850-LRC supports up to three Rogowski coils for measuring current. By combining the meter with one or more M240-RCM coils the M850 can measure current up to 4000A. To maintain accuracy and resolution, three ranges of the meter can be ordered: 0-500 0-2000A or 0-4000A. Example: Nominal current is 400 Amps, you would choose the 0-500A meter.

Using M240-RCM coils allows for extremely easy installation compared to conventional CTs, making them ideal for fitting in difficult to reach installations, or for retrofitting applications. Also, the wide current range offers a cheaper solution than standard current transformers for high primary currents.

Communications

An integrated RS485 port enables the M850 to communicate with up to 31 other meters or controllers using the popular Modbus RTU protocol. The protocol allows the M850 to be used with PC, PLC, RTU, Data loggers and Scada programs.

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 three colour options of the back lighting available: Blue, Green, or White; which are selectable through the front panel.

Coil

The M240-RCM is available in a variety of standard lengths to suit most installation scenarios. Special lengths are available on request. For more information please see the MultiCore brochure.

Easy Installation

Flexible Rogowski coil allows installation around conductors without disconnection or removal.

Parameters Measured

Phase Voltage (V)
Phase to Neutral (V)
Phase Current (I)
Frequency (Hz)
Active Power (W)
Reactive Power (Var)
Apparent Power (VA)
Active Energy (W.h)
Reactive Energy (Var.h)
Power Factor (P.F.)
Inst. Demand Amp
Inst. Demand Active Power
Inst. Demand Apparent Power
Max Demand Amps
Max Demand Active Power
Max Demand Apparent Power
Neutral Current
THD Voltage Option
THD Current Option

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General Specification

Rated Un	28V - 330V L-N 48 - 570V L-L (280V L-N nominal)
Overload	800V continuous
Burden	0.5VA
Cut-off Point	2% Un nominal
Rated In	A1: 10 - 500A
	A2: 40 - 2000A
	A3: 80 - 4000A

Auxiliary

Input	100 - 440V AC 45 - 65Hz 100 - 420V DC
Burden	< 10VA

Insulation

Installation Category	III (480 VAC ph/ph)
Degree of Pollution	2
Rated Impulse Withstand Voltage	IEC 60947-1-V imp: 4kV
Meter Front	Class II
Electrical Security	IEC 61010-1
Inputs + Aux to Case	4 kV rms 50 Hz for 1 min
Inputs + Aux to RS485	3kV rms 50 Hz for 1 min
Inputs + Aux to Relay	1.5kV rms 50 Hz for 1 min
LV DC Aux to Inputs	1.5kV rms 50 Hz for 1 min

Electromagnetic compatibility

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
Conducted and Radiated Emissions	CISPR11-Class A

Approvals

UL File No . 337752-1

Display

LCD Update time of 1 second, back-light colour of blue, green or white.

Standard Outputs

Integrated RS485 (Modbus std or BACnet) with baud rates of :76800, 57600, 38400, 19200, 9600, and 4800. Parity of Odd, Even, and no parity supported. Response time is <10mS.

An integrated pulsed output, solid-state relay module is included. It can be set for W.h or VAr.h.

Options

1. 19V-69V dc auxiliary (see 'Insulation')
2. BACnet

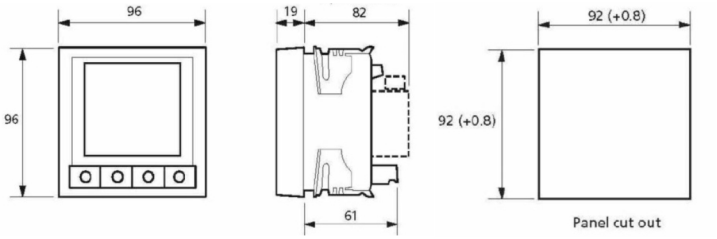
Environmental

Working Temperature	-20 to +70°C
Storage Temperature	-30 to +80°C
Relative Humidity	0 - 95% non condensing
Shock	30g in 2 planes

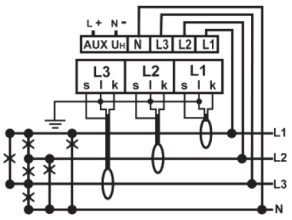
Enclosure

Standard DIN Case	DIN 96x96
Panel Mount	Via 4 Retaining Brackets
Panel Cut-out	92+0.8mm x 92+0.8mm
Material	Black Polycarbonate
Terminals	Current 6mm²
	All others 2.5mm²
IP Rating Front	IP52 / Nema 12
IP Rating Case	IP30 / Nema 1
Weight	0.25kg / 0.66lb

Case



Connection



	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

Coil Connections

k = Red wire
l = Blue wire
s = Screen wire

Ordering Information

M850-LRC-RS-PO- ☐ ☐ ☐ ☐

Output	Code
0 - 500A	A1
0 - 2000A	A2
0 - 4000A	A3

Frequency	Code
50Hz	H5
60Hz	H6

Window Size	Coil Length	Code
80mm	281mm	W1
130mm	448mm	W2
200mm	658mm	W3
290mm	940mm	W4

Power Supply	Code
100 - 440V AC 45 - 65Hz 100 - 420V DC	P1
19 - 69V DC	P2