



RDL

Issue 1.0

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ELECTRONIC METER MODEL TYPE : MHC-1f

USER MANUAL FOR SPECIFICATION AND OPERATING SETTINGS



MID APPROVED SINGLE PHASE CREDIT METER

CERTIFICATE NO: 0120/SGS0280

DECLARATIONS

This meter complies with Class B (1%) to EN50470 1-3

MID Approval Certificate No. 0120/SGS0280

This meter is intended to be installed in a Mechanical Environment 'M1' with Shock and Vibrations of low significance, as per 2004/22/EC Directive.

This meter is intended to be installed in electromagnetic Environment 'E2', as per 2004/22/EC Directive.

This meter is intended for Indoor use only.

This meter is intended for Non Condensing humidity.

Note that this meter is sealed and there are no user serviceable parts and no user adjustments. The maintenance and repair of this meter is only permissible by RDL Meters Ltd.

Guarantee

This meter is guaranteed for a period of three years from the date of purchase, subject to the following guarantee conditions:

This meter is covered by RDL (Meters) Ltd for parts and labour.

This guarantee will **not** cover any Consequential losses.

This guarantee will be **void** under any of the following conditions:

- Removal of any seals to the case.
- The meter has not been installed by a competent, qualified electrician to standards that satisfy the requirements of the current Institute of Electrical Engineers (IEE).
- The meter has been incorrectly installed.
- The meter has been subject to a load of greater than 100 Amps.
- The meter has been tampered with, to obtain free electricity.

If returning the meter, please contact RDL (Meters) Ltd to report the return and to arrange an RMA (Return Merchandise Authorisation) number. Make sure that the meter is carefully packed.

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1. INTRODUCTION

1.1 Overview

This manual covers the specification and operation for the MHC-1f single phase whole current active energy credit meter.

The main features of the product are:

- 1) All solid state with 8 character LCD.
- 2) Single tariff rate.
- 3) No battery replacement required.
- 4) Reverse Energy Detection.
- 5) Extension Terminal Cover to Protect Supply Cables.

2. TECHNICAL DATA

The MHC-1f is an alternating Current Static Watt Hour Credit Meter, Class B. Double Insulated. 

2.1 Meter LED & Power Registration Security

The red LED mounted on the front panel will pulse at a rate of 1000 pulses per kWh. Power registration is recorded in non-volatile memory under control of the microprocessor which is updated every 24 hours and in the event of a power failure.

2.2 General

Current Rating:	100 Amps
Terminal Arrangement:	BS 7856
Main Terminal Dimensions:	8.0mm to 8.2mm
Terminal Construction:	Solid Brass
Terminal Screws:	6.0mm

2.3 Power Supply

Rated Voltage:	230V
Operating Voltage Range:	220V-240V
Current Range:	1.0-20(100A)
Frequency:	50Hz Standard

2.4 Metrology

Meter Accuracy:	Active energy, Class B (1%)
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2.5 Environmental

Temperature Operating Range:	-25 to 55 degrees C
Storage Range:	-25 to 55 degrees C
Transportation Range:	-25 to 70 degrees C
Ingress Protection:	IP51

Maximum period of 6 hours at the extremes of its temperature range

2.6 Dimensions

Height:	120.00 mm
Width:	125.00 mm
Depth:	54.00 mm
Weight:	0.410 kg

3. NORMAL FUNCTIONAL OPERATION IN METER MODE

3.1 Normal Operation Display

During normal operation the display on the MHC-1f will be shown below.

DISPLAY	REMARKS
XXXXXX.X kWh	XXXXXX.X kWh registered on current tariff.

3.2 Reverse Energy Detection

DISPLAY	REMARKS
"rEd"	If reverse power is detected above a pre-determined level the display will indicate "rEd" (Reverse Energy Detection). Reverse energy warning can be removed by isolating and reinstating the power supply.

3.3 Additional Displayed Information

On first application of power, or following a power cut, the display on the meter will be one of those shown below.

4. FUNCTIONAL OPERATION ON APPLICATION OF POWER

4.1 Power Up Operation Display

During power up operation the display on the MHC-1f will be one of those shown below.

DISPLAY	REMARKS
88888.8.8.8 kWh	Test all character positions on display.
V11.2	Software / Firmware Version.
XXXX.XXX kWh	On first application of power, or following a power cut, three decimal places are displayed for the first 30 minutes.
XXXXXX.X kWh	Normal Operation Display.

5. APPENDIX

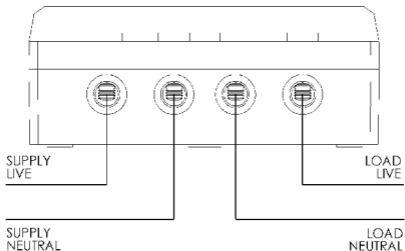
5.1 Starting Current

The meter starts to register at 80 mA.

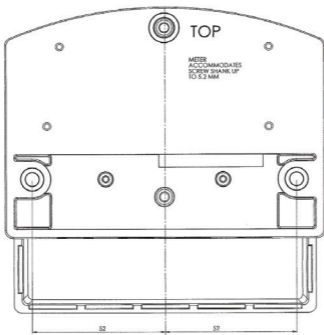
5.2 Wiring Diagram and Mounting Template

The meter must be installed by a competent, qualified electrician to the standards that satisfy the requirements of the current Institute of Electrical Engineers (IEE).

WIRING DIAGRAM



WALL MOUNTING DIMENSIONS



Meter Model:
MHC-1f Single Phase
kWh Credit Meter

This Declaration of
Conformity applies to
Meter serial number:

RDL Meters LTD
Unit E2, Westfield Business Park, Long Road
Paignton TQ4-7AU United Kingdom

Declares that the Measuring Instrument described hereafter as MHC-1f Single Phase kWh Credit Meter is in conformity with the provisions of: Council Directive 2014/32/EU and with the national standard transposing harmonized standard Numbers: EN 50470-1:2006 & EN 50470-3:2006

It is identical to the Measuring Instrument which is the subject of EC certification of conformity No. SGS0280 issued by Notified Body 0120

SGS United Kingdom Limited
Unit 12A/12B
Southern Industrial Estate
Bowburn
Durham DH6 5AD
United Kingdom

Is subject to the procedure set out in Module D of Directive 2014/32/EU under the supervision of the Notified Body 0120. The fulfilment of the essential requirements set out in Annex 1 and in the relevant instrument-specific Annexes has been demonstrated.

SGS United Kingdom Limited
Unit 202b,
Worle Parkway
Weston-Super-Mare BS22 6WA
United Kingdom

Verified at RDL Meters Ltd, Paignton

Date:



Peter Gibbs - Technical Director
RDL Meters Ltd

