



EU Type Examination Certificate Number: **0120/ SGS0280**

RDL Meters Ltd

Unit E2
Westfield Business Park
Long Road
Paignton
Devon
TQ4 7AU

Instrument Identification:
MHC-1f

Single Phase, Active Import (kWh), Electricity Meter

Instrument Traceable Number
0120/ SGS0280

has been assessed and certified as meeting the requirements of

EU Directive 2014/32/EU **on Measuring Instruments Annex II, Module B**

It is certified that the manufacturer's technical design and specimen for the above instrument has been examined and, based on the evidence submitted, it is considered that the instrument conforms to the requirements of Annex V of EU Directive 2014/32/EU

This certificate must be used in conjunction with a certificate covering the product verification as required in Annex II, Module D or Annex II, Module F

This certificate is valid for 10 years from 9th January 2017 until 8th January 2027
Issue 1


Certification is based on report number(s) EMA231206/1 Dated 9th January 2017

Authorised Signature

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1. Technical Data

Manufacturer	RDL Meters Ltd
Meter Type	MHC-1f
Voltage Rating (U_n)	230V
Current Rating ($I_{min} - I_{ref} (I_{max})$)	1-20(100)A
Frequency (F_n)	50Hz
Active Accuracy Class (kWh)	A or B (kWh)
Type of circuit	1P2W
Temperature Range	-25°C to +55°C
Software/ Firmware Version No	V11.2
Identification Location	LCD & Nameplate
Bill Of Materials Number	Rev E
IP Rating	IP51
Insulation Protective Class	Class II
LED Pulse Constant	1000imp/ kWh
Impulse Voltage Rating	6kV
AC Voltage Rating	4kV
Main Cover Sealing Type	Wire & Crimp
Integrity of meter	Inaccessible without breaking seals
Intended Location of the Meter	Indoor
Type of Register	LCD
Terminal Arrangement(s)	BS
Location of manufacturers address	Nameplate & Documentation

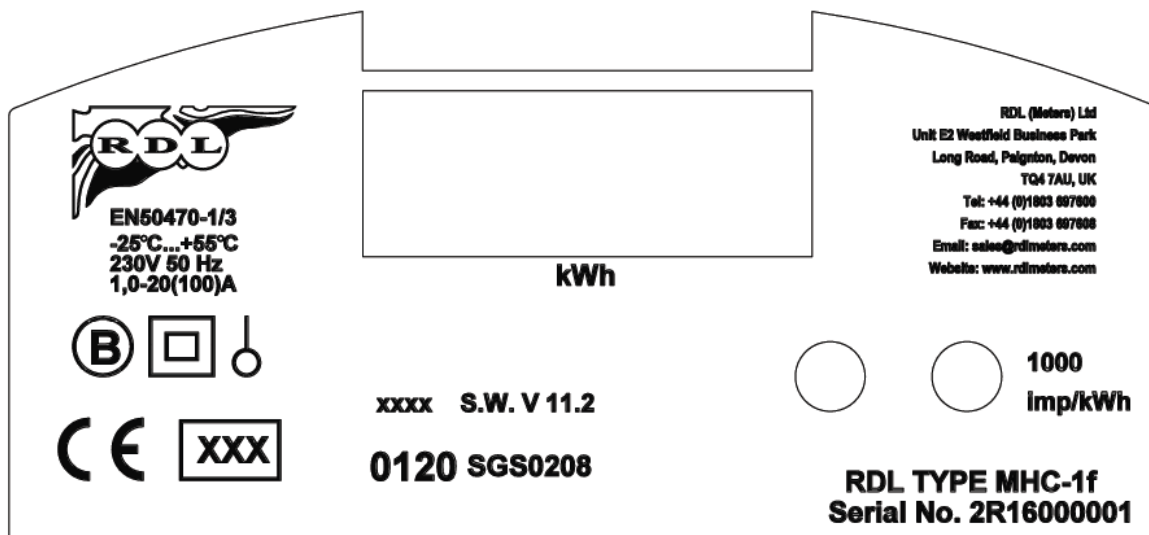
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2. Photograph of Meter and Sealing Plan



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3. Nameplate



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4. Calculation of the composite error/ MPE


During the type approval examination the influence factors for temperature, frequency and voltage are determined per load point. The table below represents the sum of the square values per load, determined via the following formula:-

$$\delta e(T, U, f) = \sqrt{(\delta e^2(T, I, \cos\phi) + \delta e^2(U, I, \cos\phi) + \delta e^2(f, I, \cos\phi))}$$

where

$\delta e(T, I, \cos\phi) =$ Additional error due to variation of the temperature at the same load
 $\delta e(U, I, \cos\phi) =$ Additional error due to variation of the voltage at the same load
 $\delta e(f, I, \cos\phi) =$ Additional error due to variation of the frequency at the same load

		Influence Factors for Temperature. Frequency & Voltage					
Current	PF Cos	-25	-10	5	30	40	55
I _{min}	1.0	0.70	0.63	0.50	0.40	0.50	0.75
I _{tr}	1.0	0.74	0.58	0.39	0.23	0.36	0.65
10I _{tr}	1.0	0.80	0.59	0.35	0.16	0.33	0.64
I _{max}	1.0	1.11	0.84	0.55	0.16	0.27	0.57
I _{tr}	0.5ind	0.92	0.80	0.62	0.43	0.49	0.68
10I _{tr}	0.5ind	1.13	0.96	0.81	0.75	0.81	0.98
I _{max}	0.5ind	1.35	1.14	0.98	0.90	0.96	1.13
I _{tr}	0.8cap	0.99	0.87	0.73	0.60	0.64	0.81
10I _{tr}	0.8cap	0.87	0.69	0.52	0.42	0.52	0.75
I _{max}	0.8cap	0.98	0.73	0.47	0.30	0.45	0.74


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5. Annex of Variants

Product Variant Identification Details:

Type Designation	Description of meter
MHC-1f	230V, 1-20(100)A, Single Rate

Modifications to the meter(s) described according to approval No.**0120/ SGS0280** must be notified to the issuing body to confirm the meter(s) continuing compliance to the relevant pattern approval standard(s).

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6. Document Revision History

Issue	Date	Comments
1	09/01/2017	Initial Issue

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