

EC Type Examination Certificate Number: 0120/SGS0208

Rayleigh Instruments Limited

Raytel House Cutlers Road South Woodham Ferrers Chelmsford Essex, CM3 5WA United Kingdom

Instrument Identification: RI-36-100 Series

Instrument Traceable Number 0120/SGS0208

Single Phase, Active Import/ Export (kWh), Multifunction, Indoor, Electricity Meter

has been assessed and certified as meeting the requirements of

EC Directive 2004/22/EC

Measuring Instruments Annex 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 MI-003 of EC Directive 2004/22/EC

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

> This certificate is valid from 15th December 2015 to 15th April 2025 Issue 1

Certification is based on report number(s) SHES141200649301 16th April 2015 EMA 202963 16th April 2015 EMA 217810 15th December 2015 Authorised Signature

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Dated: 5th April 2016

1. Technical Data

Manufacturer	Ravleigh Instruments Limited.			
Meter Type(s)	Ri-36-100-C Ri-36-100-P Ri-36-100-MB Ri-36-100-MT			
Voltage Rating (Un)	230V			
Current Rating (Imin – Iref (Imax))	0.25-5(100)A, 0.5-10(100)A			
Frequency <i>(Fn)</i>	50Hz			
Active Accuracy Class (kWh)	A or B (kWh)			
Type of circuit	1p2w			
Temperature Range	-25°C to +55°C			
Software Version No.	V1.2			
Identification Location	Nameplate			
Bill Of Materials No.'s	SDM220-MT V1.5 SDM220-Modbus V1.5 SDM220-Mbus V1.5 SDM220-Pulse V1.5			
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	4 clips, one of which is covered by a self-destructive label. A self destructive label is also present across the joint between base and side of case.			
Integrity of meter	Inaccessible without removing labels			
Intended Location of the Meter	Indoor			
Type of Register	LCD			



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2. Photograph of Meter and Sealing Plan





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3. Influence factors for temperature, frequency and voltage

Current	PF Cos	-25	-10	5	30	40	55
Imin	1.0	0.30	0.28	0.25	0.23	0.24	0.23
ltr	1.0	0.17	0.15	0.16	0.13	0.13	0.13
10ltr	1.0	0.07	0.08	0.08	0.05	0.07	0.10
Imax	1.0	0.13	0.11	0.05	0.04	0.04	0.04
ltr	0.5ind	0.27	0.24	0.24	0.21	0.21	0.23
10ltr	0.5ind	0.16	0.16	0.17	0.16	0.16	0.17
Imax	0.5ind	0.06	0.04	0.05	0.11	0.11	0.09
ltr	0.8cap	0.24	0.24	0.22	0.19	0.19	0.19
10ltr	0.8cap	0.06	0.07	0.07	0.05	0.07	0.08
Imax	0.8cap	0.13	0.09	0.04	0.03	0.03	0.03

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

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

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



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4. Annex of Variants

Product Variant Identification Details:

Type Designation	Description of meter
RI-36-100-MT	Multi tariff, single phase, multi function, RS485 Modbus
RI-36-100-C	Single tariff, single phase, multi function, RS485 Modbus
RI-36-100-MB	Single tariff, single phase, multi function, Mbus
RI-36-100-P	Single tariff, single phase, multi function, pulse

Modifications to the meter(s) described according to approval No.**0120/SGS0207** must be notified to the issuing body to confirm the meter(s) continuing compliance to the relevant pattern approval standard(s).

5. Document Revision History

Issue	Date	Comments
1	10/12/2015	Initial Issue
2	05/04/2016	Main cover sealing arrangements amended from an ultrasonic weld to self- destructive labels