



EC Type Examination Certificate Number: **0120/ SGS0015**

Secure Meters (UK) Ltd

PRI House
Moorside Road
Winnall
Winchester
SO23 7RX

Instrument Identification:
i-Credit 300 E1Cx0x-30x
Single Phase, Credit, Active Import/ Export, Multi-rate, Electricity Meter

Instrument Traceable Number
0120/ SGS0015

has been assessed and certified as meeting the requirements of

EC Directive 2004/22/EC **on 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 for 10 years from 21st July 2008 until 20th July 2018
Issue 6


Certification is based on report number(s)
EMA116126/ 1 dated 21st July 2008
EMA124344/ 1 dated 13th March 2009

Authorised Signature

Jan Saunders


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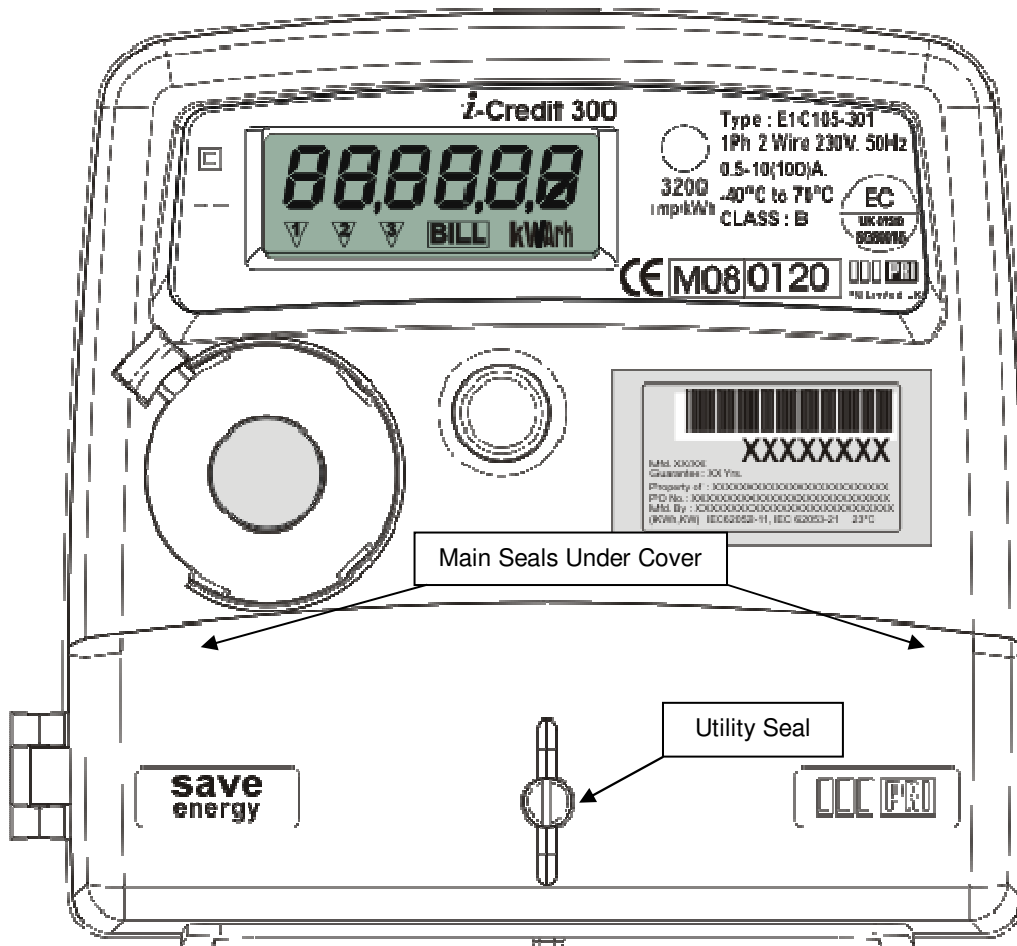
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1. Technical Data

Manufacturer	Secure Meter (UK) Ltd
Meter Type	i-Credit 300 E1Cx0x-30x
Voltage Rating (U_n)	230V
Current Rating (I_{min} – I_{ref} (I_{max}))	0,5-10(60)A 1-20(80)A 1-20(100)A 0,5-10(100)A
Frequency (F_n)	50Hz
Active Accuracy Class (kWh)	A or B (kWh)
Type of circuit	1p2w
Temperature Range	-40°C to +70°C
Software/ Firmware Version No Identification Location	b0 000 & b0 001 LCD
Bill Of Materials Number	E1C105-308 Rev 14
IP Rating	IP51
Insulation Protective Class	Class II
LED Pulse Constant	3200 imp/ 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

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2. Photograph of Meter and Sealing Plan



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3. Calculation of the composite error/ MPE

In addition to the accuracy requirements the composite error e_c of the meter is shown below

The composite error at a certain load is calculated from the following formula:

$$e_c = \sqrt{e^2(l.\cos\theta) + e^2(T.l.\cos\theta) + e^2(U.l.\cos\theta) + e^2(f.l.\cos\theta)}$$

where

$e^2(l.\cos\theta)$	=	Intrinsic error of meter at a certain load
$e^2(T.l.\cos\theta)$	=	Additional error due to variation of the temperature at the same load
$e^2(U.l.\cos\theta)$	=	Additional error due to variation of the voltage at the same load
$e^2(f.l.\cos\theta)$	=	Additional error due to variation of the frequency at the same load

Ambient Temperature Range 5 to 30 Degrees C						
Current	PF Cos	e(lcos)	e(Tlcos)	e(Ulcos)	e(flcos)	%MPE
Imin	1.0	-0.16	-0.14	0.02	0.03	0.22
Itr	1.0	-0.08	-0.11	0.03	0.04	0.14
10Itr	1.0	0.04	-0.11	0.03	0.02	0.12
I _{max}	1.0	0.07	-0.13	0.02	0.02	0.15
Itr	0.5ind	-0.14	-0.09	0.03	0.01	0.17
10Itr	0.5ind	-0.03	-0.14	-0.02	-0.02	0.15
I _{max}	0.5ind	0.01	-0.15	-0.03	-0.02	0.15
Itr	0.8cap	0.09	-0.13	-0.03	0.03	0.16
10Itr	0.8cap	0.06	-0.11	0.02	0.01	0.13
I _{max}	0.8cap	0.08	-0.14	-0.03	0.01	0.16

Ambient Temperature Range -10 to 40 Degrees C						
Current	PF Cos	e(lcos)	e(Tlcos)	e(Ulcos)	e(flcos)	%MPE
Imin	1.0	-0.16	-0.17	0.02	0.03	0.24
Itr	1.0	-0.08	-0.14	0.03	0.04	0.17
10Itr	1.0	0.04	-0.14	0.03	0.02	0.15
I _{max}	1.0	0.07	-0.19	0.02	0.02	0.20
Itr	0.5ind	-0.14	-0.18	0.03	0.01	0.23
10Itr	0.5ind	-0.03	-0.18	-0.02	-0.02	0.18
I _{max}	0.5ind	0.01	-0.22	-0.03	-0.02	0.22
Itr	0.8cap	0.09	-0.18	-0.03	0.03	0.21
10Itr	0.8cap	0.06	-0.17	0.02	0.01	0.18
I _{max}	0.8cap	0.08	-0.21	-0.03	0.01	0.23



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Ambient Temperature Range -25 to 55 Degrees C						
Current	PF Cos	e(lcos)	e(Tlcos)	e(Ulcos)	e(flcos)	%MPE
lmin	1.0	-0.16	-0.27	0.02	0.03	0.32
ltr	1.0	-0.08	-0.25	0.03	0.04	0.27
10ltr	1.0	0.04	-0.25	0.03	0.02	0.26
lmax	1.0	0.07	-0.33	0.02	0.02	0.34
ltr	0.5ind	-0.14	-0.27	0.03	0.01	0.31
10ltr	0.5ind	-0.03	-0.29	-0.02	-0.02	0.29
lmax	0.5ind	0.01	-0.35	-0.03	-0.02	0.35
ltr	0.8cap	0.09	-0.32	-0.03	0.03	0.34
10ltr	0.8cap	0.06	-0.29	0.02	0.01	0.30
lmax	0.8cap	0.08	-0.35	-0.03	0.01	0.36

Ambient Temperature Range -40 to 70 Degrees C (OUTDOOR ONLY)						
Current	PF Cos	e(lcos)	e(Tlcos)	e(Ulcos)	e(flcos)	%MPE
lmin	1.0	-0.16	-0.43	0.02	0.03	0.46
ltr	1.0	-0.08	-0.43	0.03	0.04	0.44
10ltr	1.0	0.04	-0.43	0.03	0.02	0.43
lmax	1.0	0.07	-0.55	0.02	0.02	0.56
ltr	0.5ind	-0.14	-0.44	0.03	0.01	0.46
10ltr	0.5ind	-0.03	-0.45	-0.02	-0.02	0.45
lmax	0.5ind	0.01	-0.58	-0.03	-0.02	0.58
ltr	0.8cap	0.09	-0.44	-0.03	0.03	0.45
10ltr	0.8cap	0.06	-0.52	0.02	0.01	0.52
lmax	0.8cap	0.08	-0.63	-0.03	0.01	0.64

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4. Annex of Variants

Product Variant Identification Details:

Type Designation	Description of meter
E1C Wiring Type: 230V P-N 1P2W	
10	Accuracy: = Class B (Class 1)
20	Accuracy: = Class A (Class 2)
2	Current Range: = 0.5-10(60)A
3	Current Range: = 1-20(80)A
4	Current Range: = 1-20(100)A
5	Current Range: = 0.5-10(100)A
301	Optional Features: Base model, no additional comms, no pulse output, no backlight
308	Optional Features: RF Zigbee Comms, no backlight

Modifications to the meter(s) described according to approval No.**0120/ SGS0015** 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	17/07/2008	Initial Issue
2	22/07/2008	Corrected details
3	13/03/2009	RF Zigbee build option added to annex
4	24/01/2011	Company Name updated and Firmware Update
5	18/04/2011	Certificate template updated without UK prefix to instrument number
6	23//01/2013	BOM updated from Rev12 to Rev14 as a result of mods to zigbee