



EU Type Examination Certificate Number: **0120/SGS0097/R1**

# SC Honeywell Elster Rometrics SRL

Timisoara Airport Park  
DJ 691 km 8+775 m, 307210 Giarmata,  
Timis County,  
Romania

Instrument Identification:  
**AS230**

**Single Phase, Direct Connected, Credit, Import/Export, Active/Reactive, Multi Rate, Electricity Meter**

Instrument Traceable Number  
**0120/SGS0097**

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 24<sup>th</sup> September 2018 until 23<sup>rd</sup> September 2028  
Issue 2

Certification is based on report number(s): EMA121661 dated 24th October 2008, EMA125056 dated 27th March 2009, EMA139902 dated 21st September 2010, EMA258164 dated 24<sup>th</sup> September 2018, EMA258164/TR50579 dated 24<sup>th</sup> September 2018

Authorised Signature


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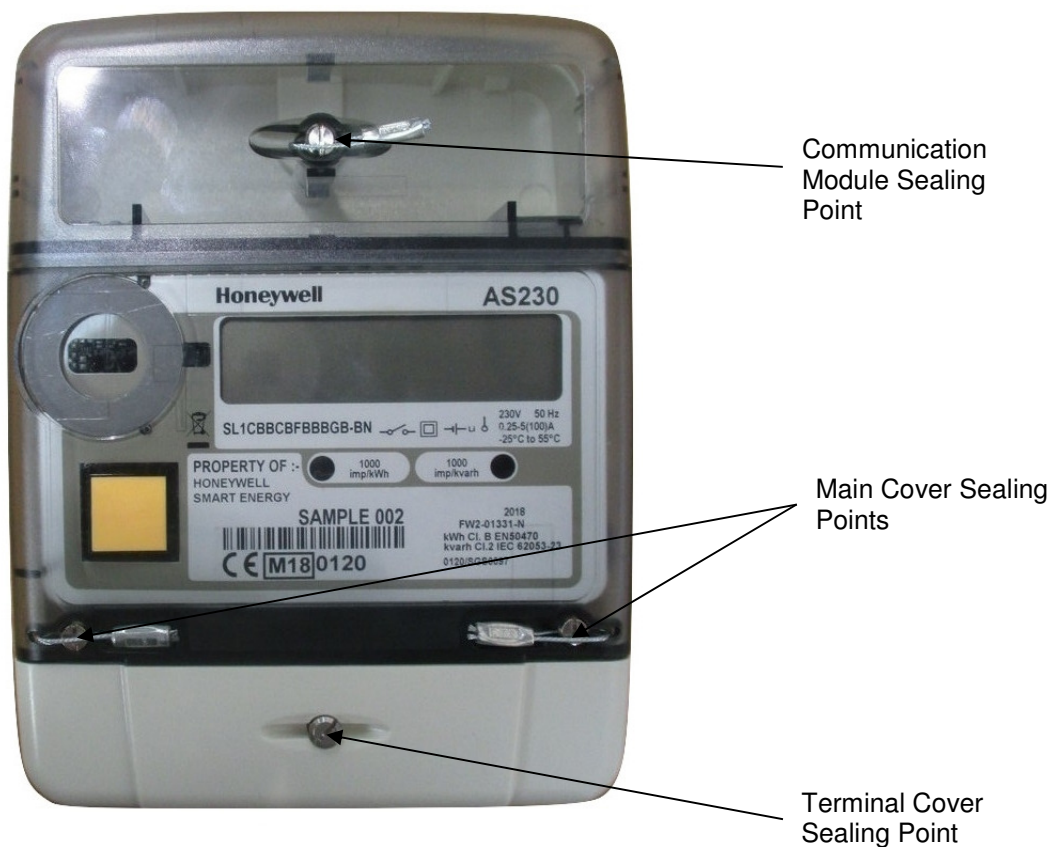
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## 1. Technical Data

<b>Manufacturer</b>	SC Honeywell Elster Rometrics SRL
<b>Meter Type</b>	AS230
<b>Voltage Rating (<math>U_n</math>)</b>	220V-240V
<b>Current Rating (<math>I_{min} - I_{ref} (I_{max})</math>)</b>	0,25-5(100)A
<b>Frequency (<math>F_n</math>)</b>	50Hz
<b>Active Accuracy Class (<math>kWh</math>)</b>	A or B ( $kWh$ )
<b>Type of circuit</b>	1p2w
<b>Temperature Range</b>	-25°C to +55°C
<b>Software/ Firmware Version No's</b>	2-01331-E, 2-01331-F, 2-01331-G, 2-01331-J, 2-01331-K, 2-01331-L, 2-01331-N, 2-01396-A
<b>CRC Checksum No's</b>	2-01331-N: 0x 63 95 2-01396-A: 0x 63 7B
<b>Identification Location</b>	Nameplate
<b>Bill Of Materials No's</b>	BS Terminals v1.4 DIN Terminals v1.0
<b>IP Rating</b>	IP51
<b>Insulation Protective Class</b>	Class II
<b>LED Pulse Constant</b>	1000imp/kWh
<b>Impulse Voltage Rating</b>	6kV
<b>AC Voltage Rating</b>	4kV
<b>Main Cover Sealing Type</b>	Wire & Crimp
<b>Integrity of meter</b>	Inaccessible without breaking seals
<b>Intended Location of the Meter</b>	Indoor
<b>Type of Register</b>	LCD
<b>Terminal Arrangement(s)</b>	BS or DIN
<b>Location of Manufacturers Address</b>	Associated Documents

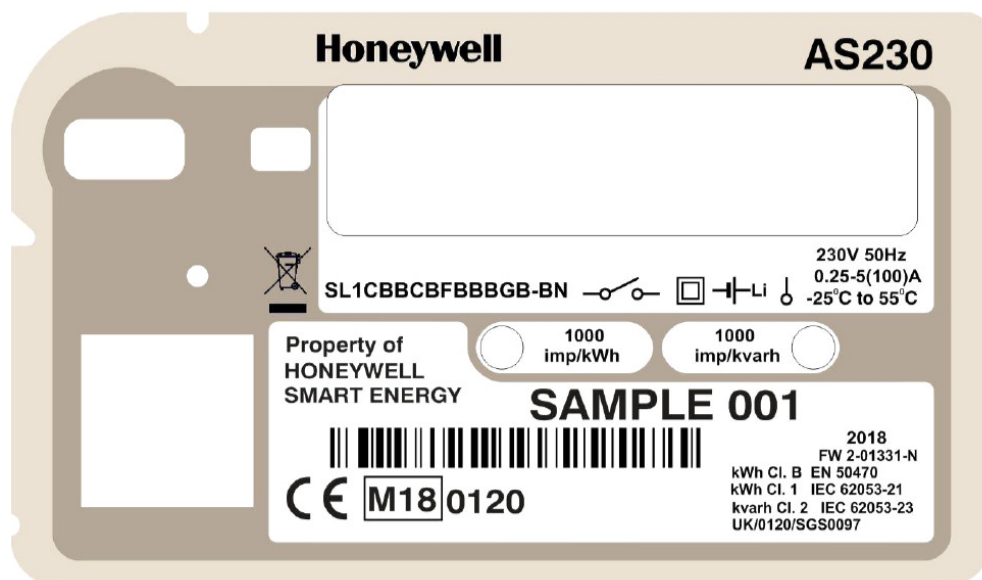
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## 2. Photograph of Meter and Sealing Plan



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### 3. Example of 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, Voltage & Frequency					
Current	PF Cos	-25 °C	-10 °C	5 °C	30 °C	40 °C	55 °C
I <sub>min</sub>	1.0	0.77	1.15	0.85	0.75	0.76	1.36
I <sub>tr</sub>	1.0	0.44	0.53	0.44	0.49	0.56	0.75
10I <sub>tr</sub>	1.0	0.22	0.09	0.13	0.10	0.09	0.11
I <sub>max</sub>	1.0	0.05	0.04	0.09	0.05	0.05	0.03
I <sub>tr</sub>	0.5ind	0.89	1.13	0.90	0.94	1.04	1.44
10I <sub>tr</sub>	0.5ind	0.21	0.11	0.14	0.12	0.12	0.14
I <sub>max</sub>	0.5ind	0.10	0.07	0.11	0.09	0.07	0.07
I <sub>tr</sub>	0.8cap	0.59	0.62	0.43	0.52	0.65	0.96
10I <sub>tr</sub>	0.8cap	0.19	0.07	0.13	0.10	0.09	0.14
I <sub>max</sub>	0.8cap	0.08	0.04	0.10	0.07	0.80	0.06

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## 5. Annex of Variants

### SINGLE PHASE (AS230) MODEL CODE


V <sub>ref</sub>	I <sub>tr</sub>	I <sub>b</sub> / I <sub>ref</sub>	I <sub>max</sub>

MODEL

TYPE (nameplate)


example: S L 1 A B N B<sub>B</sub> N N N N B B - A N

PRODUCT/TERMINATION												
Single Phase, BS terminal arrangement (L-N-N-L), Multi Rate with Load Profile						S	L					
Single Phase, DIN terminal arrangement (L-L-N-N), Multi Rate with Load Profile						S	N					
Obsolete												
SERVICE TYPE												
1-phase 2-wire							1					
CURRENT RANGE												
Direct Connected 20A – * (* is any multiple of I <sub>b</sub> up to 100A maximum)							A					
Direct Connected 10A – * (* is any multiple of I <sub>b</sub> up to 100A maximum)							B					
Direct Connected 5A – * (* is any multiple of I <sub>b</sub> up to 100A maximum)							C					
VOLTAGE/ ACCURACY CLASS												
220 – 240V 50 Hz Cl.1 kWh, Cl.2 kvarh (IEC 62053-21, 23 see note 2) Cl.B kWh, (EN 50470-3)							B					
220 – 240V 50 Hz Cl.2 kWh, Cl.3 kvarh (IEC 62053-21, 23 see note 2) Cl.A kWh, (EN 50470-3)							C					
CONTACTOR												
No contactor							N					
With contactor							B					
LCD/BACKLIGHT												
"English" LCD option - no kvarh LED, no backlight							B					
"English" LCD option - with kvarh LED, no backlight							C					
"English" LCD option - no kvarh LED, with backlight (see Note 4)							D					
"Chevrons" LCD option - no kvarh LED, no backlight							F					
"Chevrons" LCD option - with kvarh LED, no backlight							G					
"Chevrons" LCD option - no kvarh LED, with backlight (see Note 4)							H					
BATTERY OPTIONS												
Real Time Clock battery support							B					
AUXILIARY OUTPUT												
No SO or relay output							N					
SO output (as kWh LED)							B					
100mA/230V relay output (configurable to track tariff – not pulses)							F					
100mA/230V relay output (as kWh LED)							G					
MAIN COVER TAMPER												
No main cover tamper							N					
With main cover tamper							B					
TERMINAL COVER TAMPER												
No terminal cover tamper							N					
With terminal cover tamper							B					
MAGNETIC FIELD SENSOR												
No magnetic field sensor							N					
With magnetic Field sensor							B					
OPERATIONAL MODES												
Import kWh only (plus reverse active energy)							B					
Import kWh, import (Q1 + Q2) kvarh plus reverse active energy							C					
Import/Export kWh							D					
Import/Export kWh, import (Q1 + Q2) and export (Q3 + Q4) kvarh							F					
Import/Export kWh, import (Q1 + Q2) and export (Q3 + Q4) kvarh and kVAh.							G					
OTHER OPTIONS												
Short Terminal Cover							B					
Extended Terminal cover							C					
Extended Terminal cover with cut-out							D					
FEATURE SET												
Original (Revision suffix 'F' only) Obsolete										-	A	
Load Profile data packet ID included (From revision suffix 'K')										-	B	

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Load Profile data packet ID included and low level password access to load profile data	-	C
<b>REVISION SUFFIX</b>		
<del>Firmware 2-01331-F (selected customers only)</del> <b>Obsolete</b>		F
Firmware 2-01331-N (Feature set B)		N
Firmware 2-01395-B (Feature set B) (Not IEC 62056.21 compliant) Only for use with meters for South Africa		1
Firmware 2-01396-A (Feature set C)		A

Modifications to the meter(s) described according to approval No.**0120/SGS0097** 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	24/09/2018	Initial Issue
2	20/12/2018	CRC numbers added to approval for current software versions 2-01331-N: 0x 63 95, 2-01396-A: 0x 63 7B

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**END OF CERTIFICATE**