



EU Type Examination Certificate Number: **0120/SGS0394**

# ISKRAEMECO Energy Measurement

Elsowedy Electric Building  
4<sup>th</sup> Floor, Plot 27  
1<sup>st</sup> District  
5<sup>th</sup> Settlement  
New Cairo  
Egypt

Instrument Identification:  
**ME513-2**

**Single Phase, Active Import/Export (kWh), Smart, Electricity Meter**

Instrument Traceable Number  
**0120/SGS0394**

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 until 10<sup>th</sup> December 2028  
Issue 1

Certification is based on report number(s) SHES180700724301 dated 10<sup>th</sup> December 2018  
EMA262064/1/TR50579 dated 10<sup>th</sup> December 2018  
EMA262064, EMA279105

Authorised Signature


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	Issue Number: 1	Dated: 14 <sup>th</sup> May 2020

## 1. Technical Data

<b>Manufacturer</b>	ISKRAEMECO Energy Measurement
<b>Meter Type</b>	ME513-2
<b>Voltage Rating (<math>U_n</math>)</b>	220-240V
<b>Current Rating (<math>I_{min} - I_{ref} (I_{max})</math>)</b>	0.25-5(80)A, 0.25-5(100)A
<b>Frequency (<math>F_n</math>)</b>	50Hz or 60Hz (IEC only)
<b>Active Accuracy Class (<math>kWh</math>)</b>	A or B (kWh)
<b>Type of circuit</b>	1p2w
<b>Temperature Range</b>	-40°C to + 70°C
<b>Software/ Firmware Version No</b>	DDSD101-DT61-0-0
<b>CRC Checksum</b>	0298
<b>Identification Location</b>	LCD on CIU
<b>Bill Of Materials Number</b>	OKWQ2.702.527
<b>IP Rating</b>	IP51
<b>Insulation Protective Class</b>	Class II
<b>LED Pulse Constant</b>	1000 imp/kWh
<b>Impulse Voltage Rating</b>	6kV
<b>AC Voltage Rating</b>	4kV
<b>Main Cover Sealing Type</b>	4 x Screws 1 x 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>	DIN
<b>Location of Manufacturers Address</b>	Nameplate

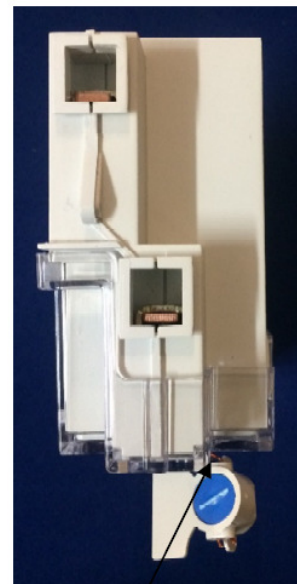
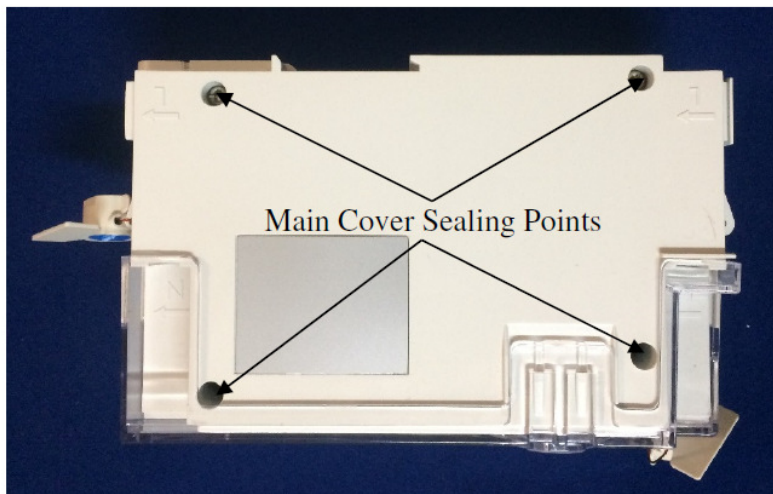
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## 2. Photograph of Meter and Sealing Plan

**Metering Unit**

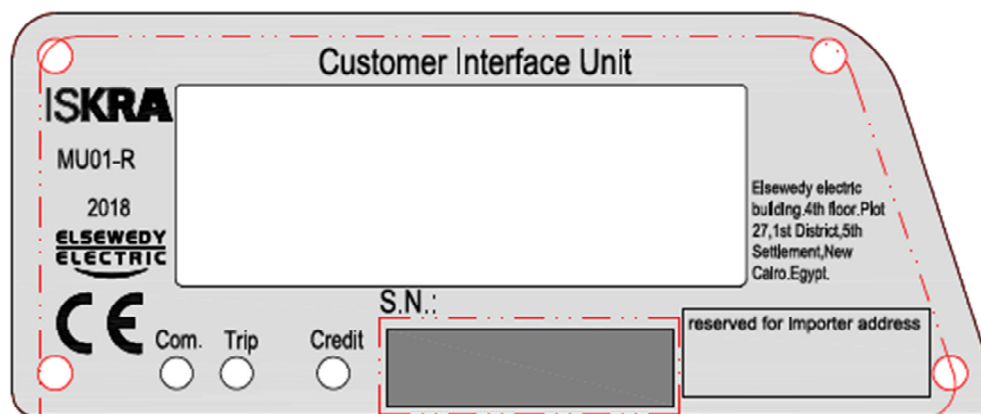
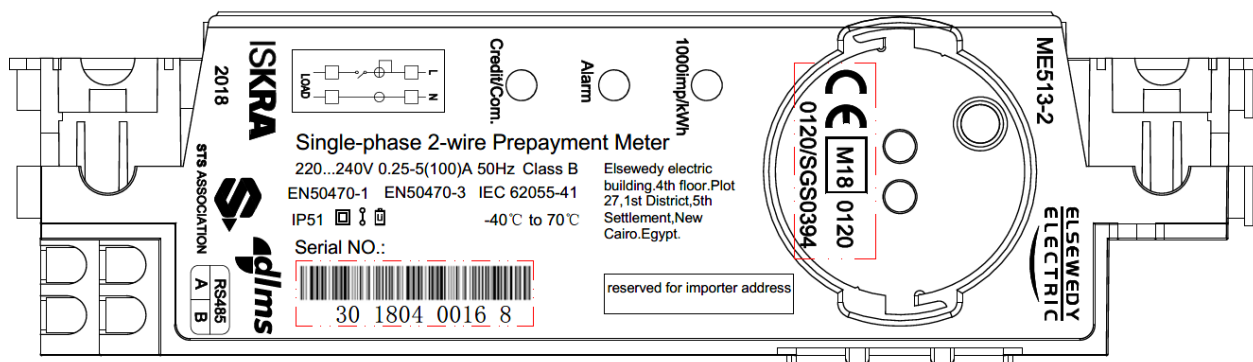



**User Interface Unit**



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### 3. Examples of Nameplates



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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	-40°C	-25°C	-10°C	5°C	30°C	40°C	55°C	70°C
I <sub>min</sub>	1.0	0.24	0.16	0.30	0.22	0.17	0.18	0.44	0.52
I <sub>tr</sub>	1.0	0.18	0.07	0.25	0.14	0.08	0.11	0.51	0.56
10I <sub>tr</sub>	1.0	0.16	0.07	0.25	0.13	0.06	0.20	0.51	0.57
I <sub>max</sub>	1.0	0.63	0.47	0.45	0.44	0.53	0.44	0.48	0.53
I <sub>tr</sub>	0.5ind	0.28	0.11	0.16	0.10	0.10	0.25	0.50	0.60
10I <sub>tr</sub>	0.5ind	0.24	0.06	0.23	0.13	0.06	0.32	0.58	0.64
I <sub>max</sub>	0.5ind	0.74	0.52	0.47	0.47	0.56	0.47	0.53	0.58
I <sub>tr</sub>	0.8cap	0.15	0.05	0.26	0.14	0.05	0.23	0.48	0.56
10I <sub>tr</sub>	0.8cap	0.12	0.06	0.25	0.14	0.03	0.22	0.50	0.53
I <sub>max</sub>	0.8cap	0.73	0.60	0.58	0.58	0.64	0.59	0.60	0.64


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## 5. Annex of Variants

Product Variant Identification Details:

Type Designation	Description of meter
ME513-2	Single Phase, 220-240V, 5(80)A or 5(100)A

Modifications to the meter(s) described according to approval No.**0120/SGS0394** 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	14/05/2020	Initial Issue

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**END OF CERTIFICATE**