



EU Type Examination Certificate Number: **0120/SGS0360**

**Qonnex bvba**

Hollestraat 12  
9310 Aalst  
Belguim

Instrument Identification:  
**EMM.220**

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

Instrument Traceable Number  
**0120/SGS0360**

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 15<sup>th</sup> April 2025  
Issue 1

Certification is based on report number(s) SHES141200649301 16<sup>th</sup> April 2015  
EMA255538

Authorised Signature


SGS United Kingdom Limited, Notified Body 0120  
Unit 202B Worle Parkway, Weston-super-Mare, BS22 6WA, UK  
t +44 (0)1934 522917 f +44 (0)1934 522137 [www.sgs.com](http://www.sgs.com)

Contact Address  
SGS United Kingdom Limited, Units 12A & 12B, South Industrial Estate, Bowburn, Durham, DH6 5AD, UK  
t +44 (0)191 377 2000 f +44 (0)191 377 2020 [www.sgs.com](http://www.sgs.com)

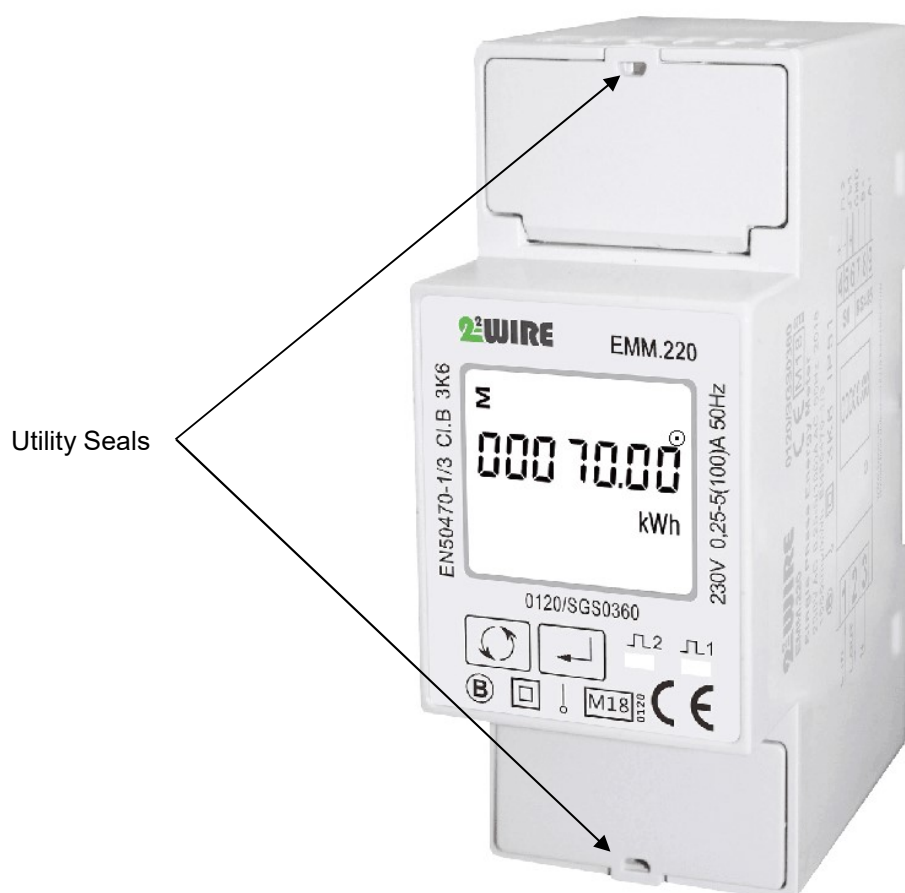
	EU-Type Examination Certificate Number:	
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	Issue Number: 1	Dated: 19 <sup>th</sup> July 2018


## 1. Technical Data

<b>Manufacturer</b>	Qonnex bvba
<b>Meter Type</b>	EMM.220
<b>Voltage Rating (<math>U_n</math>)</b>	230V
<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 (kWh)</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</b>	V1.2
<b>Identification Location</b>	Nameplate
<b>Bill Of Materials Number</b>	V1.5
<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>	2 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 and associated documents

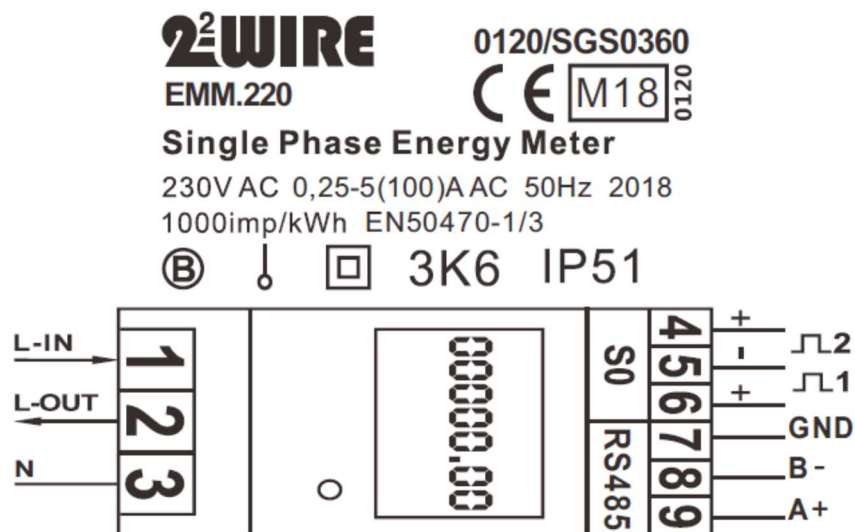
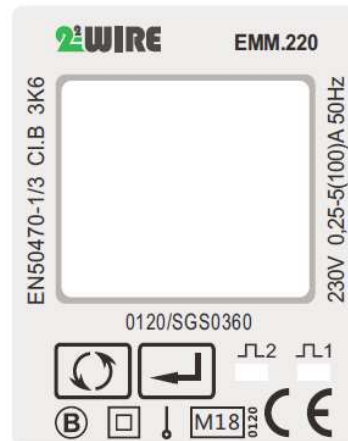
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## 2. Photograph of Meter and Sealing Plan




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### 3. Examples of Nameplates



WWW.2-wire.net  
Gonnex bvba Hollestraat 9310 Aalst / BELGIUM

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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	0.30	0.28	0.25	0.23	0.24	0.23
I <sub>tr</sub>	1.0	0.17	0.15	0.16	0.13	0.13	0.13
10I <sub>tr</sub>	1.0	0.07	0.08	0.08	0.05	0.07	0.10
I <sub>max</sub>	1.0	0.13	0.11	0.05	0.04	0.04	0.04
I <sub>tr</sub>	0.5ind	0.27	0.24	0.24	0.21	0.21	0.23
10I <sub>tr</sub>	0.5ind	0.16	0.16	0.17	0.16	0.16	0.17
I <sub>max</sub>	0.5ind	0.06	0.04	0.05	0.11	0.11	0.09
I <sub>tr</sub>	0.8cap	0.24	0.24	0.22	0.19	0.19	0.19
10I <sub>tr</sub>	0.8cap	0.06	0.07	0.07	0.05	0.07	0.08
I <sub>max</sub>	0.8cap	0.13	0.09	0.04	0.03	0.03	0.03


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## 5. Annex of Variants

Product Variant Identification Details:

Type Designation	Description of meter
EMM.220	Single tariff, single phase, multi-function, RS485 Modbus

Modifications to the meter(s) described according to approval No.**0120/SGS0360** 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	19/07/2018	Initial Issue

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