



EU Type Examination Certificate Number: **0120/SGS0359**

**Qonnex bvba**

Hollestraat 12  
9310 Aalst  
Belguim

Instrument Identification:  
**EMM.630**

**Polyphase, Active Import/Export (kWh), Indoor, Electricity Meter**

Instrument Traceable Number  
**0120/SGS0359**

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 5<sup>th</sup> January 2025  
Issue 1

Certification is based on report number(s) SHES130800321501 dated 26<sup>th</sup> December 2014  
EMA198278/1 dated 26<sup>th</sup> December 2014  
EMA198278/2 dated 21<sup>st</sup> June 2016  
EMA255538

Authorised Signature


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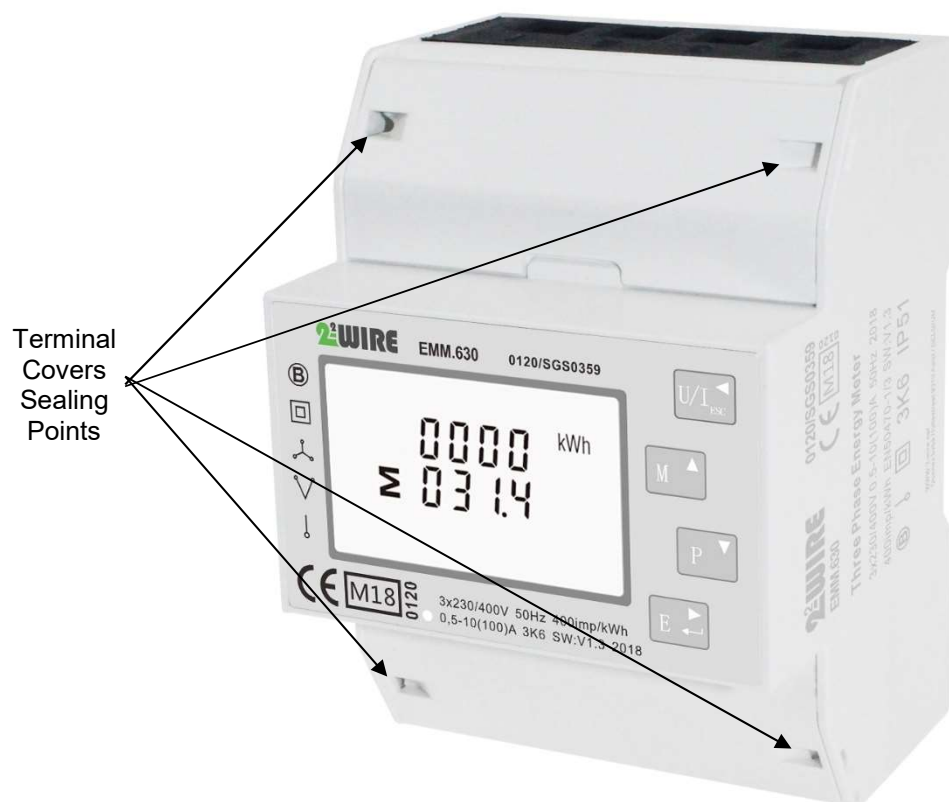
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	Issue Number: 1	Dated: 19 <sup>th</sup> July 2018


## 1. Technical Data

<b>Manufacturer</b>	Qonnex bvba
<b>Meter Type</b>	EMM.630
<b>Voltage Rating (<math>U_n</math>)</b>	3x230/400V
<b>Current Rating (<math>I_{min} - I_{ref} (I_{max})</math>)</b>	0.5-10(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, 3p3w, 3p4w
<b>Temperature Range</b>	-25°C to +55°C
<b>Software/ Firmware Version No</b>	V1.3
<b>CRC Checksum</b>	0x0000AFF9
<b>Identification Location</b>	Nameplate
<b>Bill Of Materials Number</b>	V1.4
<b>IP Rating</b>	IP51
<b>Insulation Protective Class</b>	Class II
<b>LED Pulse Constant</b>	400imp/kWh
<b>Impulse Voltage Rating</b>	6kV
<b>AC Voltage Rating</b>	4kV
<b>Main Cover Sealing Type</b>	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 and associated documents

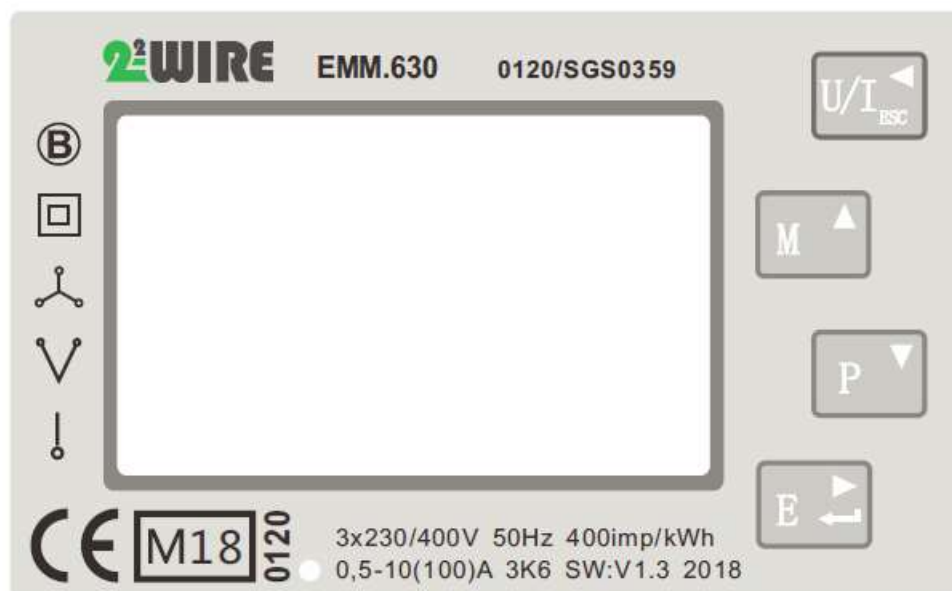
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## 2. Photograph of Meter and Sealing Plan



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### 3. Examples of Nameplates



**2WIRE**  
EMM.630


0120/SGS0359  
CE M18 0120

#### Three Phase Energy Meter

3x230/400V 0.5-10(100)A 50Hz 2018  
400imp/kWh EN50470-1/3 SW:V1.3

Ⓟ ⚡ ◻ 3K6 IP51

WWW.2-wire.net  
Qonnex 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

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		Influence Factors for Temperature. Frequency & Voltage					
Current	PF Cos	-25°C	-10°C	5°C	30°C	40°C	55°C
I <sub>min</sub>	1.0	0.46	0.34	0.14	0.18	0.29	0.52
I <sub>tr</sub>	1.0	0.57	0.39	0.19	0.11	0.24	0.46
10I <sub>tr</sub>	1.0	0.64	0.45	0.25	0.06	0.20	0.42
I <sub>max</sub>	1.0	0.75	0.60	0.44	0.26	0.23	0.30
I <sub>tr</sub>	0.5ind	0.56	0.40	0.20	0.14	0.24	0.49
10I <sub>tr</sub>	0.5ind	0.60	0.43	0.23	0.11	0.23	0.45
I <sub>max</sub>	0.5ind	0.62	0.47	0.30	0.05	0.10	0.28
I <sub>tr</sub>	0.8cap	0.65	0.46	0.27	0.11	0.21	0.43
10I <sub>tr</sub>	0.8cap	0.62	0.44	0.24	0.12	0.24	0.46
I <sub>max</sub>	0.8cap	0.69	0.55	0.37	0.16	0.14	0.28
L1							
I <sub>tr</sub>	1.0	0.84	0.60	0.32	0.08	0.20	0.48
10I <sub>tr</sub>	1.0	0.97	0.71	0.46	0.10	0.13	0.36
I <sub>max</sub>	1.0	0.93	0.70	0.48	0.16	0.06	0.25
I <sub>tr</sub>	0.5ind	0.60	0.32	0.09	0.25	0.42	0.66
10I <sub>tr</sub>	0.5ind	0.79	0.56	0.29	0.12	0.27	0.53
I <sub>max</sub>	0.5ind	0.84	0.63	0.40	0.10	0.11	0.33
L2							
I <sub>tr</sub>	1.0	0.40	0.26	0.09	0.08	0.16	0.37
10I <sub>tr</sub>	1.0	0.42	0.31	0.19	0.08	0.17	0.36
I <sub>max</sub>	1.0	0.44	0.36	0.25	0.08	0.08	0.23
I <sub>tr</sub>	0.5ind	0.20	0.09	0.24	0.27	0.35	0.53
10I <sub>tr</sub>	0.5ind	0.43	0.30	0.17	0.10	0.20	0.40
I <sub>max</sub>	0.5ind	0.46	0.35	0.25	0.09	0.06	0.20
L3							
I <sub>tr</sub>	1.0	0.55	0.37	0.15	0.14	0.30	0.51
10I <sub>tr</sub>	1.0	0.51	0.33	0.11	0.20	0.33	0.56
I <sub>max</sub>	1.0	0.55	0.39	0.21	0.10	0.21	0.52
I <sub>tr</sub>	0.5ind	0.41	0.24	0.06	0.32	0.46	0.66
10I <sub>tr</sub>	0.5ind	0.41	0.22	0.04	0.31	0.46	0.67
I <sub>max</sub>	0.5ind	0.43	0.30	0.34	0.17	0.30	0.53


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## 5. Annex of Variants

Product Variant Identification Details:

Type Designation	Description of meter
EMM.630	Three phase, multi-function, 2 pulse outputs and 1 RS485 communication port

Modifications to the meter(s) described according to approval No.**0120/SGS0359** 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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