



SGS

EC Type Examination Certificate Number: **0120/SGS0099**

Schneider Electric

Wuxi Pro-Face Electronics Co. Ltd
51-A block of Wuxi High-tech Industrial Development Zone
Wuxi
Jiangsu, 214028
P.R.C

Instrument Identification:
iEM32xx

Poly phase, Active Import/ Export (kWh), Transformer Operated, Electricity Meter

Instrument Traceable Number
0120/SGS0099

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 E.

This certificate is valid until 2nd April 2022
Issue 6

Certification is based on report number(s)
EMA153420-1 Issue 2 dated 3rd April 2012, EMA153420/1/1p4w dated 21st August 2015

Authorised Signature

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SGSPAPER
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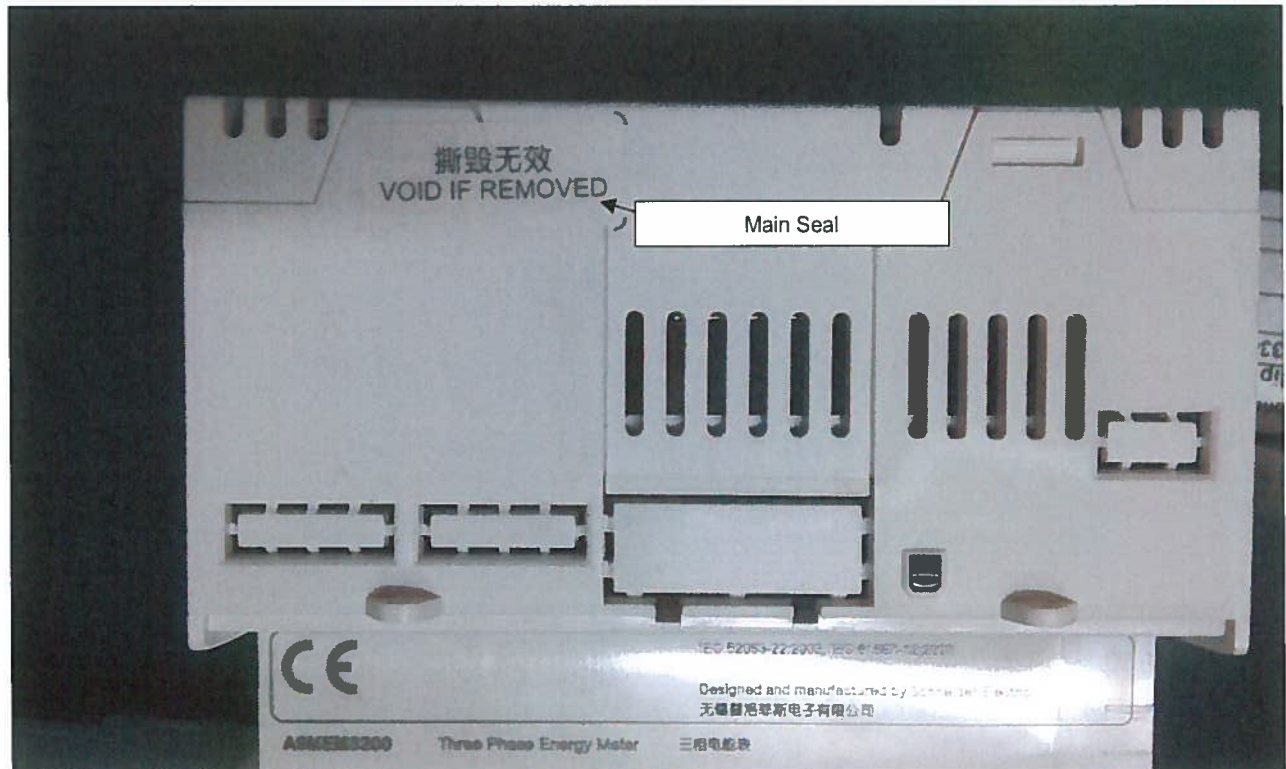
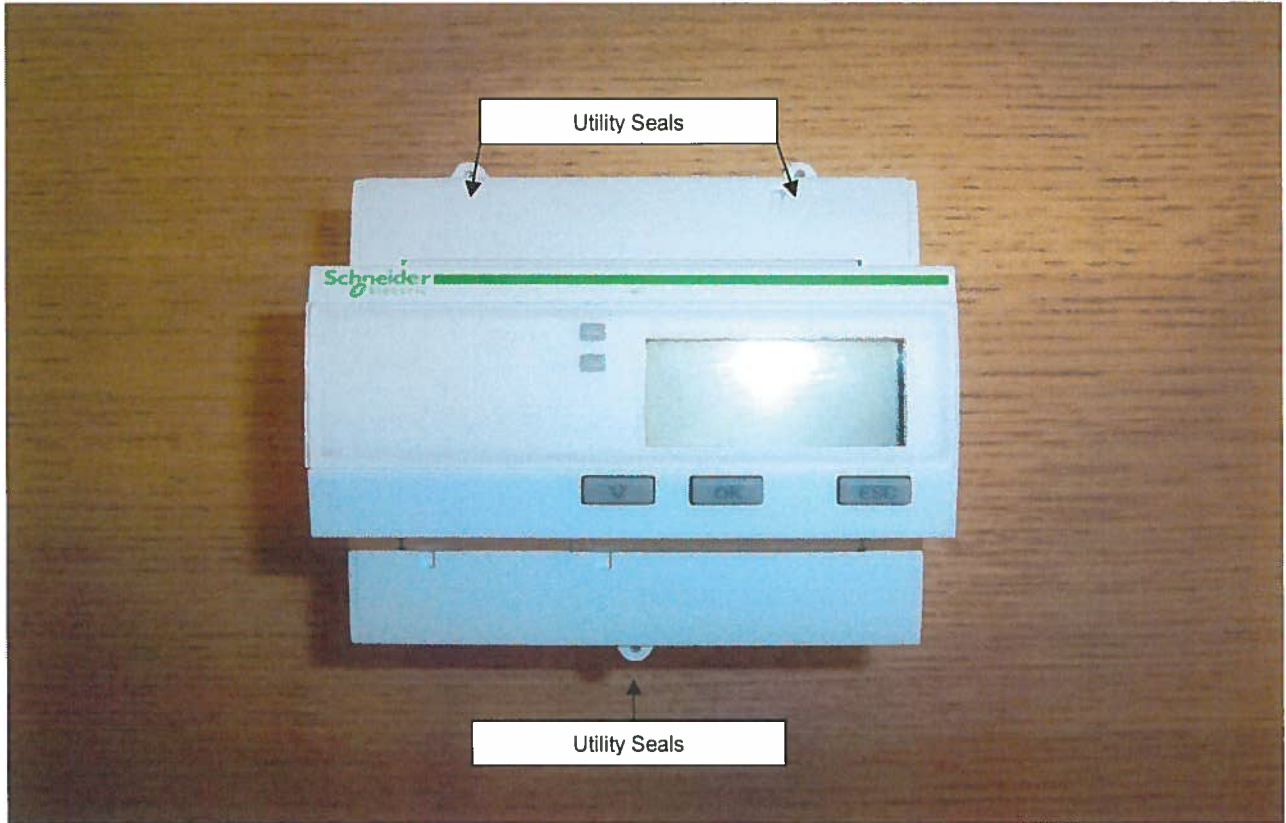
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1. Technical Data

Manufacturer	Schneider Electric
Meter Type	iEM32xx
Voltage Rating (U_n)	100/ 173V – 277/ 480V
Current Rating (I_{min} – I_{ref} (I_{max}))	0,05-5(6)A
Frequency (F_n)	50Hz
Active Accuracy Class (kWh)	C (kWh)
Type of circuit	3p4w, 1p4w
Temperature Range	-25°C to +55°C
Software/ Firmware Version No's	V1.0.200, V1.0.300, V1.0.400, V1.0.500, V1.2.000,V1.3.007
Identification Location	LCD
Bill Of Materials Number	BOM_MainboardE_V02 BOM_HMI_V00 BOM_Comm_V03
IP Rating	IP20 Casing*
* = The meter casing is only IP20 complaint. Therefore the meter MUST always be fitted into an IP51 approved enclosure.	
Insulation Protective Class	Class II
LED Pulse Constant	5000 imp/ kWh
Impulse Voltage Rating	6kV
AC Voltage Rating	4kV
Main Cover Sealing Type	1 x Tamper-proof Adhesive Label
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:

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

where

- $e^2(i.\cos\theta)$ = Intrinsic error of meter at a certain load
- $e^2(T.I.\cos\theta)$ = Additional error due to variation of the temperature at the same load
- $e^2(U.I.\cos\theta)$ = Additional error due to variation of the voltage at the same load
- $e^2(f.I.\cos\theta)$ = 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
lmin	1.0	-0.11	-0.09	-0.09	-0.13	0.21
ltr	1.0	-0.05	-0.07	-0.06	-0.02	0.11
10ltr	1.0	-0.03	-0.05	-0.06	-0.01	0.08
lmax	1.0	0.05	0.03	0.04	0.07	0.10
ltr	0.5ind	0.05	-0.04	-0.05	-0.03	0.09
10ltr	0.5ind	0.28	0.09	0.08	0.13	0.33
lmax	0.5ind	0.34	0.09	0.09	0.15	0.39
ltr	0.8cap	-0.09	-0.07	-0.20	-0.04	0.23
10ltr	0.8cap	-0.06	0.05	0.03	0.07	0.11
lmax	0.8cap	-0.07	0.03	0.03	0.06	0.10

Ambient Temperature Range -10 to 40 Degrees C						
Current	PF Cos	e(lcos)	e(Tlcos)	e(Ulcos)	e(flcos)	%MPE
lmin	1.0	-0.11	-0.16	-0.09	-0.13	0.25
ltr	1.0	-0.05	-0.06	-0.06	-0.02	0.10
10ltr	1.0	-0.03	-0.05	-0.06	-0.01	0.08
lmax	1.0	0.05	0.03	0.04	0.07	0.10
ltr	0.5ind	0.05	-0.05	-0.05	-0.03	0.09
10ltr	0.5ind	0.28	0.10	0.08	0.13	0.33
lmax	0.5ind	0.34	0.17	0.09	0.15	0.42
ltr	0.8cap	-0.09	-0.07	-0.20	-0.04	0.23
10ltr	0.8cap	-0.06	0.06	0.03	0.07	0.11
lmax	0.8cap	-0.07	0.03	0.03	0.06	0.10



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Ambient Temperature Range -25 to 55 Degrees C

Current	PF Cos	e(lcos)	e(Tlcos)	e(Ulcos)	e(flcos)	%MPE
Imin	1.0	-0.11	-0.16	-0.09	-0.13	0.25
Itr	1.0	-0.05	-0.03	-0.06	-0.02	0.09
10ltr	1.0	-0.03	-0.05	-0.06	-0.01	0.08
Imax	1.0	0.05	0.11	0.04	0.07	0.15
Itr	0.5ind	0.05	-0.06	-0.05	-0.03	0.10
10ltr	0.5ind	0.28	0.16	0.08	0.13	0.36
Imax	0.5ind	0.34	0.19	0.09	0.15	0.43
Itr	0.8cap	-0.09	-0.01	-0.20	-0.04	0.22
10ltr	0.8cap	-0.06	0.06	0.03	0.07	0.11
Imax	0.8cap	-0.07	0.07	0.03	0.06	0.12


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4. Annex of Variants

Product Variant Identification Details:

Type Designation		Description of meter
Model	-	Description
iEM3210	-	Poly phase, Active Import/ Export (kWh), Transformer Operated, Electricity Meter, With 1 pulse output
iEM3215	-	Poly phase, Active Import/ Export (kWh), Transformer Operated, Electricity Meter, With Multi-tariff by 2 Digital Inputs
iEM3255	-	Poly phase, Active Import/ Export (kWh), Transformer Operated, Electricity Meter, With 1 Digital Input & 1 Digital Output and modbus communication
iEM3235	-	Poly phase, Active Import/ Export (kWh), Transformer Operated, Electricity Meter, With 1 Digital Input & 1 Digital Output and M-Bus communication.
iEM3265	-	Poly phase, Active Import/ Export (kWh), Transformer Operated, Electricity Meter, With 1 Digital Input & 1 Digital Output and BACnet communication.
iEM3275	-	Poly phase, Active Import/ Export (kWh), Transformer Operated, Electricity Meter, With 1 Digital Input and LonWorks communication

Modifications to the meter(s) described according to approval No. **0120/ SGS0099** 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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5. Document Revision History

Issue	Date	Comments
1	03/04/2012	Initial Issue
2	17/04/2012	Updated Address and Sealing Plan
3	10/06/2013	Minor Firmware update to V1.05.00 and additional comms build options
4	24/07/2013	iEM3265 additional comms build option
5	21/08/2015	1P4W wiring configuration added
6	27/11/2015	Firmware update