UKAS PRODUCT CERTIFICATION
5386

UKCA Type Examination Certificate Number: **0120/SGS0340**

Schneider Electric

Schneider Electric Canada Inc.
2195 Keating Cross Road
Saanichton, British Columbia
Canada, V8M 2A5

Instrument Identification:
ION7400

Polyphase, Active Import/ Export (kWh)
Transformer Operated, Electricity Meter with Auxiliary Power Supply
RS485, Dual Ethernet, ANSI C12.19 Optical Port, USB, 1 digital output, 3 digital inputs

Instrument Traceable Number
0120/SGS0340

has been assessed and certified as meeting the requirements of

Measuring Instruments Regulations 2016 (as amended)

on Active electrical energy meters, Schedule 1B, 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 Schedule 1E, as referenced in the UK Measuring Instruments Regulations 2016, as amended

This certificate must be used in conjunction with a certificate covering the product verification as required in Schedule 1B, Module D or Schedule 1B, Module F

This certificate is valid until 19th February 2028
Issue 6

Certification is based on report number(s) EMA247506/1/MID dated 23rd December 2017, EMA211257/1 dated 28th June 2016
EMA298333/1
EMA247506/1

Authorised Signature

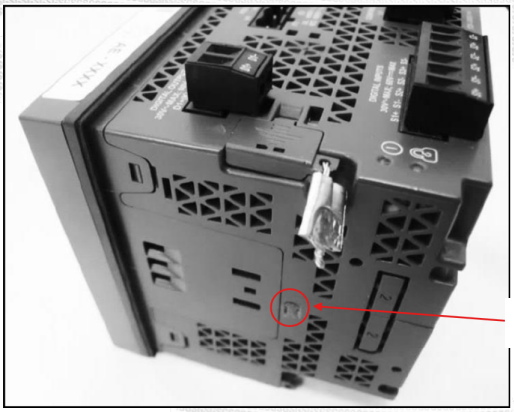
Lewis Lee

Contact Address
SGS United Kingdom Limited, Approved Body 0120
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

1. Technical Data

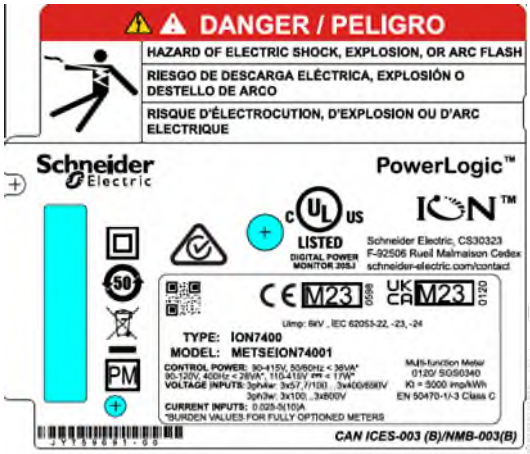
Manufacturer	Schneider Electric
Meter Type	ION7400
Models	METSEION74001, METSEION74101, METSEION74001A, METSEION74001E
Voltage Rating *(Un)*	3P3W: 3x100 V to 3x600 V (L-L) 3P4W: 3 x 57.7/100 V to 3x400/690 V
Current Rating *(Imin – Iref (Imax))*	0.025-5(10) A
Frequency *(Fn)*	50 Hz or 60Hz (IEC only)
Active Accuracy Class *(kWh)*	C (kWh)
Type of circuit	3P4W, 3P3W
Temperature Range	-25ºC to +70ºC
Software/ Firmware Version No 's **Identification Location**	Version: 001.004.003. CRC: 0x5e1c559e Version: 002.001.000. CRC: 0x49d43152 Version: 002.002.001. CRC: 0xb0f2a762 Version: 003.000.000. CRC: 0x89b163bb Version: 003.000.001. CRC: 0x3ba6d971 Version: 003.001.000. CRC: 0x1b86091a Version: 004.000.000. CRC: 0x84d12d44 Version: 004.005.000. CRC: 0xf770ec65 Version: 004.006.000. CRC: 0x770611cb LCD
Bill of Materials No's	EAV66596 PCBA, PSU, PM8000 EAV66599 PCBA, CVM, PM8000 EAV66594 PCBA, Comm I/O, PM8000 EAV66601 PCBA, Backplane, INT, PM8000 NHA51480 PCBA, CPU, UFM, ION 7400 QGH24414 LVDC PCBA, PSU, PM8000 Alternative construction GEX43722 PCBA, CPU, 7400, LATTICE
Mechanical Environment	M1
Electromagnetic Environment	E2
IP Rating	IP51 Front Display Meter body not rated, must be fitted in an IP51 Enclosure
Insulation Protective Class	Class II
LED Pulse Constant	5000 imp/ kWh
Impulse Voltage Rating	6kV
AC Voltage Rating	4kV
Main Cover Sealing Type	Destructible rivet
Integrity of meter	Inaccessible without breaking seals
Intended Location of the Meter	Indoor
Type of Register	LCD
Location of Manufacturers Address	Associated Documents

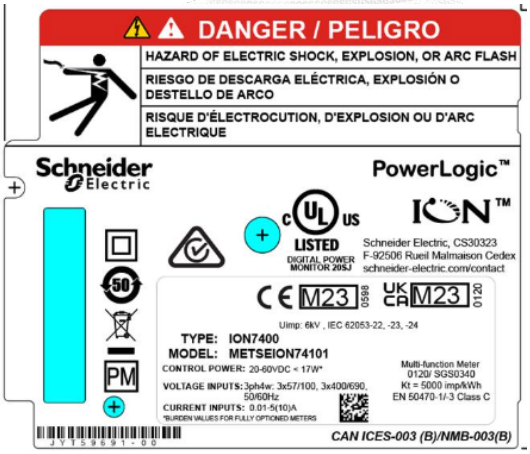
2. Photograph of Meter and Sealing Plan

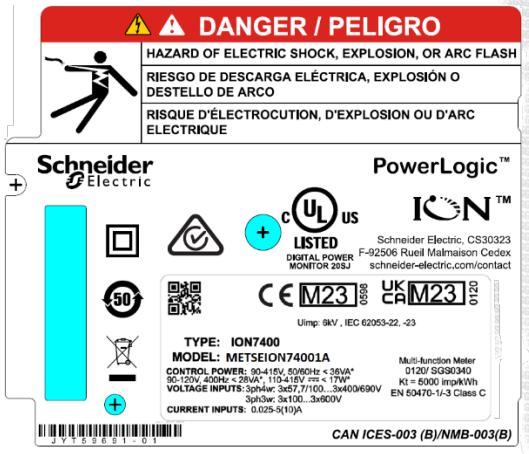


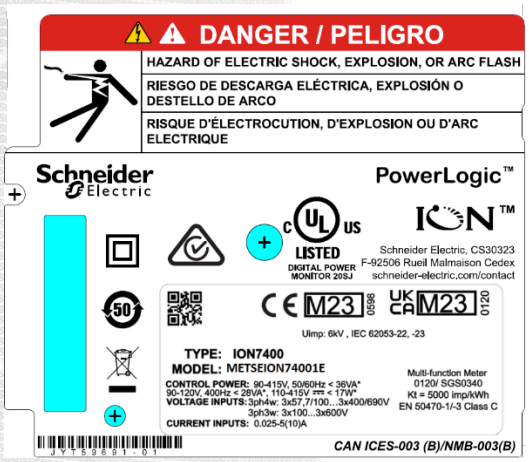
Main Cover Sealing Point

3. Examples of Nameplate









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:-

$$\delta e\,(T, U, f) = \sqrt{(\delta e^2\,(T, I, \cos\varphi)\,,\ \delta e^2\,(U, I, \cos\varphi)\,,\ \delta e^2\,(f, I, \cos\varphi))}$$

where

$\delta e(T, I, \cos\varphi)$ = Additional error due to variation of the temperature at the same load

$\delta e(U, I, \cos\varphi)$ = Additional error due to variation of the voltage at the same load

$\delta e(f, I, \cos\varphi)$ = Additional error due to variation of the frequency at the same load

		Influence Factors for Temperature. Frequency & Voltage						
Current	**PF Cos**	-25° C	-10° C	5° C	30° C	40° C	55° C	70° C
Imin	1.0	*0.16*	*0.11*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*
Itr	1.0	*0.13*	*0.07*	*0.04*	*0.01*	*0.00*	*0.01*	*0.01*
10Itr	1.0	*0.13*	*0.06*	*0.03*	*0.00*	*0.00*	*0.02*	*0.05*
Imax	1.0	*0.12*	*0.06*	*0.03*	*0.01*	*0.01*	*0.46*	*0.07*
Itr	0.5ind	*0.19*	*0.10*	*0.05*	*0.03*	*0.07*	*0.16*	*0.26*
10Itr	0.5ind	*0.16*	*0.08*	*0.04*	*0.02*	*0.03*	*0.06*	*0.01*
Imax	0.5ind	*0.17*	*0.08*	*0.05*	*0.01*	*0.01*	*0.01*	*0.10*
Itr	0.8cap	*0.15*	*0.05*	*0.04*	*0.03*	*0.05*	*0.08*	*0.13*
10Itr	0.8cap	*0.11*	*0.05*	*0.02*	*0.01*	*0.01*	*0.04*	*0.07*
Imax	0.8cap	*0.10*	*0.05*	*0.02*	*0.02*	*0.02*	*0.04*	*0.06*
L1								
Itr	1.0	*0.08*	*0.04*	*0.01*	*0.00*	*0.00*	*0.00*	*0.00*
10Itr	1.0	*0.12*	*0.06*	*0.03*	*0.01*	*0.01*	*0.03*	*0.05*
Imax	1.0	*0.11*	*0.04*	*0.02*	*0.02*	*0.01*	*0.03*	*0.05*
Itr	0.5ind	*0.11*	*0.08*	*0.04*	*0.02*	*0.07*	*0.12*	*0.15*
10Itr	0.5ind	*0.19*	*0.07*	*0.04*	*0.03*	*0.05*	*0.04*	*0.03*
Imax	0.5ind	*0.15*	*0.08*	*0.03*	*0.02*	*0.02*	*0.02*	*0.06*
L2								
Itr	1.0	*0.12*	*0.05*	*0.02*	*0.01*	*0.00*	*0.01*	*0.01*
10Itr	1.0	*0.11*	*0.05*	*0.02*	*0.00*	*0.00*	*0.02*	*0.05*
Imax	1.0	*0.10*	*0.04*	*0.02*	*0.01*	*0.02*	*0.05*	*0.08*
Itr	0.5ind	*0.19*	*0.10*	*0.06*	*0.04*	*0.07*	*0.17*	*0.30*
10Itr	0.5ind	*0.14*	*0.07*	*0.03*	*0.03*	*0.05*	*0.03*	*0.01*
Imax	0.5ind	*0.11*	*0.06*	*0.04*	*0.02*	*0.02*	*0.12*	*0.14*
L3								
Itr	1.0	*0.17*	*0.09*	*0.05*	*0.02*	*0.02*	*0.02*	*0.01*
10Itr	1.0	*0.15*	*0.08*	*0.05*	*0.01*	*0.00*	*0.02*	*0.04*
Imax	1.0	*0.15*	*0.08*	*0.04*	*0.01*	*0.01*	*0.04*	*0.06*
Itr	0.5ind	*0.22*	*0.13*	*0.09*	*0.02*	*0.18*	*0.18*	*0.32*
10Itr	0.5ind	*0.16*	*0.05*	*0.05*	*0.01*	*0.03*	*0.02*	*0.01*
Imax	0.5ind	*0.18*	*0.11*	*0.07*	*0.01*	*0.01*	*0.04*	*0.08*

5. Annex of Variants

Product Variant Identification Details:

Type Designation		**Description of meter**
Product	**Model (SKU)**	**Description**
ION7400	METSEION74001	Polyphase, Active Import/ Export (kWh), Transformer Operated, Auxiliary Power Supply, RS485, Dual Ethernet, ANSI C12.19 Optical Port, USB, 1 Digital Output, 3 Digital Inputs
	METSEION74101	Polyphase, Active Import/ Export (kWh), Transformer Operated, Auxiliary Power Supply (20-60 VDC), RS485, Dual Ethernet, ANSI C12.19 Optical Port, USB, 1 Digital Output, 3 Digital Inputs
	METSEION74001A	Polyphase, Active Import/ Export (kWh), Transformer Operated, Auxiliary Power Supply, RS485, Dual Ethernet, ANSI C12.19 Optical Port, USB, 1 Digital Output, 3 Digital Inputs Advanced Integrated Display, MID
	METSEION74001E	Polyphase, Active Import/ Export (kWh), Transformer Operated, Auxiliary Power Supply, RS485, Dual Ethernet,1 Digital Output, 3 Digital Inputs Essential MID, integrated display
Aux Device	METSEPMFIBER	+ 100BASE FX SC duplex connector

Modifications to the meter(s) described according to approval No. **0120/SGS0340** must be notified to the issuing body to confirm the meter(s) continuing compliance to the relevant pattern approval standard(s).

6. Document Revision History

Issue	Date	Comments
1	20/12/2021	Initial Issue
2	04/05/2023	New firmware version 004.000.000. CRC 0x84d12d44 Alternative construction CPU PCBA, GEX43722 Corporate legal name changed. Replaced dba Power Measurement with Schneider Electric Inc.
3	30/08/2023	METSEPMFIBER added to list of Aux Devices on the TEC (as an I/O accessory)
4	20/12/2023	New model METSEION74101 added to approval
5	12/03/2024	New models METSEION74001A & METSEION74001E added to approval. Updated firmware version 004.005.000. CRC 0xf770ec65
6	15/07/2025	New software version 004.006.000 & CRC 0x770611cb

END OF CERTIFICATE