Certificate of Conformity

Number CoC-2538077-01
Project number 2538077

Issued by	:	NMi Certin B.V. Thijsseweg 11 2629 JA Delft The Netherlands
Applicant	:	Schneider Electric dba Power Measurement Ltd. 2195 Keating Cross Road Saanichton, BC V8M 2A5 Canada
Submitted	:	**PQI-A-FI1 (power quality instrument according to IEC 62586-1) embedding IEC 61000-4-30 class A Power Quality functions** Manufacturer : Schneider Electric Type : PowerLogic ION9000
Characteristics	:	See page 2 and further
In accordance with	:	**IEC 62586-1 Edition 2 (2017)** "Power quality measurement in power supply systems – Part 1: Power quality instruments (PQI)" **IEC 62586-2 Edition 2 (2017)** "Power quality measurement in power supply systems – Part 2: Functional tests and uncertainty requirements"

The undersigned declares that the described product is tested according to the above-mentioned standards and meet their requirements, based on a non-recurrent examination. The appertaining test data is presented in the following type evaluation reports:

Functional tests	:	NMi-1902299-01, NMi-1902299-02 and NMi-2538077-01, NMi Certin B.V.
EMC, immunity	:	NMi-1902299-03, NMi Certin B.V.
EMC, emissions	:	16952-1E, LabTest Certification Inc.
Climatic and mechanical	:	NMi-1902299-03, NMi Certin B.V.
Safety	:	E189364-D1002-1/A0/C0-CB, Underwriters Laboratory (UL)

NMi Certin B.V.
12 February 2021

Certification Board

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IEC 61000-4-30 Power Quality functions tested
The following IEC 61000-4-30 measurement methods have been tested

IEC 62586-2 Clause	Parameter	IEC 61000-4-30 ed.3 class	Comments
6.1 / 7.1	Power frequency	**A + S**	50 and 60 Hz
6.2 / 7.2	Magnitude of supply voltage	**A + S**	
6.3 / 7.3	Flicker	**A + S**	Class F1 230V, 50 Hz / 60 Hz 120V, 50 Hz / 60 Hz
6.4 / 7.4	Supply voltage interruptions, dips and swells	**A + S**	50 and 60 Hz
6.5 / 7.5	Supply voltage unbalance	**A + S**	
6.6 / 7.6	Voltage harmonics	**A + S**	
6.7 / 7.7	Voltage interharmonics	**A + S**	
6.8 / 7.8	Mains signalling voltages on the voltage supply	**A + S**	Method 2
6.9 / 7.9	Measurement of underdeviation and overdeviation parameters	**A**	Not applicable for class S
6.10 / 7.10	Flagging	**A + S**	
6.11 / 7.11	Clock uncertainty testing	**A + S**	
6.12 / 7.12	Variation of external influence quantities	**A + S**	Temperature: -25°C .. +70°C Power supply: 90 – 480 VAC 110 – 480 VDC
6.13 / 7.13	Rapid Voltage Changes (RVC)	**A + S**	
6.14 / 7.14	Magnitude of current	**A + S**	
6.15 / 7.15	Harmonic current	**A + S**	
6.16 / 7.16	Interharmonic currents	**A + S**	
6.17 / 7.17	Current unbalance	**A + S**	
8	Calculation of measurement uncertainty and operating uncertainty	**A + S**	

A : compliance with class A
S : compliance with class S
--- : Not implemented

The tests are performed in accordance with IEC 62586-2 edition 2 (2017).

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Characteristics of the measuring instrument

The general characteristics of the measuring instrument are presented.

General characteristics

Model	ION9000
IEC 62586-1 classification	PQI-A-FI1, defines as follows: Function class ☒ PQI-A ☐ PQI-S Fixed or Portable ☒ Fixed (F) ☐ Portable (P) Indoor or outdoor ☒ Indoor (I) ☐ Outdoor (O) Indoor environment ☒ 1 ☐ 2 EMC environment ☒ G (blank) ☐ harsh (H)
Kind of instrument	Fixed installed, housing instrument fixed on DIN rails
U_{din}	230 V_{LN}
I_{nom}	1 A, 5 A or 10 A with external current clamps
f_{nom}	50 Hz and 60 Hz
Power supply range	90 – 480 VAC (+/- 20%), 47-63 Hz 110 – 480 VDC (+/- 20%)
Software version	002.xxx.xxx or 003.xxx.xxx
Hardware version	00 or 01

Climatic characteristics

Rated operation range	Temperature range	IEC 62586-1 Table 9	-25°C to +70°C (within specified uncertainty)
Limit operating range IEC 60721-3-3 / 3K6	Cold	IEC 60068-2-1	-25 °C, 96 h
	Dry Heat	IEC 60068-2-2	+55 °C, 96 h
	Damp heat	IEC 60068-2-78	40 °C, 93 % RH, 4 days
	Temperature changes	IEC 60068-2-14	0 °C to +55 °C 1 °C / min, 2 h, 5 cycles
	Salt mist	IEC 60068-2-52	n.a. for indoor application
Storage and Transport IEC 60721-3-1 / 1K5 IEC 60721-3-2 / 2K2	Cold	IEC 60068-2-1	-40 °C, 96 h
	Dry heat	IEC 60068-2-2	+70°C, 96 h
	Temperature changes	IEC 60068-2-14	-40 °C to +70 °C 3 °C / min, 2 h, 5 cycles

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Mechanical characteristics

Limit operating range IEC 60721-3-3 / 3M1	Vibrations	IEC 60068-2-6	10 Hz to 150 Hz 2 Hz to 9 Hz, 0,75 mm 9 Hz to 150 Hz, 0,5 g_n 20 cycles
	Shocks	IEC 60068-2-27	Not applicable for fixed installed equipment
	Earthquakes	IEC 60068-2-57	See remark 1
storage and transport IEC 60721-3-1 / 1M1 IEC 60721-3-2 / 2M1	Vibrations	IEC 60068-2-6	5 Hz to 150 Hz 2 Hz to 9 Hz, 7,5 mm 9 Hz to 150 Hz, 2 g_n 20 cycles
	Shocks	IEC 60068-2-27	15 g_n / 11 ms, 3 pulses
	Free fall	IEC 60068-2-31	500 mm, 2 each side
Enclosure robustness	Mechanical impact	IEC 62262	IK 06 (1 J)
Degree of protection by enclosure	IP code	IEC 60529	IP20 exposed parts IP20 non-exposed parts

1. The requirement can be met by installing the instrument into an adequate enclosure/cabinet. (IEC 62586-1 Table 15 note d.)

Safety

Product safety standard	IEC 61010-1 and IEC 61010-2-30
Measurement category	Voltage measurement inputs (600 VLL) – CAT III Current inputs – CAT III
Protective class	II
Rated impulse voltage	Up to 6 kV

Electromagnetic compatibility

Immunity requirements: "power stations" requirements of IEC 61000-6-5	
Power frequency magnetic field	IEC 61000-4-8
Radiated, radio frequency electromagnetic field	IEC 61000-4-3
Electrostatic discharge	IEC 61000-4-2
Fast transient/burst	IEC 61000-4-4
Surge	IEC 61000-4-5
Conducted disturbances induced by radio frequency fields	IEC 61000-4-6
Main frequency voltage	IEC 61000-4-16
Damped oscillatory wave	IEC 61000-4-18
Voltage dips and voltage interruptions	IEC 61000-4-11 / IEC 61000-4-34
Emission requirements	
Conducted and radiated emission	EN 55032 / CISPR 32 class B