

Issued by : NMI Certin B.V.
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Applicant : CT LAB (PTY) LTD
15 Thermo Lane
Stellenbosch
South Africa, 7600

Submitted : **A meter embedding IEC 61000-4-30 class A Power Quality functions**

Manufacturer : CT Lab
Type : Vecto III

Characteristics : See page 2 and further

In accordance with : **IEC 61000-4-30 Ed. 3 (2015)**
"Electromagnetic Compatibility (EMC) – Part 4-30: Testing and measurement techniques – Power quality measurement methods"
IEC 62586-2 Ed. 2 (2017)
"Power quality measurement in power supply systems - Part 2: Functional tests and uncertainty requirements"

Measurement class : IEC 61000-4-30 class A

The undersigned declares that the described product is tested according to the above mentioned standard and meet their requirements, based on a non-recurrent examination. The appertaining test data is presented in type evaluation report number NMI-2174081-01, granted by NMI Certin B.V.

NMI Certin B.V.
5 October 2018



C. Oosterman
Head Certification Board

IEC 61000-4-30 Power Quality functions tested

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

Table 1 IEC 61000-4-30 Power Quality functions tested

IEC 62586-2 Clause	Parameter	IEC 61000-4-30 class	Comments
6.1 / 7.1	Power frequency	A	50 and 60 Hz
6.2 / 7.2	Magnitude of supply voltage	A	
6.3 / 7.3	Flicker	A	Class F1 120V, 50 Hz and 60 Hz
6.4 / 7.4	Supply voltage interruptions, dips and swells	A	50 and 60 Hz
6.5 / 7.5	Supply voltage unbalance	A	
6.6 / 7.6	Voltage harmonics	A	Class I
6.7 / 7.7	Voltage interharmonics	A	
6.8 / 7.8	Mains signalling voltages on the voltage supply	A	Method 2
6.9 / 7.9	Measurement of underdeviation and overdeviation parameters	A	
6.10 / 7.10	Flagging	A	
6.11 / 7.11	Clock uncertainty testing	A	
6.12 / 7.12	Variation of external influence quantities	A	Temperature: -25°C .. +55°C Power supply: 90 – 300 VAC 100 – 300 VDC
6.13 / 7.13	Rapid Voltage Changes (RVC)	A	
6.14 / 7.14	Magnitude of current	A	
6.15 / 7.15	Harmonic current	A	Class I
6.16 / 7.16	Interharmonic currents	A	
6.17 / 7.17	Current unbalance	A	
8	Calculation of measurement uncertainty and operating uncertainty	A	

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).

Characteristics of the measuring instrument

In Table 2 the general characteristics of the measuring instrument are presented.

Table 2 General characteristics

Model	Vecto III
U_{din}	120 V _{LN}
I_{nom}	1 A
f_{nom}	50 Hz and 60 Hz
Temperature	Rated range of operation: -25°C to +55°C
Power supply range	90 – 300 VAC, 50/60 Hz 100 – 300 VDC
Software version	v5.3
Hardware version	v3
Environmental application	Fixed (F), Indoor (I)