

Issued by : NMI Certin B.V.
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Applicant : Fluke Austria GmbH
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Austria

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

Manufacturer : Fluke Corporation
Type : Fluke 1742, 1746 and 1748
Three-Phase Power Quality Logger

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-1901640-01, granted by NMI Certin B.V.

NMI Certin B.V.
10 September 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
		1742	1746	1748	
6.1 / 7.1	Power frequency	A	A	A	50 and 60 Hz
6.2 / 7.2	Magnitude of supply voltage	A	A	A	120 V or 230 V
6.3 / 7.3	Flicker	A	A	A	Class F1: 230V, 50 Hz 120V, 60 Hz
6.4 / 7.4	Supply voltage interruptions, dips and swells	----	A	A	50 and 60 Hz
6.5 / 7.5	Supply voltage unbalance	----	A	A	
6.6 / 7.6	Voltage harmonics	----	A	A	
6.7 / 7.7	Voltage interharmonics	----	A	A	
6.8 / 7.8	Mains signalling voltages on the voltage supply	----	A	A	Method 2
6.9 / 7.9	Measurement of underdeviation and overdeviation parameters	----	A	A	
6.10 / 7.10	Flagging	----	A	A	
6.11 / 7.11	Clock uncertainty testing	----	A	A	
6.12 / 7.12	Variation of external influence quantities	----	A	A	Temperature: -25°C .. +55°C Power supply: 100 – 500 VAC
6.13 / 7.13	Rapid Voltage Changes (RVC)	----	A	A	
6.14 / 7.14	Magnitude of current	A	A	A	
6.15 / 7.15	Harmonic current	----	A	A	
6.16 / 7.16	Interharmonic currents	----	A	A	
6.17 / 7.17	Current unbalance	----	A	A	
8	Calculation of measurement uncertainty and operating uncertainty	A	A	A	

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

The Fluke 1748 is tested according to IEC 62586-2 edition 2, as presented in type evaluation report number NMI-1901640-01. The Fluke 1742 and Fluke 1746 have identical hardware and software as the Fluke 1748 and offer a subset of the parameters as indicated in this table.

Characteristics of the measuring instrument

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

Table 2 General characteristics

Model	Fluke 1748
U_{din}	230 V _{LN} or 120 V _{LN}
I_{nom}	100 A
f_{nom}	50 Hz and 60 Hz
Temperature	Rated range of operation: -25°C to +50°C
Power supply range	100 – 500 VAC 50/60 Hz (+/- 15%)
Software version	1.1.2rc0
Hardware version	V2
Environmental application	Portable (P), Indoor (I)