



**Declaration of Expertise in
Testing of Power Quality Instruments According to
IEC 61000-4-30 (Ed. 2 and Ed. 3)**

Issued by	<i>Power Quality Laboratory AGH University of Science and Technology Kraków, Poland</i>
Date	2018-07-16
Applicant	SONEL S.A. Świdnica, Poland
Manufacturer	SONEL S.A. Świdnica, Poland
Equipment under test	Power Quality Analyzer PQM-700
Nominal values	230 V, 50 Hz
Serial number	BE0760
Firmware version	1.10
Test reference	<i>IEC 62586-1:2017, Power quality measurement in power supply systems – Part 1: Power quality instruments IEC 62586-2:2017, Power quality measurement in power supply systems – Part 2: Functional tests and uncertainty requirements.</i>
IEC 61000-4-30 Power quality functions tested	– Power frequency – Magnitude of the supply voltage – Flicker – Supply voltage interruptions, dips and swells – Supply voltage unbalance – Voltage harmonics – Flaggering – Clock uncertainty – Variations due to external influence quantities – Magnitude of current – Harmonic current – Current unbalance

Power Quality Laboratory of AGH University of Science and Technology (AGH PQLab) confirms that the above instrument fulfils Class S requirements of IEC 61000-4-30 Ed. 2 and IEC 61000-4-30 Ed. 3, in the test range as presented in Table 1, when tested according to the procedures set forth in IEC 62586-2:2017.

Tests were performed using a calibrated test generator, traceable to national standards administered by EURAMET and ILAC members.

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16.07.2018

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Compliance test according to IEC 61000-4-30 (Ed. 2 and Ed. 3)

Table 1. Summary of tests results

IEC 62586-2 Section	Power Quality Parameter	IEC 61000-4-30 Class S Test Result	
		Ed. 2	Ed. 3
7.1	Power frequency	Positive	Positive
7.2	Magnitude of the supply voltage	Positive	Positive
7.3	Flicker	Positive	Positive
7.4	Supply voltage interruptions, dips and swells	Positive	Positive
7.5	Supply voltage unbalance	Positive	Positive
7.6	Voltage harmonics	Positive	Positive
7.7	Voltage interharmonics	(N/A)	(N/A)
7.8	Mains signalling voltages on the supply voltage	(N/A)	(N/A)
7.9	Under-over deviation parameters	(N/A)	(N/A)
7.10	Flagging	Positive	Positive
7.11	Clock uncertainty	Positive	Positive
7.12	Variations due to external influence quantities	Positive	Positive
7.13	Rapid voltage changes	(N/A)	(N/A)
7.14	Magnitude of current	(N/A)	Positive
7.15	Harmonic current	(N/A)	Positive
7.16	Interharmonic currents	(N/A)	(N/A)
7.17	Current unbalance	(N/A)	Positive

(N/A) – Not Applicable (not required by the Standard)