EMC Test Report

Reference number:	EMC-240705/2
Customer:	QX WORLD Kft. 1095 Budapest, Tinodi u. 1-3.
Contact person:	Janos KALDI GSM: +36301478253
Tested product:	Two channels EEG, GSR device Type: QUEX ED S/N: QED121121502
Environmental conditions:	Temperature: 20°C Humidity: 65%
Date of tests:	from 02-03/07/2024

The tests were carried out by EMC Test Laboratory's engineers on behalf of the T-Network Kft. Budapest, Hungary:

Ferenc DEMETER

Laboratory Leader:

Sandor TATAR

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Registration num.: 12005222-2-42

The contact person participating in the tests considers the procedure convincing. The results verify the product's EMC compliance, on behalf of the QX WORLD Kft.:

Janos KALDI

Summary of the test results

Description of the tests	Limits and test levels of the related Standard	Result
Disturbance emission measurements		
Radiated RF emission measurement	**EN 60601-1-2:2015+A1:2021, FCC Part 15 Class B** EN 55011:2016+A1:2016+A2:2021, 30-1000MHz, Class B	**Passed**
Flicker	**EN 60601-1-2:2015+A1:2021** EN 61000-3-3:2013+A1:2017+A2:2021	**NA**
Mains-frequency harmonics emission measurement	**EN 60601-1-2:2015+A1:2021,** EN 61000-3-2:2019 100 Hz-2 kHz	**NA**
Immunity tests		
Immunity test against radiated RF disturbances	**EN 60601-1-2:2015+A1:2021,** EN 61000-4-3:2020 3V/m 0.08-6 GHz Modulation: sinus 1 kHz 80% AM Performance criteria: A	**Passed**
Immunity test against proximity fields from wireless communication equipment	**EN 60601-1-2:2015+A1:2021,** EN 61000-4-3:2020 9-28 V/m 0.08-6 GHz Modulation: sinus 1 kHz 80% AM and PM 18/217 Hz, Performance criteria: A	**Passed**
Immunity test against conducted RF disturbances on the USB lines	**EN 60601-1-2:2015+A1:2021,** EN 61000-4-6:2014 6 V_{RMS} 0.15 - 80 MHz, Modulation: sinus 1 kHz, 80% AM Performance criteria: A	**Passed**
Immunity test against EFT on the USB lines	**EN 60601-1-2:2015+A1:2021,** EN 61000-4-4:2013 ±2 kV between L, N and ground, Performance criteria: B	**Passed**
Immunity test against SURGE, Voltage DIPs and interruptions	**EN 60601-1-2:2015+A1:2021,** EN 61000-4-5:2014+A1:2017 EN 61000-4-11:2020, Performance criteria: B	**NA**
Immunity test against electrostatic discharges (ESD)	**EN 60601-1-2:2015+A1:2021,** EN 61000-4-2:2009 ±15 kV air, ±8 kV contact discharges, Performance criteria: B	**Passed**
Immunity test against mains frequency magnetic field	**EN 60601-1-2:2015+A1:2021,** EN 61000-4-8:2010 50 Hz, 3 A/m	**NA**

Flicker measurement, mains-frequency harmonic emission measurement and immunity test against surges, voltage DIPs and interruptions were omitted since the product was powered from USB port. Immunity test against mains frequency magnetic field was not performed since the product does not comprise magnetic field sensitive components.

The test results refer to the tested QUEX ED and are valid only for products made the same way.

Operational conditions during the tests and measurements:
The QUEX ED operated continuously from a laptop's USB port.
The USB cable was 1.8 m long. The length of the patient wires was 1 m.

Changes on the UEX ED for reducing the radiated RF disturbance emission:
On the USB cable Würth 7427154 type ferrite was clamped with two turns at the product's USB connector. On the patient pair of wires 1-1 Würth 74271222 ferrite clamp was applied.

1. Radiated RF emission measurement

Measurement method: EN 55011:2016+A1:2016+A2:2021
Applied limit values: EN 60601-1-2:2015+A1:2021 Class B and FCC Part 15. Class B