

ILUMEN PID SOLUTION

ILUMEN PID BOX MINI



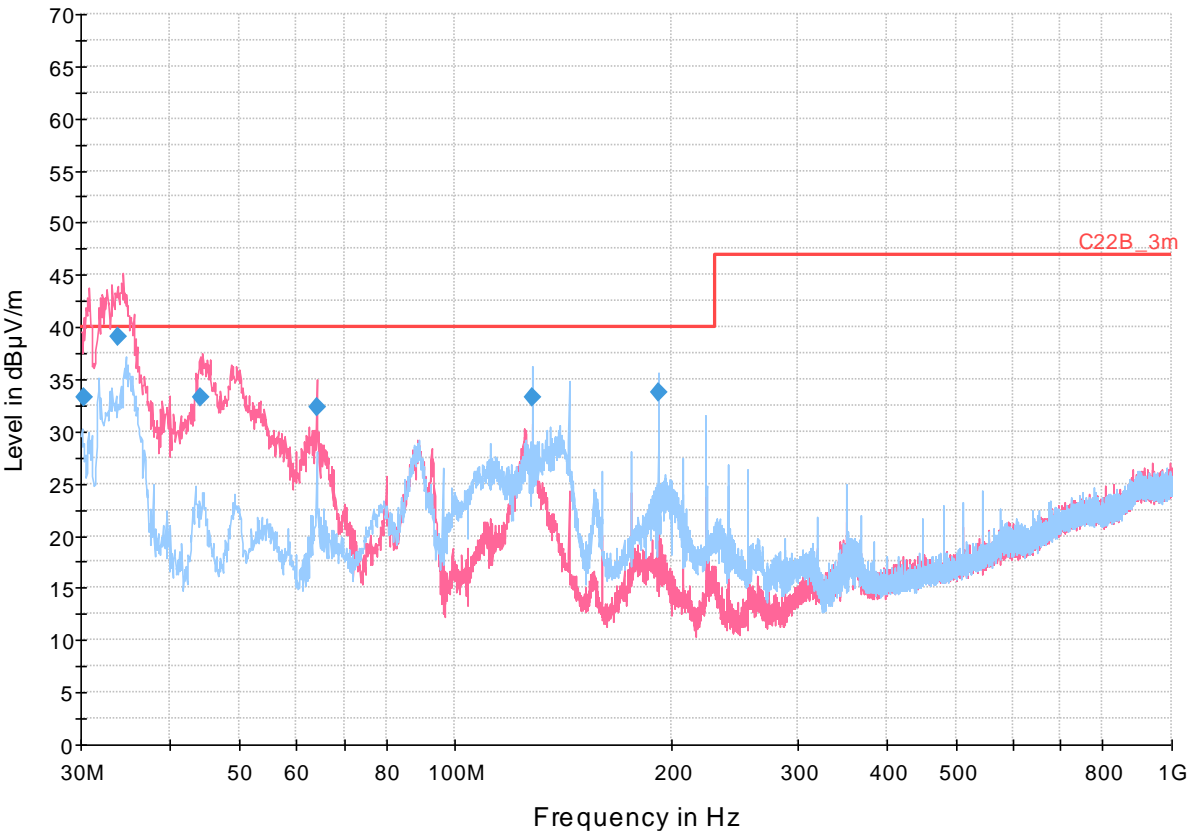
EMC compliance

Electromagnetic Compatibility (EMC) is the ability of an equipment or system to function satisfactorily in its intended environment (immunity) without introducing unacceptable electromagnetic interference (emission), possibly affecting the operation of other equipment in that environment.

The European directives on EMC (2004/108/EC) and R&TTE (1999/5/EC) require products to meet all relevant EMC requirements before they can be sold on the European market. Ilumen chose “Laboratoria De Nayer vzw” as an independent reference to confirm our compliance. They are accredited with the BELAC ISO17025 ensuring high quality professional and competent testing services recognized internationally. They are also a Notified Body for the EMC directive 2004/108/EC and the Low Voltage Directive 73/23/EEC, recognized testing authority for Australia, and Conformity Assessment Body CAB according to the US-EU MRA (FCC).

At present pre-compliance semi-anechoic radiation emissions (RE) tests have been carried out on our Ilumen PID Box Mini. Proving compliance with European regulatory emission demands. Proof is shown in the included measurement graph and table below.

EMI Auto Test_RE3m



Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
30.280000	33.3	1000.0	120.000	100.0	V	225.0	-2.8	6.7	40.0
33.800000	39.1	1000.0	120.000	100.0	V	315.0	-5.2	0.9	40.0
44.120000	33.3	1000.0	120.000	100.0	V	270.0	-10.8	6.7	40.0
64.040000	32.4	1000.0	120.000	125.0	V	90.0	-17.6	7.6	40.0
128.040000	33.3	1000.0	120.000	200.0	H	135.0	-13.1	6.7	40.0
192.040000	33.8	1000.0	120.000	125.0	H	225.0	-14.6	6.2	40.0

Shown are the regulatory European limit (red) with the horizontal (blue) and vertical (pink) polarized electro-magnetic wave levels in a frequency range from 30MHz to 1GHz measured at a distance of 3m. The resulting graph is a summary of the highest measurements made of our product while it was at different angles (azimuth) towards the measuring antenna and the antenna at different heights.

At six frequency points, the ones with the highest Peak levels measurement, a slower Quasi-Peak measurement with bandwidth 120kHz is performed. Quasi-Peak weighs signals according to their repetition rate in a given time, for us 1s. This results in an equal Peak and Quasi-Peak response for continuous wave (CW) signals but a lower Quasi-Peak response for other signals.

The shown graph and table proof first EMC testing of the Ilumen PID Box Mini was positive. Peak and more detailed Quasi-Peak measurements of the emitted radiation are below Europe’s set limits. Further testing will be carried out to ensure our complete compliance.

