

New Measurement Microphone M2340 for the XL2



The new M2340 measurement microphone is a further development of the M2230, compatible with the XL2 and also a Class 1 measurement microphone. In addition, the M2340 features self-verification circuitry and consumes significantly less power than the M2230.

Stand-alone, remote-controlled measurement stations are usually employed for long-term level monitoring. Over time, in reality, damage to the monitoring microphone, such as from vandalism, storm damage or animal attacks, can occur.

Thanks to the System Self-test (Charge Injection Check - CIC) in the new M2340 microphone, the proper functioning of the system can now be periodically remotely verified and documented.

An internal precision generator in the MA230 - this is the microphone preamplifier in the M2340 - produces two square-wave signals with the fundamental frequencies 46.9 Hz and 375 Hz. Including the harmonics of these square-wave signals, the test signal covers the entire spectrum up to 20 kHz. The generator is controlled via the ASD (Automatic Sensor Detection) data link to the microphone.

The test signal is capacitively coupled to the input of the MA230 preamplifier and attenuated by the capacitance of the microphone capsule. Before starting the measurement series, the reference spectral levels are recorded so that later measurements can be compared with this reference. If a capsule is damaged, its capacitance changes, which consequently leads to a change in the microphone signal level. This signal now passes through the preamplifier, the connecting cable and the input stage of the measurement instrument, where it is digitized and

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evaluated.

With the Remote Measurement interface, the XL2 makes available all commands to control the M2340 and to query the measured values, while the monitoring system - e.g. NoiseScout - takes care of the recording of the reference spectrum, the regular verification and the alarming in case of a significant level change or error.

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