

From: David Sullivan-Nightengale

To: Anthony Serafini

Date: June 17, 2016

Subject: Request for Info - File # 0403-EX-PL-2016

Message:

Detector Electronics Corp.
6901 West 110th Street
Minneapolis, MN 55438

15 June 2016

Anthony Serafini
Federal Communications Commission

Dear Mr. Serafini:

Regarding file number 0403-EX-PL-2016, Correspondence Reference Number 32709

This letter/exhibit explains the test we conduct for radiated immunity. This test is conducted in accordance with the provisions of Factory Mutual, Class Number 3010 (FM3010) Approval Standard for Fire Alarm Signaling Systems. Section 4.25 Extraneous Transients (RFI Immunity) on page 26 (attached) indicates the frequency and power requirements measured from 12 inches from the antenna to the unit under test.

4.25 Extraneous Transients (RFI Immunity)
FM3010:2014 Cl. 4.25

Test Location: Det-Tronics, Bloomington / Det-Tronics, Savage / Environ / NW-EMC (Circle one)
Test Equipment ID# (Reference Appendix A for instrument detail)

Room Amb. Conditions During Test Typical Recorded
Ambient temperatures, °C * 15-35°C
Relative Humidity, %RH * 25-75%RH
Pressure, kPa * 86-106kPa
(860-1060mba)
* FM 3010 does not stipulate.

A power functioning system placed in normal standby mode and alarm mode (individually 2 tests) shall be subjected to the following (see table below) RFI signals. The RFI signal shall be subjected to each component of the system. When components of a system are located within an enclosure the test shall be applied to the enclosure. The "System" shall not produce; false signals (alarms, trouble/faults), reset of alarm(s), or false actuation of outputs including releasing devices

Note: The system shall include proper grounding, shielding and installation practices.

Frequency	Watts / 12inches	Or 20V/m	Notes (if any)
27 Mhz 5w @ ____Hz	@ ____Hz		

150-174 Mhz 5w @ ____Hz @ ____Hz

450-467 Mhz 5w @ ____Hz @ ____Hz

850-870 Mhz 3 w @ ____Hz @ ____Hz

900-920 Mhz 4 w @ ____Hz @ ____Hz

Observation, Anomalies, Failure(s) defined (if needed)

Need table(s) for all devices to be tested

Procedures may vary depending on the complexity and type of equipment under test, but 20 V/m, as determined with calibrated electric field (E-field) strength meters, is applied in all cases. In all cases, the radios used for testing have existing FCC approvals as a representative sample of handheld radios that are used in the workplace. Each radio is calibrated before use to ensure that they have the correct output power and don't fail in a way to cause interference to anything but the unit under test.

Results of the test are recorded on sophisticated equipment and annotated on the form provided in the appendix here.

Tests at this location occur in a controlled laboratory environment inside an access-controlled facility.

All tests are recorded in an official project record kept on field at the address in this letter, and you may review them at any time.

Our lab qualification program requires all personnel conducting the test be trained in the safe use of the radio equipment.

Respectfully,
David J. Sullivan-Nightengale, CSP
Safety Engineer, Approvals