



Member of the FM Global Group

Examination Standard for Audible Notification Appliances for Automatic Fire Alarm Signaling

Class Number 3150

September 2020

Foreword

This standard is intended to verify that the products and services described will meet the stated conditions of performance, safety and quality useful to the ends of property conservation. The purpose of this standard is to present the criteria for examination of various types of products and services.

Examination in accordance with this standard shall demonstrate compliance and verify that quality control in manufacturing shall ensure a consistent and reliable product.

TABLE OF CONTENTS

1. INTRODUCTION	1
1.1 Purpose	1
1.2 Scope	1
1.3 Basis for Requirements	1
1.4 Basis for Certification	1
1.5 Basis for Continued Certification	2
1.6 Effective Date	2
1.7 System of Units	2
1.8 Normative References	2
2. GENERAL INFORMATION	3
2.1 Product Information	3
2.2 Certification Application Requirements	3
2.3 Requirements for Samples for Examination	3
3. GENERAL REQUIREMENTS	4
3.1 Review of Documentation	4
3.2 Physical or Structural Features	4
3.3 Markings	4
3.4 Manufacturer's Installation and Operation Instructions	5
3.5 Calibration	5
4. PERFORMANCE REQUIREMENTS	6
4.1 Audible Characteristics	6
4.2 Voltage Range	6
4.3 Continued Operation	6
4.4 Temperature Extremes	7
4.5 Vibration	7
4.6 Dielectric Strength	7
4.7 Bonding	8
4.8 Surge Transient Tests	8
4.9 Enclosure Requirements (including Plastic housings)	8
5. OPERATIONS REQUIREMENTS	9
5.1 Demonstrated Quality Control Program	9
5.2 Surveillance Audit	10
5.3 Manufacturer's Responsibilities	10
5.4 Manufacturing and Production Tests	10
6. BIBLIOGRAPHY	11

1 INTRODUCTION

1.1 Purpose

- 1.1.1 This standard states testing and certification requirements for audible notification appliances (hereafter referred to as appliances) such as electrically powered bells and horns, but not speakers, used for automatic fire alarm signaling.
- 1.1.2 Testing and certification criteria may include, but are not limited to, performance requirements, marking requirements, examination of manufacturing facility(ies), audit of quality assurance procedures, and a surveillance program. Evaluation for environmental or hazardous location ratings will require additional examination per other standards such as Examination Standard 3600 — *Electrical Equipment for Use in Hazardous (Classified) Locations*.

1.2 Scope

- 1.2.1 This standard sets performance requirements for electrically powered bells and horns to sound an alarm in the event of fire or other abnormal condition for the protection of occupants, building space, structure, area, or object.

1.3 Basis for Requirements

- 1.3.1 The requirements of this standard are based on experience, research and testing, and/or the standards of other organizations. The advice of manufacturers, users, trade associations, jurisdictions, and loss control specialists has also been considered.
- 1.3.2 The requirements of this standard reflect tests and practices used to examine characteristics of electrically powered bells and horns for the purpose of obtaining certification. Appliances having characteristics not anticipated by this standard may be certified if performance equal or superior to that required by this standard is demonstrated.

1.4 Basis for Certification

Certification is based upon satisfactory evaluation of the product and the manufacturer in the following major areas:

- 1.4.1 Examination and tests on production samples shall be performed to evaluate:
- the suitability of the product;
 - the performance of the product as specified by the manufacturer and required for certification; and, as far as practical,
 - the durability and reliability of the product.
- 1.4.2 An examination of the manufacturing facilities and audit of quality control procedures may be made to evaluate the manufacturer's ability to consistently produce the product which was examined and tested, and the marking procedures used to identify the product. Subsequent surveillance may be required by the certification agency in accordance with the certification scheme to ensure ongoing compliance.