



Member of the FM Global Group

Approval Standard for Temperature Limit and Supervisory Switches

Class Number 3545

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Foreword

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- b) must be readily identifiable.

Continuance of Approval and listing depends on compliance with the Approval Agreement, satisfactory performance in the field, on successful re-examinations of equipment, materials, and services as appropriate, and on periodic follow-up audits of the manufacturing facility.

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1.0 INTRODUCTION

1.1 Purpose

- 1.1.1 This standard states FM Approval criteria for temperature limit and supervisory switches. These switches use inputs from thermocouples or resistance temperature devices (RTDs). They may be stand-alone devices or incorporated into a temperature controller.
- 1.1.2 FM Approval criteria shall include, but are not limited to, performance requirements, marking requirements, examination of manufacturing facility(ies), audit of quality assurance procedures, and a follow-up program.

1.2 Scope

- 1.2.1 This standard sets performance requirements for temperature limit and supervisory switches used as safety devices in industrial heating control systems. They are intended to operate electrical switching devices in order to initiate a safety shutdown or initiate an alarm under abnormal conditions. Process temperature controllers and/or recorders can also be Approved if they are provided with limit and/or supervisory functions.
- 1.2.2 The requirements of this Standard shall be used to measure and describe the performance of thermal switches in response to exposure from heat, cold, abnormalities, etc., under controlled laboratory conditions. The results of these controlled exposures shall not be used to describe or appraise actual exposure conditions since such conditions vary widely. Dielectric strength and proper operation with variations in supply voltage are also assessed.

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, and loss control specialists was also considered.
- 1.3.2 The requirements of this Standard reflect tests and practices used to examine characteristics of thermal switches for the purpose of obtaining FM Approval. Switches having characteristics not anticipated by this Standard may be Approved if performance equal, or superior, to that required by this Standard is demonstrated, or if the intent of the Standard is met. Alternatively, switches which meet all of the requirements identified in this Standard may not be Approved if other conditions which adversely affect performance exist or if the intent of this Standard is not met.