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Arc Resistant Electric Fire Pump Controllers

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Foreword

This technical publication describes a method to evaluate the effect of abnormal internal pressure acting on properly latched or secured covers, doors, inspection windows, etc. The method also considers the thermal effects of arcing on enclosures and of ejected hot gases and particles.

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1 Scope

This technical publication provides requirements for testing fire pump controllers for electric motor-driven centrifugal fire pumps (EFPC) for resistance to the effects of arcing due to an internal fault.

EFPCs in this standard include variable speed electric fire pump controllers (VEFPC).

The requirements in this standard are only applicable to arcing faults occurring entirely in air within the enclosure when all doors and covers are properly secured. This standard does not apply to arcing faults that occur within components of the EFPC.

EFPCs that meet the requirements of this standard shall be referred to as arc-resistant EFPCs.

Flush mount enclosed equipment is not addressed in this standard.

2 Reference Publications

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

Institute of Electrical and Electronics Engineers
45 Hoes Lane
P.O. Box 1331
Piscataway, NJ 08855

IEEE C37.20.7 *IEEE Guide for Testing Switchgear Rated Up to 52 kV for Internal Arcing Faults*

Canadian Standards Association
178 Rexdale Blvd.
Toronto, Ontario, Canada M9W 1R3

CSA C22.2 No. 0.22-11 *Evaluation methods for arc resistance ratings of enclosed electrical equipment*

CSA C22.2 No. 62091 *Low-voltage switchgear and controlgear—Controllers for drivers of stationary fire pumps*

Underwriters Laboratories Inc.
333 Pfingsten Road
Northbrook, IL 60092

UL 62091 *Low-voltage switchgear and controlgear—Controllers for drivers of stationary fire pumps*