



Technical Specification 48-2

Issue 2 2016

Fault Passage Indicators up to 36 kV for
underground and overhead distribution systems

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Amendments since publication

| Issue | Date | Amendment |
|----------------------|-------------|---|
| Issue 1 Amendment | 1993 | Amended to introduce changes necessary to ensure that it meets the requirements of Clause 11 of the Utilities Supply and Works Contracts Regulations 1992 (S.I. No. 3279) Details of all other technical, general and editorial amendments are included in the associated Document Amendment Summary for this Issue (available on request from the Operations Directorate of ENA). |
| Issue 2 | 2016 | A complete redraft of Issue 1 has been completed to align the document with the relevant series of Standards, IEC 62689 Parts 1 and 2, 2016. All previous content from Issue 1 has been deleted with the exception of some unique requirements for FPIs, which have been captured in a new Clause 13. |

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Foreword

This Technical Specification (TS) is published by the Energy Networks Association (ENA) and comes into effect from the publishing date. It has been prepared under the authority of the ENA Engineering Policy and Standards Manager and has been approved for publication by the ENA Electricity Networks and Futures Group (ENFG). The approved abbreviated title of this engineering document is “ENA TS 48-2”.

This document replaces and supersedes ENA TS 48-2 Issue 1 1974 (amended in 1993).

Current and voltage sensors or detectors covered by this Specification are required to conform to International and British Standards listed. The IEC 62689 series of Standards are the main normative references throughout the document. This Specification amplifies and/or clarifies the requirements of those parts of IEC 62689-1, where alternative arrangements are permitted and where additional information is required to be supplied by the purchaser. This Specification should be read in conjunction with IEC 62689-1.

Manufacturers shall refer to the ‘Schedule of Requirements’ submitted by the purchaser as outlined in Annex A. Annex B of the document includes a ‘Self Certification Conformance Declaration’ sheet to enable manufacturers to declare conformance or otherwise, clause by clause, with the relevant parts of the document.

Where the term “shall” or “must” is used in this document it means the requirement is mandatory. The term “should” is used to express a recommendation. The term “may” is used to express permission.

NOTE: Commentary, explanation and general informative material is presented in smaller type, and does not constitute a normative element.

Introduction

This specification predominantly follows the requirements detailed in IEC 62689-1. Where necessary, clarifications and enhancements have been made to cover technical requirements and features specific to ENA Member Companies (ENAMCs) in the UK.

Section I of this Specification provides general informative guidance for the choice of Fault Passage Indicators (FPIs). Section II presents technical requirements for FPI devices.

1 Scope

This specification refers to fault passage indicator assemblies for use on underground and overhead distribution networks operating at voltages up to 36 kV.

2 Normative references

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

Standards publications

BS EN 60529, *Degrees of protection provided by enclosures (IP Code)*

IEC 60068-2-52, *Environmental testing - Part 2: Tests - Test Kb: Salt mist, cyclic (sodium, chloride solution)*

IEC 62689-1, *Current and voltage sensors or detectors to be used for fault passage indication purposes. Part 1: General principles and requirements*

IEC 62689-2, *Current and voltage sensors or detectors to be used for fault passage indication purposes. Part 2: System aspects*

Other publications

[N1] ENA TS 41-36, *Switchgear for service up to 36 kV (cable and overhead conductor connected)*

3 Terms and definitions

The definitions of IEC 62689-1 Clause 3 are applicable with the following additions.

3.1

distributed generation (DG)

power generation plants generally connected to medium voltage (generally in the range 0.1-10 MW) and low voltage (generally below 0.1 MW) distribution networks