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Technical Specification 50-19

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Standard numbering for small wiring (for switchgear and transformers together with their associated relay panels)

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PUBLISHING AND COPYRIGHT INFORMATION

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First published as British Electricity Board Specification (B.E.B.S) S12 in 1964, amended in 1969 and first issued as ENA TS 50-19 in 2004.

Amendments since publication

Issue	Date	Amendment
Issue 2	December, 2017	Document subject to a minor revision, Normative references added. Terms and definitions added. Reference to self-contained, pre-fabricated modules added. Reformatted to align with the current ENA Standards template and the rules for structure, drafting and presentation of ENA engineering documents (EREC G0). No changes have been made to the technical content to ensure compatibility with existing installations.

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Foreword

This Technical Specification (TS) is published by the Energy Networks Association (ENA) and comes into effect from the date of issue. 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 50-19”.

This Specification has been prepared by the Electricity Association. It was originally issued as British Electricity Boards Specification (B.E.B.S.) S12 in 1964 and subject to an amendment in 1969. It was first issued as ENA TS 50-19 in 2004. Issue 1 is now superseded.

This Technical Specification defines a uniform system for identifying small wiring (conductors) for transformers, switchgear, control and protection equipment.

For safety reasons the specification may be applied to equipment, which is:

- installed and operated at existing sites or;
- maintained and operated by staff familiar with the uniform system for identification of small wiring to this specification.

The Technical Specification may be applied to the small wiring of protection and control panels from the point of interface with primary parts or their mechanisms and ancillary circuits.

To enable compatibility with existing installations the technical content of the original specification has not been altered.

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

BS EN 62491 provides rules and guidelines for the labelling of cables and conductors used in industrial installations, equipment and products.

Such labelling is needed in order to maintain a clear relation between the technical documentation and the actual equipment and for other purposes. It describes and designates various methods to achieve this.

In the context of this Technical Specification, it is considered that the rules herein are a form of composite labelling as described in BS EN 62491:2008. This is where two or more of identification labelling, connection labelling and signal labelling systems are used together.

1 Scope

This Technical Specification provides general rules for identification of individual wires (“ferruling”) to denote its function in transformers, switchgear, control and protection equipment using an alphanumeric notation.

This Technical Specification applies identification marks to small wiring of protection and controlgear in LV compartments at the point of interface with transformers and/or switchgear. Interface small wiring includes external auxiliary supplies, protection and SCADA control circuits. This is for the purpose of electrical identification of individual wires and provides the ability to trace through equipment for function checking and fault-finding.

Manufacturers may apply identification marks to small wiring complying with other standards or to their own convention, at terminals which are not located at the point of interface.

This Technical Specification provides manufacturers with a standardised method of recording ‘as wired’ panels on schematic diagrams and wiring drawings.

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 60445, *Basic and safety principles for man – machine interface, marking and identification – Identification of equipment terminals, conductor terminations and conductors*

BS EN 62491, *Industrial systems, installations and equipment and industrial products – Labelling of cables and cores*

BS EN 81346-1, *Industrial systems, installations and equipment and industrial product – Structuring principles and reference designations – Part 1:Basic rules*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1
labelling
label or labels attached to a cable or core indicating appropriate characteristics

[BS EN 62491:2008, Clause 3.9]

3.2
identification labelling
labelling showing the identifier of an object as a constituent of a specific installation, system, equipment or product

[BS EN 62491:2008, Clause 3.10]

3.3
connection labelling
labelling of a cable or core showing the identifier of the terminal, terminal block or equipment to which it is connected

[BS EN 62491:2008, Clause 3.11]

3.4
signal labelling
system of labelling of cables and cores used as a supplement to other labelling generally based on the signal(s) carried by the cable or core

[BS EN 62491:2008, Clause 3.15]

3.5
composite labelling
system of labelling where two or more of identification labelling, connection labelling and signal labelling are used together

[BS EN 62491:2008, Clause 3.16]

4 Application

4.1 General

Identification marks to small wiring of protection and controlgear in LV compartments at the point of interface with transformers and/or switchgear shall conform to BS EN 62491:2008.

Installations conforming to this Technical Specification are deemed to conform with BS 62491:2008.

Unless otherwise agreed by the purchaser, all interface small wiring shall conform to this Technical Specification.