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BSI Standards Publication

Connectors for thermoelectric sensors

National foreword

This British Standard is the UK implementation of EN 50212:2020. It supersedes BS EN 50212:1997, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee GEL/65/3, Industrial communications: process measurement and control, including fieldbus.

A list of organizations represented on this committee can be obtained on request to its secretary.

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English Version

Connectors for thermoelectric sensors

Connecteurs pour capteurs thermoélectriques

Steckverbindungen für Thermoelemente

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

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European foreword

This document (EN 50212:2020) has been prepared by CLC/TC 65X “Industrial-process measurement, control and automation”.

The following dates are fixed:

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• latest date by which the national standards conflicting with this document have to be withdrawn	(dow)	2023-03-09

This document supersedes EN 50212:1996 and all of its amendments and corrigenda (if any).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC shall not be held responsible for identifying any or all such patent rights.

1 Scope

The object of this document is to determine the composition, nature of materials, manufacturing tests and thermoelectronic behaviour of connectors for sensors using thermocouples according to EN 60584-3:2008.

This document does not cover such special thermocouples as U, L and W types; nevertheless, the user of such special thermocouples can use the connectors described hereafter with some restrictions mentioned in the relevant paragraphs.

2 Normative References

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

IEC 60584 (series), *Thermocouples*

3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— IEC Electropedia: available at http://www.electropedia.org/

— ISO Online browsing platform: available at http://www.iso.org/obp

4 General

4.1 Connector types

4.1.1 Connectors with specified dimensional characteristics

They are defined in this standard by their dimensional, physical, electrical and chemical characteristics.

The types retained in this standard are:

— A type: connectors with cylindrical pins and cylindrical sockets;

— B type: connectors with flat pins and flat sockets.

4.1.2 Other connectors

The electrical characteristics are identical to those defined for connectors described in 4.1.1. Withdrawal tests, waterproof and dustproof tests, corrosion tests, test for resistance to heat will be stated by the manufacturer as list of technical characteristics.

The dimensional, physical and chemical characteristics peculiar to each manufacturer are not specified.

4.2 Marking for identification and polarities

The connectors shall comprise a permanent colour marking, e.g. either indelible superficial or mass colouring, or recessed coloured dots or coloured rings, etc.

At least the + polarity shall be indicated be permanent marking. Though non-compulsory, to avoid confusion with previous markings, or markings in other standards, the thermocouple type may be also additionally indicated, see Table 1.