



# PRE-RELEASE VERSION (FDIS)

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**Electrical equipment for measurement, control and laboratory use – EMC requirements –  
Part 2-3: Particular requirements – Test configuration, operational conditions and performance criteria for transducers with integrated or remote signal conditioning**

INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

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ICS 17.220.20; 25.040.40; 33.100.20

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65A/980/FDIS

FINAL DRAFT INTERNATIONAL STANDARD (FDIS)

PROJECT NUMBER:

**IEC 61326-2-3 ED3**

DATE OF CIRCULATION:

**2020-08-28**

CLOSING DATE FOR VOTING:

**2020-10-09**

SUPERSEDES DOCUMENTS:

**65A/925/CDV, 65A/938A/RVC**

IEC SC 65A : SYSTEM ASPECTS	
SECRETARIAT: United Kingdom	SECRETARY: Mr Petar Luzajic
OF INTEREST TO THE FOLLOWING COMMITTEES: TC 77,SC 77A	HORIZONTAL STANDARD: <input type="checkbox"/>
FUNCTIONS CONCERNED: <input checked="" type="checkbox"/> EMC <input type="checkbox"/> ENVIRONMENT <input type="checkbox"/> QUALITY ASSURANCE <input type="checkbox"/> SAFETY	
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TITLE:

**Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 2-3: Particular requirements - Test configuration, operational conditions and performance criteria for transducers with integrated or remote signal conditioning**

PROPOSED STABILITY DATE: 2023

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

### **ELECTRICAL EQUIPMENT FOR MEASUREMENT, CONTROL AND LABORATORY USE – EMC REQUIREMENTS –**

#### **Part 2-3: Particular requirements – Test configuration, operational conditions and performance criteria for transducers with integrated or remote signal conditioning**

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This International Standard IEC 61326-2-3 has been prepared by subcommittee 65A: System aspects, of IEC technical committee 65: Industrial-process measurement, control and automation.

This third edition cancels and replaces the second edition published in 2012. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- update of the document with respect to IEC 61326-1:2020.

The text of this International Standard is based on the following documents:

FDIS	Report on voting
65A/XX/FDIS	65A/XX/RVD

Full information on the voting for the approval of this International Standard can be found in the report on voting indicated in the above table.

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

In this document the following print types are used:

- Terms used throughout this document which have been defined in Clause 3 of this document and of IEC 61326-1:2020: SMALL CAPITALS.

This part of the IEC 61326 series is to be used in conjunction with IEC 61326-1:2020 and follows the same numbering of clauses, subclauses, tables and figures.

When a particular subclause of IEC 61326-1 is not mentioned in this part, that subclause applies as far as is reasonable. When this standard states “addition”, “modification” or “replacement”, the relevant text in IEC 61326-1 is to be adapted accordingly.

NOTE The following numbering system is used:

- subclauses, tables and figures that are numbered starting from 101 are additional to those in IEC 61326-1;
- unless notes are in a new subclause or involve notes in IEC 61326-1, they are numbered starting from 101 including those in a replaced clause or subclause;
- additional annexes are lettered AA, BB, etc.

A list of all parts of the IEC 61326 series, under the general title *Electrical equipment for measurement, control and laboratory use – EMC requirements*, can be found on the IEC website.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under "<http://webstore.iec.ch>" in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

# **ELECTRICAL EQUIPMENT FOR MEASUREMENT, CONTROL AND LABORATORY USE – EMC REQUIREMENTS –**

## **Part 2-3: Particular requirements – Test configuration, operational conditions and performance criteria for transducers with integrated or remote signal conditioning**

### **1 Scope**

In addition to the requirements of IEC 61326-1, this part of IEC 61326 specifies more detailed test configurations, operational conditions and performance criteria for transducers with integrated or remote signal conditioning.

This document applies only to transducers characterized by their ability to transform, with the aid of an auxiliary energy source, a non-electric quantity to a process-relevant electrical signal, and to output the signal at one or more PORTS. This document includes transducers for electro-chemical and biological measured quantities.

The transducers covered by this document can be powered by AC or DC voltage and/or by battery or with internal power supply.

Transducers referred to by this document comprise at least the following items (see Figure 101 and Figure 102):

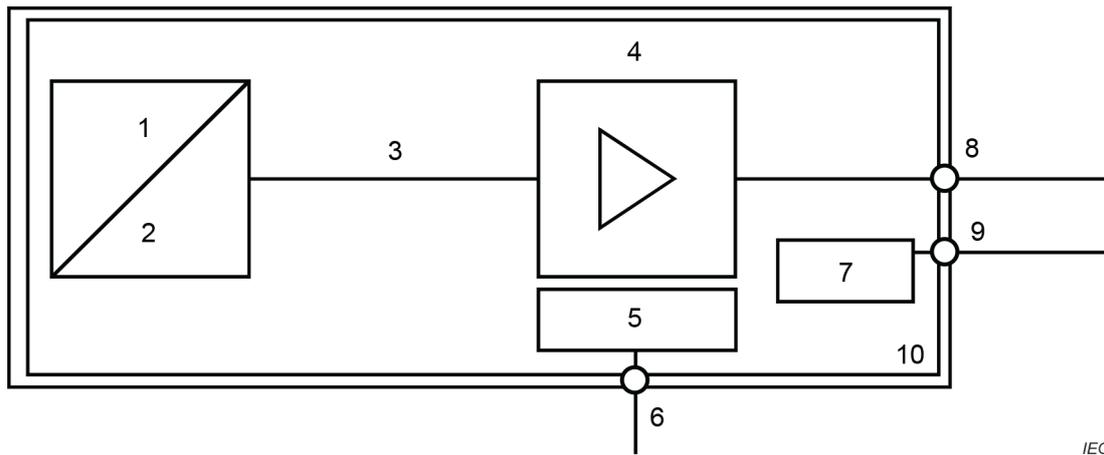
- one or more elements for transforming a non-electrical input quantity to an electrical quantity;
- a TRANSMISSION LINK for transferral of the electrical quantity to a component for signal conditioning;
- a unit for signal conditioning that converts the electrical quantity to a process-relevant electrical signal;
- an enclosure for enclosing the above-stated components fully or in parts.

Transducers referred to by this document can also have the following items (see Figure 101 and Figure 102):

- a communication and control unit;
- a display unit;
- control elements such as keys, buttons, switches, etc.;
- transducer output signals (for example, switch outputs, alarm outputs) which are clearly assigned to the input signal(s);
- transducers with signal conditioning which may be integrated or remote.

The manufacturer specifies the environment for which the product is intended to be used and utilizes the corresponding test levels of IEC 61326-1.

Additional requirements and exceptions for specific types of transducers are given in Annex AA, Annex BB and Annex CC to this document.

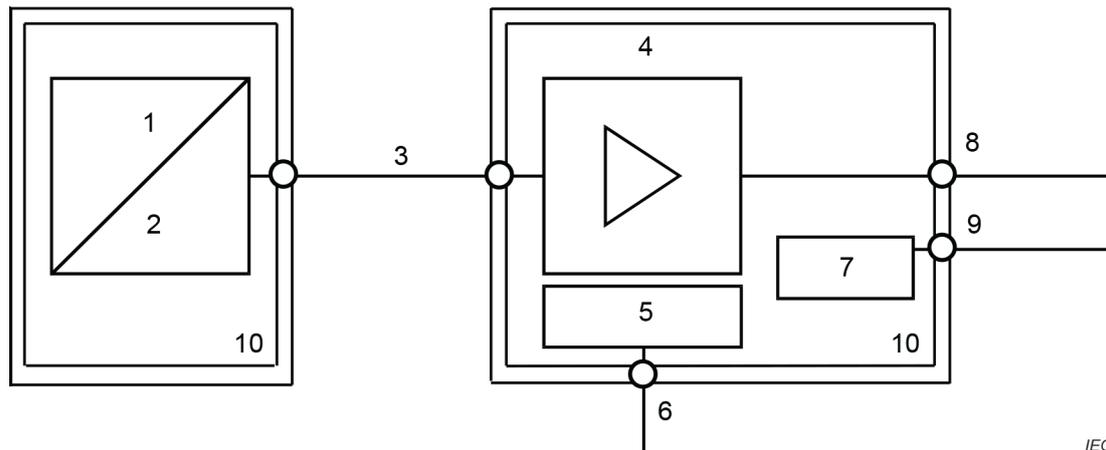


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**Key**

- 1 non-electrical quantity
- 2 electrical quantity
- 3 TRANSMISSION LINK
- 4 signal conditioning
- 5 communication and control unit
- 6 input/output PORTS
- 7 power supply
- 8 signal PORT
- 9 AC/DC POWER PORT
- 10 enclosure

**Figure 101 – Example of a TRANSDUCER WITH INTEGRATED SIGNAL CONDITIONING**



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### Key

- 1 non-electrical quantity
- 2 electrical quantity
- 3 TRANSMISSION LINK
- 4 signal conditioning
- 5 communication and control unit
- 6 input/output PORTS
- 7 power supply
- 8 signal PORT
- 9 AC/DC POWER PORT
- 10 enclosure

**Figure 102 – Example of a TRANSDUCER WITH REMOTE SIGNAL CONDITIONING**

## 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.

Clause 2 of IEC 61326-1:2020 applies, except as follows:

*Addition:*

IEC 61326-1:2020, *Electrical equipment for measurement, control and laboratory use – EMC requirements – Part 1: General requirements*