

INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Electrical equipment for measurement, control and laboratory use –
EMC requirements –**

**Part 2-5: Particular requirements – Test configurations, operational conditions
and performance criteria for field devices with field bus interfaces according to
IEC 61784-1**

**Matériel électrique de mesure, de commande et de laboratoire –
Exigences relatives à la CEM –**

**Partie 2-5: Exigences particulières – Configurations d'essai, conditions de
fonctionnement et critères de performance pour les équipements de terrain avec
des interfaces utilisant des bus de terrain conformes à l'IEC 61784-1**



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INTERNATIONAL
ELECTROTECHNICAL
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COMMISSION
ELECTROTECHNIQUE
INTERNATIONALE

ICS 17.220.20; 25.040.40; 33.100.20

ISBN 978-2-8322-8952-5

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**ELECTRICAL EQUIPMENT FOR MEASUREMENT,
CONTROL AND LABORATORY USE –
EMC REQUIREMENTS –****Part 2-5: Particular requirements –
Test configurations, operational conditions and performance criteria
for field devices with field bus interfaces according to IEC 61784-1**

FOREWORD

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International Standard IEC 61326-2-5 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 change with respect to the previous edition:

- update with respect to IEC 61326-1:2020.

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

FDIS	Report on voting
65A/978/FDIS	65A/989/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.

This part of 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 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 2-5: Particular requirements – Test configurations, operational conditions and performance criteria for field devices with field bus interfaces according to IEC 61784-1

1 Scope

In addition to the requirements of IEC 61326-1, this part of IEC 61326 treats the particular features for EMC testing of field devices with field bus interfaces. This part of IEC 61326 covers only the field bus interface of the equipment.

NOTE The other functions of the equipment remain covered by other parts of IEC 61326 series.

This part refers only to field devices intended for use in process control and process measuring.

In this document, field devices with interfaces according to IEC 61784-1:2019, CP 3/2 and CP 1/1 as defined in IEC 61784 are covered. Other field bus interfaces may be included in future editions of this document.

IEC 61784-1:2019 specifies a set of protocol specific communication profiles based on IEC 61158.

The manufacturer specifies the environment for which the product is intended to be used and/or selects the appropriate test level specifications of IEC 61326-1.

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 61158-2:2014, *Industrial communication networks – Fieldbus specifications – Part 2: Physical layer specification and service definition*

IEC 61158-3-3:2014, *Industrial communication networks – Fieldbus specifications – Part 3-3: Data-link layer service definition – Type 3 elements*

IEC 61158-5-5:2014, *Industrial communication networks – Fieldbus specifications – Part 5-5: Application layer service definition – Type 5 elements*

IEC 61158-6-10:2019, *Industrial communication networks – Fieldbus specifications – Part 6-10: Application layer protocol specification – Type 10 elements*

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

IEC 61784-1:2019, *Industrial communication networks – Profiles – Part 1: Fieldbus profiles*

3 Terms and definitions

Clause 3 of IEC 61326-1:2020 applies.

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

Clause 4 of IEC 61326-1:2020 applies.

5 EMC test plan

5.1 General

Subclause 5.1 of IEC 61326-1:2020 applies.

5.2 Configuration of EUT during testing

Subclause 5.2 of IEC 61326-1:2020 applies, except as follows:

Addition:

Additional requirements: see Annex AA and Annex BB.

5.3 Operation conditions of EUT during testing

Subclause 5.3 of IEC 61326-1:2020 applies, except as follows:

Addition:

Additional requirements: see Annex AA and Annex BB.

5.4 Specification of FUNCTIONAL PERFORMANCE

Subclause 5.4 of IEC 61326-1:2020 applies.

5.5 Test description

Subclause 5.5 of IEC 61326-1:2020 applies.

6 Immunity requirements

6.1 Conditions during the tests

Subclause 6.1 of IEC 61326-1:2020 applies.