
**Radiofrequency identification of
animals —**

**Part 4:
Evaluation of performance of RFID
transceivers conforming with ISO
11784 and ISO 11785**

Identification des animaux par radiofréquence —

*Partie 4: Évaluation de la performance des émetteurs-récepteurs
RFID conformes à l'ISO 11784 et à l'ISO 11785*



This document is a preview generated by ERS



COPYRIGHT PROTECTED DOCUMENT

© ISO 2017, Published in Switzerland

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Ch. de Blandonnet 8 • CP 401
CH-1214 Vernier, Geneva, Switzerland
Tel. +41 22 749 01 11
Fax +41 22 749 09 47
copyright@iso.org
www.iso.org

Contents

	Page
Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Conformance	3
5 Abbreviated terms	3
6 Application	4
7 Test procedures	5
7.1 Test apparatus.....	5
7.2 Test conditions.....	5
7.3 Measurement of reading distance diagram.....	5
7.3.1 Purpose.....	5
7.3.2 Transponder orientation.....	5
7.3.3 Test geometry.....	6
7.3.4 Procedure.....	7
7.4 Measurement of transceiver response time.....	7
7.4.1 Purpose.....	7
7.4.2 Test geometry.....	8
7.4.3 Procedure.....	8
Annex A (normative) Test application form (ISO 24631-4)	9
Annex B (normative) Transponder emulation circuit (TEC) design specifications (ISO 24631-4)	10
Annex C (informative) Example of distance diagram (ISO 24631-4)	14
Bibliography	15

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see the following URL: www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 23, *Tractors and machinery for agriculture and forestry*, Subcommittee SC 19, *Agricultural electronics*.

This second edition cancels and replaces the first edition (ISO 24631-4:2009), which has been technically revised.

The main change to the previous edition is as follows:

— [Figure C.1](#) has been updated.

A list of all parts in the ISO series can be found on the ISO website.

Introduction

ISO has appointed a registration authority (RA) competent to register manufacturer codes used in the radiofrequency identification (RFID) of animals in accordance with ISO 11784 and ISO 11785.

The registration authority for ISO 11784 and ISO 11785 can found under:

http://www.iso.org/iso/home/standards_development/list_of_iso_technical_committees/maintenance_agencies.htm

This document deals with the performance of RFID transceivers. Measurements are made using transponder emulation circuits, ensuring that the transceiver testing is always performed against the same, known stimuli.

Radiofrequency identification of animals —

Part 4:

Evaluation of performance of RFID transceivers conforming with ISO 11784 and ISO 11785

1 Scope

This document provides the means of evaluating the performance of ISO 11784- and ISO 11785-conformant RFID (radiofrequency identification) transceivers used in the individual identification of animals.

The test procedures specified in this document are recognized by the Federation of European Companion Animals Veterinary Association (FECAVA) and World Small Animal Veterinarian Association (WSAVA) and, as such, can be applied also to companion animals.

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.

ISO 3166-1, *Codes for the representation of names of countries and their subdivisions — Part 1: Country codes*

ISO 11784, *Radio frequency identification of animals — Code structure*

ISO 11785:1996, *Radio frequency identification of animals — Technical concept*

ISO 24631-2, *Radiofrequency identification of animals — Part 2: Evaluation of conformance of RFID transceivers with ISO 11784 and ISO 11785*

ISO 24631-5, *Radio frequency identification of animals — Part 5: Procedure for testing the capability of RFID transceivers of reading ISO 11784 and ISO 11785 transponders*

3 Terms and definitions

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

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>

3.1

accreditation

third-party attestation related to a conformity assessment body conveying formal demonstration of its competence to carry out specific conformity assessment tasks

[SOURCE: ISO/IEC 17000]