



BSI Standards Publication

Radio frequency identification of animals

Part 5: Procedure for testing the capability
of RFID transceivers of reading ISO 11784
and ISO 11785 transponders

National foreword

This British Standard is the UK implementation of ISO 24631-5:2014.

The UK participation in its preparation was entrusted to Technical Committee AGE/6/1, Radio Frequency ID for Animals.

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

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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Radio frequency identification of animals —

Part 5: Procedure for testing the capability of RFID transceivers of reading ISO 11784 and ISO 11785 transponders

Identification des animaux par radiofréquence —

*Partie 5: Procédure pour vérifier les capacités des émetteurs-récepteurs
à lire des transpondeurs RFID conformes à l'ISO 11784 et à l'ISO 11785*



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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 (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 (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 meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: [Foreword – Supplementary information](#).

The committee responsible for this document is ISO/TC 23, *Tractors and machinery for agriculture and forestry*, Subcommittee SC 19, *Agricultural electronics*.

ISO 24631 consists of the following parts, under the general title *Radio frequency identification of animals*:

- *Part 1: Evaluation of conformance of RFID transponders with ISO 11784 and ISO 11785 (including granting and use of a manufacturer code)*
- *Part 2: Evaluation of conformance of RFID transceivers with ISO 11784 and ISO 11785*
- *Part 3: Evaluation of performance of RFID transponders conforming with ISO 11784 and ISO 11785*
- *Part 4: Evaluation of performance of RFID transceivers conforming with ISO 11784 and ISO 11785*
- *Part 5: Procedure for testing the capability of RFID transceivers of reading ISO 11784 and ISO 11785 transponders*
- *Part 6: Representation of animal identification information (visual display/data transfer)*
- *Part 7: Synchronization of ISO 11785 identification systems*

Introduction

ISO has appointed ICAR (International Committee for Animal Recording) as the registration authority (RA) competent to register manufacturer codes used in the radio frequency identification (RFID) of animals in accordance with ISO 11784 and ISO 11785.

ISO 24631 defines means, based upon ICAR test procedures^[1], for evaluating and verifying both the conformance and performance of RFID devices in respect of ISO 11784 and ISO 11785. Only those results emanating from RA-approved test centres are recognized.

This part of ISO 24631 deals with the capability of RFID transceivers of reading ISO 11784 and ISO 11785 transponders.

Radio frequency identification of animals —

Part 5:

Procedure for testing the capability of RFID transceivers of reading ISO 11784 and ISO 11785 transponders

1 Scope

This part of ISO 24631 specifies rules and procedures for verifying the capability of RFID transceivers of reading transponders used in individual animal identification complying to ISO 11784 and ISO 11785. In addition, this part of ISO 24631 specifies how to apply for an approval and the rights and duties to use this approval. This part of ISO 24631 does not set out the procedures for evaluating wireless synchronised mobile transceivers and also this document contains no provision for evaluating wired synchronisation of stationary transceivers.

This test differs from ISO 24631-2, which is intended for testing transceivers with all mandatory features described in ISO 11784 and ISO 11785. The test described here is intended for cost-effective non-synchronising transceivers that are capable of reading transponders complying to ISO 11784 and ISO 11785 but have no synchronisation capability and does not have to support the dual adaptive protocol. Furthermore, the activation field frequency accuracy is more relaxed.

2 Conformance

The procedures of this part of ISO 24631 include the options of RA approval and registration of transceiver equipment. The procedures of this part of ISO 24631 shall be followed if a company wants RA approval and registration of a transceiver.

The test procedures given in [Clause 7](#) of this part of ISO 24631 specify the procedure how to verify RFID-transceivers' capability of reading transponders complying to ISO 11784 and ISO 11785. RA-approved test centres carry out transceiver tests in conformance with these procedures and report the results to the RA. A transceiver test approval is granted to a company whose transceiver product has passed the tests mentioned in [Clause 7](#). Approved transceiver products receive an approval reference number. To apply for an approval reference number, an application form ([Annex A](#)) shall be completed, signed, and submitted to the RA. In order to standardize the use of the test approval, the conditions for the right of using this approval are given in [Annex B](#).

3 Normative reference

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. 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 11784:1996, *Radio frequency identification of animals — Code structure*

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

ISO 24631-1:2009, *Radiofrequency identification of animals — Part 1: Evaluation of conformance of RFID transponders with ISO 11784 and ISO 11785 (including granting and use of a manufacturer code)*