
**Information technology — Radio
frequency identification device
conformance test methods —**

**Part 6:
Test methods for air interface
communications at 860 MHz to 960
MHz**

*Technologies de l'information — Méthodes d'essai de conformité du
dispositif d'identification de radiofréquence —*

*Partie 6: Méthodes d'essai pour des communications d'une interface
d'air à 860 MHz et jusqu'à 960 MHz*





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Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work. In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1.

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 document 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 and IEC 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/IEC JTC 1, *Information technology*, Subcommittee SC 31, *Automatic identification and data capture techniques*.

This second edition cancels and replaces the first edition (ISO/IEC 18047-6:2012), which has been technically revised.

The main changes compared to the previous edition are as follows:

- Tag demodulation test setup now includes a monostatic setup with the use of a circulator;
- new tests for Tag link timings T5, T6 and T7 (defined in ISO/IEC 18000-63:2015 and related to delayed and in-process tag reply); and
- new tests related to ISO/IEC 18000-63:2015 like Tag memory overruns, Kill command, unauthorized write commands and optional commands that involve C-flag, ResponseBuffer, security features and untraceability.

Introduction

ISO/IEC 18000 series defines the air interfaces for radio frequency identification (RFID) devices used in item management applications. ISO/IEC 18000-61, ISO/IEC 18000-62, ISO/IEC 18000-63 and ISO/IEC 18000-64 define the air interface for these devices operating at frequencies from 860 MHz to 960 MHz.

ISO/IEC 18047 series provides test methods for conformance with the various parts of the ISO/IEC 18000 series.

Each part of ISO/IEC 18047 contains all measurements required to be made on a product in order to establish whether it conforms to the corresponding part of ISO/IEC 18000. For this document, each interrogator and each tag needs to support at least one of the types A or B or C or D.

NOTE Test methods for interrogator and tag performance are covered by ISO/IEC 18046 series.

[Clause 5](#) describes all necessary conformance tests for ISO/IEC 18000-61.

[Clause 6](#) describes all necessary conformance tests for ISO/IEC 18000-62.

[Clause 7](#) describes all necessary conformance tests for ISO/IEC 18000-63.

[Clause 8](#) describes all necessary conformance tests for ISO/IEC 18000-64.

[Clause 9](#) describes all necessary conformance tests for ISO/IEC 18000-63:2015, Clause 7.

[Clause 10](#) describes all necessary conformance tests for ISO/IEC 18000-63:2015, 7.5.

Information technology — Radio frequency identification device conformance test methods —

Part 6:

Test methods for air interface communications at 860 MHz to 960 MHz

1 Scope

This document defines test methods for determining the conformance of radio frequency identification (RFID) devices (tags and interrogators) for item management with the specifications given in ISO/IEC 18000-61, ISO/IEC 18000-62, ISO/IEC 18000-63 and ISO/IEC 18000-64, but does not apply to the testing of conformity with regulatory or similar requirements.

The test methods require only that the mandatory functions, and any optional functions which are implemented, are verified. This can, in appropriate circumstances, be supplemented by further, application-specific functionality criteria that are not available in the general case.

The interrogator and tag conformance parameters in this document are the following:

- type-specific conformance parameters including nominal values and tolerances;
- parameters that apply directly affecting system functionality and inter-operability.

Parameters that are already included in regulatory test requirements are not included in this document.

Unless otherwise specified, the tests in this document are intended to be applied exclusively to RFID tags and interrogators defined in ISO/IEC 18000-61, ISO/IEC 18000-62, ISO/IEC 18000-63 and ISO/IEC 18000-64.

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/IEC 18000-61:2012, *Information technology — Radio frequency identification for item management — Part 61: Parameters for air interface communications at 860 MHz to 960 MHz Type A*

ISO/IEC 18000-62:2012, *Information technology — Radio frequency identification for item management — Part 62: Parameters for air interface communications at 860 MHz to 960 MHz Type B*

ISO/IEC 18000-63:2015, *Information technology — Radio frequency identification for item management — Part 63: Parameters for air interface communications at 860 MHz to 960 MHz Type C*

ISO/IEC 18000-64, *Information technology — Radio frequency identification for item management — Part 64: Parameters for air interface communications at 860 MHz to 960 MHz Type D*

ISO/IEC 19762, *Information technology — Automatic identification and data capture (AIDC) techniques — Harmonized vocabulary*