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Information technology — Radio frequency identification for item management —

Part 63: Parameters for air interface communications at 860 MHz to 960 MHz Type C

Technologies de l'information — Identification par radiofréquence (RFID) pour la gestion d'objets —

Partie 63: Paramètres de communications d'une interface radio entre 860 MHz et 960 MHz, Type C

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Foreword

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This third edition cancels and replaces the second edition (ISO/IEC 18000-63:2015), which has been technically revised.

The main changes are as follows:

— incorporation of the Technical Corrigendum;

— incorporation of a new sensor class for snapshot sensors.

A list of all parts in the ISO/IEC 18000 series can be found on the ISO and IEC websites.

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Introduction

This document defines the physical and logical requirements for a passive-backscatter, Interrogator-talks-first (ITF), radio-frequency identification (RFID) system operating in the 860 MHz to 960 MHz frequency range. The system comprises Interrogators, also known as Readers, and Tags, also known as Labels or Transponders.

An Interrogator transmits information to a Tag by modulating an RF signal in the 860 MHz to 960 MHz frequency range. The Tag receives both information and operating energy from this RF signal. Tags are passive, meaning that they receive all of their operating energy from the Interrogator's RF signal.

An Interrogator receives information from a Tag by transmitting a continuous-wave (CW) RF signal to the Tag; the Tag responds by modulating the reflection coefficient of its antenna, thereby backscattering an information signal to the Interrogator. The system is ITF, meaning that a Tag modulates its antenna reflection coefficient with an information signal only after being directed to do so by an Interrogator.

Interrogators and Tags are not required to talk simultaneously; rather, communications are half-duplex, i.e. Interrogators talk and Tags listen, or vice versa.

The described backscatter radio frequency identification (RFID) system that supports the following system capabilities:

— identification and communication with multiple tags in the field;

— selection of a subgroup of tags for identification or with which to communicate;

— reading from and writing to or rewriting data many times to individual tags;

— user-controlled permanently lockable memory;

— data integrity protection;

— Interrogator-to-tag communications link with error detection;

— tag-to-Interrogator communications link with error detection;

— support for both passive back-scatter tags with or without batteries.

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