INTERNATIONAL STANDARD

**ISO 21384-3**

Second edition
2023-10

# Unmanned aircraft systems —

## Part 3: Operational procedures

*Aéronefs sans pilote —*

*Partie 3: Modes opératoires*



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# Contents

Page

# Foreword

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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 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).

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This document was prepared by Technical Committee ISO/TC 20, *Aircraft and space vehicles*, Subcommittee SC 16, *Unmanned aircraft systems*.

This second edition cancels and replaces the first edition (ISO 21384-3:2019), which has been technically revised.

The main changes are as follows:

— Clause 2: addition of normative references;

— Clause 3: addition of several terms and definitions;

— 5.1: addition of applicable management systems and equipment requirements;

— 5.2: major restructuring of the subclause, addition of requirements for operators under different preconditions and specified tasks for different personnel to be conducted;

— 9.1: designation of a remote pilot in control added;

— 9.4: addition of requirements for handovers of functions and responsibilities, precautions for the operation of multiple UA by one remote pilot, communication and airborne functions for UTM;

— 9.5: addition of new subclauses on organizational, operational and technical requirements for external service regarding UTM and C2CSP;

— Clause 11: new clause on conflict management including operational charts and descriptions.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

# Introduction

This document outlines requirements for unmanned aircraft (UA) operational procedures which, when applied together with any other current and future standard on unmanned aircraft systems (UAS), form a robust UA safety and quality standard. This document applies to all commercial UAS regardless of size, categorization, application or location and represents the international best practice for the safe operation of all commercial UAS. This document is structured in a way to provide a logical pathway from core principles to specific requirements.

# Unmanned aircraft systems —

# Part 3:
# Operational procedures

## 1 Scope

This document specifies the requirements for safe commercial unmanned aircraft system (UAS) operations, including the external safety-critical service providing command and control (C2) link.

## 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 12100, *Safety of machinery — General principles for design — Risk assessment and risk reduction*

ISO 21384-4, *Unmanned aircraft systems — Part 4: Vocabulary*

ISO 23629-12:2022, *UAS traffic management (UTM) — Part 12: Requirements for UTM service providers*

ISO 23665, *Unmanned aircraft systems — Training for personnel involved in UAS operations*

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 21384-4 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

**3.1**
**C2 Link communications service provider**
**C2CSP**
entity which provides a portion of or all of the *C2 Link* (3.4) service for operation of an UAS

Note 1 to entry: The definition is adapted from Reference [16].

**3.2**
**designated operational coverage**
**DOC**
volume where the C2 Link *QoSD* (3.9) meets the *C2 Link* (3.4) specified performances and supports the corresponding intended UAS operations

Note 1 to entry: The definition is adapted from Reference [16].

**3.3**
**collision avoidance**
third layer of conflict management which activates when the separation mode has been compromised

Note 1 to entry: The definition is adapted from Reference [17].