
**Hydrometry — Hydrometric data
transmission systems — Specification of
system requirements**

*Hydrométrie — Systèmes de transmission des données
hydrométriques — Spécification des exigences des systèmes*



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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.

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The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

In other circumstances, particularly when there is an urgent market requirement for such documents, a technical committee may decide to publish other types of normative document:

- an ISO Publicly Available Specification (ISO/PAS) represents an agreement between technical experts in an ISO working group and is accepted for publication if it is approved by more than 50 % of the members of the parent committee casting a vote;
- an ISO Technical Specification (ISO/TS) represents an agreement between the members of a technical committee and is accepted for publication if it is approved by 2/3 of the members of the committee casting a vote.

An ISO/PAS or ISO/TS is reviewed after three years in order to decide whether it will be confirmed for a further three years, revised to become an International Standard, or withdrawn. If the ISO/PAS or ISO/TS is confirmed, it is reviewed again after a further three years, at which time it must either be transformed into an International Standard or be withdrawn.

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.

ISO/TS 24155 was prepared by Technical Committee ISO/TC 113, *Hydrometry*, Subcommittee SC 5, *Instruments, equipment and data management*.

Introduction

Hydrometric data transmission systems provide data for the day-to-day management of water resources and for warning and forecasting of floods, droughts and conditions affecting water quality and public health. The systems transmit data measured at remote telemetry stations to a receiving center for further processing.

This Technical Specification defines and standardizes the required specifications of hydrometric data transmission systems. It does not describe the specifications of the equipment and units constituting hydrometric data transmission systems, but does describe the functional performance that the hydrometric data transmission systems should provide.

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Hydrometry — Hydrometric data transmission systems — Specification of system requirements

1 Scope

This Technical Specification specifies the technical requirements that should be considered in designing and operating hydrometric data transmission systems and the necessary functions of those systems.

2 Normative references

The following referenced documents are indispensable for the application 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 772:1996, *Hydrometric determinations — Vocabulary and symbols*

ISO 1000:1992, *SI units and recommendations for the use of their multiples and of certain other units*

ISO/IEC 2382-1:1993, *Information technology — Vocabulary — Part 1: Fundamental terms*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 772 and ISO/IEC 2382-1 apply.

4 Basic requirements

4.1 General

This clause specifies the general requirements for designing a hydrometric data transmission system (HDTS).

An HDTS shall be designed to meet the basic requirements, defined hereinafter, taking into consideration functionality, geographical structures, time structures, installation conditions, reliability, safety, maintainability and economy. The final system specifications should be determined through the process of repetitive discussions among technological specialists in hydrological and telecommunications fields.

The conceptual configuration of an HDTS is shown in Annex A.

4.2 Objectives of use

An HDTS shall be designed with a full understanding of the necessity and importance of hydrometric services for appropriate water management in river basins in which this system is to be used.