
Hydrometry — Water level measuring devices

Hydrométrie — Appareils de mesure du niveau de l'eau



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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

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.

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 4373 was prepared by Technical Committee ISO/TC 113, *Hydrometry*, Subcommittee SC 5, *Instruments, equipment and data management*.

This third edition cancels and replaces the second edition (ISO 4373:1995), which has been technically revised.

Hydrometry — Water level measuring devices

1 Scope

This International Standard specifies the functional requirements of instrumentation for measuring the level of water surface (stage), primarily for the purpose of determining flow rates. This International Standard is supplemented by an annex providing guidance on the types of water level measurement devices currently available and the measurement uncertainty associated with them (see Annex A).

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, *Hydrometry — Vocabulary and symbols*

IEC 60529, *Degrees of protection provided by enclosures (IP Code)*

IEC 60079-10, *Electrical apparatus for explosive gas atmospheres — Part 10: Classification of hazardous areas*

3 Terms and definitions

For the purpose of this document, the terms and definitions given in ISO 772 apply.

4 Instrument specification

4.1 Performance classifications

The parameters of performance of a water level measuring device shall be described by the classification categories of uncertainty, temperature range and relative humidity so that the overall performance of the equipment may be summarized in three digits.

4.2 General

Water level measuring devices shall be classified in accordance with the performance classes given in Table 1 that account for the resolution to be achieved and the limits of uncertainty required over specified ranges.

It should be made clear whether these levels of attainment can only be achieved by the use of special works, for example installation within stilling wells. It is also important to remember that in the measurement of stage, uncertainty expressed as a percentage of range gives rise to worst case uncertainty in the determination of stage at low values of stage. This is highly significant for the measurement of low flows and should be taken into account in the design of equipment for this purpose.