

ISO/TC 172 SC6 Survey Instrument Standards

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SUMMARY

ISO/TC 172 SC6 provides a comprehensive coverage of standards related to surveying instruments and their accessories including: handheld laser distance meters, levels, theodolites, EDM measurements to reflectors, total stations, GNSS field measurement systems in real-time kinematic (RTK), terrestrial laser scanners etc...

Standards and/or project under the direct responsibility of ISO/TC 172/SC 6 Secretariat (17)

ISO 12858 Series Ancillary devices for geodetic instruments

- ISO 12858-1:2014 Part 1: Invar levelling staffs
- ISO 12858-2:1999/Amd 1:2013 Part 2: Tripods
- ISO 12858-3:2005 Part 3: Tribrachs

ISO 16331 Series Laboratory procedures for testing surveying and construction instruments

- ISO 16331-1:2017 Part 1: Performance of handheld laser distance meters

- ISO 16331-2 Part 2: Terrestrial laser scanner [Under development]

ISO 17123 Field procedures for testing geodetic and surveying instruments

- ISO 17123-1:2014 Part 1:

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Theory

- ISO 17123-2:2001 Part 2: Levels
- ISO 17123-3:2001 Part 3: Theodolites
- ISO 17123-4:2012 Part 4: Electro-optical distance meters (EDM measurements to reflectors)
- ISO 17123-5:2018 Part 5: Total stations
- ISO 17123-6:2012 Part 6: Rotating lasers
- ISO 17123-7:2005 Part 7: Optical plumbing instruments
- ISO 17123-8:2015 Part 8: GNSS field measurement systems in real-time kinematic (RTK)
- ISO 17123-9:2018 Part 9: Terrestrial laser scanners

ISO 9849 Series Geodetic and surveying instruments

- ISO 9849:2017 Vocabulary

There are 13 participating and 10 observing members of ISO/TC 172 SC6

Important work on the terrestrial laser scanning standard

The new standard ISO 17123-9 was published (12/2018) - Optics and optical instruments -- Field procedures for testing geodetic and surveying instruments -- Part 9: Terrestrial laser scanners.

The first feedback concerning the usability and practical experience seems very promising.

Depending on the feedback from different organizations, a small revision may be planned in the near future.

The working group for ISO/NP 16331-2 Optics and optical instruments -- Laboratory procedures for testing surveying and construction instruments -- Part 2: Terrestrial laser scanner

The working group is established to work on a laboratory standard for terrestrial laser scanning.

Currently, working drafts are discussed, but because of the advanced procedures, a final publication

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will still take a few years.

Distance and angle measurements:

The ISO 17123-5:2018 is published: - Optics and optical instruments -- Field procedures for testing geodetic and surveying instruments -- Part 5: Total stations. The general procedure is the same, but some formulas are updated and some layout issues are improved.

Other important work

The new Standard ISO 9849 is published – Optics and optical instruments -- Geodetic and surveying instruments – Vocabulary

This standard is maybe important for FIG because it summarizes the vocabulary used in the field of geodetic and surveying sensors. This standard shall be extended to include terms in the area of multi-sensor-systems in the future.

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