PD CEN/TS 15518-4:2023

BSI Standards Publication

Winter maintenance equipment – Road weather information systems

Part 4: Test methods for stationary equipment

bsi.

National foreword

This Published Document is the UK implementation of CEN/TS 15518-4:2023. It supersedes PD CEN/TS 15518-4:2013, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee B/513, Construction equipment and plant and site safety.

A list of organizations represented on this committee can be obtained on request to its committee manager.

Contractual and legal considerations

This publication has been prepared in good faith, however no representation, warranty, assurance or undertaking (express or implied) is or will be made, and no responsibility or liability is or will be accepted by BSI in relation to the adequacy, accuracy, completeness or reasonableness of this publication. All and any such responsibility and liability is expressly disclaimed to the full extent permitted by the law.

This publication is provided as is, and is to be used at the recipient's own risk.

The recipient is advised to consider seeking professional guidance with respect to its use of this publication.

This publication is not intended to constitute a contract. Users are responsible for its correct application.

This publication is not to be regarded as a British Standard.

Published by BSI Standards Limited 2023

ISBN 978 0 539 19313 8

ICS 07.040; 13.030.40; 35.240.99

Compliance with a Published Document cannot confer immunity from legal obligations.

This Published Document was published under the authority of the Standards Policy and Strategy Committee on 30 November 2023.

Amendments/corrigenda issued since publication

Date	Text affected

TECHNICAL SPECIFICATION

SPÉCIFICATION TECHNIQUE

TECHNISCHE SPEZIFIKATION

CEN/TS 15518-4

November 2023

ICS 07.060; 13.030.40; 35.240.99

Supersedes CEN/TS 15518-4:2013

English Version

Winter maintenance equipment - Road weather information systems - Part 4: Test methods for stationary equipment

Matériel de viabilité hivernale - Systèmes d'information météorologique routière - Partie 4 : Méthodes d'essai pour les matériels fixes

Winterdienstausrüstung - Straßenzustands- und Wetterinformationssysteme - Teil 4: Prüfverfahren bei stationären Einrichtungen

This Technical Specification (CEN/TS) was approved by CEN on 15 October 2023 for provisional application.

The period of validity of this CEN/TS is limited initially to three years. After two years the members of CEN will be requested to submit their comments, particularly on the question whether the CEN/TS can be converted into a European Standard.

CEN members are required to announce the existence of this CEN/TS in the same way as for an EN and to make the CEN/TS available promptly at national level in an appropriate form. It is permissible to keep conflicting national standards in force (in parallel to the CEN/TS) until the final decision about the possible conversion of the CEN/TS into an EN is reached.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and United Kingdom.

EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Ref. No. CEN/TS 15518-4:2023 E

Contents

Page

European foreword

This document (CEN/TS 15518-4:2023) has been prepared by Technical Committee CEN/TC 337 “Road operation equipment and products”, the secretariat of which is held by AFNOR.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes CEN/TS 15518-4:2013.

CEN/TS 15518-4:2023 includes the following significant technical changes with respect to CEN/TS 15518-4:2013:

— revised general specifications;

— revised or added test specifications for embedded sensors:

  — pavement temperature;

  — road body temperature;

  — road surface condition;

  — water film thickness;

  — freezing temperature;

  — amount of de-icing agent;

— added test specifications for remote sensors:

  — surface temperature;

  — water film thickness and surface condition;

  — frost detection;

  — ice film thickness and road condition;

— revised test specifications for atmospheric sensors:

  — air temperature;

  — relative humidity;

  — dew point temperature;

  — wind speed;

  — wind direction;

  — precipitation intensity;

  — visibility;

— deleted test specifications for atmospheric sensors:

  — snow depth.

EN 15518, *Winter maintenance equipment — Road weather information systems*, is currently composed of the following parts:

— *Part 1: Global definitions and components*;

— *Part 2: Road weather — Recommended observation and forecast*;

— *Part 3: Requirements on measured values of stationary equipment*;

— *Part 4 (CEN/TS): Test methods for stationary equipment*.

Any feedback and questions on this document should be directed to the users' national standards body. A complete listing of these bodies can be found on the CEN website.

According to the CEN/CENELEC Internal Regulations, the national standards organisations of the following countries are bound to announce this Technical Specification: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

Introduction

Road Weather Information Systems (RWIS) are complex structures used for road maintenance decision support, which feature as a rule the following components: meteorological sensors and instruments, transmission technology, computer systems for processing, representation and storing of information, road weather forecasts, alarms, in relation to traffic control and traffic information systems and more.

This European specification lays down the test procedures to verify the requirements on stationary equipment specified in EN 15518-3.

The aim is to allow for objective and reproducible measurement analysis and evaluation.

1 Scope

This document specifies the test methods, the experimental set-up and result analysis for the laboratory qualification of stationary equipment within a RWIS.

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.

EN 15518-3, *Winter maintenance equipment — Road weather information systems — Part 3: Requirements on measured values of stationary equipment*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 15518-3 apply.

ISO and IEC maintain terminology 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/

4 System and test setup definition

4.1 Introduction

4.1.1 General

The tests described hereafter apply to either a complete system (which can influence the measured value) consisting of sensor, processing electronics and associated terminal program software necessary to acquire, display and store the measurements in a digital form, or some specific parts of the whole system when the inputs can be simulated, as specified by the manufacturer. Figure 1 below is an illustration of the possible functional components of a system.

The manufacturer shall specify and supervise the material set-up for the test set-up.

The manufacturer shall not change the test set-up during the tests. The data shall be readable during the whole test. The whole tests shall stop in case the manufacturer changes the test set-up.

If a single sensor provides measurements subject to more than one test procedure, it shall always be tested against all these procedures within the same test campaign and by the same laboratory. This is also valid for tests after technical changes to a sensor.