ICS 29.280, 45.060.10 SLOVENSKÁ TECHNICKÁ NORMA Apríl 2026

STN	**Dráhové aplikácie Systémy odberu prúdu Požiadavky na merania dynamickej interakcie medzi pantografovým zberačom a vrchným trolejovým vedením a validácia týchto meraní**	**STN EN 50317 36 2313**

Railway applications - Current collection systems - Requirements for and validation of measurements of the dynamic interaction between pantograph and overhead contact line

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 03/26

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English Version

Railway applications - Current collection systems - Requirements for and validation of measurements of the dynamic interaction between pantograph and overhead contact line

Applications ferroviaires - Systèmes de captage de courant - Prescriptions et validation des mesures de l'interaction dynamique entre le pantographe et la caténaire

Bahnanwendungen - Stromabnahmesysteme - Anforderungen und Validierung von Messungen des dynamischen Zusammenwirkens zwischen Stromabnehmer und Oberleitung

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European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

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European foreword

This document (EN 50317:2025) has been prepared by CLC/SC 9XC, “Electric supply and earthing systems for public transport equipment and ancillary apparatus (Fixed installations)”, of CLC/TC 9X, “Electrical and electronic applications for railways”.

The following dates are fixed:

• latest date by which this document has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2026-12-31
• latest date by which the national standards conflicting with this document have to be withdrawn	(dow)	2028-12-31

This document supersedes EN 50317:2012 and all of its amendments and corrigenda (if any).

EN 50317:2025 includes the following significant technical changes with respect to EN 50317:2012:

— changed definitions for “collector head” replaced by “pantograph head” (3.1);

— changed definitions for “total mean uplift force” replaced by “mean cord force” (3.1);

— new definition “expansion length” (3.1);

— changed definitions “arcing” (3.1);

— added definition for “nominal voltage” (3.1);

— new definition “reference threshold”, “measurement threshold” and “reference distance” (3.1);

— updated abbreviation lists (now 3.2);

— minimum conditions recorded for measurements (Clause 4);

— more detailed explanation of measurement of cord forces (Clause 5);

— measurement of contact force (Clause 6);

  — updated requirements for definitions of requirements;

  — aerodynamic influence, Inertia correction force, Aerodynamic correction force;

  — definition of Dynamic laboratory test of the instrumented pantograph;

  — updated requirements for of measurement results, control section possible acceptable exceptions;

— measurement of displacement (Clause 7);

  — uplift at the support how to achieve representative results;

— measurement of times during pantograph lowering (Clause 8);

— measurement of arcing (Clause 9);

— removed wavelength 323 nm – 329 nm;

— reference threshold values from note to normative;

— more detailed definition of control section and possible acceptable exceptions;

— more detailed definition of Adjustment of threshold for the measurement distance.

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

This document has been prepared under a standardization request addressed to CENELEC by the European Commission. The Standing Committee of the EFTA States subsequently approves these requests for its Member States.

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

1 Scope

This document specifies the functional requirements for output and accuracy of measurements of the dynamic interaction between pantograph and overhead contact line.

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 50318:2018,[1] *Railway applications - Current collection systems - Validation of simulation of the dynamic interaction between pantograph and overhead contact line*

EN 50206-1:2010, *Railway applications - Rolling stock - Pantographs: Characteristics and tests - Part 1: Pantographs for main line vehicles*

[1] As impacted by EN 50318:2018/A1:2022.