BS EN 50716:2023

BSI Standards Publication

Railway Applications — Requirements for software development

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National foreword

This British Standard is the UK implementation of EN 50716:2023. It supersedes BS EN 50657:2017+A1:2023 and BS EN 50128:2011+A2:2020, which are withdrawn.

The UK participation in its preparation was entrusted to Technical Committee GEL/9, Railway Electrotechnical Applications.

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

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English Version

Railway Applications - Requirements for software development

Applications ferroviaires - Exigences pour le développement de logiciels

Sektorübergreifende Software-Norm für Eisenbahnen

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European Committee for Electrotechnical Standardization
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European foreword

This document (EN 50716:2023) has been prepared by 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) 2024-10-30
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2026-10-30

This document supersedes EN 50128:2011 and EN 50657:2017 and all of their amendments and corrigenda (if any).

EN 50716:2023 includes the following significant technical changes with respect to EN 50128:2011 and EN 50657:2017:

— Better alignment with EN 50126-1:2017 and EN 50126-2:2017, including definitions, has been made;

— Clause 5: requirements have been re-written to simplify readability (while keeping existing options for organization broadly unchanged);

— Annex A has been updated to have a better alignment with lifecycle phases;

— In informative Annex C, new clause C.1 has been added with additional guidance on lifecycle models;

— In informative Annex C, new clause C.2 has been added with guidance on modelling for software development;

— Additional guidance provided for software components of different software integrity levels;

— Requirements on programming languages have been generalized.

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 is read in conjunction with EN 50126-1 “*Railway applications – The specification and demonstration of Reliability, Availability, Maintainability and Safety (RAMS): Basic requirements and generic process*” [1] and EN 50126-2 “*Railway applications – The specification and demonstration of Reliability, Availability, Maintainability and Safety (RAMS): Systems Approach to Safety*” [2].

For railway related fixed installations (electric traction power control and supply) EN 50562 *“Railway applications - Fixed installations - Process, protective measures and demonstration of safety for electric traction systems*” [20] is applicable.

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.

For the relationship with EU Legislation, see informative Annex ZZ, which is an integral part of this document.

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.