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CENELEC

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

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Foreword

This Technical Specification was prepared by SC 9XB, Electromechanical material on board rolling stock, of Technical Committee CENELEC TC 9X, Electrical and electronic applications for railways.

It was circulated for voting in accordance with the Internal Regulations, Part 2, Subclause 11.3.3.3 and was approved by CENELEC as CLC/TS 50206-3 on 2010-09-27.

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1 Scope

This Technical Specification defines mechanical, pneumatic and electrical interfaces between one single arm pantograph and the roof of mainline rail vehicles. In contrast to EN 50206-1, it is assumed that the insulators are part of the pantograph scope of supply. The air supply of the pantograph to the vehicle roof is in the responsibility of the car manufacturer.

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.

EN 12663-1, Railway applications – Structural requirements of railway vehicle bodies – Part 1: Locomotives and passenger rolling stock (and alternative method for freight wagons)

EN 50206-1:2010, Railway applications – Rolling stock – Pantographs: Characteristics and tests – Part 1: Pantographs for main inevenicles

ISO 8573-1:2010, Compressed air Part 1: Contaminants and purity classes

3 Terms and definitions

Fur the purposes of this document, the following terms and definitions apply.

3.1

target area

proposed plan area in the xy-plane for the location of the electrical and pneumatic interfaces

NOTE The z-dimension of the target area is a function of the insulation coordination.

Tabla 1

4 Coordinate system

The orientation of the x- and y-axes of the coordinate system used in this document is in accordance with those given in EN 12663-1. All x- and y-dimensions are given in reference to the lateral centre of the pantograph's collector head pivot (see item 9 in Table 1 in EX 50206-1:2010) and the longitudinal centre line of the pantograph. Negative sign of x-coordinate is towards the knee of the pantograph.

NOTE The collector head pivot is in many cases in the same cross-sectional area the defines the pantograph's profile. The distance of this section to the adjacent end axle or the nearest bogie pivot (symbol of n EN 15273-1) is an input to the pantograph gauge verification of a vehicle.

5 Interfaces

5.1 Mechanical interface

5.1.1 Position of insulators

The pantograph insulators shall be placed on the vehicle roof at positions given in Table 1. The location in the xy-plane is illustrated in Figure 1 by cyan squares.

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Position	1	2	3	4	5	6			
x coordinate [mm]	0	0	-800	-600	-600	100			
y coordinate [mm]	-475	475	0	-475	475	0			





