



Irish Railway Standard IRS-501-A

Requirements for Vehicle Network Interfaces
for Fixed Installations

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1. Foreword

1.1. This Irish Railway Standard:

- i. cannot replace any Technical Standard for Interoperability (TSI) or other legal requirements which may be applicable to a given project;
- ii. is recommended to be chosen in accordance with RFU-STR-088 as an Alternative Solution in conjunction with a TSI Parameter to demonstrate conformity with the Essential Requirements;
- iii. may be called up as a code of practice in conjunction with CSM-REA 352/2009 and 402/2013;
- iv. may be called up as good industry practice in conjunction with Railway Safety Act 2005;
- v. may be called up as a code of practice in conjunction with the safe integration of projects within the Railway System in the Republic of Ireland as defined under 2008/57/EC Article or 2016/797 (EU) Article 18;
- vi. may in parts or in full be called up as a National Technical Rule (NR) for the Republic of Ireland in conjunction with 2008/57/EC or 2016/797 (EU).

1.2. Where this document is called up as an NR, the reason for its application shall be identified in line with EU 2016/797 Art 13(2):

- i. where the TSIs do not cover, or do not fully cover, certain aspects corresponding to the essential requirements, including open points as referred to in 2016/797 Article 4(6);
- ii. where non-application of one or more TSIs, or parts of them, has been notified under 2016/797 Article 7 or 2008/57/EC Article 9 or Article 20;
- iii. where a specific case requires the application of technical rules not included in the relevant TSI;
- iv. national rules used to specify existing systems, limited to the aim of assessing technical compatibility of the vehicle with the network;
- v. networks and vehicles not covered by TSIs;
- vi. as an urgent temporary preventive measure, in particular following an accident.

2. Scope and Application

2.1. Scope

2.1.1. Requirements for fixed installations.

2.2. General Compliance Date

2.2.1. This Irish Railway Standard comes into force and is to be complied with for all new authorisations from the date of issue.

2.3. NR Provisions

2.3.1. The following table identifies all sections of this IRS which are proposed as Republic of Ireland NRs. The rationale is identified in line with section 1.2.

2.3.2. In each case the assessment of an Irish NR shall be performed by an IE recognised DeBo employing the Modules stated. The assessment Modules are defined in 2010/713/EC. In this regard, the term NoBo (as used in 2010/713/EC) shall be understood to mean DeBo and references to TSIs shall be understood to mean references to Irish NRs.

Table 1 NR Provisions

Section	Rationale (as defined in section 1.2)		Module
6.1	Non-application of TSIs	ii	for fixed installations: SG or SH1
	Technical Compatibility between on-board and trackside equipment	iv	
	Networks/ vehicles not covered by TSIs	v	
6.2 to 6.5	Absence of TSI requirements	i	for fixed installations: SG or SH1
	Non-application of TSIs	ii	
	Technical Compatibility between on-board and trackside equipment	iv	
	Networks/ vehicles not covered by TSIs	v	

3. Normative References

TSI L&P	Commission Regulation (EU) No 1302/2014 of 18 November 2014 concerning a technical specification for interoperability relating to the 'rolling stock — locomotives and passenger rolling stock' subsystem of the rail system in the European Union. Currently this includes the following amendments – (EU) 2016/919; (EU) 2018/868 and (EU) 2019/776 and (EU) 2020/387.
TSI INF	Commission Regulation (EU) No 1299/2014 of 18 November 2014 on the technical specifications for interoperability relating to the 'infrastructure' subsystem of the rail system in the European Union. Currently this includes the following amendment – (EU) 2019/776.
TSI WAG	Commission Regulation (EU) No 321/2013 of 13 March 2013 concerning the technical specification for interoperability relating to the subsystem 'rolling stock — freight wagons' of the rail system in the European Union and repealing Decision 2006/861/EC. Currently this includes the following amendments – (EU) 2015/924 and (EU) 2019/776.
Directive 2016/797/EC	Directive (EU) 2016/797 of the European Parliament and of the Council of 11 May 2016 on the interoperability of the rail system within the European Union (Recast). This shall include any amendments to the document.
Directive 2008/57/EC	Directive 2008/57/EC of the European Parliament and of the Council of 17 June 2008 on the interoperability of the rail system within the Community (Recast). This shall include any amendments to the document.
CSM-RA 402/2013	Commission Implementing Regulation (EU) No 402/2013 of 30 April 2013 on the common safety method for risk evaluation and assessment and repealing Regulation (EC) No 352/2009. This shall include any amendments to the document.
S.I. No. 419 of 2011	Irish Statutory instrument, European Communities (Interoperability of the Rail System) Regulations. This shall include any amendments to the document.

4. Terms and Definitions

IE	Republic of Ireland
Proposer	The proposer is the organisation which proposes a modification. This includes the cases where the modification is mandatory and the proposer merely proposes the detailed concept on how the modification is performed. In certain cases, the proposer may be the applicant for an authorisation or be a supplier to such an applicant.

5. Symbols and Abbreviated Terms

CRR	Commission for Railway Regulation
CSM	Common Safety Method
DeBo	Designated Body
ERA	European Railway Agency
IM	Infrastructure Manager
NoBo	Notified Body
NR	National Technical Rule
RU	Railway Undertaking
TSI	Technical Specification for Interoperability

6. Requirements for Fixed Installations

6.1. Any Parameter relating to Fixed Installations in Case of a Non-application of a TSI or parts of a TSI

6.1.1. *Note: NR where non-application of one or more TSIs or parts of them has been notified under Directive 2016/797/EC Article 7 or Directive 2008/57/EC Article 9 or Article 20.*

6.1.2. In this case the requirements for any relevant parameter shall be established by the proposer in line with Railway Safety Act 2005 (incl. all amendments) related CRR guidance and S.I. No. 419 of 2011 23(2) in case of renewal and upgrade and /or 23(3) in case of derogation and in line with related Guidance prepared by the CRR.

6.1.3. The proposer shall demonstrate the documented systematic establishment of requirements.

6.1.4. The proposer shall demonstrate the documented evidence on compliance with the established requirements.

6.2. Immediate Action Limits for Isolated Defects in Alignments at Fixed Installations where the permitted line speed is above 300km/h

6.2.1. *Note: NR for TSI INF Section 4.2.8.1. (2).*

6.2.2. The safety requirements for the immediate action limits for isolated defects in alignments at fixed installations where the permitted line speed is above 300km/h shall be established between the proposer and any IM on whose network operation is intended and – as far as this(these) organisation(s) is(are) already determined at that time - any RU intending to operate the vehicle.

6.2.3. The proposer shall demonstrate the documented systematic establishment of requirements.

6.2.4. The proposer shall demonstrate the documented evidence on compliance with the established requirements.

6.3. Immediate Action Limits for Longitudinal Level of Track at Fixed Installations where the permitted line speed is above 300km/h

6.3.1. *Note: NR for TSI INF Section 4.2.8.2. (2).*

6.3.2. The safety requirements for the immediate action limits for longitudinal level of track at fixed installations where the permitted line speed is above 300km/h shall be established between the proposer and any IM on whose network operation is intended and – as far as this(these) organisation(s) is(are) already determined at that time - any RU intending to operate the vehicle.

6.3.3. The proposer shall demonstrate the documented systematic establishment of requirements.

6.3.4. The proposer shall demonstrate the documented evidence on compliance with the established requirements.

6.4. Mitigations for Ballast Pick up from Track at Fixed Installations where the permitted line speed is above 250km/h

6.4.1. *Note: NR for TSI INF Section 4.2.10.3. (3).*

6.4.2. The safety requirements for the Mitigations for ballast pick up from track at fixed installations where the permitted line speed is above 250km/h shall be established between the proposer and any IM on whose network operation is intended and – as far as this(these) organisation(s) is(are) already determined at that time - any RU intending to operate the vehicle.

6.4.3. The proposer shall demonstrate the documented systematic establishment of requirements.

6.4.4. The proposer shall demonstrate the documented evidence on compliance with the established requirements.

6.5. Line Category and Associated Speeds at Fixed Installations

6.5.1. *Note: NR for TSI INF Appendix E Table 38+39.*

6.5.2. Where a line is categorised as P1, P2, P3a, P4a, P1520, F1520, the max. axle load shall be at least EN 15528:2008+A1:2012 class D4 and max. permitted speed shall be at least 200 km/h for all types of vehicles for which table 38 (TSI INF) identifies an open point.

6.5.3. Where a line is categorised as P1600, the line shall accommodate an axle load of at least 21t, a load per meter of at least 21t/m and a design line speed of at least 80 km/h.

6.5.4. Where a line is categorised as F1600, the line shall accommodate an axle load of at least 21t, a load per meter of at least 21t/m and a design line speed of at least 80 km/h.

6.5.5. The above values for P1600 and F1600 may in cases of upgrade or renewal be reduced to the pre-existing axle loads, loads per meter and design line speeds.

7. Further Clarification

Further clarification can be sought from the CRR by phone at +353 1 206 8110 or by email info@crr.ie.

8. List of Participants

The participants for each revision of this IRS are shown below in Table 2.

Note: IRS-501-A was extracted from IRS-201-A following a request from ERA to separate the requirements contained in IRS-201-A between those for Vehicles and those for Fixed Installations. The requirements for Vehicles were extracted from IRS-201-A into IRS-403-A.

Table 2 List of Participants by Revision

Participant Name and Organisation		Involved in Issue 201-A	Involved in Issue 501-A	
Aidan O Sullivan	CRR	✓		
Gavin Duffy	IÉ-RU	✓		
Maik Wuttke	CRR	✓	✓	
Mary Molloy	CRR	✓		
Tommy Johnson	IÉ-IM	✓		