



Notified national technical rules (NNTRs)

ID	CH-TSI ENE-001	State	Switzerland	Status:	in force	Since:	July 2016
Title:	Pantograph gauge						
Office responsible:	Federal Office of Transport FOT Approvals and Rules Section				Address:	3003 Bern SWITZERLAND	
E-mail:	BAV-WeiterentwicklungRegelwerke@bav.admin.ch						
Referenced TSI article:	ENE TSI (1301/2014/EU) 4.2.10 Pantograph gauge						
Reference in Swiss regulation:	IP-RailO to art. 18, IP 18.4, sheet 16N and on art. 18/47 Pantograph and overhead contact line space						
Current NNTV classification:	<input type="checkbox"/> NNTR on an 'open point' in the TSI <input checked="" type="checkbox"/> NNTR due to difference between Swiss regulation and corresponding requirements in the TSI <input type="checkbox"/> NNTR due to additional requirements in Swiss regulation without equivalent in the TSI						
Full description:	<p>The pantograph spacing specified in Swiss NTRs RailO S1, RailO S2, RailO S3 differ from the requirements in TSI-ENE.</p> <p>RailO S1: Pantograph head geometry type 1320mm (or type 1'450 mm with insulated end horns)</p> <p>RailO S2: Pantograph head geometry type 1'450 mm (or type 1'600 mm with insulated end horns)</p> <p>RailO S3: Pantograph head geometry type 1'600 mm</p> <p>RailO S4: Pantograph head geometry type 1'950 mm</p>						
Current applicable norms in Switzerland:	The implementing provisions (IP) of the Rail Ordinance (RailO) apply; (Version: 01.07.2016)						
Test specification for certificate of conformity:	<p>Conformity assessment is based on the Swiss legislation referenced above. The mechanical kinematic pantograph gauge (pantograph space) may not be infringed.</p> <p>- Pantograph and overhead contact line space respected according to IP 18.4, Sheet 16N and to IP 18.2/47.2 Sheet 11N for the corresponding pantograph profiles (heads).</p>						

Notified national technical rules (NNTRs)

ID	CH-TSI ENE-002	State	Switzerland	Status:	in force	Since:	July 2016
Title:							
Office responsible:	Federal Office of Transport FOT Approvals and Rules Section			Address:	3003 Bern SWITZERLAND		
E-mail:	BAV-WeiterentwicklungRegelwerke@bav.admin.ch						
Referenced TSI article:	ENE TSI (1301/2014/EU) 4.2.4.2 Mean useful voltage						
Reference in Swiss regulation:	AB-EBV on Art. 44, AB 44c, para. 5.1.4 Design of contact line system						
Current NNTV classification:	<input type="checkbox"/> NNTR on an 'open point' in the TSI <input checked="" type="checkbox"/> NNTR due to difference between Swiss regulation and corresponding requirements in the TSI <input type="checkbox"/> NNTR due to additional requirements in Swiss regulation without equivalent in the TSI						
Full description:	<p>The performance of the railway power supply is to be assessed as follows:</p> <ol style="list-style-type: none"> a. demonstration of mean useful voltage according to ENE TSI; or b. demonstration of mean useful voltage according to SN EN 50388; or c. comparison with a reference case where the power supply solution has been used for a train service with similar or higher power requirements (in the reference case the feeding section lengths and the line impedance must be similar or larger); or d. in simple cases, rough estimation of mean useful voltage, considering additional capacity for future transport demands 						
Current applicable norms in Switzerland:	The implementing provisions (IP) of the Rail Ordinance (RailO) apply; (Version: 01.07.2016).						
Test specification for certificate of conformity:	Conformity assessment is based on the Swiss legislation referenced above. - Mean useful voltage complied with according to IP 44.c, Section 5.1.4						