

S9.4.4 Part 4: Technical Safety Report Section 4

Operation with external influences

Colophon	
Document ID	S9.4.4
Version	1.0
Revision	532323
Author	AVE
Reviewed	532323 ,STMA-78381
Approved	532323 ,STMA-78432
Archive	SID-2160
Date:	2020/06/19 14:04


Authorization

Compiled by: AVE Signature/E-sign: 532323 ,STMA-78385	Date: 2020/06/19 14:05
Reviewed by: AGP Signature/E-sign: 532323 ,STMA-78381	Date: 2020/06/19 14:05
Approved by: AZB Signature/E-sign: 532323 ,STMA-78432	Date: 2020/06/19 21:54


1 Preface

Text, STMA-78005 - This document describes part 4 of the Technical Safety Report, Section 4 Operation with external influences. The contents of the document are taken from EN50129 Annex B.4


2 Climatic conditions



Text, STMA-78001 - The climatic conditions that are applied during the design are listed in  [D4 .5 Environmental Requirement Specification \(ERS\)](#). The requirements for the climatic conditions are based on the standard EN50125-1.

It is not based on the standard EN50125-3, as this standard is out of scope for train-borne signalling equipment.



Fulfillment of the requirements can be found in  [T8.6.0 Environmental Test Plan](#) and  [T8.6.2 Environmental Test Report](#).



3 Mechanical conditions

Text, STMA-78006 - The mechanical conditions that are applied during the design are listed in  [D4.5 Environmental Requirement Specification \(ERS\)](#). The standards that are used are listed in this document as well. The main source document for the requirements for mechanical conditions is the EN50155.

Fulfillment of the requirements can be found in  [T8.6.0 Environmental Test Plan](#) and  [T8.6.2 Environmental Test Report](#).

4 Altitude


Text, STMA-78008 - The requirement for the maximum altitude for the STM ATB is listed in  [S TMA-8401](#) in document  [D4.5 Environmental Requirement Specification \(ERS\)](#).



Fulfillment of this requirement can be found in  [D7.1.0 Hardware Unit Test Plan](#) and  [D7.1.2 Hardware Unit Test Report](#).

5 Electrical conditions (not on vehicles)

Text, STMA-78003 - This chapter does not apply for STM ATB, as it is train-borne equipment.

6 Electrical conditions (on vehicles)

Text, STMA-78009 - The electrical conditions that are applied during the design are listed in  [D 4.5 Environmental Requirement Specification \(ERS\)](#). The standards that are used are listed in this document as well.

Fulfillment of the requirements can be found in  [T8.6.0 Environmental Test Plan](#) and  [T8.6.2 Environmental Test Report](#).

7 Protection against unauthorised access

7.1 Definition of access levels

Text, STMA-78028 - The following roles are defined for the STM ATB:

- System user
- System integrator
- Maintenance staff

System users do not need physical access to the device for normal operation. Access restriction for users is not necessary.

The system integrator does need access to the device to perform the tasks that are described in [M9.3 Installation Manual](#).

Maintenance staff do need access to the device to perform the tasks that are described in [M9.4 Maintenance Manual](#).

7.2 Protection

Text, STMA-78037 - Protection for unauthorized access will be implemented by the system integrator. The system integrator needs to place the device in a protective cabinet, as described in the [M9.3 Installation Manual](#), see [STMA-68345](#).

7.3 External conditions

Text, STMA-78024 - Additional measures than mentioned in [STMA-78013 - Protection](#) to prevent access to the device are not required, nor excluded for the system integrator.

7.4 Encapsulation

Text, STMA-78022 -

- The configurable components of STM ATB are part of the connectors and are after installation fixated to the vehicle. A device exchange (for instance for repairs) does therefore not require configuration of the device. This protects the STM ATB for misconfiguration during repairs.
- The external connectors of the STM ATB are unique (form factor and gender) and can therefore not be interchanged
- The external connectors are secured with fastening bolts, to reduce the risk for accidental

disconnections. Even then, a disconnection would not lead to a safety risk.

- The STM ATB in a mounted position is fully enclosed. Accidental penetration of tools is therefore unlikely to occur.

8 More severe conditions

Text, STMA-78026 - The railway authority does not specify more severe conditions for STM ATB.