



EULYNX Initiative

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Väylä (FTIA)

**Requirements specification for subsystem Level Crossing**

Document number: Eu.Doc.108

Baseline: 1.0 (0.A)

EULYNX Baseline Set: 3



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ID	Type	Requirement Part 1	Requirement Part 2	Appl.
Eu.LC.1	Head	<b>1 Introduction</b>		Default
Eu.LC.2	Head	<b>1.1 Release information</b>		Default
Eu.LC.3	Info	[Eu.Doc.108] Requirements specification for subsystem Level crossing CENELEC Phase: 4 Version: 1.0 (0.A) EULYNX Baseline Set: 3 Approval date: 18.06.2020		Default
Eu.LC.4	Info	<b>Version history</b>		Default
Eu.LC.31	Info	version number: 0.1 (0.A) date: 09.04.2020 author: Marie Gehrmann & Philipp Wolber model version: 15.5.84 generic profile version: 33 Generic interface and subsystem requirements version: 3.0 (0.A) review: Cluster changes: Initial version		Default
Eu.LC.1342	Info	version number: 0.2 (0.A) date: 26.05.2020 author: Marie Gehrmann & Philipp Wolber model version: 15.5.84 generic profile version: 33 Generic interface and subsystem requirements version: 3.0 (0.A) review: Cluster changes: Implemented STM, EULX-264, EULX-276, EULX-329, EULX-424, EULX-428, EULX-429, EULX-430, EULX-431, EULX-432		Default
Eu.LC.2369	Info	version number: 0.2 (1.A) date: 29.05.2020 author: Philipp Wolber model version: 15.5.84 generic profile version: 33 Generic interface and subsystem requirements version: 3.0 (0.A) review: Cluster changes: EULX-433		Default
Eu.LC.2370	Info	version number: 1.0 (0.A) date: 19.06.2020 author: Philipp Wolber model version: 15.5.84 generic profile version: 36 Generic interface and subsystem requirements version: 3.2 (0.A) review: CCB changes: EULX-268, EULX-420, EULX-434, EULX-435, EULX-436, EULX-437, EULX-438, EULX-442, EULX-443		Default
Eu.LC.32	Head	<b>1.2 Impressum</b>		Default
Eu.LC.33	Info	Publisher: <b>EULYNX Initiative</b>  <b>EULYNX Partners:</b> Bane NOR Société Nationale des Chemins de Fer Luxembourgeois (CFL) DB Netz AG (DB) S.A. Infrabel Vayla (FTIA) Network Rail ÖBB Infrastruktur AG ProRail B.V. Rete Ferroviaria Italiana (RFI) SBB AG Société Nationale des Chemins de Fer Français (SNCF) SZ-Infrastruktura, d.o.o. (SZ) Trafikverket		Default
Eu.LC.34	Info	Responsible for this document: EULYNX Project Management Office <a href="http://www.eulynx.eu">www.eulynx.eu</a>		Default
Eu.LC.35	Info	Copyright EULYNX Partners All information included or disclosed in this document is licensed under the European Union Public Licence EUPL, Version 1.1.		Default
Eu.LC.36	Head	<b>1.3 Purpose</b>		Default
Eu.LC.37	Info	The purpose of the document is the specification of functional requirements for the Subsystem - Level Crossing for the development of the EULYNX System.		Default
Eu.LC.38	Info	This document describes the functional requirements for the Subsystem - Level Crossing.		Default
Eu.LC.39	Info	This document is intended for the following users: <ul style="list-style-type: none"><li>• safety authorities</li><li>• infrastructure managers</li><li>• safety assessors</li><li>• signalling system suppliers</li><li>• validators</li></ul>		Default

ID	Type	Requirement Part 1	Requirement Part 2	Appl.
Eu.LC.40	Info	This document is the basis for the implementation by the supplier and for approval by the infrastructure manager.		Default
Eu.LC.41	Head	<b>1.4 Applicable standards and regulations</b>		Default
Eu.LC.42	Info	A list of applicable standards and regulations used in EULYNX is listed in the EULYNX Reference Document List [Eu.Doc.12].		Default
Eu.LC.43	Head	<b>1.5 Applicable documents</b>		Default
Eu.LC.44	Info	The current versions of documents used as input or related to this document are listed in the EULYNX Documentation Plan [Eu.Doc.11]. The relationships between the documents are displayed in the Appendix A1 Documentation plan and structure [Eu.Doc.11_A1].		Default
Eu.LC.45	Head	<b>1.6 Terms and abbreviations</b>		Default
Eu.LC.46	Info	The terms and abbreviations are listed in the EULYNX Glossary [Eu.Doc.9].		Default
Eu.LC.47	Head	<b>1.7 Variability management</b>		Default
Eu.LC.48	Info	Applicability column indicates the applicability of the requirement or information object per EULYNX partner. Value "Default" means the object applies to all EULYNX partners. Value "IM code" means the object applies specifically to the stated EULYNX partner. Value "-" indicates, that this requirement is part of the chapters of the state machine modelling. The state machine itself defines the applicability of each transition. If there are no FlowPorts which describe the different applicabilities, the whole state machine is default. IM codes follow the pattern "abcdyz", where abcd is the UIC numeric code for railway companies and yz is by default "00".		Default
Eu.LC.49	Head	<b>1.8 Definition of object types</b>		Default
Eu.LC.50	Info	The following definition for object types is applied in this document:		Default
Eu.LC.51	Info	<ul style="list-style-type: none"><li>• "Req" - This denotes a mandatory requirement.</li></ul>		Default
Eu.LC.53	Info	<ul style="list-style-type: none"><li>• "Info" - This denotes additional information to help understand the specification. These objects do not specify any additional requirements.</li></ul>		Default
Eu.LC.54	Info	<ul style="list-style-type: none"><li>• "Head" - This denotes chapter headings.</li></ul>		Default
Eu.LC.55	Head	<b>1.9 Modelling</b>		Default
Eu.LC.56	Info	The section "Functional requirements specification" follows a model based systems engineering process using Systems Modelling Language (SysML) and defines the functional system requirements for the Subsystem - Level Crossing operational in stimulus-response form. Furthermore the information objects (stimuli and responses) exchanged over the interfaces of the Subsystem - Level Crossing are defined.		Default
Eu.LC.57	Info	The diagrams presented in this document are modelled in SysML [SysML].		Default
Eu.LC.58	Info	The rules for the interpretation of the model based parts of specification are defined in [Eu.Doc.29].		Default
Eu.LC.59	Info	In chapter 3 "Functional requirements specification" the functional system requirements, defined in the form of a SysML model in the PTC Integrity Modeler are depicted as a surrogate of this model in the form of DOORS-objects.		Default
Eu.LC.60	Info	A requirement thereby consists of the respective SysML model element, for instance a SysML diagram, and if necessary an additional extension of the requirement.		Default
Eu.LC.61	Info	In the column "Requirement Part 1" the particular SysML model element is depicted and in the column "Requirement Part 2" the corresponding extension of the definition is given. The stated object type normally applies both to "Requirement Part 1" and to "Requirement Part 2".		Default
Eu.LC.62	Info	There are requirements with type "Req" given, where the column "Requirement Part 2" or a part of it is provided with the heading "Information". In this case, the defined type only applies to the column "Requirement Part 1" and the part of "Requirement Part 2", which is not labelled as "Information".		Default
Eu.LC.63	Head	<b>2 Conditions of use</b>		Default
Eu.LC.2371	Req	All references to Eu.Doc.20 refer to version 3.2 (0.A) of that document.		Default
Eu.LC.64	Req	The specifications defined in this document shall follow the requirements of the EULYNX System Architecture Specification [Eu.Doc.16].		Default
Eu.LC.65	Req	The specifications defined in this document shall be complemented by the generic requirements specified in Generic interface and subsystem requirements [Eu.Doc.20].		Default
Eu.LC.66	Head	<b>3 Functional requirements specification</b>		Default
Eu.LC.67	Head	<b>3.1 Subsystem definition</b>		Default
Eu.LC.68	Head	<b>3.1.1 Subsystem context</b>		Default
Eu.LC.69	Head	<b>3.1.1.1 Technical subsystem context</b>		Default

ID	Type	Requirement Part 1	Requirement Part 2	Appl.
Eu.LC.70	Req	<div><div>Subsystem - Level Crossing - Technical Subsystem Context [SubSLC BDD 1]</div><div><div><div><div><div><div>1</div><div>Subsystem - Electronic Interlocking</div></div><div>SCI-LC</div><div>1</div></div><div><div><div>1</div><div>Subsystem - Maintenance and Data Management</div></div><div>SMI-LC</div><div>1</div><div>SDI-LC</div><div>1</div></div><div><div><div>1</div><div>Basic Data identifier</div></div><div>LC1</div><div>1</div></div><div><div><div>1</div><div>Maintainer</div></div><div>LC2</div><div>1</div></div><div><div><div>1</div><div>Power supply</div></div><div>LC3</div><div>1</div></div></div><div><div><div>1</div><div>Level Crossing protection facility</div></div><div>LC4</div><div>1</div></div><div><div><div>*</div><div>Detection element</div></div><div>LC5</div><div>←</div></div><div><div><div>0..1</div><div>Local operator</div></div><div>LC6</div><div>→</div></div></div></div></div>	<div>The Subsystem - Level Crossing has to provide the technical interfaces which are pictured in "Subsystem - Level Crossing - Technical Subsystem Context [SubSLC BDD 1]", to the pictured Actors. The amount of Actors that should be able to be connected are defined in the pictured multiplicities.</div>	Default
Eu.LC.71	Head	3.1.1.2 Functional subsystem context		Default
Eu.LC.72	Info	Subsystem - Level Crossing		Default

The Subsystem - Level Crossing has to provide the technical interfaces which are pictured in "Subsystem - Level Crossing - Technical Subsystem Context [SubSLC BDD 1]", to the pictured Actors. The amount of Actors that should be able to be connected are defined in the pictured multiplicities.

Default

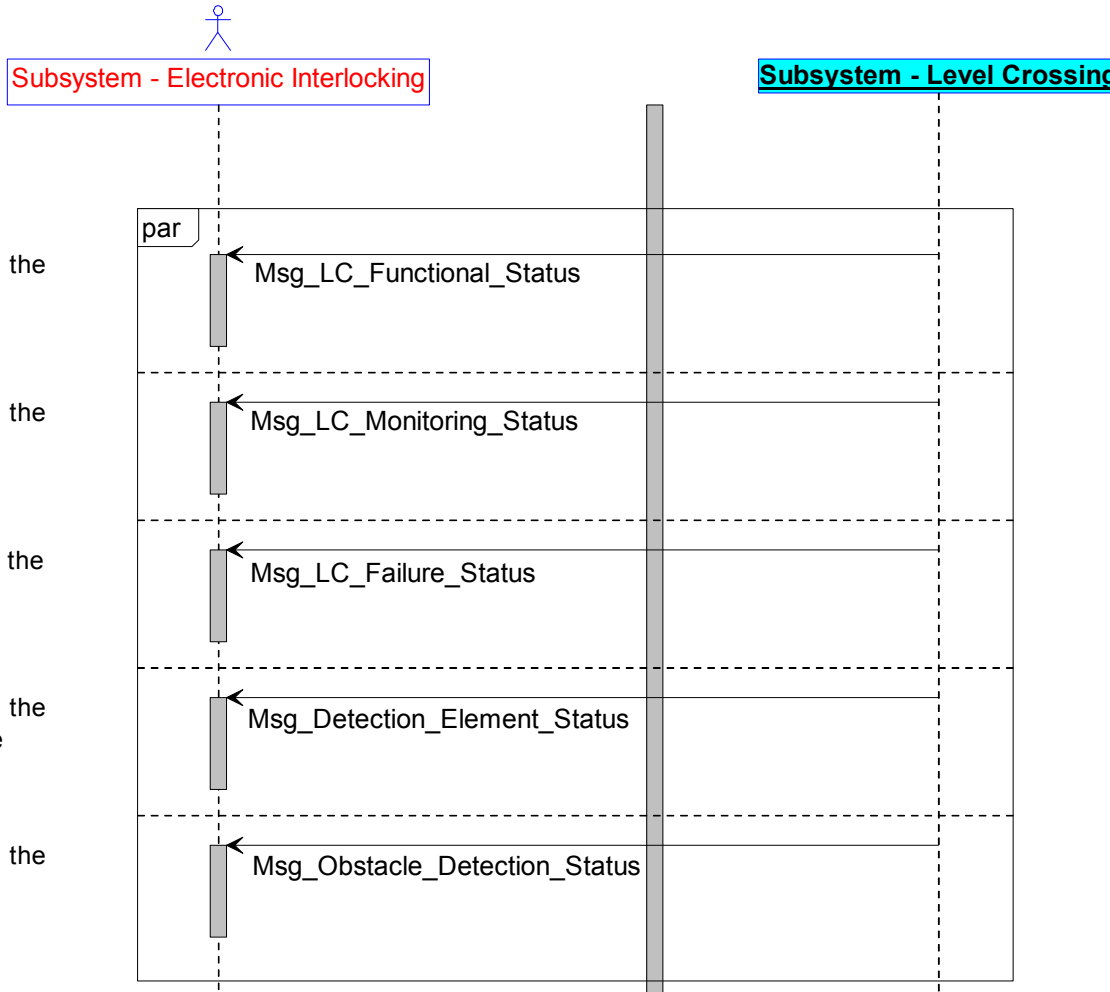
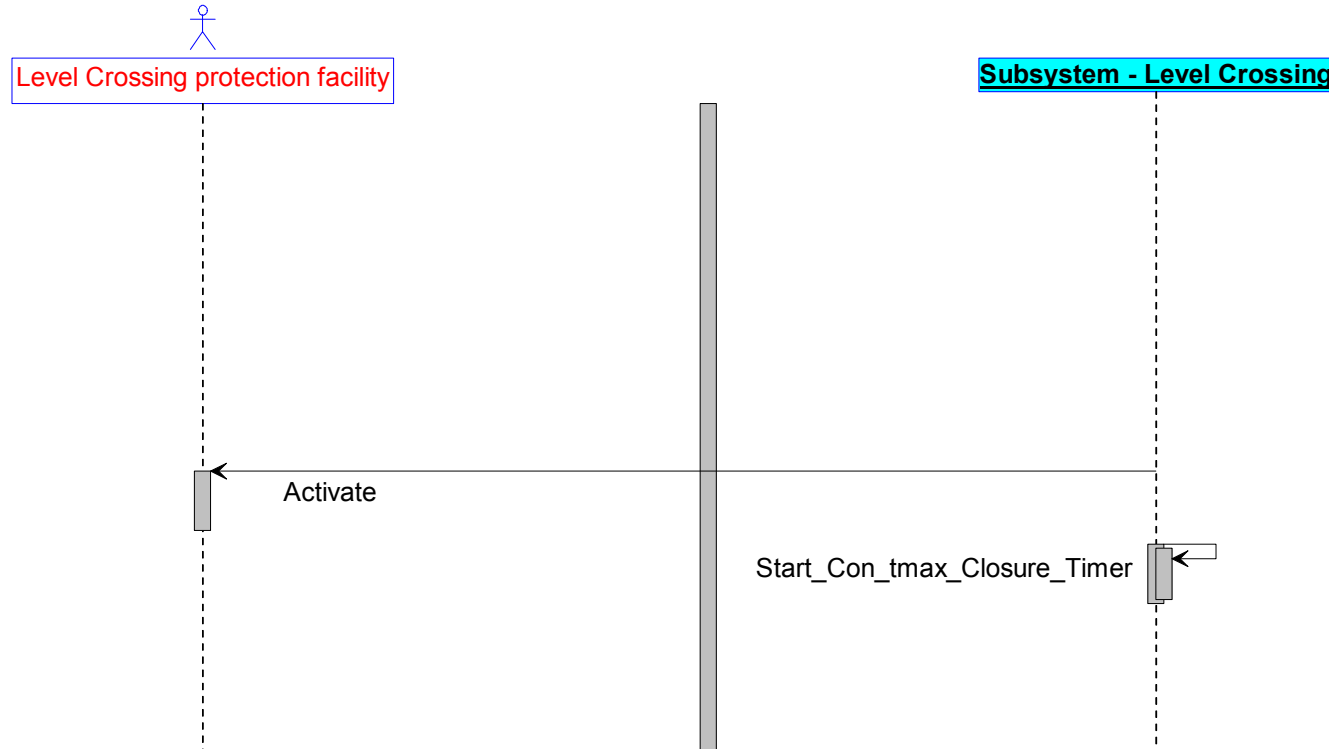
ID	Type	Requirement Part 1	Requirement Part 2	Appl.
Eu.LC.73	Req	<div>Subsystem - Level Crossing - Functional Subsystem Context [SubSLC IBD 1]</div> <div><div>ibd Subsystem - Level Crossing - Functional Subsystem Context [SubSLC IBD 1]</div></div>	The Subsystem - Level Crossing shall provide the technical interfaces shown in the "Subsystem - Level Crossing - Functional Subsystem Context [SubSLC IBD 1]". Each interface shall allow the connection to the corresponding actors shown in the quantities defined in the multiplicities.	Default
Eu.LC.74	Info	SCI-LC	The functional Process Data Interface to the Subsystem - Electronic Interlocking (SCI: Standard Communication Interface) for the InformationFlow through the interface is defined by the FlowSpecification "Subsystem_Electronic_Interlocking".	Default
Eu.LC.75	Info	SMI-LC	The functional Maintenance interface to the Subsystem - Maintenance and Data Management for the InformationFlow through the interface is defined by the FlowSpecification "Subsystem_MDM_M".	Default
Eu.LC.76	Info	SDI-LC	The functional Diagnostic interface to the Subsystem - Maintenance and Data Management for the InformationFlow through the interface, which is defined by the FlowSpecification "Subsystem_MDM_D".	Default
Eu.LC.77	Info	LC1	The functional System Data interface to the Basic Data identifier. The InformationFlow through the interface is defined by the FlowSpecification "Basic_Data_Identifier".	Default
Eu.LC.78	Info	LC2	The functional Local Control and Display interface to the Maintainer. The InformationFlow through the interface is defined by the FlowSpecification "Maintainer".	Default
Eu.LC.79	Info	LC4	The functional Control interface to the Level Crossing protection facility. The InformationFlow through the interface is defined by the FlowSpecification "Level_Crossing_protection_facility".	Default
Eu.LC.81	Info	LC5	The functional Control interface to the Detection element. The InformationFlow through the interface is defined by the FlowSpecification "Detection_element".	Default
Eu.LC.82	Info	LC6	The functional Local Control and Display interface to the Local operator. The InformationFlow through the interface is defined by the FlowSpecification "Local_operator".	Default
Eu.LC.85	Head	<b>3.1.2 InformationFlow at the subsystem interfaces</b>		Default
Eu.LC.86	Head	<b>3.1.2.1 Interface SCI-LC (Subsystem - Electronic Interlocking)</b>		Default
Eu.LC.87	Info	The generic commands and messages through the SCI-LC are specified in Eu.Doc.20.		Default

ID	Type	Requirement Part 1	Requirement Part 2	Appl.
Eu.LC.88	Info	Subsystem_Electronic_Interlocking	Definition of the InformationFlow (by FlowSpecification) for Process Data Interface SCI-LC (Subsystem - Electronic Interlocking).	Default
Eu.LC.89	Req	Cd_Activation	Command (Cd) from Subsystem - Electronic Interlocking to Subsystem - Level Crossing to activate the Level Crossing.	Default
Eu.LC.90	Req	Cd_Deactivation	Command (Cd) from Subsystem - Electronic Interlocking to Subsystem - Level Crossing to deactivate the Level Crossing.	Default
Eu.LC.96	Req	Cd_Local_Operation_Handover	Command (Cd) from Subsystem - Electronic Interlocking to Subsystem - Level Crossing to allow or return a handover of local operation to the Local operator according to the handover status.	Default
Eu.LC.102	Req	Cd_Isolate_LC	Command (Cd) from Subsystem - Electronic Interlocking to Subsystem - Level Crossing to prevent the activated Level Crossing.	Default
Eu.LC.103	Req	Msg_LC_Functional_Status	Message (Msg) from Subsystem - Level Crossing to Subsystem - Electronic Interlocking to report a changed functional status.	Default
Eu.LC.104	Req	Msg_LC_Monitoring_Status	Message (Msg) from Subsystem - Level Crossing to Subsystem - Electronic Interlocking to report a changed monitoring status.	Default
Eu.LC.105	Req	Msg_LC_Failure_Status	Message (Msg) from Subsystem - Level Crossing to Subsystem - Electronic Interlocking to report the current failure status.	Default
Eu.LC.112	Req	Msg_Detection_Element_Status	Message (Msg) from Subsystem - Electronic Interlocking to Subsystem - Level Crossing to report the changed status of the Detection element.	Default
Eu.LC.113	Req	Msg_Local_Operation_Handover	Message (Msg) from Subsystem - Level Crossing to Subsystem - Electronic Interlocking to allow or return a handover of local operation to the Local operator.	Default
Eu.LC.114	Req	Msg_Obstacle_Detection_Status	Message (Msg) from Subsystem - Level Crossing to Subsystem - Electronic Interlocking to report the changed status of the Obstacle detector.	Default
Eu.LC.116	Req	Msg_Local_Request	Message (Msg) from Subsystem - Level Crossing to Subsystem - Electronic Interlocking to report a local request.	Default
Eu.LC.117	Head	3.1.2.2 Interface SMI-LC (Subsystem - Maintenance and Data Management)		Default
Eu.LC.118	Info	The generic FlowSpecification and the related FlowProperties through the SMI-LC are specified in Eu.Doc.20.		Default
Eu.LC.119	Head	3.1.2.3 Interface SDI-LC (Subsystem - Maintenance and Data Management)		Default
Eu.LC.120	Info	The generic data points through the SDI-LC are specified in Eu.Doc.20.		Default
Eu.LC.121	Info	Subsystem_MDM_D	The functional Diagnostic interface to the Subsystem - Maintenance and Data Management. The InformationFlow through the interface, which is defined by the FlowSpecification "Subsystem_MDM_D".	Default
Eu.LC.122	Req	levelCrossing.levelCrossingProtectionFacility.barrier[i].status	The message comprises the status of a determined Barrier.  The message shall be transmitted as event triggered.	Default
Eu.LC.123	Req	levelCrossing.levelCrossingProtectionFacility.obstacleDetector[i].obstacle	The message comprises the detection of an Obstacle of a determined Obstacle detector.  The message shall be transmitted as event triggered.	Default
Eu.LC.124	Req	levelCrossing.levelCrossingProtectionFacility.obstacleDetector[i].status	The message comprises the critical or non-critical fault of a determined Obstacle detector.  The message shall be transmitted as event triggered.	Default
Eu.LC.125	Req	levelCrossing.levelCrossingProtectionFacility.roadLight[i].lamps[j].status	The message comprises the status of a determined Road Light for the road protection is whether switched on or off.  The message shall be transmitted as event triggered.	Default
Eu.LC.1307	Req	levelCrossing.levelCrossingProtectionFacility.barrierMachineMotor[i].turnTime	The message comprises the Time of the Moving Barrier.  The message shall be transmitted as event triggered.	Default
Eu.LC.1305	Req	levelCrossing.levelCrossingProtectionFacility.barrierMachineMotor[i].timeOut	The message comprises the information of a Timeout for a moving Barrier Machine Motor.  The message shall be transmitted as event triggered.	Default
Eu.LC.1306	Req	levelCrossing.levelCrossingProtectionFacility.barrierMachineMotor[i].turnCounter	The message comprises the Counting of the Moving barrier.  The message shall be transmitted as event triggered.	Default
Eu.LC.130	Req	levelCrossing.powerSupply	The message comprises the status of the Power supply.  The message shall be transmitted as event triggered.	Default

ID	Type	Requirement Part 1	Requirement Part 2	Appl.
Eu.LC.1308	Req	levelCrossing.levelCrossingProtectionFacility.turnCounter	<p>The message comprises the Counting of the activation of the Level Crossing.</p> <p>The message shall be transmitted as event triggered.</p>	Default
Eu.LC.1293	Req	levelCrossing.detectionElement[i].failure	<p>The message comprises the information on whether the Level Crossing is failed.</p> <p>The message shall be transmitted as event triggered.</p>	Default
Eu.LC.1298	Req	levelCrossing.detectionElement[i].status	<p>The message comprises the current status of the Level Crossing.</p> <p>The message shall be transmitted as event triggered.</p>	Default
Eu.LC.1296	Req	levelCrossing.detectionElement[i].passing	<p>The message comprises the information on whether the Level Crossing has been passed and in which direction.</p> <p>The message shall be transmitted as event triggered.</p>	Default
Eu.LC.136	Head	<b>3.1.2.4 Interface LC1 (Basic Data identifier)</b>		Default
Eu.LC.137	Info	The generic FlowSpecification and the related FlowProperties through LC1 are specified in Eu.Doc.20.		Default
Eu.LC.138	Head	<b>3.1.2.5 Interface LC2 (Maintainer)</b>		Default
Eu.LC.139	Info	The generic FlowProperties through LC2 are specified in Eu.Doc.20.		Default
Eu.LC.148	Head	<b>3.1.2.6 Interface LC5 (Detection element)</b>		Default
Eu.LC.149	Info	Detection_element	Definition of the InformationFlow (by FlowSpecification) for Control Interface LC5 (Detection element).	Default
Eu.LC.150	Req	Occupied_Detection_Element	The Subsystem - Level Crossing detects that the Detection element is occupied.	Default
Eu.LC.151	Req	Vacated_Detection_Element	The Subsystem - Level Crossing detects that the Detection element is vacant.	Default
Eu.LC.152	Req	Failed_Detection_Element	The Subsystem - Level Crossing detects that the Detection element is failed.	Default
Eu.LC.153	Head	<b>3.1.2.7 Interface LC6 (Local operator)</b>		Default
Eu.LC.154	Info	Local_operator	Definition of the InformationFlow (by FlowSpecification) for Control and Display Interface LC6 (Local operator).	Default
Eu.LC.155	Req	Activate	The Subsystem - Level Crossing detects the local activation of the Level Crossing protection facility from the Local operator.	Default
Eu.LC.156	Req	Deactivate	The Subsystem - Level Crossing detects the local deactivation of the Level Crossing protection facility from the Local operator.	Default
Eu.LC.159	Req	Input_Allow_Handover_To_Local_Operator	The Subsystem - Level Crossing detects that the Local operator confirms a handover of the local operations.	Default
Eu.LC.160	Req	Input_Return_Handover_To_Local_Operator	The Subsystem - Level Crossing detects that the Local operator requests to return the handover of the local operations.	Default
Eu.LC.161	Req	Output_Established_Handover_To_Local_Operator	The Subsystem - Level Crossing reports to the Local operator that the handover of the local operations is established.	Default
Eu.LC.162	Req	Output_No_Handover_To_Local_Operator	The Subsystem - Level Crossing reports to the Local operator that there is no handover of the local operations is initiated.	Default
Eu.LC.163	Req	Output_Initiated_Handover_To_Local_Operator	The Subsystem - Level Crossing reports to the Local operator that the handover of the local operations is initiated.	Default
Eu.LC.164	Head	<b>3.1.2.8 Interface LC4 (Level Crossing protection facility)</b>		Default
Eu.LC.165	Info	Level_Crossing_protection_facility	Definition of the InformationFlow (by FlowSpecification) for Control and Display Interface LC4 (Level Crossing protection facility).	Default
Eu.LC.166	Req	Activate	The Subsystem - Level Crossing request the Level Crossing protection facility to activate the Level Crossing protection facility.	Default
Eu.LC.167	Req	Deactivate	The Subsystem - Level Crossing request the Level Crossing protection facility to deactivate the Level Crossing protection facility.	Default
Eu.LC.168	Req	National_Specific_State	The Subsystem - Level Crossing request the Level Crossing protection facility to change to a national specific state.	Default
Eu.LC.169	Req	Pre-Activate	The Subsystem - Level Crossing request the Level Crossing protection facility to pre-activate the Level Crossing protection facility.	Default
Eu.LC.170	Req	Status_Level_Crossing_Protection_Facility	The Level Crossing protection facility reports its new status to the Subsystem - Level Crossing.	Default
Eu.LC.171	Head	<b>3.1.3 Subsystem functions</b>		Default



ID	Type	Requirement Part 1	Requirement Part 2	Appl.
Eu.LC.172	Head	3.1.3.1 Definition of time values		Default
Eu.LC.173	Info	The generic time values are specified in Eu.Doc.20.		Default
Eu.LC.175	Req	Con_tmax_Closure_Timer	"Con_tmax_Closure_Timer" is a configurable time value which is specific to a location. The time value provides the permissible activation of the level crossing.	Default
Eu.LC.177	Req	Con_t_PDI_Loss_Deactivation_Timer	"Con_t_PDI_Loss_Deactivation_Timer" is a configurable time value which is specific to a location. The time value provides the duration between a activation caused by a Interrupted Safe communication protocol connection and a deactivation of the Level Crossing protection facility.	Default
Eu.LC.178	Head	3.1.3.2 Essential subsystem states		Default
Eu.LC.179	Info	The essential subsystem states are specified in Eu.Doc.20.		Default
Eu.LC.187	Head	3.1.3.3 Subsystem-UseCases "Initialisation"		Default
Eu.LC.188	Info	The generic UseCases EfeSUC1.1 and EfeSUC1.2 are specified in Eu.Doc.20.		Default
Eu.LC.189	Info	<div>Subsystem - Level Crossing - UseCase Definition - Initialisation [SubSLC UCD 1]<div><div>uc Subsystem - Level Crossing - UseCase Definition - Initialisation [SubSLC UCD 1]</div><div><div>Subsystem - Level Crossing</div><div><div>Subsystem - Electronic Interlocking</div><div><div>EfeSUC1.1: Updating Configuration and Engineering Data</div><div>EfeSUC1.2: Establish PDI connection</div><div>SubSUC1.3: Report status</div><div>SubSUC1.4: Establish initial state of outputs</div></div><div>Level Crossing protection facility</div></div></div></div></div>		Default
Eu.LC.190	Req	SubSUC1.3: Report status	The Subsystem-UseCase SubSUC1.3: Report status defines a scenario about the transmission of status data of Subsystem - Level Crossing to Subsystem - Electronic Interlocking, while Process Data Interface protocol connection is establishing.	Default

ID	Type	Requirement Part 1		Requirement Part 2	Appl.	
Eu.LC.191	Info	<div><div><div>SubSLC SD 1.3.1</div><div><b>SubSUC1.3: Report status</b></div><div><div>Main Success Scenario: Report status [SubSLC SD 1.3.1]</div><div><p><b>par</b></p><div><div>1.a1 The <b>Subsystem - Level Crossing</b> reports the current functional status to the <b>Subsystem - Electronic Interlocking</b>.</div><div><b>also par</b></div><div><div>1.b1 The <b>Subsystem - Level Crossing</b> reports the current monitoring status to the <b>Subsystem - Electronic Interlocking</b>.</div><div><b>also par</b></div><div><div>1.c1 The <b>Subsystem - Level Crossing</b> reports the current failure status to the <b>Subsystem - Electronic Interlocking</b>.</div><div><b>also par</b></div><div><div>1.d1 The <b>Subsystem - Level Crossing</b> reports the current status of the <b>Detection element</b> to the <b>Subsystem - Electronic Interlocking</b>.</div><div><b>also par</b></div><div><div>1.e1 The <b>Subsystem - Level Crossing</b> reports the current status of the <b>Obstacle detector</b> to the <b>Subsystem - Electronic Interlocking</b>.</div></div></div><div><b>end par</b></div></div><div></div></div></div></div></div></div></div>				Default
Eu.LC.212	Info	SubSUC1.4: Establish initial state of outputs			The Subsystem-UseCase SubSUC1.4: Establish initial state of outputs defines the main success scenario for establishing the initial state of outputs of the Subsystem - Level Crossing. While initialising, the Level Crossing protection facility will be activated by the Subsystem - Level Crossing.	Default
Eu.LC.213	Info	<div><div><div>SubSLC SD 1.4.1</div><div><b>SubSUC1.4: Establish initial state of outputs</b></div><div><div>Main Success Scenario: Establish initial state of outputs [SubSLC SD 1.4.1]</div><div><p><b>Precondition:</b></p><p>The <b>Subsystem - Level Crossing</b> is in the state <b>BOOTING</b> or <b>INITIALISING</b>.</p><p>The <b>Initial State Of Outputs</b> has not been established.</p><p><b>Interaction 1.4.1.A:</b></p><ol style="list-style-type: none"><li>1. The <b>Subsystem - Level Crossing</b> detects the readiness for establishing the <b>Initial State Of Outputs</b>.</li><li>2. The <b>Subsystem - Level Crossing</b> activates the <b>Level Crossing protection facility</b>.</li><li>3. If the <b>Subsystem - Level Crossing</b> is configured to use the Closure Timer the <b>Subsystem - Level Crossing</b> will start the Closure Timer.</li></ol><p><b>Postcondition:</b></p><p>The <b>Subsystem - Level Crossing</b> is in the state <b>ACTIVATED AND UNPROTECTED</b>.</p><p><b>Initial State Of Outputs</b> established.</p></div><div></div></div></div></div>				Default
Eu.LC.224	Info	3.1.3.4 Subsystem-UseCases "Operation"				Default

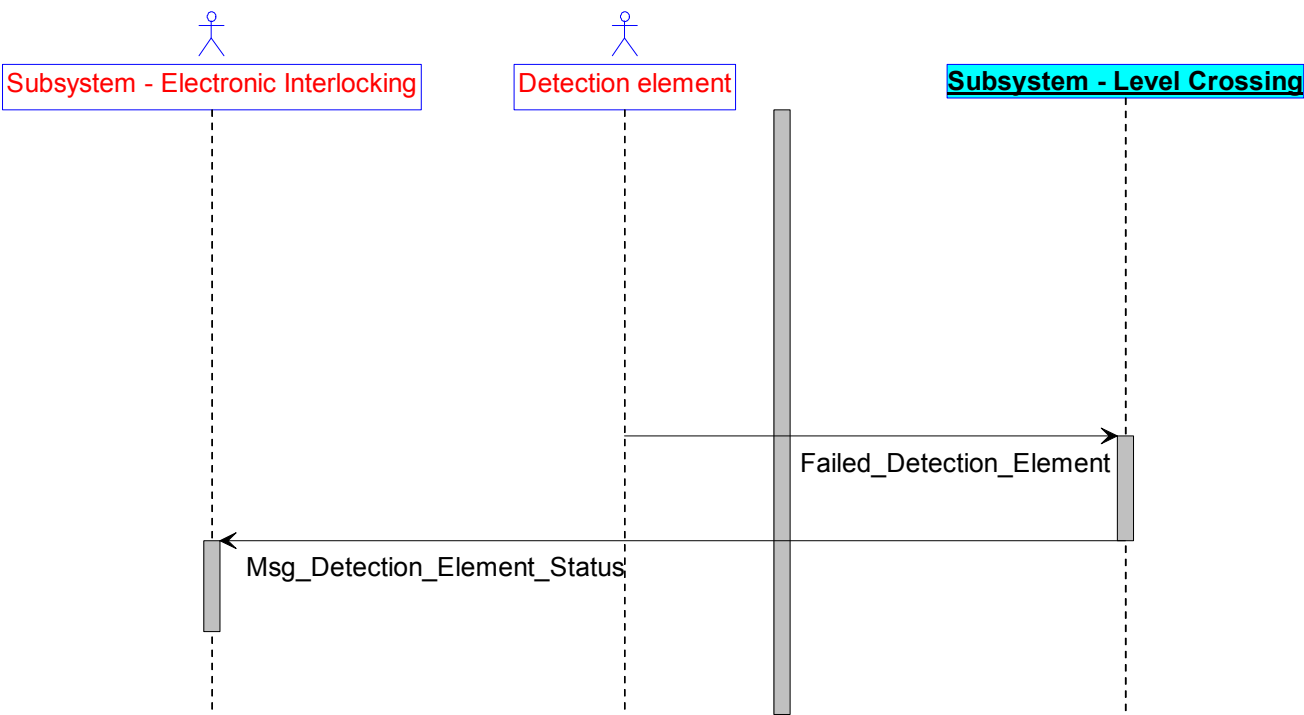
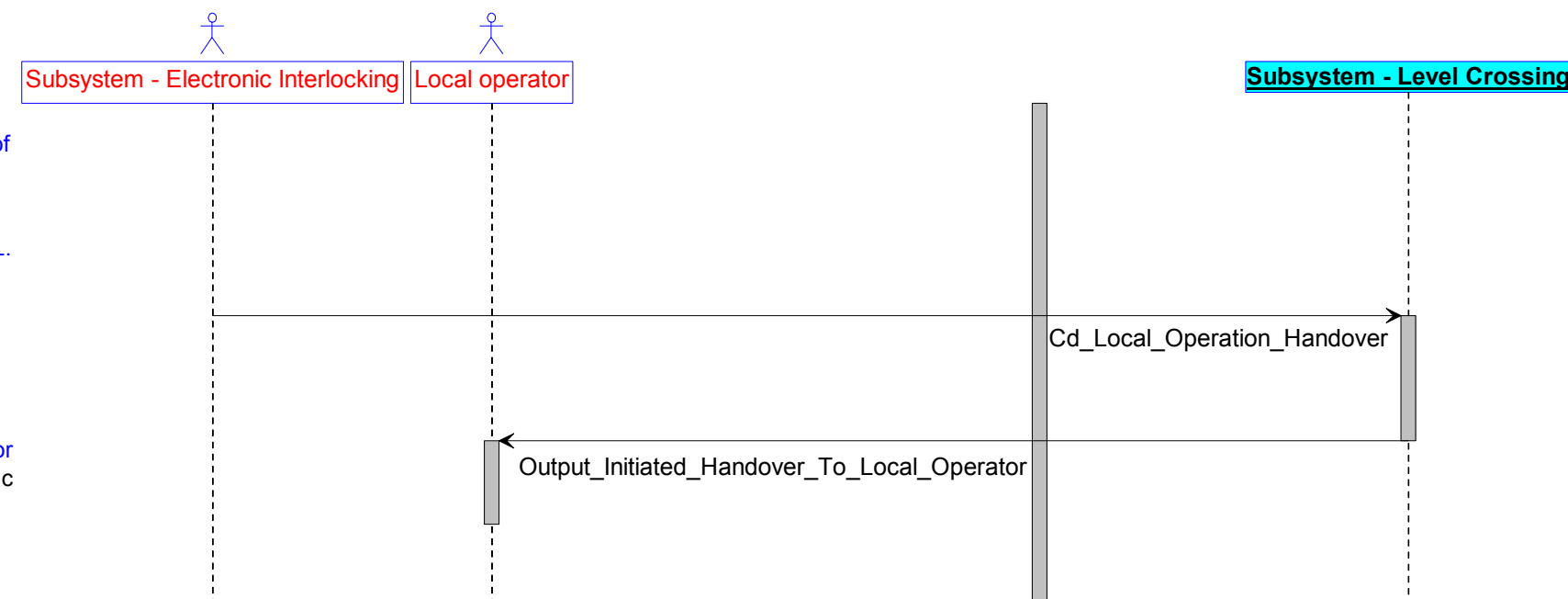
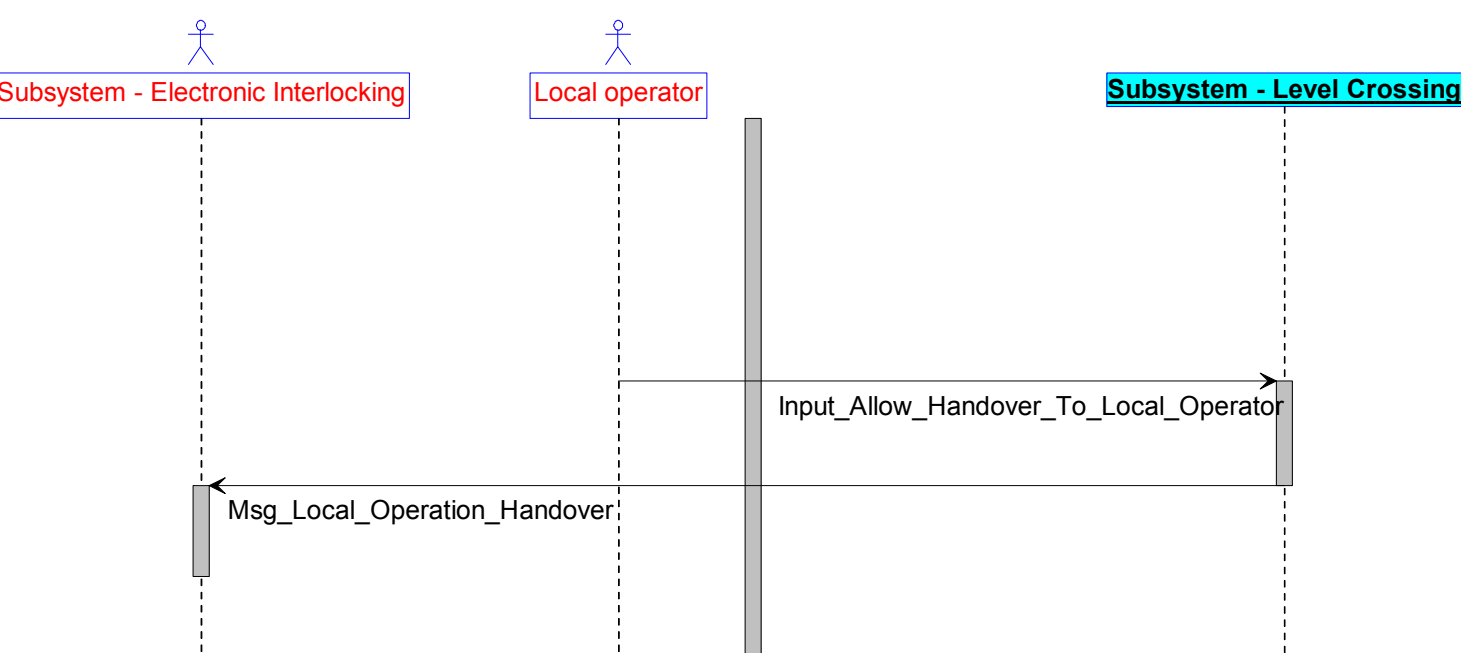
ID	Type	Requirement Part 1	Requirement Part 2	Appl.
Eu.LC.225	Info	<div><div>Subsystem - Level Crossing - UseCase Definition - Operation [SubSLC UCD 2]</div><div><div>uc Subsystem - Level Crossing - UseCase Definition - Operation [SubSLC UCD 2]</div><div><div>Subsystem - Level Crossing</div><div><div><div>Subsystem - Electronic Interlocking</div><div><div>SubSUC2.1: Handle activation LC</div><div>SubSUC2.2: Handle deactivation LC</div><div>SubSUC2.3: Report Level Crossing protection facility Status</div><div>SubSUC2.4: Report Detection Element Status</div><div>SubSUC2.5: Handle Local operations</div><div>SubSUC2.6: Handle irregularities</div><div>SubSUC2.7: Handle isolate LC</div></div><div><div>Level Crossing protection facility</div><div>Detection element</div><div>Local operator</div></div></div></div></div></div></div>		Default
Eu.LC.227	Info	SubSUC2.1: Handle activation LC	The Subsystem-UseCase SubSUC2.1: Handle activation LC defines the activation of the Subsystem - Level Crossing for the interface functions. More detailed descriptions about the activation of the Level Crossing protection facility are subject to national requirements.	Default

ID	Type	Requirement Part 1	Requirement Part 2	Appl.
Eu.LC.228	Info	<div><p>SubSLC SD 2.1.1</p><p><b>SubSUC2.1: Handle activation LC</b></p><p>Main Success Scenario: Activate [SubSLC SD 2.1.1]</p><p><b>Precondition:</b></p><p>The <b>Subsystem - Level Crossing</b> is in the state <b>OPERATIONAL</b>.</p><p>The <b>Subsystem - Level Crossing</b> is either in the state <b>DEACTIVATED AND UNPROTECTED</b> or <b>PRE-ACTIVATED</b>.</p><p><b>Interaction 2.1.1.A:</b></p><p>1. - The <b>Subsystem - Level Crossing</b> receives from the <b>Subsystem - Electronic Interlocking</b> the command to activate the <b>Level Crossing protection facility</b>.</p><p>2. The <b>Subsystem - Level Crossing</b> activates the <b>Level Crossing protection facility</b>.</p><p><b>par</b></p><p>3.a1 The <b>Subsystem - Level Crossing</b> reports to the <b>Subsystem - Electronic Interlocking</b> that the functional status has been changed to <b>ACTIVATED AND UNPROTECTED</b>.</p><p><b>also par</b></p><p>3.b1 If the <b>Subsystem - Level Crossing</b> is configured to use the Closure Timer the <b>Subsystem - Level Crossing</b> will start the Closure Timer.</p><p><b>end par</b></p><p><b>Interaction 2.1.1.B:</b></p><p>4. - The <b>Level Crossing protection facility</b> reports the new status protected to the <b>Subsystem - Level Crossing</b> when the conditions for a protected LC are fulfilled.</p><p>5. The <b>Subsystem - Level Crossing</b> reports to the <b>Subsystem - Electronic Interlocking</b> that the functional status has been changed to <b>ACTIVATED AND PROTECTED</b>.</p><p><b>Postcondition:</b></p><p>The <b>Subsystem - Level Crossing</b> is in the state <b>ACTIVATED AND PROTECTED</b>.</p></div> <pre>sequenceDiagram     participant EIL as Subsystem - Electronic Interlocking     participant LCPF as Level Crossing protection facility     participant LC as Subsystem - Level Crossing      EIL-&gt;&gt;LC: Cd_Activation     activate LC     LC-&gt;&gt;LCPF: Activate     activate LCPF     par         LC-&gt;&gt;EIL: Msg_LC_Functional_Status     and         LC-&gt;&gt;Timer: Start_Con_tmax_Closure_Timer     end     deactivate LCPF     LCPF-&gt;&gt;LC: Status_Level_Crossing_Protection_Facility     deactivate LCPF     LC-&gt;&gt;EIL: Msg_LC_Functional_Status     deactivate LC</pre>		Default
Eu.LC.321	Info	<div><p>SubSLC SD 2.1.2</p><p><b>SubSUC2.1: Handle activation LC</b></p><p>Alternative Scenario: Pre-activate [SubSLC SD 2.1.2]</p><p><b>Precondition:</b></p><p>The <b>Subsystem - Level Crossing</b> is configured to use pre-activation.</p><p>The <b>Subsystem - Level Crossing</b> is in the state <b>OPERATIONAL</b>.</p><p>The <b>Subsystem - Level Crossing</b> is in the state <b>DEACTIVATED AND UNPROTECTED</b>.</p><p><b>Interaction 2.1.2.A:</b></p><p>1. - The <b>Subsystem - Level Crossing</b> receives from the <b>Subsystem - Electronic Interlocking</b> the command to pre-activate the <b>Level Crossing protection facility</b>.</p><p>2. The <b>Subsystem - Level Crossing</b> pre-activates the <b>Level Crossing protection facility</b>.</p><p>3. The <b>Subsystem - Level Crossing</b> reports to the <b>Subsystem - Electronic Interlocking</b> that the functional status has been changed to <b>PRE-ACTIVATED</b>.</p><p><b>Postcondition:</b></p><p>The <b>Subsystem - Level Crossing</b> is in state <b>PRE-ACTIVATED</b>.</p></div> <pre>sequenceDiagram     participant EIL as Subsystem - Electronic Interlocking     participant LCPF as Level Crossing protection facility     participant LC as Subsystem - Level Crossing      EIL-&gt;&gt;LC: Cd_Activation     activate LC     LC-&gt;&gt;LCPF: Pre_Activate     activate LCPF     LC-&gt;&gt;EIL: Msg_LC_Functional_Status     deactivate LCPF     deactivate LC</pre>		Default
Eu.LC.446	Info	SubSUC2.2: Handle deactivation LC	The Subsystem-UseCase SubSUC2.2: Handle deactivation LC defines the deactivation of the Subsystem - Level Crossing for the interface functions. More detailed descriptions about the deactivation of the Level Crossing protection facility are subject to national requirements.	Default

ID	Type	Requirement Part 1	Requirement Part 2	Appl.
Eu.LC.447	Info	<div><p>SubSLC SD 2.2.1</p><p><b>SubSUC2.2: Handle deactivation LC</b></p><p>Main Success Scenario: Deactivate [SubSLC SD 2.2.1]</p><p><b>Precondition:</b></p><p>The Subsystem - Level Crossing is in the state OPERATIONAL.</p><p>The Subsystem - Level Crossing is in the state PRE-ACTIVATED or ACTIVATED AND UNPROTECTED or ACTIVATED AND PROTECTED.</p><p><b>Interaction 2.2.1.A:</b></p><p>1. - The Subsystem - Level Crossing receives from the Subsystem - Electronic Interlocking the command to deactivate the Level Crossing protection facility.</p><p>2. The Subsystem - Level Crossing deactivates the Level Crossing protection facility.</p><p>3. The Subsystem - Level Crossing reports to the Subsystem - Electronic Interlocking that the functional status has been to DEACTIVATED AND UNPROTECTED.</p><p><b>Interaction 2.2.1.B:</b></p><p>4. - The Level Crossing protection facility reports the new status idle to the Subsystem - Level Crossing when the Barriers are in an upright position.</p><p>5. If the Subsystem - Level Crossing is configured to use the Closure Timer the Subsystem - Level Crossing will stop the Closure Timer.</p><p><b>Postcondition:</b></p><p>The Subsystem - Level Crossing is in state DEACTIVATED AND UNPROTECTED.</p></div> <pre>sequenceDiagram     participant SIE as Subsystem - Electronic Interlocking     participant LCPF as Level Crossing protection facility     participant SLCS as Subsystem - Level Crossing      SIE-&gt;&gt;SLCS: Cd_Deactivation     activate SLCS     SLCS-&gt;&gt;LCPF: Deactivate     activate LCPF     LCPF-&gt;&gt;SIE: Msg_LC_Functional_Status     deactivate LCPF     LCPF-&gt;&gt;SLCS: Status_Level_Crossing_Protection_Facility     SLCS-&gt;&gt;LCPF: Stop_Con_tmax_Closure_Timer     deactivate SLCS</pre>		Default
Eu.LC.570	Info	SubSUC2.3: Report Level Crossing protection facility Status	The Subsystem-UseCase SubSUC2.3: Report Level Crossing protection facility Status defines the report of a changed status the Subsystem - Level Crossing detected. For example if the protection status of the Level Crossing protection facility is reached.	Default
Eu.LC.1327	Info	<div><p>SubSLC SD 2.3.1</p><p><b>SubSUC2.3: Report Level Crossing protection facility Status</b></p><p>Alternative Scenario: Report Functional Status [SubSLC SD 2.3.1]</p><p><b>Precondition:</b></p><p>The Subsystem - Level Crossing is in the state OPERATIONAL.</p><p><b>Interaction 2.3.1.A:</b></p><p>1. - The Level Crossing protection facility reports to the Subsystem - Level Crossing a change in the functional parameters of the Level Crossing protection facility.</p><p>2. The Subsystem - Level Crossing reports to the Subsystem - Electronic Interlocking the new functional status of the Level Crossing protection facility.</p><p><b>Postcondition:</b></p><p>—</p></div> <pre>sequenceDiagram     participant SIE as Subsystem - Electronic Interlocking     participant LCPF as Level Crossing protection facility     participant SLCS as Subsystem - Level Crossing      LCPF-&gt;&gt;SLCS: Status_Level_Crossing_Protection_Facility     activate SLCS     SLCS-&gt;&gt;SIE: Msg_LC_Functional_Status     deactivate SLCS</pre>		Default
Eu.LC.571	Info	<div><p>SubSLC SD 2.3.2</p><p><b>SubSUC2.3: Report Level Crossing protection facility Status</b></p><p>Alternative Scenario: Report Monitoring Status [SubSLC SD 2.3.2]</p><p><b>Precondition:</b></p><p>The Subsystem - Level Crossing is in the state OPERATIONAL.</p><p><b>Interaction 2.3.2.A:</b></p><p>1. - The Level Crossing protection facility reports to the Subsystem - Level Crossing a change in the monitoring parameters of the Level Crossing protection facility.</p><p>2. The Subsystem - Level Crossing reports to the Subsystem - Electronic Interlocking the new monitoring status of the Level Crossing protection facility.</p><p><b>Postcondition:</b></p><p>—</p></div> <pre>sequenceDiagram     participant SIE as Subsystem - Electronic Interlocking     participant LCPF as Level Crossing protection facility     participant SLCS as Subsystem - Level Crossing      LCPF-&gt;&gt;SLCS: Status_Level_Crossing_Protection_Facility     activate SLCS     SLCS-&gt;&gt;SIE: Msg_LC_Monitoring_Status     deactivate SLCS</pre>		Default





ID	Type	Requirement Part 1	Requirement Part 2	Appl.
Eu.LC.634	Info	<div><p>SubSLC SD 2.4.3</p><p><b>SubSUC2.4: Report Detection Element Status</b></p><p>Alternative Scenario: Report failed detection element [SubSLC SD 2.4.3]</p><p><b>Precondition:</b></p><p>The <b>Subsystem - Level Crossing</b> is in the state <b>OPERATIONAL</b>. The <b>Subsystem - Level Crossing</b> is configured to use the <b>Detection element</b>.</p><p><b>Interaction 2.4.3.A:</b></p><p>1. - The <b>Subsystem - Level Crossing</b> detects a technical failure for the detection element related deactivation of the <b>Level Crossing</b> protection facility.</p><p>2. The <b>Subsystem - Level Crossing</b> reports to the <b>Subsystem - Electronic Interlocking</b> that the detection element status has been changed. The status of the <b>Detection element</b> is failed.</p><p><b>Postcondition:</b></p><p>---</p></div> 		Default
Eu.LC.643	Info	SubSUC2.5: Handle Local operations	The Subsystem-UseCase SubSUC2.5: Handle Local operations defines the handle of a request to activate or deactivate the Level Crossing protection facility from the Local operator to the Subsystem - Level Crossing.	Default
Eu.LC.644	Info	<div><p>SubSLC SD 2.5.1</p><p><b>SubSUC2.5: Handle Local operations</b></p><p>Alternative Scenario: Receiving a command that the handover of local operations is initiated [SubSLC SD 2.5.1]</p><p><b>Precondition:</b></p><p>The <b>Subsystem - Level Crossing</b> is in the state <b>OPERATIONAL</b>.</p><p><b>Interaction 2.5.1.A:</b></p><p>1. - The <b>Subsystem - Level Crossing</b> receives from the <b>Subsystem - Electronic Interlocking</b> the command that the handover of local operations for a specific index (e.g. track) is initiated.</p><p>2. The <b>Subsystem - Level Crossing</b> reports to the <b>Local operator</b> that the handover of the local operations is initiated for a specific index (e.g. track).</p><p><b>Postcondition:</b></p><p>---</p></div> 		Default
Eu.LC.653	Info	<div><p>SubSLC SD 2.5.2</p><p><b>SubSUC2.5: Handle Local operations</b></p><p>Alternative Scenario: Receiving an input to allow the handover of local operations by Local operator [SubSLC SD 2.5.2]</p><p><b>Precondition:</b></p><p>The <b>Subsystem - Level Crossing</b> is in the state <b>OPERATIONAL</b>.</p><p><b>Interaction 2.5.2.A:</b></p><p>1. - The <b>Subsystem - Level Crossing</b> receives the input from the <b>Local operator</b> to allow handover of local operation for a specific index (e.g. track).</p><p>2. The <b>Subsystem - Level Crossing</b> reports to the <b>Subsystem - Electronic Interlocking</b> that the <b>Local operator</b> has allowed the handover of local operations.</p><p><b>Postcondition:</b></p><p>---</p></div> 		Default

ID	Type	Requirement Part 1	Requirement Part 2	Appl.
Eu.LC.664	Info	<div><p>SubSLC SD 2.5.3</p><p><b>SubSUC2.5: Handle Local operations</b></p><p>Alternative Scenario: Receiving a command that the handover of local operations is established [SubSLC SD 2.5.3]</p><p><b>Precondition:</b></p><p>The <b>Subsystem - Level Crossing</b> is in the state <b>OPERATIONAL</b>.</p><p><b>Interaction 2.5.3.A:</b></p><p>1. - The <b>Subsystem - Level Crossing</b> receives from the <b>Subsystem - Electronic Interlocking</b> the command that the handover of local operations for a specific index (e.g. track) is established.</p><p>2. The <b>Subsystem - Level Crossing</b> reports to the <b>Local operator</b> that the handover of the local operations is established for a specific index (e.g. track).</p><p><b>Postcondition:</b></p><p>---</p></div> <pre>sequenceDiagram     participant SLE as Subsystem - Electronic Interlocking     participant LO as Local operator     participant SL as Subsystem - Level Crossing     SLE-&gt;&gt;SL: Cd_Local_Operation_Handover     SL--&gt;&gt;LO: Output_Established_Handover_To_Local_Operator</pre>		Default
Eu.LC.673	Info	<div><p>SubSLC SD 2.5.4</p><p><b>SubSUC2.5: Handle Local operations</b></p><p>Alternative Scenario: Receiving an input to return the handover of local operations by Local operator [SubSLC SD 2.5.4]</p><p><b>Precondition:</b></p><p>The <b>Subsystem - Level Crossing</b> is in the state <b>OPERATIONAL</b>.</p><p><b>Interaction 2.5.4.A:</b></p><p>1. - The <b>Subsystem - Level Crossing</b> receives the input from the <b>Local operator</b> to return handover of the local operations for a specific index (e.g. track).</p><p>2. The <b>Subsystem - Level Crossing</b> reports to the <b>Subsystem - Electronic Interlocking</b> that the <b>Local operator</b> has returned the handover of local operations.</p><p><b>Postcondition:</b></p><p>---</p></div> <pre>sequenceDiagram     participant SLE as Subsystem - Electronic Interlocking     participant LO as Local operator     participant SL as Subsystem - Level Crossing     LO-&gt;&gt;SL: Input_Return_Handover_To_Local_Operator     SL--&gt;&gt;SLE: Msg_Local_Operation_Handover</pre>		Default
Eu.LC.704	Info	<div><p>SubSLC SD 2.5.5</p><p><b>SubSUC2.5: Handle Local operations</b></p><p>Alternative Scenario: Receiving a command that the handover of local operations is returned [SubSLC SD 2.5.5]</p><p><b>Precondition:</b></p><p>The <b>Subsystem - Level Crossing</b> is in the state <b>OPERATIONAL</b>.</p><p><b>Interaction 2.5.5.A:</b></p><p>1. - The <b>Subsystem - Level Crossing</b> receives from the <b>Subsystem - Electronic Interlocking</b> the command that the handover of local operations for a specific index (e.g. track) is returned.</p><p>2. The <b>Subsystem - Level Crossing</b> reports to the <b>Local operator</b> that the handover of the local operations is returned for a specific index (e.g. track).</p><p><b>Postcondition:</b></p><p>---</p></div> <pre>sequenceDiagram     participant SLE as Subsystem - Electronic Interlocking     participant LO as Local operator     participant SL as Subsystem - Level Crossing     SLE-&gt;&gt;SL: Cd_Local_Operation_Handover     SL--&gt;&gt;LO: Output_No_Handover_To_Local_Operator</pre>		Default



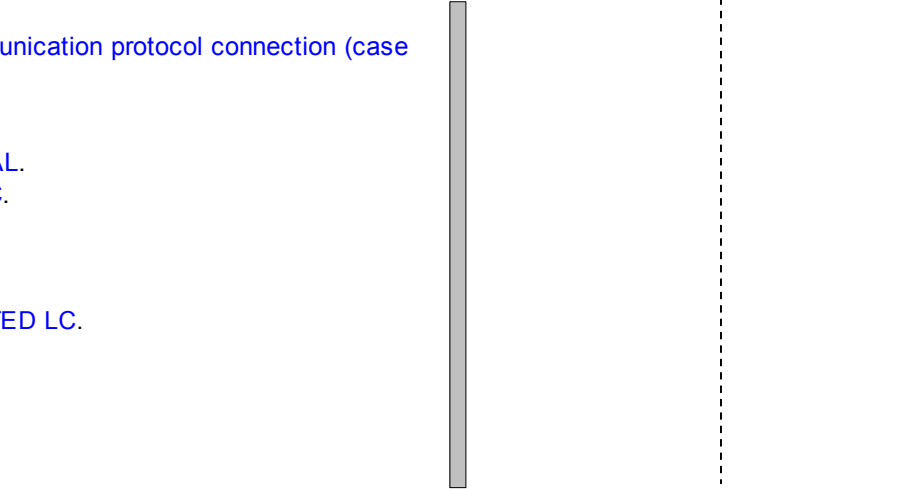
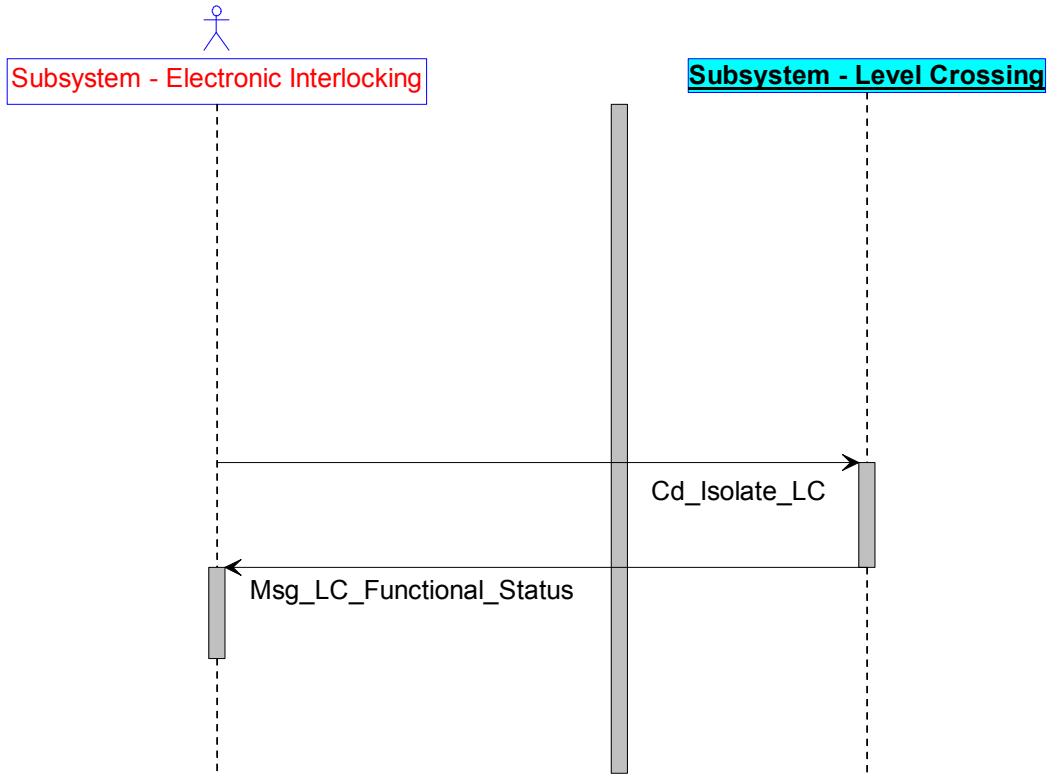
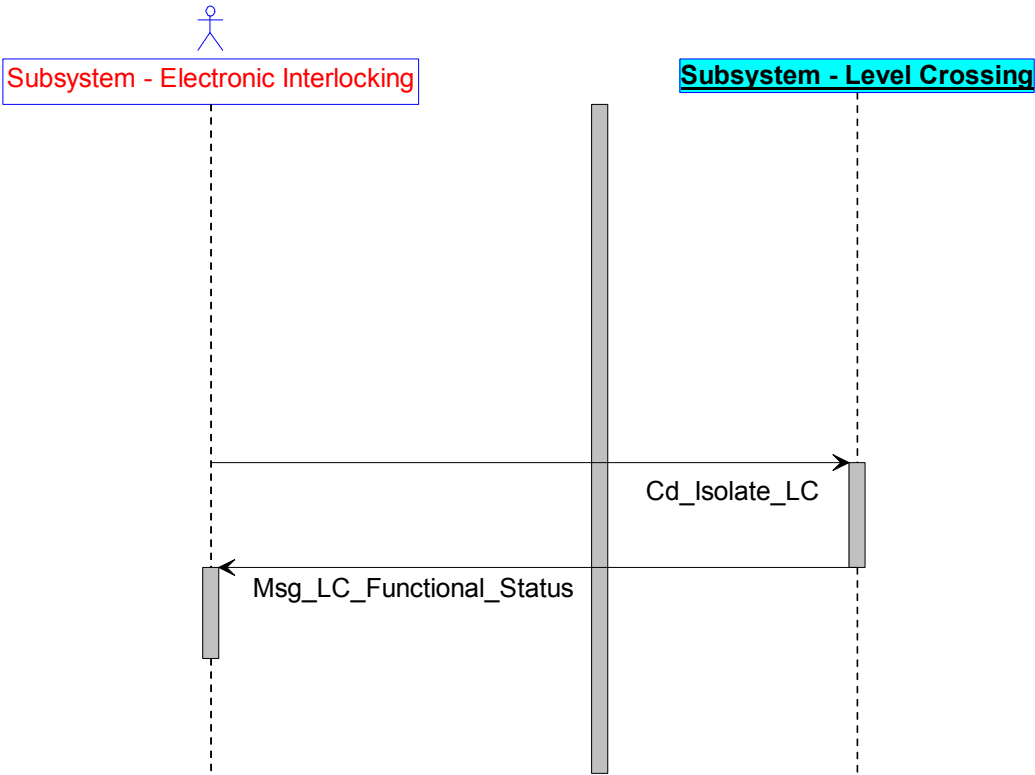
ID	Type	Requirement Part 1	Requirement Part 2	Appl.
Eu.LC.741	Info	<div><div><div>SubSLC SD 2.5.6</div><div><div><div><div><div>SubSUC2.5: Handle Local operations</div></div></div><div><div>Alternative Scenario: Activate the level crossing via local operations [SubSLC SD 2.5.6]</div></div><div><div>Precondition:</div><div>The Subsystem - Level Crossing is in the state OPERATIONAL.</div></div><div><div>Interaction 2.5.6.A:</div><div><div>1. - The Subsystem - Level Crossing detects a request for an activation from the Local operator for activating the Level Crossing protection facility.</div><div>2. The Subsystem - Level Crossing reports to the Subsystem - Electronic Interlocking that a local operator has requested a local activation.</div></div><div><div>Interaction 2.5.6.B:</div><div><div>3. - The Subsystem - Electronic Interlocking checks whether the conditions for a local operation are fulfilled.</div><div>4. The Subsystem - Level Crossing is activated.</div></div><div><div>Postcondition:</div><div>The Subsystem - Level Crossing is in the state ACTIVATED AND PROTECTED.</div></div></div></div></div><div><div><div><div><div>Subsystem - Electronic Interlocking</div><div>Local operator</div><div>Level Crossing protection facility</div><div>Subsystem - Level Crossing</div></div><div><div><div>Activate</div></div><div><div>Msg_Local_Request</div></div><div><div>refMain Success Scenario: Activate [SubSLC SD 2.1.1]</div></div></div></div></div></div></div></div></div>		Default
Eu.LC.753	Info	<div><div><div>SubSLC SD 2.5.7</div><div><div><div><div>SubSUC2.5: Handle Local operations</div></div></div><div><div>Alternative Scenario: Deactivate the level crossing via local operations [SubSLC SD 2.5.7]</div></div><div><div>Precondition:</div><div>The Subsystem - Level Crossing is in the state OPERATIONAL.</div></div><div><div>Interaction 2.5.7.A:</div><div><div>1. - The Subsystem - Level Crossing detects a request for a deactivation from the Local operator for activating the Level Crossing protection facility.</div><div>2. The Subsystem - Level Crossing reports to the Subsystem - Electronic Interlocking that a local operator has requested a local deactivation.</div></div><div><div>Interaction 2.5.7.B:</div><div><div>3. - The Subsystem - Electronic Interlocking checks whether the conditions for a local operation are fulfilled.</div><div>4. The Subsystem - Level Crossing is deactivated.</div></div><div><div>Postcondition:</div><div>The Subsystem - Level Crossing is in state DEACTIVATED AND UNPROTECTED.</div></div></div></div></div><div><div><div><div><div>Subsystem - Electronic Interlocking</div><div>Local operator</div><div>Level Crossing protection facility</div><div>Subsystem - Level Crossing</div></div><div><div><div>Deactivate</div></div><div><div>Msg_Local_Request</div></div><div><div>refMain Success Scenario: Deactivate [SubSLC SD 2.2.1]</div></div></div></div></div></div></div></div>		Default
Eu.LC.963	Info	SubSUC2.6: Handle irregularities	The Subsystem-UseCase SubSUC2.6: Handle irregularities defines the behaviour of the Subsystem - Level Crossing when an irregularity occurs.	Default

ID	Type	Requirement Part 1		Requirement Part 2	Appl.
Eu.LC.964	Info	<div><p>SubSLC SD 2.6.1</p><p><b>SubSUC2.6: Handle irregularities</b></p><p>Alternative Scenario: Closure timer overrun [SubSLC SD 2.6.1]</p><p><b>Precondition:</b></p><p>The <a href="#">Subsystem - Level Crossing</a> is configured to use the Closure Timer.</p><p>The <a href="#">Subsystem - Level Crossing</a> is in the state <b>OPERATIONAL</b>.</p><p><b>Interaction 2.6.1.A:</b></p><p>1. - The <a href="#">Subsystem - Level Crossing</a> detects the expired Closure Timer.</p><p>2. The <a href="#">Subsystem - Level Crossing</a> reports to the <a href="#">Subsystem - Electronic Interlocking</a> that the monitoring status has been changed. The status includes the information that Closure timer overrun occurred.</p><p><b>alt</b> [The <a href="#">Subsystem - Level Crossing</a> is configured to report a critical failure after a Closure timer overrun]</p><p>    <b>3.a1</b> The <a href="#">Subsystem - Level Crossing</a> reports to the <a href="#">Subsystem - Electronic Interlocking</a> that a critical failure occurred.</p><p><b>else alt</b> [The <a href="#">Subsystem - Level Crossing</a> is configured to report a non-critical failure after a Closure timer overrun]</p><p>    <b>3.a2</b> The <a href="#">Subsystem - Level Crossing</a> reports to the <a href="#">Subsystem - Electronic Interlocking</a> that a non-critical failure occurred.</p><p><b>else alt</b> [The <a href="#">Subsystem - Level Crossing</a> is configured to not report the failure status]</p><p>    <b>3.a3</b> The <a href="#">Subsystem - Level Crossing</a> doesn't reports the failure status.</p><p><b>end alt</b></p><p><b>Postcondition:</b></p><p>---</p></div>			Default
Eu.LC.978	Info	<div><p>SubSLC SD 2.6.2</p><p><b>SubSUC2.6: Handle irregularities</b></p><p>Alternative Scenario: Report an occurred failure [SubSLC SD 2.6.2]</p><p><b>Precondition:</b></p><p>The <a href="#">Subsystem - Level Crossing</a> is in the state <b>OPERATIONAL</b>.</p><p><b>Interaction 2.6.2.A:</b></p><p><b>alt</b> [There is a failure inside the <a href="#">Subsystem - Level Crossing</a>]</p><p>    <b>1.a1</b> - The <a href="#">Subsystem - Level Crossing</a> detects a failure.</p><p><b>else alt</b> [There is a failure inside the <a href="#">Level Crossing protection facility</a>]</p><p>    <b>1.b1</b> - The <a href="#">Level Crossing protection facility</a> detects a failure and reports it to the <a href="#">Subsystem - Level Crossing</a>.</p><p><b>end alt</b></p><p>2. The <a href="#">Subsystem - Level Crossing</a> reports to the <a href="#">Subsystem - Electronic Interlocking</a> that a failure occurred.</p><p><b>Postcondition:</b></p><p>---</p></div>			Default

ID	Type	Requirement Part 1	Requirement Part 2	Appl.
Eu.LC.1000	Info	<div><p>SubSLC SD 2.6.3</p><p><b><u>SubSUC2.6: Handle irregularities</u></b></p><p>Alternative Scenario: Report removed all failures [SubSLC SD 2.6.3]</p><p><b>Precondition:</b> The <b>Subsystem - Level Crossing</b> is in the state <b>OPERATIONAL</b>.</p><p><b>Interaction 2.6.3.A:</b></p><p><b>alt</b> [There was a failure inside the <b>Subsystem - Level Crossing</b>]</p><div><p><b>1.a1</b> - The <b>Subsystem - Level Crossing</b> detects that all occurred failures are removed.</p><p><b>else alt</b> [There was a failure inside the <b>Level Crossing protection facility</b>]</p><div><p><b>1.b1</b> - The <b>Level Crossing protection facility</b> detects that all occurred failures are removed and reports it to the <b>Subsystem - Level Crossing</b>.</p></div></div><p><b>end alt</b></p><p><b>2.</b> The <b>Subsystem - Level Crossing</b> reports to the <b>Subsystem - Electronic Interlocking</b> that no failures are present.</p><p><b>Postcondition:</b> ---</p></div> <pre>sequenceDiagram     participant A as Subsystem - Electronic Interlocking     participant B as Level Crossing protection facility     participant C as Subsystem - Level Crossing      alt [There was a failure inside the Subsystem - Level Crossing]         C-&gt;&gt;A: Status_Level_Crossing_Protection_Facility     else [There was a failure inside the Level Crossing protection facility]         B-&gt;&gt;C: Status_Level_Crossing_Protection_Facility         C-&gt;&gt;A: Msg_LC_Failure_Status     end</pre>		Default
Eu.LC.1013	Info	<div><p>SubSLC SD 2.6.4</p><p><b><u>SubSUC2.6: Handle irregularities</u></b></p><p>Alternative Scenario: Perform fallback operation [SubSLC SD 2.6.4]</p><p><b>Precondition:</b> ---</p><p><b>Interaction 2.6.4.A:</b></p><p><b>1.</b> - The <b>Subsystem - Level Crossing</b> enters the state <b>FALLBACK_MODE</b>.</p><p><b>2.</b> The <b>Subsystem - Level Crossing</b> requests the <b>Level Crossing protection facility</b> to change to the most safe national specific state.</p><p><b>Postcondition:</b> The <b>Subsystem - Level Crossing</b> is in the state <b>FALLBACK_MODE</b>. The <b>Subsystem - Level Crossing</b> is in the state according to the national requirements.</p></div> <pre>sequenceDiagram     participant A as Level Crossing protection facility     participant B as Subsystem - Level Crossing      B-&gt;&gt;A: National_Specific_State</pre>		Default

ID	Type	Requirement Part 1	Requirement Part 2	Appl.
Eu.LC.1023	Info	<div><p>SubSLC SD 2.6.5</p><p><b>SubSUC2.6: Handle irregularities</b></p><p>Alternative Scenario: Handle an interruption of the Safe communication protocol connection (case 1) [SubSLC SD 2.6.5]</p><p><b>Precondition:</b></p><p>The <b>Subsystem - Level Crossing</b> is in the state <b>OPERATIONAL</b>. The <b>Subsystem - Level Crossing</b> is configured to deactivate the <b>Level Crossing protection facility</b> after it was activated caused by an interrupted <b>Safe communication protocol</b> connection. The <b>Subsystem - Level Crossing</b> is <u>not</u> in the state <b>ISOLATED LC</b>.</p><p><b>Interaction 2.6.5.A:</b></p><p>1. - The event <b>T10_SCP_Connection_Terminated</b> occurs.</p><p><b>alt</b> [The <b>Subsystem - Level Crossing</b> is in state <b>DEACTIVATED AND UNPROTECTED</b> or <b>PRE-ACTIVATED</b>]</p><p><b>par</b></p><p><b>2.a1.a1</b> The <b>Subsystem - Level Crossing</b> activates the <b>Level Crossing protection facility</b>.</p><p><b>also par</b></p><p><b>2.a1.a2</b> If the <b>Subsystem - Level Crossing</b> is configured to deactivate the <b>Level Crossing protection facility</b> after a configured timer when the <b>Safe communication protocol</b> connection is interrupted, the <b>Subsystem - Level Crossing</b> will start the <b>Con_t_PDI_Loss_Deactivation_Timer</b>.</p><p><b>also par</b></p><p><b>2.a1.a3</b> If the <b>Subsystem - Level Crossing</b> is configured to use the Closure Timer the <b>Subsystem - Level Crossing</b> will start the Closure Timer.</p><p><b>end par</b></p><p><b>else alt</b> [The <b>Subsystem - Level Crossing</b> is in state <b>ACTIVATED AND PROTECTED</b> or <b>ACTIVATED AND UNPROTECTED</b>.</p><p><b>2.b1</b> If the <b>Subsystem - Level Crossing</b> is configured to deactivate the <b>Level Crossing protection facility</b> after a configured timer when the <b>Safe communication protocol</b> connection is interrupted, the <b>Subsystem - Level Crossing</b> will start the <b>Con_t_PDI_Loss_Deactivation_Timer</b>.</p><p><b>end alt</b></p><p><b>Interaction 2.6.5.B:</b></p><p>3. - After the <b>Con_t_PDI_Loss_Deactivation_Timer</b> is expired, the <b>Subsystem - Level Crossing</b> deactivates the <b>Level Crossing protection facility</b>.</p><p><b>Postcondition:</b></p><p>The <b>Subsystem - Level Crossing</b> is in the state <b>INITIALISING</b>. The <b>Safe communication protocol</b> connection is terminated. The <b>Subsystem - Level Crossing</b> is in state <b>DEACTIVATED AND UNPROTECTED</b>.</p></div> <p><b>SubSUC2.6: Handle irregularities</b></p> <p>Alternative Scenario: Handle an interruption of the Safe communication protocol connection (case 2) [SubSLC SD 2.6.6]</p> <p><b>Precondition:</b></p> <p>The <b>Subsystem - Level Crossing</b> is in the state <b>OPERATIONAL</b>.</p> <p><b>Interaction 2.6.6.A:</b></p> <p>1. - The event <b>T3_Reset</b> occurs.</p> <p>2. The event <b>T12_Terminate_SCP_Connection</b> is triggered.</p> <p>3. The <b>Subsystem - Level Crossing</b> activates the <b>Level Crossing protection facility</b>.</p> <p>4. If the <b>Subsystem - Level Crossing</b> is configured to use the Closure Timer the <b>Subsystem - Level Crossing</b> will start the Closure Timer.</p> <p><b>Postcondition:</b></p> <p>The <b>Subsystem - Level Crossing</b> is in the state <b>BOOTING</b>. The <b>Subsystem - Level Crossing</b> is in the state <b>ACTIVATED AND UNPROTECTED</b>.</p>		Default
Eu.LC.1045	Info	<div><p>SubSLC SD 2.6.6</p><p><b>SubSUC2.6: Handle irregularities</b></p><p>Alternative Scenario: Handle an interruption of the Safe communication protocol connection (case 2) [SubSLC SD 2.6.6]</p><p><b>Precondition:</b></p><p>The <b>Subsystem - Level Crossing</b> is in the state <b>OPERATIONAL</b>.</p><p><b>Interaction 2.6.6.A:</b></p><p>1. - The event <b>T3_Reset</b> occurs.</p><p>2. The event <b>T12_Terminate_SCP_Connection</b> is triggered.</p><p>3. The <b>Subsystem - Level Crossing</b> activates the <b>Level Crossing protection facility</b>.</p><p>4. If the <b>Subsystem - Level Crossing</b> is configured to use the Closure Timer the <b>Subsystem - Level Crossing</b> will start the Closure Timer.</p><p><b>Postcondition:</b></p><p>The <b>Subsystem - Level Crossing</b> is in the state <b>BOOTING</b>. The <b>Subsystem - Level Crossing</b> is in the state <b>ACTIVATED AND UNPROTECTED</b>.</p></div> <p><b>SubSUC2.6: Handle irregularities</b></p> <p>Alternative Scenario: Handle an interruption of the Safe communication protocol connection (case 2) [SubSLC SD 2.6.6]</p> <p><b>Precondition:</b></p> <p>The <b>Subsystem - Level Crossing</b> is in the state <b>OPERATIONAL</b>.</p> <p><b>Interaction 2.6.6.A:</b></p> <p>1. - The event <b>T3_Reset</b> occurs.</p> <p>2. The event <b>T12_Terminate_SCP_Connection</b> is triggered.</p> <p>3. The <b>Subsystem - Level Crossing</b> activates the <b>Level Crossing protection facility</b>.</p> <p>4. If the <b>Subsystem - Level Crossing</b> is configured to use the Closure Timer the <b>Subsystem - Level Crossing</b> will start the Closure Timer.</p> <p><b>Postcondition:</b></p> <p>The <b>Subsystem - Level Crossing</b> is in the state <b>BOOTING</b>. The <b>Subsystem - Level Crossing</b> is in the state <b>ACTIVATED AND UNPROTECTED</b>.</p>		Default

ID	Type	Requirement Part 1	Requirement Part 2	Appl.
Eu.LC.1060	Info	<div><p>SubSLC SD 2.6.7</p><p><b>SubSUC2.6: Handle irregularities</b></p><p>Alternative Scenario: Handle an interruption of the Safe communication protocol connection (case 3) [SubSLC SD 2.6.7]</p><p><b>Precondition:</b></p><p>The Subsystem - Level Crossing is in the state INITIALISING or FALLBACK_MODE.</p><p><b>Interaction 2.6.7.A:</b></p><ol style="list-style-type: none"><li>- The event T3_Reset occurs.</li><li>The Subsystem - Level Crossing activates the Level Crossing protection facility.</li><li>If the Subsystem - Level Crossing is configured to use the Closure Timer the Subsystem - Level Crossing will start the Closure Timer.</li></ol><p><b>Postcondition:</b></p><p>The Subsystem - Level Crossing is in the state BOOTING. The Subsystem - Level Crossing is in the state ACTIVATED AND UNPROTECTED.</p></div> <pre>sequenceDiagram     actor User     participant LCP as Level Crossing protection facility     participant SL as Subsystem - Level Crossing     LCP-&gt;&gt;SL: Activate     activate SL     SL-&gt;&gt;SL: Start_Con_tmax_Closure_Timer     deactivate SL</pre>		Default
Eu.LC.1073	Info	<div><p>SubSLC SD 2.6.8</p><p><b>SubSUC2.6: Handle irregularities</b></p><p>Alternative Scenario: Supply voltage of the Subsystem has gone outside the required range for operation [SubSLC SD 2.6.8]</p><p><b>Precondition:</b></p><p>---</p><p><b>Interaction 2.6.8.A:</b></p><ol style="list-style-type: none"><li>- The Subsystem - Level Crossing enters the state NO_OPERATING_VOLTAGE.</li><li>The Subsystem - Level Crossing activates the Level Crossing protection facility.</li><li>If the Subsystem - Level Crossing is configured to use the Closure Timer the Subsystem - Level Crossing will start the Closure Timer.</li></ol><p><b>Postcondition:</b></p><p>The Subsystem - Level Crossing is in the state ACTIVATED AND UNPROTECTED.</p></div> <pre>sequenceDiagram     actor User     participant LCP as Level Crossing protection facility     participant SL as Subsystem - Level Crossing     SL-&gt;&gt;LCP: Activate     activate LCP     LCP-&gt;&gt;LCP: Start_Con_tmax_Closure_Timer     deactivate LCP</pre>		Default
Eu.LC.1126	Info	<div><p>SubSLC SD 2.6.9</p><p><b>SubSUC2.6: Handle irregularities</b></p><p>Alternative Scenario: Report changed status of protection of an activated LC [SubSLC SD 2.6.9]</p><p><b>Precondition:</b></p><p>The Subsystem - Level Crossing is in the state OPERATIONAL. The Subsystem - Level Crossing is in the state ACTIVATED AND PROTECTED.</p><p><b>Interaction 2.6.9.A:</b></p><ol style="list-style-type: none"><li>- The Level Crossing protection facility reports the new status activated and unprotected to the Subsystem - Level Crossing.</li><li>The Subsystem - Level Crossing reports to the Subsystem - Electronic Interlocking that the functional status has been changed to ACTIVATED AND UNPROTECTED.</li></ol><p><b>Postcondition:</b></p><p>The Subsystem - Level Crossing is in the state ACTIVATED AND UNPROTECTED.</p></div> <pre>sequenceDiagram     actor User     participant SEI as Subsystem - Electronic Interlocking     participant LCP as Level Crossing protection facility     participant SL as Subsystem - Level Crossing     LCP-&gt;&gt;SL: Status_Level_Crossing_Protection_Facility     activate SL     SL-&gt;&gt;SEI: Msg_LC_Functional_Status     deactivate SL</pre>		Default

ID	Type	Requirement Part 1	Requirement Part 2	Appl.
Eu.LC.1140	Info	<p>SubSLC SD 2.6.10</p> <p><b>SubSUC2.6: Handle irregularities</b></p> <p>Alternative Scenario: Handle an interruption of the Safe communication protocol connection (case 4) [SubSLC SD 2.6.10]</p> <p><b>Precondition:</b></p> <p>The <a href="#">Subsystem - Level Crossing</a> is in the state <a href="#">OPERATIONAL</a>. The <a href="#">Subsystem - Level Crossing</a> is in the state <a href="#">ISOLATED LC</a>.</p> <p><b>Interaction 2.6.10.A:</b></p> <p>1. - The event <a href="#">T10_SCP_Connection_Terminated</a> occurs.</p> <p>2. The <a href="#">Subsystem - Level Crossing</a> stays in the state <a href="#">ISOLATED LC</a>.</p> <p><b>Postcondition:</b></p> <p>The <a href="#">Subsystem - Level Crossing</a> is in the state <a href="#">INITIALISING</a>. The <a href="#">Safe communication protocol</a> connection is terminated. The <a href="#">Subsystem - Level Crossing</a> is in state <a href="#">ISOLATED LC</a>.</p> 		Default
Eu.LC.1164	Info	SubSUC2.7: Handle isolate LC	The Subsystem-UseCase SubSUC2.7: Handle isolate LC defines the behaviour of the Subsystem - Level Crossing in case of a command Isolate LC.	Default
Eu.LC.1165	Info	<p>SubSLC 2.7.1</p> <p><b>SubSUC2.7: Handle isolate LC</b></p> <p>Alternative Scenario: Isolate LC [SubSLC 2.7.1]</p> <p><b>Precondition:</b></p> <p>The <a href="#">Subsystem - Level Crossing</a> is configured to use isolation. The <a href="#">Subsystem - Level Crossing</a> is in the state <a href="#">OPERATIONAL</a>. The <a href="#">Subsystem - Level Crossing</a> is in the state <a href="#">DEACTIVATED AND UNPROTECTED</a>.</p> <p><b>Interaction 2.7.1.A:</b></p> <p>1. - The <a href="#">Subsystem - Level Crossing</a> receives from the <a href="#">Subsystem - Electronic Interlocking</a> the command to be isolated.</p> <p>2. The <a href="#">Subsystem - Level Crossing</a> reports to the <a href="#">Subsystem - Electronic Interlocking</a> that the functional status has been changed.</p> <p><b>Postcondition:</b></p> <p>The <a href="#">Subsystem - Level Crossing</a> is in the state <a href="#">ISOLATED LC</a>.</p> 		Default
Eu.LC.1174	Info	<p>SubSLC 2.7.2</p> <p><b>SubSUC2.7: Handle isolate LC</b></p> <p>Alternative Scenario: Not isolate LC [SubSLC 2.7.2]</p> <p><b>Precondition:</b></p> <p>The <a href="#">Subsystem - Level Crossing</a> is configured to use isolation. The <a href="#">Subsystem - Level Crossing</a> is in the state <a href="#">OPERATIONAL</a>. The <a href="#">Subsystem - Level Crossing</a> is in the state <a href="#">ISOLATED LC</a>.</p> <p><b>Interaction 2.7.2.A:</b></p> <p>1. - The <a href="#">Subsystem - Level Crossing</a> receives from the <a href="#">Subsystem - Electronic Interlocking</a> the command to be not isolated.</p> <p>2. The <a href="#">Subsystem - Level Crossing</a> reports to the <a href="#">Subsystem - Electronic Interlocking</a> that the functional status has been changed.</p> <p><b>Postcondition:</b></p> <p>The <a href="#">Subsystem - Level Crossing</a> is in the state <a href="#">DEACTIVATED AND UNPROTECTED</a>.</p> 		Default
Eu.LC.1248	Info	3.1.3.5 Subsystem-UseCases "Maintenance"		Default



ID	Type	Requirement Part 1		Requirement Part 2	Appl.
Eu.LC.1249	Info	<div>Subsystem – Level Crossing - UseCase Definition - Maintenance [SubSLC UCD 3]</div> <div><div>uc Subsystem – Level Crossing - UseCase Definition - Maintenance [SubSLC UCD 3]</div><div><div>Subsystem - Level Crossing</div><div><div>SubSUC3.1: Collect and provide event-driven diagnostic data</div><div>SubSUC3.2: Collect and provide preventive diagnostic data</div><div>SubSUC3.3: Update specific software</div><div>SubSUC3.4: Display status of Subsystem - Level Crossing locally</div></div><div><div>Subsystem - Maintenance and Data Management</div><div>Maintainer</div></div></div></div>			Default
Eu.LC.1250	Info	SubSUC3.1: Collect and provide event-driven diagnostic data		The Subsystem-UseCase SubSUC3.1: Collect and provide event-driven diagnostic data defines the event driven collection and provision of diagnostic data in case of irregularities.	Default
Eu.LC.1251	Info	SubSUC3.2: Collect and provide preventive diagnostic data		The Subsystem-UseCase SubSUC3.2: Collect and provide preventive diagnostic data defines the continuous collection and provision of diagnostic data for preventive maintenance.	Default
Eu.LC.1252	Info	SubSUC3.3: Update specific software		The Subsystem-UseCase SubSUC3.3: Update specific software defines the process of updating the specific software between Subsystem - Maintenance and Data Management and the Subsystem.	Default
Eu.LC.1253	Info	SubSUC3.4: Display status of Subsystem - Level Crossing locally		The SubSUC3.4: Display status of Subsystem - Level Crossing locally defines the local display of the EULYNX field element Subsystem.	Default
Eu.LC.1973	Head	3.2 Subsystem requirements			-
Eu.LC.1974	Head	3.2.1 Connection context			-
Eu.LC.1975	Info	The connection context is defined in Eu.Doc.20.			-
Eu.LC.1976	Head	3.2.2 Logical architectures			-
Eu.LC.1977	Head	3.2.2.1 Process Data Interface protocol SCI-LC			-

ID	Type	Requirement Part 1	Requirement Part 2	Appl.
Eu.LC.1981	Req	<div>SCI-LC PDI SR - Logical Partitioning [SCI-LC PDI BDD 1]</div> <div><b>bdd</b> SCI-LC PDI SR - Logical Partitioning [SCI-LC PDI BDD 1]</div> <div></div>	Process Data Interface SCI-LC	-
Eu.LC.1978	Req	SCI-LC PDI SR		-
Eu.LC.1980	Req	<div>SCI-LC PDI SR - Logical Architecture [SCI-LC PDI IBD 1]</div> <div><b>ibd</b> SCI-LC PDI SR - Logical Architecture [SCI-LC PDI IBD 1]</div> <div></div>		-
Eu.LC.1979	Req	SAP_SubS_EIL		-
Eu.LC.2288	Req	SAP_SubS_LC		-
Eu.LC.1982	Head	3.2.2.2 Subsystem - Level Crossing		-

Process Data Interface SCI-LC

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ID	Type	Requirement Part 1	Requirement Part 2	Appl.
Eu.LC.1985	Req	<div>Subsystem - Level Crossing SR - Logical Partitioning [SubS LC BDD 2]</div> <div><b>bdd</b> Subsystem - Level Crossing SR - Logical Partitioning [SubS LC BDD 2]</div> <div><pre>classDiagram     class EULYNX_field_element_Subsystem_SR["«block» EULYNX field element Subsystem SR"]     class SubS_LC_SR["«block» SubS LC SR"]     class F_SCI_LC_SR["«block» F_SCI_LC_SR"]     class F_SCI_EfeS_Sec_SR["«block» F_SCI_EfeS_Sec_SR"]     class F_LC_Functions_SR["«block» F_LC_Functions_SR"]     class F_EST_EfeS_SR["«block» F_EST_EfeS_SR"]      EULYNX_field_element_Subsystem_SR &lt; -- SubS_LC_SR     SubS_LC_SR *-- "1" F_SCI_LC_SR     SubS_LC_SR *-- "1" F_SCI_EfeS_Sec_SR     SubS_LC_SR *-- "1" F_LC_Functions_SR     SubS_LC_SR *-- "1" F_EST_EfeS_SR</pre></div>		-
Eu.LC.1983	Req	SubS LC SR		-
Eu.LC.1984	Req	<div>Subsystem - Level Crossing SR - Logical Architecture [SubS LC IBD 2]</div> <div><b>ibd</b> Subsystem - Level Crossing SR - Logical Architecture [SubS LC IBD 2]</div> <div><pre>classDiagram     class SubS_LC_SR["«block» SubS LC SR"]     class SCI_LC     class F_SCI_EfeS_Sec_SR["F_SCI_EfeS_Sec_SR"]     class F_EST_EfeS_SR["F_EST_EfeS_SR"]     class F_SCI_LC_SR["F_SCI_LC_SR"]     class F_LC_Functions_SR["F_LC_Functions_SR"]      SubS_LC_SR -- SCI_LC     SubS_LC_SR -- F_SCI_EfeS_Sec_SR     SubS_LC_SR -- F_EST_EfeS_SR     SubS_LC_SR -- F_SCI_LC_SR     SubS_LC_SR -- F_LC_Functions_SR      F_SCI_EfeS_Sec_SR --&gt; F_SCI_LC_SR : T6_Start_Status_Report     F_SCI_EfeS_Sec_SR --&gt; F_SCI_LC_SR : T9_Status_Report_Completed     F_SCI_EfeS_Sec_SR --&gt; F_SCI_LC_SR : D50_PDI_Connection_State     F_EST_EfeS_SR --&gt; F_SCI_LC_SR : D51_EST_EfeS_State     F_SCI_LC_SR --&gt; F_LC_Functions_SR : D50_PDI_Connection_State     F_SCI_LC_SR --&gt; F_LC_Functions_SR : T52_All_Status_send     F_SCI_LC_SR --&gt; F_LC_Functions_SR : T101_Realise_Activation     F_SCI_LC_SR --&gt; F_LC_Functions_SR : DT101_Realise_Activation     F_SCI_LC_SR --&gt; F_LC_Functions_SR : T102_Realise_Deactivation     F_SCI_LC_SR --&gt; F_LC_Functions_SR : DT102_Realise_Deactivation     F_SCI_LC_SR --&gt; F_LC_Functions_SR : T103_Realise_Local_Operation_Handover     F_SCI_LC_SR --&gt; F_LC_Functions_SR : DT103_Realise_Local_Operation_Handover     F_SCI_LC_SR --&gt; F_LC_Functions_SR : T104_Realise_Isolate_LC     F_SCI_LC_SR --&gt; F_LC_Functions_SR : DT104_Realise_Isolate_LC     F_SCI_LC_SR --&gt; F_LC_Functions_SR : T105_Report_LC_Functional_Status     F_SCI_LC_SR --&gt; F_LC_Functions_SR : DT105_Report_LC_Functional_Status     F_SCI_LC_SR --&gt; F_LC_Functions_SR : T106_Report_LC_Monitoring_Status     F_SCI_LC_SR --&gt; F_LC_Functions_SR : DT106_Report_LC_Monitoring_Status     F_SCI_LC_SR --&gt; F_LC_Functions_SR : T107_Report_LC_Failure_Status     F_SCI_LC_SR --&gt; F_LC_Functions_SR : DT107_Report_LC_Failure_Status     F_SCI_LC_SR --&gt; F_LC_Functions_SR : T108_Report_Detection_Element_Status     F_SCI_LC_SR --&gt; F_LC_Functions_SR : DT108_Report_Detection_Element_Status     F_SCI_LC_SR --&gt; F_LC_Functions_SR : T109_Report_Obstacle_Detection_Status     F_SCI_LC_SR --&gt; F_LC_Functions_SR : DT109_Report_Obstacle_Detection_Status     F_SCI_LC_SR --&gt; F_LC_Functions_SR : T110_Report_Local_Operation_Handover     F_SCI_LC_SR --&gt; F_LC_Functions_SR : DT110_Report_Local_Operation_Handover     F_SCI_LC_SR --&gt; F_LC_Functions_SR : T111_Report_Local_Request     F_SCI_LC_SR --&gt; F_LC_Functions_SR : DT111_Report_Local_Request     F_SCI_LC_SR --&gt; F_LC_Functions_SR : T199_All_Status_Send     F_SCI_LC_SR --&gt; F_LC_Functions_SR : D50_EST_EfeS_State     F_SCI_LC_SR --&gt; F_LC_Functions_SR : T49_Report_Status     F_SCI_LC_SR --&gt; F_LC_Functions_SR : T1_Cd_Activation     F_SCI_LC_SR --&gt; F_LC_Functions_SR : DT1_Cd_Activation     F_SCI_LC_SR --&gt; F_LC_Functions_SR : T2_Cd_Deactivation     F_SCI_LC_SR --&gt; F_LC_Functions_SR : DT2_Cd_Deactivation     F_SCI_LC_SR --&gt; F_LC_Functions_SR : T3_Cd_Local_Operation_Handover     F_SCI_LC_SR --&gt; F_LC_Functions_SR : DT3_Cd_Local_Operation_Handover     F_SCI_LC_SR --&gt; F_LC_Functions_SR : T4_Cd_Isolate_LC     F_SCI_LC_SR --&gt; F_LC_Functions_SR : DT4_Cd_Isolate_LC     F_SCI_LC_SR --&gt; F_LC_Functions_SR : T5_Msg_LC_Functional_Status     F_SCI_LC_SR --&gt; F_LC_Functions_SR : DT5_Msg_LC_Functional_Status     F_SCI_LC_SR --&gt; F_LC_Functions_SR : T6_Msg_LC_Monitoring_Status     F_SCI_LC_SR --&gt; F_LC_Functions_SR : DT6_Msg_LC_Monitoring_Status     F_SCI_LC_SR --&gt; F_LC_Functions_SR : T7_Msg_LC_Failure_Status     F_SCI_LC_SR --&gt; F_LC_Functions_SR : DT7_Msg_LC_Failure_Status     F_SCI_LC_SR --&gt; F_LC_Functions_SR : T8_Msg_Detection_Element_Status     F_SCI_LC_SR --&gt; F_LC_Functions_SR : DT8_Msg_Detection_Element_Status     F_SCI_LC_SR --&gt; F_LC_Functions_SR : T9_Msg_Obstacle_Detection_Status     F_SCI_LC_SR --&gt; F_LC_Functions_SR : DT9_Msg_Obstacle_Detection_Status     F_SCI_LC_SR --&gt; F_LC_Functions_SR : T10_Msg_Local_Operation_Handover     F_SCI_LC_SR --&gt; F_LC_Functions_SR : DT10_Msg_Local_Operation_Handover     F_SCI_LC_SR --&gt; F_LC_Functions_SR : T11_Msg_Local_Request     F_SCI_LC_SR --&gt; F_LC_Functions_SR : DT11_Msg_Local_Request     F_SCI_LC_SR --&gt; F_LC_Functions_SR : D60_LC_Failure     F_SCI_LC_SR --&gt; F_LC_Functions_SR : D61_Con_tmax_Closure_Timer     F_SCI_LC_SR --&gt; F_LC_Functions_SR : D62_Con_t_PDI_Con_Loss_Deactivation_Timer     F_SCI_LC_SR --&gt; F_LC_Functions_SR : D63_Con_Use_Closure_Timer     F_SCI_LC_SR --&gt; F_LC_Functions_SR : D64_Con_Use_PDI_Con_Loss_Deactivation_Timer     F_SCI_LC_SR --&gt; F_LC_Functions_SR : D65_Con_Use_Pre_Activation     F_SCI_LC_SR --&gt; F_LC_Functions_SR : D66_Con_Use_Obstacle_Detection     F_SCI_LC_SR --&gt; F_LC_Functions_SR : D67_Con_Use_Isolation     F_SCI_LC_SR --&gt; F_LC_Functions_SR : D68_Failure_Status_After_Closure_Timer_Overrun     F_SCI_LC_SR --&gt; F_LC_Functions_SR : T30_Status_LCPF     F_SCI_LC_SR --&gt; F_LC_Functions_SR : DT30_Status_LCPF     F_SCI_LC_SR --&gt; F_LC_Functions_SR : T31_Activate_LCPF     F_SCI_LC_SR --&gt; F_LC_Functions_SR : T32_Deactivate_LCPF     F_SCI_LC_SR --&gt; F_LC_Functions_SR : T33_Pre_Activate_LCPF     F_SCI_LC_SR --&gt; F_LC_Functions_SR : T34_National_Specific_State_LCPF     F_SCI_LC_SR --&gt; F_LC_Functions_SR : T108_Detection_Element_Status     F_SCI_LC_SR --&gt; F_LC_Functions_SR : DT108_Detection_Element_Status     F_SCI_LC_SR --&gt; F_LC_Functions_SR : D108_Con_Use_Detection_Element     F_SCI_LC_SR --&gt; F_LC_Functions_SR : T40_Activate_By_Local_Operator     F_SCI_LC_SR --&gt; F_LC_Functions_SR : T41_Deactivate_By_Local_Operator     F_SCI_LC_SR --&gt; F_LC_Functions_SR : T42_Output_Initiated_Handover_To_Local_Operator     F_SCI_LC_SR --&gt; F_LC_Functions_SR : T43_Output_Established_Handover_To_Local_Operator     F_SCI_LC_SR --&gt; F_LC_Functions_SR : T44_Output_No_Handover_To_Local_Operator     F_SCI_LC_SR --&gt; F_LC_Functions_SR : T45_Input_Allow_Handover_To_Local_Operator     F_SCI_LC_SR --&gt; F_LC_Functions_SR : T46_Input_Return_Handover_To_Local_Operator</pre></div>		-
Eu.LC.2290	Req	SCI_LC		-

ID	Type	Requirement Part 1	Requirement Part 2	Appl.
Eu.LC.2289	Req	LC6		-
Eu.LC.2363	Req	LC4		-
Eu.LC.2364	Req	LC5		-
Eu.LC.1986	Head	3.2.3 Logical components		-
Eu.LC.2230	Info	S_SCI_LC_SR		-
Eu.LC.2265	Req	<div>S_SCI_LC_SR - Events [SCI LC IBD 1]<div><div>ibd S_SCI_LC_SR - Events [SCI LC IBD 1]</div><div><div>«block» S_SCI_LC_SR</div><div>«Operation» cOp1_init ()<div><div><div>T1_Realise_Activation : PulsedIn</div><div>T2_Realise_Deactivation : PulsedIn</div><div>T3_Realise_Local_Operation_Handover : PulsedIn</div><div>T4_Realise_Isolate_LC : PulsedIn</div><div>DT4_Realise_Isolate_LC : String</div><div>D50_PDI_Connection_State : String</div><div>T105_Msg_LC_Functional_Status : PulsedIn</div><div>DT105_Msg_LC_Functional_Status : String</div><div>T106_Msg_LC_Monitoring_Status : PulsedIn</div><div>DT106_Msg_LC_Monitoring_Status : String</div><div>T107_Msg_LC_Failure_Status : PulsedIn</div><div>DT107_Msg_LC_Failure_Status : String</div><div>T108_Msg_Detection_Element_Status : PulsedIn</div><div>DT108_Msg_Detection_Element_Status : String</div><div>T109_Msg_Obstacle_Detection_Status : PulsedIn</div><div>DT109_Msg_Obstacle_Detection_Status : String</div><div>T110_Msg_Local_Operation_Handover : PulsedIn</div><div>DT110_Msg_Local_Operation_Handover : String</div><div>T111_Msg_Local_Request : PulsedIn</div><div>DT111_Msg_Local_Request : String</div></div><div><div>T5_Report_LC_Functional_Status : PulsedOut</div><div>DT5_Report_LC_Functional_Status : String</div><div>T6_Report_LC_Monitoring_Status : PulsedOut</div><div>DT6_Report_LC_Monitoring_Status : String</div><div>T7_Report_LC_Failure_Status : PulsedOut</div><div>DT7_Report_LC_Failure_Status : String</div><div>T8_Report_Detection_Element_Status : PulsedOut</div><div>DT8_Report_Detection_Element_Status : String</div><div>T9_Report_Obstacle_Detection_Status : PulsedOut</div><div>DT9_Report_Obstacle_Detection_Status : String</div><div>T10_Report_Local_Operation_Handover : PulsedOut</div><div>DT10_Report_Local_Operation_Handover : String</div><div>T11_Report_Local_Request : PulsedOut</div><div>DT11_Report_Local_Request : String</div><div>T101_Cd_Activation : PulsedOut</div><div>DT101_Cd_Activation : String</div><div>T102_Cd_Deactivation : PulsedOut</div><div>T103_Cd_Local_Operation_Handover : PulsedOut</div><div>DT103_Cd_Local_Operation_Handover : String</div><div>T104_Cd_Isolate_LC : PulsedOut</div><div>DT104_Cd_Isolate_LC : String</div></div></div></div></div></div></div>		-
Eu.LC.2231	Req	cOp1_init	T101_Cd_Activation := FALSE; DT101_Cd_Activation := "undefined"; T102_Cd_Deactivation := FALSE; T103_Cd_Local_Operation_Handover := FALSE; DT103_Cd_Local_Operation_Handover := "undefined"; T104_Cd_Isolate_LC := FALSE; DT104_Cd_Isolate_LC := "undefined"; T5_Report_LC_Functional_Status := FALSE; DT5_Report_LC_Functional_Status := "undefined"; T6_Report_LC_Monitoring_Status := FALSE; DT6_Report_LC_Monitoring_Status := "undefined"; T7_Report_LC_Failure_Status := FALSE; DT7_Report_LC_Failure_Status := "undefined"; T8_Report_Detection_Element_Status := FALSE; DT8_Report_Detection_Element_Status := "undefined"; T9_Report_Obstacle_Detection_Status := FALSE; DT9_Report_Obstacle_Detection_Status := "undefined"; T10_Report_Local_Operation_Handover := FALSE; DT10_Report_Local_Operation_Handover := "undefined"; T11_Report_Local_Request := TRUE; DT11_Report_Local_Request := "undefined";	-
Eu.LC.2279	Req	T1_Realise_Activation		-
Eu.LC.2245	Req	DT1_Realise_Activation		-
Eu.LC.2280	Req	T2_Realise_Deactivation		-
Eu.LC.2281	Req	T3_Realise_Local_Operation_Handover		-
Eu.LC.2246	Req	DT3_Realise_Local_Operation_Handover		-

ID	Type	Requirement Part 1	Requirement Part 2	Appl.
Eu.LC.2282	Req	T4_Realise_Isolate_LC		-
Eu.LC.2247	Req	DT4_Realise_Isolate_LC		-
Eu.LC.2283	Req	T5_Report_LC_Functional_Status		-
Eu.LC.2248	Req	DT5_Report_LC_Functional_Status		-
Eu.LC.2284	Req	T6_Report_LC_Monitoring_Status		-
Eu.LC.2249	Req	DT6_Report_LC_Monitoring_Status		-
Eu.LC.2285	Req	T7_Report_LC_Failure_Status		-
Eu.LC.2250	Req	DT7_Report_LC_Failure_Status		-
Eu.LC.2286	Req	T8_Report_Detection_Element_Status		-
Eu.LC.2251	Req	DT8_Report_Detection_Element_Status		-
Eu.LC.2287	Req	T9_Report_Obstacle_Detection_Status		-
Eu.LC.2252	Req	DT9_Report_Obstacle_Detection_Status		-
Eu.LC.2275	Req	T10_Report_Local_Operation_Handover		-
Eu.LC.2241	Req	DT10_Report_Local_Operation_Handover		-
Eu.LC.2278	Req	T11_Report_Local_Request		-
Eu.LC.2244	Req	DT11_Report_Local_Request		-
Eu.LC.2232	Req	D50_PDI_Connection_State		-
Eu.LC.2266	Req	T101_Cd_Activation		-
Eu.LC.2233	Req	DT101_Cd_Activation		-
Eu.LC.2267	Req	T102_Cd_Deactivation		-
Eu.LC.2268	Req	T103_Cd_Local_Operation_Handover		-
Eu.LC.2234	Req	DT103_Cd_Local_Operation_Handover		-
Eu.LC.2269	Req	T104_Cd_Isolate_LC		-
Eu.LC.2235	Req	DT104_Cd_Isolate_LC		-
Eu.LC.2270	Req	T105_Msg_LC_Functional_Status		-
Eu.LC.2236	Req	DT105_Msg_LC_Functional_Status		-
Eu.LC.2271	Req	T106_Msg_LC_Monitoring_Status		-
Eu.LC.2237	Req	DT106_Msg_LC_Monitoring_Status		-
Eu.LC.2272	Req	T107_Msg_LC_Failure_Status		-
Eu.LC.2238	Req	DT107_Msg_LC_Failure_Status		-
Eu.LC.2273	Req	T108_Msg_Detection_Element_Status		-
Eu.LC.2239	Req	DT108_Msg_Detection_Element_Status		-
Eu.LC.2274	Req	T109_Msg_Obstacle_Detection_Status		-
Eu.LC.2240	Req	DT109_Msg_Obstacle_Detection_Status		-
Eu.LC.2276	Req	T110_Msg_Local_Operation_Handover		-
Eu.LC.2242	Req	DT110_Msg_Local_Operation_Handover		-
Eu.LC.2277	Req	T111_Msg_Local_Request		-
Eu.LC.2243	Req	DT111_Msg_Local_Request		-
Eu.LC.2253	Info	S_SCI_LC_SR - Behaviour		-

ID	Type	Requirement Part 1	Requirement Part 2	Appl.
Eu.LC.2259	Req	<div>SCI_LC STD 1</div> <div>S_SCI_LC_SR - Behaviour</div> <div><pre>stateDiagram-v2     [*] --&gt; WatingForStartOfReportStatus : /cOp1_init() ;     WatingForStartOfReportStatus --&gt; WatingForStartOfReportStatus : when( D50_PDI_Connection_State &lt;&gt; "ESTABLISHED" ) /     WatingForStartOfReportStatus --&gt; WatingForStartOfReportStatus : when( D50_PDI_Connection_State = "RECEIVING_STATUS" ) /     WatingForStartOfReportStatus --&gt; WatingForStartOfReportStatus : when( D50_PDI_Connection_State = "INIT_TIMEOUT" OR D50_PDI_Connection_State = "PROTOCOL_ERROR" OR D50_PDI_Connection_State = "TELEGRAM_ERROR" ) /     WatingForStartOfReportStatus --&gt; ReportStatus : [D50_PDI_Connection_State = "RECEIVING_STATUS"] /     ReportStatus --&gt; TransmitCommandsOrMessages : when( D50_PDI_Connection_State = "ESTABLISHED" ) /     TransmitCommandsOrMessages --&gt; WatingForStartOfReportStatus : when( D50_PDI_Connection_State = "RECEIVING_STATUS" ) /</pre><p>The diagram illustrates the state transitions for the S_SCI_LC_SR subsystem. It starts at an initial state (Initial0) and transitions to the WATING_FOR_START_OF_REPORT_STATUS state upon receiving the /cOp1_init() signal. From WATING_FOR_START_OF_REPORT_STATUS, there are three self-loop transitions: one for when D50_PDI_Connection_State is not ESTABLISHED, one for when it is RECEIVING_STATUS, and one for when it is INIT_TIMEOUT, PROTOCOL_ERROR, or TELEGRAM_ERROR. A transition to the REPORT_STATUS state occurs when D50_PDI_Connection_State is RECEIVING_STATUS. From REPORT_STATUS, a transition to the TRANSMIT_COMMANDS_OR_MESSAGES state occurs when D50_PDI_Connection_State is ESTABLISHED. Finally, a transition back to WATING_FOR_START_OF_REPORT_STATUS occurs from TRANSMIT_COMMANDS_OR_MESSAGES when D50_PDI_Connection_State is RECEIVING_STATUS.</p></div>		-
Eu.LC.2254	Info	Initial0		-
Eu.LC.2255	Req	/cOp1_init():{Initial0 - WATING_FOR_START_OF_REPORT_STATUS}		-
Eu.LC.2262	Info	WATING_FOR_START_OF_REPORT_STATUS		-
Eu.LC.2263	Req	[D50_PDI_Connection_State = "RECEIVING_STATUS"]/{WATING_FOR_START_OF_REPORT_STATUS - REPORT_STATUS}		-
Eu.LC.2264	Req	when(D50_PDI_Connection_State = "RECEIVING_STATUS")/{WATING_FOR_START_OF_REPORT_STATUS - REPORT_STATUS}		-
Eu.LC.2256	Info	REPORT_STATUS		-
Eu.LC.2258	Req	when(D50_PDI_Connection_State = "INIT_TIMEOUT" OR D50_PDI_Connection_State = "PROTOCOL_ERROR" OR D50_PDI_Connection_State = "TELEGRAM_ERROR")/{REPORT_STATUS - WATING_FOR_START_OF_REPORT_STATUS}		-
Eu.LC.2344	Req	when(T105_Msg_LC_Functional_Status)/DT5_Report_LC_Functional_Status := DT105_Msg_LC_Functional_Status; T5_Report_LC_Functional_Status := TRUE;{State-internal in REPORT_STATUS}		-
Eu.LC.2345	Req	when(T106_Msg_LC_Monitoring_Status)/DT6_Report_LC_Monitoring_Status := DT106_Msg_LC_Monitoring_Status; T6_Report_LC_Monitoring_Status := TRUE;{State-internal in REPORT_STATUS}		-
Eu.LC.2346	Req	when(T107_Msg_LC_Failure_Status)/DT7_Report_LC_Failure_Status := DT107_Msg_LC_Failure_Status; T7_Report_LC_Failure_Status := TRUE;{State-internal in REPORT_STATUS}		-

ID	Type	Requirement Part 1	Requirement Part 2	Appl.
Eu.LC.2347	Req	when(T108_Msg_Detection_Element_Status)/DT8_Report_Detection_Element_Status := DT108_Msg_Detection_Element_Status; T8_Report_Detection_Element_Status := TRUE;{State-internal in REPORT_STATUS}		-
Eu.LC.2348	Req	when(T109_Msg_Obstacle_Detection_Status)/DT9_Report_Obstacle_Detection_Status := DT109_Msg_Obstacle_Detection_Status; T9_Report_Obstacle_Detection_Status := TRUE;{State-internal in REPORT_STATUS}		-
Eu.LC.2257	Req	when(D50_PDI_Connection_State = "ESTABLISHED")/{REPORT_STATUS - TRANSMIT_COMMANDS_OR_MESSAGES}		-
Eu.LC.2260	Info	TRANSMIT_COMMANDS_OR_MESSAGES		-
Eu.LC.2358	Req	when(T1_Realise_Activation)/DT101_Cd_Activation := DT1_Realise_Activation; T101_Cd_Activation := TRUE;{State-internal in TRANSMIT_COMMANDS_OR_MESSAGES}		-
Eu.LC.2359	Req	when(T2_Realise_Deactivation)/T102_Cd_Deactivation := TRUE;{State-internal in TRANSMIT_COMMANDS_OR_MESSAGES}		-
Eu.LC.2350	Req	when(T3_Realise_Local_Operation_Handover)/DT103_Cd_Local_Operation_Handover := DT3_Realise_Local_Operation_Handover; T103_Cd_Local_Operation_Handover := TRUE;{State-internal in TRANSMIT_COMMANDS_OR_MESSAGES}		-
Eu.LC.2351	Req	when(T4_Realise_Isolate_LC)/DT104_Cd_Isolate_LC := DT4_Realise_Isolate_LC; T104_Cd_Isolate_LC := TRUE;{State-internal in TRANSMIT_COMMANDS_OR_MESSAGES}		-
Eu.LC.2349	Req	when(T105_Msg_LC_Functional_Status)/DT5_Report_LC_Functional_Status := DT105_Msg_LC_Functional_Status; T5_Report_LC_Functional_Status := TRUE;{State-internal in TRANSMIT_COMMANDS_OR_MESSAGES}		-
Eu.LC.2352	Req	when(T106_Msg_LC_Monitoring_Status)/DT6_Report_LC_Monitoring_Status := DT106_Msg_LC_Monitoring_Status; T6_Report_LC_Monitoring_Status := TRUE;{State-internal in TRANSMIT_COMMANDS_OR_MESSAGES}		-
Eu.LC.2353	Req	when(T107_Msg_LC_Failure_Status)/DT7_Report_LC_Failure_Status := DT107_Msg_LC_Failure_Status; T7_Report_LC_Failure_Status := TRUE;{State-internal in TRANSMIT_COMMANDS_OR_MESSAGES}		-
Eu.LC.2354	Req	when(T108_Msg_Detection_Element_Status)/DT8_Report_Detection_Element_Status := DT108_Msg_Detection_Element_Status; T8_Report_Detection_Element_Status := TRUE;{State-internal in TRANSMIT_COMMANDS_OR_MESSAGES}		-
Eu.LC.2355	Req	when(T109_Msg_Obstacle_Detection_Status)/DT9_Report_Obstacle_Detection_Status := DT109_Msg_Obstacle_Detection_Status; T9_Report_Obstacle_Detection_Status := TRUE;{State-internal in TRANSMIT_COMMANDS_OR_MESSAGES}		-
Eu.LC.2356	Req	when(T110_Msg_Local_Operation_Handover)/DT10_Report_Local_Operation_Handover := DT110_Msg_Local_Operation_Handover; T10_Report_Local_Operation_Handover := TRUE;{State-internal in TRANSMIT_COMMANDS_OR_MESSAGES}		-
Eu.LC.2357	Req	when(T111_Msg_Local_Request)/DT11_Report_Local_Request := DT111_Msg_Local_Request; T11_Report_Local_Request := TRUE;{State-internal in TRANSMIT_COMMANDS_OR_MESSAGES}		-
Eu.LC.2261	Req	when(D50_PDI_Connection_State <> "ESTABLISHED")/{TRANSMIT_COMMANDS_OR_MESSAGES - WATING_FOR_START_OF_REPORT_STATUS}		-
Eu.LC.2171	Info	F_SCI_LC_SR		-



ID	Type	Requirement Part 1	Requirement Part 2	Appl.
Eu.LC.2205	Req	<div><div>F_SCI_LC_SR - Events [SCI LC IBD 2]</div><div><div>ibd F_SCI_LC_SR - Events [SCI LC IBD 2]</div><div><div>«block» F_SCI_LC_SR</div><div>Operation</div><div>«Operation» cOp1_init ()</div><div><div><div>T1_Cd_Activation : PulsedIn</div><div>T5_Msg_LC_Functional_Status : PulsedOut</div></div><div><div>DT1_Cd_Activation : String</div><div>DT5_Msg_LC_Functional_Status : String</div></div><div><div>T2_Cd_Deactivation : PulsedIn</div><div>T6_Msg_LC_Monitoring_Status : PulsedOut</div></div><div><div>T3_Cd_Local_Operation_Handover : PulsedIn</div><div>DT6_Msg_LC_Monitoring_Status : String</div></div><div><div>DT3_Cd_Local_Operation_Handover : String</div><div>T7_Msg_LC_Failure_Status : PulsedOut</div></div><div><div>T4_Cd_Isolate_LC : PulsedIn</div><div>DT7_Msg_LC_Failure_Status : String</div></div><div><div>DT4_Cd_Isolate_LC : String</div><div>T8_Msg_Detection_Element_Status : PulsedOut</div></div><div><div>D50_PDI_Connection_State : String</div><div>DT8_Msg_Detection_Element_Status : String</div></div><div><div>T105_Report_LC_Functional_Status : PulsedIn</div><div>T9_Msg_Obstacle_Detection_Status : PulsedOut</div></div><div><div>DT105_Report_LC_Functional_Status : String</div><div>DT9_Msg_Obstacle_Detection_Status : String</div></div><div><div>T106_Report_LC_Monitoring_Status : PulsedIn</div><div>T10_Msg_Local_Operation_Handover : PulsedOut</div></div><div><div>DT106_Report_LC_Monitoring_Status : String</div><div>DT10_Msg_Local_Operation_Handover : String</div></div><div><div>T107_Report_LC_Failure_Status : PulsedIn</div><div>T11_Msg_Local_Request : PulsedOut</div></div><div><div>DT107_Report_LC_Failure_Status : String</div><div>DT11_Msg_Local_Request : String</div></div><div><div>T108_Report_Detection_Element_Status : PulsedIn</div><div>T52_All_Status_send : PulsedOut</div></div><div><div>DT108_Report_Detection_Element_Status : String</div><div>T101_Realise_Activation : PulsedOut</div></div><div><div>T109_Report_Obstacle_Detection_Status : PulsedIn</div><div>DT101_Realise_Activation : String</div></div><div><div>DT109_Report_Obstacle_Detection_Status : String</div><div>T102_Realise_Deactivation : PulsedOut</div></div><div><div>T110_Report_Local_Operation_Handover : PulsedIn</div><div>T103_Realise_Local_Operation_Handover : PulsedOut</div></div><div><div>DT110_Report_Local_Operation_Handover : String</div><div>DT103_Realise_Local_Operation_Handover : String</div></div><div><div>T111_Report_Local_Request : PulsedIn</div><div>T104_Realise_Isolate_LC : PulsedOut</div></div><div><div>DT111_Report_Local_Request : String</div><div>DT104_Realise_Isolate_LC : String</div></div><div><div>T199_All_Status_Send</div></div></div></div></div></div>		-
Eu.LC.2172	Req	cOp1_init	T101_Realise_Activation := FALSE; DT101_Realise_Activation := "undefined"; T102_Realise_Deactivation := FALSE; T103_Realise_Local_Operation_Handover := FALSE; DT103_Realise_Local_Operation_Handover := "undefined"; T104_Realise_Isolate_LC := FALSE; DT104_Realise_Isolate_LC := "undefined"; T5_Msg_LC_Functional_Status := FALSE; DT5_Msg_LC_Functional_Status := "undefined"; T6_Msg_LC_Monitoring_Status := FALSE; DT6_Msg_LC_Monitoring_Status := "undefined"; T7_Msg_LC_Failure_Status := FALSE; DT7_Msg_LC_Failure_Status := "undefined"; T8_Msg_Detection_Element_Status := FALSE; DT8_Msg_Detection_Element_Status := "undefined"; T9_Msg_Obstacle_Detection_Status := FALSE; DT9_Msg_Obstacle_Detection_Status := "undefined"; T10_Msg_Local_Operation_Handover := FALSE; DT10_Msg_Local_Operation_Handover := "undefined"; T11_Msg_Local_Request := FALSE; DT11_Msg_Local_Request := "undefined"; T52_All_Status_send := FALSE;	-
Eu.LC.2220	Req	T1_Cd_Activation		-
Eu.LC.2186	Req	DT1_Cd_Activation		-
Eu.LC.2221	Req	T2_Cd_Deactivation		-
Eu.LC.2222	Req	T3_Cd_Local_Operation_Handover		-
Eu.LC.2187	Req	DT3_Cd_Local_Operation_Handover		-
Eu.LC.2223	Req	T4_Cd_Isolate_LC		-
Eu.LC.2188	Req	DT4_Cd_Isolate_LC		-
Eu.LC.2225	Req	T5_Msg_LC_Functional_Status		-

ID	Type	Requirement Part 1	Requirement Part 2	Appl.
Eu.LC.2189	Req	DT5_Msg_LC_Functional_Status		-
Eu.LC.2226	Req	T6_Msg_LC_Monitoring_Status		-
Eu.LC.2190	Req	DT6_Msg_LC_Monitoring_Status		-
Eu.LC.2227	Req	T7_Msg_LC_Failure_Status		-
Eu.LC.2191	Req	DT7_Msg_LC_Failure_Status		-
Eu.LC.2228	Req	T8_Msg_Detection_Element_Status		-
Eu.LC.2192	Req	DT8_Msg_Detection_Element_Status		-
Eu.LC.2229	Req	T9_Msg_Obstacle_Detection_Status		-
Eu.LC.2193	Req	DT9_Msg_Obstacle_Detection_Status		-
Eu.LC.2215	Req	T10_Msg_Local_Operation_Handover		-
Eu.LC.2182	Req	DT10_Msg_Local_Operation_Handover		-
Eu.LC.2218	Req	T11_Msg_Local_Request		-
Eu.LC.2185	Req	DT11_Msg_Local_Request		-
Eu.LC.2173	Req	D50_PDI_Connection_State		-
Eu.LC.2224	Req	T52_All_Status_send		-
Eu.LC.2206	Req	T101_Realise_Activation		-
Eu.LC.2174	Req	DT101_Realise_Activation		-
Eu.LC.2207	Req	T102_Realise_Deactivation		-
Eu.LC.2208	Req	T103_Realise_Local_Operation_Handover		-
Eu.LC.2175	Req	DT103_Realise_Local_Operation_Handover		-
Eu.LC.2209	Req	T104_Realise_Isolate_LC		-
Eu.LC.2176	Req	DT104_Realise_Isolate_LC		-
Eu.LC.2210	Req	T105_Report_LC_Functional_Status		-
Eu.LC.2177	Req	DT105_Report_LC_Functional_Status		-
Eu.LC.2211	Req	T106_Report_LC_Monitoring_Status		-
Eu.LC.2178	Req	DT106_Report_LC_Monitoring_Status		-
Eu.LC.2212	Req	T107_Report_LC_Failure_Status		-
Eu.LC.2179	Req	DT107_Report_LC_Failure_Status		-
Eu.LC.2213	Req	T108_Report_Detection_Element_Status		-
Eu.LC.2180	Req	DT108_Report_Detection_Element_Status		-
Eu.LC.2214	Req	T109_Report_Obstacle_Detection_Status		-
Eu.LC.2181	Req	DT109_Report_Obstacle_Detection_Status		-
Eu.LC.2216	Req	T110_Report_Local_Operation_Handover		-
Eu.LC.2183	Req	DT110_Report_Local_Operation_Handover		-
Eu.LC.2217	Req	T111_Report_Local_Request		-
Eu.LC.2184	Req	DT111_Report_Local_Request		-
Eu.LC.2219	Req	T199_All_Status_Send		-
Eu.LC.2194	Info	F_SCI_LC_SR - Behaviour		-

ID	Type	Requirement Part 1	Requirement Part 2	Appl.
Eu.LC.2200	Req	<div>SCI_LC STD 2</div> <div>F_SCI_LC_SR - Behaviour</div> <div><div><div>Initial0</div><div>/cOp1_init() ;</div><div>WATING_FOR_START_OF_REPORT_STATUS</div><div>when( D50_PDI_Connection_State &lt;&gt; "ESTABLISHED" ) /</div><div>when( D50_PDI_Connection_State = "PROTOCOL_ERROR" OR D50_PDI_Connection_State = "TELEGRAM_ERROR" OR D50_PDI_Connection_State = "CLOSING" ) /</div><div>REPORT_STATUS</div><div>when( D50_PDI_Connection_State = "SENDING_STATUS" ) /</div><div>TRANSMIT_COMMANDS_OR_MESSAGES</div><div>when( D50_PDI_Connection_State = "ESTABLISHED" ) /</div></div></div>		-
Eu.LC.2195	Info	Initial0		-
Eu.LC.2196	Req	/cOp1_init();{Initial0 - WATING_FOR_START_OF_REPORT_STATUS}		-
Eu.LC.2203	Info	WATING_FOR_START_OF_REPORT_STATUS		-
Eu.LC.2204	Req	when(D50_PDI_Connection_State = "SENDING_STATUS")/{WATING_FOR_START_OF_REPORT_STATUS - REPORT_STATUS}		-
Eu.LC.2197	Info	REPORT_STATUS		-
Eu.LC.2199	Req	when(D50_PDI_Connection_State = "PROTOCOL_ERROR" OR D50_PDI_Connection_State = "TELEGRAM_ERROR" OR D50_PDI_Connection_State = "CLOSING")/{REPORT_STATUS - WATING_FOR_START_OF_REPORT_STATUS}		-
Eu.LC.2332	Req	when(T199_All_Status_Send)/T52_All_Status_send := TRUE;{State-internal in REPORT_STATUS}		-
Eu.LC.2327	Req	when(T105_Report_LC_Functional_Status)/DT5_Msg_LC_Functional_Status := DT105_Report_LC_Functional_Status;T5_Msg_LC_Functional_Status := TRUE;{State-internal in REPORT_STATUS}		-



ID	Type	Requirement Part 1	Requirement Part 2	Appl.
Eu.LC.2328	Req	when(T106_Report_LC_Monitoring_Status)/DT6_Msg_LC_Monitoring_Status := DT106_Report_LC_Monitoring_Status; T6_Msg_LC_Monitoring_Status := TRUE;{State-internal in REPORT_STATUS}		-
Eu.LC.2329	Req	when(T107_Report_LC_Failure_Status)/DT7_Msg_LC_Failure_Status := DT107_Report_LC_Failure_Status; T7_Msg_LC_Failure_Status := TRUE;{State-internal in REPORT_STATUS}		-
Eu.LC.2330	Req	when(T108_Report_Detection_Element_Status)/ DT8_Msg_Detection_Element_Status := DT108_Report_Detection_Element_Status; T8_Msg_Detection_Element_Status := TRUE;{State-internal in REPORT_STATUS}		-
Eu.LC.2331	Req	when(T109_Report_Obstacle_Detection_Status)/ DT9_Msg_Obstacle_Detection_Status := DT109_Report_Obstacle_Detection_Status; T9_Msg_Obstacle_Detection_Status := TRUE;{State-internal in REPORT_STATUS}		-
Eu.LC.2198	Req	when(D50_PDI_Connection_State  = "ESTABLISHED")/{REPORT_STATUS - TRANSMIT_COMMANDS_OR_MESSAGES}		-
Eu.LC.2201	Info	TRANSMIT_COMMANDS_OR_MESSAGES		-
Eu.LC.2202	Req	when(D50_PDI_Connection_State <> "ESTABLISHED")/{TRANSMIT_COMMANDS_OR_MESSAGES - WATING_FOR_START_OF_REPORT_STATUS}		-
Eu.LC.2342	Req	when(T1_Cd_Activation)/DT101_Realise_Activation := DT1_Cd_Activation; T101_Realise_Activation := TRUE;{State-internal in TRANSMIT_COMMANDS_OR_MESSAGES}		-
Eu.LC.2343	Req	when(T2_Cd_Deactivation)/T102_Realise_Deactivation := TRUE;{State-internal in TRANSMIT_COMMANDS_OR_MESSAGES}		-
Eu.LC.2334	Req	when(T3_Cd_Local_Operation_Handover)/DT103_Realise_Local_Operation_Handover := DT3_Cd_Local_Operation_Handover; T103_Realise_Local_Operation_Handover := TRUE;{State-internal in TRANSMIT_COMMANDS_OR_MESSAGES}		-
Eu.LC.2335	Req	when(T4_Cd_Isolate_LC)/DT104_Realise_Isolate_LC := DT4_Cd_Isolate_LC; T104_Realise_Isolate_LC := TRUE;{State-internal in TRANSMIT_COMMANDS_OR_MESSAGES}		-
Eu.LC.2333	Req	when(T105_Report_LC_Functional_Status)/DT5_Msg_LC_Functional_Status := DT105_Report_LC_Functional_Status; T5_Msg_LC_Functional_Status := TRUE;{State-internal in TRANSMIT_COMMANDS_OR_MESSAGES}		-
Eu.LC.2336	Req	when(T106_Report_LC_Monitoring_Status)/DT6_Msg_LC_Monitoring_Status := DT106_Report_LC_Monitoring_Status; T6_Msg_LC_Monitoring_Status := TRUE;{State-internal in TRANSMIT_COMMANDS_OR_MESSAGES}		-
Eu.LC.2337	Req	when(T107_Report_LC_Failure_Status)/DT7_Msg_LC_Failure_Status := DT107_Report_LC_Failure_Status; T7_Msg_LC_Failure_Status := TRUE;{State-internal in TRANSMIT_COMMANDS_OR_MESSAGES}		-
Eu.LC.2338	Req	when(T108_Report_Detection_Element_Status)/DT8_Msg_Detection_Element_Status := DT108_Report_Detection_Element_Status; T8_Msg_Detection_Element_Status := TRUE;{State-internal in TRANSMIT_COMMANDS_OR_MESSAGES}		-
Eu.LC.2339	Req	when(T109_Report_Obstacle_Detection_Status)/DT9_Msg_Obstacle_Detection_Status := DT109_Report_Obstacle_Detection_Status; T9_Msg_Obstacle_Detection_Status := TRUE;{State-internal in TRANSMIT_COMMANDS_OR_MESSAGES}		-
Eu.LC.2340	Req	when(T110_Report_Local_Operation_Handover)/DT10_Msg_Local_Operation_Handover := DT110_Report_Local_Operation_Handover; T10_Msg_Local_Operation_Handover := TRUE;{State-internal in TRANSMIT_COMMANDS_OR_MESSAGES}		-
Eu.LC.2341	Req	when(T111_Report_Local_Request)/DT11_Msg_Local_Request := DT111_Report_Local_Request; T11_Msg_Local_Request := TRUE;{State-internal in TRANSMIT_COMMANDS_OR_MESSAGES}		-
Eu.LC.1987	Info	F_LC_Functions_SR		-

ID	Type	Requirement Part 1	Requirement Part 2	Appl.
Eu.LC.2144	Req	<div><div>F_LC_Functions_SR - Events [SCI_LC IBD 1]</div><div><div><div>ibdd F_LC_Functions_SR - Events [SCI_LC IBD 1]</div><div><div>«block»<div>F_LC_Functions_SR</div><div>Operation<div>«Operation» cOp1_Init () «Operation» cOp2_React_On_Closure_Timer_Overrun () «Operation» cOp3_React_On_No_Closure_Timer_Overrun ()</div><div>values<div>«BlockProperty» Mem_Closure_Timer_Expired : Boolean «BlockProperty» Mem_Closure_Timer_Running : Boolean «BlockProperty» Mem_Last_LC_State : String</div></div></div></div><div><div><div>T1_Cd_Activation : PulsedIn</div><div>T5_Msg_LC_Functional_Status : PulsedOut</div><div>DT1_Cd_Activation : String</div><div>DT5_Msg_LC_Functional_Status : String</div><div>T2_Cd_Deactivation : PulsedIn</div><div>T6_Msg_LC_Monitoring_Status : PulsedOut</div><div>T3_Cd_Local_Operation_Handover : PulsedIn</div><div>DT6_Msg_LC_Monitoring_Status : String</div><div>DT3_Cd_Local_Operation_Handover : String</div><div>T7_Msg_LC_Failure_Status : PulsedOut</div><div>T4_Cd_Isolate_LC : PulsedIn</div><div>DT7_Msg_LC_Failure_Status : String</div><div>DT4_Cd_Isolate_LC : String</div><div>T8_Msg_Local_Request : PulsedOut</div><div>T30_Status_LCPF : PulsedIn</div><div>DT8_Msg_Local_Request : String</div><div>DT30_Status_LCPF : String</div><div>T9_Msg_Local_Operation_Handover : PulsedOut</div><div>T40_Activate_By_Local_Operator : PulsedIn</div><div>DT9_Msg_Local_Operation_Handover : String</div><div>T41_Deactivate_By_Local_Operator : PulsedIn</div><div>T18_Msg_Detection_Element_Status : PulsedOut</div><div>T45_Input_Allow_Handover_To_Local_Operator : PulsedIn</div><div>DT18_Msg_Detection_Element_Status : String</div><div>T46_Input_Return_Handover_To_Local_Operator : PulsedIn</div><div>T31_Activate_LCPF : PulsedOut</div><div>T49_Report_Status : PulsedIn</div><div>T32_Deactivate_LCPF : PulsedOut</div><div>D50_EST_EfeS_State : String</div><div>T33_Pre_Activate_LCPF : PulsedOut</div><div>D60_LC_Failure : Boolean</div><div>T34_National_Specific_State_LCPF : PulsedOut</div><div>D61_Con_tmax_Closure_Timer : Integer</div><div>T42_Output_Initiated_Handover_To_Local_Operator : PulsedOut</div><div>D62_Con_t_PDI_Con_Loss_Deactivation_Timer : Integer</div><div>T43_Output_Established_Handover_To_Local_Operator : PulsedOut</div><div>D63_Con_Use_Closure_Timer : Boolean</div><div>T44_Output_No_Handover_To_Local_Operator : PulsedOut</div><div>D64_Con_Use_PDI_Con_Loss_Deactivation_Timer : Boolean</div><div>T91_Msg_Obstacle_Detection_Status : PulsedOut</div><div>D65_Con_Use_Pre_Activation : Boolean</div><div>DT91_Msg_Obstacle_Detection_Status : String</div><div>D66_Con_Use_Obstacle_Detection : Boolean</div><div>T99_Msg_All_Status_Send : PulsedOut</div><div>D67_Con_Use_Isolation : Boolean</div><div></div><div>D68_Failure_Status_After_Closure_Timer_Overrun : String</div><div></div><div>T108_Detection_Element_Status : PulsedIn</div><div></div><div>DT108_Detection_Element_Status : String</div><div></div><div>D108_Con_Use_Detection_Element : Boolean</div><div></div></div></div></div></div></div></div>		
Eu.LC.1988	Req	cOp1_Init	T5_Msg_LC_Functional_Status := FALSE; DT5_Msg_LC_Functional_Status := "undefined"; T6_Msg_LC_Monitoring_Status := FALSE; DT6_Msg_LC_Monitoring_Status := "undefined"; T7_Msg_LC_Failure_Status := FALSE; DT7_Msg_LC_Failure_Status := "undefined"; T8_Msg_Local_Request := FALSE; DT8_Msg_Local_Request := "undefined"; T9_Msg_Local_Operation_Handover := FALSE; DT9_Msg_Local_Operation_Handover := "undefined"; T31_Activate_LCPF := FALSE; T32_Deactivate_LCPF := FALSE; T33_Pre_Activate_LCPF := FALSE; T34_National_Specific_State_LCPF := FALSE; T42_Output_Initiated_Handover_To_Local_Operator := FALSE; T43_Output_Established_Handover_To_Local_Operator := FALSE; T44_Output_No_Handover_To_Local_Operator := FALSE; T18_Msg_Detection_Element_Status := FALSE; DT18_Msg_Detection_Element_Status := "undefined"; T91_Msg_Obstacle_Detection_Status := FALSE; DT91_Msg_Obstacle_Detection_Status := "undefined";	-
Eu.LC.1989	Req	cOp2_React_On_Closure_Timer_Overrun	if D68_Failure_Status_After_Closure_Timer_Overrun = "non critical failure report" then DT6_Msg_LC_Monitoring_Status := "Closure timer overrun occurred"; T6_Msg_LC_Monitoring_Status := TRUE;	-

ID	Type	Requirement Part 1	Requirement Part 2	Appl.
			<div>DT7_Msg_LC_Failure_Status := "A non critical failure is present"; T7_Msg_LC_Failure_Status := TRUE;</div> <div>elseif D68_Failure_Status_After_Closure_Timer_Overrun = "critical failure report" then DT6_Msg_LC_Monitoring_Status := "Closure timer overrun occurred"; T6_Msg_LC_Monitoring_Status := TRUE; DT7_Msg_LC_Failure_Status := "A critical failure is present"; T7_Msg_LC_Failure_Status := TRUE;</div> <div>else DT6_Msg_LC_Monitoring_Status := "Closure timer overrun occurred"; T6_Msg_LC_Monitoring_Status := TRUE;</div> <div>end if</div>	
Eu.LC.2367		cOp3_React_On_No_Closure_Timer_Overrun	<div>if D68_Failure_Status_After_Closure_Timer_Overrun = "non critical failure report" then DT6_Msg_LC_Monitoring_Status := "No Closure timer overrun"; T6_Msg_LC_Monitoring_Status := TRUE; DT7_Msg_LC_Failure_Status := "No failure present"; T7_Msg_LC_Failure_Status := TRUE;</div> <div>elseif D68_Failure_Status_After_Closure_Timer_Overrun = "critical failure report" then DT6_Msg_LC_Monitoring_Status := "No Closure timer overrun"; T6_Msg_LC_Monitoring_Status := TRUE; DT7_Msg_LC_Failure_Status := "No failure present"; T7_Msg_LC_Failure_Status := TRUE;</div> <div>else DT6_Msg_LC_Monitoring_Status := "No Closure timer overrun"; T6_Msg_LC_Monitoring_Status := TRUE;</div> <div>end if</div>	-
Eu.LC.2147	Req	T1_Cd_Activation	The FlowPort T1_Cd_Activation refines the Flow Property Cd_Activation.	-
Eu.LC.2003	Req	DT1_Cd_Activation	The FlowPort DT1_Cd_Activation belongs to T1_Cd_Activation.	-
Eu.LC.2148	Req	T2_Cd_Deactivation	The FlowPort T2_Cd_Deactivation refines the Flow Property Cd_Deactivation.	-
Eu.LC.2154	Req	T3_Cd_Local_Operation_Handover	The FlowPort T3_Cd_Local_Operation_Handover refines the Flow Property Cd_Local_Operation_Handover.	-
Eu.LC.2005	Req	DT3_Cd_Local_Operation_Handover	The FlowPort DT3_Cd_Local_Operation_Handover belongs to T3_Cd_Local_Operation_Handover.	-
Eu.LC.2163	Req	T4_Cd_Isolate_LC	The FlowPort T4_Cd_Isolate_LC refines the Flow Property Cd_Isolate_LC.	-
Eu.LC.2006	Req	DT4_Cd_Isolate_LC	The FlowPort DT4_Cd_Isolate_LC belongs to T4_Cd_Isolate_LC.	-
Eu.LC.2164	Req	T5_Msg_LC_Functional_Status	The FlowPort T5_Msg_LC_Functional_Status refines the Flow Property Msg_LC_Functional_Status.	-
Eu.LC.2007	Req	DT5_Msg_LC_Functional_Status	The FlowPort DT5_Msg_LC_Functional_Status belongs to T5_Msg_LC_Functional_Status.	-
Eu.LC.2165	Req	T6_Msg_LC_Monitoring_Status	The FlowPort T6_Msg_LC_Monitoring_Status refines the Flow Property Msg_LC_Monitoring_Status.	-
Eu.LC.2008	Req	DT6_Msg_LC_Monitoring_Status	The FlowPort DT6_Msg_LC_Monitoring_Status belongs to T6_Msg_LC_Monitoring_Status.	-
Eu.LC.2166	Req	T7_Msg_LC_Failure_Status	The FlowPort T7_Msg_LC_Failure_Status refines the Flow Property Msg_LC_Failure_Status.	-
Eu.LC.2009	Req	DT7_Msg_LC_Failure_Status	The FlowPort DT7_Msg_LC_Failure_Status belongs to T7_Msg_LC_Failure_Status.	-
Eu.LC.2167	Req	T8_Msg_Local_Request	The FlowPort T8_Msg_Local_Request refines the Flow Propertytys Activate and Deactivate.	-
Eu.LC.2010	Req	DT8_Msg_Local_Request	The FlowPort DT8_Msg_Local_Request belongs to T8_Msg_Local_Request.	-

ID	Type	Requirement Part 1	Requirement Part 2	Appl.
Eu.LC.2170	Req	T9_Msg_Local_Operation_Handover	The FlowPort T9_Msg_Local_Operation_Handover refines the Flow Property Msg_Local_Operation_Handover.	-
Eu.LC.2012	Req	DT9_Msg_Local_Operation_Handover	The FlowPort DT9_Msg_Local_Operation_Handover belongs to T9_Msg_Local_Operation_Handover.	-
Eu.LC.2146	Req	T18_Msg_Detection_Element_Status	The FlowPort T108_Detection_Element_Status refines the Flow Propertys Vacated_Detection_Element, Occupied_Detection_Element or Failed_Detection_Element.	-
Eu.LC.2002	Req	DT18_Msg_Detection_Element_Status	The FlowPort DT18_Msg_Detection_Element_Status belongs to T18_Msg_Detection_Element_Status.	-
Eu.LC.2149	Req	T30_Status_LCPF	The FlowPort T30_Status_LCPF refines the Flow Property Status_Level_Crossing_Protection_Facility.	-
Eu.LC.2004	Req	DT30_Status_LCPF	The FlowPort DT30_Status_LCPF belongs to T30_Status_LCPF.	-
Eu.LC.2150	Req	T31_Activate_LCPF	The FlowPort T31_Activate_LCPF refines the Flow Property Activate.	-
Eu.LC.2151	Req	T32_Deactivate_LCPF	The FlowPort T32_Deactivate_LCPF refines the Flow Property Deactivate.	-
Eu.LC.2152	Req	T33_Pre_Activate_LCPF	The FlowPort T33_Pre_Activate_LCPF refines the Flow Property Pre-Activate.	-
Eu.LC.2153	Req	T34_National_Specific_State_LCPF	The FlowPort T34_National_Specific_State_LCPF refines the Flow Property National_Specific_State.	-
Eu.LC.2155	Req	T40_Activate_By_Local_Operator	The FlowPort T40_Activate_By_Local_Operator refines the Flow Property Activate.	-
Eu.LC.2156	Req	T41_Deactivate_By_Local_Operator	The FlowPort T41_Deactivate_By_Local_Operator refines the Flow Property Deactivate.	-
Eu.LC.2157	Req	T42_Output_Initiated_Handover_To_Local_Operator	The FlowPort T42_Output_Initiated_Handover_To_Local_Operator refines the Flow Property Output_Initiated_Handover_To_Local_Operator.	-
Eu.LC.2158	Req	T43_Output_Established_Handover_To_Local_Operator	The FlowPort T43_Output_Established_Handover_To_Local_Operator refines the Flow Property Output_Established_Handover_To_Local_Operator.	-
Eu.LC.2159	Req	T44_Output_No_Handover_To_Local_Operator	The FlowPort T44_Output_No_Handover_To_Local_Operator refines the Flow Property Output_No_Handover_To_Local_Operator.	-
Eu.LC.2160	Req	T45_Input_Allow_Handover_To_Local_Operator	The FlowPort T45_Input_Allow_Handover_To_Local_Operator refines the Flow Property Input_Allow_Handover_To_Local_Operator.	-
Eu.LC.2161	Req	T46_Input_Return_Handover_To_Local_Operator	The FlowPort T46_Input_Return_Handover_To_Local_Operator refines the Flow Property Input_Return_Handover_To_Local_Operator.	-
Eu.LC.2162	Req	T49_Report_Status		-
Eu.LC.1991	Req	D50_EST_EfeS_State		-
Eu.LC.1992	Req	D60_LC_Failure	The FlowPort D60_LC_Failure provides configuration values for a failure in the subsystem Level crossing.  true: Failure is present false: Failure is not present	-
Eu.LC.1993	Req	D61_Con_tmax_Closure_Timer	The FlowPort D61_Con_tmax_Closure_Timer refines the time value for Con_tmax_Closure_Timer.  The following values are permitted: - 1 up to any number	-
Eu.LC.1994	Req	D62_Con_t_PDI_Con_Loss_Deactivation_Timer	The FlowPort D62_Con_t_PDI_Con_Loss_Deactivation_Timer refines the time value for Con_t_PDI_Loss_Deactivation_Timer.  The following values are permitted: - 1 up to any number	-
Eu.LC.1995	Req	D63_Con_Use_Closure_Timer	The FlowPort D63_Con_Use_Closure_Timer provides configuration values for the Con_tmax_Closure_Timer.  true: Con_tmax_Closure_Timer is used false: Con_tmax_Closure_Timer is not used	-

ID	Type	Requirement Part 1	Requirement Part 2	Appl.
Eu.LC.1996	Req	D64_Con_Use_PDI_Con_Loss_Deactivation_Timer	<p>The FlowPort D64_Con_Use_PDI_Con_Loss_Deactivation_Timer provides configuration values for the Con_t_PDI_Loss_Deactivation_Timer.</p> <p>true: Con_t_PDI_Loss_Deactivation_Timer is used false: Con_t_PDI_Loss_Deactivation_Timer is not used</p>	-
Eu.LC.1997	Req	D65_Con_Use_Pre_Activation	<p>The FlowPort D65_Con_Use_Pre_Activation provides configuration values for the pre-activation.</p> <p>true: Pre-activation is used false: Pre-activation is not used</p>	-
Eu.LC.1998	Req	D66_Con_Use_Obstacle_Detection	<p>The FlowPort D66_Con_Use_Obstacle_Detection provides configuration values for the obstacle detection.</p> <p>true: Obstacle detection is used false: Obstacle detection is not used</p>	-
Eu.LC.1999	Req	D67_Con_Use_Isolation	<p>The FlowPort D67_Con_Use_Isolation provides configuration values for the state isolation.</p> <p>true: State isolation is used false: State isolation is not used</p>	-
Eu.LC.2000	Req	D68_Failure_Status_After_Closure_Timer_Overrun	<p>The FlowPort D68_Failure_Status_After_Closure_Timer_Overrun provides the configuration value what failure status the Subsystem - Level Crossing is configured to report after a closure timer overrun occurred.</p>	-
Eu.LC.2168	Req	T91_Msg_Obstacle_Detection_Status	<p>The FlowPort T91_Msg_Obstacle_Detection_Status refines the Flow Property's Status_Level_Crossing_Protection_Facility.</p>	-
Eu.LC.2011	Req	DT91_Msg_Obstacle_Detection_Status	<p>The FlowPort DT91_Msg_Obstacle_Detection_Status belongs to T91_Msg_Obstacle_Detection_Status.</p>	-
Eu.LC.2169	Req	T99_Msg_All_Status_Send		-
Eu.LC.1990	Req	D108_Con_Use_Detection_Element	<p>The FlowPort D108_Con_Use_Detection_Element provides configuration values for the detection element.</p> <p>true: Detection element is used false: Detection element is not used</p>	-
Eu.LC.2001	Req	DT108_Detection_Element_Status	<p>The FlowPort DT108_Detection_Element_Status belongs to T108_Detection_Element_Status.</p>	-
Eu.LC.2145	Req	T108_Detection_Element_Status	<p>The FlowPort T108_Detection_Element_Status refines the Flow Property's Vacated_Detection_Element, Occupied_Detection_Element and Failed_Detection_Element.</p>	-
Eu.LC.2013	Info	F_SCI_LC_SR - Behaviour		-



ID	Type	Requirement Part 1	Requirement Part 2	Appl.
Eu.LC.2035	Info	MONITOR_LC		-
Eu.LC.2040	Info	Initial2		-
Eu.LC.2041	Req	/{Initial2 - IDLE}		-
Eu.LC.2038	Info	IDLE		-
Eu.LC.2039	Req	when(D50_EST_EfeS_State = "BOOTING")/{IDLE - INITIAL_OUTPUT_STATES}		-
Eu.LC.2042	Info	INITIAL_OUTPUT_STATES		-
Eu.LC.2051	Req	<div>LC STD 1.1<div>INITIAL_OUTPUT_STATES<div><div>Initial0</div><div>ACTIVATE_LCPF<div>Entry/T31_Activate_LCPF := TRUE;</div></div><div>ACTIVATED_UNPROTECTED<div>Entry/Mem_Last_LC_State := "Activated and unprotected";</div><div>when( T30_Status_LCPF )<div>[DT30_Status_LCPF = "Protected"]/</div></div></div><div>ACTIVATED_PROTECTED<div>Entry/Mem_Last_LC_State := "Activated and protected";</div><div>when( T30_Status_LCPF )<div>[DT30_Status_LCPF = "Unprotected"]/</div></div></div><div>/Mem_Closure_Timer_Running := TRUE;</div></div></div></div>		-
Eu.LC.2049	Info	Initial0		-
Eu.LC.2050	Req	/{Initial0 - ACTIVATE_LCPF}		-
Eu.LC.2043	Info	ACTIVATE_LCPF		-
Eu.LC.2044	Req	/Mem_Closure_Timer_Running := TRUE;{ACTIVATE_LCPF - ACTIVATED_UNPROTECTED}		-
Eu.LC.2299	Req	entry/T31_Activate_LCPF := TRUE;{State-internal in ACTIVATE_LCPF}		-
Eu.LC.2047	Info	ACTIVATED_UNPROTECTED		-
Eu.LC.2048	Req	when(T30_Status_LCPF)[DT30_Status_LCPF = "Protected"]/{ACTIVATED_UNPROTECTED - ACTIVATED_PROTECTED}		-
Eu.LC.2301	Req	entry/Mem_Last_LC_State := "Activated and unprotected";{State-internal in ACTIVATED_UNPROTECTED}		-
Eu.LC.2045	Info	ACTIVATED_PROTECTED		-
Eu.LC.2046	Req	when(T30_Status_LCPF)[DT30_Status_LCPF = "Unprotected"]/{ACTIVATED_PROTECTED - ACTIVATED_UNPROTECTED}		-
Eu.LC.2300	Req	entry/Mem_Last_LC_State := "Activated and protected";{State-internal in ACTIVATED_PROTECTED}		-
Eu.LC.2052	Req	when(D50_EST_EfeS_State = "FALLBACK_MODE")/{INITIAL_OUTPUT_STATES - FALLBACK_MODE}		-
Eu.LC.2053	Req	when(D50_EST_EfeS_State = "NO_OPERATING_VOLTAGE")/{INITIAL_OUTPUT_STATES - INITIAL_OUTPUT_STATES}		-
Eu.LC.2054	Req	when(D50_EST_EfeS_State = "OPERATIONAL")/{INITIAL_OUTPUT_STATES - OPERATIONAL}		-
Eu.LC.2055	Info	OPERATIONAL		-



ID	Type	Requirement Part 1	Requirement Part 2	Appl.
Eu.LC.2089	Req	<div><div>LC STD 1.2</div><div>OPERATIONAL</div></div>		-
Eu.LC.2076	Info	Initial0		-
Eu.LC.2077	Req	/{Initial0 - Junction0}		-
Eu.LC.2084	Info	Junction0		-
Eu.LC.2085	Req	[Mem_Last_LC_State = "Isolated LC"]/{Junction0 - ISOLATED}		-
Eu.LC.2086	Req	[Mem_Last_LC_State = "Activated and protected"]/{Junction0 - PROTECTED}		-
Eu.LC.2087	Req	[Mem_Last_LC_State = "Deactivated and unprotected"]/{Junction0 - UNPROTECTED}		-
Eu.LC.2088	Req	[Mem_Last_LC_State = "Activated and unprotected"]/{Junction0 - UNPROTECTED}		-
Eu.LC.2056	Info	ACTIVATED		-
Eu.LC.2059	Info	Initial1		-
Eu.LC.2060	Req	/{Initial1 - ACTIVATE_LCPF}		-
Eu.LC.2057	Info	ACTIVATE_LCPF		-
Eu.LC.2058	Req	/Mem_Closure_Timer_Running := TRUE;{ACTIVATE_LCPF - UNPROTECTED}		-
Eu.LC.2302	Req	entry/T31_Activate_LCPF := TRUE;{State-internal in ACTIVATE_LCPF}		-



ID	Type	Requirement Part 1	Requirement Part 2	Appl.
Eu.LC.2063	Info	UNPROTECTED		-
Eu.LC.2064	Req	when(T30_Status_LCPF){DT30_Status_LCPF = "Protected"}/{UNPROTECTED - PROTECTED}		-
Eu.LC.2304	Req	entry/DT5_Msg_LC_Functional_Status := "Activated and unprotected"; T5_Msg_LC_Functional_Status := TRUE; Mem_Last_LC_State := "Activated and unprotected";{State-internal in UNPROTECTED}		-
Eu.LC.2061	Info	PROTECTED		-
Eu.LC.2062	Req	when(T30_Status_LCPF){DT30_Status_LCPF = "Unprotected"}/{PROTECTED - UNPROTECTED}		-
Eu.LC.2303	Req	entry/DT5_Msg_LC_Functional_Status := "Activated and protected"; T5_Msg_LC_Functional_Status := TRUE; Mem_Last_LC_State := "Activated and protected";{State-internal in PROTECTION}		-
Eu.LC.2065	Req	when(T2_Cd_Deactivation)/{ACTIVATED - DEACTIVATED}		-
Eu.LC.2090	Info	PRE_ACTIVATION		-
Eu.LC.2091	Info	Initial2		-
Eu.LC.2092	Req	/({Initial2 - PRE_ACTIVATE_LCPF})		-
Eu.LC.2094	Info	PRE_ACTIVATE_LCPF		-
Eu.LC.2095	Req	/({PRE_ACTIVATE_LCPF - PRE_ACTIVATED})		-
Eu.LC.2309	Req	entry/T33_Pre_Activate_LCPF := TRUE;{State-internal in PRE_ACTIVATE_LCPF}		-
Eu.LC.2096	Info	PRE_ACTIVATED		-
Eu.LC.2310	Req	entry/DT5_Msg_LC_Functional_Status := "Pre-Activated"; T5_Msg_LC_Functional_Status := TRUE; Mem_Last_LC_State := "Pre-Activated";{State-internal in PRE_ACTIVATED}		-
Eu.LC.2098	Req	when(T1_Cd_Activation)[ DT1_Cd_Activation = "Activation" ]/{PRE_ACTIVATION - ACTIVATED}		-
Eu.LC.2099	Req	when(T2_Cd_Deactivation)/{PRE_ACTIVATION - DEACTIVATED}		-
Eu.LC.2066	Info	DEACTIVATED		-
Eu.LC.2069	Info	Initial3		-
Eu.LC.2070	Req	/({Initial3 - DEACTIVATE_LCPF})		-
Eu.LC.2067	Info	DEACTIVATE_LCPF		-
Eu.LC.2068	Req	/({DEACTIVATE_LCPF - UNPROTECTED})		-
Eu.LC.2305	Req	entry/T32_Deactivate_LCPF := TRUE;{State-internal in DEACTIVATE_LCPF}		-
Eu.LC.2071	Info	UNPROTECTED		-
Eu.LC.2306	Req	entry/DT5_Msg_LC_Functional_Status := "Deactivated and unprotected"; T5_Msg_LC_Functional_Status := TRUE; Mem_Last_LC_State := "Deactivated and unprotected";{State-internal in UNPROTECTED}		-
Eu.LC.2307	Req	when(T30_Status_LCPF){DT30_Status_LCPF = "Idle"}/ Mem_Closure_Timer_Running := FALSE;{State-internal in UNPROTECTED}		-
Eu.LC.2073	Req	when(T1_Cd_Activation)[ DT1_Cd_Activation = "Activation"]/{DEACTIVATED - ACTIVATED}		-
Eu.LC.2074	Req	when(T1_Cd_Activation){DT1_Cd_Activation = "Pre-Activation" AND D65_Con_Use_Pre_Activation}/{DEACTIVATED - PRE_ACTIVATION}		-
Eu.LC.2075	Req	when(T4_Cd_Isolate_LC){DT4_Cd_Isolate_LC = "Isolate LC enable" AND D67_Con_Use_Isolation = TRUE}/{DEACTIVATED - ISOLATED}		-
Eu.LC.2078	Info	ISOLATED		-
Eu.LC.2079	Info	Initial4		-
Eu.LC.2080	Req	/({Initial4 - REPORT_ISOLATED})		-
Eu.LC.2081	Info	REPORT_ISOLATED		-
Eu.LC.2308	Req	entry/DT5_Msg_LC_Functional_Status := "Isolated LC"; T5_Msg_LC_Functional_Status := TRUE; Mem_Last_LC_State := "Isolated LC";{State-internal in REPORT_ISOLATED}		-
Eu.LC.2083	Req	when(T4_Cd_Isolate_LC){DT4_Cd_Isolate_LC = "Isolate LC disable"}/{ISOLATED - UNPROTECTED}		-
Eu.LC.2100	Req	when(D50_EST_EfeS_State = "BOOTING" OR D50_EST_EfeS_State = "NO_OPERATING_VOLTAGE")/{OPERATIONAL - INITIAL_OUTPUT_STATES}		-
Eu.LC.2101	Req	when(D50_EST_EfeS_State = "FALLBACK_MODE")/{OPERATIONAL - FALLBACK_MODE}		-
Eu.LC.2102	Req	when(D50_EST_EfeS_State = "INITIALISING")/{OPERATIONAL - PDI_CONNECTION_CLOSED}		-
Eu.LC.2103	Info	PDI_CONNECTION_CLOSED		-

ID	Type	Requirement Part 1	Requirement Part 2	Appl.
Eu.LC.2131	Req	<div><div>LC STD 1.3</div><div><div>PDI_CONNECTION_CLOSED</div><div><div><div>Initial0</div><div>IN_STATE_PDI_CONNECTION_CLOSED</div><div><div>Initial1</div><div><div>[Mem_Last_LC_State = "Isolated LC"]/ Junction0</div><div>ISOLATED LC</div></div><div><div>[else]/</div><div><div>Initial2</div><div><div>ACTIVATED</div><div><div>Initial3</div><div><div>DEACTIVATED</div></div></div></div></div></div></div></div></div></div></div>		-
Eu.LC.2129	Info	Initial0		-
Eu.LC.2130	Req	/{Initial0 - IN_STATE_PDI_CONNECTION_CLOSED}		-
Eu.LC.2104	Info	IN_STATE_PDI_CONNECTION_CLOSED		-
Eu.LC.2121	Info	Initial1		-
Eu.LC.2122	Req	/{Initial1 - Junction0}		-
Eu.LC.2124	Info	Junction0		-
Eu.LC.2125	Req	[else]/{Junction0 - ACTIVATED}		-
Eu.LC.2126	Req	[Mem_Last_LC_State = "Isolated LC"]/{Junction0 - ISOLATED LC}		-
Eu.LC.2127	Req	[Mem_Last_LC_State = "Activated and protected"]/{Junction0 - PROTECTED}		-
Eu.LC.2128	Req	[Mem_Last_LC_State = "Activated and unprotected"]/{Junction0 - UNPROTECTED}		-
Eu.LC.2105	Info	ACTIVATED		-
Eu.LC.2109	Info	Initial2		-
Eu.LC.2110	Req	/{Initial2 - ACTIVATE_LCPF}		-
Eu.LC.2106	Info	ACTIVATE_LCPF		-
Eu.LC.2107	Req	/Mem_Closure_Timer_Running := TRUE;{ACTIVATE_LCPF - UNPROTECTED}		-

ID	Type	Requirement Part 1	Requirement Part 2	Appl.
Eu.LC.2311	Req	entry/T31_Activate_LCPF := TRUE;{State-internal in ACTIVATE_LCPF}		-
Eu.LC.2108	Req	after(D62_Con_t_PDI_Con_Loss_Deactivation_Timer)/{ACTIVATED - DEACTIVATED}		-
Eu.LC.2113	Info	UNPROTECTED		-
Eu.LC.2114	Req	when(T30_Status_LCPF)[DT30_Status_LCPF = "Protected"]/{UNPROTECTED - PROTECTED}		-
Eu.LC.2313	Req	entry/Mem_Last_LC_State := "Activated and unprotected";{State-internal in UNPROTECTED}		-
Eu.LC.2111	Info	PROTECTED		-
Eu.LC.2112	Req	when(T30_Status_LCPF)[DT30_Status_LCPF = "Unprotected"]/{PROTECTED - UNPROTECTED}		-
Eu.LC.2312	Req	entry/Mem_Last_LC_State := "Activated and protected";{State-internal in PROTECTED}		-
Eu.LC.2115	Info	DEACTIVATED		-
Eu.LC.2118	Info	Initial3		-
Eu.LC.2119	Req	/ {Initial3 - DEACTIVATE_LCPF}		-
Eu.LC.2116	Info	DEACTIVATE_LCPF		-
Eu.LC.2117	Req	/ {DEACTIVATE_LCPF - UNPROTECTED}		-
Eu.LC.2314	Req	entry/T32_Deactivate_LCPF := TRUE;{State-internal in DEACTIVATE_LCPF}		-
Eu.LC.2120	Info	UNPROTECTED		-
Eu.LC.2315	Req	entry/Mem_Last_LC_State := "Deactivated and unprotected";{State-internal in UNPROTECTED}		-
Eu.LC.2316	Req	when(T30_Status_LCPF)[DT30_Status_LCPF = "Idle"]/Mem_Closure_Timer_Running := FALSE;{State-internal in UNPROTECTED}		-
Eu.LC.2123	Info	ISOLATED LC		-
Eu.LC.2132	Req	when(D50_EST_EfeS_State = "BOOTING" OR D50_EST_EfeS_State = "NO_OPERATING_VOLTAGE")/{PDI_CONNECTION_CLOSED - INITIAL_OUTPUT_STATES}		-
Eu.LC.2133	Req	when(D50_EST_EfeS_State = "FALLBACK_MODE")/{PDI_CONNECTION_CLOSED - FALLBACK_MODE}		-
Eu.LC.2134	Req	when(D50_EST_EfeS_State = "OPERATIONAL")/{PDI_CONNECTION_CLOSED - OPERATIONAL}		-
Eu.LC.2317	Req	/Mem_Closure_Timer_Running := FALSE;{State-internal in PDI_CONNECTION_CLOSED}		-
Eu.LC.2036	Info	FALLBACK_MODE		-
Eu.LC.2037	Req	when(D50_EST_EfeS_State = "BOOTING" OR D50_EST_EfeS_State = "NO_OPERATING_VOLTAGE")/{FALLBACK_MODE - INITIAL_OUTPUT_STATES}		-
Eu.LC.2298	Req	entry/T34_National_Specific_State_LCPF := TRUE; Mem_Closure_Timer_Running := FALSE;{State-internal in FALLBACK_MODE}		-
Eu.LC.2135	Info	REPORT_STATUSES		-
Eu.LC.2136	Info	Initial3		-
Eu.LC.2137	Req	/ {Initial3 - REPORT_STATUSES}		-
Eu.LC.2139	Info	REPORT_STATUSES		-

ID	Type	Requirement Part 1	Requirement Part 2	Appl.
Eu.LC.2143	Req	<div><div>LC STD 1.4</div><div><div>REPORT_STATUSES</div><div><div><div>●</div><div>Initial0</div></div><div><div>IN_STATE_REPORT_STATUSES</div><div><div>when( T30_Status_LCPF ) [DT30_Status_LCPF = "Changed Monitoring Parameter"] / DT6_Msg_LC_Monitoring_Status := "Changed Monitoring Parameter"; T6_Msg_LC_Monitoring_Status := TRUE; when( T30_Status_LCPF ) [DT30_Status_LCPF = "Failure detected"] / DT7_Msg_LC_Failure_Status := "Failure detected"; T7_Msg_LC_Failure_Status := TRUE; when( T49_Report_Status ) / DT5_Msg_LC_Functional_Status := Mem_Last_LC_State; T7_Msg_LC_Failure_Status := TRUE; DT91_Msg_Obstacle_Detection_Status := "Current Obstacle Detection Status"; T91_Msg_Obstacle_Detection_Status := TRUE; DT18_Msg_Detection_Element_Status := "Current Detection Element Status"; T18_Msg_Detection_Element_Status := TRUE; T99_Msg_All_Status_Send := TRUE; T5_Msg_LC_Functional_Status := TRUE; if Mem_Closure_Timer_Expired = TRUE then     cOp2_React_On_Closure_Timer_Overrun();     if D68_Failure_Status_After_Closure_Timer_Overrun = "no failure report" then         DT7_Msg_LC_Failure_Status := "Current Failure status";     end if elseif Mem_Closure_Timer_Expired = FALSE then     DT6_Msg_LC_Monitoring_Status := "Current Monitoring status";     T6_Msg_LC_Monitoring_Status := TRUE;     DT7_Msg_LC_Failure_Status := "Current Failure status"; end if when( T30_Status_LCPF ) [DT30_Status_LCPF = "No obstacle in the conflict area" AND D66_Con_Use_Obstacle_Detection = TRUE] / DT91_Msg_Obstacle_Detection_Status := "No obstacle in the conflict area"; T91_Msg_Obstacle_Detection_Status := TRUE; when( T30_Status_LCPF ) [DT30_Status_LCPF = "Obstacle detected in the conflict area" AND D66_Con_Use_Obstacle_Detection = TRUE] / DT91_Msg_Obstacle_Detection_Status := "Obstacle detected in the conflict area"; T91_Msg_Obstacle_Detection_Status := TRUE; when( D60_LC_Failure ) / DT7_Msg_LC_Failure_Status := "Failure detected"; T7_Msg_LC_Failure_Status := TRUE; when( D60_LC_Failure = FALSE ) [Not DT30_Status_LCPF = "Failure detected"] / DT7_Msg_LC_Failure_Status := "No failure present"; T7_Msg_LC_Failure_Status := TRUE; when( T30_Status_LCPF ) [D60_LC_Failure = FALSE AND DT30_Status_LCPF = "No failure present" ] / DT7_Msg_LC_Failure_Status := "No failure present"; T7_Msg_LC_Failure_Status := TRUE; when( T108_Detection_Element_Status ) [D108_Con_Use_Detection_Element] / DT18_Msg_Detection_Element_Status := DT108_Detection_Element_Status; T18_Msg_Detection_Element_Status := TRUE;</div></div></div></div></div></div>		-
Eu.LC.2141	Info	Initial0		-
Eu.LC.2142	Req	/{Initial0 - IN_STATE_REPORT_STATUSES}		-
Eu.LC.2140	Info	IN_STATE_REPORT_STATUSES		-
Eu.LC.2325	Req	when(T30_Status_LCPF)[DT30_Status_LCPF = "Changed Monitoring Parameter"]/ DT6_Msg_LC_Monitoring_Status := "Changed Monitoring Parameter"; T6_Msg_LC_Monitoring_Status := TRUE;{State-internal in IN_STATE_REPORT_STATUSES}		-
Eu.LC.2324	Req	when(T30_Status_LCPF)[DT30_Status_LCPF = "Failure detected"]/ DT7_Msg_LC_Failure_Status := "Failure detected"; T7_Msg_LC_Failure_Status := TRUE;{State-internal in IN_STATE_REPORT_STATUSES}		-
Eu.LC.2326	Req	when(T49_Report_Status)/DT5_Msg_LC_Functional_Status := Mem_Last_LC_State; T7_Msg_LC_Failure_Status := TRUE; DT91_Msg_Obstacle_Detection_Status := "Current Obstacle Detection Status"; T91_Msg_Obstacle_Detection_Status := TRUE; DT18_Msg_Detection_Element_Status := "Current Detection Element Status"; T18_Msg_Detection_Element_Status := TRUE; T99_Msg_All_Status_Send := TRUE; T5_Msg_LC_Functional_Status := TRUE; if Mem_Closure_Timer_Expired = TRUE then cOp2_React_On_Closure_Timer_Overrun(); if D68_Failure_Status_After_Closure_Timer_Overrun = "no failure report" then DT7_Msg_LC_Failure_Status := "Current Failure status"; end if elseif Mem_Closure_Timer_Expired = FALSE then DT6_Msg_LC_Monitoring_Status := "Current Monitoring status"; T6_Msg_LC_Monitoring_Status := TRUE; DT7_Msg_LC_Failure_Status := "Current Failure status"; end if {State-internal in IN_STATE_REPORT_STATUSES}		-
Eu.LC.2322	Req	when(T30_Status_LCPF)[DT30_Status_LCPF = "No obstacle in the conflict area" AND D66_Con_Use_Obstacle_Detection = TRUE] / DT91_Msg_Obstacle_Detection_Status := "No obstacle in the conflict area"; T91_Msg_Obstacle_Detection_Status := TRUE;{State-internal in IN_STATE_REPORT_STATUSES}		-
Eu.LC.2321	Req	when(T30_Status_LCPF)[DT30_Status_LCPF = "Obstacle detected in the conflict area" AND D66_Con_Use_Obstacle_Detection = TRUE] / DT91_Msg_Obstacle_Detection_Status := "Obstacle detected in the conflict area"; T91_Msg_Obstacle_Detection_Status := TRUE;{State-internal in IN_STATE_REPORT_STATUSES}		-

ID	Type	Requirement Part 1	Requirement Part 2	Appl.
Eu.LC.2318	Req	when(D60_LC_Failure)/ DT7_Msg_LC_Failure_Status := "Failure detected"; T7_Msg_LC_Failure_Status := TRUE;{State-internal in IN_STATE_REPORT_STATUSES}		-
Eu.LC.2319	Req	when(D60_LC_Failure = FALSE)[Not DT30_Status_LCPF = "Failure detected"]/DT7_Msg_LC_Failure_Status := "No failure present"; T7_Msg_LC_Failure_Status := TRUE;{State-internal in IN_STATE_REPORT_STATUSES}		-
Eu.LC.2323	Req	when(T30_Status_LCPF)[D60_LC_Failure = FALSE AND DT30_Status_LCPF = "No failure present" ]/ DT7_Msg_LC_Failure_Status := "No failure present"; T7_Msg_LC_Failure_Status := TRUE;{State-internal in IN_STATE_REPORT_STATUSES}		-
Eu.LC.2320	Req	when(T108_Detection_Element_Status)[D108_Con_Use_Detection_Element]/ DT18_Msg_Detection_Element_Status := DT108_Detection_Element_Status; T18_Msg_Detection_Element_Status := TRUE;{State-internal in IN_STATE_REPORT_STATUSES}		-
Eu.LC.2018	Info	HANDLE_LOCAL_OPERATIONS		-
Eu.LC.2024	Info	Initial4		-
Eu.LC.2025	Req	/{Initial4 - HANDLE_LOCAL_OPERATIONS}		-
Eu.LC.2019	Info	HANDLE_LOCAL_OPERATIONS		-
Eu.LC.2020	Req	<div>LC STD 1.5</div> <div><div>HANDLE_LOCAL_OPERATIONS</div><div><div><div>Initial0</div><div><div>IN_STATE_HANDLE_LOCAL_OPERATIONS</div><div>when( T3_Cd_Local_Operation_Handover ) [DT3_Cd_Local_Operation_Handover = "Handover to local operator initiated"]/ T42_Output_Initiated_Handover_To_Local_Operator := TRUE ; when( T45_Input_Allow_Handover_To_Local_Operator )/ DT9_Msg_Local_Operation_Handover := "Allow handover from local operator" ; T9_Msg_Local_Operation_Handover := TRUE ; when( T3_Cd_Local_Operation_Handover ) [DT3_Cd_Local_Operation_Handover = "Handover to local operator established"]/ T43_Output_Established_Handover_To_Local_Operator := TRUE ; when( T46_Input_Return_Handover_To_Local_Operator )/ DT9_Msg_Local_Operation_Handover := "Return handover from local operator" ; T9_Msg_Local_Operation_Handover := TRUE ; when( T3_Cd_Local_Operation_Handover ) [DT3_Cd_Local_Operation_Handover = "Handover to local operator returned"]/ T44_Output_No_Handover_To_Local_Operator := TRUE ; when( T40_Activate_By_Local_Operator )/ DT8_Msg_Local_Request := "Local request to activate the level crossing" ; T8_Msg_Local_Request := TRUE ; when( T41_Deactivate_By_Local_Operator )/ DT8_Msg_Local_Request := "Local request to deactivate the level crossing" ; T8_Msg_Local_Request := TRUE ;</div></div></div></div></div>		-
Eu.LC.2022	Info	Initial0		-
Eu.LC.2023	Req	/{Initial0 - IN_STATE_HANDLE_LOCAL_OPERATIONS}		-
Eu.LC.2021	Info	IN_STATE_HANDLE_LOCAL_OPERATIONS		-
Eu.LC.2293	Req	when(T3_Cd_Local_Operation_Handover)[DT3_Cd_Local_Operation_Handover = "Handover to local operator initiated"]/ T42_Output_Initiated_Handover_To_Local_Operator := TRUE;{State-internal in IN_STATE_HANDLE_LOCAL_OPERATIONS}		-
Eu.LC.2296	Req	when(T45_Input_Allow_Handover_To_Local_Operator)/ DT9_Msg_Local_Operation_Handover := "Allow handover from local operator"; T9_Msg_Local_Operation_Handover := TRUE;{State-internal in IN_STATE_HANDLE_LOCAL_OPERATIONS}		-
Eu.LC.2292	Req	when(T3_Cd_Local_Operation_Handover)[DT3_Cd_Local_Operation_Handover = "Handover to local operator established"]/ T43_Output_Established_Handover_To_Local_Operator := TRUE;{State-internal in IN_STATE_HANDLE_LOCAL_OPERATIONS}		-
Eu.LC.2297	Req	when(T46_Input_Return_Handover_To_Local_Operator)/ DT9_Msg_Local_Operation_Handover := "Return handover from local operator"; T9_Msg_Local_Operation_Handover := TRUE; {State-internal in IN_STATE_HANDLE_LOCAL_OPERATIONS}		-
Eu.LC.2291	Req	when(T3_Cd_Local_Operation_Handover)[DT3_Cd_Local_Operation_Handover = "Handover to local operator returned"]/ T44_Output_No_Handover_To_Local_Operator := TRUE;{State-internal in IN_STATE_HANDLE_LOCAL_OPERATIONS}		-
Eu.LC.2294	Req	when(T40_Activate_By_Local_Operator)/ DT8_Msg_Local_Request := "Local request to activate the level crossing"; T8_Msg_Local_Request := TRUE;{State-internal in IN_STATE_HANDLE_LOCAL_OPERATIONS}		-
Eu.LC.2295	Req	when(T41_Deactivate_By_Local_Operator)/ DT8_Msg_Local_Request := "Local request to deactivate the level crossing"; T8_Msg_Local_Request := TRUE;{State-internal in IN_STATE_HANDLE_LOCAL_OPERATIONS}		-
Eu.LC.1254	Head	4 RAMSS requirements		Default
Eu.LC.1255	Info	The requirements for reliability, availability, maintainability, safety and security are specified in [Eu.Doc.20].		Default
Eu.LC.1256	Head	5 Technical requirements		Default
Eu.LC.1257	Info	The generic technical requirements are specified in [Eu.Doc.20].		Default
Eu.LC.1258	Head	5.1 Specific technical interface requirements		Default
Eu.LC.1259	Head	5.1.1 Interface to the Point of Service - Signalling (PoS - Signalling)		Default

ID	Type	Requirement Part 1	Requirement Part 2	Appl.
Eu.LC.1260	Req	Via the technical interface <b>PoS-Signalling</b> the data of the functional interface "SCI-LC" shall be exchanged with the Subsystem - Electronic Interlocking as specified in [Eu.Doc.92].		Default
Eu.LC.1261	Req	Via the technical interface <b>PoS-Signalling</b> the data of the functional interface "SMI-LC" shall be exchanged with the Subsystem - Maintenance and Data Management as specified in [Eu.Doc.76].		Default
Eu.LC.1262	Req	Via the technical interface <b>PoS-Signalling</b> the data of the functional interface "SDI-LC" shall be exchanged with the Subsystem - Maintenance and Data Management as specified in [Eu.Doc.77].		Default
Eu.LC.1265	Head	<b>5.1.2 Interface to the Detection element</b>		Default
Eu.LC.1266	Info	These requirements shall be defined by national specification.		Default
Eu.LC.1267	Head	<b>5.1.3 Interface to the Local operator</b>		Default
Eu.LC.1268	Info	These requirements shall be defined by national specification.		Default
Eu.LC.1311	Head	<b>5.1.4 Interface to the Level Crossing protection facility</b>		Default
Eu.LC.1312	Info	These requirements shall be defined by national specification.		Default
Eu.LC.1313	Info	The Status_Level_Crossing_Protection_Facility message via LC4 includes the following information: <ul style="list-style-type: none"><li>• LCPF_Monitoring_Status_Barrier_Position</li><li>• LCPF_Monitoring_Status_Barrier_Movement</li><li>• LCPF_Monitoring_Status_Barrier_Intact</li><li>• LCPF_Monitoring_Status_Road_Lights</li><li>• LCFP_Monitoring_Status_Hardware</li><li>• LCFP_Monitoring_Status_Power</li><li>• LCPF_Failure_Status</li><li>• LCPF_Functional_Status_Idle</li><li>• LCPF_Functional_Status_Unprotected</li><li>• LCPF_Functional_Status_Protected</li><li>• Obstacle_Detection_Status</li></ul>		Default
Eu.LC.1314	Info	The LC4 interface is defined as a functional interface, physical properties are not currently defined. This specification is based upon the following assumptions on the properties of the LC4 interface.		Default
Eu.LC.1317	Info	General assumptions:		Default
Eu.LC.1315	Info	<ul style="list-style-type: none"><li>• Obstacle detectors are connected to the LCPF. The obstacle detection status is reported to the Subsystem – Level Crossing via LC4.</li></ul>		Default
Eu.LC.1318	Info	<ul style="list-style-type: none"><li>• The LCPF may be operated independent of LC4 interface according to national specifications. For example, this can be a local switch on the LCPF to directly operate road signals and barriers. This can be used even when the subsystem LC is not operational or has no connection to the electronic interlocking.</li></ul>		Default
Eu.LC.1319	Info	<ul style="list-style-type: none"><li>• In case the LCPF is operated independent of LC4, national operational rules must be in place to avoid conflicts with activation requests from the interlocking.</li></ul>		Default
Eu.LC.1320	Info	<ul style="list-style-type: none"><li>• The LCPF always reports its functional and monitoring status on LC4, regardless whether it is operated via LC4 or according to national specifications.</li></ul>		Default
Eu.LC.1269	Head	<b>5.2 Time behaviour</b>		Default
Eu.LC.1270	Info	The time values defined in the chapter Functional requirements specification (Eu.LC.172) shall be configured for the operation of the Subsystem - Level Crossing.		Default
Eu.LC.1271	Head	<b>5.3 Configuration and engineering data</b>		Default
Eu.LC.1272	Head	<b>5.3.1 Specific data</b>		Default
Eu.LC.1273	Req	The specific configuration and engineering data for the Subsystem - Level Crossing shall include as a minimum the following information:		Default
Eu.LC.1275	Req	<ul style="list-style-type: none"><li>• The applicable timers defined in chapter Definition of time values (Eu.LC.172).</li></ul>		Default
Eu.LC.1321	Req	<ul style="list-style-type: none"><li>• The usage of the Closure Timer.</li></ul>		Default
Eu.LC.1323	Req	<ul style="list-style-type: none"><li>• The usage of the PDI Loss Deactivation Timer.</li></ul>		Default
Eu.LC.1280	Req	<ul style="list-style-type: none"><li>• The usage of the activation type Pre-Activation.</li></ul>		Default
Eu.LC.1322	Req	<ul style="list-style-type: none"><li>• The usage of Detection elements.</li></ul>		Default
Eu.LC.1278	Req	<ul style="list-style-type: none"><li>• The number of Detection elements.</li></ul>		Default
Eu.LC.1340	Req	<ul style="list-style-type: none"><li>• The index of Detection elements.</li></ul>		Default
Eu.LC.1325	Req	<ul style="list-style-type: none"><li>• The usage of obstacle detection.</li></ul>		Default
Eu.LC.1326	Req	<ul style="list-style-type: none"><li>• The usage of LC isolation function.</li></ul>		Default
Eu.LC.1324	Req	<ul style="list-style-type: none"><li>• List of triggers resulting in a critical failure.</li></ul>		Default
Eu.LC.1341	Req	<ul style="list-style-type: none"><li>• List of triggers resulting in a non-critical failure.</li></ul>		Default
Eu.LC.1336	Req	<ul style="list-style-type: none"><li>• The presence of local operation handover.</li></ul>		Default
Eu.LC.1337	Req	<ul style="list-style-type: none"><li>• The index of local operations handovers.</li></ul>		Default
Eu.LC.1338	Req	<ul style="list-style-type: none"><li>• The presence of local (de)activation requests.</li></ul>		Default
Eu.LC.1339	Req	<ul style="list-style-type: none"><li>• The index of local (de)activation requests.</li></ul>		Default
Eu.LC.1288	Req	Two different data sections can be loaded which are the safety-relevant data and the non safety-relevant data. The following definitions apply to the assignment of the sections:		Default
Eu.LC.1290	Req	<ul style="list-style-type: none"><li>• The configuration data, such as the IP addresses of the Subsystem - Electronic Interlocking (or the corresponding RaSTA concentrators), the value of the attribute "Identification" (data point of the SDI-LC) and the value of the attribute "InterfaceRevision" (data point of the SDI-LC) is non safety-relevant. This data shall be used to calculate the CSNS.</li></ul>		Default

ID	Type	Requirement Part 1	Requirement Part 2	Appl.
Eu.LC.1291	Req	<ul style="list-style-type: none"><li>The remaining configuration data is currently categorised as safety-relevant. This data shall be used to calculate the CSS.</li></ul>		Default
Eu.LC.1292	Req	<ul style="list-style-type: none"><li>The engineering data is safety-relevant. This data shall be used to calculate the CSS.</li></ul>		Default