



EULYNX

EULYNX Initiative



Europe's Rail Joint Undertaking

Interface specification SCI-LC

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ID	Type	Requirement	Func. Pkg.
Eu.SCI-LC.PDI.1	Head	1 Introduction	
Eu.SCI-LC.PDI.2	Head	1.1 Release information	
Eu.SCI-LC.PDI.3	Info	[Eu.Doc.109] Interface specification SCI-LC CENELEC Phase: 5 Version: 2.1 (0.A) Approval date: 15.06.2023	
Eu.SCI-LC.PDI.4	Info	Version history	
Eu.SCI-LC.PDI.221	Info	version number: 2.0 (0.A) date 16.05.2022 author: Philipp Wolber review: CCB changes: EULX-490, EULX-501, EULX-508	
Eu.SCI-LC.PDI.222	Info	version number: 2.1 (0.A) date 26.06.2023 author: Philipp Wolber review: TACS Mirror Group changes: EULX-534, EULX-540, EULX-550, EULX-557, EULX-560, EULX-563	
Eu.SCI-LC.PDI.6	Head	1.2 Impressum	
Eu.SCI-LC.PDI.7	Info	Publishers: Europe's Rail Joint Undertaking https://rail-research.europa.eu EULYNX Initiative A full list of the EULYNX Partners can be found on www.eulynx.eu/index.php/members	
Eu.SCI-LC.PDI.8	Info	Responsible for this document: EU-Rail System Pillar Trackside Assets Control and Supervision domain	

ID	Type	Requirement	Func. Pkg.
Eu.SCI-LC.PDI.9	Info	Copyright EULYNX Partners All information included or disclosed in this document is licensed under the European Union Public Licence EUPL, Version 1.2 or later.	
Eu.SCI-LC.PDI.10	Head	1.3 Purpose	
Eu.SCI-LC.PDI.11	Info	This document specifies the application layer of the standardised interface for safe communication between the Subsystem - Electronic Interlocking and Subsystem - Level Crossing (SCI-LC).	
Eu.SCI-LC.PDI.12	Info	This application layer is designated as SCI-LC.PDI.	
Eu.SCI-LC.PDI.13	Info	This document contains the general requirements and the technical specification (e.g. telegrams) of the SCI-LC.	
Eu.SCI-LC.PDI.14	Info	This specification does not define the detailed behaviour of the interfacing partners (Subsystem - Electronic Interlocking and Subsystem - Level Crossing), nor the situations in which the defined telegrams are sent. This behaviour is the subject of the individual system specifications.	
Eu.SCI-LC.PDI.15	Info	Some items, referring to "interface-related" functionality of the communication partners, have been added to this specification as information, providing an overview only. In any case these have to be covered in the appropriate systems specification.	
Eu.SCI-LC.PDI.16	Info	This document is intended for the following users: <ul style="list-style-type: none"> • safety authorities • infrastructure managers • safety assessors • signalling system suppliers • validators 	
Eu.SCI-LC.PDI.223	Info	This document is applicable for both the EU-Rail System Pillar target architecture and the EULYNX architecture. The document is delivered as a single specification fitting both the System Pillar documentation sets and the EULYNX documentation sets. EU-Rail System Pillar is the technical authority for this document.	
Eu.SCI-LC.PDI.17	Head	1.4 Applicable standards and regulations	
Eu.SCI-LC.PDI.18	Info	The applicable standards and regulations used in EULYNX are listed in the EULYNX Reference Document List [Eu.Doc.12].	
Eu.SCI-LC.PDI.19	Head	1.5 Applicable documents	

ID	Type	Requirement	Func. Pkg.
Eu.SCI-LC.PDI.20	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].	
Eu.SCI-LC.PDI.21	Head	1.6 Appendices	
Eu.SCI-LC.PDI.22	Info	<i>- intentionally left blank -</i>	
Eu.SCI-LC.PDI.23	Head	1.7 Terms and abbreviations	
Eu.SCI-LC.PDI.24	Info	The terms and abbreviations are listed in the EULYNX Glossary [Eu.Doc.9].	
Eu.SCI-LC.PDI.25	Head	1.8 Variability management	
Eu.SCI-LC.PDI.26	Info	This document describes harmonised requirements. Variability management is not applicable.	
Eu.SCI-LC.PDI.27	Head	1.9 Definition of object types	
Eu.SCI-LC.PDI.28	Info	The following definition for object types is applied in this document:	
Eu.SCI-LC.PDI.29	Info	<ul style="list-style-type: none"> • "Req" - This denotes a mandatory requirement. 	
Eu.SCI-LC.PDI.30	Info	<ul style="list-style-type: none"> • "Info" - This denotes additional information to help understand the specification. These objects do not specify any additional requirements. 	
Eu.SCI-LC.PDI.31	Info	<ul style="list-style-type: none"> • "Head" - This denotes chapter headings. 	
Eu.SCI-LC.PDI.32	Head	2 General requirements	
Eu.SCI-LC.PDI.206	Req	All references to Eu.Doc.93 refer to Interface specification SCI Generic version 3.2 (0.A).	
Eu.SCI-LC.PDI.217	Req	All references to Eu.Doc.108 refer to Requirements specification for subsystem Level Crossing version 2.2 (0.A)	
Eu.SCI-LC.PDI.33	Head	2.1 Version handling	
Eu.SCI-LC.PDI.34	Info	The Version handling is described in Eu.Doc.93.	
Eu.SCI-LC.PDI.207	Req	The PDI-version of the SCI-LC as described in this document is 0x03.	
Eu.SCI-LC.PDI.35	Head	2.2 Communication requirements	

ID	Type	Requirement	Func. Pkg.
Eu.SCI-LC.PDI.36	Info	The Communication requirements are described in Eu.Doc.93.	
Eu.SCI-LC.PDI.218	Head	2.3 Functional requirements	
Eu.SCI-LC.PDI.219	Info	The functional requirements for SCI-LC are described in Eu.Doc.108.	
Eu.SCI-LC.PDI.37	Head	3 Telegrams SCI-LC.PDI	
Eu.SCI-LC.PDI.38	Info	This chapter defines the SCI-LC.PDI telegrams.	Basic LC
Eu.SCI-LC.PDI.39	Head	3.1 Telegram structure	
Eu.SCI-LC.PDI.40	Info	The telegram structure is specified in Eu.Doc.93.	Basic LC
Eu.SCI-LC.PDI.41	Head	3.2 Sender and Receiver Identifier	
Eu.SCI-LC.PDI.42	Info	The identification of communications partners is specified in Eu.Doc.93.	Basic LC
Eu.SCI-LC.PDI.43	Head	3.3 Message and command type overview	
Eu.SCI-LC.PDI.44	Info	The following table shows permitted subsystem specific message types for the SCI-LC.PDI. The permitted generic message types are specified in Eu.Doc.93.	Basic LC Option LOH

ID	Type	Requirement					Func. Pkg.																																																											
		<table border="1"> <thead> <tr> <th>Message Type</th> <th>Value</th> <th>Sender</th> <th>Receiver</th> <th>Purpose</th> </tr> </thead> <tbody> <tr> <td><i>command</i> Activation</td> <td>0x0001</td> <td>Subsystem – Electronic Interlocking</td> <td>Subsystem – Level Crossing</td> <td>Command to activate</td> </tr> <tr> <td><i>command</i> Deactivation</td> <td>0x0002</td> <td>Subsystem – Electronic Interlocking</td> <td>Subsystem – Level Crossing</td> <td>Command to deactivate</td> </tr> <tr> <td><i>command</i> Local Operation Handover</td> <td>0x0014</td> <td>Subsystem – Electronic Interlocking</td> <td>Subsystem – Level Crossing</td> <td>Command to allow or return a handover of local operation to the Local operator according to the handover status.</td> </tr> <tr> <td><i>command</i> Isolate LC</td> <td>0x0006</td> <td>Subsystem – Electronic Interlocking</td> <td>Subsystem – Level Crossing</td> <td>Command to prevent the activated Level Crossing</td> </tr> <tr> <td><i>message</i> LC Functional Status</td> <td>0x0003</td> <td>Subsystem – Level Crossing</td> <td>Subsystem – Electronic Interlocking</td> <td>Report of a changed functional status</td> </tr> <tr> <td><i>message</i> LC Monitoring Status</td> <td>0x0004</td> <td>Subsystem – Level Crossing</td> <td>Subsystem – Electronic Interlocking</td> <td>Report of a changed monitoring status</td> </tr> <tr> <td><i>message</i> LC Failure Status</td> <td>0x0005</td> <td>Subsystem – Level Crossing</td> <td>Subsystem – Electronic Interlocking</td> <td>Report the current failure status</td> </tr> <tr> <td><i>message</i> Local Operation Handover</td> <td>0x0015</td> <td>Subsystem – Level Crossing</td> <td>Subsystem – Electronic Interlocking</td> <td>Report to allow or return a handover of local operation to the Local operator</td> </tr> <tr> <td><i>message</i> Detection Element Status</td> <td>0x0017</td> <td>Subsystem – Level Crossing</td> <td>Subsystem – Electronic Interlocking</td> <td>Report of a changed Detection element status</td> </tr> <tr> <td><i>message</i> Obstacle Detection Status</td> <td>0x0020</td> <td>Subsystem – Level Crossing</td> <td>Subsystem – Electronic Interlocking</td> <td>Report of a changed Obstacle detection status</td> </tr> <tr> <td><i>message</i> Local Request</td> <td>0x0007</td> <td>Subsystem – Level Crossing</td> <td>Subsystem – Electronic Interlocking</td> <td>Report of a local request</td> </tr> </tbody> </table>	Message Type	Value	Sender	Receiver	Purpose	<i>command</i> Activation	0x0001	Subsystem – Electronic Interlocking	Subsystem – Level Crossing	Command to activate	<i>command</i> Deactivation	0x0002	Subsystem – Electronic Interlocking	Subsystem – Level Crossing	Command to deactivate	<i>command</i> Local Operation Handover	0x0014	Subsystem – Electronic Interlocking	Subsystem – Level Crossing	Command to allow or return a handover of local operation to the Local operator according to the handover status.	<i>command</i> Isolate LC	0x0006	Subsystem – Electronic Interlocking	Subsystem – Level Crossing	Command to prevent the activated Level Crossing	<i>message</i> LC Functional Status	0x0003	Subsystem – Level Crossing	Subsystem – Electronic Interlocking	Report of a changed functional status	<i>message</i> LC Monitoring Status	0x0004	Subsystem – Level Crossing	Subsystem – Electronic Interlocking	Report of a changed monitoring status	<i>message</i> LC Failure Status	0x0005	Subsystem – Level Crossing	Subsystem – Electronic Interlocking	Report the current failure status	<i>message</i> Local Operation Handover	0x0015	Subsystem – Level Crossing	Subsystem – Electronic Interlocking	Report to allow or return a handover of local operation to the Local operator	<i>message</i> Detection Element Status	0x0017	Subsystem – Level Crossing	Subsystem – Electronic Interlocking	Report of a changed Detection element status	<i>message</i> Obstacle Detection Status	0x0020	Subsystem – Level Crossing	Subsystem – Electronic Interlocking	Report of a changed Obstacle detection status	<i>message</i> Local Request	0x0007	Subsystem – Level Crossing	Subsystem – Electronic Interlocking	Report of a local request				
Message Type	Value	Sender	Receiver	Purpose																																																														
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<i>message</i> Obstacle Detection Status	0x0020	Subsystem – Level Crossing	Subsystem – Electronic Interlocking	Report of a changed Obstacle detection status																																																														
<i>message</i> Local Request	0x0007	Subsystem – Level Crossing	Subsystem – Electronic Interlocking	Report of a local request																																																														
Eu.SCI-LC.PDI.45	Head	3.4 Telegram definitions																																																																
Eu.SCI-LC.PDI.46	Info	In this chapter, specific telegrams for SCI-LC.PDI are defined. The generic telegrams are defined in Eu.Doc.93.					Basic LC																																																											

ID	Type	Requirement	Func. Pkg.												
Eu.SCI-LC.PDI.47	Head	3.4.1 Command "Activation"													
Eu.SCI-LC.PDI.48	Info	With this telegram the Subsystem – Electronic Interlocking commands the Subsystem – Level Crossing to activate. This telegram refines the InformationFlow "Cd_Activation" specified in the requirements specification (ID Eu.LC.2757).	Basic LC												
Eu.SCI-LC.PDI.49	Info	Telegram definition for command "Activation" <table border="1" data-bbox="479 427 1429 719"> <thead> <tr> <th data-bbox="479 427 645 478">Byte-Nr.</th> <th data-bbox="645 427 1429 478">Content</th> </tr> </thead> <tbody> <tr> <td data-bbox="479 478 645 529">00</td> <td data-bbox="645 478 1429 529">Protocol Type: 0x60 (1 Byte binary)</td> </tr> <tr> <td data-bbox="479 529 645 580">01..02</td> <td data-bbox="645 529 1429 580">Message Type: 0x0001 (2 Bytes binary)</td> </tr> <tr> <td data-bbox="479 580 645 632">03..22</td> <td data-bbox="645 580 1429 632">Sender Identifier (20 Bytes ISO IEC 8859-1:1998)</td> </tr> <tr> <td data-bbox="479 632 645 683">23..42</td> <td data-bbox="645 632 1429 683">Receiver Identifier (20 Bytes ISO IEC 8859-1:1998)</td> </tr> <tr> <td data-bbox="479 683 645 719">43</td> <td data-bbox="645 683 1429 719">Activation type (1 Byte binary)</td> </tr> </tbody> </table>	Byte-Nr.	Content	00	Protocol Type: 0x60 (1 Byte binary)	01..02	Message Type: 0x0001 (2 Bytes binary)	03..22	Sender Identifier (20 Bytes ISO IEC 8859-1:1998)	23..42	Receiver Identifier (20 Bytes ISO IEC 8859-1:1998)	43	Activation type (1 Byte binary)	Basic LC
Byte-Nr.	Content														
00	Protocol Type: 0x60 (1 Byte binary)														
01..02	Message Type: 0x0001 (2 Bytes binary)														
03..22	Sender Identifier (20 Bytes ISO IEC 8859-1:1998)														
23..42	Receiver Identifier (20 Bytes ISO IEC 8859-1:1998)														
43	Activation type (1 Byte binary)														
Eu.SCI-LC.PDI.50	Req	Permitted values for command "Activation":	Basic LC												
Eu.SCI-LC.PDI.51	Req	Message Type The message bytes 1 - 2 shall be set to 0x0001.	Basic LC												
Eu.SCI-LC.PDI.52	Req	Sender Identifier The message bytes 3 - 22 shall contain the technical identifier of the Subsystem - Electronic Interlocking according to ID Eu.SCI-XX.PDI.59 in ISO IEC 8859-1:1998 format.	Basic LC												
Eu.SCI-LC.PDI.53	Req	Receiver Identifier The message bytes 23 - 42 shall contain the operational identifier of the Subsystem - Level Crossing according to ID Eu.SCI-XX.PDI.59 in ISO IEC 8859-1:1998 format.	Basic LC												
Eu.SCI-LC.PDI.54	Req	Activation type The message byte 43 shall provide the Activation type. Permitted values are: <table data-bbox="479 1267 824 1326"> <thead> <tr> <th data-bbox="479 1267 658 1299">value</th> <th data-bbox="658 1267 824 1299">meaning</th> </tr> </thead> <tbody> <tr> <td data-bbox="479 1299 658 1326">-----</td> <td data-bbox="658 1299 824 1326">-----</td> </tr> </tbody> </table>	value	meaning	-----	-----	Basic LC								
value	meaning														
-----	-----														
Eu.SCI-LC.PDI.55	Req	0x01 Activation	Basic LC												
Eu.SCI-LC.PDI.56	Req	0x02 Pre-activation	Basic LC												

ID	Type	Requirement	Func. Pkg.										
Eu.SCI-LC.PDI.57	Head	3.4.2 Command "Deactivation"											
Eu.SCI-LC.PDI.58	Info	With this telegram the Subsystem – Electronic Interlocking commands the Subsystem – Level Crossing to deactivate. This telegram refines the InformationFlows "Cd_Deactivation" specified in the requirements specification (ID Eu.LC.2758).	Basic LC										
Eu.SCI-LC.PDI.59	Info	Telegram definition for command "Deactivation" <table border="1" data-bbox="479 427 1429 668"> <thead> <tr> <th data-bbox="479 427 645 475">Byte-Nr.</th> <th data-bbox="645 427 1429 475">Content</th> </tr> </thead> <tbody> <tr> <td data-bbox="479 475 645 523">00</td> <td data-bbox="645 475 1429 523">Protocol Type: 0x60 (1 Byte binary)</td> </tr> <tr> <td data-bbox="479 523 645 571">01..02</td> <td data-bbox="645 523 1429 571">Message Type: 0x0002 (2 Bytes binary)</td> </tr> <tr> <td data-bbox="479 571 645 619">03..22</td> <td data-bbox="645 571 1429 619">Sender Identifier (20 Bytes ISO IEC 8859-1:1998)</td> </tr> <tr> <td data-bbox="479 619 645 668">23..42</td> <td data-bbox="645 619 1429 668">Receiver Identifier (20 Bytes ISO IEC 8859-1:1998)</td> </tr> </tbody> </table>	Byte-Nr.	Content	00	Protocol Type: 0x60 (1 Byte binary)	01..02	Message Type: 0x0002 (2 Bytes binary)	03..22	Sender Identifier (20 Bytes ISO IEC 8859-1:1998)	23..42	Receiver Identifier (20 Bytes ISO IEC 8859-1:1998)	Basic LC
Byte-Nr.	Content												
00	Protocol Type: 0x60 (1 Byte binary)												
01..02	Message Type: 0x0002 (2 Bytes binary)												
03..22	Sender Identifier (20 Bytes ISO IEC 8859-1:1998)												
23..42	Receiver Identifier (20 Bytes ISO IEC 8859-1:1998)												
Eu.SCI-LC.PDI.60	Req	Permitted values for command "Deactivation":	Basic LC										
Eu.SCI-LC.PDI.61	Req	Message Type The message bytes 1 - 2 shall be set to 0x0002.	Basic LC										
Eu.SCI-LC.PDI.62	Req	Sender Identifier The message bytes 3 - 22 shall contain the technical identifier of the Subsystem - Electronic Interlocking according to ID Eu.SCI-XX.PDI.59 in ISO IEC 8859-1:1998 format.	Basic LC										
Eu.SCI-LC.PDI.63	Req	Receiver Identifier The message bytes 23 - 42 shall contain the operational identifier of the Subsystem - Level Crossing according to ID Eu.SCI-XX.PDI.59 in ISO IEC 8859-1:1998 format.	Basic LC										
Eu.SCI-LC.PDI.64	Head	3.4.3 Command "Local Operation Handover"											
Eu.SCI-LC.PDI.65	Info	With this telegram the Subsystem – Electronic Interlocking commands the Subsystem – Level Crossing to allow or revoke a handover of local operation to the Local operator according to the handover status. This telegram refines the InformationFlow "Cd_Local_Operation_Handover" specified in the requirements specification (ID Eu.LC.2760).	Option LOH										
Eu.SCI-LC.PDI.66	Info	Telegram definition for command "Local Operation Handover"	Option LOH										

ID	Type	Requirement	Func. Pkg.														
		<table border="1" data-bbox="479 236 1429 574"> <thead> <tr> <th data-bbox="479 236 645 284">Byte-Nr.</th> <th data-bbox="649 236 1429 284">Content</th> </tr> </thead> <tbody> <tr> <td data-bbox="479 287 645 331">00</td> <td data-bbox="649 287 1429 331">Protocol Type: 0x60 (1 Byte binary)</td> </tr> <tr> <td data-bbox="479 335 645 379">01..02</td> <td data-bbox="649 335 1429 379">Message Type: 0x0014 (2 Bytes binary)</td> </tr> <tr> <td data-bbox="479 383 645 427">03..22</td> <td data-bbox="649 383 1429 427">Sender Identifier (20 Bytes ISO IEC 8859-1:1998)</td> </tr> <tr> <td data-bbox="479 430 645 475">23..42</td> <td data-bbox="649 430 1429 475">Receiver Identifier (20 Bytes ISO IEC 8859-1:1998)</td> </tr> <tr> <td data-bbox="479 478 645 523">43</td> <td data-bbox="649 478 1429 523">Handover status (1 Byte binary)</td> </tr> <tr> <td data-bbox="479 526 645 574">44</td> <td data-bbox="649 526 1429 574">Handover index (1 Byte binary)</td> </tr> </tbody> </table>	Byte-Nr.	Content	00	Protocol Type: 0x60 (1 Byte binary)	01..02	Message Type: 0x0014 (2 Bytes binary)	03..22	Sender Identifier (20 Bytes ISO IEC 8859-1:1998)	23..42	Receiver Identifier (20 Bytes ISO IEC 8859-1:1998)	43	Handover status (1 Byte binary)	44	Handover index (1 Byte binary)	
Byte-Nr.	Content																
00	Protocol Type: 0x60 (1 Byte binary)																
01..02	Message Type: 0x0014 (2 Bytes binary)																
03..22	Sender Identifier (20 Bytes ISO IEC 8859-1:1998)																
23..42	Receiver Identifier (20 Bytes ISO IEC 8859-1:1998)																
43	Handover status (1 Byte binary)																
44	Handover index (1 Byte binary)																
Eu.SCI-LC.PDI.67	Req	Permitted values for command "Local Operation Handover":	Option LOH														
Eu.SCI-LC.PDI.68	Req	Message Type The message bytes 1 - 2 shall be set to 0x0014.	Option LOH														
Eu.SCI-LC.PDI.69	Req	Sender Identifier The message bytes 3 - 22 shall contain the technical identifier of the Subsystem - Electronic Interlocking according to ID Eu.SCI-XX.PDI.59 in ISO IEC 8859-1:1998 format.	Option LOH														
Eu.SCI-LC.PDI.70	Req	Receiver Identifier The message bytes 23 - 42 shall contain the operational identifier of the Subsystem - Level Crossing according to ID Eu.SCI-XX.PDI.59 in ISO IEC 8859-1:1998 format.	Option LOH														
Eu.SCI-LC.PDI.71	Req	Handover status The message byte 43 shall provide the handover or the revoke of the handover to the Local operator. Permitted values are: value meaning ----- -----	Option LOH														
Eu.SCI-LC.PDI.72	Req	0x01 No handover to local operator	Option LOH														
Eu.SCI-LC.PDI.73	Req	0x02 Handover to local operator initiated	Option LOH														

ID	Type	Requirement	Func. Pkg.												
Eu.SCI-LC.PDI.74	Req	0x03 Handover to local operator established	Option LOH												
Eu.SCI-LC.PDI.75	Req	<p>Handover index The message byte 44 shall provide the Handover index. Permitted values are:</p> <table border="1" data-bbox="477 384 824 443"> <thead> <tr> <th>value</th> <th>meaning</th> </tr> </thead> <tbody> <tr> <td>-----</td> <td>-----</td> </tr> </tbody> </table>	value	meaning	-----	-----	Option LOH								
value	meaning														
-----	-----														
Eu.SCI-LC.PDI.76	Req	0x01..0xFE Index of handover (e.g. track)	Option LOH												
Eu.SCI-LC.PDI.77	Head	3.4.4 Command "Isolate LC"													
Eu.SCI-LC.PDI.78	Info	With this telegram the Subsystem - Electronic Interlocking commands the Subsystem - Level Crossing to prevent activation as a result of maintenance or reconfiguration work which requires deactivation of the Subsystem - Electronic Interlocking. This telegram refines the InformationFlow "Cd_Isolate_LC" specified in the requirements specification (ID Eu.LC.2759).	Basic LC												
Eu.SCI-LC.PDI.79	Info	<p>Telegram definition for command "Isolate LC"</p> <table border="1" data-bbox="477 834 1429 1125"> <thead> <tr> <th>Byte-Nr.</th> <th>Content</th> </tr> </thead> <tbody> <tr> <td>00</td> <td>Protocol Type: 0x60 (1 Byte binary)</td> </tr> <tr> <td>01..02</td> <td>Message Type: 0x0006 (2 Bytes binary)</td> </tr> <tr> <td>03..22</td> <td>Sender Identifier (20 Bytes ISO IEC 8859-1:1998)</td> </tr> <tr> <td>23..42</td> <td>Receiver Identifier (20 Bytes ISO IEC 8859-1:1998)</td> </tr> <tr> <td>43</td> <td>Isolation command (1 Byte binary)</td> </tr> </tbody> </table>	Byte-Nr.	Content	00	Protocol Type: 0x60 (1 Byte binary)	01..02	Message Type: 0x0006 (2 Bytes binary)	03..22	Sender Identifier (20 Bytes ISO IEC 8859-1:1998)	23..42	Receiver Identifier (20 Bytes ISO IEC 8859-1:1998)	43	Isolation command (1 Byte binary)	Basic LC
Byte-Nr.	Content														
00	Protocol Type: 0x60 (1 Byte binary)														
01..02	Message Type: 0x0006 (2 Bytes binary)														
03..22	Sender Identifier (20 Bytes ISO IEC 8859-1:1998)														
23..42	Receiver Identifier (20 Bytes ISO IEC 8859-1:1998)														
43	Isolation command (1 Byte binary)														
Eu.SCI-LC.PDI.80	Req	Permitted values for command "Isolate LC":	Basic LC												
Eu.SCI-LC.PDI.81	Req	<p>Message Type The message bytes 1 - 2 shall be set to 0x0006.</p>	Basic LC												

ID	Type	Requirement	Func. Pkg.												
Eu.SCI-LC.PDI.82	Req	Sender Identifier The message bytes 3 - 22 shall contain the technical identifier of the Subsystem - Electronic Interlocking according to ID Eu.SCI-XX.PDI.59 in ISO IEC 8859-1:1998 format.	Basic LC												
Eu.SCI-LC.PDI.83	Req	Receiver Identifier The message bytes 23 - 42 shall contain the operational identifier of the Subsystem - Level Crossing according to ID Eu.SCI-XX.PDI.59 in ISO IEC 8859-1:1998 format.	Basic LC												
Eu.SCI-LC.PDI.84	Req	Isolation command The message byte 43 shall enable or disable isolation of the Subsystem - Level Crossing. Permitted values are: value meaning ----- -----	Basic LC												
Eu.SCI-LC.PDI.85	Req	0x01 Enable isolation of the level crossing	Basic LC												
Eu.SCI-LC.PDI.86	Req	0x02 Disable isolation of the level crossing	Basic LC												
Eu.SCI-LC.PDI.87	Head	3.4.5 Message "LC Functional Status"													
Eu.SCI-LC.PDI.88	Info	With this telegram the Subsystem – Level Crossing reports to the Subsystem – Electronic Interlocking a changed functional status. This telegram refines the InformationFlow "Msg_LC_Functional_Status" specified in the requirements specification (ID Eu.LC.2763).	Basic LC												
Eu.SCI-LC.PDI.89	Info	Telegram definition for message "LC Functional Status" <table border="1" data-bbox="479 1075 1458 1366"> <thead> <tr> <th data-bbox="479 1075 645 1123">Byte-Nr.</th> <th data-bbox="645 1075 1458 1123">Content</th> </tr> </thead> <tbody> <tr> <td data-bbox="479 1123 645 1171">00</td> <td data-bbox="645 1123 1458 1171">Protocol Type: 0x60 (1 Byte binary)</td> </tr> <tr> <td data-bbox="479 1171 645 1219">01..02</td> <td data-bbox="645 1171 1458 1219">Message Type: 0x0003 (2 Bytes binary)</td> </tr> <tr> <td data-bbox="479 1219 645 1267">03..22</td> <td data-bbox="645 1219 1458 1267">Sender Identifier (20 Bytes ISO IEC 8859-1:1998)</td> </tr> <tr> <td data-bbox="479 1267 645 1315">23..42</td> <td data-bbox="645 1267 1458 1315">Receiver Identifier (20 Bytes ISO IEC 8859-1:1998)</td> </tr> <tr> <td data-bbox="479 1315 645 1362">43</td> <td data-bbox="645 1315 1458 1362">Activation status (1 Byte binary)</td> </tr> </tbody> </table>	Byte-Nr.	Content	00	Protocol Type: 0x60 (1 Byte binary)	01..02	Message Type: 0x0003 (2 Bytes binary)	03..22	Sender Identifier (20 Bytes ISO IEC 8859-1:1998)	23..42	Receiver Identifier (20 Bytes ISO IEC 8859-1:1998)	43	Activation status (1 Byte binary)	Basic LC
Byte-Nr.	Content														
00	Protocol Type: 0x60 (1 Byte binary)														
01..02	Message Type: 0x0003 (2 Bytes binary)														
03..22	Sender Identifier (20 Bytes ISO IEC 8859-1:1998)														
23..42	Receiver Identifier (20 Bytes ISO IEC 8859-1:1998)														
43	Activation status (1 Byte binary)														
Eu.SCI-LC.PDI.90	Req	Permitted values for message "LC Functional Status":	Basic LC												

ID	Type	Requirement	Func. Pkg.				
Eu.SCI-LC.PDI.91	Req	Message Type The message bytes 1 - 2 shall be set to 0x0003.	Basic LC				
Eu.SCI-LC.PDI.92	Req	Sender Identifier The message bytes 3 - 22 shall contain the operational identifier of the Subsystem - Level Crossing according to ID Eu.SCI-XX.PDI.59 in ISO IEC 8859-1:1998 format.	Basic LC				
Eu.SCI-LC.PDI.93	Req	Receiver Identifier The message bytes 23 - 42 shall contain the technical identifier of the Subsystem - Electronic Interlocking according to ID Eu.SCI-XX.PDI.59 in ISO IEC 8859-1:1998 format.	Basic LC				
Eu.SCI-LC.PDI.94	Req	Activation status The message byte 43 shall provide the Activation status. Permitted values are: <table border="0" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 150px;">value</td> <td style="width: 100px;">meaning</td> </tr> <tr> <td>-----</td> <td>-----</td> </tr> </table>	value	meaning	-----	-----	Basic LC
value	meaning						
-----	-----						
Eu.SCI-LC.PDI.95	Req	0x01 Deactivated and Unprotected	Basic LC				
Eu.SCI-LC.PDI.96	Req	0x02 Activated and Unprotected	Basic LC				
Eu.SCI-LC.PDI.97	Req	0x03 Activated and Protected	Basic LC				
Eu.SCI-LC.PDI.98	Req	0x04 Pre-activated	Basic LC				
Eu.SCI-LC.PDI.99	Req	0x05 Isolated LC	Basic LC				
Eu.SCI-LC.PDI.100	Head	3.4.6 Message "LC Monitoring Status"					
Eu.SCI-LC.PDI.101	Info	With this telegram the Subsystem – Level Crossing reports to the Subsystem – Electronic Interlocking a changed status of the LC protection facility. This telegram refines the InformationFlow "Msg_LC_Monitoring_Status" specified in the requirements specification (ID Eu.LC.2764).	Basic LC				
Eu.SCI-LC.PDI.102	Info	Telegram definition for message "LC Monitoring Status"	Basic LC				

ID	Type	Requirement	Func. Pkg.																								
		<table border="1"> <thead> <tr> <th data-bbox="479 236 645 284">Byte-Nr.</th> <th data-bbox="645 236 1429 284">Content</th> </tr> </thead> <tbody> <tr> <td data-bbox="479 284 645 331">00</td> <td data-bbox="645 284 1429 331">Protocol Type: 0x60 (1 Byte binary)</td> </tr> <tr> <td data-bbox="479 331 645 379">01..02</td> <td data-bbox="645 331 1429 379">Message Type: 0x0004 (2 Bytes binary)</td> </tr> <tr> <td data-bbox="479 379 645 427">03..22</td> <td data-bbox="645 379 1429 427">Sender Identifier (20 Bytes ISO IEC 8859-1:1998)</td> </tr> <tr> <td data-bbox="479 427 645 475">23..42</td> <td data-bbox="645 427 1429 475">Receiver Identifier (20 Bytes ISO IEC 8859-1:1998)</td> </tr> <tr> <td data-bbox="479 475 645 523">43</td> <td data-bbox="645 475 1429 523">Barrier position (1 Byte binary)</td> </tr> <tr> <td data-bbox="479 523 645 571">44</td> <td data-bbox="645 523 1429 571">Barrier movement (1 Byte binary)</td> </tr> <tr> <td data-bbox="479 571 645 619">45</td> <td data-bbox="645 571 1429 619">Road lights status (1 Byte binary)</td> </tr> <tr> <td data-bbox="479 619 645 667">46</td> <td data-bbox="645 619 1429 667">Timer overrun (1 Byte binary)</td> </tr> <tr> <td data-bbox="479 667 645 715">47</td> <td data-bbox="645 667 1429 715">Hardware status (1 Byte binary)</td> </tr> <tr> <td data-bbox="479 715 645 762">48</td> <td data-bbox="645 715 1429 762">Power supply status (1 Byte binary)</td> </tr> <tr> <td data-bbox="479 762 645 810">49</td> <td data-bbox="645 762 1429 810">Barrier intact (1 Byte binary)</td> </tr> </tbody> </table>	Byte-Nr.	Content	00	Protocol Type: 0x60 (1 Byte binary)	01..02	Message Type: 0x0004 (2 Bytes binary)	03..22	Sender Identifier (20 Bytes ISO IEC 8859-1:1998)	23..42	Receiver Identifier (20 Bytes ISO IEC 8859-1:1998)	43	Barrier position (1 Byte binary)	44	Barrier movement (1 Byte binary)	45	Road lights status (1 Byte binary)	46	Timer overrun (1 Byte binary)	47	Hardware status (1 Byte binary)	48	Power supply status (1 Byte binary)	49	Barrier intact (1 Byte binary)	
Byte-Nr.	Content																										
00	Protocol Type: 0x60 (1 Byte binary)																										
01..02	Message Type: 0x0004 (2 Bytes binary)																										
03..22	Sender Identifier (20 Bytes ISO IEC 8859-1:1998)																										
23..42	Receiver Identifier (20 Bytes ISO IEC 8859-1:1998)																										
43	Barrier position (1 Byte binary)																										
44	Barrier movement (1 Byte binary)																										
45	Road lights status (1 Byte binary)																										
46	Timer overrun (1 Byte binary)																										
47	Hardware status (1 Byte binary)																										
48	Power supply status (1 Byte binary)																										
49	Barrier intact (1 Byte binary)																										
Eu.SCI-LC.PDI.103	Req	Permitted values for message "LC Monitoring Status":	Basic LC																								
Eu.SCI-LC.PDI.104	Req	<p>Message Type The message bytes 1 - 2 shall be set to 0x0004.</p>	Basic LC																								
Eu.SCI-LC.PDI.105	Req	<p>Sender Identifier The message bytes 3 - 22 shall contain the operational identifier of the Subsystem - Level Crossing according to ID Eu.SCI-XX.PDI.59 in ISO IEC 8859-1:1998 format.</p>	Basic LC																								
Eu.SCI-LC.PDI.106	Req	<p>Receiver Identifier The message bytes 23 - 42 shall contain the technical identifier of the Subsystem - Electronic Interlocking according to ID Eu.SCI-XX.PDI.59 in ISO IEC 8859-1:1998 format.</p>	Basic LC																								

ID	Type	Requirement	Func. Pkg.
Eu.SCI-LC.PDI.107	Req	Barrier position The message byte 43 shall provide the Barrier position. Permitted values are: value meaning ----- -----	Basic LC
Eu.SCI-LC.PDI.108	Req	0x01 End position at the top	Basic LC
Eu.SCI-LC.PDI.109	Req	0x02 End position at the bottom	Basic LC
Eu.SCI-LC.PDI.110	Req	0x03 No End position	Basic LC
Eu.SCI-LC.PDI.111	Req	0xFF Barrier position is not applicable	Basic LC
Eu.SCI-LC.PDI.112	Info	If the Subsystem – Level Crossing is not configured to have information on the barrier position, the value 0xFF can be used.	Basic LC
Eu.SCI-LC.PDI.113	Req	Barrier movement The message byte 44 shall provide the Barrier movement. Permitted values are: value meaning ----- -----	Basic LC
Eu.SCI-LC.PDI.114	Req	0x01 Barrier movement downwards	Basic LC
Eu.SCI-LC.PDI.115	Req	0x02 Barrier movement upwards	Basic LC
Eu.SCI-LC.PDI.116	Req	0x03 No movement	Basic LC
Eu.SCI-LC.PDI.117	Req	0xFF Barrier movement is not applicable	Basic LC
Eu.SCI-LC.PDI.118	Info	If the Subsystem – Level Crossing is not configured to have information on the barrier movement, the value 0xFF can be used.	Basic LC
Eu.SCI-LC.PDI.119	Req	Road lights status The message byte 45 shall provide the Road lights status. Permitted values are: value meaning ----- -----	Basic LC
Eu.SCI-LC.PDI.120	Req	0x01 Road lights off	Basic LC

ID	Type	Requirement	Func. Pkg.				
Eu.SCI-LC.PDI.121	Req	0X02 Road lights on	Basic LC				
Eu.SCI-LC.PDI.122	Req	0xFF Road lights status is not applicable	Basic LC				
Eu.SCI-LC.PDI.123	Info	If the Subsystem – Level Crossing is not configured to have information on the road lights status, the value 0xFF can be used.	Basic LC				
Eu.SCI-LC.PDI.124	Req	<p>Timer overrun The message byte 46 shall provide the occurred Closure timer overrun. Permitted values are:</p> <table border="0" data-bbox="477 507 824 564"> <tr> <td>value</td> <td>meaning</td> </tr> <tr> <td>-----</td> <td>-----</td> </tr> </table>	value	meaning	-----	-----	Basic LC
value	meaning						
-----	-----						
Eu.SCI-LC.PDI.125	Req	0x01 No Closure timer overrun	Basic LC				
Eu.SCI-LC.PDI.126	Req	0x02 Closure timer overrun occurred	Basic LC				
Eu.SCI-LC.PDI.127	Req	0xFF Timer overrun is not applicable	Basic LC				
Eu.SCI-LC.PDI.128	Info	If the Subsystem – Level Crossing is not configured to have information on the timer overrun, the value 0xFF can be used.	Basic LC				
Eu.SCI-LC.PDI.129	Req	<p>Hardware status The message byte 47 shall provide the Hardware status of half Barriers due to short level crossing activation time. Permitted values are:</p> <table border="0" data-bbox="477 975 824 1032"> <tr> <td>value</td> <td>meaning</td> </tr> <tr> <td>-----</td> <td>-----</td> </tr> </table>	value	meaning	-----	-----	Basic LC
value	meaning						
-----	-----						
Eu.SCI-LC.PDI.130	Req	0x01 Hardware status is correct	Basic LC				
Eu.SCI-LC.PDI.131	Req	0x02 Hardware status is not correct	Basic LC				
Eu.SCI-LC.PDI.132	Req	0xFF Hardware status is not applicable	Basic LC				
Eu.SCI-LC.PDI.133	Info	When the Subsystem – Level Crossing is not configured to have information on the hardware status, the value 0xFF can be used.	Basic LC				

ID	Type	Requirement	Func. Pkg.				
Eu.SCI-LC.PDI.134	Req	<p>Power supply status The message byte 48 shall provide the Power supply status. Permitted values are:</p> <table border="0"> <tr> <td style="padding-right: 20px;">value</td> <td>meaning</td> </tr> <tr> <td style="padding-right: 20px;">-----</td> <td>-----</td> </tr> </table>	value	meaning	-----	-----	Basic LC
value	meaning						
-----	-----						
Eu.SCI-LC.PDI.135	Req	0x01 Power supply is working correctly	Basic LC				
Eu.SCI-LC.PDI.136	Req	0x02 Power supply is not fully available	Basic LC				
Eu.SCI-LC.PDI.137	Req	0xFF Power supply status is not applicable	Basic LC				
Eu.SCI-LC.PDI.138	Info	If the Subsystem – Level Crossing is not configured to have information on the power supply status, the value 0xFF can be used.	Basic LC				
Eu.SCI-LC.PDI.208	Req	<p>Barrier intact status The message byte 49 shall provide the Barrier intact status. Permitted values are:</p> <table border="0"> <tr> <td style="padding-right: 20px;">value</td> <td>meaning</td> </tr> <tr> <td style="padding-right: 20px;">-----</td> <td>-----</td> </tr> </table>	value	meaning	-----	-----	Basic LC
value	meaning						
-----	-----						
Eu.SCI-LC.PDI.209	Req	0x01 intact	Basic LC				
Eu.SCI-LC.PDI.211	Req	0x0F not intact	Basic LC				
Eu.SCI-LC.PDI.210	Req	0xFF Barrier intact is not applicable	Basic LC				
Eu.SCI-LC.PDI.139	Head	3.4.7 Message "LC Failure Status"					
Eu.SCI-LC.PDI.140	Info	<p>With this telegram the Subsystem – Level Crossing reports to the Subsystem – Electronic Interlocking the presence of failures. This telegram refines the InformationFlow "Msg_LC_Failure_Status" specified in the requirements specification (ID Eu.LC.2762).</p>	Basic LC				
Eu.SCI-LC.PDI.141	Info	Telegram definition for message "LC Failure Status"	Basic LC				

ID	Type	Requirement	Func. Pkg.														
		<table border="1"> <thead> <tr> <th data-bbox="479 197 645 245">Byte-Nr.</th> <th data-bbox="645 197 1460 245">Content</th> </tr> </thead> <tbody> <tr> <td data-bbox="479 245 645 293">00</td> <td data-bbox="645 245 1460 293">Protocol Type: 0x60 (1 Byte binary)</td> </tr> <tr> <td data-bbox="479 293 645 341">01..02</td> <td data-bbox="645 293 1460 341">Message Type: 0x0005 (2 Bytes binary)</td> </tr> <tr> <td data-bbox="479 341 645 389">03..22</td> <td data-bbox="645 341 1460 389">Sender Identifier (20 Bytes ISO IEC 8859-1:1998)</td> </tr> <tr> <td data-bbox="479 389 645 437">23..42</td> <td data-bbox="645 389 1460 437">Receiver Identifier (20 Bytes ISO IEC 8859-1:1998)</td> </tr> <tr> <td data-bbox="479 437 645 485">43</td> <td data-bbox="645 437 1460 485">Non critical failure status (1 Byte binary)</td> </tr> <tr> <td data-bbox="479 485 645 533">44</td> <td data-bbox="645 485 1460 533">Critical failure status (1 Byte binary)</td> </tr> </tbody> </table>	Byte-Nr.	Content	00	Protocol Type: 0x60 (1 Byte binary)	01..02	Message Type: 0x0005 (2 Bytes binary)	03..22	Sender Identifier (20 Bytes ISO IEC 8859-1:1998)	23..42	Receiver Identifier (20 Bytes ISO IEC 8859-1:1998)	43	Non critical failure status (1 Byte binary)	44	Critical failure status (1 Byte binary)	
Byte-Nr.	Content																
00	Protocol Type: 0x60 (1 Byte binary)																
01..02	Message Type: 0x0005 (2 Bytes binary)																
03..22	Sender Identifier (20 Bytes ISO IEC 8859-1:1998)																
23..42	Receiver Identifier (20 Bytes ISO IEC 8859-1:1998)																
43	Non critical failure status (1 Byte binary)																
44	Critical failure status (1 Byte binary)																
Eu.SCI-LC.PDI.142	Req	Permitted values for message "LC Failure Status":	Basic LC														
Eu.SCI-LC.PDI.143	Req	Message Type The message bytes 1 - 2 shall be set to 0x0005.	Basic LC														
Eu.SCI-LC.PDI.144	Req	Sender Identifier The message bytes 3 - 22 shall contain the operational identifier of the Subsystem - Level Crossing according to ID Eu.SCI-XX.PDI.59 in ISO IEC 8859-1:1998 format.	Basic LC														
Eu.SCI-LC.PDI.145	Req	Receiver Identifier The message bytes 23 - 42 shall contain the technical identifier of the Subsystem - Electronic Interlocking according to ID Eu.SCI-XX.PDI.59 in ISO IEC 8859-1:1998 format.	Basic LC														
Eu.SCI-LC.PDI.146	Req	Non critical failure status The message byte 43 shall provide the non critical failure status. Permitted values are: value meaning ----- -----	Basic LC														
Eu.SCI-LC.PDI.147	Req	0x01 A non critical failure is present	Basic LC														
Eu.SCI-LC.PDI.148	Req	0x02 No non critical failure is present	Basic LC														
Eu.SCI-LC.PDI.151	Req	Critical failure status The message byte 44 shall provide the Critical failure status. Permitted values are: value meaning ----- -----	Basic LC														
Eu.SCI-LC.PDI.152	Req	0x01 A critical failure is present	Basic LC														

ID	Type	Requirement	Func. Pkg.														
Eu.SCI-LC.PDI.153	Req	0x02 No critical failure is present	Basic LC														
Eu.SCI-LC.PDI.156	Head	3.4.8 Message "Local Operation Handover"															
Eu.SCI-LC.PDI.157	Info	With this telegram the Subsystem – Level Crossing reports to the Subsystem – Electronic Interlocking the input to allow or return a handover of local operation to the Local operator. This telegram refines the InformationFlow "Msg_Local_Operation_Handover" specified in the requirements specification (ID Eu.LC.2765).	Option LOH														
Eu.SCI-LC.PDI.158	Info	Telegram definition for message "Local Operation Handover": <table border="1" data-bbox="479 576 1460 916"> <thead> <tr> <th data-bbox="479 576 645 624">Byte-Nr.</th> <th data-bbox="645 576 1460 624">Content</th> </tr> </thead> <tbody> <tr> <td data-bbox="479 624 645 671">00</td> <td data-bbox="645 624 1460 671">Protocol Type: 0x60 (1 Byte binary)</td> </tr> <tr> <td data-bbox="479 671 645 719">01..02</td> <td data-bbox="645 671 1460 719">Message Type: 0x0015 (2 Bytes binary)</td> </tr> <tr> <td data-bbox="479 719 645 767">03..22</td> <td data-bbox="645 719 1460 767">Sender Identifier (20 Bytes ISO IEC 8859-1:1998)</td> </tr> <tr> <td data-bbox="479 767 645 815">23..42</td> <td data-bbox="645 767 1460 815">Receiver Identifier (20 Bytes ISO IEC 8859-1:1998)</td> </tr> <tr> <td data-bbox="479 815 645 863">43</td> <td data-bbox="645 815 1460 863">Handover (1 Byte binary)</td> </tr> <tr> <td data-bbox="479 863 645 911">44</td> <td data-bbox="645 863 1460 911">Handover index (1 Byte binary)</td> </tr> </tbody> </table>	Byte-Nr.	Content	00	Protocol Type: 0x60 (1 Byte binary)	01..02	Message Type: 0x0015 (2 Bytes binary)	03..22	Sender Identifier (20 Bytes ISO IEC 8859-1:1998)	23..42	Receiver Identifier (20 Bytes ISO IEC 8859-1:1998)	43	Handover (1 Byte binary)	44	Handover index (1 Byte binary)	Option LOH
Byte-Nr.	Content																
00	Protocol Type: 0x60 (1 Byte binary)																
01..02	Message Type: 0x0015 (2 Bytes binary)																
03..22	Sender Identifier (20 Bytes ISO IEC 8859-1:1998)																
23..42	Receiver Identifier (20 Bytes ISO IEC 8859-1:1998)																
43	Handover (1 Byte binary)																
44	Handover index (1 Byte binary)																
Eu.SCI-LC.PDI.159	Req	Permitted values for message "Local Operation Handover":	Option LOH														
Eu.SCI-LC.PDI.160	Req	Message Type The message bytes 1 - 2 shall be set to 0x0015.	Option LOH														
Eu.SCI-LC.PDI.161	Req	Sender Identifier The message bytes 3 - 22 shall contain the operational identifier of the Subsystem - Level Crossing according to ID Eu.SCI-XX.PDI.59 in ISO IEC 8859-1:1998 format.	Option LOH														
Eu.SCI-LC.PDI.162	Req	Receiver Identifier The message bytes 23 - 42 shall contain the technical identifier of the Subsystem - Electronic Interlocking according to ID Eu.SCI-XX.PDI.59 in ISO IEC 8859-1:1998 format.	Option LOH														

ID	Type	Requirement	Func. Pkg.														
Eu.SCI-LC.PDI.163	Req	Handover The message byte 43 shall provide the handover or the return of the handover to the Local operator. Permitted values are: value meaning ----- -----	Option LOH														
Eu.SCI-LC.PDI.164	Req	0x01 Allow handover to local operator	Option LOH														
Eu.SCI-LC.PDI.165	Req	0x02 Return handover from local operator	Option LOH														
Eu.SCI-LC.PDI.166	Req	Handover index The message byte 44 shall provide the Handover index. Permitted values are: value meaning ----- -----	Option LOH														
Eu.SCI-LC.PDI.167	Req	0x01..0xFE Index of handover (e.g. track)	Option LOH														
Eu.SCI-LC.PDI.168	Head	3.4.9 Message "Detection Element Status"															
Eu.SCI-LC.PDI.169	Info	With this telegram the Subsystem – Level Crossing reports to the Subsystem – Electronic Interlocking the changed status of the Detection elements. This telegram refines the InformationFlow "Msg_Detection_Element_Status" specified in the requirements specification (ID Eu.LC.2761).	Basic LC														
Eu.SCI-LC.PDI.170	Info	Telegram definition for message "Detection Element Status": <table border="1" data-bbox="479 1074 1460 1417"> <thead> <tr> <th data-bbox="479 1074 645 1121">Byte-Nr.</th> <th data-bbox="645 1074 1460 1121">Content</th> </tr> </thead> <tbody> <tr> <td data-bbox="479 1121 645 1169">00</td> <td data-bbox="645 1121 1460 1169">Protocol Type: 0x60 (1 Byte binary)</td> </tr> <tr> <td data-bbox="479 1169 645 1217">01..02</td> <td data-bbox="645 1169 1460 1217">Message Type: 0x0017 (2 Bytes binary)</td> </tr> <tr> <td data-bbox="479 1217 645 1265">03..22</td> <td data-bbox="645 1217 1460 1265">Sender Identifier (20 Bytes ISO IEC 8859-1:1998)</td> </tr> <tr> <td data-bbox="479 1265 645 1313">23..42</td> <td data-bbox="645 1265 1460 1313">Receiver Identifier (20 Bytes ISO IEC 8859-1:1998)</td> </tr> <tr> <td data-bbox="479 1313 645 1361">43</td> <td data-bbox="645 1313 1460 1361">Number k of following Detection Elements (1 Byte binary)</td> </tr> <tr> <td data-bbox="479 1361 645 1409">44..44+k-1</td> <td data-bbox="645 1361 1460 1409">Status of Detection Element n (each 1 Byte binary) (1 <= n <= k)</td> </tr> </tbody> </table>	Byte-Nr.	Content	00	Protocol Type: 0x60 (1 Byte binary)	01..02	Message Type: 0x0017 (2 Bytes binary)	03..22	Sender Identifier (20 Bytes ISO IEC 8859-1:1998)	23..42	Receiver Identifier (20 Bytes ISO IEC 8859-1:1998)	43	Number k of following Detection Elements (1 Byte binary)	44..44+k-1	Status of Detection Element n (each 1 Byte binary) (1 <= n <= k)	Basic LC
Byte-Nr.	Content																
00	Protocol Type: 0x60 (1 Byte binary)																
01..02	Message Type: 0x0017 (2 Bytes binary)																
03..22	Sender Identifier (20 Bytes ISO IEC 8859-1:1998)																
23..42	Receiver Identifier (20 Bytes ISO IEC 8859-1:1998)																
43	Number k of following Detection Elements (1 Byte binary)																
44..44+k-1	Status of Detection Element n (each 1 Byte binary) (1 <= n <= k)																

ID	Type	Requirement	Func. Pkg.
Eu.SCI-LC.PDI.171	Req	Permitted values for message "Detection Element Status":	Basic LC
Eu.SCI-LC.PDI.172	Req	Message Type The message bytes 1 - 2 shall be set to 0x0017.	Basic LC
Eu.SCI-LC.PDI.173	Req	Sender Identifier The message bytes 3 - 22 shall contain the operational identifier of the Subsystem - Level Crossing according to ID Eu.SCI-XX.PDI.59 in ISO IEC 8859-1:1998 format.	Basic LC
Eu.SCI-LC.PDI.174	Req	Receiver Identifier The message bytes 23 - 42 shall contain the technical identifier of the Subsystem - Electronic Interlocking according to ID Eu.SCI-XX.PDI.59 in ISO IEC 8859-1:1998 format.	Basic LC
Eu.SCI-LC.PDI.175	Req	Number k of following Detection Elements The message byte 43 shall contains the number k of below-given statuses for Detection Elements, transmitted in single bytes. As a maximum, 32 Detection Elements can be configured, therefore, the highest permitted value for byte 43 is 0x20.	Basic LC
Eu.SCI-LC.PDI.176	Req	Detection Element Status The message bytes 44..44+k-1 ($1 \leq n \leq k$) contain the current states of the particular Detection Element n. Permitted values are: value meaning ----- -----	Basic LC
Eu.SCI-LC.PDI.177	Req	0x01 Detection element is vacant	Basic LC
Eu.SCI-LC.PDI.178	Req	0x02 Detection element is occupied	Basic LC
Eu.SCI-LC.PDI.179	Req	0x03 Detection element is failed	Basic LC
Eu.SCI-LC.PDI.180	Head	3.4.10 Message "Obstacle Detection Status"	
Eu.SCI-LC.PDI.181	Info	With this telegram the Subsystem – Level Crossing reports to the Subsystem – Electronic Interlocking the changed status of the Obstacle detection. This telegram refines the InformationFlow "Msg_Obstacle_Detection_Status" specified in the requirements specification (ID Eu.LC.2767).	Basic LC
Eu.SCI-LC.PDI.182	Info	Telegram definition for message "Obstacle Detection Status":	Basic LC

ID	Type	Requirement	Func. Pkg.												
		<table border="1"> <thead> <tr> <th data-bbox="474 193 645 240">Byte-Nr.</th> <th data-bbox="645 193 1460 240">Content</th> </tr> </thead> <tbody> <tr> <td data-bbox="474 240 645 288">00</td> <td data-bbox="645 240 1460 288">Protocol Type: 0x60 (1 Byte binary)</td> </tr> <tr> <td data-bbox="474 288 645 336">01..02</td> <td data-bbox="645 288 1460 336">Message Type: 0x0020 (2 Bytes binary)</td> </tr> <tr> <td data-bbox="474 336 645 384">03..22</td> <td data-bbox="645 336 1460 384">Sender Identifier (20 Bytes ISO IEC 8859-1:1998)</td> </tr> <tr> <td data-bbox="474 384 645 432">23..42</td> <td data-bbox="645 384 1460 432">Receiver Identifier (20 Bytes ISO IEC 8859-1:1998)</td> </tr> <tr> <td data-bbox="474 432 645 480">43</td> <td data-bbox="645 432 1460 480">Obstacle detection (1 Byte binary)</td> </tr> </tbody> </table>	Byte-Nr.	Content	00	Protocol Type: 0x60 (1 Byte binary)	01..02	Message Type: 0x0020 (2 Bytes binary)	03..22	Sender Identifier (20 Bytes ISO IEC 8859-1:1998)	23..42	Receiver Identifier (20 Bytes ISO IEC 8859-1:1998)	43	Obstacle detection (1 Byte binary)	
Byte-Nr.	Content														
00	Protocol Type: 0x60 (1 Byte binary)														
01..02	Message Type: 0x0020 (2 Bytes binary)														
03..22	Sender Identifier (20 Bytes ISO IEC 8859-1:1998)														
23..42	Receiver Identifier (20 Bytes ISO IEC 8859-1:1998)														
43	Obstacle detection (1 Byte binary)														
Eu.SCI-LC.PDI.183	Req	Permitted values for message "Obstacle Detection Status":	Basic LC												
Eu.SCI-LC.PDI.184	Req	Message Type The message bytes 1 - 2 shall be set to 0x0020.	Basic LC												
Eu.SCI-LC.PDI.185	Req	Sender Identifier The message bytes 3 - 22 shall contain the operational identifier of the Subsystem - Level Crossing according to ID Eu.SCI-XX.PDI.59 in ISO IEC 8859-1:1998 format.	Basic LC												
Eu.SCI-LC.PDI.186	Req	Receiver Identifier The message bytes 23 - 42 shall contain the technical identifier of the Subsystem - Electronic Interlocking according to ID Eu.SCI-XX.PDI.59 in ISO IEC 8859-1:1998 format.	Basic LC												
Eu.SCI-LC.PDI.187	Req	Obstacle detection The message byte 43 shall provide the detected Obstacle in the conflict area. Permitted values are: value meaning ----- -----	Basic LC												
Eu.SCI-LC.PDI.188	Req	0x01 No obstacle in the conflict area	Basic LC												
Eu.SCI-LC.PDI.189	Req	0x02 Obstacle detected in the conflict area	Basic LC												
Eu.SCI-LC.PDI.192	Head	3.4.11 Message "Local Request"													
Eu.SCI-LC.PDI.193	Info	With this telegram the Subsystem – Level Crossing reports to the Subsystem – Electronic Interlocking the presence of a local request. This telegram refines the InformationFlow "Msg_Local_Request" specified in the requirements specification (ID Eu.LC.2766).	Option LOH												

ID	Type	Requirement	Func. Pkg.														
Eu.SCI-LC.PDI.194	Info	Telegram definition for message "Local Request": <table border="1" data-bbox="479 261 1460 603"> <thead> <tr> <th data-bbox="479 261 645 309">Byte-Nr.</th> <th data-bbox="645 261 1460 309">Content</th> </tr> </thead> <tbody> <tr> <td data-bbox="479 309 645 357">00</td> <td data-bbox="645 309 1460 357">Protocol Type: 0x60 (1 Byte binary)</td> </tr> <tr> <td data-bbox="479 357 645 405">01..02</td> <td data-bbox="645 357 1460 405">Message Type: 0x0007 (2 Bytes binary)</td> </tr> <tr> <td data-bbox="479 405 645 453">03..22</td> <td data-bbox="645 405 1460 453">Sender Identifier (20 Bytes ISO IEC 8859-1:1998)</td> </tr> <tr> <td data-bbox="479 453 645 501">23..42</td> <td data-bbox="645 453 1460 501">Receiver Identifier (20 Bytes ISO IEC 8859-1:1998)</td> </tr> <tr> <td data-bbox="479 501 645 549">43</td> <td data-bbox="645 501 1460 549">Local request (1 Byte binary)</td> </tr> <tr> <td data-bbox="479 549 645 596">44</td> <td data-bbox="645 549 1460 596">Request index (1 Byte binary)</td> </tr> </tbody> </table>	Byte-Nr.	Content	00	Protocol Type: 0x60 (1 Byte binary)	01..02	Message Type: 0x0007 (2 Bytes binary)	03..22	Sender Identifier (20 Bytes ISO IEC 8859-1:1998)	23..42	Receiver Identifier (20 Bytes ISO IEC 8859-1:1998)	43	Local request (1 Byte binary)	44	Request index (1 Byte binary)	Option LOH
Byte-Nr.	Content																
00	Protocol Type: 0x60 (1 Byte binary)																
01..02	Message Type: 0x0007 (2 Bytes binary)																
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23..42	Receiver Identifier (20 Bytes ISO IEC 8859-1:1998)																
43	Local request (1 Byte binary)																
44	Request index (1 Byte binary)																
Eu.SCI-LC.PDI.195	Req	Permitted values for message "Local Request":	Option LOH														
Eu.SCI-LC.PDI.196	Req	Message Type The message bytes 1 - 2 shall be set to 0x0007.	Option LOH														
Eu.SCI-LC.PDI.197	Req	Sender Identifier The message bytes 3 - 22 shall contain the operational identifier of the Subsystem - Level Crossing according to ID Eu.SCI-XX.PDI.59 in ISO IEC 8859-1:1998 format.	Option LOH														
Eu.SCI-LC.PDI.198	Req	Receiver Identifier The message bytes 23 - 42 shall contain the technical identifier of the Subsystem - Electronic Interlocking according to ID Eu.SCI-XX.PDI.59 in ISO IEC 8859-1:1998 format.	Option LOH														
Eu.SCI-LC.PDI.199	Req	Local request The message byte 43 shall provide the local request. Permitted values are: value meaning ----- -----	Option LOH														
Eu.SCI-LC.PDI.200	Req	0x01 Local request to activate the level crossing	Option LOH														
Eu.SCI-LC.PDI.201	Req	0x02 Local request to deactivate the level crossing	Option LOH														

ID	Type	Requirement	Func. Pkg.
Eu.SCI-LC.PDI.202	Req	Request index The message byte 44 shall provide the Request index. Permitted values are: value meaning ----- -----	Option LOH
Eu.SCI-LC.PDI.203	Req	0x01..0xFE Index of request (e.g. track)	Option LOH