



**EULYNX Initiative**



**Europe's Rail Joint Undertaking**

## **Interface specification SCI-LC**

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| ID                | Type | Requirement   | Func.<br>Pkg. | JIRA     | V 2.2 (0.A) > V 2.1 (1.A)  |
|-------------------|------|---|---------------|----------|--|
| Eu.SCI-LC.PDI.1   | Head | <b>1 Introduction</b>   |               |          |  |
| Eu.SCI-LC.PDI.2   | Head | <b>1.1 Release information</b>  |               |          |  |
| Eu.SCI-LC.PDI.3   | Info | [Eu.Doc.109]<br>Interface specification SCI-LC<br>CENELEC Phase: 5<br>Version: 2.2 (0.A)<br>Approval date: 29.05.2024   |               |          | <b>Object Text:</b><br>[Eu.Doc.109]<br>Interface specification SCI-LC<br>CENELEC Phase: 5<br>Version: 2.2 (0.A)<br>Approval date: 29.05.2024   |
| Eu.SCI-LC.PDI.4   | Info | <b>Version history</b>  |               |          |  |
| Eu.SCI-LC.PDI.221 | Info | version number: 2.0 (0.A)<br>date 16.05.2022<br>author: Philipp Wolber<br>review: CCB<br>changes: EULX-490, EULX-501, EULX-508  |               |          |  |
| Eu.SCI-LC.PDI.222 | Info | version number: 2.1 (0.A)<br>date 26.06.2023<br>author: Philipp Wolber<br>review: TACS Mirror Group<br>changes: EULX-534, EULX-540, EULX-550, EULX-557, EULX-560, EULX-563  |               |          |  |
| Eu.SCI-LC.PDI.224 | Info | version number: 2.1 (1.A)<br>date 15.12.2023<br>author: Philipp Wolber<br>review: M&T<br>changes: EULX-566, EULX-597  |               |          |  |
| Eu.SCI-LC.PDI.225 | Info | version number: 2.1 (2.A)<br>date 03.05.2024<br>author: Philipp Wolber<br>review: cluster<br>changes: EULX-596, EULX-611, EULX-616, EULX-619  |               |          | object created after baseline 2.1 (1.A)  |
| Eu.SCI-LC.PDI.228 | Info | version number: 2.2 (0.A)<br>date 18.06.2024<br>author: Philipp Wolber<br>review: TACS Mirror Group<br>changes: EULX-627, EULX-633, EULX-637  |               |          | object created after baseline 2.1 (1.A)  |
| Eu.SCI-LC.PDI.6   | Head | <b>1.2 Impressum</b>  |               |          |  |
| Eu.SCI-LC.PDI.7   | Info | Publishers:<br><br><b>Europe's Rail Joint Undertaking</b><br><a href="https://rail-research.europa.eu/">https://rail-research.europa.eu/</a><br><br><b>EULYNX Initiative</b><br><a href="https://eulynx.eu/">https://eulynx.eu/</a> |               | EULX-619 | <b>Object Text:</b><br>Publishers:<br><br>Europe's Rail Joint Undertaking<br><a href="https://rail-research.europa.eu/">https://rail-research.europa.eu/</a><br><br>EULYNX Initiative<br>A full list of the EULYNX Partners can be found on<br><a href="http://www.eulynx.eu/index.php/members">www.eulynx.eu/index.php/members</a><br><b>a_JIRA_Ticket_BL4R3:</b><br><a href="#">EULX-619</a> |

| ID               | Type | Requirement   | Func. Pkg. | JIRA                 | V 2.2 (0.A) > V 2.1 (1.A)   |
|------------------|------|---|------------|----------------------|---|
| Eu.SCI-LC.PDI.8  | Info | Responsible for this document:<br>EU-Rail System Pillar<br>Trackside Assets Control and Supervision domain  |            |                      |   |
| Eu.SCI-LC.PDI.9  | Info | <p>This document is drafted by and belongs to EU Rail.</p> <p>EU Rail encourages the distribution and re-use of this document, the technical specifications and the information it contains. EU Rail holds several intellectual property rights, such as copyright and trade mark rights, which need to be considered when this document is used.</p> <p>EU Rail authorizes you to re-publish, re-use, copy and store this document without changing it, provided that you indicate its source and include the following mention [EU Rail trade mark, title of the document, year of publication, version of document].</p> <p>EU Rail makes no representation or warranty as to the accuracy or completeness of the information contained within these documents. EU Rail shall have no liability to any party as a result of the use of the information contained herein. EU Rail will have no liability whatsoever for any indirect or consequential loss or damage, and any such liability is expressly excluded.</p> <p>You may study, research, implement, adapt, improve and otherwise use the information, the content and the models in this document for your own purposes. If you decide to publish or disclose any adapted, modified or improved version of this document, any amended implementation or derivative work, then you must indicate that you have modified this document, with a reference to the document name and the terms of use of this document. You may not use EU Rail's trade marks or name in any way that may state or suggest, directly or indirectly, that EU Rail is the author of your adaptations. EU Rail cannot be held responsible for your product, even if you have used this document and its content. It is your responsibility to verify the quality, completeness and the accuracy of the information you use, for your own purposes.</p> |            | EULX-619<br>EULX-633 | <p><b>Object Text:</b><br/> <del>Copyright</del> <del>This EULYNX document Partners</del> <u>is drafted by and belongs to EU Rail.</u><br/> <del>All</del><br/> <u>EU Rail encourages the distribution and re-use of this document, the technical specifications and the information included it or contains. disclosed EU in</u> <del>EU in</del> <u>Rail holds several intellectual property rights, such as copyright and trade mark rights, which need to be considered when this document is licensed used.</u></p> <p><del>EU under</del> <u>Rail authorizes you to re-publish, re-use, copy and store this document without changing it, provided that you indicate its source and include the European following Union mention Public [EU Licence Rail EUP] trade mark, Version title 1 of the document, year of publication, version of document].2</u></p> <p><u>EU Rail makes no representation or later warranty as to the accuracy or completeness of the information contained within these documents. EU Rail shall have no liability to any party as a result of the use of the information contained herein. EU Rail will have no liability whatsoever for any indirect or consequential loss or damage, and any such liability is expressly excluded.</u></p> <p><u>You may study, research, implement, adapt, improve and otherwise use the information, the content and the models in this document for your own purposes. If you decide to publish or disclose any adapted, modified or improved version of this document, any amended implementation or derivative work, then you must indicate that you have modified this document, with a reference to the document name and the terms of use of this document. You may not use EU Rail's trade marks or name in any way that may state or suggest, directly or indirectly, that EU Rail is the author of your adaptations. EU Rail cannot be held responsible for your product, even if you have used this document and its content. It is your responsibility to verify the quality, completeness and the accuracy of the information you use, for your own purposes.</u></p> <p><b>a_JIRA_Ticket_BL4R3:</b><br/> <a href="#">EULX-619</a><br/> <a href="#">EULX-633</a></p> |
| Eu.SCI-LC.PDI.10 | Head | <b>1.3 Purpose</b>  |            |                      |   |
| 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.   |            |                      |   |

| ID                | Type | Requirement  | Func. Pkg. | JIRA | V 2.2 (0.A) > V 2.1 (1.A) |
|-------------------|------|--|------------|------|---------------------------|
| 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"><li>• safety authorities</li><li>• infrastructure managers</li><li>• safety assessors</li><li>• signalling system suppliers</li><li>• validators</li></ul>  |            |      |                           |
| 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 | <b>1.4 Applicable standards and regulations</b>  |            |      |                           |
| 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 | <b>1.5 Applicable documents</b>  |            |      |                           |
| 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 | <b>1.6 Appendices</b>  |            |      |                           |
| Eu.SCI-LC.PDI.22  | Info | <i>- intentionally left blank -</i>  |            |      |                           |
| Eu.SCI-LC.PDI.23  | Head | <b>1.7 Terms and abbreviations</b>   |            |      |                           |
| 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 | <b>1.8 Variability management</b>  |            |      |                           |
| Eu.SCI-LC.PDI.26  | Info | This document describes harmonised requirements. Variability management is not applicable.   |            |      |                           |
| Eu.SCI-LC.PDI.27  | Head | <b>1.9 Definition of object types</b>  |            |      |                           |
| 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"><li>• "Req" - This denotes a mandatory requirement.</li></ul>  |            |      |                           |
| Eu.SCI-LC.PDI.30  | 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>   |            |      |                           |
| Eu.SCI-LC.PDI.31  | Info | <ul style="list-style-type: none"><li>• "Head" - This denotes chapter headings.</li></ul>  |            |      |                           |
| Eu.SCI-LC.PDI.32  | Head | <b>2 General requirements</b>  |            |      |                           |

| ID                | Type | Requirement  | Func. Pkg. | JIRA                             | V 2.2 (0.A) > V 2.1 (1.A)   |
|-------------------|------|--|------------|----------------------------------|---|
| Eu.SCI-LC.PDI.217 | Req  | All references to [Eu.Doc.108] refer to Requirements specification for subsystem Level Crossing version 2.3 (0.A). |            | EULX-611<br>EULX-627<br>EULX-637 | <b>Object Text:</b><br>All references to [Eu.Doc.108] refer to Requirements specification for subsystem Level Crossing version 2. <del>2</del> 3 (10.A).<br><b>a_JIRA_Ticket_BL4R3:</b><br><a href="#">EULX-611</a><br><a href="#">EULX-627</a><br><a href="#">EULX-637</a> |
| Eu.SCI-LC.PDI.206 | Req  | All references to [Eu.Doc.93] refer to Interface specification SCI Generic version 3.3 (0.A).                      |            | EULX-611<br>EULX-627<br>EULX-637 | <b>Object Text:</b><br>All references to [Eu.Doc.93] refer to Interface specification SCI Generic version 3. <del>2</del> 3 (0.A).<br><b>a_JIRA_Ticket_BL4R3:</b><br><a href="#">EULX-611</a><br><a href="#">EULX-627</a><br><a href="#">EULX-637</a>                       |
| Eu.SCI-LC.PDI.33  | Head | <b>2.1 Version handling</b>  |            |                                  |   |
| Eu.SCI-LC.PDI.34  | Info | The Version handling is described in [Eu.Doc.93].  |            | EULX-611                         | <b>Object Text:</b><br>The Version handling is described in [Eu.Doc.93].<br><b>a_JIRA_Ticket_BL4R3:</b><br><a href="#">EULX-611</a>   |
| Eu.SCI-LC.PDI.207 | Req  | The PDI-version of the SCI-LC as described in this document is 0x04.   |            | EULX-616                         | <b>Object Text:</b><br>The PDI-version of the SCI-LC as described in this document is <del>0x03</del> 0x04.<br><b>a_JIRA_Ticket_BL4R3:</b><br><a href="#">EULX-616</a>  |
| Eu.SCI-LC.PDI.35  | Head | <b>2.2 Communication requirements</b>  |            |                                  |   |
| Eu.SCI-LC.PDI.36  | Info | The Communication requirements are described in [Eu.Doc.93].   |            | EULX-611                         | <b>Object Text:</b><br>The Communication requirements are described in [Eu.Doc.93].<br><b>a_JIRA_Ticket_BL4R3:</b><br><a href="#">EULX-611</a>  |
| Eu.SCI-LC.PDI.218 | Head | <b>2.3 Functional requirements</b>   |            |                                  |   |
| Eu.SCI-LC.PDI.219 | Info | The functional requirements for SCI-LC are described in [Eu.Doc.108].  |            | EULX-611                         | <b>Object Text:</b><br>The functional requirements for SCI-LC are described in [Eu.Doc.108].<br><b>a_JIRA_Ticket_BL4R3:</b><br><a href="#">EULX-611</a>   |
| Eu.SCI-LC.PDI.37  | Head | <b>3 Telegrams SCI-LC.PDI</b>  |            |                                  |   |
| Eu.SCI-LC.PDI.38  | Info | This chapter defines the SCI-LC.PDI telegrams.   | Basic LC   |                                  |   |
| Eu.SCI-LC.PDI.39  | Head | <b>3.1 Telegram structure</b>  |            |                                  |   |
| Eu.SCI-LC.PDI.40  | Info | The telegram structure is specified in [Eu.Doc.93].  | Basic LC   | EULX-611                         | <b>Object Text:</b><br>The telegram structure is specified in [Eu.Doc.93].<br><b>a_JIRA_Ticket_BL4R3:</b><br><a href="#">EULX-611</a>   |
| Eu.SCI-LC.PDI.41  | Head | <b>3.2 Sender and Receiver Identifier</b>  |            |                                  |   |

| ID  | Type   | Requirement   | Func. Pkg.                          | JIRA   | V 2.2 (0.A) > V 2.1 (1.A)   |          |         |                              |        |                                     |                            |                     |                                |        |                                     |                            |                       |  |        |                                     |                            |  |                              |        |                                     |                            |   |  |        |                            |                                     |                                       |  |        |                            |                                     |                                       |                                     |        |                            |                                     |                                   |  |        |                            |                                     |   |  |        |                            |                                     |  |   |        |                            |                                     |   |                                 |        |                            |                                     |                           |                        |          |  |
|---|--------|---|-------------------------------------|--|---|----------|---------|------------------------------|--------|-------------------------------------|----------------------------|---------------------|--------------------------------|--------|-------------------------------------|----------------------------|-----------------------|--|--------|-------------------------------------|----------------------------|--|------------------------------|--------|-------------------------------------|----------------------------|---|--|--------|----------------------------|-------------------------------------|---------------------------------------|--|--------|----------------------------|-------------------------------------|---------------------------------------|-------------------------------------|--------|----------------------------|-------------------------------------|-----------------------------------|--|--------|----------------------------|-------------------------------------|---|--|--------|----------------------------|-------------------------------------|--|---|--------|----------------------------|-------------------------------------|---|---------------------------------|--------|----------------------------|-------------------------------------|---------------------------|------------------------|----------|--|
| Eu.SCI-LC.PDI.42                            | Info   | The identification of communications partners is specified in [Eu.Doc.93].  | Basic LC                            | EULX-611   | <b>Object Text:</b><br>The identification of communications partners is specified in [Eu.Doc.93].<br><b>a_JIRA_Ticket_BL4R3:</b><br><a href="#">EULX-611</a>  |          |         |                              |        |                                     |                            |                     |                                |        |                                     |                            |                       |  |        |                                     |                            |  |                              |        |                                     |                            |   |  |        |                            |                                     |                                       |  |        |                            |                                     |                                       |                                     |        |                            |                                     |                                   |  |        |                            |                                     |   |  |        |                            |                                     |  |   |        |                            |                                     |   |                                 |        |                            |                                     |                           |                        |          |  |
| Eu.SCI-LC.PDI.43                            | Head   | <b>3.3 Message and command type overview</b>  |                                     |  |   |          |         |                              |        |                                     |                            |                     |                                |        |                                     |                            |                       |  |        |                                     |                            |  |                              |        |                                     |                            |   |  |        |                            |                                     |                                       |  |        |                            |                                     |                                       |                                     |        |                            |                                     |                                   |  |        |                            |                                     |   |  |        |                            |                                     |  |   |        |                            |                                     |   |                                 |        |                            |                                     |                           |                        |          |  |
| Eu.SCI-LC.PDI.44                            | Info   | <div><div>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].</div><table><tr><th>Message Type</th><th>Value</th><th>Sender</th><th>Receiver</th><th>Purpose</th></tr><tr><td><i>command</i><br/>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><br/>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><br/>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><br/>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><br/>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><br/>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><br/>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><br/>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><br/>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><br/>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><br/>Local Request</td><td>0x0007</td><td>Subsystem – Level Crossing</td><td>Subsystem – Electronic Interlocking</td><td>Report of a local request</td></tr></table></div> | Message Type                        | Value  | Sender  | Receiver | Purpose | <i>command</i><br>Activation | 0x0001 | Subsystem – Electronic Interlocking | Subsystem – Level Crossing | Command to activate | <i>command</i><br>Deactivation | 0x0002 | Subsystem – Electronic Interlocking | Subsystem – Level Crossing | Command to deactivate | <i>command</i><br>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><br>Isolate LC | 0x0006 | Subsystem – Electronic Interlocking | Subsystem – Level Crossing | Command to prevent the activated Level Crossing | <i>message</i><br>LC Functional Status | 0x0003 | Subsystem – Level Crossing | Subsystem – Electronic Interlocking | Report of a changed functional status | <i>message</i><br>LC Monitoring Status | 0x0004 | Subsystem – Level Crossing | Subsystem – Electronic Interlocking | Report of a changed monitoring status | <i>message</i><br>LC Failure Status | 0x0005 | Subsystem – Level Crossing | Subsystem – Electronic Interlocking | Report the current failure status | <i>message</i><br>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><br>Detection Element Status | 0x0017 | Subsystem – Level Crossing | Subsystem – Electronic Interlocking | Report of a changed Detection element status | <i>message</i><br>Obstacle Detection Status | 0x0020 | Subsystem – Level Crossing | Subsystem – Electronic Interlocking | Report of a changed Obstacle detection status | <i>message</i><br>Local Request | 0x0007 | Subsystem – Level Crossing | Subsystem – Electronic Interlocking | Report of a local request | Basic LC<br>Option LOH | EULX-611 | <b>Object Text:</b><br>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].<br><br><b>a_JIRA_Ticket_BL4R3:</b><br><a href="#">EULX-611</a> |
| Message Type                                | Value  | Sender  | Receiver                            | Purpose  |   |          |         |                              |        |                                     |                            |                     |                                |        |                                     |                            |                       |  |        |                                     |                            |  |                              |        |                                     |                            |   |  |        |                            |                                     |                                       |  |        |                            |                                     |                                       |                                     |        |                            |                                     |                                   |  |        |                            |                                     |   |  |        |                            |                                     |  |   |        |                            |                                     |   |                                 |        |                            |                                     |                           |                        |          |  |
| <i>command</i><br>Activation                | 0x0001 | Subsystem – Electronic Interlocking   | Subsystem – Level Crossing          | Command to activate  |   |          |         |                              |        |                                     |                            |                     |                                |        |                                     |                            |                       |  |        |                                     |                            |  |                              |        |                                     |                            |   |  |        |                            |                                     |                                       |  |        |                            |                                     |                                       |                                     |        |                            |                                     |                                   |  |        |                            |                                     |   |  |        |                            |                                     |  |   |        |                            |                                     |   |                                 |        |                            |                                     |                           |                        |          |  |
| <i>command</i><br>Deactivation              | 0x0002 | Subsystem – Electronic Interlocking   | Subsystem – Level Crossing          | Command to deactivate  |   |          |         |                              |        |                                     |                            |                     |                                |        |                                     |                            |                       |  |        |                                     |                            |  |                              |        |                                     |                            |   |  |        |                            |                                     |                                       |  |        |                            |                                     |                                       |                                     |        |                            |                                     |                                   |  |        |                            |                                     |   |  |        |                            |                                     |  |   |        |                            |                                     |   |                                 |        |                            |                                     |                           |                        |          |  |
| <i>command</i><br>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><br>Isolate LC                | 0x0006 | Subsystem – Electronic Interlocking   | Subsystem – Level Crossing          | Command to prevent the activated Level Crossing  |   |          |         |                              |        |                                     |                            |                     |                                |        |                                     |                            |                       |  |        |                                     |                            |  |                              |        |                                     |                            |   |  |        |                            |                                     |                                       |  |        |                            |                                     |                                       |                                     |        |                            |                                     |                                   |  |        |                            |                                     |   |  |        |                            |                                     |  |   |        |                            |                                     |   |                                 |        |                            |                                     |                           |                        |          |  |
| <i>message</i><br>LC Functional Status      | 0x0003 | Subsystem – Level Crossing  | Subsystem – Electronic Interlocking | Report of a changed functional status  |   |          |         |                              |        |                                     |                            |                     |                                |        |                                     |                            |                       |  |        |                                     |                            |  |                              |        |                                     |                            |   |  |        |                            |                                     |                                       |  |        |                            |                                     |                                       |                                     |        |                            |                                     |                                   |  |        |                            |                                     |   |  |        |                            |                                     |  |   |        |                            |                                     |   |                                 |        |                            |                                     |                           |                        |          |  |
| <i>message</i><br>LC Monitoring Status      | 0x0004 | Subsystem – Level Crossing  | Subsystem – Electronic Interlocking | Report of a changed monitoring status  |   |          |         |                              |        |                                     |                            |                     |                                |        |                                     |                            |                       |  |        |                                     |                            |  |                              |        |                                     |                            |   |  |        |                            |                                     |                                       |  |        |                            |                                     |                                       |                                     |        |                            |                                     |                                   |  |        |                            |                                     |   |  |        |                            |                                     |  |   |        |                            |                                     |   |                                 |        |                            |                                     |                           |                        |          |  |
| <i>message</i><br>LC Failure Status         | 0x0005 | Subsystem – Level Crossing  | Subsystem – Electronic Interlocking | Report the current failure status  |   |          |         |                              |        |                                     |                            |                     |                                |        |                                     |                            |                       |  |        |                                     |                            |  |                              |        |                                     |                            |   |  |        |                            |                                     |                                       |  |        |                            |                                     |                                       |                                     |        |                            |                                     |                                   |  |        |                            |                                     |   |  |        |                            |                                     |  |   |        |                            |                                     |   |                                 |        |                            |                                     |                           |                        |          |  |
| <i>message</i><br>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><br>Detection Element Status  | 0x0017 | Subsystem – Level Crossing  | Subsystem – Electronic Interlocking | Report of a changed Detection element status   |   |          |         |                              |        |                                     |                            |                     |                                |        |                                     |                            |                       |  |        |                                     |                            |  |                              |        |                                     |                            |   |  |        |                            |                                     |                                       |  |        |                            |                                     |                                       |                                     |        |                            |                                     |                                   |  |        |                            |                                     |   |  |        |                            |                                     |  |   |        |                            |                                     |   |                                 |        |                            |                                     |                           |                        |          |  |
| <i>message</i><br>Obstacle Detection Status | 0x0020 | Subsystem – Level Crossing  | Subsystem – Electronic Interlocking | Report of a changed Obstacle detection status  |   |          |         |                              |        |                                     |                            |                     |                                |        |                                     |                            |                       |  |        |                                     |                            |  |                              |        |                                     |                            |   |  |        |                            |                                     |                                       |  |        |                            |                                     |                                       |                                     |        |                            |                                     |                                   |  |        |                            |                                     |   |  |        |                            |                                     |  |   |        |                            |                                     |   |                                 |        |                            |                                     |                           |                        |          |  |
| <i>message</i><br>Local Request             | 0x0007 | Subsystem – Level Crossing  | Subsystem – Electronic Interlocking | Report of a local request  |   |          |         |                              |        |                                     |                            |                     |                                |        |                                     |                            |                       |  |        |                                     |                            |  |                              |        |                                     |                            |   |  |        |                            |                                     |                                       |  |        |                            |                                     |                                       |                                     |        |                            |                                     |                                   |  |        |                            |                                     |   |  |        |                            |                                     |  |   |        |                            |                                     |   |                                 |        |                            |                                     |                           |                        |          |  |
| Eu.SCI-LC.PDI.45                            | Head   | <b>3.4 Telegram definitions</b>   |                                     |  |   |          |         |                              |        |                                     |                            |                     |                                |        |                                     |                            |                       |  |        |                                     |                            |  |                              |        |                                     |                            |   |  |        |                            |                                     |                                       |  |        |                            |                                     |                                       |                                     |        |                            |                                     |                                   |  |        |                            |                                     |   |  |        |                            |                                     |  |   |        |                            |                                     |   |                                 |        |                            |                                     |                           |                        |          |  |
| 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                            | EULX-611   | <b>Object Text:</b><br>In this chapter, specific telegrams for SCI-LC.PDI are defined. The generic telegrams are defined in [Eu.Doc.93].<br><b>a_JIRA_Ticket_BL4R3:</b><br><a href="#">EULX-611</a> |          |         |                              |        |                                     |                            |                     |                                |        |                                     |                            |                       |  |        |                                     |                            |  |                              |        |                                     |                            |   |  |        |                            |                                     |                                       |  |        |                            |                                     |                                       |                                     |        |                            |                                     |                                   |  |        |                            |                                     |   |  |        |                            |                                     |  |   |        |                            |                                     |   |                                 |        |                            |                                     |                           |                        |          |  |
| Eu.SCI-LC.PDI.47                            | Head   | <b>3.4.1 Command "Activation"</b>   |                                     |  |   |          |         |                              |        |                                     |                            |                     |                                |        |                                     |                            |                       |  |        |                                     |                            |  |                              |        |                                     |                            |   |  |        |                            |                                     |                                       |  |        |                            |                                     |                                       |                                     |        |                            |                                     |                                   |  |        |                            |                                     |   |  |        |                            |                                     |  |   |        |                            |                                     |   |                                 |        |                            |                                     |                           |                        |          |  |
| 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                            |  |   |          |         |                              |        |                                     |                            |                     |                                |        |                                     |                            |                       |  |        |                                     |                            |  |                              |        |                                     |                            |   |  |        |                            |                                     |                                       |  |        |                            |                                     |                                       |                                     |        |                            |                                     |                                   |  |        |                            |                                     |   |  |        |                            |                                     |  |   |        |                            |                                     |   |                                 |        |                            |                                     |                           |                        |          |  |

| ID               | Type   | Requirement   | Func. Pkg. | JIRA           | V 2.2 (0.A) > V 2.1 (1.A) |  |          |    |                                     |        |                                       |        |  |        |  |    |                                 |
|------------------|--|---|------------|----------------|---------------------------|--|----------|----|-------------------------------------|--------|---------------------------------------|--------|--|--------|--|----|---------------------------------|
| Eu.SCI-LC.PDI.49 | Info   | Telegram definition for command "Activation"  | Basic LC   |                |                           |  |          |    |                                     |        |                                       |        |  |        |  |    |                                 |
|                  |  | <table><tr><th>Byte-Nr.</th><th>Content</th></tr><tr><td>00</td><td>Protocol Type: 0x60 (1 Byte binary)</td></tr><tr><td>01..02</td><td>Message Type: 0x0001 (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>Activation type (1 Byte binary)</td></tr></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) |
|                  |  | 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  | <b>Message Type</b><br>The message bytes 1 - 2 shall be set to 0x0001.  | Basic LC   |                |                           |  |          |    |                                     |        |                                       |        |  |        |  |    |                                 |
| Eu.SCI-LC.PDI.52 | Req  | <b>Sender Identifier</b><br>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  | <b>Receiver Identifier</b><br>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  | <b>Activation type</b><br>The message byte 43 shall provide the Activation type. Permitted values are:<br><br><table><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.55 | Req  | <table><tr><td>0x01</td><td>Activation</td></tr></table>  | 0x01       | Activation     | Basic LC                  |  |          |    |                                     |        |                                       |        |  |        |  |    |                                 |
| 0x01             | Activation   |   |            |                |                           |  |          |    |                                     |        |                                       |        |  |        |  |    |                                 |
| Eu.SCI-LC.PDI.56 | Req  | <table><tr><td>0x02</td><td>Pre-activation</td></tr></table>  | 0x02       | Pre-activation | Basic LC                  |  |          |    |                                     |        |                                       |        |  |        |  |    |                                 |
| 0x02             | Pre-activation                                     |   |            |                |                           |  |          |    |                                     |        |                                       |        |  |        |  |    |                                 |
| Eu.SCI-LC.PDI.57 | Head   | <b>3.4.2 Command "Deactivation"</b>   |            |                |                           |  |          |    |                                     |        |                                       |        |  |        |  |    |                                 |
| 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"  | Basic LC   |                |                           |  |          |    |                                     |        |                                       |        |  |        |  |    |                                 |
|                  |  | <table><tr><th>Byte-Nr.</th><th>Content</th></tr><tr><td>00</td><td>Protocol Type: 0x60 (1 Byte binary)</td></tr><tr><td>01..02</td><td>Message Type: 0x0002 (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></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) |    |                                 |
|                  |  | 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  | <b>Message Type</b><br>The message bytes 1 - 2 shall be set to 0x0002.  | Basic LC   |                |                           |  |          |    |                                     |        |                                       |        |  |        |  |    |                                 |
| Eu.SCI-LC.PDI.62 | Req  | <b>Sender Identifier</b><br>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   |                |                           |  |          |    |                                     |        |                                       |        |  |        |  |    |                                 |



| ID               | Type   | Requirement   | Func. Pkg. | JIRA    | V 2.2 (0.A) > V 2.1 (1.A) |                                     |        |                                       |        |  |        |  |    |                                 |    |                                |            |  |  |
|------------------|--|---|------------|---------|---------------------------|-------------------------------------|--------|---------------------------------------|--------|--|--------|--|----|---------------------------------|----|--------------------------------|------------|--|--|
| Eu.SCI-LC.PDI.63 | Req  | <b>Receiver Identifier</b><br>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   | <b>3.4.3 Command "Local Operation Handover"</b>   |            |         |                           |                                     |        |                                       |        |  |        |  |    |                                 |    |                                |            |  |  |
| 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.<br>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" <table><tr><th>Byte-Nr.</th><th>Content</th></tr><tr><td>00</td><td>Protocol Type: 0x60 (1 Byte binary)</td></tr><tr><td>01..02</td><td>Message Type: 0x0014 (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>Handover status (1 Byte binary)</td></tr><tr><td>44</td><td>Handover index (1 Byte binary)</td></tr></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) | Option LOH |  |  |
| 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  | <b>Message Type</b><br>The message bytes 1 - 2 shall be set to 0x0014.  | Option LOH |         |                           |                                     |        |                                       |        |  |        |  |    |                                 |    |                                |            |  |  |
| Eu.SCI-LC.PDI.69 | Req  | <b>Sender Identifier</b><br>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  | <b>Receiver Identifier</b><br>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  | <b>Handover status</b><br>The message byte 43 shall provide the handover or the revoke of the handover to the Local operator. Permitted values are:<br>value                      meaning<br>-----                      -----   | 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 |         |                           |                                     |        |                                       |        |  |        |  |    |                                 |    |                                |            |  |  |
| Eu.SCI-LC.PDI.74 | Req  | 0x03                      Handover to local operator established  | Option LOH |         |                           |                                     |        |                                       |        |  |        |  |    |                                 |    |                                |            |  |  |
| Eu.SCI-LC.PDI.75 | Req  | <b>Handover index</b><br>The message byte 44 shall provide the Handover index. Permitted values are:<br><br>value                      meaning<br>-----                      -----  | Option LOH |         |                           |                                     |        |                                       |        |  |        |  |    |                                 |    |                                |            |  |  |
| Eu.SCI-LC.PDI.76 | Req  | 0x01..0xFE              Index of handover (e.g. track)  | Option LOH |         |                           |                                     |        |                                       |        |  |        |  |    |                                 |    |                                |            |  |  |

| ID               | Type   | Requirement  | Func. Pkg. | JIRA    | V 2.2 (0.A) > V 2.1 (1.A) |                                     |        |                                       |        |  |        |  |    |                                   |          |  |  |
|------------------|--|--|------------|---------|---------------------------|-------------------------------------|--------|---------------------------------------|--------|--|--------|--|----|-----------------------------------|----------|--|--|
| Eu.SCI-LC.PDI.77 | Head   | <b>3.4.4 Command "Isolate LC"</b>  |            |         |                           |                                     |        |                                       |        |  |        |  |    |                                   |          |  |  |
| 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   | Telegram definition for command "Isolate LC" <table><tr><th>Byte-Nr.</th><th>Content</th></tr><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></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  | <b>Message Type</b><br>The message bytes 1 - 2 shall be set to 0x0006.   | Basic LC   |         |                           |                                     |        |                                       |        |  |        |  |    |                                   |          |  |  |
| Eu.SCI-LC.PDI.82 | Req  | <b>Sender Identifier</b><br>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  | <b>Receiver Identifier</b><br>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  | <b>Isolation command</b><br>The message byte 43 shall enable or disable isolation of the Subsystem - Level Crossing. Permitted values are:<br>value            meaning<br>-----        -----   | 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   | <b>3.4.5 Message "LC Functional Status"</b>  |            |         |                           |                                     |        |                                       |        |  |        |  |    |                                   |          |  |  |
| 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   |         |                           |                                     |        |                                       |        |  |        |  |    |                                   |          |  |  |

| ID                | Type                              | Requirement   | Func. Pkg. | JIRA                         | V 2.2 (0.A) > V 2.1 (1.A) |  |  |    |                                     |        |                                       |        |  |        |  |    |                                   |
|-------------------|-----------------------------------|---|------------|------------------------------|---------------------------|--|--|----|-------------------------------------|--------|---------------------------------------|--------|--|--------|--|----|-----------------------------------|
| Eu.SCI-LC.PDI.89  | Info                              | Telegram definition for message "LC Functional Status"  | Basic LC   |                              |                           |  |  |    |                                     |        |                                       |        |  |        |  |    |                                   |
|                   |                                   | <table><tr><th>Byte-Nr.</th><th>Content</th></tr><tr><td>00</td><td>Protocol Type: 0x60 (1 Byte binary)</td></tr><tr><td>01..02</td><td>Message Type: 0x0003 (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>Activation status (1 Byte binary)</td></tr></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) |
|                   |                                   | 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   |                              |                           |  |  |    |                                     |        |                                       |        |  |        |  |    |                                   |
| Eu.SCI-LC.PDI.91  | Req                               | <b>Message Type</b><br>The message bytes 1 - 2 shall be set to 0x0003.  | Basic LC   |                              |                           |  |  |    |                                     |        |                                       |        |  |        |  |    |                                   |
| Eu.SCI-LC.PDI.92  | Req                               | <b>Sender Identifier</b><br>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                               | <b>Receiver Identifier</b><br>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                               | <b>Activation status</b><br>The message byte 43 shall provide the Activation status. Permitted values are:<br><br><table><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.95  | Info                              | <table><tr><td>0x01</td><td>Intentionally deleted</td></tr></table>   | 0x01       | Intentionally deleted        | Basic LC                  | EULX-596   | <b>a_Object_Type:</b><br><del>Req</del> <a href="#">Info</a><br><b>Object Text:</b><br>0x01 <del>Deactivated and</del> <a href="#">Intentionally</a><br><del>Unprotected</del> <del>deleted</del><br><b>a_JIRA_Ticket_BL4R3:</b><br><a href="#">EULX-596</a> |    |                                     |        |                                       |        |  |        |  |    |                                   |
| 0x01              | Intentionally deleted             |   |            |                              |                           |  |  |    |                                     |        |                                       |        |  |        |  |    |                                   |
| Eu.SCI-LC.PDI.96  | Req                               | <table><tr><td>0x02</td><td>Activated and Unprotected</td></tr></table>   | 0x02       | Activated and Unprotected    | Basic LC                  |  |  |    |                                     |        |                                       |        |  |        |  |    |                                   |
| 0x02              | Activated and Unprotected         |   |            |                              |                           |  |  |    |                                     |        |                                       |        |  |        |  |    |                                   |
| Eu.SCI-LC.PDI.97  | Req                               | <table><tr><td>0x03</td><td>Activated and Protected</td></tr></table>   | 0x03       | Activated and Protected      | Basic LC                  |  |  |    |                                     |        |                                       |        |  |        |  |    |                                   |
| 0x03              | Activated and Protected           |   |            |                              |                           |  |  |    |                                     |        |                                       |        |  |        |  |    |                                   |
| Eu.SCI-LC.PDI.98  | Req                               | <table><tr><td>0x04</td><td>Pre-activated</td></tr></table>   | 0x04       | Pre-activated                | Basic LC                  |  |  |    |                                     |        |                                       |        |  |        |  |    |                                   |
| 0x04              | Pre-activated                     |   |            |                              |                           |  |  |    |                                     |        |                                       |        |  |        |  |    |                                   |
| Eu.SCI-LC.PDI.99  | Req                               | <table><tr><td>0x05</td><td>Isolated LC</td></tr></table>   | 0x05       | Isolated LC                  | Basic LC                  |  |  |    |                                     |        |                                       |        |  |        |  |    |                                   |
| 0x05              | Isolated LC                       |   |            |                              |                           |  |  |    |                                     |        |                                       |        |  |        |  |    |                                   |
| Eu.SCI-LC.PDI.227 | Req                               | <table><tr><td>0x06</td><td>Deactivating and Unprotected</td></tr></table>  | 0x06       | Deactivating and Unprotected | Basic LC                  | EULX-596   | object created after baseline 2.1 (1.A)  |    |                                     |        |                                       |        |  |        |  |    |                                   |
| 0x06              | Deactivating and Unprotected      |   |            |                              |                           |  |  |    |                                     |        |                                       |        |  |        |  |    |                                   |
| Eu.SCI-LC.PDI.226 | Req                               | <table><tr><td>0x07</td><td>Deactivated and Idle</td></tr></table>  | 0x07       | Deactivated and Idle         | Basic LC                  | EULX-596   | object created after baseline 2.1 (1.A)  |    |                                     |        |                                       |        |  |        |  |    |                                   |
| 0x07              | Deactivated and Idle              |   |            |                              |                           |  |  |    |                                     |        |                                       |        |  |        |  |    |                                   |
| Eu.SCI-LC.PDI.100 | Head                              | <b>3.4.6 Message "LC Monitoring Status"</b>   |            |                              |                           |  |  |    |                                     |        |                                       |        |  |        |  |    |                                   |
| 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.<br>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. | JIRA    | V 2.2 (0.A) > V 2.1 (1.A) |                                     |        |                                       |        |  |        |  |    |                                  |    |                                  |    |                                    |    |                                    |    |                                 |    |                                     |    |                                |  |  |  |
|-------------------|--|--|------------|---------|---------------------------|-------------------------------------|--------|---------------------------------------|--------|--|--------|--|----|----------------------------------|----|----------------------------------|----|------------------------------------|----|------------------------------------|----|---------------------------------|----|-------------------------------------|----|--------------------------------|--|--|--|
|                   |  | <table><tr><th>Byte-Nr.</th><th>Content</th></tr><tr><td>00</td><td>Protocol Type: 0x60 (1 Byte binary)</td></tr><tr><td>01..02</td><td>Message Type: 0x0004 (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>Barrier position (1 Byte binary)</td></tr><tr><td>44</td><td>Barrier movement (1 Byte binary)</td></tr><tr><td>45</td><td>Road lights status (1 Byte binary)</td></tr><tr><td>46</td><td>Time value overrun (1 Byte binary)</td></tr><tr><td>47</td><td>Hardware status (1 Byte binary)</td></tr><tr><td>48</td><td>Power supply status (1 Byte binary)</td></tr><tr><td>49</td><td>Barrier intact (1 Byte binary)</td></tr></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 | Time value 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                | Time value 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  | <b>Message Type</b><br>The message bytes 1 - 2 shall be set to 0x0004.   | Basic LC   |         |                           |                                     |        |                                       |        |  |        |  |    |                                  |    |                                  |    |                                    |    |                                    |    |                                 |    |                                     |    |                                |  |  |  |
| Eu.SCI-LC.PDI.105 | Req  | <b>Sender Identifier</b><br>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.106 | Req  | <b>Receiver Identifier</b><br>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.107 | Req  | <b>Barrier position</b><br>The message byte 43 shall provide the Barrier position. Permitted values are:<br><br>value            meaning<br>-----        -----   | 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  | <b>Barrier movement</b><br>The message byte 44 shall provide the Barrier movement. Permitted values are:<br><br>value            meaning<br>-----        -----   | Basic LC   |         |                           |                                     |        |                                       |        |  |        |  |    |                                  |    |                                  |    |                                    |    |                                    |    |                                 |    |                                     |    |                                |  |  |  |
| Eu.SCI-LC.PDI.114 | Req  | 0x01            Barrier movement downwards   | Basic LC   |         |                           |                                     |        |                                       |        |  |        |  |    |                                  |    |                                  |    |                                    |    |                                    |    |                                 |    |                                     |    |                                |  |  |  |

| ID                | Type | Requirement   | Func. Pkg. | JIRA | V 2.2 (0.A) > V 2.1 (1.A) |
|-------------------|------|---|------------|------|---------------------------|
| 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  | <b>Road lights status</b><br>The message byte 45 shall provide the Road lights status. Permitted values are:<br><br><div> <div>value</div> <div>meaning</div> <div>-----</div> <div>-----</div> </div>  | Basic LC   |      |                           |
| Eu.SCI-LC.PDI.120 | Req  | 0x01 Road lights off  | Basic LC   |      |                           |
| 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  | <b>Time value overrun</b><br>The message byte 46 shall provide the occurred Closure time overrun. Permitted values are:<br><br><div> <div>value</div> <div>meaning</div> <div>-----</div> <div>-----</div> </div>   | Basic LC   |      |                           |
| Eu.SCI-LC.PDI.125 | Req  | 0x01 No Closure time overrun  | Basic LC   |      |                           |
| Eu.SCI-LC.PDI.126 | Req  | 0x02 Closure time overrun occurred  | Basic LC   |      |                           |
| Eu.SCI-LC.PDI.127 | Req  | 0xFF Time value 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 time value overrun, the value 0xFF can be used.  | Basic LC   |      |                           |
| Eu.SCI-LC.PDI.129 | Req  | <b>Hardware status</b><br>The message byte 47 shall provide the Hardware status of half Barriers due to short level crossing activation time. Permitted values are:<br><br><div> <div>value</div> <div>meaning</div> <div>-----</div> <div>-----</div> </div> | Basic LC   |      |                           |
| 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   |      |                           |
| Eu.SCI-LC.PDI.134 | Req  | <b>Power supply status</b><br>The message byte 48 shall provide the Power supply status. Permitted values are:<br><br><div> <div>value</div> <div>meaning</div> <div>-----</div> <div>-----</div> </div>  | Basic LC   |      |                           |
| Eu.SCI-LC.PDI.135 | Req  | 0x01 Power supply is working correctly  | Basic LC   |      |                           |

| ID                | Type   | Requirement  | Func. Pkg. | JIRA    | V 2.2 (0.A) > V 2.1 (1.A) |                                     |        |                                       |        |  |        |  |    |   |    |   |          |  |  |
|-------------------|--|--|------------|---------|---------------------------|-------------------------------------|--------|---------------------------------------|--------|--|--------|--|----|---|----|---|----------|--|--|
| 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  | <b>Barrier intact status</b><br>The message byte 49 shall provide the Barrier intact status. Permitted values are:<br><br>value            meaning<br>-----        -----   | Basic LC   |         |                           |                                     |        |                                       |        |  |        |  |    |   |    |   |          |  |  |
| 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   | <b>3.4.7 Message "LC Failure Status"</b>   |            |         |                           |                                     |        |                                       |        |  |        |  |    |   |    |   |          |  |  |
| Eu.SCI-LC.PDI.140 | Info   | With this telegram the Subsystem – Level Crossing reports to the Subsystem – Electronic Interlocking the presence of failures.<br>This telegram refines the InformationFlow “Msg_LC_Failure_Status” specified in the requirements specification (ID Eu.LC.2762).   | Basic LC   |         |                           |                                     |        |                                       |        |  |        |  |    |   |    |   |          |  |  |
| Eu.SCI-LC.PDI.141 | Info   | Telegram definition for message "LC Failure Status"<br><table><tr><th>Byte-Nr.</th><th>Content</th></tr><tr><td>00</td><td>Protocol Type: 0x60 (1 Byte binary)</td></tr><tr><td>01..02</td><td>Message Type: 0x0005 (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>Non critical failure status (1 Byte binary)</td></tr><tr><td>44</td><td>Critical failure status (1 Byte binary)</td></tr></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) | Basic LC |  |  |
| 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  | <b>Message Type</b><br>The message bytes 1 - 2 shall be set to 0x0005.   | Basic LC   |         |                           |                                     |        |                                       |        |  |        |  |    |   |    |   |          |  |  |
| Eu.SCI-LC.PDI.144 | Req  | <b>Sender Identifier</b><br>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  | <b>Receiver Identifier</b><br>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  | <b>Non critical failure status</b><br>The message byte 43 shall provide the non critical failure status. Permitted values are:<br>value            meaning<br>-----        -----   | 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   |         |                           |                                     |        |                                       |        |  |        |  |    |   |    |   |          |  |  |

| ID                | Type   | Requirement   | Func. Pkg. | JIRA    | V 2.2 (0.A) > V 2.1 (1.A) |                                     |        |                                       |        |  |        |  |    |                          |    |                                |            |  |  |
|-------------------|--|---|------------|---------|---------------------------|-------------------------------------|--------|---------------------------------------|--------|--|--------|--|----|--------------------------|----|--------------------------------|------------|--|--|
| Eu.SCI-LC.PDI.151 | Req  | <b>Critical failure status</b><br>The message byte 44 shall provide the Critical failure status. Permitted values are:<br>value            meaning<br>-----        -----  | Basic LC   |         |                           |                                     |        |                                       |        |  |        |  |    |                          |    |                                |            |  |  |
| Eu.SCI-LC.PDI.152 | Req  | 0x01            A critical failure is present   | Basic LC   |         |                           |                                     |        |                                       |        |  |        |  |    |                          |    |                                |            |  |  |
| Eu.SCI-LC.PDI.153 | Req  | 0x02            No critical failure is present  | Basic LC   |         |                           |                                     |        |                                       |        |  |        |  |    |                          |    |                                |            |  |  |
| Eu.SCI-LC.PDI.156 | Head   | <b>3.4.8 Message "Local Operation Handover"</b>   |            |         |                           |                                     |        |                                       |        |  |        |  |    |                          |    |                                |            |  |  |
| 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.<br>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><tr><th>Byte-Nr.</th><th>Content</th></tr><tr><td>00</td><td>Protocol Type: 0x60 (1 Byte binary)</td></tr><tr><td>01..02</td><td>Message Type: 0x0015 (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>Handover (1 Byte binary)</td></tr><tr><td>44</td><td>Handover index (1 Byte binary)</td></tr></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  | <b>Message Type</b><br>The message bytes 1 - 2 shall be set to 0x0015.  | Option LOH |         |                           |                                     |        |                                       |        |  |        |  |    |                          |    |                                |            |  |  |
| Eu.SCI-LC.PDI.161 | Req  | <b>Sender Identifier</b><br>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  | <b>Receiver Identifier</b><br>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.163 | Req  | <b>Handover</b><br>The message byte 43 shall provide the handover or the return of the handover to the Local operator. Permitted values are:<br>value            meaning<br>-----        -----  | 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  | <b>Handover index</b><br>The message byte 44 shall provide the Handover index. Permitted values are:<br>value            meaning<br>-----        -----  | Option LOH |         |                           |                                     |        |                                       |        |  |        |  |    |                          |    |                                |            |  |  |
| Eu.SCI-LC.PDI.167 | Req  | 0x01..0xFE        Index of handover (e.g. track)  | Option LOH |         |                           |                                     |        |                                       |        |  |        |  |    |                          |    |                                |            |  |  |
| Eu.SCI-LC.PDI.168 | Head   | <b>3.4.9 Message "Detection Element Status"</b>   |            |         |                           |                                     |        |                                       |        |  |        |  |    |                          |    |                                |            |  |  |

| ID                | Type   | Requirement   | Func. Pkg. | JIRA    | V 2.2 (0.A) > V 2.1 (1.A) |                                     |        |                                       |        |  |        |  |    |  |            |  |          |  |  |
|-------------------|--|---|------------|---------|---------------------------|-------------------------------------|--------|---------------------------------------|--------|--|--------|--|----|--|------------|--|----------|--|--|
| 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.<br>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><tr><th>Byte-Nr.</th><th>Content</th></tr><tr><td>00</td><td>Protocol Type: 0x60 (1 Byte binary)</td></tr><tr><td>01..02</td><td>Message Type: 0x0017 (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>Number k of following Detection Elements (1 Byte binary)</td></tr><tr><td>44..44+k-1</td><td>Status of Detection Element n (each 1 Byte binary) (1 &lt;= n &lt;= k)</td></tr></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) |   |            |         |                           |                                     |        |                                       |        |  |        |  |    |  |            |  |          |  |  |
| Eu.SCI-LC.PDI.171 | Req  | Permitted values for message "Detection Element Status":  | Basic LC   |         |                           |                                     |        |                                       |        |  |        |  |    |  |            |  |          |  |  |
| Eu.SCI-LC.PDI.172 | Req  | <b>Message Type</b><br>The message bytes 1 - 2 shall be set to 0x0017.  | Basic LC   |         |                           |                                     |        |                                       |        |  |        |  |    |  |            |  |          |  |  |
| Eu.SCI-LC.PDI.173 | Req  | <b>Sender Identifier</b><br>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  | <b>Receiver Identifier</b><br>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  | <b>Number k of following Detection Elements</b><br>The message byte 43 shall contains the number k of below-given statuses for Detection Elements, transmitted in single bytes.<br>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  | <b>Detection Element Status</b><br>The message bytes 44..44+k-1 (1 <= n <= k) contain the current states of the particular Detection Element n.<br>Permitted values are:<br>value            meaning<br>-----        -----  | 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   | <b>3.4.10 Message "Obstacle Detection Status"</b>   |            |         |                           |                                     |        |                                       |        |  |        |  |    |  |            |  |          |  |  |
| 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.<br>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. | JIRA    | V 2.2 (0.A) > V 2.1 (1.A) |                                     |        |                                       |        |  |        |  |    |                                    |    |                               |            |  |  |
|-------------------|--|---|------------|---------|---------------------------|-------------------------------------|--------|---------------------------------------|--------|--|--------|--|----|------------------------------------|----|-------------------------------|------------|--|--|
|                   |  | <table><tr><th>Byte-Nr.</th><th>Content</th></tr><tr><td>00</td><td>Protocol Type: 0x60 (1 Byte binary)</td></tr><tr><td>01..02</td><td>Message Type: 0x0020 (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>Obstacle detection (1 Byte binary)</td></tr></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  | <b>Message Type</b><br>The message bytes 1 - 2 shall be set to 0x0020.  | Basic LC   |         |                           |                                     |        |                                       |        |  |        |  |    |                                    |    |                               |            |  |  |
| Eu.SCI-LC.PDI.185 | Req  | <b>Sender Identifier</b><br>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  | <b>Receiver Identifier</b><br>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  | <b>Obstacle detection</b><br>The message byte 43 shall provide the detected Obstacle in the conflict area. Permitted values are:<br>value                      meaning<br>-----                      -----  | 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   | <b>3.4.11 Message "Local Request"</b>   |            |         |                           |                                     |        |                                       |        |  |        |  |    |                                    |    |                               |            |  |  |
| 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 |         |                           |                                     |        |                                       |        |  |        |  |    |                                    |    |                               |            |  |  |
| Eu.SCI-LC.PDI.194 | Info   | Telegram definition for message "Local Request":<br><table><tr><th>Byte-Nr.</th><th>Content</th></tr><tr><td>00</td><td>Protocol Type: 0x60 (1 Byte binary)</td></tr><tr><td>01..02</td><td>Message Type: 0x0007 (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>Local request (1 Byte binary)</td></tr><tr><td>44</td><td>Request index (1 Byte binary)</td></tr></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)              |   |            |         |                           |                                     |        |                                       |        |  |        |  |    |                                    |    |                               |            |  |  |
| 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)                      |   |            |         |                           |                                     |        |                                       |        |  |        |  |    |                                    |    |                               |            |  |  |
| Eu.SCI-LC.PDI.195 | Req  | Permitted values for message "Local Request":   | Option LOH |         |                           |                                     |        |                                       |        |  |        |  |    |                                    |    |                               |            |  |  |
| Eu.SCI-LC.PDI.196 | Req  | <b>Message Type</b><br>The message bytes 1 - 2 shall be set to 0x0007.  | Option LOH |         |                           |                                     |        |                                       |        |  |        |  |    |                                    |    |                               |            |  |  |
| Eu.SCI-LC.PDI.197 | Req  | <b>Sender Identifier</b><br>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 |         |                           |                                     |        |                                       |        |  |        |  |    |                                    |    |                               |            |  |  |

| ID                | Type | Requirement   | Func.<br>Pkg. | JIRA | V 2.2 (0.A) > V 2.1 (1.A) |
|-------------------|------|---|---------------|------|---------------------------|
| Eu.SCI-LC.PDI.198 | Req  | <b>Receiver Identifier</b><br>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  | <b>Local request</b><br>The message byte 43 shall provide the local request. Permitted values are:<br>value            meaning<br>-----        -----  | 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    |      |                           |
| Eu.SCI-LC.PDI.202 | Req  | <b>Request index</b><br>The message byte 44 shall provide the Request index. Permitted values are:<br>value            meaning<br>-----        -----  | Option LOH    |      |                           |
| Eu.SCI-LC.PDI.203 | Req  | 0x01..0xFE     Index of request (e.g. track)  | Option LOH    |      |                           |