



**EULYNX Initiative**



**Europe's Rail Joint Undertaking**

## **Interface specification SDI-LS**

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| ID            | Type | Requirement  | Meaning | Model Type | Data Type | Trigger | Attribute Type | Sampling | Optionality | Func. Pkg. | JIRA  | V 4.2 (0.A) > V 4.0 (0.A)   |
|---------------|------|--|---------|------------|-----------|---------|----------------|----------|-------------|------------|---|---|
| Eu.SDI-LS.1   | Head | <b>1 Introduction</b>  |         |            |           |         |                |          |             |            |   |   |
| Eu.SDI-LS.2   | Head | <b>1.1 Release information</b>   |         |            |           |         |                |          |             |            |   |   |
| Eu.SDI-LS.3   | Info | [Eu.Doc.78]<br>Interface specification SDI-LS<br>CENELEC Phase: 5<br>Version: 4.2 (0.A)<br>Approval date: 29.05.2024   |         |            |           |         |                |          |             |            |   | <b>Object Text:</b><br>[Eu.Doc.78]<br>Interface specification SDI-LS<br>CENELEC Phase: 5<br>Version: 4.02 (0.A)<br>Approval date: <del>+529.0605.2023</del> 2024  |
| Eu.SDI-LS.4   | Info | <b>Version history</b>   |         |            |           |         |                |          |             |            |   |   |
| Eu.SDI-LS.225 | Info | version number: 3.0 (0.A)<br>date: 16.05.2022<br>author: Filip Giering<br>review: CCB<br>changes: EULS-384, EULS-386   |         |            |           |         |                |          |             |            |   |   |
| Eu.SDI-LS.226 | Info | version number: 3.1 (0.A)<br>date: 08.06.2023<br>author: SDI task force<br>review:<br>changes: EULS-398, EULS-400, EULS-401, EULS-406, EULS-418  |         |            |           |         |                |          |             |            |   |   |
| Eu.SDI-LS.292 | Info | version number: 4.0 (0.A)<br>date: 27.06.2023<br>author: SDI task force<br>review: TACS Mirror Group<br>changes: EULS-422, EULS-424, EULS-426  |         |            |           |         |                |          |             |            |   |   |
| Eu.SDI-LS.323 | Info | version number: 4.1 (0.A)<br>date: 01.04.2024<br>author: SDI task force<br>review: cluster<br>changes: EULS-434, EULS-435, EULS-436, EULS-460, EULS-461, EULS-462  |         |            |           |         |                |          |             |            |   | object created after baseline 4.0 (0.A)   |
| Eu.SDI-LS.338 | Info | version number: 4.2 (0.A)<br>date: 20.06.2024<br>author: SDI task force<br>review: TACS Mirror Group<br>changes: EULS-471, EULS-479, EULS-480  |         |            |           |         |                |          |             |            |   | object created after baseline 4.0 (0.A)   |
| Eu.SDI-LS.7   | Head | <b>1.2 Impressum</b>   |         |            |           |         |                |          |             |            |   |   |
| Eu.SDI-LS.8   | Info | Publishers:<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>  |         |            |           |         |                |          |             |            | EULS-471  | <b>Object Text:</b><br>Publishers:<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><del>A full list of the EULYNX Partners can be found on-</del><br><del>www.https://eulynx.eu/index.php/members</del><br><b>a_JIRA_BL4_R3:</b><br><del>EULS-471</del> |
| Eu.SDI-LS.9   | Info | Responsible for this document:<br>EU-Rail System Pillar<br>Trackside Assets Control and Supervision domain   |         |            |           |         |                |          |             |            |   |   |
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[illegible]

| ID            | Type | Requirement  | Meaning | Model Type | Data Type | Trigger | Attribute Type | Sampling | Optionality | Func. Pkg. | JIRA     | V 4.2 (0.A) > V 4.0 (0.A)  |
|---------------|------|--|---------|------------|-----------|---------|----------------|----------|-------------|------------|----------|--|
| Eu.SDI-LS.18  | 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.SDI-LS.19  | Head | <b>1.6 Appendices</b>  |         |            |           |         |                |          |             |            |          |  |
| Eu.SDI-LS.20  | Info | - <i>intentionally left blank</i> -  |         |            |           |         |                |          |             |            |          |  |
| Eu.SDI-LS.21  | Head | <b>1.7 Terms and abbreviations</b>   |         |            |           |         |                |          |             |            |          |  |
| Eu.SDI-LS.22  | Info | The terms and abbreviations are listed in the EULYNX Glossary [Eu.Doc.9].  |         |            |           |         |                |          |             |            |          |  |
| Eu.SDI-LS.23  | Head | <b>1.8 Variability management</b>  |         |            |           |         |                |          |             |            |          |  |
| Eu.SDI-LS.24  | Info | This document describes harmonised requirements. Variability management is not applicable.   |         |            |           |         |                |          |             |            |          |  |
| Eu.SDI-LS.25  | Head | <b>1.9 Definition of object types</b>  |         |            |           |         |                |          |             |            |          |  |
| Eu.SDI-LS.26  | Info | The following definition for object types is applied in this document:   |         |            |           |         |                |          |             |            |          |  |
| Eu.SDI-LS.27  | Info | <ul style="list-style-type: none"><li>"Req" - This denotes a mandatory requirement.</li></ul>  |         |            |           |         |                |          |             |            |          |  |
| Eu.SDI-LS.28  | 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.SDI-LS.29  | Info | <ul style="list-style-type: none"><li>"Head" - This denotes chapter headings.</li></ul>  |         |            |           |         |                |          |             |            |          |  |
| Eu.SDI-LS.37  | Head | <b>2 Telegram SDI</b>  |         |            |           |         |                |          |             | Basic LS   |          |  |
| Eu.SDI-LS.224 | Req  | All references to [Eu.Doc.94] refer to Interface specification SDI Generic version 4.2 (0.A).  |         |            |           |         |                |          |             | Basic LS   | EULS-460 | <b>Object Text:</b><br>All references to <a href="#">[Eu.Doc.94]</a> refer to Interface specification SDI Generic version 4. <del>0</del> <sup>2</sup> (0.A).<br><b>a_JIRA_BL4_R3:</b><br><a href="#">EULS-460</a>   |
| Eu.SDI-LS.38  | Info | This chapter defines the diagnostic messages - specifically the data points and values applied in the SDI-LS telegrams. The generic data points are defined in [Eu.Doc.94].  |         |            |           |         |                |          |             | Basic LS   | EULS-460 | <b>Object Text:</b><br>This chapter defines the diagnostic messages - specifically the data points and values applied in the SDI-LS telegrams. The generic data points are defined in <a href="#">[Eu.Doc.94]</a> .<br><b>a_JIRA_BL4_R3:</b><br><a href="#">EULS-460</a>   |
| Eu.SDI-LS.223 | Info | The defined diagnostic messages are mandatory only when the physical interfaces related to the specific diagnostic message are available on the Subsystem – Light Signal.  |         |            |           |         |                |          |             | Basic LS   |          |  |
| Eu.SDI-LS.230 | Head | <b>2.1 Definition of columns</b>   |         |            |           |         |                |          |             |            |          |  |
| Eu.SDI-LS.231 | Info | <b>Model Type:</b> Column that marks whether an entry is a model class (Class), a diagnostic data point (Attribute), an enumeration header (ValueType (Enumeration)) or an enumeration value (Enumeration Literal).  |         |            |           |         |                |          |             | Basic LS   |          |  |
| Eu.SDI-LS.232 | Info | <b>Data Type:</b> Column that indicates the data type for the diagnostic data points. Enumeration values are defined in the section 'Enumeration'.   |         |            |           |         |                |          |             | Basic LS   |          |  |
| Eu.SDI-LS.233 | Info | <b>Trigger:</b> Column that indicates the precision of data that shall be provided by the back-end to the OPC UA server on a subsystem. It represents the minimum level of change of the measures or reported value that shall trigger an update of the data point on the OPC UA server. For discrete data types (Boolean, enumeration, string), any change shall trigger an update on the OPC UA server. This is expressed as 'current value' in the column. For data that is part of an event class, the value 'on event' is used. |         |            |           |         |                |          |             | Basic LS   |          | <b>Object Text:</b><br><del>Event/Timepoint</del> <b>Trigger:</b><br>Column that indicates the <del>trigger</del> <sup>precision</sup> <del>events</del> <sup>of</sup> <del>data that shall be provided by the back-end to send</del> <sup>the OPC UA server on a diagnostics</sup> <del>subsystem.</del><br><del>It represents the minimum level of change of the measures or reported value that shall trigger an update of the data point on the OPC UA server. For discrete data types (Boolean, enumeration, string), any change shall trigger an update on the OPC UA server. This is expressed as 'current value' in the column. For data that is part of an event class, the value 'on event' is used.</del> |
| Eu.SDI-LS.234 | Info | <b>Attribute Type:</b> Column that indicates the type of diagnostic information contained in the data point. Values are:<br><b>raw data:</b> uninterpreted data that is measured.<br><b>diagnosis:</b> an attribute with discrete values (enumeration or Boolean) that interprets the status of a system. There must be a table that directly links diagnostic enumeration values to statusTechnical values of that system.  |         |            |           |         |                |          |             | Basic LS   |          | <b>Object Text:</b><br>Attribute Type: Column that indicates the type of diagnostic information contained in the data point. <u>Values are:</u><br>raw data: uninterpreted data  |

| ID            | Type | Requirement  | Meaning   | Model Type | Data Type                        | Trigger  | Attribute Type | Sampling | Optionality | Func. Pkg. | JIRA     | V 4.2 (0.A) > V 4.0 (0.A)  |
|---------------|------|--|---|------------|----------------------------------|----------|----------------|----------|-------------|------------|----------|--|
|               |      | <b>configuration:</b> data that is not measured but often set by the manufacturer or operator; it describes characteristics of the system.<br><b>counter:</b> diagnostic information that counts occurrences of a specific data measurement or event.  |   |            |                                  |          |                |          |             |            |          | that is measured.<br>diagnosis: an attribute with discrete values (enumeration or <del>boolean</del> <a href="#">Boolean</a> ) that interprets the status of a system. There must be a table that directly links diagnostic enumeration values to statusTechnical values of that system.<br>configuration: data that is not measured but often set by the manufacturer or operator; it describes characteristics of the system.<br><a href="#">counter: diagnostic information that counts occurrences of a specific data measurement or event.</a>  |
| Eu.SDI-LS.337 | Info | <b>Sampling:</b> Column that indicates the required sampling interval of the data point, that is how often the OPC UA Server determines the values for an attribute, provided by the back-end. Value in milliseconds.  |   |            |                                  |          |                |          |             | Basic LS   |          | object created after baseline 4.0 (0.A)  |
| Eu.SDI-LS.235 | Info | <b>Optionality:</b> Column that indicates whether a diagnostic data point is mandatory inside the model class, or optional. The diagnostic data of optional attributes may be required by national specifications. If an equipment or subsystem has the capability to collect and report the related diagnostic data, it must be reported in this data point.<br>Note: In future phases of the System Pillar, national specifications will be replaced by harmonised specifications. |   |            |                                  |          |                |          |             | Basic LS   |          | <b>Object Text:</b><br>Optionality-: Column that indicates whether a diagnostic data point <del>is</del> <a href="#">is</a> mandatory inside the model class( <del>+</del> ), or optional( <del>0..1</del> ). The diagnostic data of optional attributes may be required by national specifications. If an equipment or subsystem has the capability to collect and report the related diagnostic data, it must be reported in this data point.<br>Note: In future phases of the System Pillar, national specifications will be replaced by harmonised specifications.   |
| Eu.SDI-LS.39  | Head | <b>2.2 Telegrams SDI-LS</b>  |   |            |                                  |          |                |          |             |            |          |  |
| Eu.SDI-LS.236 | Req  | LightPoint   | LightPoint denotes the entire installed unit in the signal screen, which consists of optics, lamps and other associated electronic elements.  | Class      |                                  |          |                |          |             | Basic LS   |          | <b>art_Meaning (en) (MD Meaning (en)):</b><br><a href="#">LightPoint denotes the entire installed unit in the signal screen, which consists of optics, lamps and other associated electronic elements.</a>   |
| Eu.SDI-LS.237 | Req  | counterLightDurationDay  | Total illumination time of the light point in Day mode since the last reset in seconds. The counter must also be reset when the physical device that implements the LightPoint is replaced.   | Attribute  | counterLightDurationDay : Long   | >= 3600s | counter        | 1000     | Mandatory   | Basic LS   | EULS-434 | <b>art_Meaning (en) (MD Meaning (en)):</b><br>Total illumination time of the light point in Day mode since the <del>first</del> <del>last installation</del> <a href="#">reset</a> in seconds. <del>The counter must also be reset when the physical device that implements the LightPoint is replaced.</del><br><b>art_Accuracy (Accuracy):</b><br><a href="#">&gt;= 3600s</a><br><b>art_Attribute Type (MD Attribute Type):</b><br><del>raw-data</del> <a href="#">counter</a><br><b>art_Sampling Rate (Sampling Rate):</b><br><a href="#">1000</a><br><b>art_Modelling Rule (Modelling Rule):</b><br><a href="#">Mandatory</a><br><b>a_JIRA_BL4_R3:</b><br><a href="#">EULS-434</a> |
| Eu.SDI-LS.238 | Req  | counterLightDurationNight  | Total illumination time of the light point in Night mode since the last reset in seconds. The counter must also be reset when the physical device that implements the LightPoint is replaced. | Attribute  | counterLightDurationNight : Long | >= 3600s | counter        | 1000     | Mandatory   | Basic LS   | EULS-434 | <b>art_Meaning (en) (MD Meaning (en)):</b><br>Total illumination time of the light point in Night mode since the <del>first</del> <del>last installation</del> <a href="#">reset</a> in seconds. <del>The counter must also be reset when the physical device that implements the LightPoint is replaced.</del><br><b>art_Accuracy (Accuracy):</b><br><a href="#">&gt;= 3600s</a><br><b>art_Attribute Type (MD Attribute Type):</b><br><del>raw-data</del> <a href="#">counter</a>   |

| ID            | Type | Requirement                                | Meaning   | Model Type | Data Type   | Trigger       | Attribute Type | Sampling | Optionality | Func. Pkg. | JIRA     | V 4.2 (0.A) > V 4.0 (0.A)   |
|---------------|------|--|---|------------|---|---------------|----------------|----------|-------------|------------|----------|---|
|               |      |  |   |            |   |               |                |          |             |            |          | <b>art_Sampling Rate (Sampling Rate):</b><br><a href="#">1000</a><br><b>art_Modelling Rule (Modelling Rule):</b><br><a href="#">Mandatory</a><br><b>a_JIRA_BL4_R3:</b><br><a href="#">EULS-434</a>  |
| Eu.SDI-LS.240 | Req  | statusTechnical                            | Indicates the generic technical status of the light Point. Note: Enumeration values defined in in Interface specification SDI Generic [Eu.Doc.94].  | Attribute  | statusTechnical : StatusTechnical   | Current value | diagnosis      | 1000     | Mandatory   | Basic LS   |          | <b>art_Meaning (en) (MD Meaning (en)):</b><br>Indicates the generic technical status of the light Point. Note: Enumeration values defined <a href="#">in</a> in Interface specification SDI Generic [Eu.Doc.94].<br><b>art_Accuracy (Accuracy):</b><br><a href="#">Current value</a><br><b>art_Sampling Rate (Sampling Rate):</b><br><a href="#">1000</a><br><b>art_Modelling Rule (Modelling Rule):</b><br><a href="#">Mandatory</a>   |
| Eu.SDI-LS.241 | Req  | statusTechnicalManufacturerSpecificMessage | Must be used by the supplier to describe the reasons for a StatusTechnical != OK, that cannot be explained by existing datapoints (NOT including IM and manufacturer specific diagnostic messages). This Information MUST be provided from the supplier. This should provide flexibility for future uses. Multiple states can be indicated at the same time if multiple diagnosis have not been included in the model during the design phase. The supplier specific reason may not overlap with reasons already covered in other attributes. | Attribute  | statusTechnicalManufacturerSpecificMessage : MultiStateDiscreteTypeSupplier | Current value | diagnosis      | 1000     | Optional    | Basic LS   |          | <b>art_Meaning (en) (MD Meaning (en)):</b><br>Must be used by the supplier to describe the reasons for a StatusTechnical != OK, that cannot be explained by existing datapoints.<br><del>This Information MUST be provided from the supplier, if there is not already a defined attribute (NOT that including explains IM and statusTechnical manufacturer other specific than diagnostic Ok messages).</del><br><del>Allows to extend This "StatusTechnical" Information for MUST future be uses provided from IMs &amp; Suppliers if the StatusTechnical == not OK-supplier.</del> This should provide flexibility for future uses.<br>_Multiple states can be indicated at the same time if multiple <del>reasons</del> <a href="#">diagnosis are have present not been included in the model during the design phase.</a> <a href="#">The Note:supplier Enumeration specific values reason defined may in not Interface overlap specification with SDI reasons Generic already [Eu.Doc covered in other attributes.94]</a><br><b>art_Signature:</b><br>statusTechnicalManufacturerSpecificMessage : MultiStateDiscreteTypeSupplier- <del>{0..1}</del><br><b>art_Accuracy (Accuracy):</b><br><a href="#">Current value</a><br><b>art_Sampling Rate (Sampling Rate):</b><br><a href="#">1000</a><br><b>art_Modelling Rule (Modelling Rule):</b><br><a href="#">Optional</a> |
| Eu.SDI-LS.298 | Req  | logicalLightPointStatus                    | Current logical status of the light point.  | Attribute  | logicalLightPointStatus : LogicalLightPointStatus                           | Current value | diagnosis      | 250      | Mandatory   | Basic LS   | EULS-436 | object created after baseline 4.0 (0.A)   |
| Eu.SDI-LS.320 | Req  | label                                      | It is assigned to all classes representing physically identifiable entities. This string, corresponding to a physically identifiable label, facilitates consistent reference between the physical entities in the field and their digital representations within the model.   | Attribute  | label : String  | Current value | configuration  | 1000     | Optional    | Basic LS   |          | object created after baseline 4.0 (0.A)   |

| ID            | Type | Requirement              | Meaning   | Model Type | Data Type                       | Trigger       | Attribute Type | Sampling | Optionality | Func. Pkg. | JIRA     | V 4.2 (0.A) > V 4.0 (0.A)  |
|---------------|------|--------------------------|---|------------|---------------------------------|---------------|----------------|----------|-------------|------------|----------|--|
| Eu.SDI-LS.242 | Req  | LightPointMatrix         | Matrix display for displaying a letter or a number.   | Class      |                                 |               |                |          |             | Basic LS   |          | <b>art_Meaning (en) (MD Meaning (en)):</b><br><a href="#">Matrix display for displaying a letter or a number.</a>  |
| Eu.SDI-LS.244 | Req  | valueCurrent             | The displayed value, e.g. a letter for the direction or the speed. If no value is displayed, "none" must be transmitted.        | Attribute  | valueCurrent : String           | Current value | diagnosis      | 250      | Mandatory   | Basic LS   | EULS-462 | <b>art_Accuracy (Accuracy):</b><br><a href="#">Current value</a><br><b>art_Attribute Type (MD Attribute Type):</b><br><del>raw-data</del> <a href="#">diagnosis</a><br><b>art_Sampling Rate (Sampling Rate):</b><br><a href="#">250</a><br><b>art_Modelling Rule (Modelling Rule):</b><br><a href="#">Mandatory</a><br><b>a_JIRA_BL4_R3:</b><br><a href="#">EULS-462</a> |
| Eu.SDI-LS.245 | Req  | LightPointSingleFilament | Filament of a conventional lamp.  | Class      |                                 |               |                |          |             | Basic LS   |          | <b>art_Meaning (en) (MD Meaning (en)):</b><br><a href="#">Filament of a conventional lamp.</a>   |
| Eu.SDI-LS.246 | Req  | filamentStatus           | Status of the lamp filament.  | Attribute  | filamentStatus : FilamentStatus | Current value | diagnosis      | 1000     | Mandatory   | Basic LS   |          | <b>art_Meaning (en) (MD Meaning (en)):</b><br>Status of the lamp filament,<br><b>art_Accuracy (Accuracy):</b><br><a href="#">Current value</a><br><b>art_Sampling Rate (Sampling Rate):</b><br><a href="#">1000</a><br><b>art_Modelling Rule (Modelling Rule):</b><br><a href="#">Mandatory</a>  |
| Eu.SDI-LS.247 | Req  | role                     | Describes whether a filament is main or auxiliary.  | Attribute  | role : LampWireRole             | Current value | configuration  | 1000     | Mandatory   | Basic LS   |          | <b>art_Meaning (en) (MD Meaning (en)):</b><br>Describes whether a filament is main or auxiliary,<br><b>art_Accuracy (Accuracy):</b><br><a href="#">Current value</a><br><b>art_Sampling Rate (Sampling Rate):</b><br><a href="#">1000</a><br><b>art_Modelling Rule (Modelling Rule):</b><br><a href="#">Mandatory</a>  |
| Eu.SDI-LS.248 | Req  | LightPointSingleLamp     | Lamp with conventional filaments.   | Class      |                                 |               |                |          |             | Basic LS   |          | <b>art_Meaning (en) (MD Meaning (en)):</b><br><a href="#">Lamp with conventional filaments.</a>  |
| Eu.SDI-LS.249 | Req  | LightPointSingleLED      | Light point LED (Light Emitting Diode):<br>LightPointSingleLED shall be used for single LightPoints consisting of several LEDs. | Class      |                                 |               |                |          |             | Basic LS   | EULS-461 | <b>art_Meaning (en) (MD Meaning (en)):</b><br><a href="#">Light point LED (Light Emitting Diode): LightPointSingleLED shall be used for single LightPoints consisting of several LEDs.</a><br><b>a_JIRA_BL4_R3:</b><br><a href="#">EULS-461</a>  |
| Eu.SDI-LS.250 | Req  | degenerationGrade        | The degree of degeneration of the light point in %.<br>100% means: all LEDs failed; 0% means: no LED failed.                    | Attribute  | degenerationGrade : Real        | 1%            | diagnosis      | 1000     | Mandatory   | Basic LS   |          | <b>art_Accuracy (Accuracy):</b><br><a href="#">1%</a><br><b>art_Sampling Rate (Sampling Rate):</b><br><a href="#">1000</a><br><b>art_Modelling Rule (Modelling Rule):</b><br><a href="#">Mandatory</a>   |
| Eu.SDI-LS.251 | Req  | isElectronicFailure      | True: There is a failure in the electronics of the light point.   | Attribute  | isElectronicFailure : Boolean   | Current value | diagnosis      | 1000     | Mandatory   | Basic LS   |          | <b>art_Accuracy (Accuracy):</b><br><a href="#">Current value</a><br><b>art_Sampling Rate (Sampling Rate):</b><br><a href="#">1000</a><br><b>art_Modelling Rule (Modelling Rule):</b><br><a href="#">Mandatory</a>  |
| Eu.SDI-LS.252 | Req  | numberOfDefectLEDs       | Number of defective LEDs in the light point.  | Attribute  | numberOfDefectLEDs : Integer    | Current value | raw data       | 1000     | Optional    | Basic LS   |          | <b>art_Meaning (en) (MD Meaning (en)):</b><br>Number of defective LEDs in the light point,<br><b>art_Signature:</b><br>numberOfDefectLEDs : Integer- <del>{0..1}</del><br><b>art_Accuracy (Accuracy):</b>  |

| ID            | Type | Requirement            | Meaning   | Model Type | Data Type                         | Trigger       | Attribute Type | Sampling | Optionality | Func. Pkg. | JIRA                 | V 4.2 (0.A) > V 4.0 (0.A)   |
|---------------|------|------------------------|---|------------|-----------------------------------|---------------|----------------|----------|-------------|------------|----------------------|---|
|               |      |                        |   |            |                                   |               |                |          |             |            |                      | <a href="#">Current value</a><br><b>art_Sampling Rate (Sampling Rate):</b><br><a href="#">1000</a><br><b>art_Modelling Rule (Modelling Rule):</b><br><a href="#">Optional</a>   |
| Eu.SDI-LS.253 | Req  | pNumberOfLEDs          | Total number of LEDs in the light point.  | Attribute  | pNumberOfLEDs : Integer           | Current value | configuration  | 1000     | Optional    | Basic LS   |                      | <b>art_Meaning (en) (MD Meaning (en)):</b><br>Total number of LEDs in the light point.<br><b>art_Signature:</b><br>pNumberOfLEDs : Integer- <del>{0..1}</del><br><b>art_Accuracy (Accuracy):</b><br><a href="#">Current value</a><br><b>art_Sampling Rate (Sampling Rate):</b><br><a href="#">1000</a><br><b>art_Modelling Rule (Modelling Rule):</b><br><a href="#">Optional</a>   |
| Eu.SDI-LS.254 | Req  | LightSignal            | The class represents the Subsystem - Light Signal.                                  | Class      |                                   |               |                |          |             | Basic LS   |                      | <b>art_Meaning (en) (MD Meaning (en)):</b><br><a href="#">The class represents the Subsystem - Light Signal.</a>  |
| Eu.SDI-LS.255 | Req  | isLuminosityChangeable | True: Luminosity is changeable.   | Attribute  | isLuminosityChangeable : Boolean  | Current value | configuration  | 1000     | Mandatory   | Basic LS   |                      | <b>art_Meaning (en) (MD Meaning (en)):</b><br>True: <del>luminosity</del> <a href="#">Luminosity</a> is changeable.<br><b>art_Accuracy (Accuracy):</b><br><a href="#">Current value</a><br><b>art_Sampling Rate (Sampling Rate):</b><br><a href="#">1000</a><br><b>art_Modelling Rule (Modelling Rule):</b><br><a href="#">Mandatory</a>  |
| Eu.SDI-LS.256 | Req  | luminosityCommanded    | Reports the luminosity currently commanded by the electronic interlocking.          | Attribute  | luminosityCommanded : NightDay    | Current value | diagnosis      | 250      | Mandatory   | Basic LS   | EULS-462             | <b>art_Meaning (en) (MD Meaning (en)):</b><br><del>reports</del> <a href="#">Reports</a> the <del>command-</del><br><del>received from the</del> <a href="#">luminosity interlocking</a><br><del>currently to</del> <a href="#">commanded set</a><br><del>by at</del> <a href="#">the given</a> <a href="#">electronic luminosity</a> <a href="#">interlocking.</a><br><b>art_Accuracy (Accuracy):</b><br><a href="#">Current value</a><br><b>art_Attribute Type (MD Attribute Type):</b><br><del>raw-data</del> <a href="#">diagnosis</a><br><b>art_Sampling Rate (Sampling Rate):</b><br><a href="#">250</a><br><b>art_Modelling Rule (Modelling Rule):</b><br><a href="#">Mandatory</a><br><b>a_JIRA_BL4_R3:</b><br><a href="#">EULS-462</a> |
| Eu.SDI-LS.257 | Req  | luminosityCurrent      | Reports the currently indicated luminosity.   | Attribute  | luminosityCurrent : NightDay      | Current value | diagnosis      | 250      | Mandatory   | Basic LS   | EULS-462<br>EULS-479 | <b>art_Meaning (en) (MD Meaning (en)):</b><br><del>reports</del> <a href="#">Reports</a> the currently indicated luminosity.<br><b>art_Accuracy (Accuracy):</b><br><a href="#">Current value</a><br><b>art_Attribute Type (MD Attribute Type):</b><br><del>raw-data</del> <a href="#">diagnosis</a><br><b>art_Sampling Rate (Sampling Rate):</b><br><a href="#">250</a><br><b>art_Modelling Rule (Modelling Rule):</b><br><a href="#">Mandatory</a><br><b>a_JIRA_BL4_R3:</b><br><a href="#">EULS-462</a><br><a href="#">EULS-479</a>  |
| Eu.SDI-LS.258 | Req  | operationalIdentifier  | Operational identifier of the connected subsystem (see Eu.SAS.1784 in [Eu.Doc.16]). | Attribute  | operationalIdentifier : Byte [20] | Current value | configuration  | 1000     | Mandatory   | Basic LS   | EULS-462<br>EULS-458 | <b>art_Meaning (en) (MD Meaning (en)):</b><br>Operational identifier of the connected subsystem (see Eu.SAS.1784 <a href="#">in [Eu.Doc.16]</a> ).<br><b>art_Signature:</b>   |

| ID            | Type | Requirement                          | Meaning   | Model Type | Data Type  | Trigger       | Attribute Type | Sampling | Optionality | Func. Pkg. | JIRA     | V 4.2 (0.A) > V 4.0 (0.A)   |
|---------------|------|--------------------------------------|---|------------|--|---------------|----------------|----------|-------------|------------|----------|---|
|               |      |                                      |   |            |  |               |                |          |             |            |          | operationalIdentifier : Byte <a href="#">[20]</a><br><b>art_Accuracy (Accuracy):</b><br><a href="#">Current value</a><br><b>art_Sampling Rate (Sampling Rate):</b><br><a href="#">1000</a><br><b>art_Modelling Rule (Modelling Rule):</b><br><a href="#">Mandatory</a><br><b>a_JIRA_BL4_R3:</b><br><a href="#">EULS-462</a><br><a href="#">EULS-458</a>   |
| Eu.SDI-LS.259 | Req  | signalInformationAdditionalCommanded | Reports the additional signal information currently commanded by the electronic interlocking. Corresponds to Bytes 49 until 60 of the telegram Cd_Indicate_Signal_Aspect. | Attribute  | signalInformationAdditionalCommanded : Byte [12] | Current value | diagnosis      | 250      | Mandatory   | Basic LS   | EULS-462 | <b>art_Meaning (en) (MD Meaning (en)):</b><br>Reports the additional signal information currently commanded <del>at the light signal-</del> by the <a href="#">electronic</a> interlocking. Corresponds to Bytes 49 until 60 of the telegram Cd_Indicate_Signal_Aspect_.<br><b>art_Signature:</b><br>signalInformationAdditionalCommanded : Byte <a href="#">[12]</a><br><b>art_Accuracy (Accuracy):</b><br><a href="#">Current value</a><br><b>art_Attribute Type (MD Attribute Type):</b><br><del>raw-data</del> <a href="#">diagnosis</a><br><b>art_Sampling Rate (Sampling Rate):</b><br><a href="#">250</a><br><b>art_Modelling Rule (Modelling Rule):</b><br><a href="#">Mandatory</a><br><b>a_JIRA_BL4_R3:</b><br><a href="#">EULS-462</a> |
| Eu.SDI-LS.260 | Req  | signalInformationAdditionalCurrent   | Reports the additional signal information currently indicated by the light signal. Corresponds to Bytes 49 until 60 of the telegram Msg_Indicated_Signal_Aspect.          | Attribute  | signalInformationAdditionalCurrent : Byte [12]   | Current value | diagnosis      | 250      | Mandatory   | Basic LS   | EULS-462 | <b>art_Meaning (en) (MD Meaning (en)):</b><br>Reports the additional signal information currently indicated by the light signal. Corresponds to Bytes 49 until 60 of the telegram Msg_Indicated_Signal_Aspect_.<br><b>art_Signature:</b><br>signalInformationAdditionalCurrent : Byte <a href="#">[12]</a><br><b>art_Accuracy (Accuracy):</b><br><a href="#">Current value</a><br><b>art_Attribute Type (MD Attribute Type):</b><br><del>raw-data</del> <a href="#">diagnosis</a><br><b>art_Sampling Rate (Sampling Rate):</b><br><a href="#">250</a><br><b>art_Modelling Rule (Modelling Rule):</b><br><a href="#">Mandatory</a><br><b>a_JIRA_BL4_R3:</b><br><a href="#">EULS-462</a>  |

| ID            | Type | Requirement                      | Meaning   | Model Type | Data Type  | Trigger       | Attribute Type | Sampling | Optionality | Func. Pkg.               | JIRA     | V 4.2 (0.A) > V 4.0 (0.A)  |
|---------------|------|----------------------------------|---|------------|--|---------------|----------------|----------|-------------|--------------------------|----------|--|
| Eu.SDI-LS.261 | Req  | signalVectorCommanded            | Reports the signal aspect currently commanded by the electronic interlocking. Corresponds to bytes 43 until 48 of the telegram Cd_Indicate_Signal_Aspect.   | Attribute  | signalVectorComma<br>nded : Byte [6]                             | Current value | diagnosis      | 250      | Mandatory   | Basic LS                 | EULS-462 | <b>art_Meaning (en) (MD Meaning (en)):</b><br>Reports the signal aspect currently commanded <del>at the light signal</del> by the <u>electronic</u> interlocking. Corresponds to bytes 43 until 48 of the telegram Cd_Indicate_Signal_Aspect.<br><b>art_Signature:</b><br>signalVectorCommanded : Byte <u>[6]</u><br><b>art_Accuracy (Accuracy):</b><br><u>Current value</u><br><b>art_Attribute Type (MD Attribute Type):</b><br><del>raw-data</del> <u>diagnosis</u><br><b>art_Sampling Rate (Sampling Rate):</b><br><u>250</u><br><b>art_Modelling Rule (Modelling Rule):</b><br><u>Mandatory</u><br><b>a_JIRA_BL4_R3:</b><br><u>EULS-462</u> |
| Eu.SDI-LS.262 | Req  | signalVectorCurrent              | Reports the signal aspect currently indicated by the light signal. Corresponds to Bytes 43 until 48 of the telegram Msg_Indicated_Signal_Aspect.  | Attribute  | signalVectorCurrent : Byte [6]                                   | Current value | diagnosis      | 250      | Mandatory   | Basic LS                 | EULS-462 | <b>art_Meaning (en) (MD Meaning (en)):</b><br>Reports the signal aspect currently indicated by the light signal. Corresponds to Bytes 43 until 48 of the telegram Msg_Indicated_Signal_Aspect.<br><b>art_Signature:</b><br>signalVectorCurrent : Byte <u>[6]</u><br><b>art_Accuracy (Accuracy):</b><br><u>Current value</u><br><b>art_Attribute Type (MD Attribute Type):</b><br><del>raw-data</del> <u>diagnosis</u><br><b>art_Sampling Rate (Sampling Rate):</b><br><u>250</u><br><b>art_Modelling Rule (Modelling Rule):</b><br><u>Mandatory</u><br><b>a_JIRA_BL4_R3:</b><br><u>EULS-462</u>  |
| Eu.SDI-LS.321 | Req  | label                            | It is assigned to all classes representing physically identifiable entities. This string, corresponding to a physically identifiable label, facilitates consistent reference between the physical entities in the field and their digital representations within the model. | Attribute  | label : String   | Current value | configuration  | 1000     | Optional    | Basic LS                 |          | object created after baseline 4.0 (0.A)  |
| Eu.SDI-LS.264 | Req  | LightSignalAdjacentOutputChannel | Output channel to the adjacent system Eurobalise or Legacy train protection system.   | Class      |  |               |                |          |             | Option LS4<br>Option LS5 | EULS-479 | <b>art_Meaning (en) (MD Meaning (en)):</b><br><u>Output channel to the adjacent system Eurobalise or Legacy train protection system.</u><br><b>a_JIRA_BL4_R3:</b><br><u>EULS-479</u>   |
| Eu.SDI-LS.265 | Req  | interfaceConnectionStatus        | Mandatory in case the adjacent train control element is type 1 Eurobalise.  | Attribute  | interfaceConnection<br>Status :<br>InterfaceConnection<br>Status | Current value | diagnosis      | 1000     | Mandatory   | Option LS4               |          | <b>art_Accuracy (Accuracy):</b><br><u>Current value</u><br><b>art_Sampling Rate (Sampling Rate):</b><br><u>1000</u><br><b>art_Modelling Rule (Modelling Rule):</b><br><u>Mandatory</u>   |

| ID            | Type | Requirement                                | Meaning   | Model Type | Data Type   | Trigger       | Attribute Type | Sampling | Optionality | Func. Pkg.               | JIRA     | V 4.2 (0.A) > V 4.0 (0.A)   |
|---------------|------|--|---|------------|---|---------------|----------------|----------|-------------|--------------------------|----------|---|
| Eu.SDI-LS.266 | Req  | statusTechnical                            | Indicates the generic technical status of the output channel to the adjacent system. Note: Enumeration values defined in Interface specification SDI Generic [Eu.Doc.94].   | Attribute  | statusTechnical : StatusTechnical   | Current value | diagnosis      | 1000     | Mandatory   | Option LS4<br>Option LS5 | EULS-479 | <b>art_Meaning (en) (MD Meaning (en)):</b><br>Indicates the generic technical status of the output channel to the adjacent <del>LS</del> -system. Note: Enumeration values defined <del>in</del> in Interface specification SDI Generic [Eu.Doc.94].<br><b>art_Accuracy (Accuracy):</b><br><a href="#">Current value</a><br><b>art_Sampling Rate (Sampling Rate):</b><br><a href="#">1000</a><br><b>art_Modelling Rule (Modelling Rule):</b><br><a href="#">Mandatory</a><br><b>a_JIRA_BL4_R3:</b><br><a href="#">EULS-479</a>  |
| Eu.SDI-LS.267 | Req  | statusTechnicalManufacturerSpecificMessage | Must be used by the supplier to describe the reasons for a StatusTechnical != OK, that cannot be explained by existing datapoints (NOT including IM and manufacturer specific diagnostic messages). This Information MUST be provided from the supplier. This should provide flexibility for future uses. Multiple states can be indicated at the same time if multiple diagnosis have not been included in the model during the design phase. The supplier specific reason may not overlap with reasons already covered in other attributes. | Attribute  | statusTechnicalManufacturerSpecificMessage : MultiStateDiscreteTypeSupplier | Current value | diagnosis      | 1000     | Optional    | Option LS4<br>Option LS5 |          | <b>art_Meaning (en) (MD Meaning (en)):</b><br>Must be used by the supplier to describe the reasons for a StatusTechnical != OK, that cannot be explained by existing datapoints ( <a href="#">NOT including IM and manufacturer specific diagnostic messages</a> ). This Information MUST be provided from the supplier, <del>if there is not already a defined attribute that explains a statusTechnical other than Ok.</del> Allows to <del>This extend</del> <a href="#">should "StatusTechnical" provide flexibility</a> for future uses <del>from IMs &amp; Suppliers if, theMultiple StatusTechnicalstates =can not be OK-indicated Thisat shouldthe provide same flexibilitytime forif futuremultiple uses diagnosis</del> Note: <del>have Enumerationnot valuesbeen definedincluded in inthe Interfacemodel specificationduring SDIthe Genericdesign [Eu.Docphase.94]</del><br><br><del>Multiple statesThe cansupplier bespecific indicatedreason atmay thenot sameoverlap timewith ifreasons multiplealready reasonscovered arein presentother attributes.</del><br><b>art_Signature:</b><br>statusTechnicalManufacturerSpecificMessage : MultiStateDiscreteTypeSupplier-<br><del>{0..1}</del><br><b>art_Accuracy (Accuracy):</b><br><a href="#">Current value</a><br><b>art_Sampling Rate (Sampling Rate):</b><br><a href="#">1000</a><br><b>art_Modelling Rule (Modelling Rule):</b><br><a href="#">Optional</a> |
| Eu.SDI-LS.322 | Req  | label                                      | It is assigned to all classes representing physically identifiable entities. This string, corresponding to a physically identifiable label, facilitates consistent reference between the physical entities in the field and their digital representations within the model.   | Attribute  | label : String  | Current value | configuration  | 1000     | Optional    | Option LS4<br>Option LS5 |          | object created after baseline 4.0 (0.A)   |
| Eu.SDI-LS.268 | Req  | LightSignalAdjacentTrainControlElements    | Representation of the adjacent system.  | Class      |   |               |                |          |             | Option LS4<br>Option LS5 | EULS-479 | <b>art_Meaning (en) (MD Meaning (en)):</b><br><a href="#">Representation of the adjacent system.</a><br><b>a_JIRA_BL4_R3:</b><br><a href="#">EULS-479</a>   |
| Eu.SDI-LS.269 | Req  | trainProtectionName                        | Name of the Legacy Train Protection System.   | Attribute  | trainProtectionName : String  | Current value | configuration  | 1000     | Optional    | Option LS5               | EULS-462 | <b>art_Meaning (en) (MD Meaning (en)):</b><br>Name of the Legacy Train Protection System.<br><b>art_Signature:</b><br>trainProtectionName : String-<br><del>{0..1}</del>  |

| ID            | Type | Requirement               | Meaning   | Model Type                 | Data Type   | Trigger       | Attribute Type | Sampling | Optionality | Func. Pkg.               | JIRA                             | V 4.2 (0.A) > V 4.0 (0.A)   |
|---------------|------|---------------------------|---|----------------------------|---|---------------|----------------|----------|-------------|--------------------------|----------------------------------|---|
|               |      |                           |   |                            |   |               |                |          |             |                          |                                  | <b>art_Accuracy (Accuracy):</b><br><a href="#">Current value</a><br><b>art_Sampling Rate (Sampling Rate):</b><br><a href="#">1000</a><br><b>art_Modelling Rule (Modelling Rule):</b><br><a href="#">Optional</a><br><b>a_Functional_Packages:</b><br>Option <del>LS4</del><br><del>Option</del> -LS5<br><b>a_JIRA_BL4_R3:</b><br><a href="#">EULS-462</a>   |
| Eu.SDI-LS.270 | Req  | type                      | Describes whether the adjacent system is a Eurobalise or a Legacy Train Protection System.  | Attribute                  | type :<br>LightSignalAdjacent<br>TrainControlSystem | Current value | configuration  | 1000     | Mandatory   | Option LS4<br>Option LS5 | EULS-479                         | <b>art_Meaning (en) (MD Meaning (en)):</b><br>Describes whether the adjacent <del>LS</del> -system is a Eurobalise <del>o</del> <a href="#">for</a> a Legacy Train Protection System.<br><b>art_Accuracy (Accuracy):</b><br><a href="#">Current value</a><br><b>art_Sampling Rate (Sampling Rate):</b><br><a href="#">1000</a><br><b>art_Modelling Rule (Modelling Rule):</b><br><a href="#">Mandatory</a><br><b>a_JIRA_BL4_R3:</b><br><a href="#">EULS-479</a> |
| Eu.SDI-LS.293 | Req  | Indicator                 | A switchable frame that shows supplementary aspect information to a signal (for example route indicator, platform indicator).   | Class                      |   |               |                |          |             | Basic LS                 | EULS-435<br>EULS-461<br>EULS-479 | object created after baseline 4.0 (0.A)   |
| Eu.SDI-LS.295 | Req  | indicatorStatus           | Current status of the indicator.  | Attribute                  | indicatorStatus :<br>IndicatorStatus                | Current value | diagnosis      | 250      | Mandatory   | Basic LS                 | EULS-435<br>EULS-479             | object created after baseline 4.0 (0.A)   |
| Eu.SDI-LS.319 | Req  | label                     | It is assigned to all classes representing physically identifiable entities. This string, corresponding to a physically identifiable label, facilitates consistent reference between the physical entities in the field and their digital representations within the model. | Attribute                  | label : String                                      | Current value | configuration  | 1000     | Optional    | Basic LS                 | EULS-479                         | object created after baseline 4.0 (0.A)   |
| Eu.SDI-LS.271 | Head | <b>2.2.1 Enumeration</b>  |   |                            |   |               |                |          |             |                          |                                  | <b>ART Model Element Type:</b><br><del>Package</del>  |
| Eu.SDI-LS.272 | Req  | FilamentStatus            | Enumeration: Status of the filament   | ValueType<br>(Enumeration) |   |               |                |          |             | Basic LS                 |                                  | <b>art_Meaning (en) (MD Meaning (en)):</b><br>Enumeration: <a href="#">Status of the filament</a>   |
| Eu.SDI-LS.275 | Req  | Unknown                   | 0: The status unknown is used when the state is not yet established e.g. if connection to the system is lost  | Enumeration Literal        |   |               |                |          |             | Basic LS                 |                                  | <b>art_Meaning (en) (MD Meaning (en)):</b><br>0: <a href="#">The status unknown is used when the state is not yet established e.g. if connection to the system is lost</a>  |
| Eu.SDI-LS.274 | Req  | Ok                        | 1: Functioning according to specifications  | Enumeration Literal        |   |               |                |          |             | Basic LS                 |                                  | <b>art_Meaning (en) (MD Meaning (en)):</b><br>1: <a href="#">Functioning according to specifications</a>  |
| Eu.SDI-LS.273 | Req  | Failure                   | 2: Not functioning  | Enumeration Literal        |   |               |                |          |             | Basic LS                 |                                  | <b>art_Meaning (en) (MD Meaning (en)):</b><br>2: <a href="#">Not functioning</a>  |
| Eu.SDI-LS.276 | Req  | InterfaceConnectionStatus | Enumeration: Status of the output channel forming the interface connection to the adjacent system   | ValueType<br>(Enumeration) |   |               |                |          |             | Option LS4               | EULS-479                         | <b>art_Meaning (en) (MD Meaning (en)):</b><br>Enumeration: <a href="#">Status of the output channel forming the interface connection to the adjacent system</a><br><b>a_JIRA_BL4_R3:</b><br><a href="#">EULS-479</a>  |
| Eu.SDI-LS.280 | Req  | Unknown                   | 0: The status unknown is used when the state is not yet established e.g. if connection to the system is lost  | Enumeration Literal        |   |               |                |          |             | Option LS4               |                                  | <b>art_Meaning (en) (MD Meaning (en)):</b><br>0: <a href="#">The status unknown is used when the state is not yet established e.g. if connection to the system is lost</a>  |
| Eu.SDI-LS.277 | Req  | Ok                        | 1: Functioning according to specifications  | Enumeration Literal        |   |               |                |          |             | Option LS4               |                                  | <b>art_Meaning (en) (MD Meaning (en)):</b><br>1: <a href="#">Functioning according to specifications</a>  |

| ID            | Type | Requirement  | Meaning  | Model Type              | Data Type | Trigger | Attribute Type | Sampling | Optionality | Func. Pkg.               | JIRA                             | V 4.2 (0.A) > V 4.0 (0.A)  |
|---------------|------|--|--|-------------------------|-----------|---------|----------------|----------|-------------|--------------------------|----------------------------------|--|
| Eu.SDI-LS.279 | Req  | ShortCircuit   | 2: A short circuit fault is detected in the output channel   | Enumeration Literal     |           |         |                |          |             | Option LS4               |                                  | <b>art_Meaning (en) (MD Meaning (en)):</b><br>2: <a href="#">A short circuit fault is detected in the output channel</a>   |
| Eu.SDI-LS.278 | Req  | OpenCircuit  | 3: The interface connection is broken due to an open circuit   | Enumeration Literal     |           |         |                |          |             | Option LS4               |                                  | <b>art_Meaning (en) (MD Meaning (en)):</b><br>3: <a href="#">The interface connection is broken due to an open circuit</a>   |
| Eu.SDI-LS.281 | Req  | LampWireRole   | Enumeration: Role of one filament within the lamp  | ValueType (Enumeration) |           |         |                |          |             | Basic LS                 |                                  | <b>art_Meaning (en) (MD Meaning (en)):</b><br>Enumeration: <a href="#">Role of one filament within the lamp</a>  |
| Eu.SDI-LS.283 | Req  | MainFilament   | 1  | Enumeration Literal     |           |         |                |          |             | Basic LS                 |                                  |  |
| Eu.SDI-LS.282 | Req  | AuxiliaryFilament  | 2  | Enumeration Literal     |           |         |                |          |             | Basic LS                 |                                  |  |
| Eu.SDI-LS.284 | Req  | LightSignalAdjacentTrainControlSystem  | Enumeration: Type of adjacent system   | ValueType (Enumeration) |           |         |                |          |             | Option LS4<br>Option LS5 | EULS-479                         | <b>art_Meaning (en) (MD Meaning (en)):</b><br>Enumeration: <a href="#">Type of adjacent system</a><br><b>a_JIRA_BL4_R3:</b><br><a href="#">EULS-479</a>                    |
| Eu.SDI-LS.285 | Req  | Eurobalise   | 1  | Enumeration Literal     |           |         |                |          |             | Option LS4               |                                  |  |
| Eu.SDI-LS.286 | Req  | LegacyTrainProtectionSystem  | 2  | Enumeration Literal     |           |         |                |          |             | Option LS5               |                                  |  |
| Eu.SDI-LS.287 | Req  | NightDay   | Enumeration: Luminosity value (day or night)   | ValueType (Enumeration) |           |         |                |          |             | Basic LS                 |                                  | <b>art_Meaning (en) (MD Meaning (en)):</b><br>Enumeration: <a href="#">Luminosity value (day or night)</a>   |
| Eu.SDI-LS.290 | Req  | Unknown  | 0: The status unknown is used when the state is not yet established e.g. if connection to the system is lost             | Enumeration Literal     |           |         |                |          |             | Basic LS                 |                                  | <b>art_Meaning (en) (MD Meaning (en)):</b><br>0: <a href="#">The status unknown is used when the state is not yet established e.g. if connection to the system is lost</a> |
| Eu.SDI-LS.288 | Req  | Day  | 1  | Enumeration Literal     |           |         |                |          |             | Basic LS                 |                                  |  |
| Eu.SDI-LS.289 | Req  | Night  | 2  | Enumeration Literal     |           |         |                |          |             | Basic LS                 |                                  |  |
| Eu.SDI-LS.315 | Req  | IndicatorStatus  | Enumeration: Status of the indicator   | ValueType (Enumeration) |           |         |                |          |             | Basic LS                 | EULS-435<br>EULS-479             | object created after baseline 4.0 (0.A)  |
| Eu.SDI-LS.318 | Req  | Unknown  | 0: The status unknown is used when the state is not yet established e.g. if connection to the system is lost             | Enumeration Literal     |           |         |                |          |             | Basic LS                 | EULS-435<br>EULS-461<br>EULS-479 | object created after baseline 4.0 (0.A)  |
| Eu.SDI-LS.317 | Req  | Off  | 1  | Enumeration Literal     |           |         |                |          |             | Basic LS                 | EULS-435<br>EULS-461<br>EULS-479 | object created after baseline 4.0 (0.A)  |
| Eu.SDI-LS.316 | Req  | On   | 2  | Enumeration Literal     |           |         |                |          |             | Basic LS                 | EULS-435<br>EULS-461<br>EULS-479 | object created after baseline 4.0 (0.A)  |
| Eu.SDI-LS.331 | Req  | LogicalLightPointStatus  | Enumeration: Value of the logical output channel   | ValueType (Enumeration) |           |         |                |          |             | Basic LS                 | EULS-326<br>EULS-461             | object created after baseline 4.0 (0.A)  |
| Eu.SDI-LS.335 | Req  | Unknown  | 0: The status unknown is used when the state is not yet established e.g. if connection to the system is lost             | Enumeration Literal     |           |         |                |          |             | Basic LS                 | EULS-326<br>EULS-461             | object created after baseline 4.0 (0.A)  |
| Eu.SDI-LS.333 | Req  | SwitchedOff  | 1  | Enumeration Literal     |           |         |                |          |             | Basic LS                 | EULS-326<br>EULS-461             | object created after baseline 4.0 (0.A)  |
| Eu.SDI-LS.334 | Req  | SwitchedOn   | 2  | Enumeration Literal     |           |         |                |          |             | Basic LS                 | EULS-326<br>EULS-461             | object created after baseline 4.0 (0.A)  |
| Eu.SDI-LS.332 | Req  | Flashing   | 3  | Enumeration Literal     |           |         |                |          |             | Basic LS                 | EULS-326<br>EULS-461             | object created after baseline 4.0 (0.A)  |
| Eu.SDI-LS.291 | Head | <b>2.2.2 Light Signal class diagram</b>  |  |                         |           |         |                |          |             |                          |                                  | <b>Object Heading:</b><br><del>LightSignal</del> <a href="#">Light Signal</a> class diagram<br><b>ART Model Element Type:</b><br><del>Package</del>                        |
| Eu.SDI-LS.336 | Info | In the class diagram, classes presented in yellow indicate classes from the generic SDI model and are covered in [Eu.Doc.94]. Classes presented in blue are specific classes and covered in this document. |  |                         |           |         |                |          |             | Basic LS                 | EULS-460                         | object created after baseline 4.0 (0.A)  |
| Eu.SDI-LS.263 | Info | Light Signal class diagram<br>See Figure 1 on page 14.   | The class diagram represents the static structure of the Subsystem - Light Signal from the point of view of diagnostics. | Class Diagram           |           |         |                |          |             | Basic LS                 | EULS-480                         | <b>Object Text:</b><br><del>LightSignal</del> <a href="#">Light Signal</a> class diagram<br><b>art_Meaning (en) (MD</b>  |

| ID | Type | Requirement | Meaning | Model Type | Data Type | Trigger | Attribute Type | Sampling | Optionality | Func. Pkg. | JIRA | V 4.2 (0.A) > V 4.0 (0.A)  |
|----|------|-------------|---------|------------|-----------|---------|----------------|----------|-------------|------------|------|--|
|    |      |             |         |            |           |         |                |          |             |            |      | <b>Meaning (en)):</b><br><a href="#">The class diagram represents the static structure of the Subsystem - Light Signal from the point of view of diagnostics.</a><br><b>a_JIRA_B14_R3:</b><br><a href="#">EULS-480</a> |

Figure 1: From object 263 on page 12.

