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General - Facility Instructions Process

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Model Documentation

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The European message format for the gas market

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8   *Version 6.1*

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18   *Document Version: 2*

19   *Schema Version: 1*

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1 Model Detail

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60 **2 Document usage decision table**

61 The following decision table provides a summary of the message requirements depending on the type of message:

Instructions Document	Instruction Forecast	Setting Forecast	Operational Instructions	Instructions Response	Instructions Confirmation
identification	Mandatory.				
version	Mandatory.				
documentCode	AIG = Instruction Forecast.	AL8 = Setting Forecast.	AEG = Operational Instructions.	AFG = Instruction Response.	ALG = Instruction Confirmation.
creationDateTime	Mandatory.				
validityPeriod	Mandatory.				
applicationContext	May be used. Deprecated attribute which will be removed in the next version of Edig@s.				
issuer_MarketParticipant.identification	Mandatory; codingScheme = 305 (EIC Party X code).				
issuer_MarketParticipant.marketRole.roleCode	ZUQ = Production Facility Operator.	ZUW = Transmission System Operator	ZUW = Transmission System Operator.	ZUQ = Production Facility Operator.	ZUW = Transmission System Operator.
recipient_MarketParticipant.identification	Mandatory; codingScheme = 305 (EIC Party X code).				
recipient_MarketParticipant.marketRole.roleCode	ZUW = Transmission System Operator.	ZUQ = Production Facility Operator.	ZUQ = Production Facility Operator.	ZUW = Transmission System Operator.	ZUQ = Production Facility Operator.
connectionPoint.identification	Mandatory; codingScheme = 305 (EIC Measurement Point Z or Y code) or ZSO.				
measureUnit.unitOfMeasureCode	KW1 = Kilowatt-hour per hour (kWh/h). KW2 = Kilowatt-hour per day (kWh/d). MQ6 = Normal cubic meter per hour (nm³/h). MQ7 = Normal cubic meter per day (nm³/d).				
Period.timeInterval	Mandatory.				
Period.direction.gasDirectionCode	Z02 = Input quantity. Z03 = Output quantity.				

quantity.amount	Mandatory.
SourceConnectionPoint.identification	May be used to identify an entry connection point; codingScheme = 305 (EIC Measurement Point Z or Y code) or ZSO. If used no destination connection point allowed.
identification	May be used an exit connection point; codingScheme = 305 (EIC Measurement Point Z or Y code) or ZSO. If used no source connection point allowed
statusCode	May be used 32G = Increased. 33G = Decreased. 34G = Confirmed.

62

3 Facility Instructions Process

3.1 Business Process

The Edig@s standard has been created to facilitate the exchanges required to support the activities for the exchange of information within gas market. The principal activities within the facility setting process are outlined in the use case diagram in figure 1.

3.1.1 Facility setting use case

The facility setting use case in figure 1 shows the use case that is possible within the process which is to provide different facilities with the operational settings for the injection or withdrawal of gas;
The actors involved in the facility setting process are:
1.   The Transmission System Operator.
2.   The Production Facility Operator.
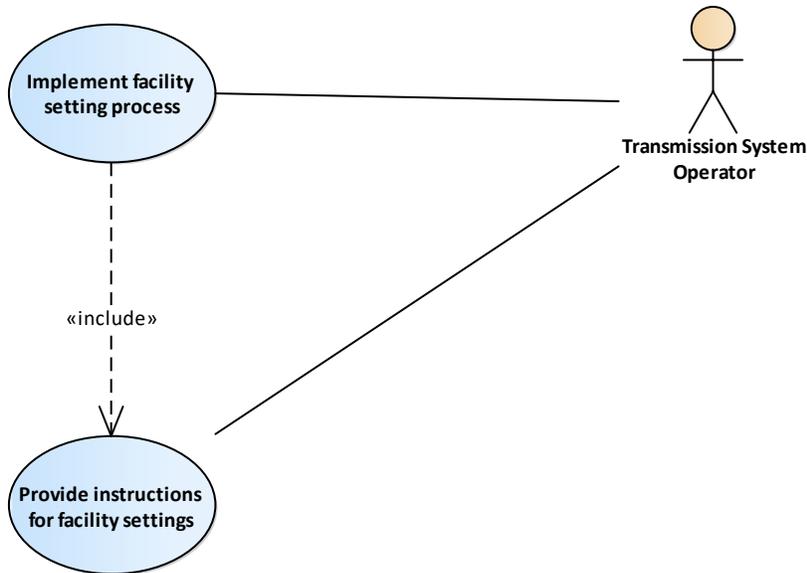
Figure: 1 **Facility setting use case**

79 3.1.2 Facility setting sequence

80 A Production Facility Operator may send a forecast of the quantity of gas to be produced through the use of flow 1
81 in order to enable the Transmission System Operator to be aware of the quantity of gas that may be supplied (flow
82 1). This phase may occur at any time.
83 A Transmission System Operator may send a setting forecast of the quantity of gas to be produced through the use
84 of flow 2 in order to enable the Production Facility Operator to prepare for the supply of the quantity of gas
85 required. This phase may occur at any time.
86 When the Transmission System Operator has determined the exact requirements operational instructions are sent to
87 the respective Production Facility Operators (flow 3).
88 The Production Facility Operators reply with an Instruction Response that may modify the quantities initially
89 requested by the Transmission System Operator (flow 4).
90 The Transmission System Operator takes the contents of the Instruction Response into consideration and finally
91 sends an Instruction Confirmation that confirms the quantities to be produced (flow 5).
92
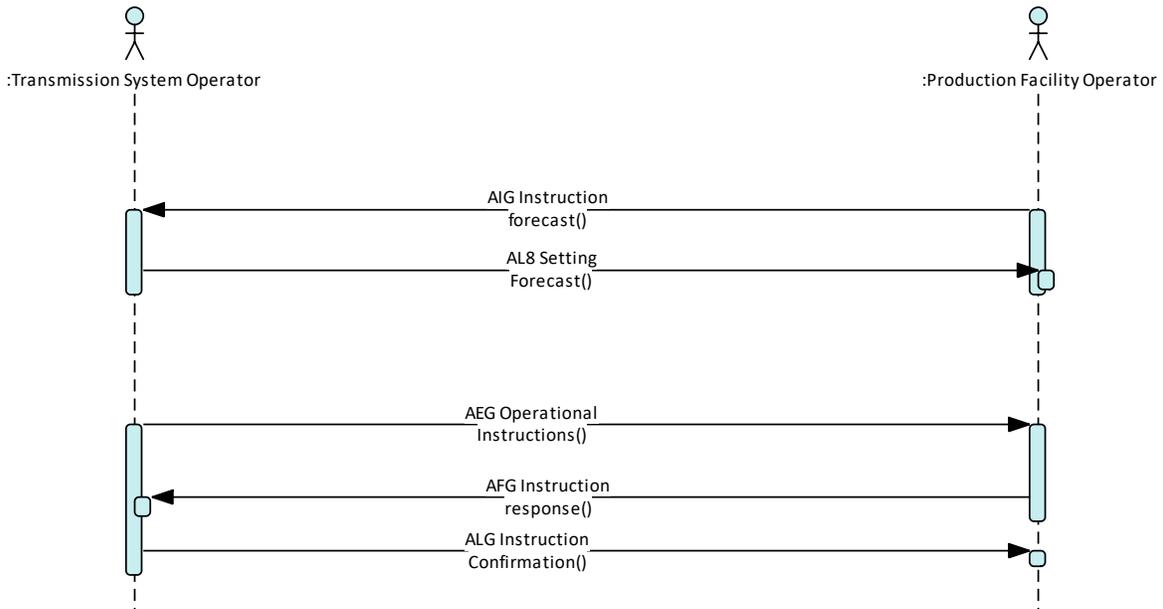
Figure: 2 **Facility setting sequence**

96 3.1.3 Facility setting workflow

97 A Production Facility Operator may initially forecast the quantity of gas to be produced and inform the
98 Transmission System Operator to enable the preparation for the supply of the quantity of gas required.
99 When the Transmission System Operator has determined the exact requirements the Production Facility Operators
100 are informed through a setting forecast. The Production Facility Operators acknowledge requirements on reception.
101 When the gas requirements are finalised the Transmission System Operator sends the operational instructions to the
102 Production Facility Operators. A Production Facility Operator may accept the quantities requested or may modify
103 the quantities requested through the use of the instruction response that is sent to the Transmission System Operator
104 who consequently takes the modifications into consideration.
105 The process is finalised when the Transmission System Operator transmits an instruction confirmation to the
106 Production Facility Operators confirming the quantities to be produced. The Production Facility Operators must
107 systematically acknowledge receipt of the confirmation.
108
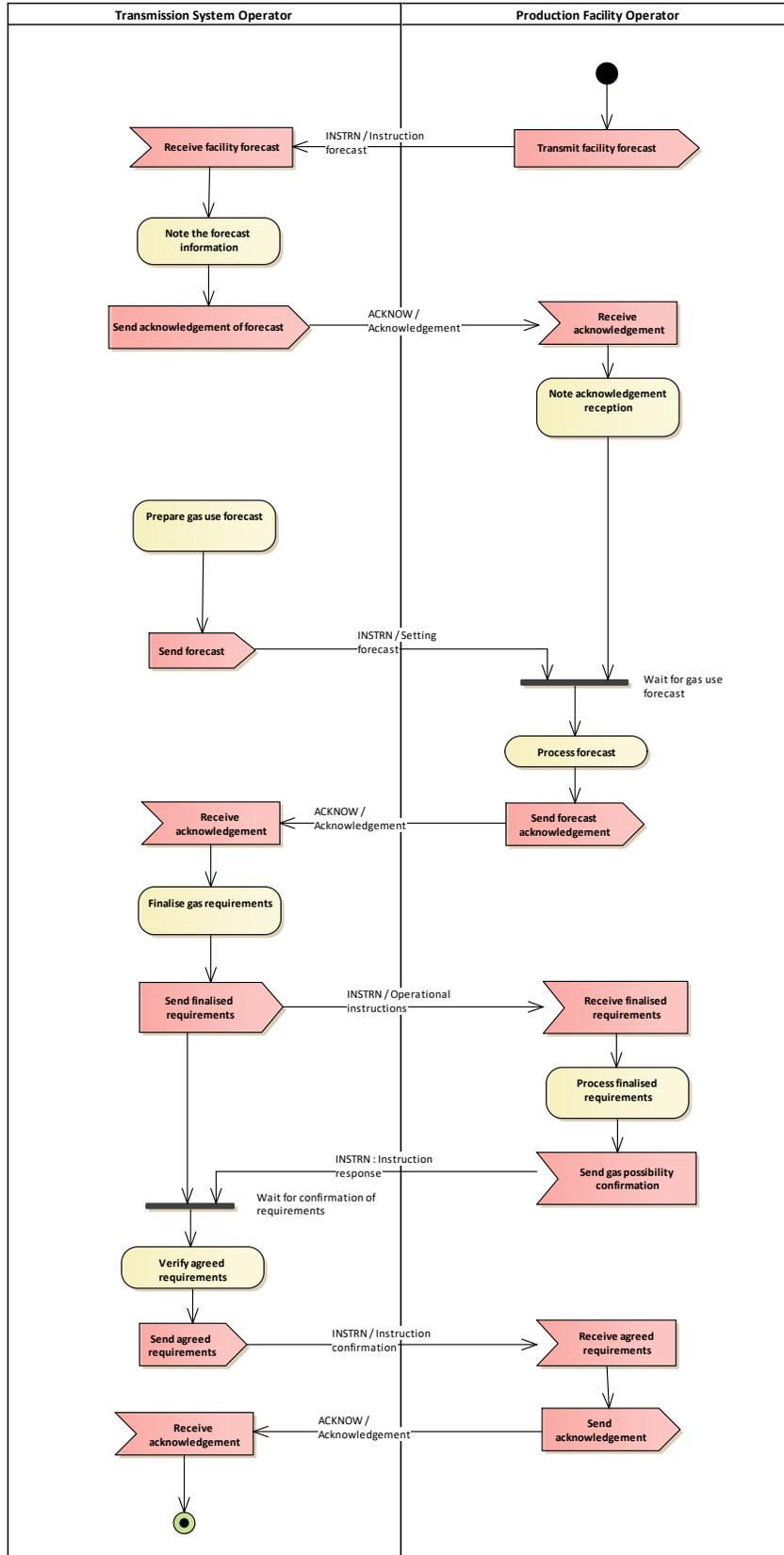
Figure: 3 **Facility setting workflow**

3.1.4 Facility setting possibilities

An Instructions Document may address a single connection point or multiple connection points. The following three diagrams describe the different possibilities for the use of the model:

1. *An unspecified source and destination (see entry and exit defined in the instructions class).*
In this case only the Period class related directly with the Instructions Document class shall be used to provide the time series information. This is the general case.

2. *An unspecified source with multiple destinations (see entry defined in the instructions class; exit defined in the destination class).*
In this case the Period class related to the Instructions Document class shall be used to provide the time series information entering the Connection Point.
The Destination Connection Point class shall be used to identify the connection point for each destination.
The Period class related to the Destination Connection Point class shall be used to provide the time series information for each destination connection point.

3. *Multiple specified sources with one or multiple destinations (entry defined in the source class and exit defined in the destination class).*
In this case there is no Period class related to the Instructions class.
The Source Connection Point class shall be used to identify the connection point for each source.

The Period class related to the Source Connection Point class shall be used to provide the time series information for each source connection point.
The Destination Connection Point class shall be used to identify the connection point for each destination.
The Period class related to the Destination Connection Point class shall be used to provide the time series information for each destination connection point.
Note: The possibility of multiple source connection points and a single destination point uses this same possibility with only one Destination Connection Point class.
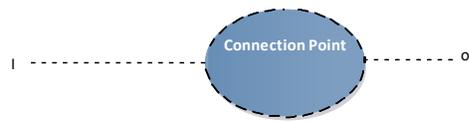
Connection Point

I - - - - - - - - - - - - - - - - o

Entry and exit defined in the Instructions class

Instructions

1..*

Period

Connection Point

i - - - - - - - - - - o1

o2

o3
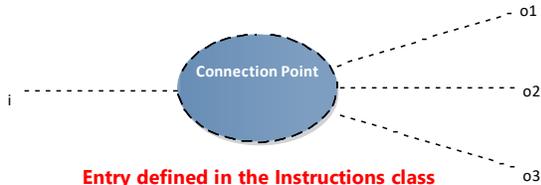
Entry defined in the Instructions class
Exits defined in the Destination class

Instructions

1..*

Period   **Destination Conection Point**

1..*   1..*

Connection Point

i1 - - - - - - - - o1

i2 - - - - - - - - o2

i3 - - - - - - - - o3
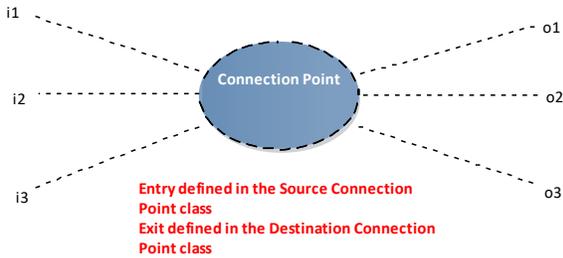
Entry defined in the Source Connection Point class
Exit defined in the Destination Connection Point class

Instructions

1..*

Source Connection Point

1..*

Period   **Destination Connection Point**

1..*

1..*

140
141
142
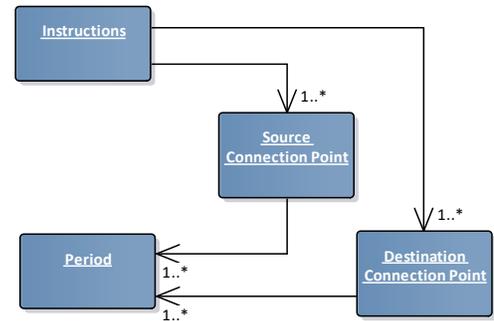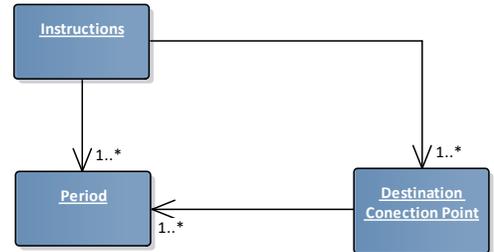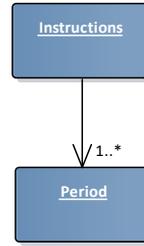
Figure: 4 **Facility setting possibilities**

143   3.2 Instructions Document (INSTRN)

144   3.2.1 Instructions Document Contextual Model

145
146
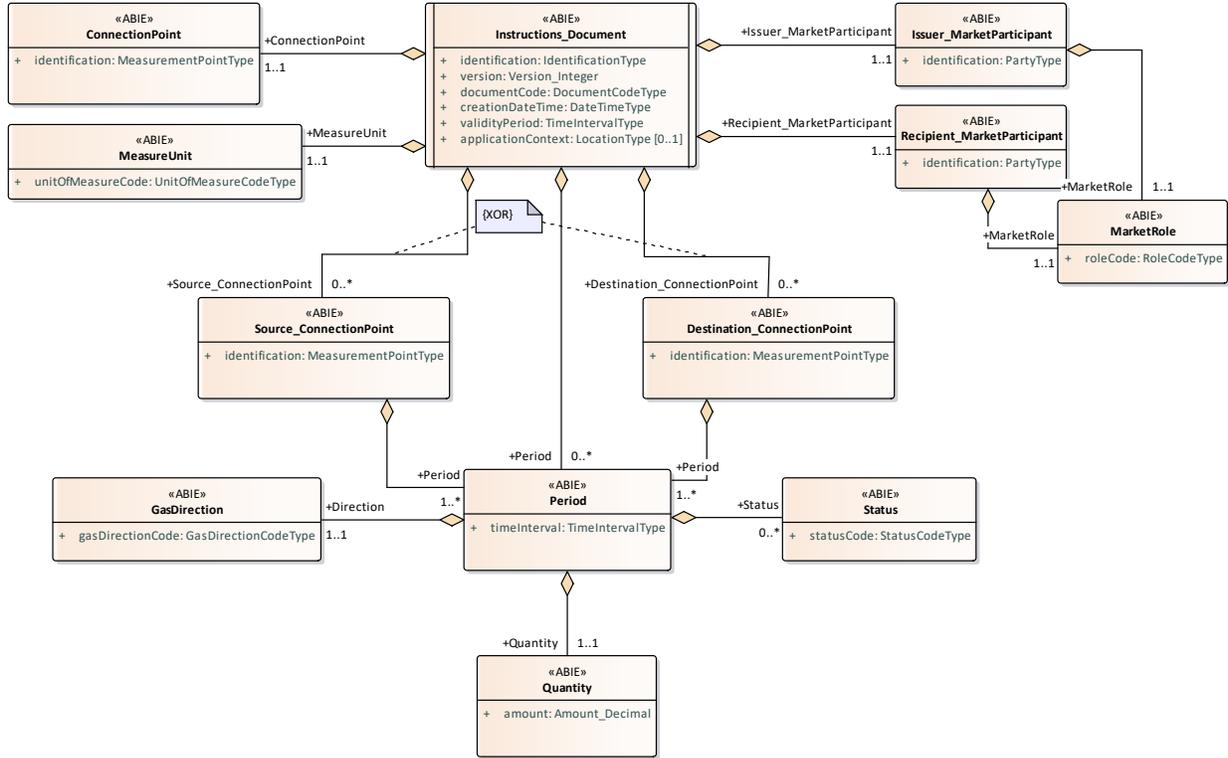
147
148   Figure: 5 **Instructions Document Contextual Model**
149

150   3.2.2 Instructions Document Assembly Model

151


```
                              «MBIE»
                         Instructions_Document

        +   identification: IdentificationType
        +   version: Version_Integer
        +   documentCode: DocumentCodeType
        +   creationDateTime: DateTimeType
        +   validityPeriod: TimeIntervalType
        +   applicationContext: LocationType [0..1]
        +   issuer_MarketParticipant.identification: PartyType
        +   issuer_MarketParticipant.marketRole.roleCode: RoleCodeType
        +   recipient_MarketParticipant.identification: PartyType
        +   recipient_MarketParticipant.marketRole.roleCode: RoleCodeType
        +   connectionPoint.identification: MeasurementPointType
        +   measureUnit.unitOfMeasureCode: UnitOfMeasureCodeType
```

{XOR}

+Destination_ConnectionPoint   0..*   +Source_ConnectionPoint   0..*

```
           «MBIE»                                    «MBIE»
   Destination_ConnectionPoint               Source_ConnectionPoint

  +  identification: MeasurementPointType   +  identification: MeasurementPointType
```

+Period   1..*   +Period   0..*   +Period   1..*

```
                          «MBIE»
                          Period

        +  timeInterval: TimeIntervalType
        +  direction.gasDirectionCode: GasDirectionCodeType
        +  quantity.amount: Amount_Decimal
```

+Status   0..*

```
                          «MBIE»
                          Status

        +  statusCode: StatusCodeType
```

152
153   Figure: 6 **Instructions Document Assembly Model**
154

155 ### 3.2.2.1 Instructions_Document

156 This class provides the basic information needed to describe most electronic documents.

157 #### 3.2.2.1.1 Attributes

Attribute	Description	Multiplicity
identification	A unique identification of a document that is assigned by the issuer. This identifies the document being reported.	
version	Version of the document being sent. The first version number for a given document identification shall normally be 1. The document version number must be incremented for each retransmission of a document that contains changes to the previous version. The receiving system shall only accept a document with a version number which is greater than the previous version number of the same document.	
documentCode	Coded representation of the type of the electronic document.	
creationDateTime	Date and time of the creation of the current document expressed in UTC.	
validityPeriod	The start and end date and time of the period of validity covered in the document.	
applicationContext	The application context is used to identify a particular context (a location identification, an application identification, etc.) that is relevant to the recipient of the document.	[0..1]
issuer_MarketParticipant.identification	The identification of the party participating in the market. --- The issuer of the document.	
issuer_MarketParticipant.marketRole.roleCode	A code identifying the role played by a market participant in the market. --- The issuer of the document. --- The role of the issuer of the document.	
recipient_MarketParticipant.identification	The identification of the party participating in the market. --- The recipient of the document.	
recipient_MarketParticipant.marketRole.roleCode	A code identifying the role played by a market participant in the market. --- The recipient of the document. --- The role of the recipient of the document.	
connectionPoint.identification	The identification of a connection point.	
measureUnit.unitOfMeasureCode	The coded representation of a unit of measure using the UN/CEFACT Recommendation 20 common codes.	

158 ### 3.2.2.2 Destination_ConnectionPoint

159 A cross-border interconnection point, whether it is physical or virtual, between two or more member states as well
160 as interconnection between adjacent entry-exit-systems within the same member states. It may be used on the
161 internal market.
162 The Destination Connection Point class is only necessary if there are multiple destinations. It may also be used in
163 the case of multiple source connection points and a single destination connection point.

164 #### 3.2.2.2.1 Attributes

Attribute	Description	Multiplicity
identification	The identification of a connection point.	

165

166 ## 3.2.2.3 Source_ConnectionPoint

167 A cross-border interconnection point, whether it is physical or virtual, between two or more member states as well
168 as interconnection between adjacent entry-exit-systems within the same member states, in so far as these points are
169 subject to booking procedures by Capacity Responsible Parties. It may be used on the internal market.
170 The Source Connection Point class shall only be used if there are multiple source connection points. In the case it is
171 used, the association between the Instructions Document class and the Period class is not permitted.

172 ### 3.2.2.3.1 Attributes

Attribute	Description	Multiplicity
identification	The identification of a connection point.	

173 ## 3.2.2.4 Period

174 The period that the dependent information is for.
175 There must always be a Period class.
176 If there is only one source connection point, the Period class is associated directly with the Instructions Document
177 Class.
178 If there are multiple source connection points, the direct association between the Instructions Document class and
179 the Period class is not permitted.

180 ### 3.2.2.4.1 Attributes

Attribute	Description	Multiplicity
timeInterval	The start and end date and time for the period. The time is expressed in UTC.	
direction.gasDirectionCode	A code identifying the direction of a gas flow.	
quantity.amount	The amount of a quantity.	

181 ## 3.2.2.5 Status

182 The status of an object.
183 Whenever a quantity has a status indicating an evolution this class shall be used.

184 ### 3.2.2.5.1 Attributes

Attribute	Description	Multiplicity
statusCode	A code providing the status of an object.	

185

186 # 4 Document Change Log

187 ## 4.1 Version

188 ### 4.1.1 Attributes

Attribute	Description	Multiplicity
Version 1 2020-06-29	Initial release.	
Version 2 2021-07-05	Release 6.1	

189