
OPC UA companion specification generated by Sterfive OPCUA
Modeler and NodeOPCUA

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Sterfive SAS

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Model

Namespace

<http://opcfoundation.org/UA/LADS/>

1. DataTypes

1.1 Structures

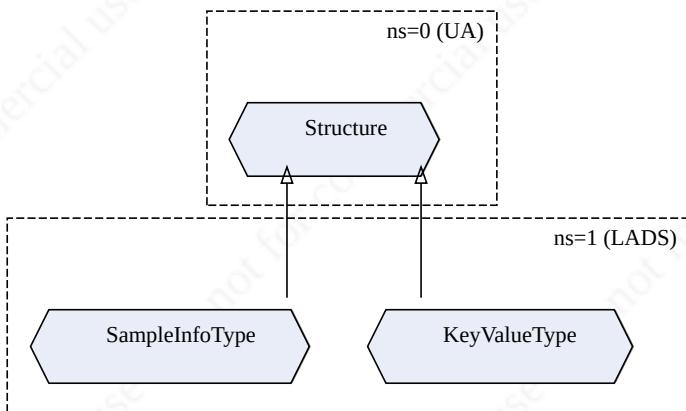


Fig. 1 type hierarchy Structure

1.1.1 KeyValue_Type

Basic Type: ExtensionObject

The fields of the KeyValue_Type DataType are defined in the following table:

Name	Type	Description
Key	String	
Value	String	

Table 1 KeyValue_Type structure definition

The representation of the KeyValue_Type DataType in the address space is shown in the following table:

Name	Attribute
NodeId	ns=1;i=1000
NamespaceUri	http://opcfoundation.org/UA/LADS/
BrowseName	KeyValue
NodeClass	DataType
IsAbstract	No
SubtypeOf	Structure

Table 2 KeyValue definition

1.1.2 SampleInfoType

Basic Type: ExtensionObject

The fields of the SampleInfoType DataType are defined in the following table:

Name	Type	Description
ContainerId	String	
SampleId	String	
Position	String	
CustomData	String	

Table 3 SampleInfoType structure definition

The representation of the SampleInfoType DataType in the address space is shown in the following table:

Name	Attribute
NodeId	ns=1;i=1006
NamespaceUri	http://opcfoundation.org/UA/LADS/
BrowseName	SampleInfo
NodeClass	DataType
IsAbstract	No
SubtypeOf	Structure

Table 4 SampleInfoType definition

1.2 Enumerations

1.2.1 MaintenanceTaskStopResultEnum

The fields of the MaintenanceTaskStopResultEnum DataType are defined in the following table:

Basic Type: Int32

Name	Value	Description
Success	0	The maintenance task stopped successfully.
Failure	1	The maintenance task stopped with failure.
Undetermined	2	The status of the maintenance task upon stopping cannot be determined.

Table 5 MaintenanceTaskStopResultEnum fields

The representation of the MaintenanceTaskStopResultEnum DataType in the address space is shown in the following table:

Name	Attribute
NodeId	ns=1;i=1004
NamespaceUri	http://opcfoundation.org/UA/LADS/
BrowseName	MaintenanceTaskStopResultEnum
NodeClass	DataType
IsAbstract	No
SubtypeOf	Enumeration

Table 6 MaintenanceTaskStopResultEnum definition

The reference of the MaintenanceTaskStopResultEnum DataType is shown in the following table:

Reference	NodeClass	BrowseName	DataType	TypeDefinition	ModellingRule
HasProperty	Variable	EnumStrings	LocalizedText[]	.PropertyType	

Table 7 MaintenanceTaskStopResultEnum properties

2. Object Types



Fig. 1 type hierarchy *BaseObjectType*

2.1 ProgramTemplateType

Program template

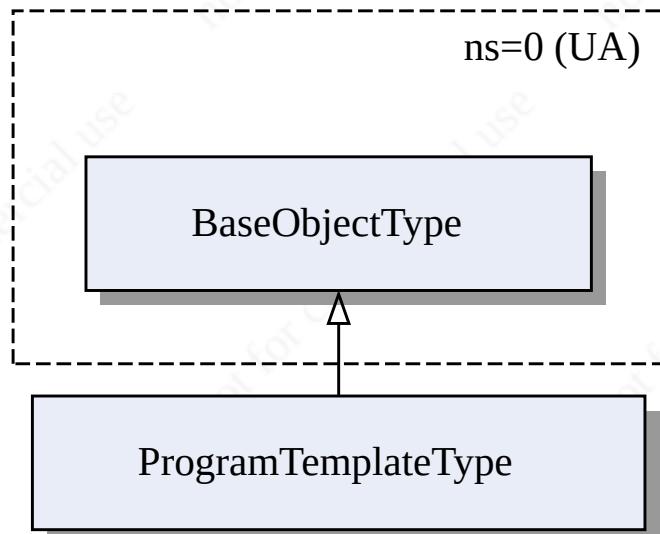
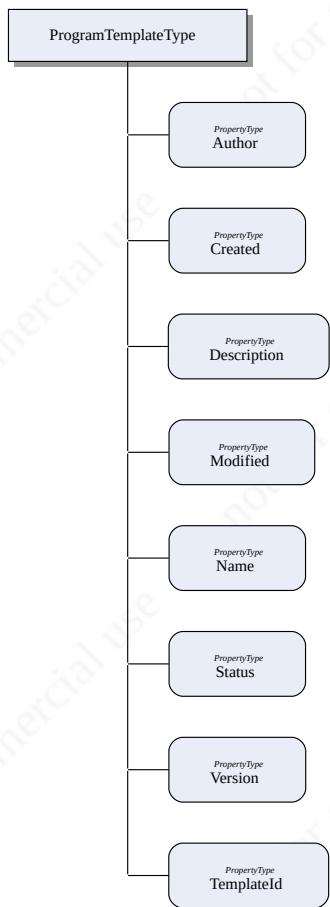


Fig. 2 hierarchy *ProgramTemplateType*

*Fig. 3 ProgramTemplateType*

Attribute	Value
BrowseName	1:ProgramTemplateType
IsAbstract	No
SubtypeOf	BaseObjectType

Table 1 ProgramTemplateType

Reference	NodeClass	BrowseName	ModellingRule	TypeDefinition	DataType
Properties					
HasProperty	Variable	1:Author	Mandatory	.PropertyType	LocalizedText
HasProperty	Variable	1:Created	Mandatory	.PropertyType	DateTime
HasProperty	Variable	1:Description	Mandatory	.PropertyType	LocalizedText
HasProperty	Variable	1:Modified	Mandatory	.PropertyType	DateTime
HasProperty	Variable	1:Name	Mandatory	.PropertyType	String
HasProperty	Variable	1:Status	Mandatory	.PropertyType	String
HasProperty	Variable	1:Version	Mandatory	.PropertyType	String
HasProperty	Variable	1:TemplateId	Mandatory	.PropertyType	String

Table 2 ProgramTemplateType references

2.2 ActiveProgramType

The currently active program on the device.

The currently active program on the device.

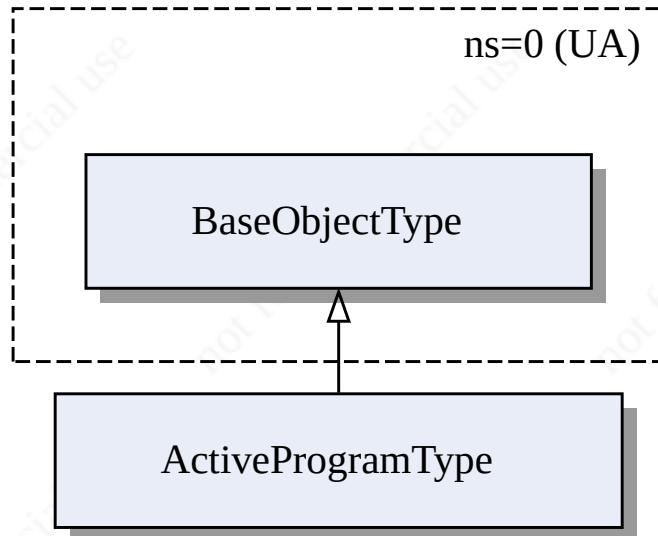


Fig. 4 hierarchy ActiveProgramType

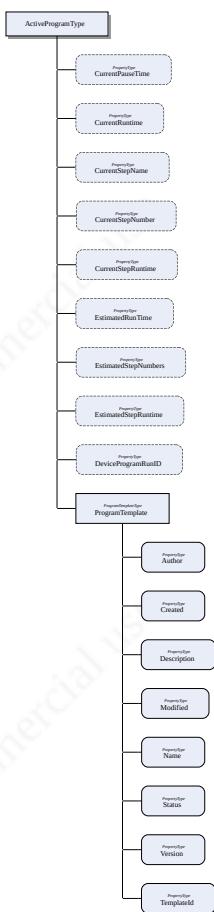


Fig. 5 ActiveProgramType

Attribute	Value
BrowseName	1:ActiveProgramType
IsAbstract	No
SubtypeOf	BaseObjectType

Table 3 ActiveProgramType

Reference	NodeClass	BrowseName	ModellingRule	TypeDefinition	DataType
Properties					
HasProperty	Variable	1:CurrentPauseTime	Optional	.PropertyType	Duration(Double)
HasProperty	Variable	1:CurrentRuntime	Optional	.PropertyType	Duration(Double)
HasProperty	Variable	1:CurrentStepName	Optional	.PropertyType	LocalizedText
HasProperty	Variable	1:CurrentStepNumber	Optional	.PropertyType	UInt32
HasProperty	Variable	1:CurrentStepRuntime	Optional	.PropertyType	Duration(Double)
HasProperty	Variable	1:EstimatedRunTime	Optional	.PropertyType	Duration(Double)
HasProperty	Variable	1:EstimatedStepNumbers	Optional	.PropertyType	UInt32
HasProperty	Variable	1:EstimatedStepRuntime	Optional	.PropertyType	Duration(Double)
HasProperty	Variable	1:DeviceProgramRunID	Optional	.PropertyType	String
Components					
HasComponent	Object	1:ProgramTemplate	Mandatory	1:ProgramTemplateType	

Table 4 ActiveProgramType references

2.2.1 ProgramTemplate Object

Program template

2.3 SetType

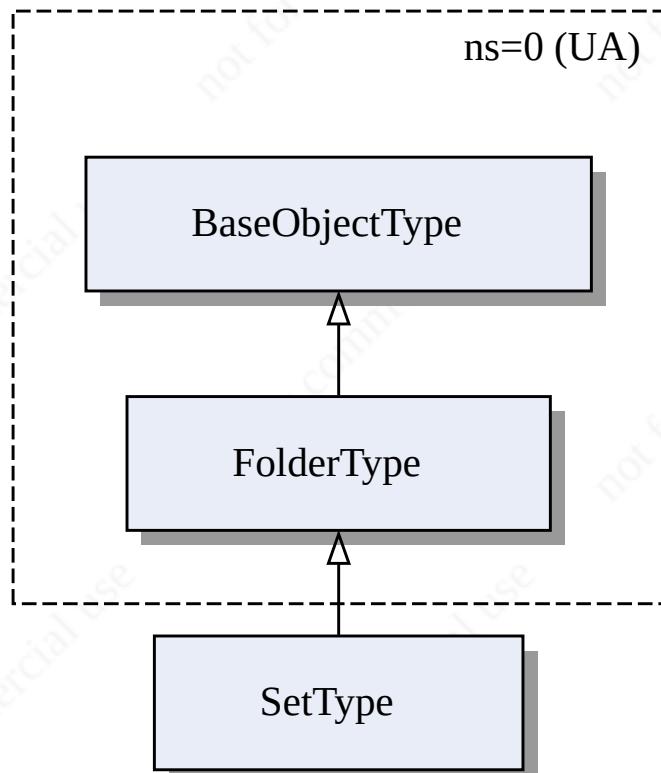


Fig. 6 hierarchy SetType

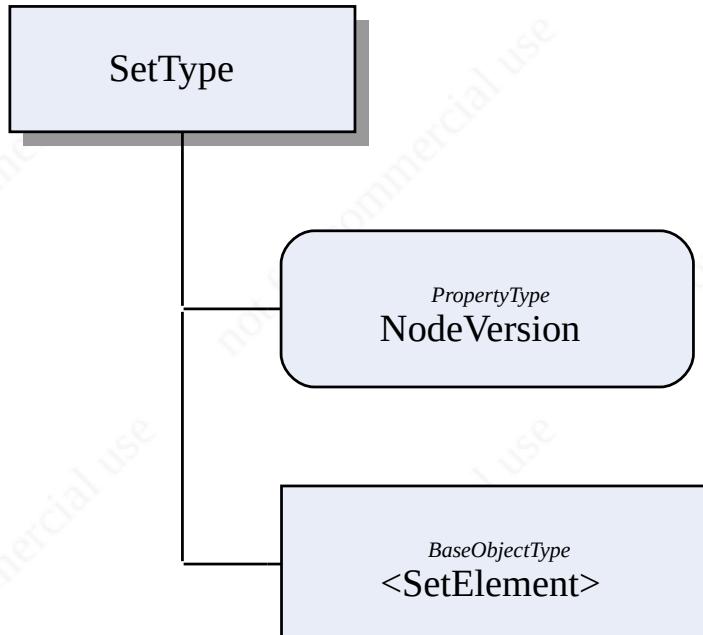


Fig. 7 SetType

Attribute	Value
BrowseName	1:SetType
IsAbstract	Yes
SubtypeOf	FolderType

Table 5 SetType

Reference	NodeClass	BrowseName
HasSubtype	ObjectType	1:FunctionSetType
HasSubtype	ObjectType	1:ControllerParameterSetType
HasSubtype	ObjectType	1:ProgramTemplateSetType
HasSubtype	ObjectType	1:ResultFileSetType
HasSubtype	ObjectType	1:ResultSetType
HasSubtype	ObjectType	1:SupportedPropertiesSetType
HasSubtype	ObjectType	1:FunctionalUnitSetType

Table 6 SetType sub types

Reference	NodeClass	BrowseName	ModellingRule	TypeDefinition	DataType
Properties					
HasProperty	Variable	NodeVersion	Mandatory	.PropertyType	String
Components					
HasComponent	Object	1:<SetElement>	MandatoryPlaceholder	BaseObjectType	

Table 7 SetType references

2.3.1 <SetElement> Object

2.4 FunctionType

Abstract function type

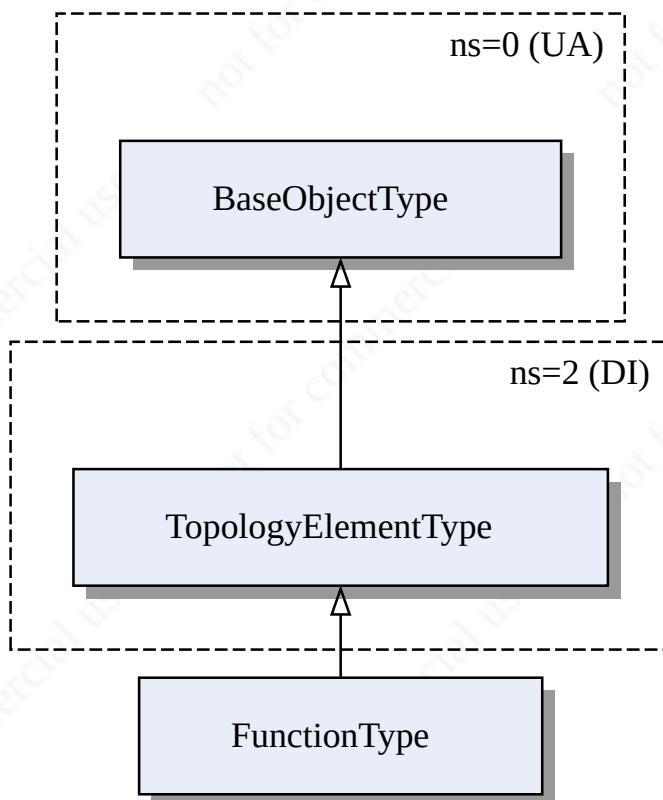


Fig. 8 hierarchy FunctionType

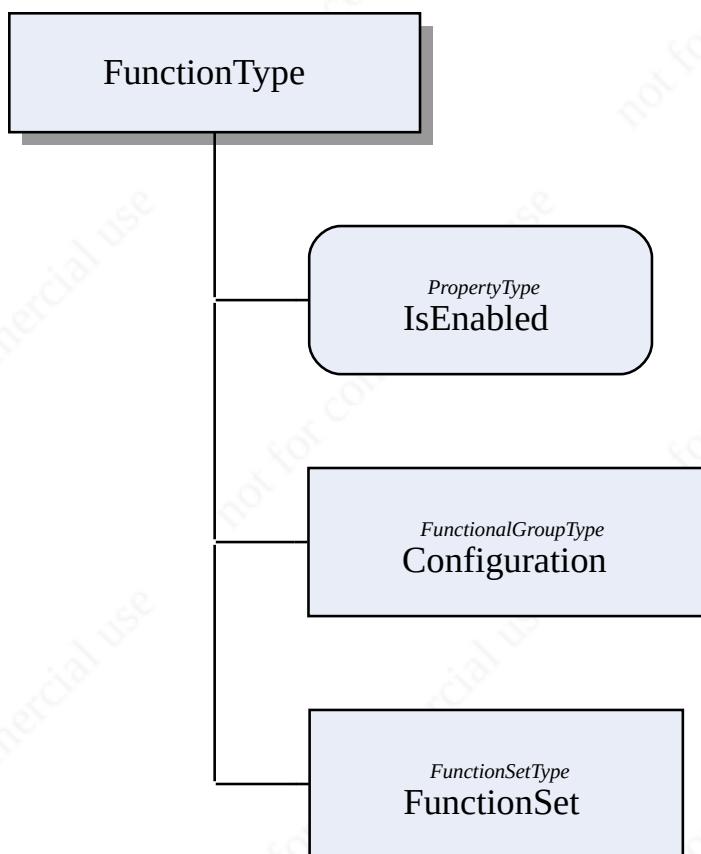


Fig. 9 FunctionType

Attribute	Value
BrowseName	1:FunctionType
IsAbstract	Yes
SubtypeOf	2:TopologyElementType

Table 8 FunctionType

Reference	NodeClass	BrowseName
HasSubtype	ObjectType	1:BaseControlFunctionType
HasSubtype	ObjectType	1:BaseSensorFunctionType
HasSubtype	ObjectType	1:CoverFunctionType

Table 9 FunctionType sub types

Reference	NodeClass	BrowseName	ModellingRule	TypeDefinition	DataType
Properties					
HasProperty	Variable	1:Enabled	Mandatory	.PropertyType	Boolean
Components					
HasComponent	Object	1:Configuration	Optional	2:FunctionalGroupType	
HasComponent	Object	1:FunctionSet	Optional	1:FunctionSetType	

Table 10 FunctionType references

2.4.1 Configuration Object

FolderType is used to organize the Parameters and Methods from the complete set (ParameterSet, MethodSet) with regard to their application

2.4.2 FunctionSet Object

2.5 FunctionSetType

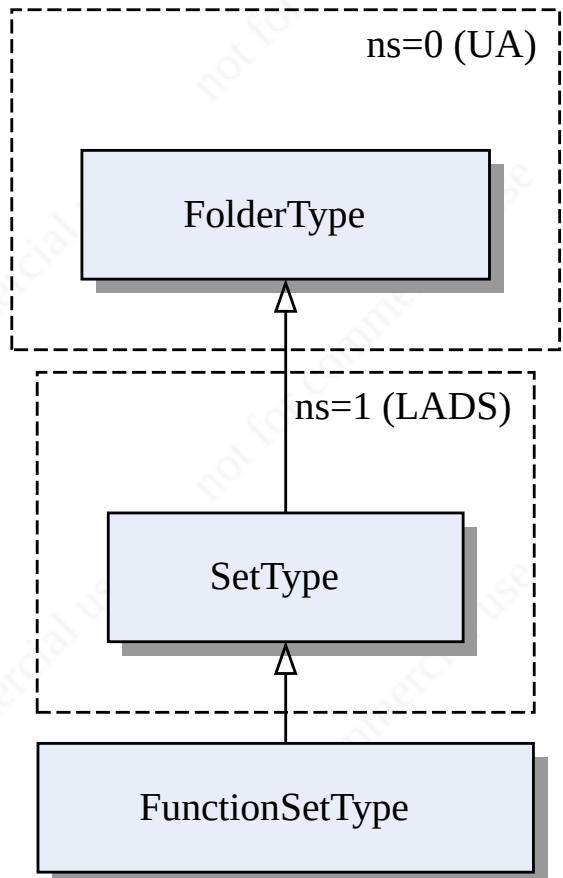


Fig. 10 hierarchy FunctionSetType

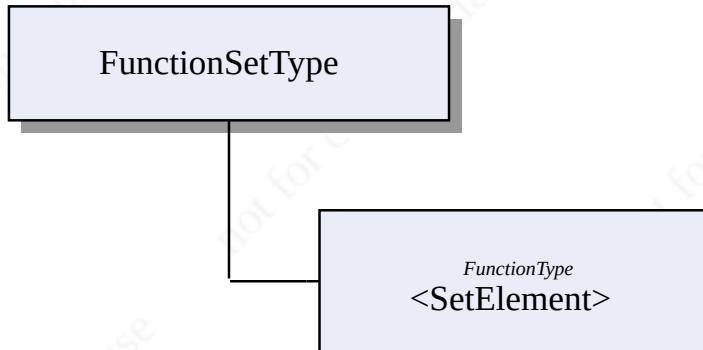


Fig. 11 FunctionSetType

Attribute	Value
BrowseName	1:FunctionSetType
IsAbstract	No
SubtypeOf	1:SetType

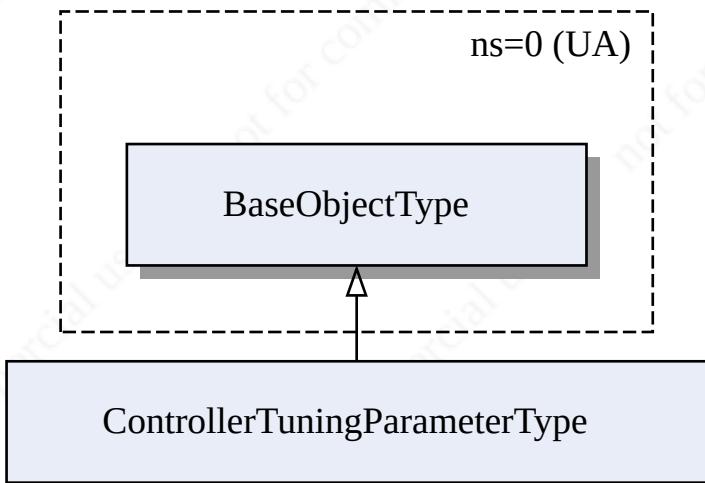
Table 11 FunctionSetType

Reference	NodeClass	BrowseName	ModellingRule	TypeDefinition	DataType
Components					
HasComponent	Object	1:<SetElement>	MandatoryPlaceholder	1:FunctionType	

Table 12 FunctionSetType references

2.5.1 <SetElement> Object

2.6 ControllerTuningParameterType

*Fig. 12 hierarchy ControllerTuningParameterType**Fig. 13 ControllerTuningParameterType*

Attribute	Value
BrowseName	1:ControllerTuningParameterType
IsAbstract	No
SubtypeOf	BaseObjectType

Table 13 ControllerTuningParameterType

Reference	NodeClass	BrowseName
HasSubtype	ObjectType	1:PidControllerParameterType

Table 14 ControllerTuningParameterType sub types

Reference	NodeClass	BrowseName	ModellingRule	TypeDefinition	DataType

Table 15 ControllerTuningParameterType references

2.7 BaseControlFunctionType

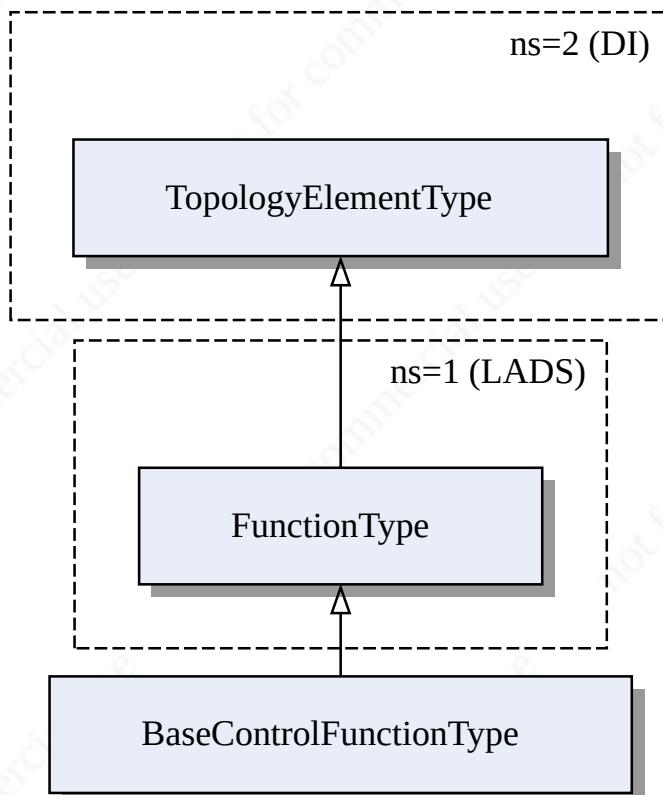


Fig. 14 hierarchy BaseControlFunctionType

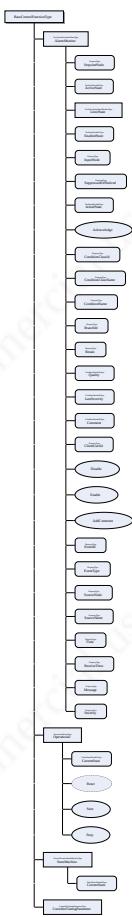


Fig. 15 BaseControlFunctionType

Attribute	Value
BrowseName	1:BaseControlFunctionType
IsAbstract	Yes
SubtypeOf	1:FunctionType

Table 16 BaseControlFunctionType

Reference	NodeClass	BrowseName
HasSubtype	ObjectType	1:AnalogControlFunctionType
HasSubtype	ObjectType	1:DiscreteControlFunctionType
HasSubtype	ObjectType	1:MultiModeAnalogControlFunctionType
HasSubtype	ObjectType	1:MultiParameterAnalogControlFunctionType
HasSubtype	ObjectType	1:RatebasedAccumulatingControlFunctionType
HasSubtype	ObjectType	1:StartStopControlFunctionType
HasSubtype	ObjectType	1:TimerFunctionType

Table 17 BaseControlFunctionType sub types

Reference	NodeClass	BrowseName	ModellingRule	TypeDefinition	DataTy
Components					
HasComponent	Object	1:AlarmMonitor	Optional	ExclusiveDeviationAlarmType	
HasComponent	Object	1:Operational	Mandatory	2:FunctionalGroupType	
HasComponent	Object	1:StateMachine	Mandatory	1:ControlFunctionStateMachineType	
HasComponent	Object	1:ContollerTuningParameter	Optional	1:ControllerTuningParameterType	

Table 18 BaseControlFunctionType references

2.7.1 AlarmMonitor Object

ActiveState Variable

LimitState Object

CurrentState Variable

EnabledState Variable

AckedState Variable

Acknowledge Method

Signature

```
Acknowledge(
    [in] ByteString EventId
    [in] LocalizedText Comment
)
```

Acknowledge method arguments

Argument	DataType	Description
EventId	ByteString	The identifier for the event to comment.
Comment	LocalizedText	The comment to add to the condition.

*Table 19 Acknowledge method arguments***Acknowledge Method AddressSpace definition**

Attribute	Value
BrowseName	Acknowledge

References	NodeClass	BrowseName	DataType	TypeDefinition	ModellingRule
HasProperty	Variable	InputArguments	Argument[]	.PropertyType	Mandatory

*Table 20 Acknowledge components***Quality Variable****LastSeverity Variable****Comment Variable****Disable Method****Signature**

```
Disable()
```

Disable method arguments

Argument	DataType	Description

*Table 21 Disable method arguments***Disable Method AddressSpace definition**

Attribute	Value
BrowseName	Disable

References	NodeClass	BrowseName	DataType	TypeDefinition	ModellingRule
------------	-----------	------------	----------	----------------	---------------

*Table 22 Disable components***Enable Method****Signature**

```
Enable()
```

Enable method arguments

Argument	DataType	Description
----------	----------	-------------

*Table 23 Enable method arguments***Enable Method AddressSpace definition**

Attribute	Value
BrowseName	Enable

References	NodeClass	BrowseName	DataType	TypeDefinition	ModellingRule
------------	-----------	------------	----------	----------------	---------------

*Table 24 Enable components***AddComment Method****Signature**

```
AddComment(
    [in] ByteString EventId
    [in] LocalizedText Comment
)
```

AddComment method arguments

Argument	DataType	Description
EventId	ByteString	The identifier for the event to comment.
Comment	LocalizedText	The comment to add to the condition.

*Table 25 AddComment method arguments***AddComment Method AddressSpace definition**

Attribute	Value
BrowseName	AddComment

References	NodeClass	BrowseName	DataType	TypeDefinition	ModellingRule
HasProperty	Variable	InputArguments	Argument[]	.PropertyType	Mandatory

Table 26 AddComment components

2.7.2 Operational Object

FolderType is used to organize the Parameters and Methods from the complete set (ParameterSet, MethodSet) with regard to their application

CurrentState Variable

Operational: FolderType is used to organize the Parameters and Methods from the complete set (ParameterSet, MethodSet) with regard to their application

Reset Method

Signature

```
Reset()
```

Reset method arguments

Argument	DataType	Description

Table 27 Reset method arguments

Reset Method AddressSpace definition

Attribute	Value
BrowseName	Reset

References	NodeClass	BrowseName	DataType	TypeDefinition	ModellingRule

Table 28 Reset components

Start Method

Signature

Start()

Start method arguments

Argument	DataType	Description
----------	----------	-------------

*Table 29 Start method arguments***Start Method AddressSpace definition**

Attribute	Value
BrowseName	Start

References	NodeClass	BrowseName	DataType	TypeDefinition	ModellingRule
------------	-----------	------------	----------	----------------	---------------

*Table 30 Start components***Stop Method****Signature**

Stop()

Stop method arguments

Argument	DataType	Description
----------	----------	-------------

*Table 31 Stop method arguments***Stop Method AddressSpace definition**

Attribute	Value
BrowseName	Stop

References	NodeClass	BrowseName	DataType	TypeDefinition	ModellingRule
------------	-----------	------------	----------	----------------	---------------

*Table 32 Stop components***2.7.3 StateMachine Object**

Represents the state of a Function in a LADS Device

CurrentState Variable

StateMachine: Represents the state of a Function in a LADS Device

2.7.4 ContollerTuningParameter Object

2.8 AnalogControlFunctionType

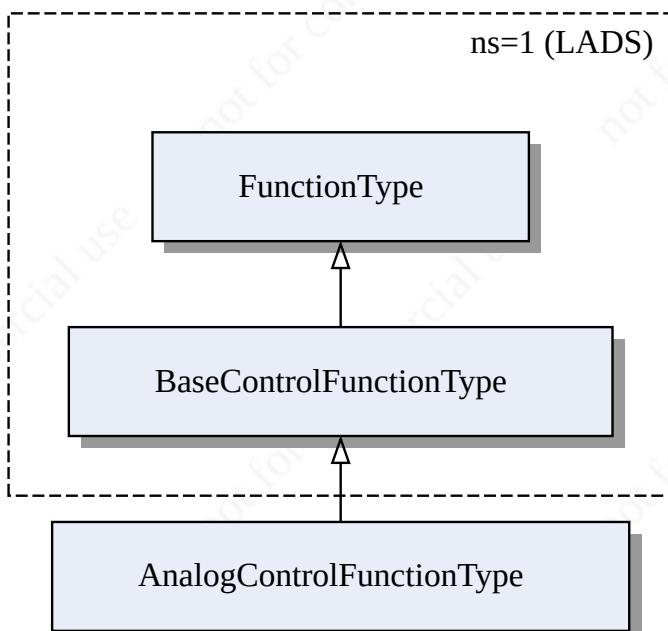


Fig. 16 hierarchy `AnalogControlFunctionType`

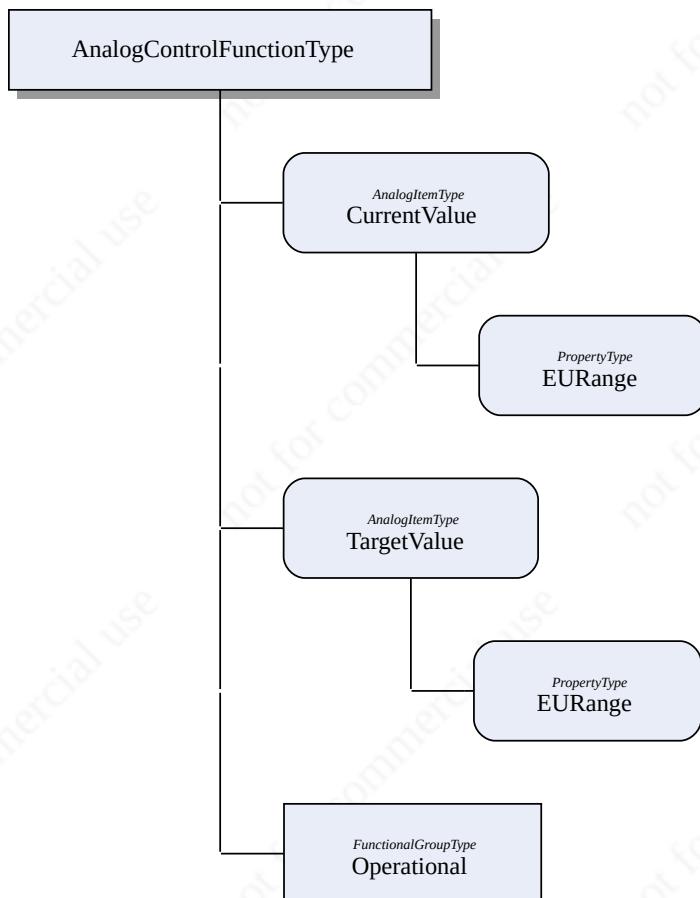


Fig. 17 AnalogControlFunctionType

Attribute	Value
BrowseName	1:AnalogControlFunctionType
IsAbstract	No
SubtypeOf	1:BaseControlFunctionType

Table 33 AnalogControlFunctionType

Reference	NodeClass	BrowseName
HasSubtype	ObjectType	1:AnalogControlFunctionWithComposedTargetValueType
HasSubtype	ObjectType	1:AnalogControlFunctionWithTotalizerType

Table 34 AnalogControlFunctionType sub types

Reference	NodeClass	BrowseName	ModellingRule	TypeDefinition	DataType
Components					
HasComponent	Variable	1:CurrentValue	Mandatory	AnalogItemType	Double
HasComponent	Variable	1:TargetValue	Mandatory	AnalogItemType	Double
HasComponent	Object	1:Operational	Mandatory	2:FunctionalGroupType	

Table 35 AnalogControlFunctionType references

2.8.1 CurrentValue Variable

2.8.2 TargetValue Variable

2.8.3 Operational Object

FolderType is used to organize the Parameters and Methods from the complete set (ParameterSet, MethodSet) with regard to their application

2.9 VariableSetType

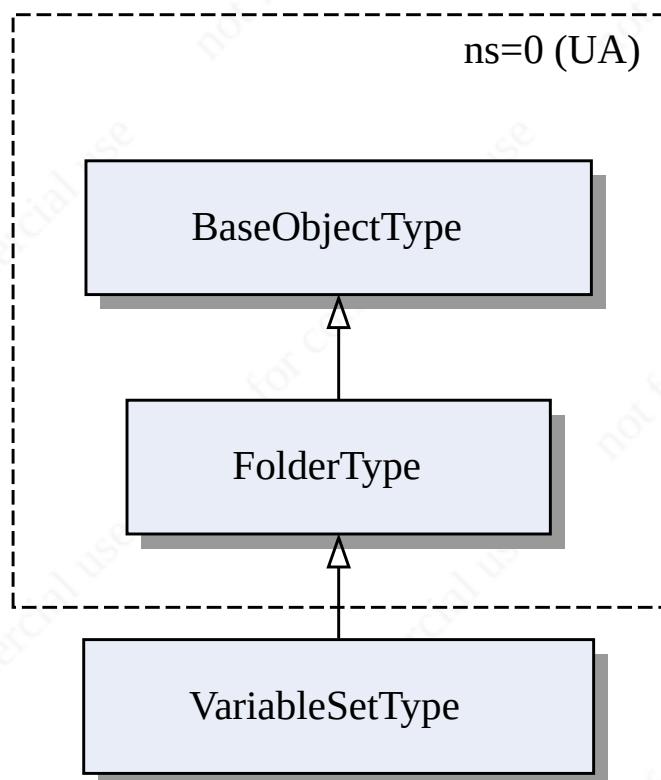
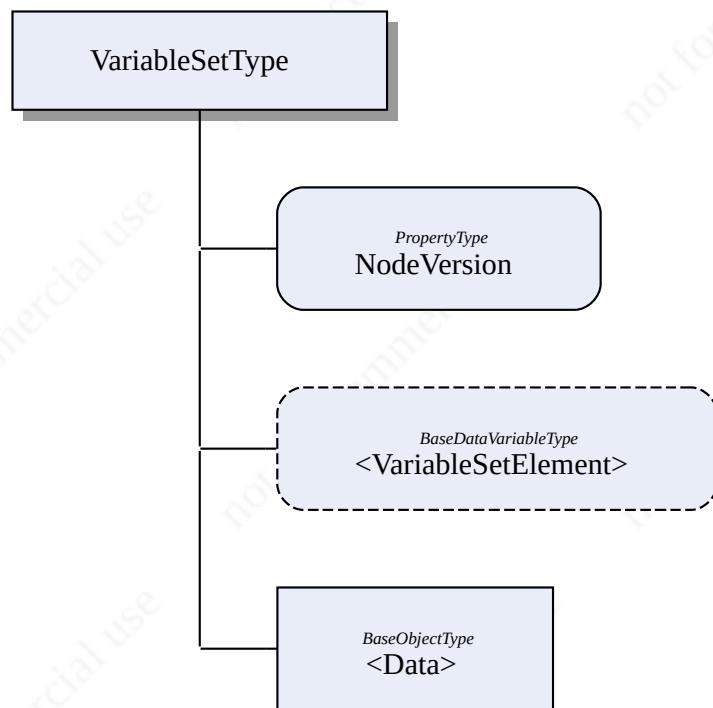


Fig. 18 hierarchy VariableSetType

Fig. 19 `VariableSetType`

Attribute	Value
BrowseName	1:VariableSetType
IsAbstract	No
SubtypeOf	FolderType

Table 36 `VariableSetType`

Reference	NodeClass	BrowseName
HasSubtype	ObjectType	1:SensorValueSetType

Table 37 `VariableSetType` sub types

Reference	NodeClass	BrowseName	ModellingRule	TypeDefinition	DataType
Properties					
HasProperty	Variable	1:NodeVersion	Mandatory	.PropertyType	String
Components					
HasComponent	Variable	1:<VariableSetElement>	OptionalPlaceholder	BaseDataVariableType	
HasComponent	Object	1:<Data>	OptionalPlaceholder	BaseObjectType	

Table 38 `VariableSetType` references

2.9.1 <VariableSetElement> Variable

2.9.2 <Data> Object

2.10 AnalogControlFunctionWithComposedTargetValueType

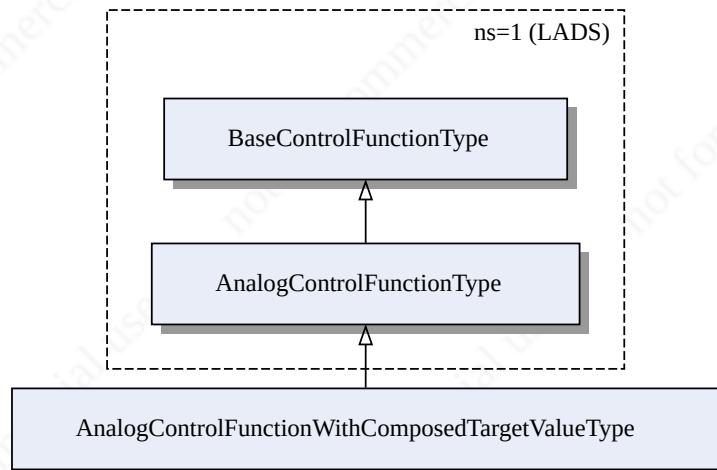


Fig. 20 hierarchy AnalogControlFunctionWithComposedTargetValueType

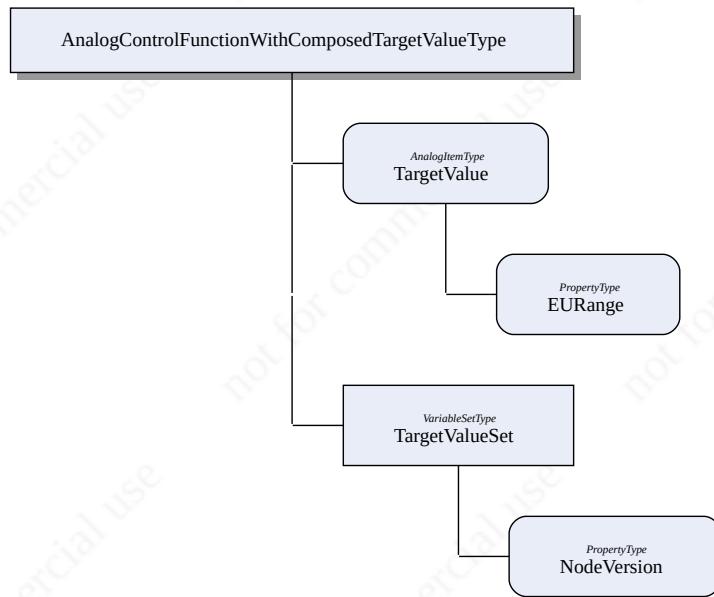


Fig. 21 AnalogControlFunctionWithComposedTargetValueType

Attribute	Value
BrowseName	1:AnalogControlFunctionWithComposedTargetValueType
IsAbstract	No
SubtypeOf	1:AnalogControlFunctionType

Table 39 AnalogControlFunctionWithComposedTargetValueType

Reference	NodeClass	BrowseName	ModellingRule	TypeDefinition	DataType
Components					
HasComponent	Variable	1:TargetValue	Mandatory	AnalogItemType	Double
HasComponent	Object	1:TargetValueSet	Mandatory	1:VariableSetType	

Table 40 AnalogControlFunctionWithComposedTargetValueType references

2.10.1 TargetValue Variable

2.10.2 TargetValueSet Object

2.11 AnalogControlFunctionWithTotalizerType

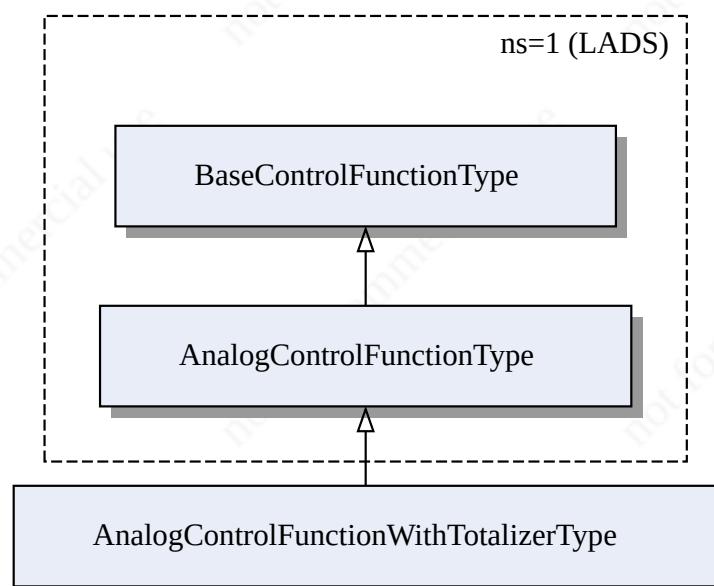


Fig. 22 hierarchy AnalogControlFunctionWithTotalizerType

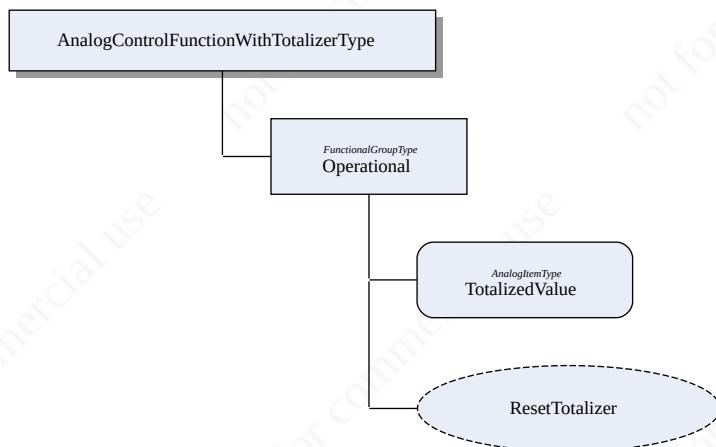


Fig. 23 AnalogControlFunctionWithTotalizerType

Attribute	Value
BrowseName	1:AnalogControlFunctionWithTotalizerType
IsAbstract	No
SubtypeOf	1:AnalogControlFunctionType

Table 41 AnalogControlFunctionWithTotalizerType

Reference	NodeClass	BrowseName	ModellingRule	TypeDefinition	DataType
Components					
HasComponent	Object	1:Operational	Mandatory	2:FunctionalGroupType	

Table 42 AnalogControlFunctionWithTotalizerType references

2.11.1 Operational Object

FolderType is used to organize the Parameters and Methods from the complete set (ParameterSet, MethodSet) with regard to their application

TotalizedValue Variable

Operational: FolderType is used to organize the Parameters and Methods from the complete set (ParameterSet, MethodSet) with regard to their application

ResetTotalizer Method

Signature

```
ResetTotalizer()
```

ResetTotalizer method arguments

Argument	DataType	Description
----------	----------	-------------

Table 43 ResetTotalizer method arguments

ResetTotalizer Method AddressSpace definition

Attribute	Value
BrowseName	ResetTotalizer

References	NodeClass	BrowseName	DataType	TypeDefinition	ModellingRule
------------	-----------	------------	----------	----------------	---------------

Table 44 ResetTotalizer components

2.12 BaseSensorFunctionType

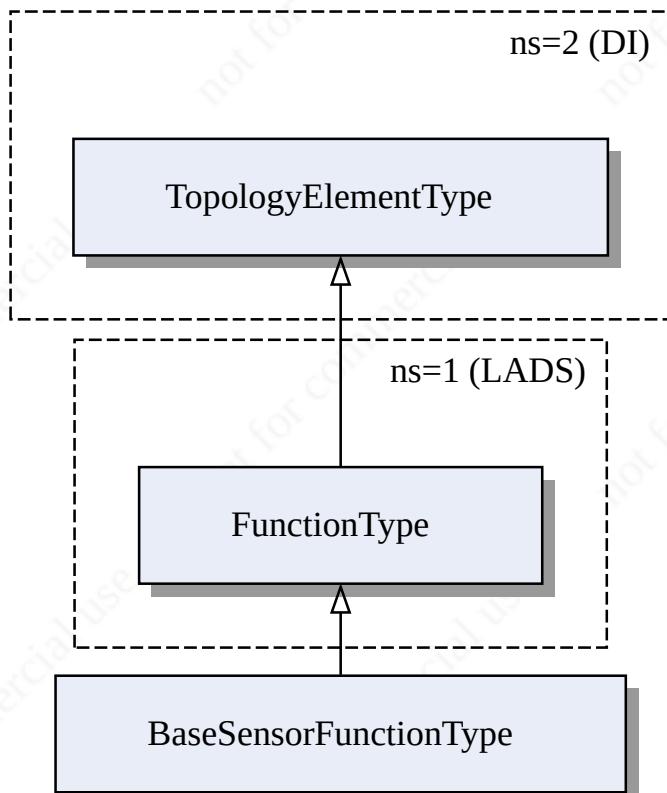


Fig. 24 hierarchy *BaseSensorFunctionType*

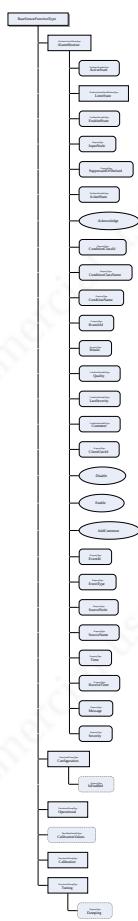


Fig. 25 BaseSensorFunctionType

Attribute	Value
BrowseName	1:BaseSensorFunctionType
IsAbstract	Yes
SubtypeOf	1:FunctionType

Table 45 BaseSensorFunctionType

Reference	NodeClass	BrowseName
HasSubtype	ObjectType	1:AnalogSensorArrayFunctionType
HasSubtype	ObjectType	1:AnalogSensorFunctionType
HasSubtype	ObjectType	1:DiscreteSensorFunctionType
HasSubtype	ObjectType	1:MultiAnalogSensorFunctionType

Table 46 BaseSensorFunctionType sub types

Reference	NodeClass	BrowseName	ModellingRule	TypeDefinition	DataType
Components					
HasComponent	Object	1:AlarmMonitor	Optional	ExclusiveLevelAlarmType	
HasComponent	Object	1:Configuration	Optional	2:FunctionalGroupType	
HasComponent	Object	1:Operational	Mandatory	2:FunctionalGroupType	
HasComponent	Variable	1:CalibrationValues	Optional	BaseDataVariableType	Double
HasComponent	Object	1:Calibration	Mandatory	2:FunctionalGroupType	
HasComponent	Object	1:Tuning	Optional	2:FunctionalGroupType	

Table 47 BaseSensorFunctionType references

2.12.1 AlarmMonitor Object

ActiveState Variable

LimitState Object

CurrentState Variable

EnabledState Variable

AckedState Variable

Acknowledge Method

Signature

```
Acknowledge(
    [in] ByteString EventId
    [in] LocalizedText Comment
)
```

Acknowledge method arguments

Argument	DataType	Description
EventId	ByteString	The identifier for the event to comment.
Comment	LocalizedText	The comment to add to the condition.

Table 48 Acknowledge method arguments

Acknowledge Method AddressSpace definition

Attribute	Value
BrowseName	Acknowledge

References	NodeClass	BrowseName	DataType	TypeDefinition	ModellingRule
HasProperty	Variable	InputArguments	Argument[]	.PropertyType	Mandatory

*Table 49 Acknowledge components***Quality Variable****LastSeverity Variable****Comment Variable****Disable Method****Signature**

Disable()

Disable method arguments

Argument	DataType	Description

*Table 50 Disable method arguments***Disable Method AddressSpace definition**

Attribute	Value
BrowseName	Disable

References	NodeClass	BrowseName	DataType	TypeDefinition	ModellingRule

*Table 51 Disable components***Enable Method****Signature**

Enable()

Enable method arguments

Argument	DataType	Description
----------	----------	-------------

*Table 52 Enable method arguments***Enable Method AddressSpace definition**

Attribute	Value
BrowseName	Enable

References	NodeClass	BrowseName	DataType	TypeDefinition	ModellingRule
------------	-----------	------------	----------	----------------	---------------

*Table 53 Enable components***AddComment Method****Signature**

```
AddComment(
    [in] ByteString EventId
    [in] LocalizedText Comment
)
```

AddComment method arguments

Argument	DataType	Description
EventId	ByteString	The identifier for the event to comment.
Comment	LocalizedText	The comment to add to the condition.

*Table 54 AddComment method arguments***AddComment Method AddressSpace definition**

Attribute	Value
BrowseName	AddComment

References	NodeClass	BrowseName	DataType	TypeDefinition	ModellingRule
HasProperty	Variable	InputArguments	Argument[]	PropertyType	Mandatory

*Table 55 AddComment components***2.12.2 Configuration Object**

FolderType is used to organize the Parameters and Methods from the complete set (ParameterSet, MethodSet) with regard to their application

.IsEnabled Variable

Configuration: FolderType is used to organize the Parameters and Methods from the complete set (ParameterSet, MethodSet) with regard to their application

2.12.3 Operational Object

FolderType is used to organize the Parameters and Methods from the complete set (ParameterSet, MethodSet) with regard to their application

2.12.4 CalibrationValues Variable

2.12.5 Calibration Object

FolderType is used to organize the Parameters and Methods from the complete set (ParameterSet, MethodSet) with regard to their application

2.12.6 Tuning Object

FolderType is used to organize the Parameters and Methods from the complete set (ParameterSet, MethodSet) with regard to their application

Damping Variable

Tuning: FolderType is used to organize the Parameters and Methods from the complete set (ParameterSet, MethodSet) with regard to their application

2.13 AnalogSensorArrayFunctionType

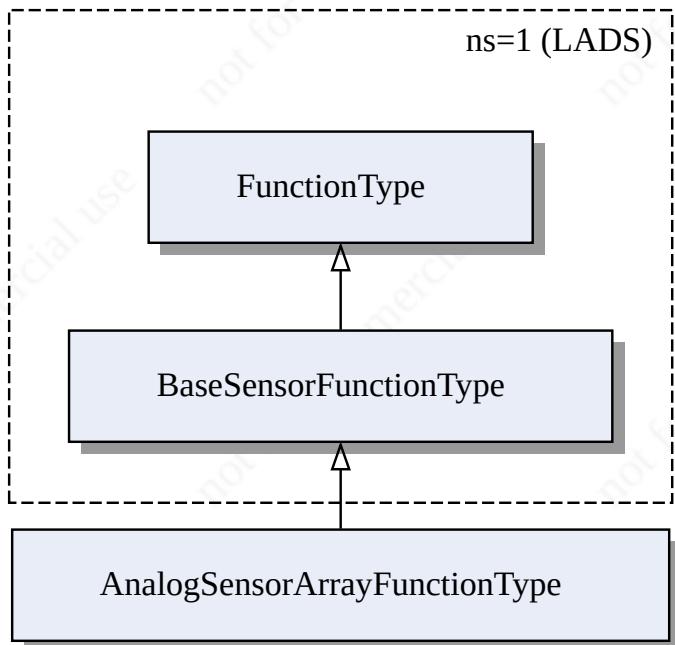


Fig. 26 hierarchy `AnalogSensorArrayFunctionType`

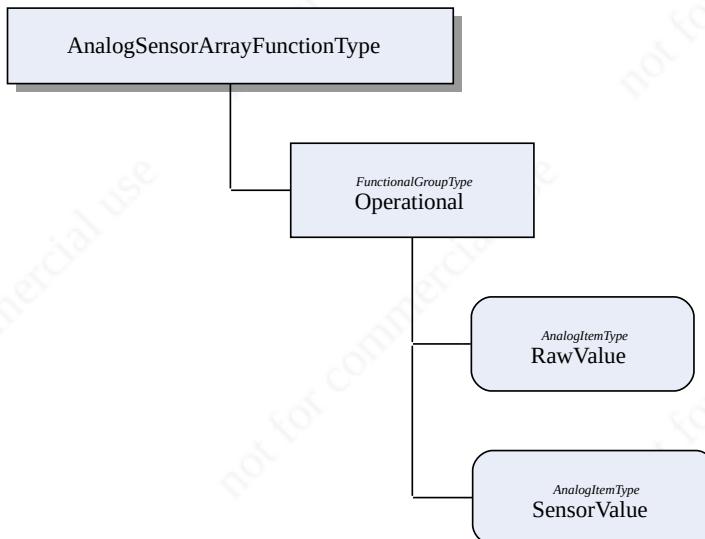


Fig. 27 `AnalogSensorArrayFunctionType`

Attribute	Value
BrowseName	1:AnalogSensorArrayFunctionType
IsAbstract	No
SubtypeOf	1:BaseSensorFunctionType

Table 56 AnalogSensorArrayFunctionType

Reference	NodeClass	BrowseName	ModellingRule	TypeDefinition	DataType
Components					
HasComponent	Object	1:Operational	Mandatory	2:FunctionalGroupType	

Table 57 AnalogSensorArrayFunctionType references

2.13.1 Operational Object

FolderType is used to organize the Parameters and Methods from the complete set (ParameterSet, MethodSet) with regard to their application

RawValue Variable

Operational: FolderType is used to organize the Parameters and Methods from the complete set (ParameterSet, MethodSet) with regard to their application

SensorValue Variable

Operational: FolderType is used to organize the Parameters and Methods from the complete set (ParameterSet, MethodSet) with regard to their application

2.14 AnalogSensorFunctionType

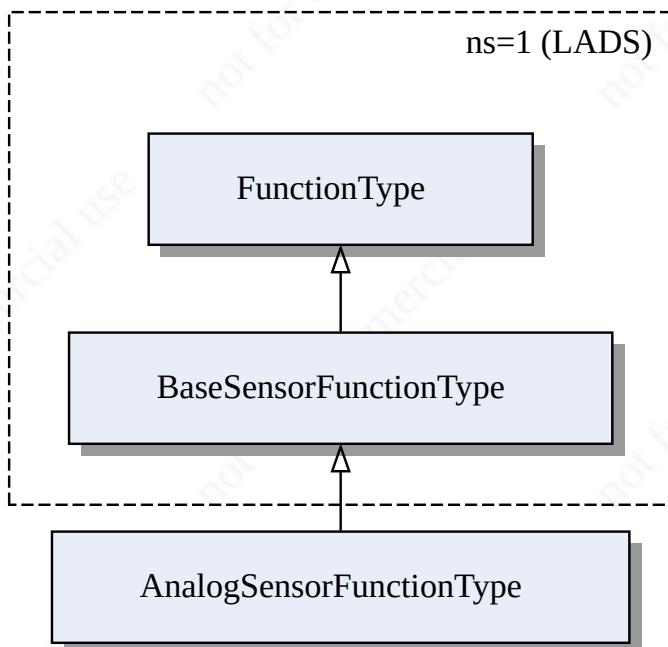


Fig. 28 hierarchy AnalogSensorFunctionType

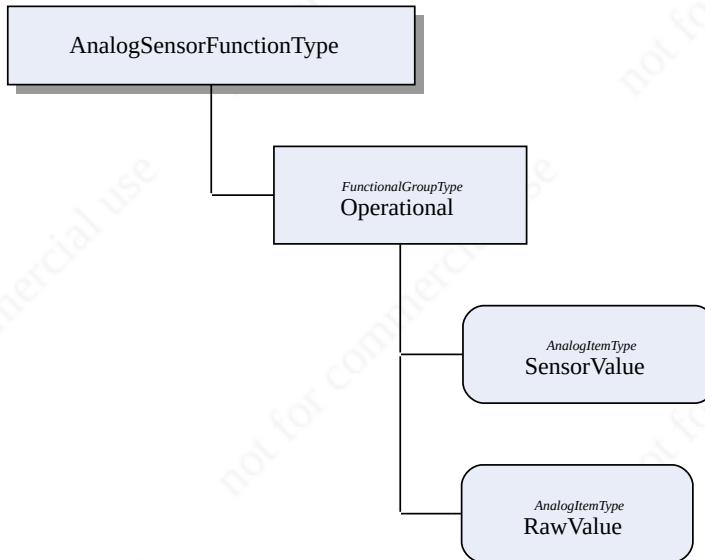


Fig. 29 AnalogSensorFunctionType

Attribute	Value
BrowseName	1:AnalogSensorFunctionType
IsAbstract	No
SubtypeOf	1:BaseSensorFunctionType

Table 58 AnalogSensorFunctionType

Reference	NodeClass	BrowseName
HasSubtype	ObjectType	1:AnalogSensorFunctionWithCompensationType

Table 59 AnalogSensorFunctionType sub types

Reference	NodeClass	BrowseName	ModellingRule	TypeDefinition	DataType
Components					
HasComponent	Object	1:Operational	Mandatory	2:FunctionalGroupType	

Table 60 AnalogSensorFunctionType references

2.14.1 Operational Object

FolderType is used to organize the Parameters and Methods from the complete set (ParameterSet, MethodSet) with regard to their application

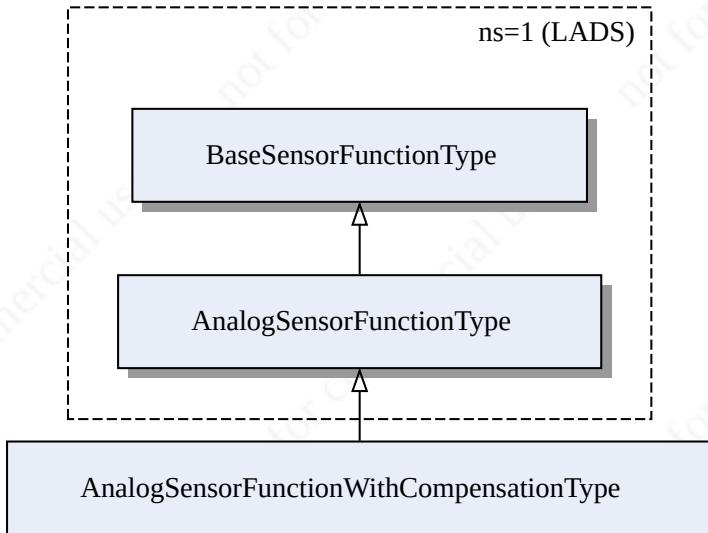
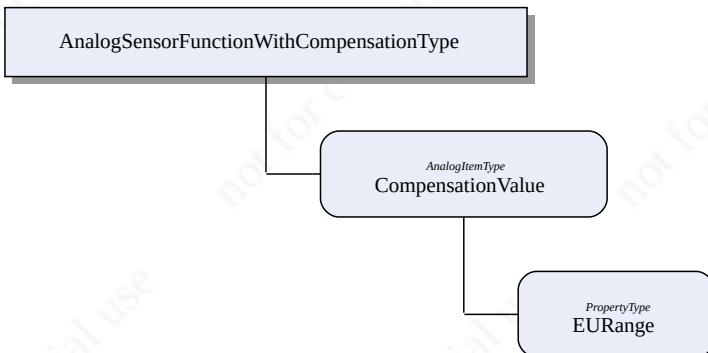
SensorValue Variable

Operational: FolderType is used to organize the Parameters and Methods from the complete set (ParameterSet, MethodSet) with regard to their application

RawValue Variable

Operational: FolderType is used to organize the Parameters and Methods from the complete set (ParameterSet, MethodSet) with regard to their application

2.15 AnalogSensorFunctionWithCompensationType

*Fig. 30 hierarchy `AnalogSensorFunctionWithCompensationType`**Fig. 31 `AnalogSensorFunctionWithCompensationType`*

Attribute	Value
<code>BrowseName</code>	<code>1:AnalogSensorFunctionWithCompensationType</code>
<code>IsAbstract</code>	No
<code>SubtypeOf</code>	<code>1:AnalogSensorFunctionType</code>

Table 61 `AnalogSensorFunctionWithCompensationType`

Reference	NodeClass	BrowseName	ModellingRule	TypeDefinition	DataType
Components					
<code>HasComponent</code>	Variable	<code>1:CompensationValue</code>	Mandatory	AnalogItemType	Double

Table 62 `AnalogSensorFunctionWithCompensationType` references

2.15.1 CompensationValue Variable

2.16 LADSOperationCountersType

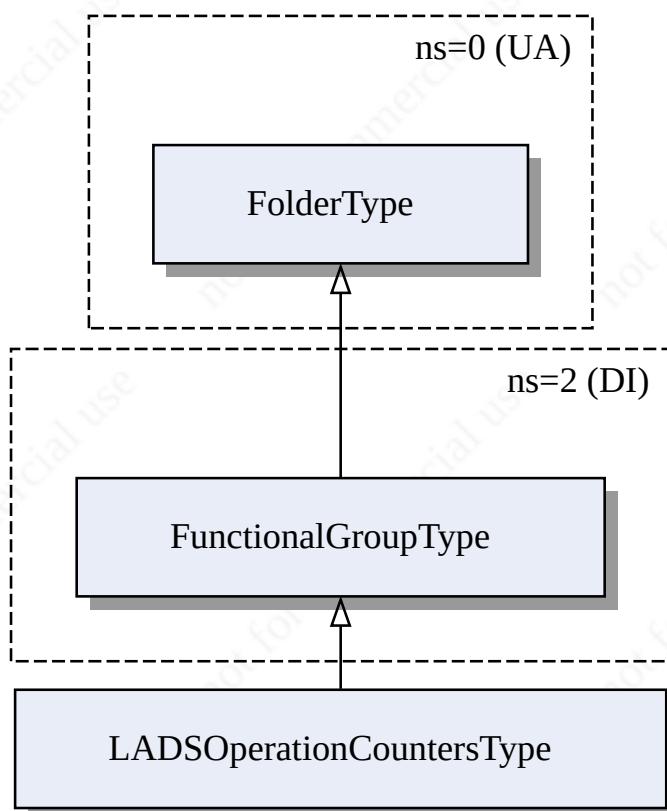


Fig. 32 hierarchy `LADSOperationCountersType`

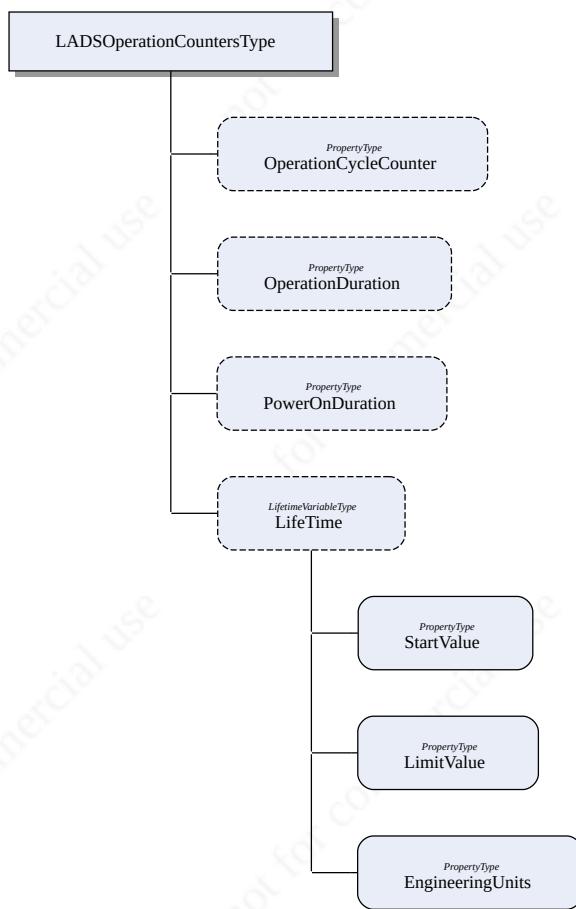


Fig. 33 LADSOperationCountersType

Attribute	Value
BrowseName	1:LADSOperationCountersType
IsAbstract	No
SubtypeOf	2:FunctionalGroupType

Table 63 LADSOperationCountersType

Reference	NodeClass	BrowseName	ModellingRule	TypeDefinition	DataType
Properties					
HasProperty	Variable	2:OperationCycleCounter	Optional	.PropertyType	UInteger(Variant)
HasProperty	Variable	2:OperationDuration	Optional	.PropertyType	Duration(Double)
HasProperty	Variable	2:PowerOnDuration	Optional	.PropertyType	Duration(Double)
Components					
HasComponent	Variable	1:LifeTime	Optional	2:LifetimeVariableType	Number(Variant)

Table 64 LADSOperationCountersType references

2.16.1 LifeTime Variable

Remaining lifetime

LifetimeVariableType: Remaining lifetime

StartValue: StartValue indicates the initial value, when there is still the full lifetime left.

LimitValue: LimitValue indicates when the end of lifetime has been reached.

2.17 LADSMaintenanceSetType

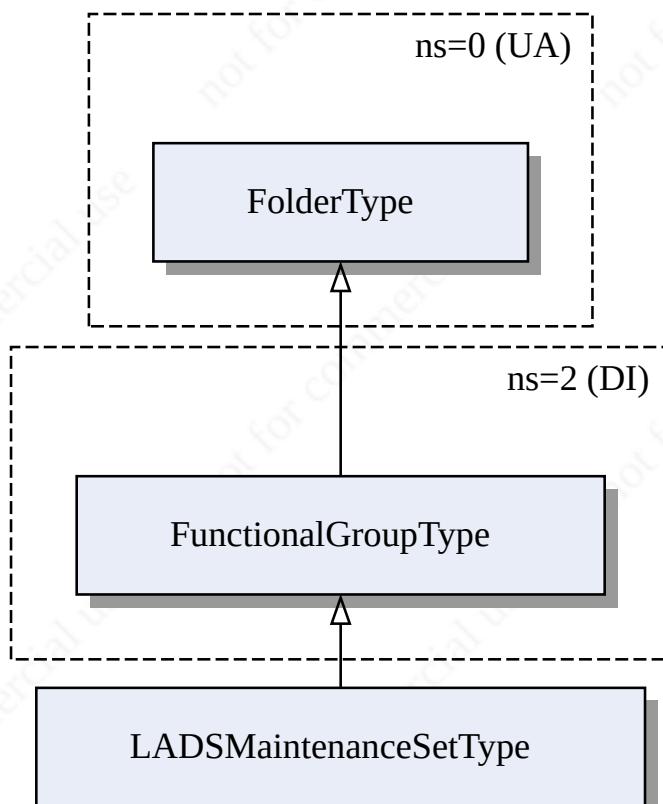


Fig. 34 hierarchy LADSMaintenanceSetType

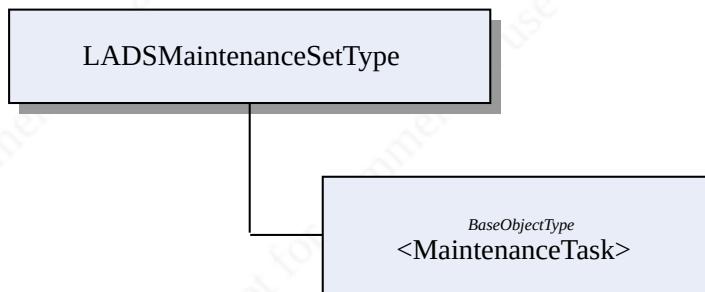


Fig. 35 LADSMaintenanceSetType

Attribute	Value
BrowseName	1:LADSMaintenanceSetType
IsAbstract	No
SubtypeOf	2:FunctionalGroupType

Table 65 LADSMaintenanceSetType

Reference	NodeClass	BrowseName	ModellingRule	TypeDefinition	DataType
Components					
HasComponent	Object	1:<MaintenanceTask>	Optional	BaseObjectType	

Table 66 LADSMaintenanceSetType references

2.17.1 <MaintenanceTask> Object

2.18 LADSComponentType

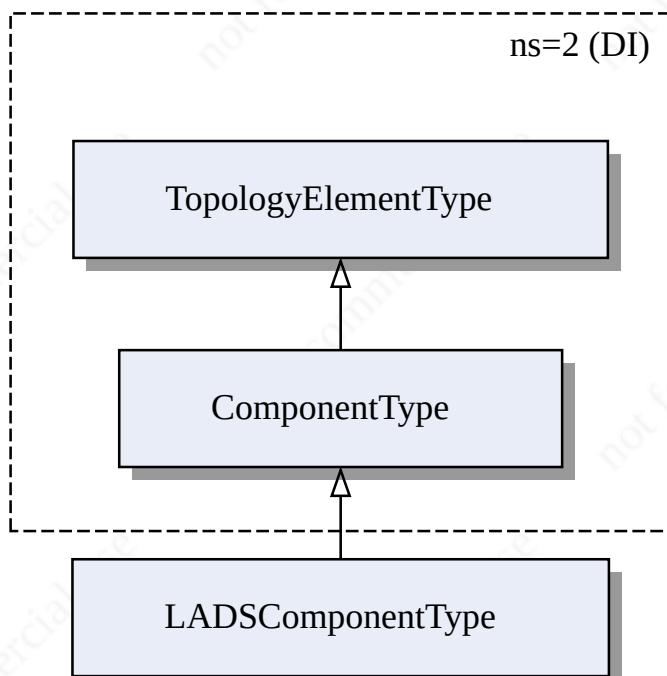
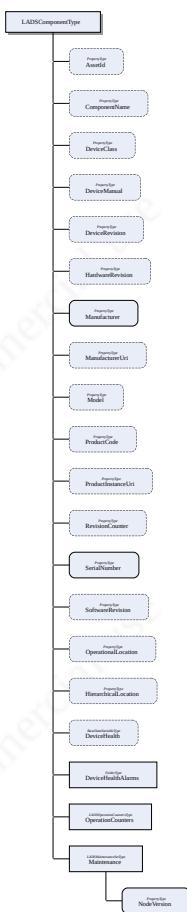


Fig. 36 hierarchy LADSComponentType

Fig. 37 `LADSComponentType`

Attribute	Value
<code>BrowseName</code>	1: <code>LADSComponentType</code>
<code>IsAbstract</code>	No
<code>SubtypeOf</code>	2: <code>ComponentType</code>

Table 67 `LADSComponentType`

Reference	NodeClass	BrowseName	ModellingRule	TypeDefinition	DataType
Properties					
HasProperty	Variable	2:AssetId	Optional	.PropertyType	String
HasProperty	Variable	2:ComponentName	Optional	.PropertyType	LocalizedText
HasProperty	Variable	2:DeviceClass	Optional	.PropertyType	String
HasProperty	Variable	2:DeviceManual	Optional	.PropertyType	String
HasProperty	Variable	2:DeviceRevision	Optional	.PropertyType	String
HasProperty	Variable	2:HardwareRevision	Optional	.PropertyType	String
HasProperty	Variable	2:Manufacturer	Mandatory	.PropertyType	LocalizedText
HasProperty	Variable	2:ManufacturerUri	Optional	.PropertyType	String
HasProperty	Variable	2:Model	Optional	.PropertyType	LocalizedText
HasProperty	Variable	2:ProductCode	Optional	.PropertyType	String
HasProperty	Variable	2:ProductInstanceUri	Optional	.PropertyType	String
HasProperty	Variable	2:RevisionCounter	Optional	.PropertyType	Int32
HasProperty	Variable	2:SerialNumber	Mandatory	.PropertyType	String
HasProperty	Variable	2:SoftwareRevision	Optional	.PropertyType	String
HasProperty	Variable	4:OperationalLocation	Optional	.PropertyType	String
HasProperty	Variable	4:HierarchicalLocation	Optional	.PropertyType	String
Components					
HasComponent	Variable	2:DeviceHealth	Optional	BaseDataVariableType	2:DeviceHealthE
HasComponent	Object	2:DeviceHealthAlarms	Optional	FolderType	
HasComponent	Object	1:OperationCounters	Optional	1:LADSOperationCountersType	
HasComponent	Object	1:Maintenance	Optional	1:LADSMaintenanceSetType	

Table 68 LADSComponentType references

2.18.1 DeviceHealth Variable

2.18.2 DeviceHealthAlarms Object

2.18.3 OperationCounters Object

2.18.4 Maintenance Object

2.19 ComponentSetType

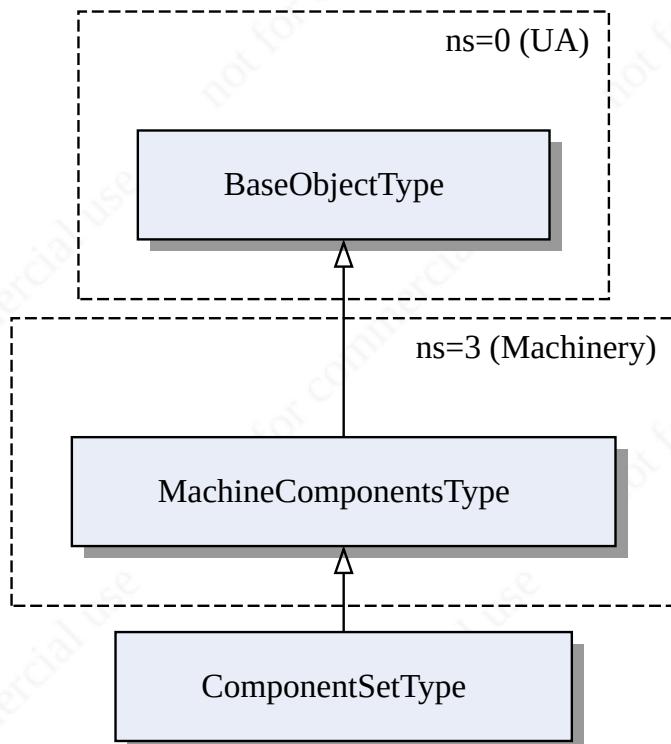


Fig. 38 hierarchy ComponentSetType

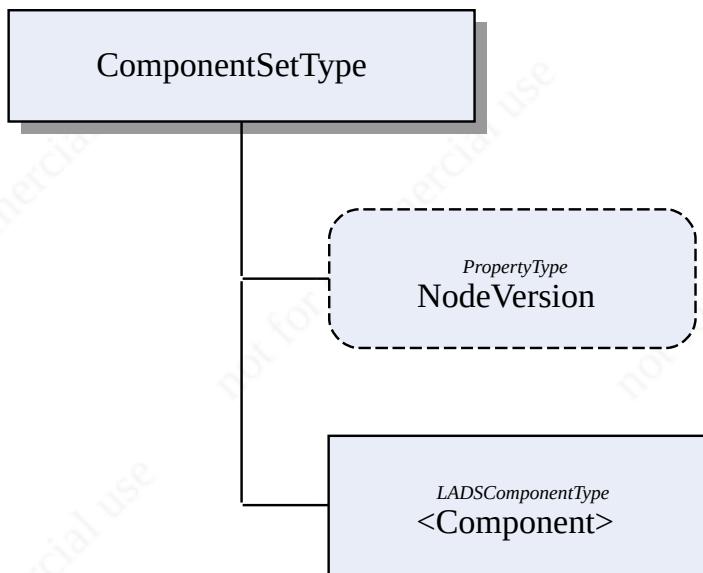


Fig. 39 ComponentSetType

Attribute	Value
BrowseName	1:ComponentSetType
IsAbstract	No
SubtypeOf	3:MachineComponentsType

Table 69 ComponentSetType

Reference	NodeClass	BrowseName	ModellingRule	TypeDefinition	DataType
Properties					
HasProperty	Variable	NodeVersion	Optional	.PropertyType	String
Components					
HasComponent	Object	3: <Component>	OptionalPlaceholder	1:LADSComponentType	

Table 70 ComponentSetType references

2.19.1 <Component> Object

2.20 ControllerParameterType

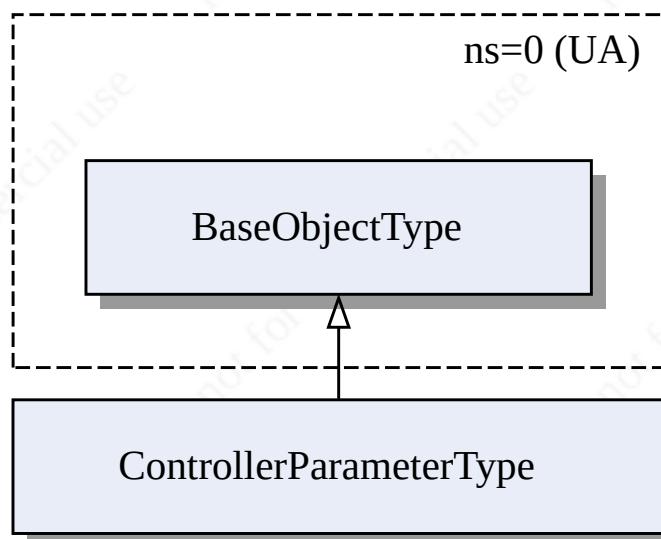


Fig. 40 hierarchy ControllerParameterType

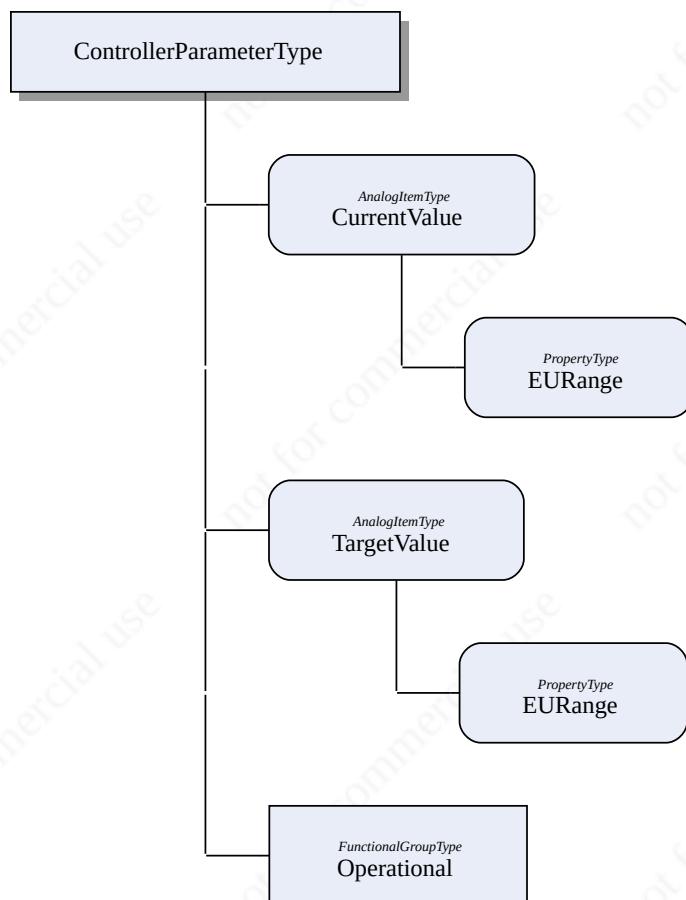


Fig. 41 ControllerParameterType

Attribute	Value
BrowseName	1:ControllerParameterType
IsAbstract	No
SubtypeOf	BaseObjectType

Table 71 ControllerParameterType

Reference	NodeClass	BrowseName	ModellingRule	TypeDefinition	DataType
Components					
HasComponent	Variable	1:CurrentValue	Mandatory	AnalogItemType	Double
HasComponent	Variable	1:TargetValue	Mandatory	AnalogItemType	Double
HasComponent	Object	1:Operational	Optional	2:FunctionalGroupType	

Table 72 ControllerParameterType references

2.20.1 CurrentValue Variable

2.20.2 TargetValue Variable

2.20.3 Operational Object

FolderType is used to organize the Parameters and Methods from the complete set (ParameterSet, MethodSet) with regard to their application

2.21 ControllerParameterSetType

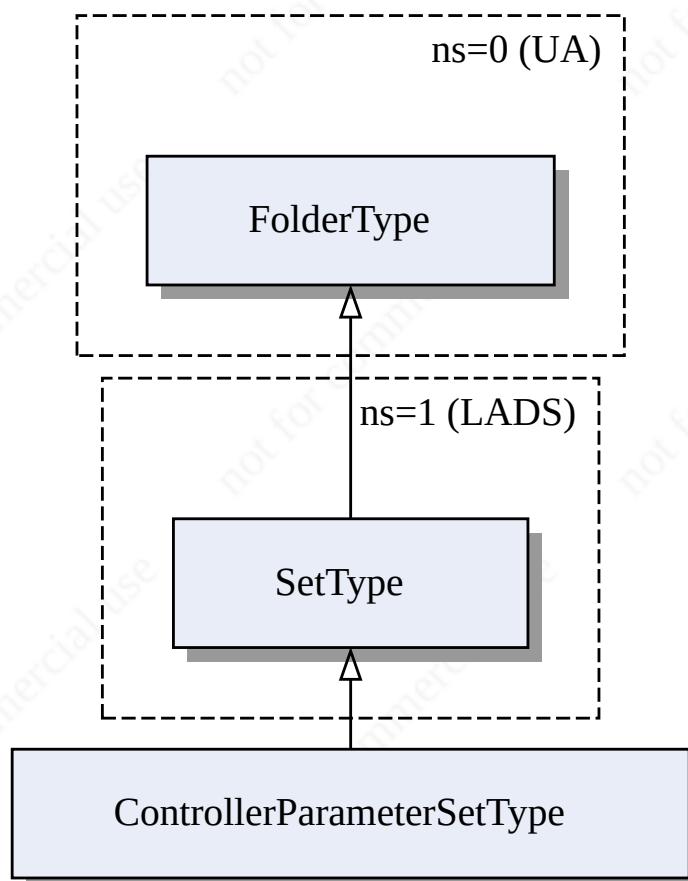


Fig. 42 hierarchy ControllerParameterSetType

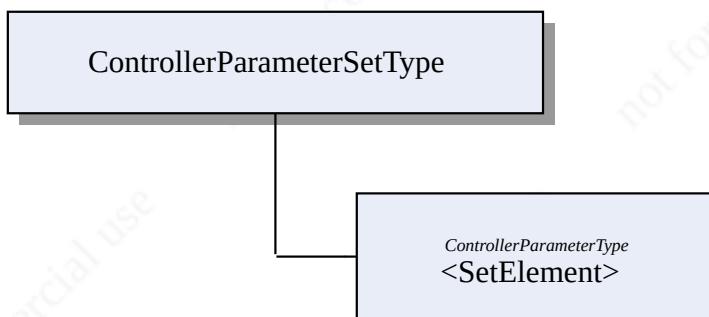


Fig. 43 ControllerParameterSetType

Attribute	Value
BrowseName	1:ControllerParameterSetType
IsAbstract	No
SubtypeOf	1:SetType

Table 73 ControllerParameterSetType

Reference	NodeClass	BrowseName	ModellingRule	TypeDefinition	DataType
Components					
HasComponent	Object	1: <SetElement>	MandatoryPlaceholder	1:ControllerParameterType	

Table 74 ControllerParameterSetType references

2.21.1 <SetElement> Object

2.22 CoverFunctionType

Controls a cover e.g., lid or door.

Controls a cover e.g., lid or door.

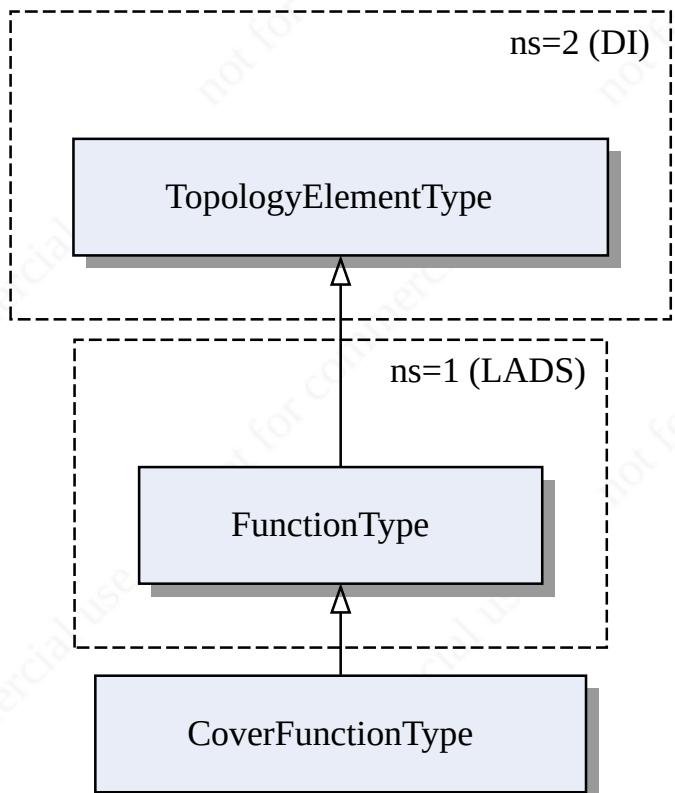


Fig. 44 hierarchy *CoverFunctionType*

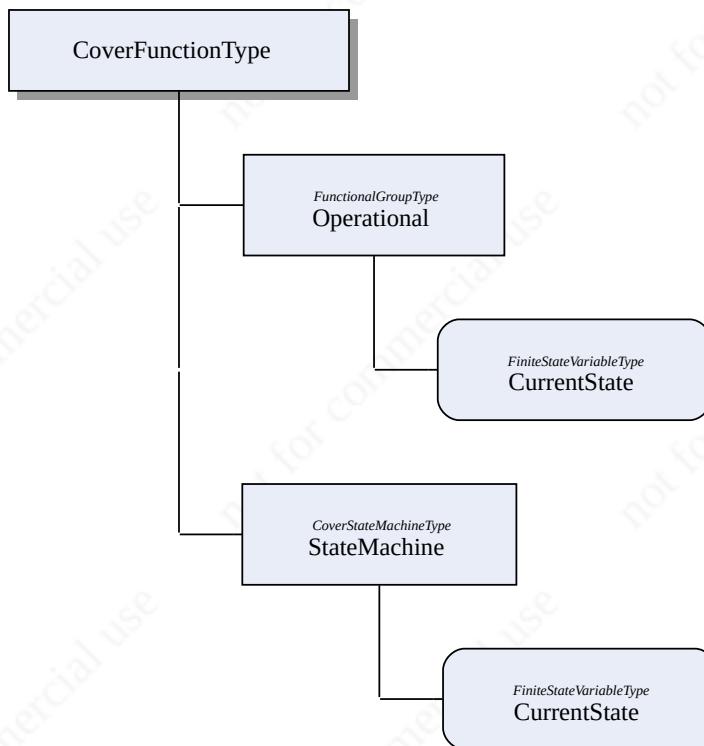


Fig. 45 CoverFunctionType

Attribute	Value
BrowseName	1:CoverFunctionType
IsAbstract	No
SubtypeOf	1:FunctionType

Table 75 CoverFunctionType

Reference	NodeClass	BrowseName	ModellingRule	TypeDefinition	DataType
Components					
HasComponent	Object	1:Operational	Mandatory	2:FunctionalGroupType	
HasComponent	Object	1:StateMachine	Mandatory	1:CoverStateMachineType	

Table 76 CoverFunctionType references

2.22.1 Operational Object

FolderType is used to organize the Parameters and Methods from the complete set (ParameterSet, MethodSet) with regard to their application

CurrentState Variable

Operational: FolderType is used to organize the Parameters and Methods from the complete set (ParameterSet, MethodSet) with regard to their application

2.22.2 StateMachine Object

CurrentState Variable

2.23 DiscreteControlFunctionType

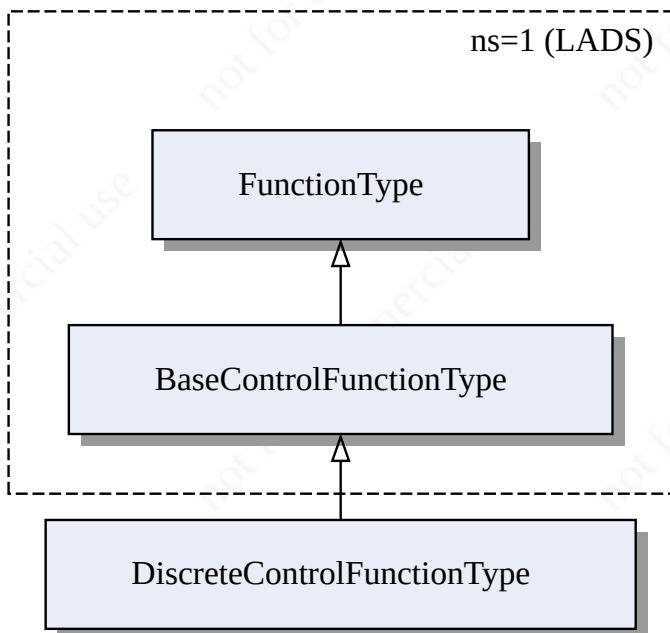


Fig. 46 hierarchy `DiscreteControlFunctionType`

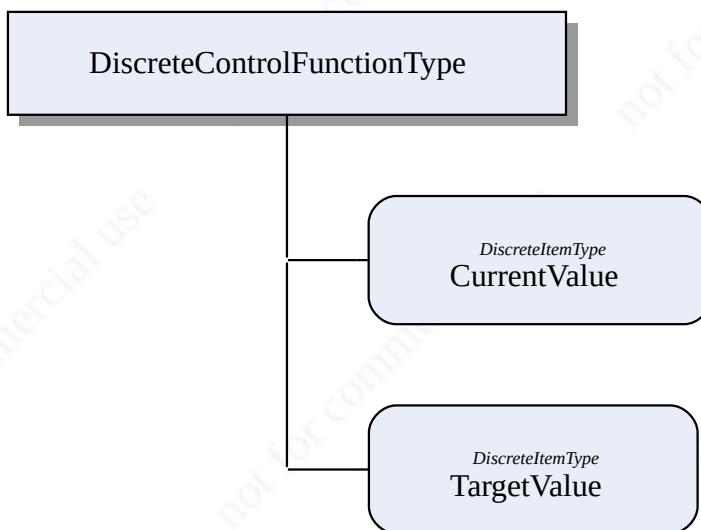


Fig. 47 DiscreteControlFunctionType

Attribute	Value
BrowseName	1:DiscreteControlFunctionType
IsAbstract	Yes
SubtypeOf	1:BaseControlFunctionType

Table 77 DiscreteControlFunctionType

Reference	NodeClass	BrowseName
HasSubtype	ObjectType	1:MultiStateDiscreteControlFunctionType
HasSubtype	ObjectType	1:TwoStateDiscreteControlFunctionType

Table 78 DiscreteControlFunctionType sub types

Reference	NodeClass	BrowseName	ModellingRule	TypeDefinition	DataType
Components					
HasComponent	Variable	1:CurrentValue	Mandatory	DiscreteItemType	
HasComponent	Variable	1:TargetValue	Mandatory	DiscreteItemType	

Table 79 DiscreteControlFunctionType references

2.23.1 CurrentValue Variable

2.23.2 TargetValue Variable

2.24 DiscreteSensorFunctionType

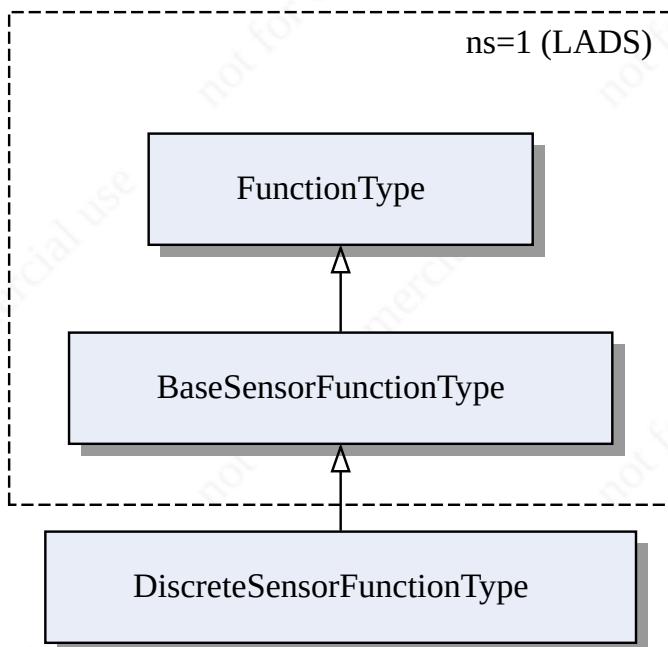


Fig. 48 hierarchy DiscreteSensorFunctionType

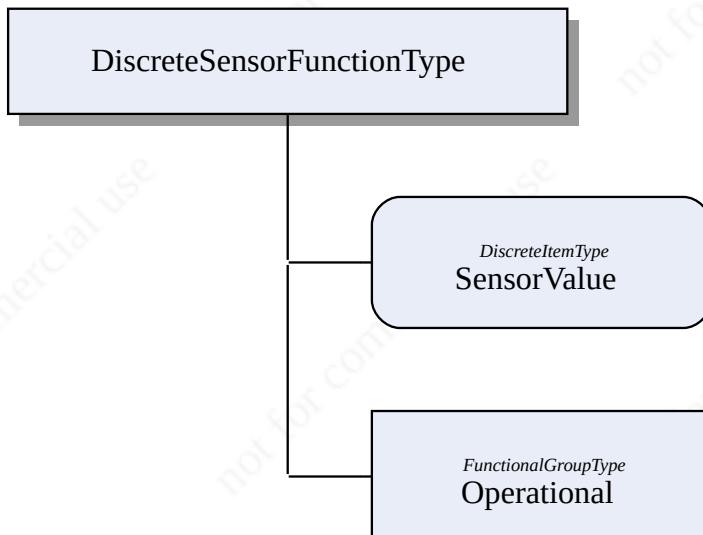


Fig. 49 DiscreteSensorFunctionType

Attribute	Value
BrowseName	1:DiscreteSensorFunctionType
IsAbstract	Yes
SubtypeOf	1:BaseSensorFunctionType

Table 80 DiscreteSensorFunctionType

Reference	NodeClass	BrowseName
HasSubtype	ObjectType	1:MutliStateDiscreteSensorFunctionType
HasSubtype	ObjectType	1:TwoStateDiscreteSensorFunctionType

Table 81 DiscreteSensorFunctionType sub types

Reference	NodeClass	BrowseName	ModellingRule	TypeDefinition	DataType
Components					
HasComponent	Variable	1:SensorValue	Mandatory	DiscreteItemType	
HasComponent	Object	1:Operational	Mandatory	2:FunctionalGroupType	

Table 82 DiscreteSensorFunctionType references

2.24.1 SensorValue Variable

2.24.2 Operational Object

FolderType is used to organize the Parameters and Methods from the complete set (ParameterSet, MethodSet) with regard to their application

2.25 ProgramTemplateSetType

Set of program templates.

Set of program templates.

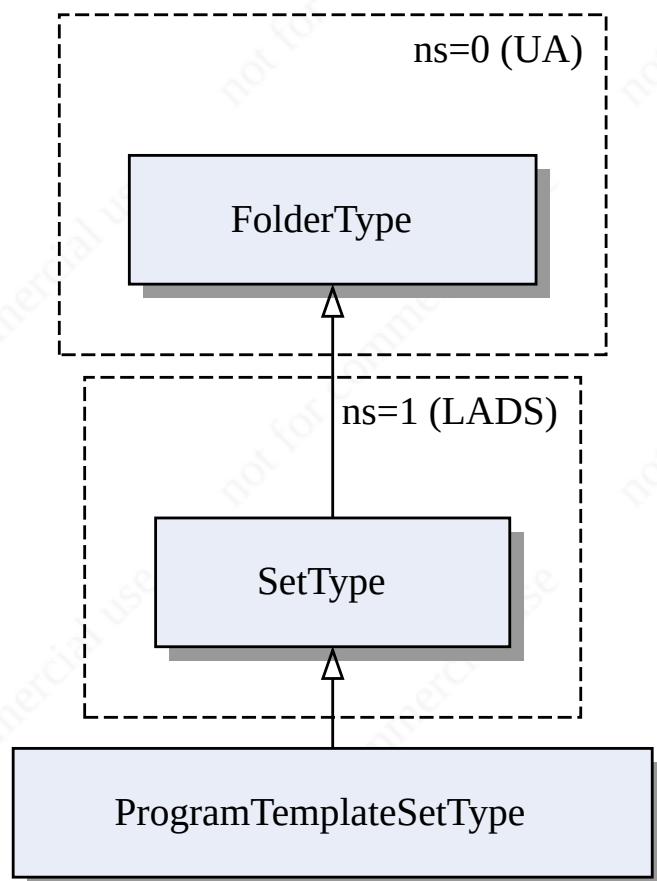


Fig. 50 hierarchy ProgramTemplateSetType

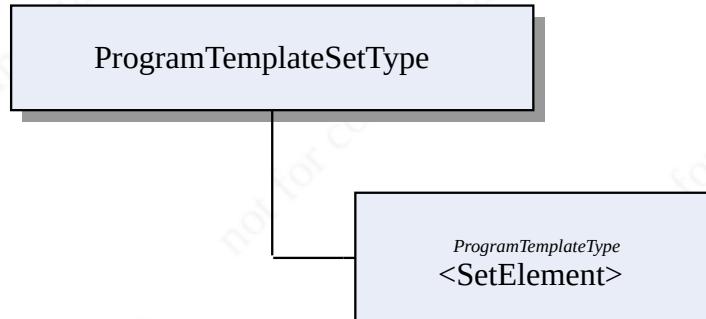


Fig. 51 ProgramTemplateSetType

Attribute	Value
BrowseName	1:ProgramTemplateSetType
IsAbstract	No
SubtypeOf	1:SetType

Table 83 ProgramTemplateSetType

Reference	NodeClass	BrowseName	ModellingRule	TypeDefinition	DataType
Components					
HasComponent	Object	1: <SetElement>	MandatoryPlaceholder	1:ProgramTemplateType	

Table 84 ProgramTemplateSetType references

2.25.1 <SetElement> Object

2.26 ResultFileType

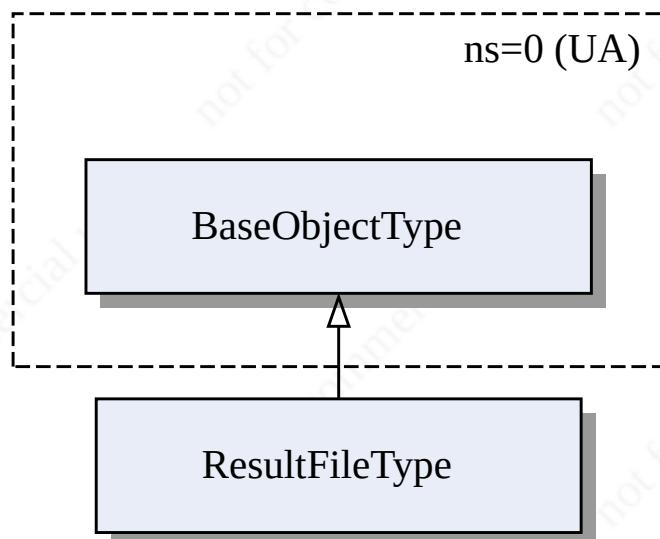


Fig. 52 hierarchy ResultFileType

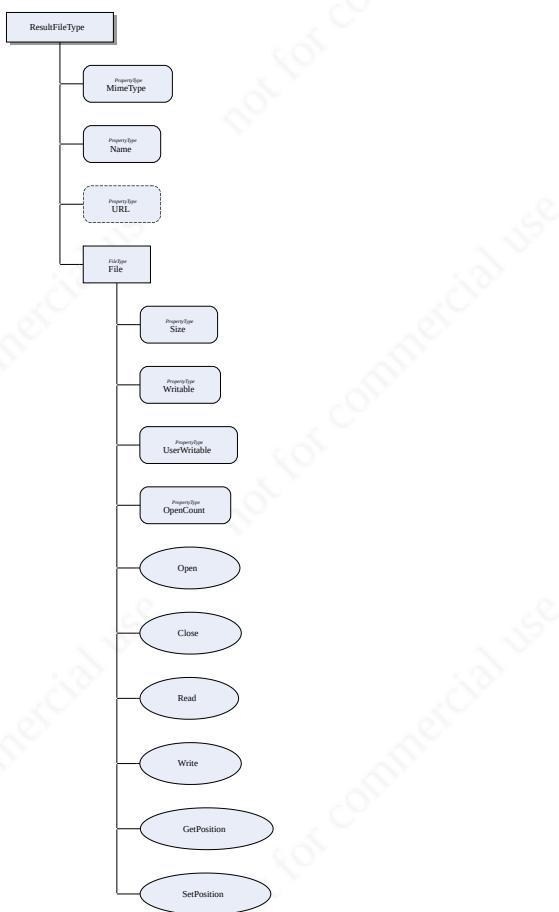


Fig. 53 ResultFileType

Attribute	Value
BrowseName	1:ResultFileType
IsAbstract	No
SubtypeOf	BaseObjectType

Table 85 ResultFileType

Reference	NodeClass	BrowseName	ModellingRule	TypeDefinition	DataType
Properties					
HasProperty	Variable	1:MimeType	Mandatory	.PropertyType	String
HasProperty	Variable	1:Name	Mandatory	.PropertyType	String
HasProperty	Variable	1:URL	Optional	.PropertyType	String
Components					
HasComponent	Object	1:File	Optional	FileType	

Table 86 ResultFileType references

2.26.1 File Object

Open Method

Signature

```
Open(
    [in] Byte Mode
    [out] UInt32 FileHandle
)
```

Open method arguments

Argument	DataType	Description
Mode	Byte	
FileHandle	UInt32	

Table 87 Open method arguments

Open Method AddressSpace definition

Attribute	Value
BrowseName	Open

References	NodeClass	BrowseName	DataType	TypeDefinition	ModellingRule
HasProperty	Variable	InputArguments	Argument[]	.PropertyType	Mandatory
HasProperty	Variable	OutputArguments	Argument[]	.PropertyType	Mandatory

Table 88 Open components

Close Method

Signature

```
Close(
    [in] UInt32 FileHandle
)
```

Close method arguments

Argument	DataType	Description
FileHandle	UInt32	

*Table 89 Close method arguments***Close Method AddressSpace definition**

Attribute	Value
BrowseName	Close

References	NodeClass	BrowseName	DataType	TypeDefinition	ModellingRule
HasProperty	Variable	InputArguments	Argument[]	.PropertyType	Mandatory

*Table 90 Close components***Read Method****Signature**

```
Read(
    [in] UInt32 FileHandle
    [in] Int32 Length
    [out] ByteString Data
)
```

Read method arguments

Argument	DataType	Description
FileHandle	UInt32	
Length	Int32	
Data	ByteString	

*Table 91 Read method arguments***Read Method AddressSpace definition**

Attribute	Value
BrowseName	Read

References	NodeClass	BrowseName	DataType	TypeDefinition	ModellingRule
HasProperty	Variable	InputArguments	Argument[]	.PropertyType	Mandatory
HasProperty	Variable	OutputArguments	Argument[]	.PropertyType	Mandatory

Table 92 Read components

Write Method

Signature

```
Write(
    [in] UInt32 FileHandle
    [in] ByteString Data
)
```

Write method arguments

Argument	DataType	Description
FileHandle	UInt32	
Data	ByteString	

Table 93 Write method arguments

Write Method AddressSpace definition

Attribute	Value
BrowseName	Write

References	NodeClass	BrowseName	DataType	TypeDefinition	ModellingRule
HasProperty	Variable	InputArguments	Argument[]	.PropertyType	Mandatory

Table 94 Write components

GetPosition Method

Signature

```
GetPosition(
    [in] UInt32 FileHandle
    [out] UInt64 Position
)
```

GetPosition method arguments

Argument	DataType	Description
FileHandle	UInt32	
Position	UInt64	

*Table 95 GetPosition method arguments***GetPosition Method AddressSpace definition**

Attribute	Value
BrowseName	GetPosition

References	NodeClass	BrowseName	DataType	TypeDefinition	ModellingRule
HasProperty	Variable	InputArguments	Argument[]	.PropertyType	Mandatory
HasProperty	Variable	OutputArguments	Argument[]	.PropertyType	Mandatory

*Table 96 GetPosition components***SetPosition Method****Signature**

```
SetPosition(
    [in] UInt32 FileHandle
    [in] UInt64 Position
)
```

SetPosition method arguments

Argument	DataType	Description
FileHandle	UInt32	
Position	UInt64	

Table 97 SetPosition method arguments

SetPosition Method AddressSpace definition

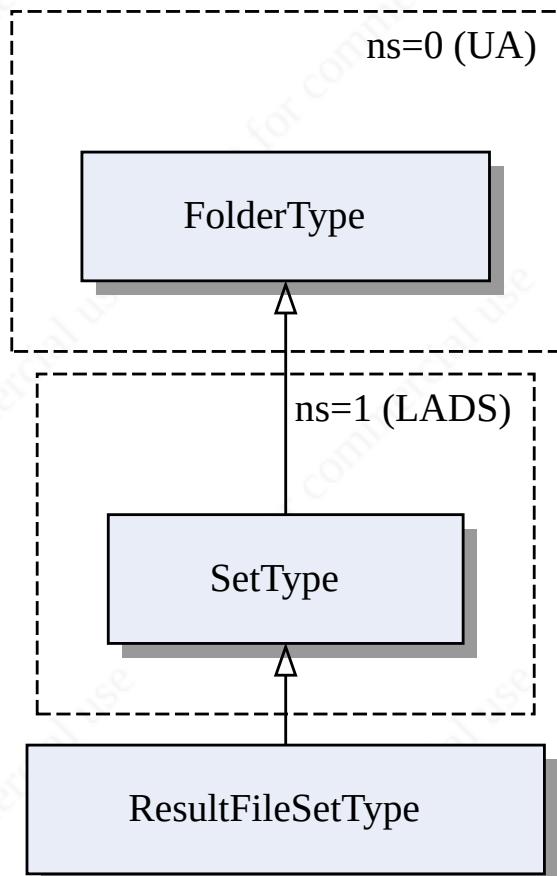
Attribute	Value
BrowseName	SetPosition

References	NodeClass	BrowseName	DataType	TypeDefinition	ModellingRule
HasProperty	Variable	InputArguments	Argument[]	.PropertyType	Mandatory

*Table 98 SetPosition components***2.27 ResultFileType**

Set of files.

Set of files.

*Fig. 54 hierarchy ResultFileType*

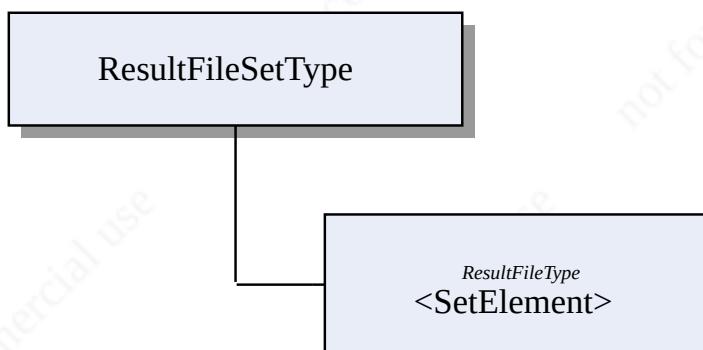


Fig. 55 ResultFileSetType

Attribute	Value
BrowseName	1:ResultFileSetType
IsAbstract	No
SubtypeOf	1:SetType

Table 99 ResultFileSetType

Reference	NodeClass	BrowseName	ModellingRule	TypeDefinition	DataType
Components					
HasComponent	Object	1: <SetElement>	MandatoryPlaceholder	1:ResultFileType	

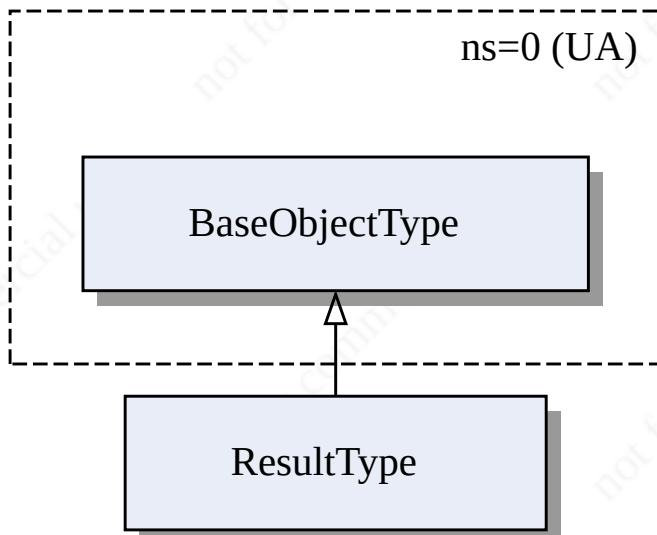
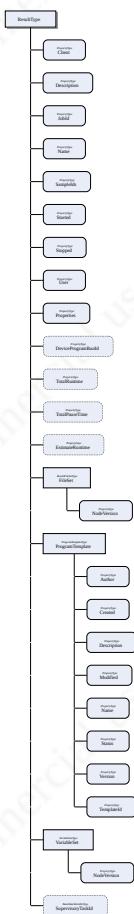
Table 100 ResultFileSetType references

2.27.1 <SetElement> Object

2.28 ResultType

Results of a specific program run.

Results of a specific program run.

*Fig. 56 hierarchy ResultType**Fig. 57 ResultType*

Attribute	Value
BrowseName	1:ResultType
IsAbstract	No
SubtypeOf	BaseObjectType

Table 101 ResultType

Reference	NodeClass	BrowseName	ModellingRule	TypeDefinition	DataType
Properties					
HasProperty	Variable	1:Client	Mandatory	.PropertyType	String
HasProperty	Variable	1:Description	Mandatory	.PropertyType	LocalizedText
HasProperty	Variable	1:JobId	Mandatory	.PropertyType	String
HasProperty	Variable	1:Name	Mandatory	.PropertyType	String
HasProperty	Variable	1:SampleIds	Mandatory	.PropertyType	String
HasProperty	Variable	1:Started	Mandatory	.PropertyType	DateTime
HasProperty	Variable	1:Stopped	Mandatory	.PropertyType	DateTime
HasProperty	Variable	1:User	Mandatory	.PropertyType	String
HasProperty	Variable	1:Properties	Mandatory	.PropertyType	1:KeyValue.Type(Extensible)
HasProperty	Variable	1:DeviceProgramRunId	Optional	.PropertyType	String
HasProperty	Variable	1:TotalRuntime	Optional	.PropertyType	Duration(Double)
HasProperty	Variable	1:TotalPauseTime	Optional	.PropertyType	Duration(Double)
HasProperty	Variable	1:EstimateRuntime	Optional	.PropertyType	Duration(Double)
Components					
HasComponent	Object	1:FileSet	Mandatory	1:ResultFileSetType	
HasComponent	Object	1:ProgramTemplate	Mandatory	1:ProgramTemplateType	
HasComponent	Object	1:VariableSet	Mandatory	1:VariableSetType	
HasComponent	Variable	1:SupervisoryTaskId	Optional	BaseDataVariableType	String

Table 102 ResultType references

2.28.1 FileSet Object

Set of files.

2.28.2 ProgramTemplate Object

Program template

2.28.3 VariableSet Object

2.28.4 SupervisoryTaskId Variable

ResultType: Results of a specific program run.

2.29 ResultSetType

Results of program runs.

Results of program runs.

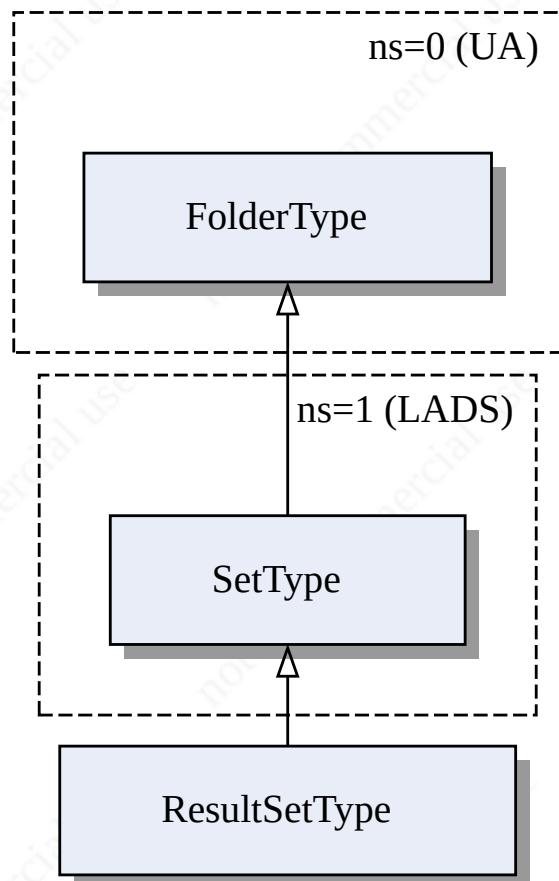


Fig. 58 hierarchy ResultSetType

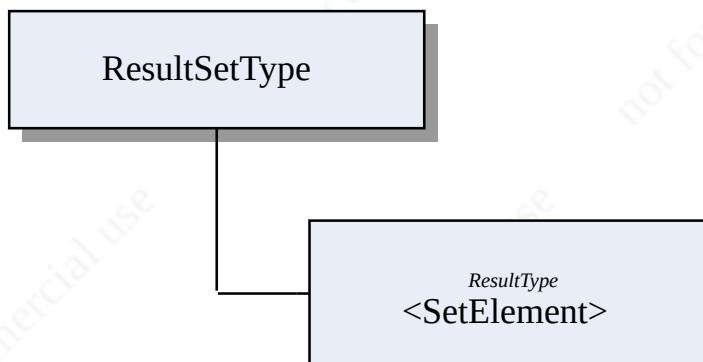


Fig. 59 ResultSetType

Attribute	Value
BrowseName	1:ResultSetType
IsAbstract	No
SubtypeOf	1:SetType

Table 103 ResultSetType

Reference	NodeClass	BrowseName	ModellingRule	TypeDefinition	DataType
Components					
HasComponent	Object	1:<SetElement>	MandatoryPlaceholder	1:ResultType	

Table 104 ResultSetType references

2.29.1 <SetElement> Object

2.30 ProgramManagerType

The functional unit's program manager.

The functional unit's program manager.

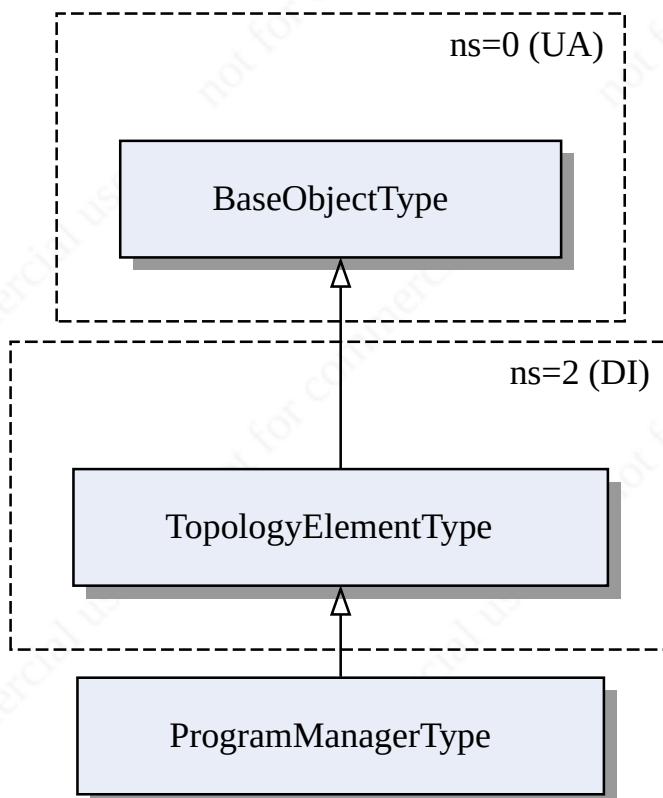


Fig. 60 hierarchy ProgramManagerType

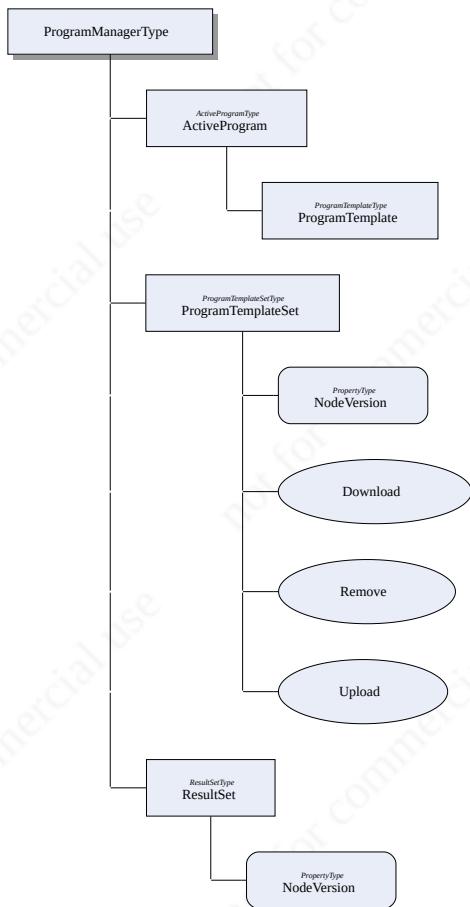


Fig. 61 ProgramManagerType

Attribute	Value
BrowseName	1:ProgramManagerType
IsAbstract	No
SubtypeOf	2:TopologyElementType

Table 105 ProgramManagerType

Reference	NodeClass	BrowseName	ModellingRule	TypeDefinition	DataType
Components					
HasComponent	Object	1:ActiveProgram	Mandatory	1:ActiveProgramType	
HasComponent	Object	1:ProgramTemplateSet	Mandatory	1:ProgramTemplateSetType	
HasComponent	Object	1:ResultSet	Mandatory	1:ResultSetType	

Table 106 ProgramManagerType references

2.30.1 ActiveProgram Object

The currently active program on the device.

ProgramTemplate Object

Program template

2.30.2 ProgramTemplateSet Object

Set of program templates.

Download Method

Signature

```
Download(
    [in] String Name
    [out] String Name
    [out] BaseDataType Properties
    [out] ByteString Data
    [out] BaseDataType Data2
)
```

Download method arguments

Argument	DataType	Description
Name	String	
Name	String	
Properties	BaseDataType	
Data	ByteString	
Data2	BaseDataType	

Table 107 Download method arguments

Download Method AddressSpace definition

Attribute	Value
BrowseName	Download

References	NodeClass	BrowseName	DataType	TypeDefinition	ModellingRule
HasProperty	Variable	InputArguments	Argument[]	PropertyParams	Mandatory
HasProperty	Variable	OutputArguments	Argument[]	PropertyParams	Mandatory

Table 108 Download components

Remove Method

Signature

```
Remove(
    [in] String Name
)
```

Remove method arguments

Argument	DataType	Description
Name	String	

Table 109 Remove method arguments

Remove Method AddressSpace definition

Attribute	Value
BrowseName	Remove

References	NodeClass	BrowseName	DataType	TypeDefinition	ModellingRule
HasProperty	Variable	InputArguments	Argument[]	PropertyParams	Mandatory

Table 110 Remove components

Upload Method

Signature

```
Upload(
    [in] String Name
    [in] BaseDataType Properties
    [in] ByteString Data
)
```

Upload method arguments

Argument	DataType	Description
Name	String	
Properties	BaseDataType	
Data	ByteString	

*Table 111 Upload method arguments***Upload Method AddressSpace definition**

Attribute	Value
BrowseName	Upload

References	NodeClass	BrowseName	DataType	TypeDefinition	ModellingRule
HasProperty	Variable	InputArguments	Argument[]	.PropertyType	Mandatory

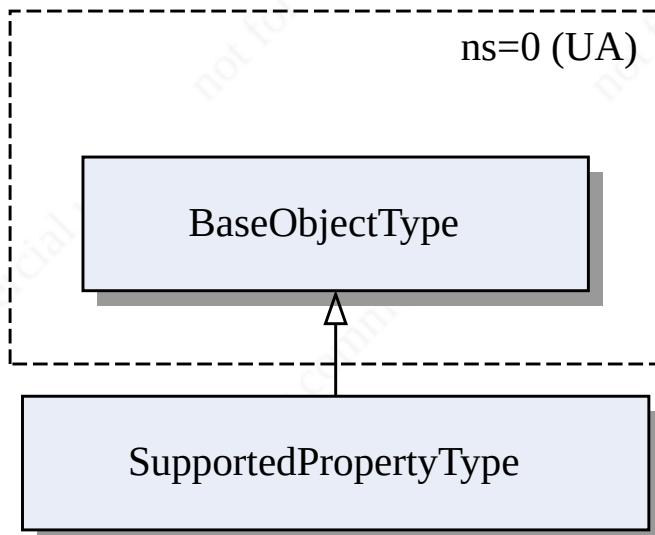
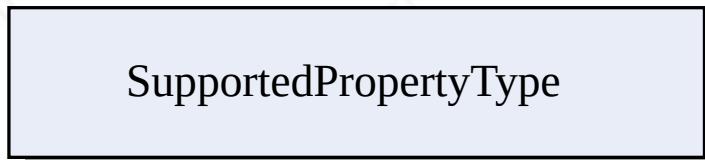
*Table 112 Upload components***2.30.3 ResultSet Object**

Results of program runs.

2.31 Supported.PropertyType

Property which is supported as member of the properties list argument for specific methods e.g., FunctionalUnit.Start() or ActiveProgram.Start(). The objects name will serve as property key. The target variable is linked via an Organizes reference.

Property which is supported as member of the properties list argument for specific methods e.g., FunctionalUnit.Start() or ActiveProgram.Start(). The objects name will serve as property key. The target variable is linked via an Organizes reference.

*Fig. 62 hierarchy SupportedPropertyType**Fig. 63 SupportedPropertyType*

Attribute	Value
BrowseName	1:SupportedPropertyType
IsAbstract	No
SubtypeOf	BaseObjectType

Table 113 SupportedPropertyType

Reference	NodeClass	BrowseName	ModellingRule	TypeDefinition	DataType

Table 114 SupportedPropertyType references

2.32 SupportedPropertiesSetType

Set of properties which are supported as members of a properties list argument for method calls e.g., `FunctionalUnit.StartFunctions()` or `ActiveProgram.Start()`.

Set of properties which are supported as members of a properties list argument for method calls e.g., FunctionalUnit.StartFunctions() or ActiveProgram.Start().

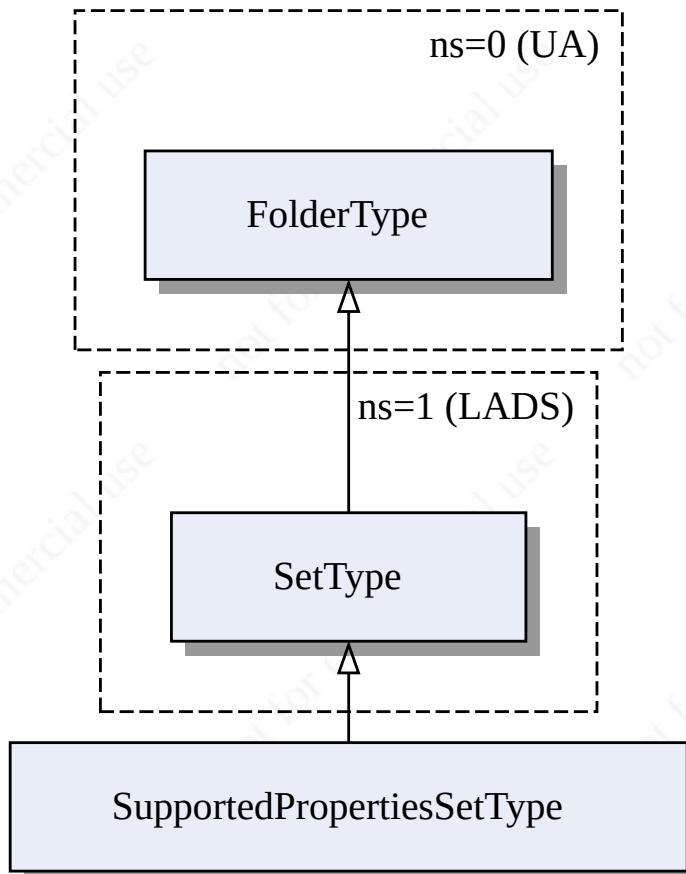


Fig. 64 hierarchy `SupportedPropertiesSetType`

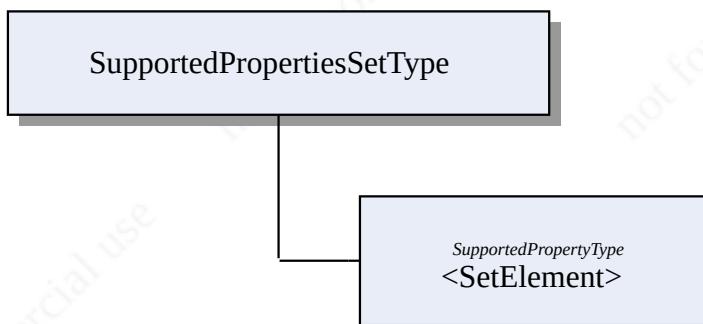


Fig. 65 `SupportedPropertiesSetType`

Attribute	Value
BrowseName	1:SupportedPropertiesSetType
IsAbstract	No
SubtypeOf	1:SetType

Table 115 SupportedPropertiesSetType

Reference	NodeClass	BrowseName	ModellingRule	TypeDefinition	DataType
Components					
HasComponent	Object	1: <SetElement>	MandatoryPlaceholder	1:SupportedPropertyType	

Table 116 SupportedPropertiesSetType references

2.32.1 <SetElement> Object

2.33 FunctionalUnitType

Represents a functional unit of a laboratory- or analytical device.

Represents a functional unit of a laboratory- or analytical device.

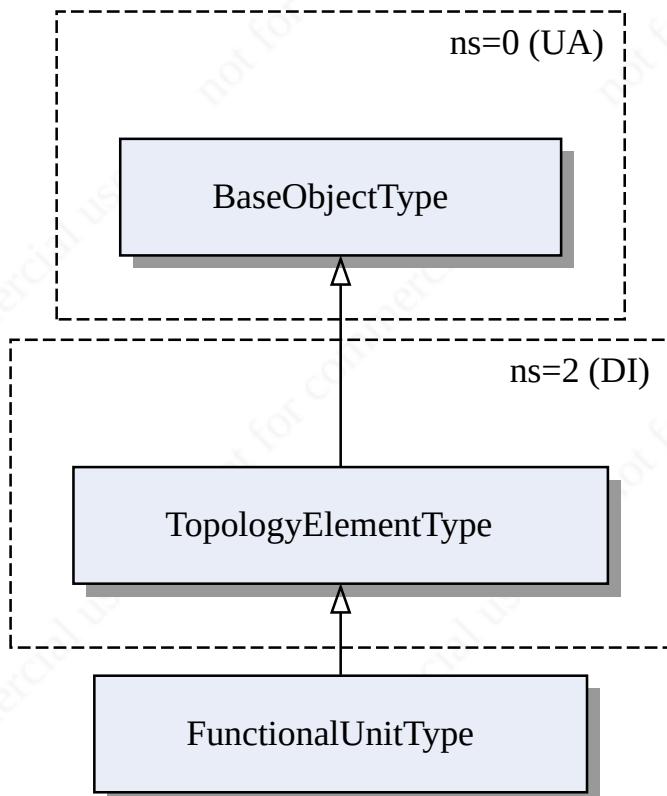


Fig. 66 hierarchy *FunctionalUnitType*

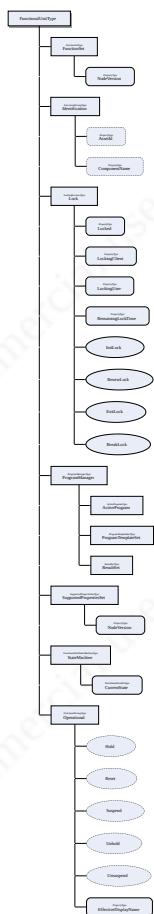


Fig. 67 FunctionalUnitType

Attribute	Value
BrowseName	1:FunctionalUnitType
IsAbstract	No
SubtypeOf	2:TopologyElementType

Table 117 FunctionalUnitType

Reference	NodeClass	BrowseName	ModellingRule	TypeDefinition	DataType
Components					
HasComponent	Object	1:FunctionSet	Mandatory	1:FunctionSetType	
HasComponent	Object	2:Identification	Optional	2:FunctionalGroupType	
HasComponent	Object	2:Lock	Mandatory	2:LockingServicesType	
HasComponent	Object	1:ProgramManager	Optional	1:ProgramManagerType	
HasComponent	Object	1:SupportedPropertiesSet	Optional	1:SupportedPropertiesSetType	
HasComponent	Object	1:StateMachine	Mandatory	1:FunctionalUnitStateMachineType	
HasComponent	Object	1:Operational	Optional	2:FunctionalGroupType	

Table 118 FunctionalUnitType references

2.33.1 FunctionSet Object

2.33.2 Identification Object

FolderType is used to organize the Parameters and Methods from the complete set (ParameterSet, MethodSet) with regard to their application

AssetId Variable

Identification: FolderType is used to organize the Parameters and Methods from the complete set (ParameterSet, MethodSet) with regard to their application

ComponentName Variable

Identification: FolderType is used to organize the Parameters and Methods from the complete set (ParameterSet, MethodSet) with regard to their application

2.33.3 Lock Object

An interface for Locking.

InitLock Method

Signature

```
InitLock(
    [in] String Context
    [out] Int32 InitLockStatus
)
```

InitLock method arguments

Argument	DataType	Description
Context	String	
InitLockStatus	Int32	

*Table 119 InitLock method arguments***InitLock Method AddressSpace definition**

Attribute	Value
BrowseName	InitLock

References	NodeClass	BrowseName	DataType	TypeDefinition	ModellingRule
HasProperty	Variable	InputArguments	Argument[]	.PropertyType	Mandatory
HasProperty	Variable	OutputArguments	Argument[]	.PropertyType	Mandatory

*Table 120 InitLock components***RenewLock Method****Signature**

```
RenewLock(
    [out] Int32 RenewLockStatus
)
```

RenewLock method arguments

Argument	DataType	Description
RenewLockStatus	Int32	

*Table 121 RenewLock method arguments***RenewLock Method AddressSpace definition**

Attribute	Value
BrowseName	RenewLock

References	NodeClass	BrowseName	DataType	TypeDefinition	ModellingRule
HasProperty	Variable	OutputArguments	Argument[]	PropertyParams	Mandatory

Table 122 RenewLock components

ExitLock Method

Signature

```
ExitLock(
    [out] Int32 ExitLockStatus
)
```

ExitLock method arguments

Argument	DataType	Description
ExitLockStatus	Int32	

Table 123 ExitLock method arguments

ExitLock Method AddressSpace definition

Attribute	Value
BrowseName	ExitLock

References	NodeClass	BrowseName	DataType	TypeDefinition	ModellingRule
HasProperty	Variable	OutputArguments	Argument[]	PropertyParams	Mandatory

Table 124 ExitLock components

BreakLock Method

Signature

```
BreakLock(
    [out] Int32 BreakLockStatus
)
```

BreakLock method arguments

Argument	DataType	Description
BreakLockStatus	Int32	

*Table 125 BreakLock method arguments***BreakLock Method AddressSpace definition**

Attribute	Value
BrowseName	BreakLock

References	NodeClass	BrowseName	DataType	TypeDefinition	ModellingRule
HasProperty	Variable	OutputArguments	Argument[]	.PropertyType	Mandatory

*Table 126 BreakLock components***2.33.4 ProgramManager Object**

The functional unit's program manager.

ActiveProgram Object

The currently active program on the device.

ProgramTemplate Object

Program template

ProgramTemplateSet Object

Set of program templates.

Download Method

Signature

```
Download(
    [in] String Name
    [out] String Name
    [out] BaseDataType Properties
    [out] ByteString Data
    [out] BaseDataType Data2
)
```

Download method arguments

Argument	DataType	Description
Name	String	
Name	String	
Properties	BaseDataType	
Data	ByteString	
Data2	BaseDataType	

Table 127 Download method arguments

Download Method AddressSpace definition

Attribute	Value
BrowseName	Download

References	NodeClass	BrowseName	DataType	TypeDefinition	ModellingRule
HasProperty	Variable	InputArguments	Argument[]	.PropertyType	Mandatory
HasProperty	Variable	OutputArguments	Argument[]	.PropertyType	Mandatory

*Table 128 Download components***Remove Method**

Signature

```
Remove(
    [in] String Name
)
```

Remove method arguments

Argument	DataType	Description
Name	String	

Table 129 Remove method arguments

Remove Method AddressSpace definition

Attribute	Value
BrowseName	Remove

References	NodeClass	BrowseName	DataType	TypeDefinition	ModellingRule
HasProperty	Variable	InputArguments	Argument[]	PropertyParams	Mandatory

Table 130 Remove components

Upload Method

```
##### Signature
```

```
Upload(
    [in] String Name
    [in] BaseDataType Properties
    [in] ByteString Data
)
```

```
##### Upload method arguments
```

Argument	DataType	Description
Name	String	
Properties	BaseDataType	
Data	ByteString	

Table 131 Upload method arguments

```
##### Upload Method AddressSpace definition
```

Attribute	Value
BrowseName	Upload

References	NodeClass	BrowseName	DataType	TypeDefinition	ModellingRule
HasProperty	Variable	InputArguments	Argument[]	PropertyParams	Mandatory

Table 132 Upload components

ResultSet Object

Results of program runs.

2.33.5 SupportedPropertiesSet Object

Set of properties which are supported as members of a properties list argument for method calls e.g., FunctionalUnit.StartFunctions() or ActiveProgram.Start().

2.33.6 StateMachine Object

Represents the state of a FunctionalUnit in a LADS Device

CurrentState Variable

StateMachine: Represents the state of a FunctionalUnit in a LADS Device

2.33.7 Operational Object

FolderType is used to organize the Parameters and Methods from the complete set (ParameterSet, MethodSet) with regard to their application

Hold Method

Signature

Hold()

Hold method arguments

Argument	DataType	Description
----------	----------	-------------

Table 133 Hold method arguments

Hold Method AddressSpace definition

Attribute	Value
BrowseName	Hold

References	NodeClass	BrowseName	DataType	TypeDefinition	ModellingRule
------------	-----------	------------	----------	----------------	---------------

Table 134 Hold components

Reset Method

Signature

Reset()

Reset method arguments

Argument	DataType	Description
----------	----------	-------------

*Table 135 Reset method arguments***Reset Method AddressSpace definition**

Attribute	Value
BrowseName	Reset

References	NodeClass	BrowseName	DataType	TypeDefinition	ModellingRule
------------	-----------	------------	----------	----------------	---------------

*Table 136 Reset components***Suspend Method****Signature**

Suspend()

Suspend method arguments

Argument	DataType	Description
----------	----------	-------------

*Table 137 Suspend method arguments***Suspend Method AddressSpace definition**

Attribute	Value
BrowseName	Suspend

References	NodeClass	BrowseName	DataType	TypeDefinition	ModellingRule
------------	-----------	------------	----------	----------------	---------------

*Table 138 Suspend components***Unhold Method****Signature**

Unhold()

Unhold method arguments

Argument	DataType	Description
----------	----------	-------------

*Table 139 Unhold method arguments***Unhold Method AddressSpace definition**

Attribute	Value
BrowseName	Unhold

References	NodeClass	BrowseName	DataType	TypeDefinition	ModellingRule
------------	-----------	------------	----------	----------------	---------------

*Table 140 Unhold components***Unsuspend Method****Signature**

Unsuspend()

Unsuspend method arguments

Argument	DataType	Description
----------	----------	-------------

*Table 141 Unsuspend method arguments***Unsuspend Method AddressSpace definition**

Attribute	Value
BrowseName	Unsuspend

References	NodeClass	BrowseName	DataType	TypeDefinition	ModellingRule
------------	-----------	------------	----------	----------------	---------------

*Table 142 Unsuspend components***EffectiveDisplayName Variable**

Operational: FolderType is used to organize the Parameters and Methods from the complete set (ParameterSet, MethodSet) with regard to their application

2.34 FunctionalUnitSetType

Set of Functional Units.

Set of Functional Units.

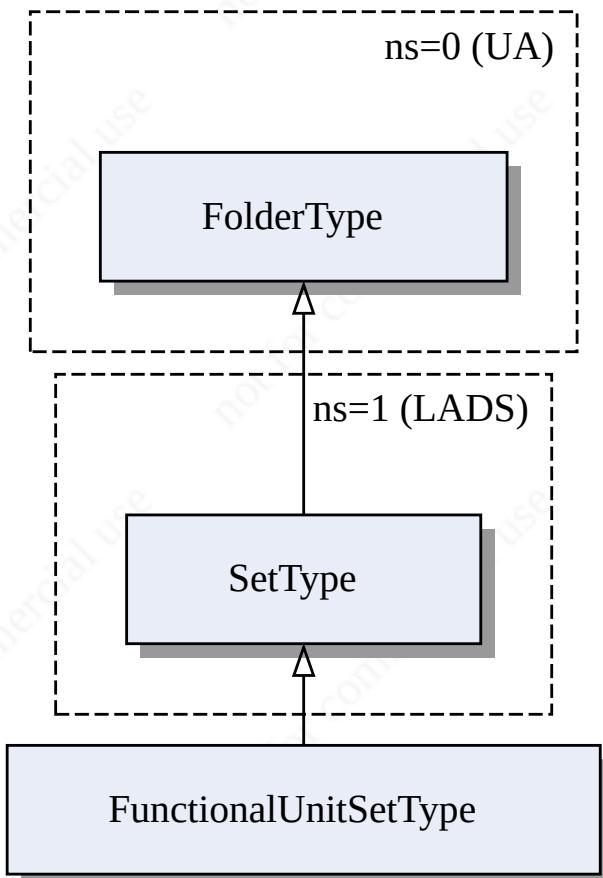


Fig. 68 hierarchy *FunctionalUnitSetType*

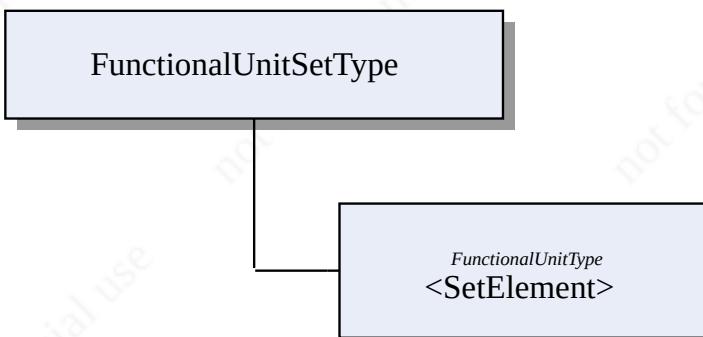


Fig. 69 *FunctionalUnitSetType*

Attribute	Value
BrowseName	1:FunctionalUnitSetType
IsAbstract	No
SubtypeOf	1:SetType

Table 143 FunctionalUnitSetType

Reference	NodeClass	BrowseName	ModellingRule	TypeDefinition	DataType
Components					
HasComponent	Object	1: <SetElement>	MandatoryPlaceholder	1:FunctionalUnitType	

Table 144 FunctionalUnitSetType references

2.34.1 <SetElement> Object

2.35 LADSDeviceType

Base class for laboratory- and analytical devices

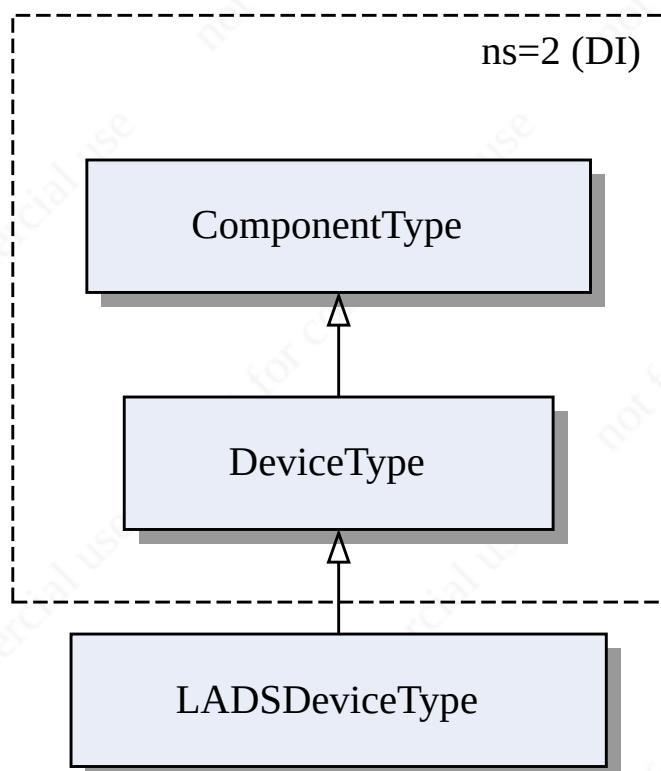
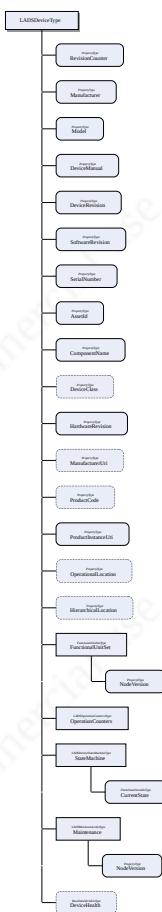


Fig. 70 hierarchy LADSDeviceType

Fig. 71 `LADSDeviceType`

Attribute	Value
<code>BrowseName</code>	<code>1:LADSDeviceType</code>
<code>IsAbstract</code>	No
<code>SubtypeOf</code>	<code>2:DeviceType</code>

Table 145 `LADSDeviceType`

Reference	NodeClass	BrowseName	ModellingRule	TypeDefinition	DataType
Properties					
HasProperty	Variable	2:RevisionCounter	Mandatory	.PropertyType	Int32
HasProperty	Variable	2:Manufacturer	Mandatory	.PropertyType	LocalizedText
HasProperty	Variable	2:Model	Mandatory	.PropertyType	LocalizedText
HasProperty	Variable	2:DeviceManual	Mandatory	.PropertyType	String
HasProperty	Variable	2:DeviceRevision	Mandatory	.PropertyType	String
HasProperty	Variable	2:SoftwareRevision	Mandatory	.PropertyType	String
HasProperty	Variable	2:SerialNumber	Mandatory	.PropertyType	String
HasProperty	Variable	2:AssetId	Mandatory	.PropertyType	String
HasProperty	Variable	2:ComponentName	Mandatory	.PropertyType	LocalizedText
HasProperty	Variable	2:DeviceClass	Optional	.PropertyType	String
HasProperty	Variable	2:HardwareRevision	Mandatory	.PropertyType	String
HasProperty	Variable	2:ManufacturerUri	Optional	.PropertyType	String
HasProperty	Variable	2:ProductCode	Optional	.PropertyType	String
HasProperty	Variable	2:ProductInstanceUri	Mandatory	.PropertyType	String
HasProperty	Variable	4:OperationalLocation	Optional	.PropertyType	String
HasProperty	Variable	4:HierarchicalLocation	Optional	.PropertyType	String
Components					
HasComponent	Object	1:FunctionalUnitSet	Mandatory	1:FunctionalUnitSetType	
HasComponent	Object	1:OperationCounters	Mandatory	1:LADSOperationCountersType	
HasComponent	Object	1:StateMachine	Mandatory	1:LADSDeviceStateMachineType	
HasComponent	Object	1:Maintenance	Mandatory	1:LADSMaintenanceSetType	
HasComponent	Variable	2:DeviceHealth	Optional	BaseDataVariableType	2:DeviceHealth

Table 146 LADSDeviceType references

2.35.1 FunctionalUnitSet Object

Set of Functional Units.

2.35.2 OperationCounters Object

2.35.3 StateMachine Object

CurrentState Variable

2.35.4 Maintenance Object

2.35.5 DeviceHealth Variable

LADSDeviceType: Base class for laboratory- and analytical devices

2.36 SensorValueSetType

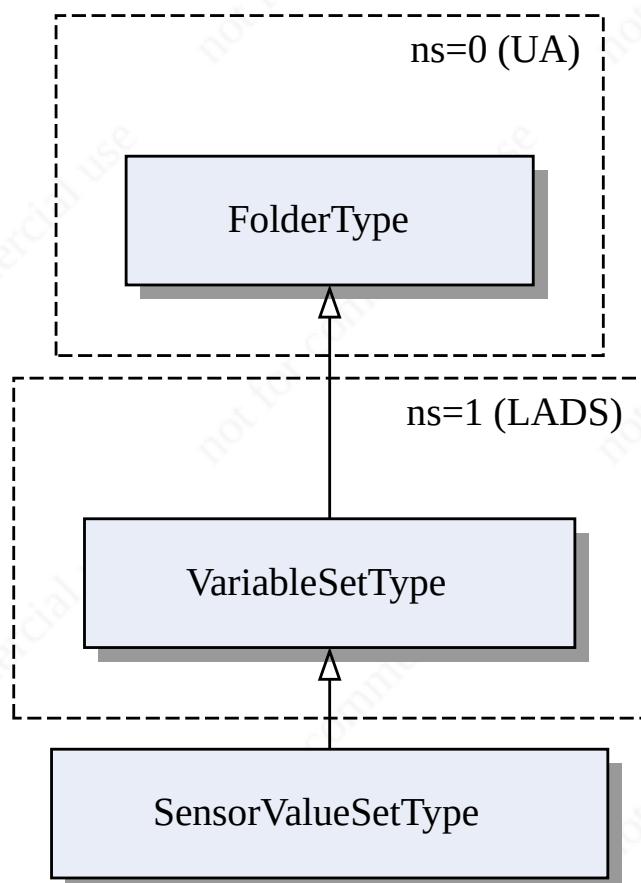


Fig. 72 hierarchy SensorValueSetType

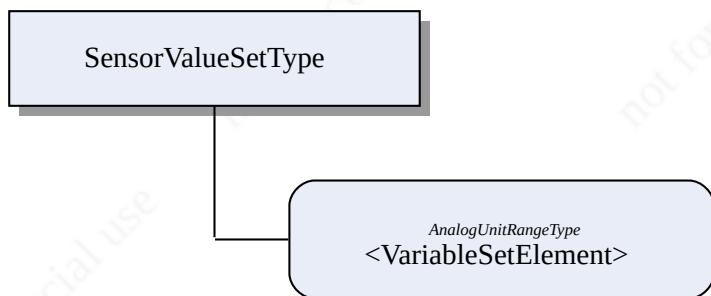


Fig. 73 SensorValueSetType

Attribute	Value
BrowseName	1:SensorValueSetType
IsAbstract	No
SubtypeOf	1:VariableSetType

Table 147 SensorValueSetType

Reference	NodeClass	BrowseName	ModellingRule	TypeDefinition	DataType
Components					
HasComponent	Variable	1: <VariableSetElement>	MandatoryPlaceholder	AnalogUnitRangeType	Number(Variant)

Table 148 SensorValueSetType references

2.36.1 <VariableSetElement> Variable

2.37 MultiAnalogSensorFunctionType

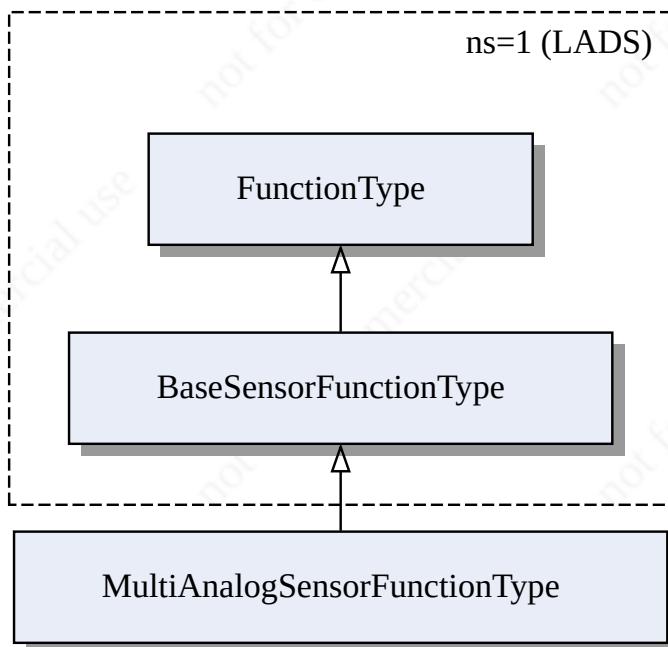


Fig. 74 hierarchy MultiAnalogSensorFunctionType

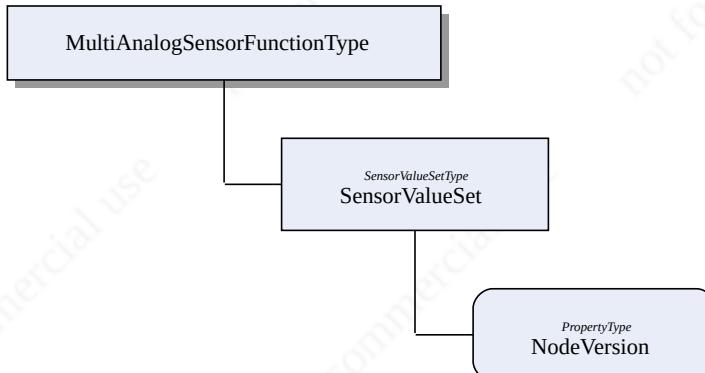


Fig. 75 MultiAnalogSensorFunctionType

Attribute	Value
BrowseName	1:MultiAnalogSensorFunctionType
IsAbstract	No
SubtypeOf	1:BaseSensorFunctionType

Table 149 MultiAnalogSensorFunctionType

Reference	NodeClass	BrowseName	ModellingRule	TypeDefinition	DataType
Components					
HasComponent	Object	1:SensorValueSet	Mandatory	1:SensorValueSetType	

Table 150 MultiAnalogSensorFunctionType references

2.37.1 SensorValueSet Object

2.38 MultiModeAnalogControlFunctionType

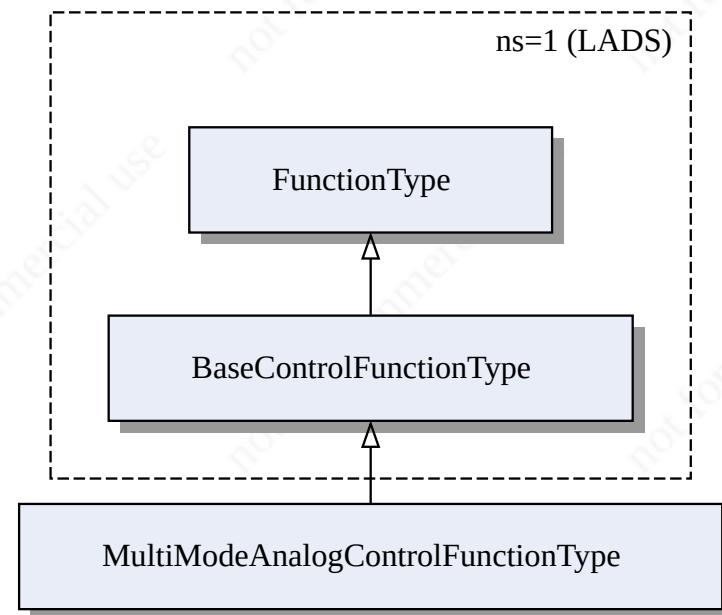


Fig. 76 hierarchy MultiModeAnalogControlFunctionType

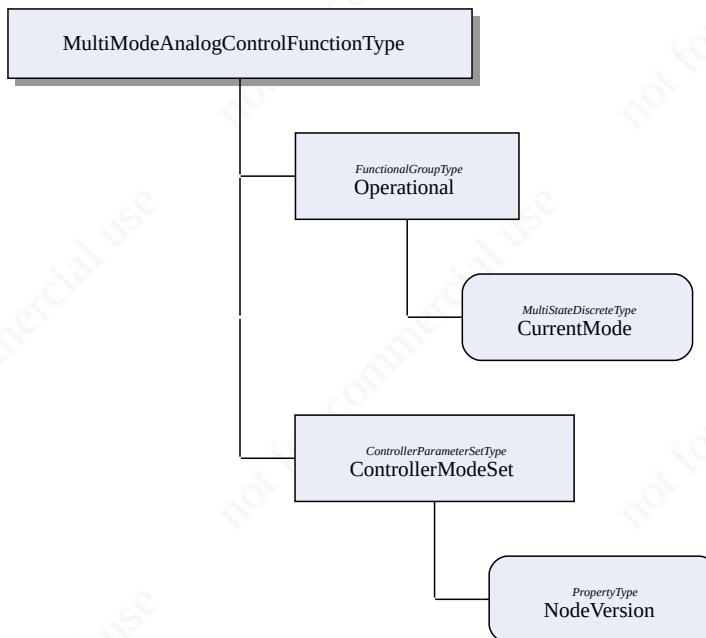


Fig. 77 MultiModeAnalogControlFunctionType

Attribute	Value
BrowseName	1:MultiModeAnalogControlFunctionType
IsAbstract	No
SubtypeOf	1:BaseControlFunctionType

Table 151 MultiModeAnalogControlFunctionType

Reference	NodeClass	BrowseName	ModellingRule	TypeDefinition	DataType
Components					
HasComponent	Object	1:Operational	Mandatory	2:FunctionalGroupType	
HasComponent	Object	1:ControllerModeSet	Mandatory	1:ControllerParameterSetType	

Table 152 MultiModeAnalogControlFunctionType references

2.38.1 Operational Object

FolderType is used to organize the Parameters and Methods from the complete set (ParameterSet, MethodSet) with regard to their application

CurrentMode Variable

Operational: FolderType is used to organize the Parameters and Methods from the complete set (ParameterSet, MethodSet) with regard to their application

2.38.2 ControllerModeSet Object

2.39 MultiParameterAnalogControlFunctionType

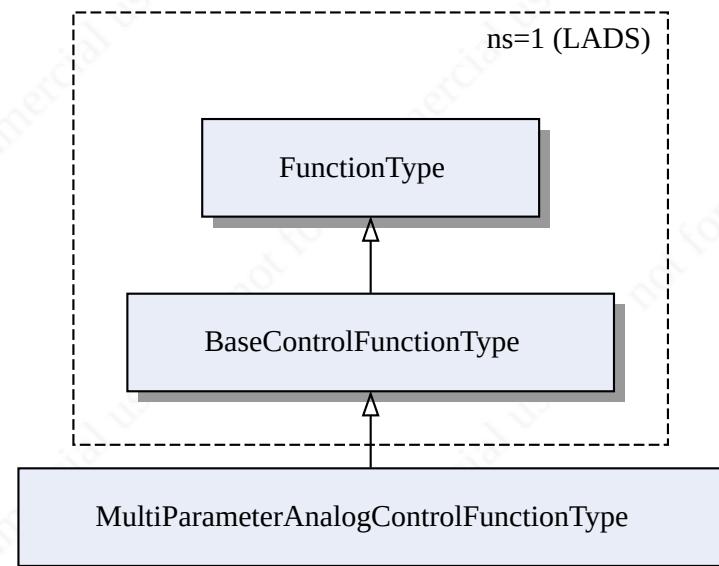


Fig. 78 hierarchy MultiParameterAnalogControlFunctionType

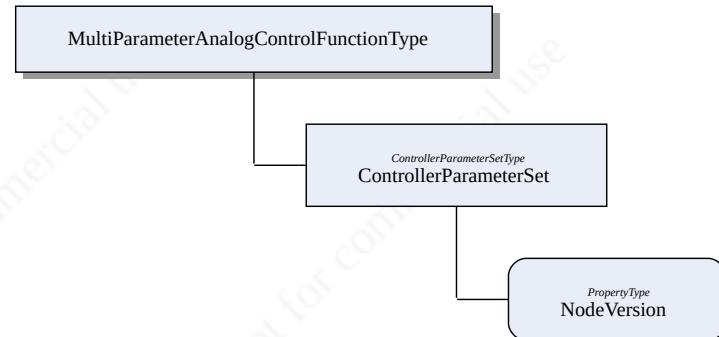


Fig. 79 MultiParameterAnalogControlFunctionType

Attribute	Value
BrowseName	1:MultiParameterAnalogControlFunctionType
IsAbstract	No
SubtypeOf	1:BaseControlFunctionType

Table 153 MultiParameterAnalogControlFunctionType

Reference	NodeClass	BrowseName	ModellingRule	TypeDefinition	DataType
Components					
HasComponent	Object	1:ControllerParameterSet	Mandatory	1:ControllerParameterSetType	

Table 154 MultiParameterAnalogControlFunctionType references

2.39.1 ControllerParameterSet Object

2.40 MultiStateDiscreteControlFunctionType

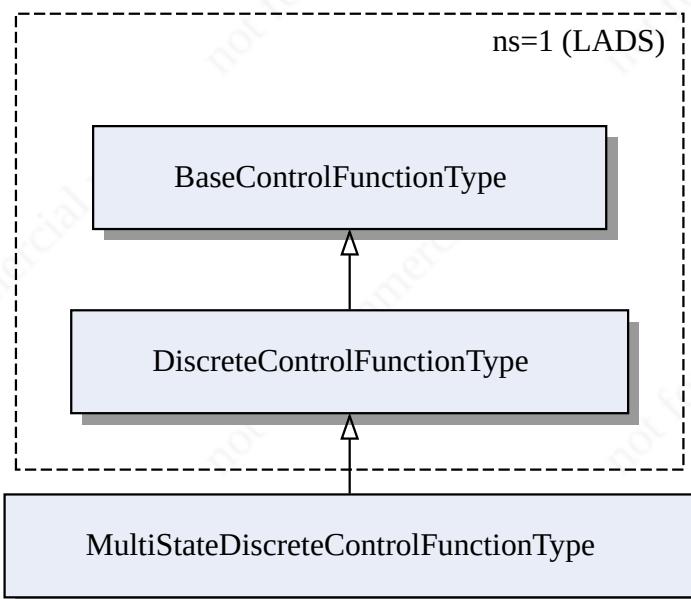
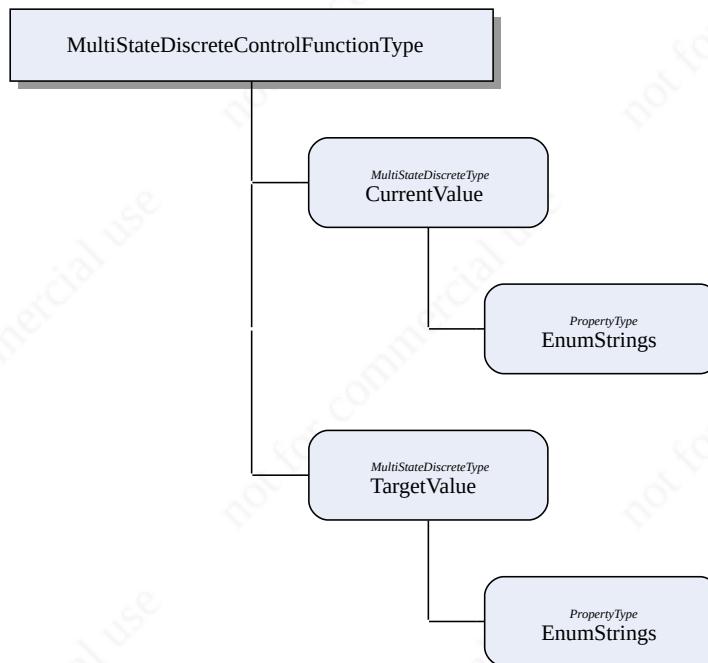


Fig. 80 hierarchy MultiStateDiscreteControlFunctionType

*Fig. 81 MultiStateDiscreteControlFunctionType*

Attribute	Value
BrowseName	1:MultiStateDiscreteControlFunctionType
IsAbstract	No
SubtypeOf	1:DiscreteControlFunctionType

Table 155 MultiStateDiscreteControlFunctionType

Reference	NodeClass	BrowseName	ModellingRule	TypeDefinition	DataType
Components					
HasComponent	Variable	1:CurrentValue	Mandatory	MultiStateDiscreteType	UInt32
HasComponent	Variable	1:TargetValue	Mandatory	MultiStateDiscreteType	UInt32

Table 156 MultiStateDiscreteControlFunctionType references

2.40.1 CurrentValue Variable

2.40.2 TargetValue Variable

2.41 MutliStateDiscreteSensorFunctionType

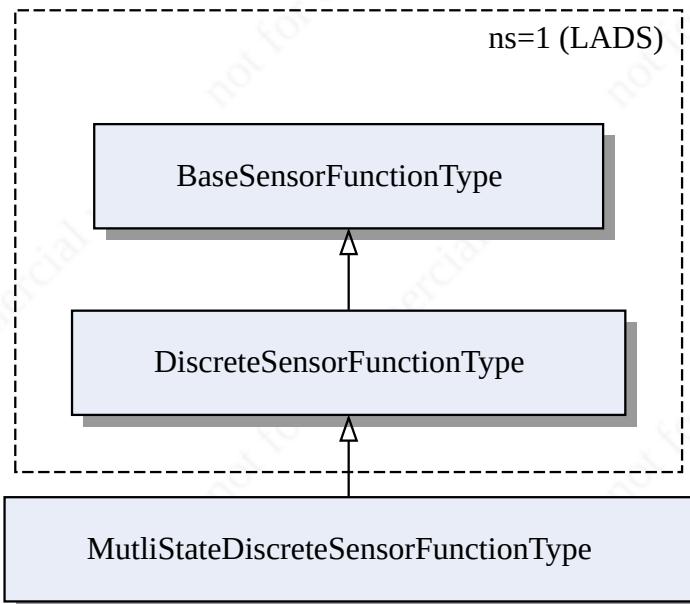


Fig. 82 hierarchy MutliStateDiscreteSensorFunctionType

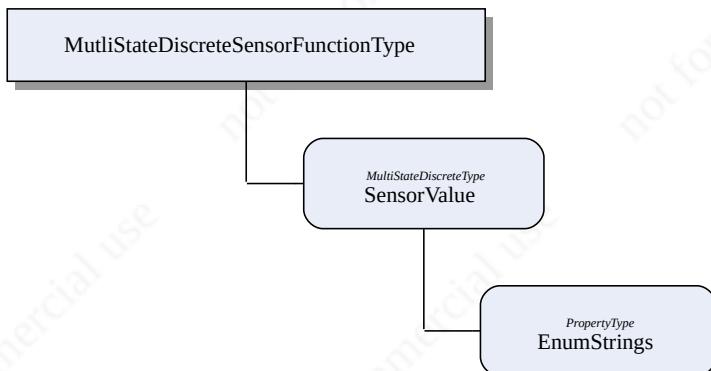


Fig. 83 MultiStateDiscreteSensorFunctionType

Attribute	Value
BrowseName	1:MultiStateDiscreteSensorFunctionType
IsAbstract	No
SubtypeOf	1:DiscreteSensorFunctionType

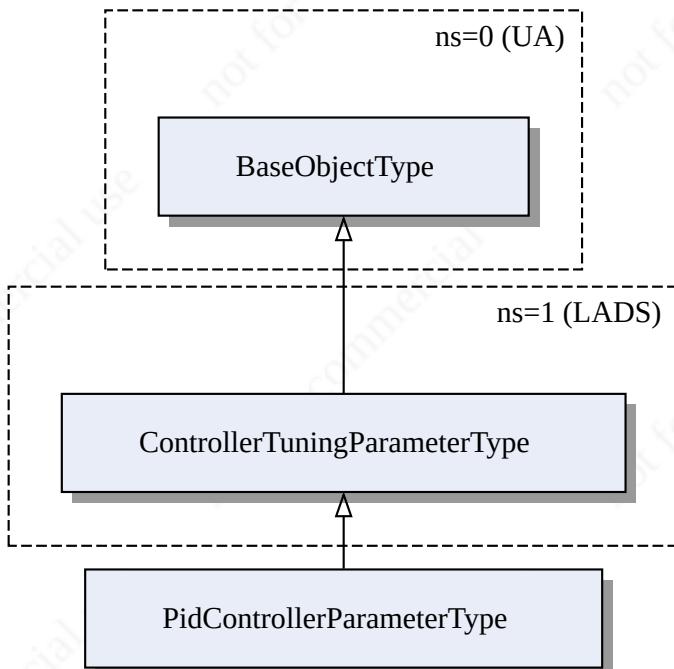
Table 157 MultiStateDiscreteSensorFunctionType

Reference	NodeClass	BrowseName	ModellingRule	TypeDefinition	DataType
Components					
HasComponent	Variable	1:SensorValue	Mandatory	MultiStateDiscreteType	UInteger(Variant)

Table 158 MultiStateDiscreteSensorFunctionType references

2.41.1 SensorValue Variable

2.42 PidControllerParameterType

*Fig. 84 hierarchy PidControllerParameterType*

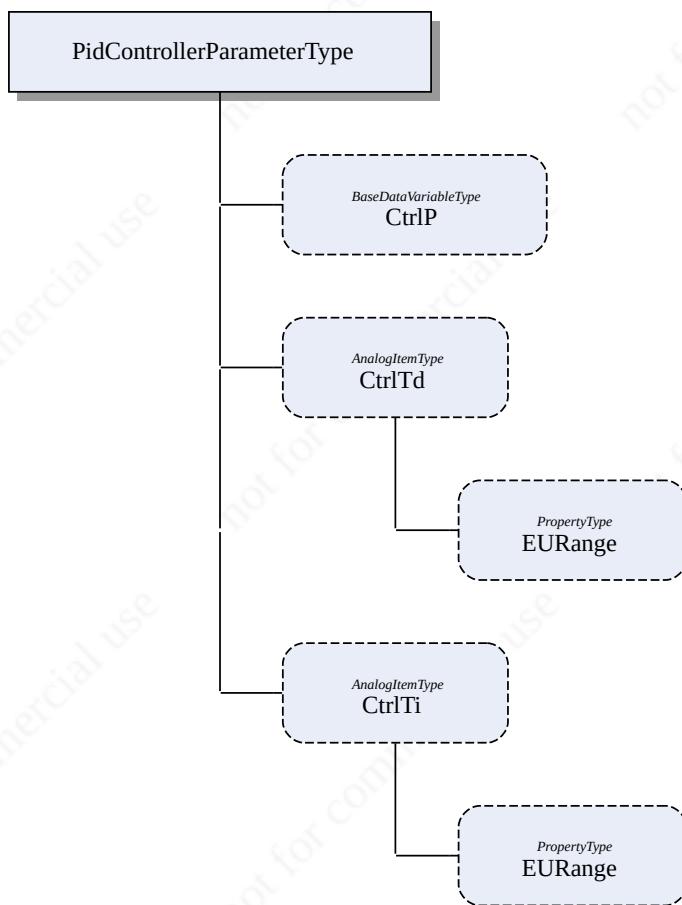


Fig. 85 PidControllerParameterType

Attribute	Value
BrowseName	1:PidControllerParameterType
IsAbstract	No
SubtypeOf	1:ControllerTuningParameterType

Table 159 PidControllerParameterType

Reference	NodeClass	BrowseName	ModellingRule	TypeDefinition	DataType
Components					
HasComponent	Variable	1:CtrlP	Optional	BaseDataVariableType	Double
HasComponent	Variable	1:CtrlTd	Optional	AnalogItemType	Double
HasComponent	Variable	1:CtrlTi	Optional	AnalogItemType	Double

Table 160 PidControllerParameterType references

2.42.1 CtrlP Variable

2.42.2 CtrlTd Variable

2.42.3 CtrlTi Variable

2.43 RatebasedAccumulatingControlFunctionType

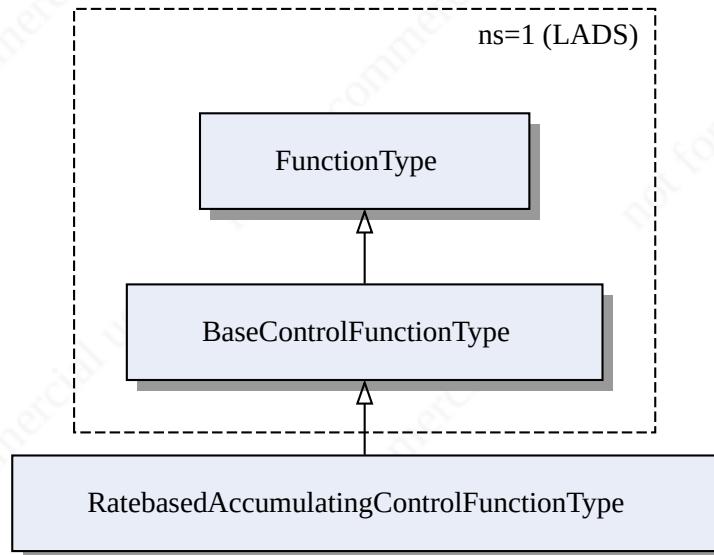


Fig. 86 hierarchy `RatebasedAccumulatingControlFunctionType`

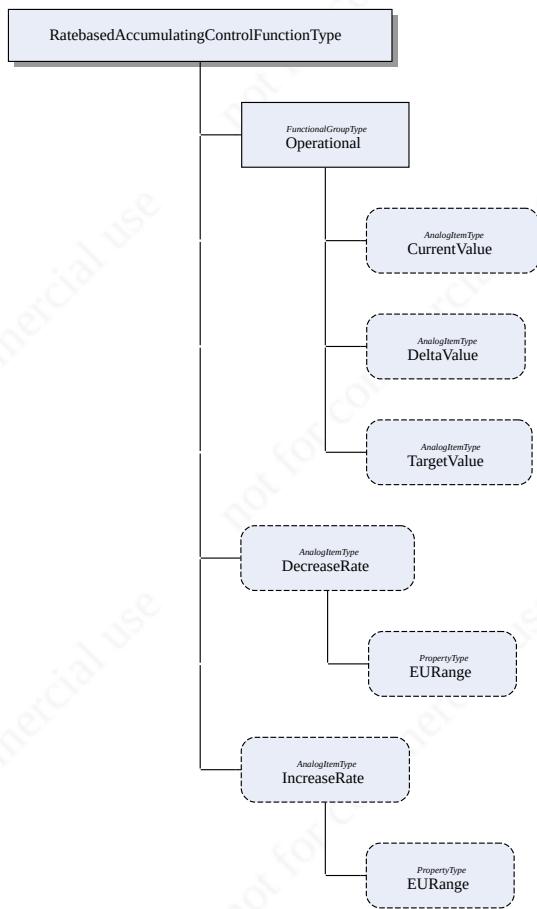


Fig. 87 RatebasedAccumulatingControlFunctionType

Attribute	Value
BrowseName	1:RatebasedAccumulatingControlFunctionType
IsAbstract	No
SubtypeOf	1:BaseControlFunctionType

Table 161 RatebasedAccumulatingControlFunctionType

Reference	NodeClass	BrowseName	ModellingRule	TypeDefinition	DataType
Components					
HasComponent	Object	1:Operational	Mandatory	2:FunctionalGroupType	
HasComponent	Variable	1:DecreaseRate	Optional	AnalogItemTypes	Double
HasComponent	Variable	1:IncreaseRate	Optional	AnalogItemTypes	Double

Table 162 RatebasedAccumulatingControlFunctionType references

2.43.1 Operational Object

FolderType is used to organize the Parameters and Methods from the complete set (ParameterSet, MethodSet) with regard to their application

CurrentValue Variable

Operational: FolderType is used to organize the Parameters and Methods from the complete set (ParameterSet, MethodSet) with regard to their application

DeltaValue Variable

Operational: FolderType is used to organize the Parameters and Methods from the complete set (ParameterSet, MethodSet) with regard to their application

TargetValue Variable

Operational: FolderType is used to organize the Parameters and Methods from the complete set (ParameterSet, MethodSet) with regard to their application

2.43.2 DecreaseRate Variable

2.43.3 IncreaseRate Variable

2.44 StartStopControlFunctionType

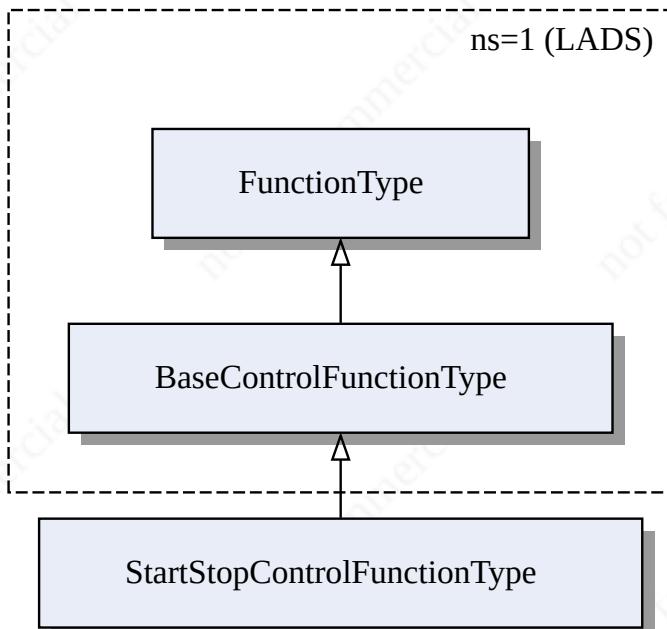


Fig. 88 hierarchy StartStopControlFunctionType

StartStopControlFunctionType

Fig. 89 StartStopControlFunctionType

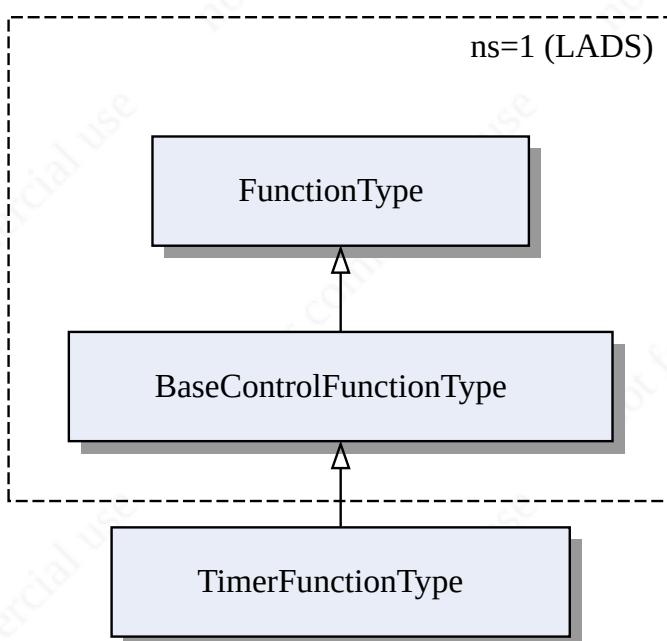
Attribute	Value
BrowseName	1:StartStopControlFunctionType
IsAbstract	No
SubtypeOf	1:BaseControlFunctionType

Table 163 StartStopControlFunctionType

Reference	NodeClass	BrowseName	ModellingRule	TypeDefinition	DataType

Table 164 StartStopControlFunctionType references

2.45 TimerFunctionType

*Fig. 90 hierarchy TimerFunctionType*

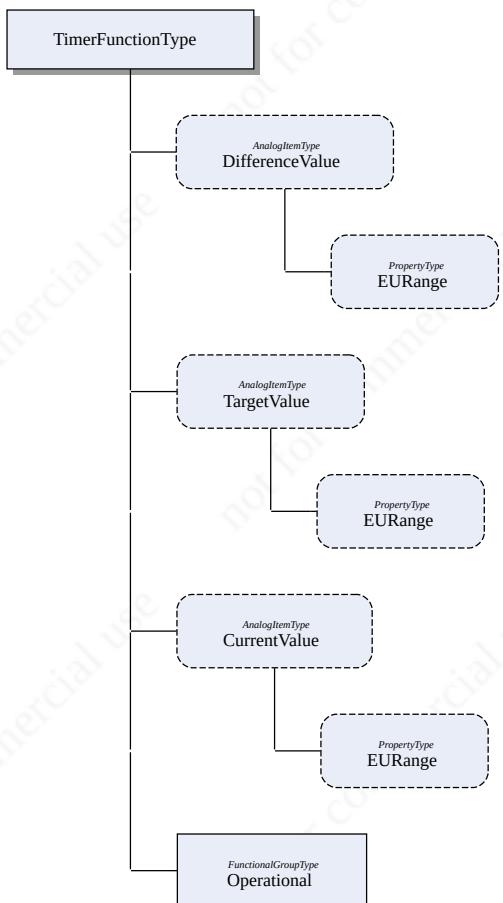


Fig. 91 TimerFunctionType

Attribute	Value
BrowseName	1:TimerFunctionType
IsAbstract	No
SubtypeOf	1:BaseControlFunctionType

Table 165 TimerFunctionType

Reference	NodeClass	BrowseName	ModellingRule	TypeDefinition	DataType
Components					
HasComponent	Variable	1:DifferenceValue	Optional	AnalogItemType	Duration(Double)
HasComponent	Variable	1:TargetValue	Optional	AnalogItemType	Duration(Double)
HasComponent	Variable	1:CurrentValue	Optional	AnalogItemType	Duration(Double)
HasComponent	Object	1:Operational	Mandatory	2:FunctionalGroupType	

Table 166 TimerFunctionType references

2.45.1 DifferenceValue Variable

2.45.2 TargetValue Variable

2.45.3 CurrentValue Variable

2.45.4 Operational Object

FolderType is used to organize the Parameters and Methods from the complete set (ParameterSet, MethodSet) with regard to their application

2.46 TwoStateDiscreteControlFunctionType

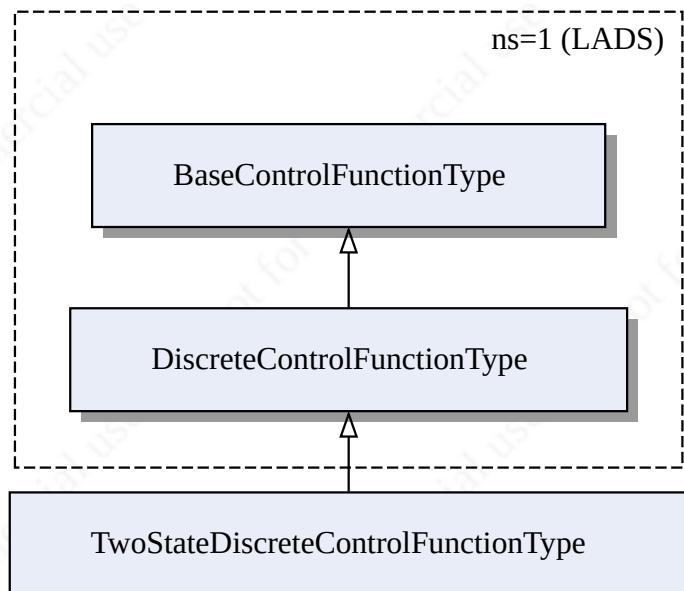


Fig. 92 hierarchy `TwoStateDiscreteControlFunctionType`

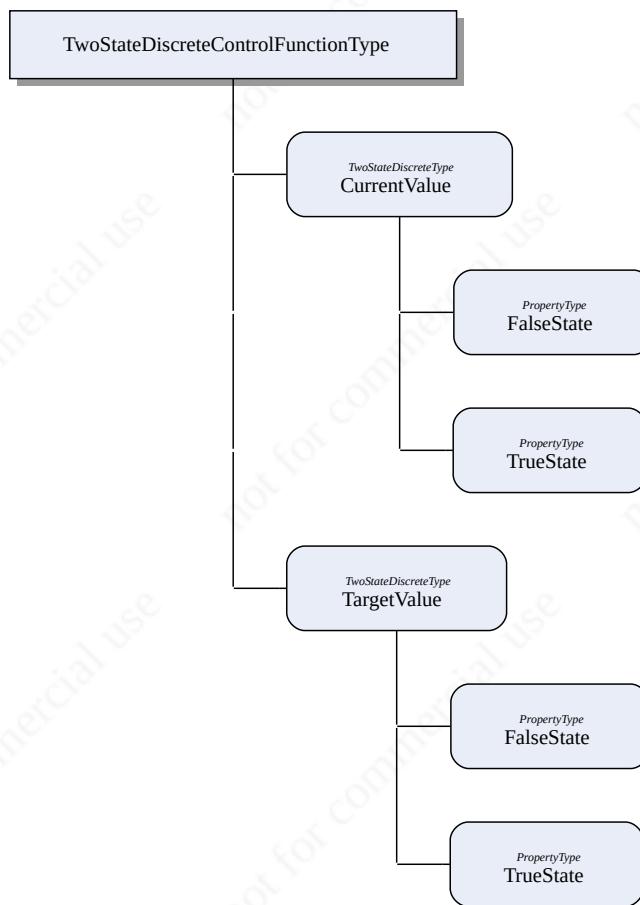


Fig. 93 TwoStateDiscreteControlFunctionType

Attribute	Value
BrowseName	1:TwoStateDiscreteControlFunctionType
IsAbstract	No
SubtypeOf	1:DiscreteControlFunctionType

Table 167 TwoStateDiscreteControlFunctionType

Reference	NodeClass	BrowseName	ModellingRule	TypeDefinition	DataType
Components					
HasComponent	Variable	1:CurrentValue	Mandatory	TwoStateDiscreteType	Boolean
HasComponent	Variable	1:TargetValue	Mandatory	TwoStateDiscreteType	Boolean

Table 168 TwoStateDiscreteControlFunctionType references

2.46.1 CurrentValue Variable

2.46.2 TargetValue Variable

2.47 TwoStateDiscreteSensorFunctionType

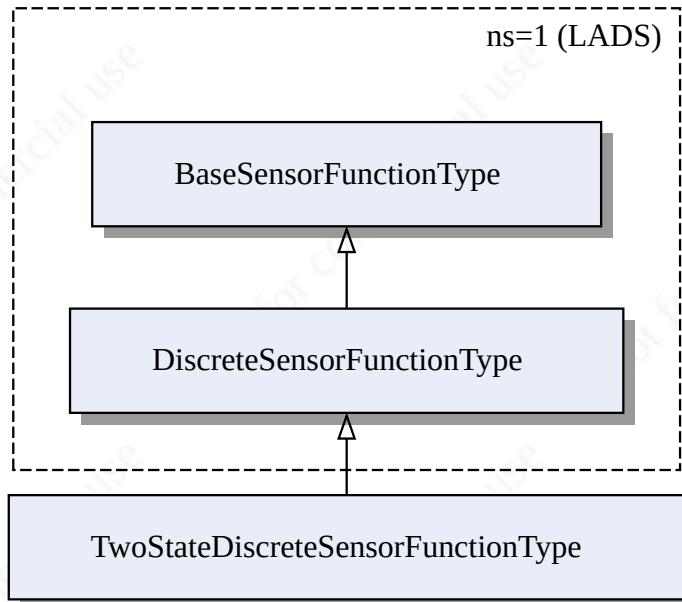


Fig. 94 hierarchy `TwoStateDiscreteSensorFunctionType`

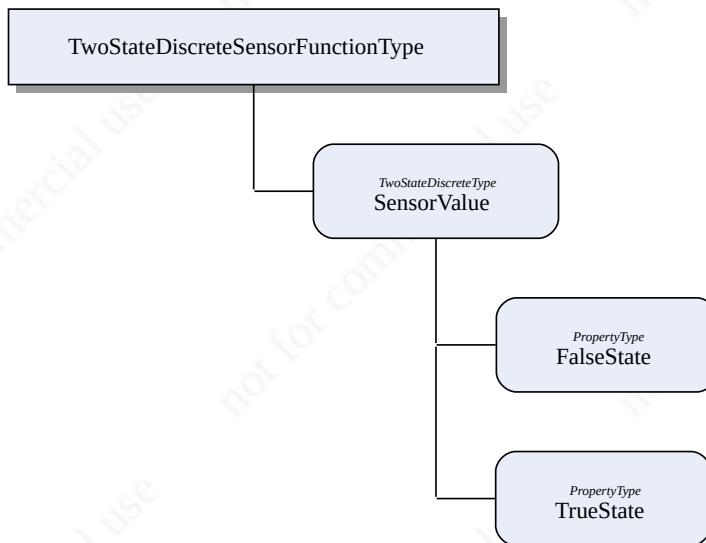


Fig. 95 `TwoStateDiscreteSensorFunctionType`

Attribute	Value
BrowseName	1:TwoStateDiscreteSensorFunctionType
IsAbstract	No
SubtypeOf	1:DiscreteSensorFunctionType

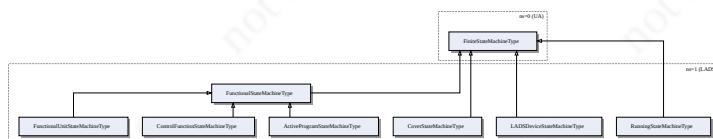
Table 169 TwoStateDiscreteSensorFunctionType

Reference	NodeClass	BrowseName	ModellingRule	TypeDefinition	DataType
Components					
HasComponent	Variable	1:SensorValue	Mandatory	TwoStateDiscreteType	Boolean

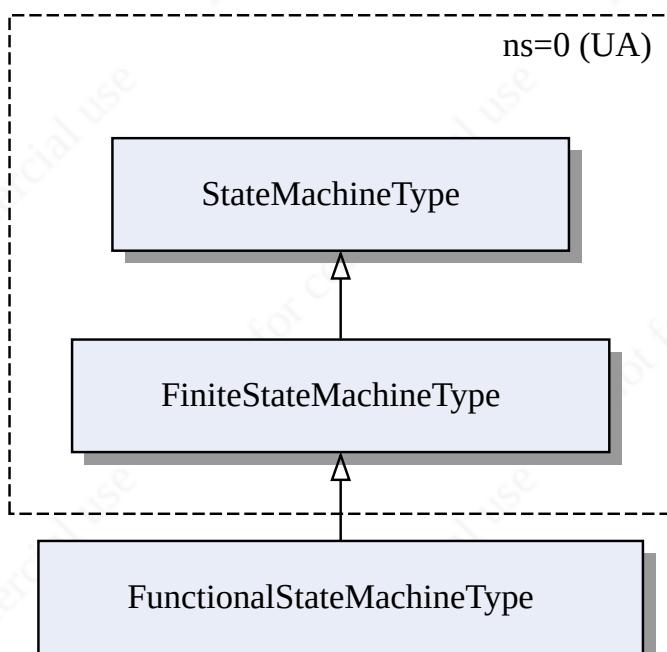
Table 170 TwoStateDiscreteSensorFunctionType references

2.47.1 SensorValue Variable

3. Finite State Machines

Fig. 1 type hierarchy *FiniteStateMachineType*

3.1 FunctionalStateMachineType

Fig. 2 hierarchy *FunctionalStateMachineType*Fig. 3 *FunctionalStateMachineType*

Attribute	Value
BrowseName	1:FunctionalStateMachineType
IsAbstract	Yes
SubtypeOf	FiniteStateMachineType

Table 1 *FunctionalStateMachineType*

Reference	NodeClass	BrowseName
HasSubtype	ObjectType	1:ActiveProgramStateMachineType
HasSubtype	ObjectType	1:ControlFunctionStateMachineType
HasSubtype	ObjectType	1:FunctionalUnitStateMachineType

Table 2 FunctionalStateMachineType sub types

Reference	NodeClass	BrowseName	ModellingRule	TypeDefinition	DataType
Components					
HasComponent	Object	1:Stopping		StateType	
HasComponent	Object	1:Running		StateType	
HasComponent	Object	1:Clearing		StateType	
HasComponent	Object	1:Aborting		StateType	
HasComponent	Object	1:Aborted		StateType	
HasComponent	Object	1:Stopped		InitialStateType	
HasComponent	Object	1:RunningToStopping		TransitionType	
HasComponent	Object	1:ClearingToStopped		TransitionType	
HasComponent	Object	1:RunningToAborting		TransitionType	
HasComponent	Object	1:StoppedToRunning		TransitionType	
HasComponent	Object	1:StoppingToStopped		TransitionType	
HasComponent	Object	1:AbortingToAborted		TransitionType	
HasComponent	Object	1:AbortedToClearing		TransitionType	

Table 3 FunctionalStateMachineType references

3.1.1 States

BrowseName	References	Target BrowseName	Value	Target Type Definition	Notes
Aborted	HasProperty	StateNumber	1	.PropertyType	
	FromTransition	AbortedToClearing		TransitionType	
	ToTransition	AbortingToAborted		TransitionType	
Aborting	HasProperty	StateNumber	2	.PropertyType	
	FromTransition	AbortingToAborted		TransitionType	
	ToTransition	RunningToAborting		TransitionType	
Clearing	HasProperty	StateNumber	3	.PropertyType	
	FromTransition	ClearingToStopped		TransitionType	
	ToTransition	AbortedToClearing		TransitionType	
Stopped	HasProperty	StateNumber	4	PropertyParams	
	FromTransition	StoppedToRunning		TransitionType	
	ToTransition	ClearingToStopped		TransitionType	
Running	HasProperty	StateNumber	5	PropertyParams	
	FromTransition	RunningToStopping		TransitionType	
	FromTransition	RunningToAborting		TransitionType	
Stopping	HasProperty	StateNumber	6	PropertyParams	
	FromTransition	StoppingToStopped		TransitionType	
	ToTransition	RunningToStopping		TransitionType	

Table 4 FunctionalStateMachineType states

3.1.2 Transitions

BrowseName	References	Target BrowseName	Value	Target Type Definition	Notes
RunningToStopping	HasProperty	StateNumber	8	.PropertyType	
	FromTransition	Running		.StateType	
	ToTransition	Stopping		.StateType	
ClearingToStopped	HasProperty	StateNumber	7	.PropertyType	
	FromTransition	Clearing		.StateType	
	ToTransition	Stopped		.InitialStateType	
RunningToAborting	HasProperty	StateNumber	6	.PropertyType	
	FromTransition	Running		.StateType	
	ToTransition	Aborting		.StateType	
StoppedToRunning	HasProperty	StateNumber	5	.PropertyType	
	FromTransition	Stopped		.InitialStateType	
	ToTransition	Running		.StateType	
StoppingToStopped	HasProperty	StateNumber	4	.PropertyType	
	FromTransition	Stopping		.StateType	
	ToTransition	Stopped		.InitialStateType	
AbortingToAborted	HasProperty	StateNumber	2	.PropertyType	
	FromTransition	Aborting		.StateType	
	ToTransition	Aborted		.StateType	
AbortedToClearing	HasProperty	StateNumber	1	.PropertyType	
	FromTransition	Aborted		.StateType	
	ToTransition	Clearing		.StateType	

Table 5 FunctionalStateMachineType transitions

3.2 ActiveProgramStateMachineType

Represents the state of the currently active program in a LADS Device

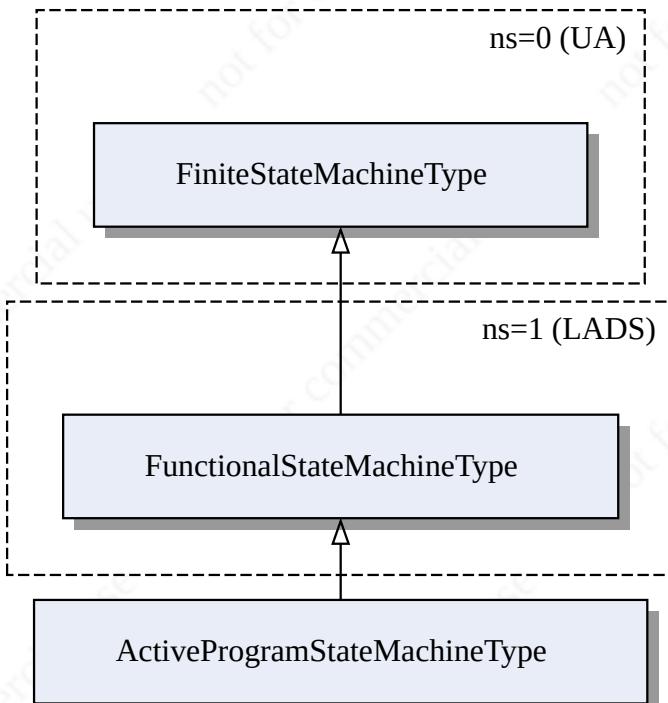


Fig. 4 hierarchy ActiveProgramStateMachineType

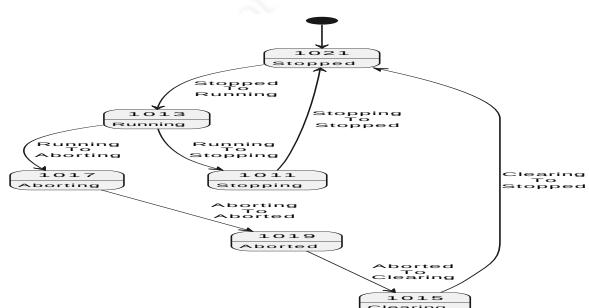


Fig. 5 ActiveProgramStateMachineType

Attribute	Value
BrowseName	1:ActiveProgramStateMachineType
IsAbstract	No
SubtypeOf	1:FunctionalStateMachineType

Table 6 ActiveProgramStateMachineType

Reference	NodeClass	BrowseName	ModellingRule	TypeDefinition	DataType
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Table 7 ActiveProgramStateMachineType references

3.2.1 States

BrowseName	References	Target BrowseName	Value	Target Type Definition	Notes
Aborted	HasProperty	StateNumber	1	.PropertyType	
	FromTransition	AbortedToClearing		TransitionType	
	ToTransition	AbortingToAborted		TransitionType	
Aborting	HasProperty	StateNumber	2	PropertyParams	
	FromTransition	AbortingToAborted		TransitionType	
	ToTransition	RunningToAborting		TransitionType	
Clearing	HasProperty	StateNumber	3	PropertyParams	
	FromTransition	ClearingToStopped		TransitionType	
	ToTransition	AbortedToClearing		TransitionType	
Stopped	HasProperty	StateNumber	4	PropertyParams	
	FromTransition	StoppedToRunning		TransitionType	
	ToTransition	ClearingToStopped		TransitionType	
Running	HasProperty	StateNumber	5	PropertyParams	
	FromTransition	RunningToStopping		TransitionType	
	FromTransition	RunningToAborting		TransitionType	
Stopping	HasProperty	StateNumber	6	PropertyParams	
	FromTransition	StoppingToStopped		TransitionType	
	ToTransition	RunningToStopping		TransitionType	

Table 8 ActiveProgramStateMachineType states

3.2.2 Transitions

BrowseName	References	Target BrowseName	Value	Target Type Definition	Notes
RunningToStopping	HasProperty	StateNumber	8	.PropertyType	
	FromTransition	Running		.StateType	
	ToTransition	Stopping		.StateType	
ClearingToStopped	HasProperty	StateNumber	7	.PropertyType	
	FromTransition	Clearing		.StateType	
	ToTransition	Stopped		.InitialStateType	
RunningToAborting	HasProperty	StateNumber	6	.PropertyType	
	FromTransition	Running		.StateType	
	ToTransition	Aborting		.StateType	
StoppedToRunning	HasProperty	StateNumber	5	.PropertyType	
	FromTransition	Stopped		.InitialStateType	
	ToTransition	Running		.StateType	
StoppingToStopped	HasProperty	StateNumber	4	.PropertyType	
	FromTransition	Stopping		.StateType	
	ToTransition	Stopped		.InitialStateType	
AbortingToAborted	HasProperty	StateNumber	2	.PropertyType	
	FromTransition	Aborting		.StateType	
	ToTransition	Aborted		.StateType	
AbortedToClearing	HasProperty	StateNumber	1	.PropertyType	
	FromTransition	Aborted		.StateType	
	ToTransition	Clearing		.StateType	

Table 9 ActiveProgramStateMachineType transitions

3.3 ControlFunctionStateMachineType

Represents the state of a Function in a LADS Device

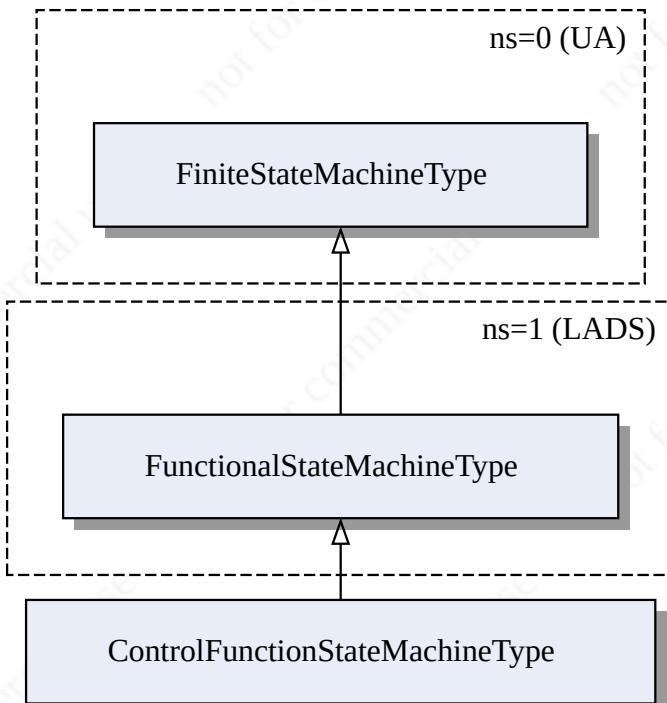


Fig. 6 hierarchy ControlFunctionStateMachineType

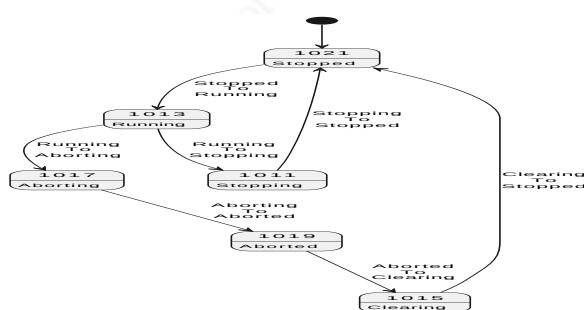


Fig. 7 ControlFunctionStateMachineType

Attribute	Value
BrowseName	1:ControlFunctionStateMachineType
IsAbstract	No
SubtypeOf	1:FunctionalStateMachineType

Table 10 ControlFunctionStateMachineType

Reference	NodeClass	BrowseName	ModellingRule	TypeDefinition	DataType
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Table 11 ControlFunctionStateMachineType references

3.3.1 States

BrowseName	References	Target BrowseName	Value	Target Type Definition	Notes
Aborted	HasProperty	StateNumber	1	.PropertyType	
	FromTransition	AbortedToClearing		TransitionType	
	ToTransition	AbortingToAborted		TransitionType	
Aborting	HasProperty	StateNumber	2	PropertyParams	
	FromTransition	AbortingToAborted		TransitionType	
	ToTransition	RunningToAborting		TransitionType	
Clearing	HasProperty	StateNumber	3	PropertyParams	
	FromTransition	ClearingToStopped		TransitionType	
	ToTransition	AbortedToClearing		TransitionType	
Stopped	HasProperty	StateNumber	4	PropertyParams	
	FromTransition	StoppedToRunning		TransitionType	
	ToTransition	ClearingToStopped		TransitionType	
Running	HasProperty	StateNumber	5	PropertyParams	
	FromTransition	RunningToStopping		TransitionType	
	FromTransition	RunningToAborting		TransitionType	
Stopping	HasProperty	StateNumber	6	PropertyParams	
	FromTransition	StoppingToStopped		TransitionType	
	ToTransition	RunningToStopping		TransitionType	

Table 12 ControlFunctionStateMachineType states

3.3.2 Transitions

BrowseName	References	Target BrowseName	Value	Target Type Definition	Notes
RunningToStopping	HasProperty	StateNumber	8	.PropertyType	
	FromTransition	Running		.StateType	
	ToTransition	Stopping		.StateType	
ClearingToStopped	HasProperty	StateNumber	7	.PropertyType	
	FromTransition	Clearing		.StateType	
	ToTransition	Stopped		.InitialStateType	
RunningToAborting	HasProperty	StateNumber	6	.PropertyType	
	FromTransition	Running		.StateType	
	ToTransition	Aborting		.StateType	
StoppedToRunning	HasProperty	StateNumber	5	.PropertyType	
	FromTransition	Stopped		.InitialStateType	
	ToTransition	Running		.StateType	
StoppingToStopped	HasProperty	StateNumber	4	.PropertyType	
	FromTransition	Stopping		.StateType	
	ToTransition	Stopped		.InitialStateType	
AbortingToAborted	HasProperty	StateNumber	2	.PropertyType	
	FromTransition	Aborting		.StateType	
	ToTransition	Aborted		.StateType	
AbortedToClearing	HasProperty	StateNumber	1	.PropertyType	
	FromTransition	Aborted		.StateType	
	ToTransition	Clearing		.StateType	

Table 13 ControlFunctionStateMachineType transitions

3.4 CoverStateMachineType

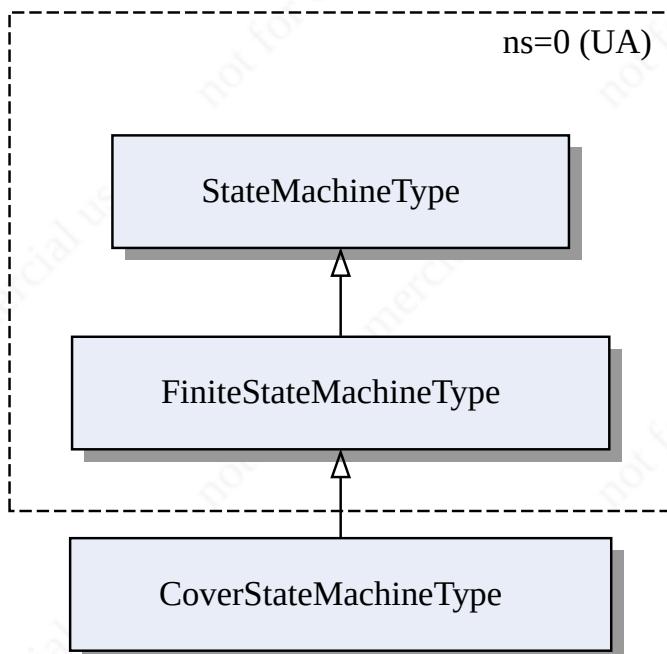


Fig. 8 hierarchy CoverStateMachineType

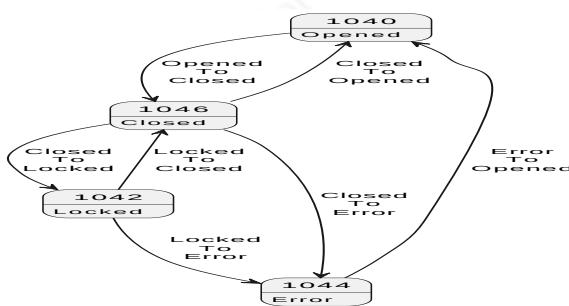


Fig. 9 CoverStateMachineType

Attribute	Value
BrowseName	1:CoverStateMachineType
IsAbstract	No
SubtypeOf	FiniteStateMachineType

Table 14 CoverStateMachineType

Reference	NodeClass	BrowseName	ModellingRule	TypeDefinition	DataType
Components					
HasComponent	Object	1:Opened		StateType	
HasComponent	Object	1:Locked		StateType	
HasComponent	Object	1:Error		StateType	
HasComponent	Object	1:Closed		StateType	
HasComponent	Object	1:ErrorToOpened		TransitionType	
HasComponent	Object	1:ClosedToError		TransitionType	
HasComponent	Object	1:LockedToError		TransitionType	
HasComponent	Object	1:LockedToClosed		TransitionType	
HasComponent	Object	1:ClosedToLocked		TransitionType	
HasComponent	Object	1:ClosedToOpened		TransitionType	
HasComponent	Object	1:OpenedToClosed		TransitionType	

Table 15 CoverStateMachineType references

3.4.1 States

BrowseName	References	Target BrowseName	Value	Target Type Definition	Notes
Closed	HasProperty	StateNumber	1	.PropertyType	
	FromTransition	ClosedToError		TransitionType	
	FromTransition	ClosedToLocked		TransitionType	
	FromTransition	ClosedToOpened		TransitionType	
	ToTransition	LockedToClosed		TransitionType	
	ToTransition	OpenedToClosed		TransitionType	
Error	HasProperty	StateNumber	2	.PropertyType	
	FromTransition	ErrorToOpened		TransitionType	
	ToTransition	ClosedToError		TransitionType	
	ToTransition	LockedToError		TransitionType	
Locked	HasProperty	StateNumber	3	PropertyParams	
	FromTransition	LockedToError		TransitionType	
	FromTransition	LockedToClosed		TransitionType	
	ToTransition	ClosedToLocked		TransitionType	
Opened	HasProperty	StateNumber	4	PropertyParams	
	FromTransition	OpenedToClosed		TransitionType	
	ToTransition	ErrorToOpened		TransitionType	
	ToTransition	ClosedToOpened		TransitionType	

Table 16 CoverStateMachineType states

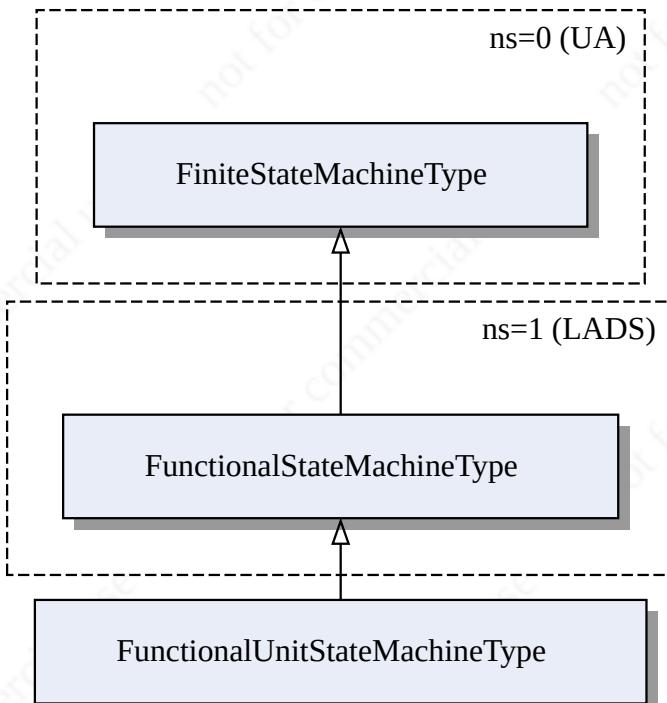
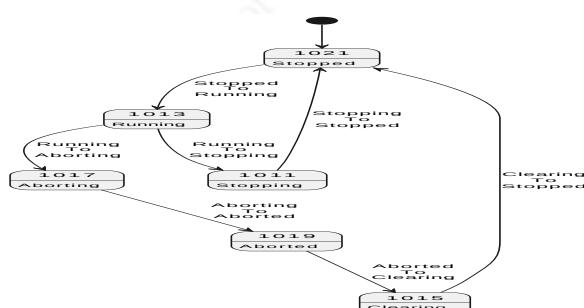
3.4.2 Transitions

BrowseName	References	Target BrowseName	Value	Target Type Definition	Notes
ErrorToOpened	HasProperty	StateNumber	7	.PropertyType	
	FromTransition	Error		.StateType	
	ToTransition	Opened		.StateType	
ClosedToError	HasProperty	StateNumber	6	.PropertyType	
	FromTransition	Closed		.StateType	
	ToTransition	Error		.StateType	
LockedToError	HasProperty	StateNumber	5	.PropertyType	
	FromTransition	Locked		.StateType	
	ToTransition	Error		.StateType	
LockedToClosed	HasProperty	StateNumber	4	.PropertyType	
	FromTransition	Locked		.StateType	
	ToTransition	Closed		.StateType	
ClosedToLocked	HasProperty	StateNumber	3	.PropertyType	
	FromTransition	Closed		.StateType	
	ToTransition	Locked		.StateType	
ClosedToOpened	HasProperty	StateNumber	2	.PropertyType	
	FromTransition	Closed		.StateType	
	ToTransition	Opened		.StateType	
OpenedToClosed	HasProperty	StateNumber	1	.PropertyType	
	FromTransition	Opened		.StateType	
	ToTransition	Closed		.StateType	

Table 17 CoverStateMachineType transitions

3.5 FunctionalUnitStateMachineType

Represents the state of a FunctionalUnit in a LADS Device

Fig. 10 hierarchy *FunctionalUnitStateMachineType*Fig. 11 *FunctionalUnitStateMachineType*

Attribute	Value
BrowseName	1:FunctionalUnitStateMachineType
IsAbstract	No
SubtypeOf	1:FunctionalStateMachineType

Table 18 *FunctionalUnitStateMachineType*

Reference	NodeClass	BrowseName	ModellingRule	TypeDefinition	DataType
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Table 19 *FunctionalUnitStateMachineType* references

3.5.1 States

BrowseName	References	Target BrowseName	Value	Target Type Definition	Notes
Aborted	HasProperty	StateNumber	1	.PropertyType	
	FromTransition	AbortedToClearing		TransitionType	
	ToTransition	AbortingToAborted		TransitionType	
Aborting	HasProperty	StateNumber	2	.PropertyType	
	FromTransition	AbortingToAborted		TransitionType	
	ToTransition	RunningToAborting		TransitionType	
Clearing	HasProperty	StateNumber	3	.PropertyType	
	FromTransition	ClearingToStopped		TransitionType	
	ToTransition	AbortedToClearing		TransitionType	
Stopped	HasProperty	StateNumber	4	PropertyParams	
	FromTransition	StoppedToRunning		TransitionType	
	ToTransition	ClearingToStopped		TransitionType	
Running	HasProperty	StateNumber	5	PropertyParams	
	FromTransition	RunningToStopping		TransitionType	
	FromTransition	RunningToAborting		TransitionType	
Stopping	HasProperty	StateNumber	6	PropertyParams	
	FromTransition	StoppingToStopped		TransitionType	
	ToTransition	RunningToStopping		TransitionType	

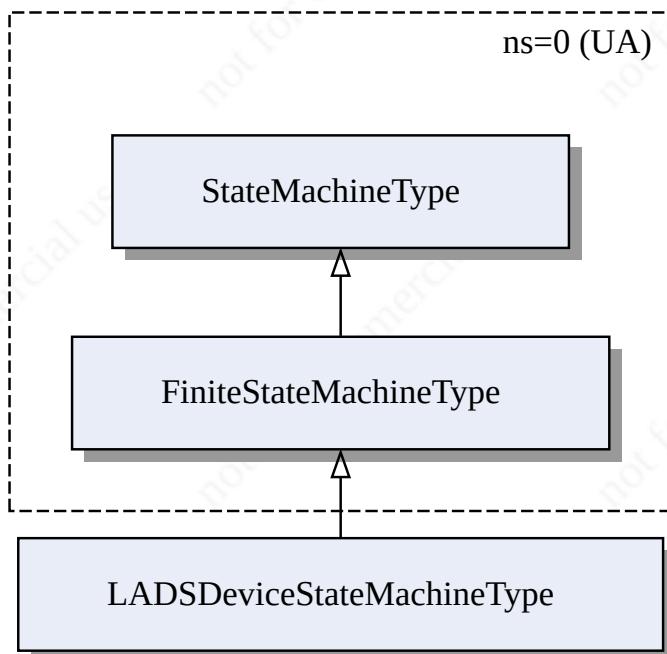
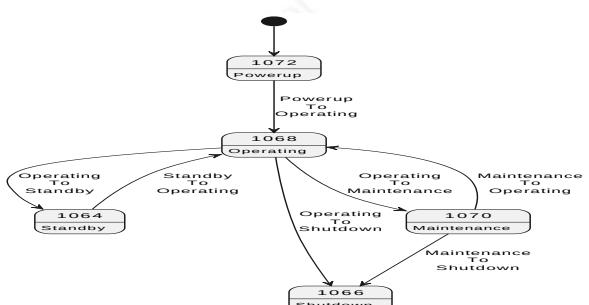
Table 20 FunctionalUnitStateMachineType states

3.5.2 Transitions

BrowseName	References	Target BrowseName	Value	Target Type Definition	Notes
RunningToStopping	HasProperty	StateNumber	8	.PropertyType	
	FromTransition	Running		.StateType	
	ToTransition	Stopping		.StateType	
ClearingToStopped	HasProperty	StateNumber	7	.PropertyType	
	FromTransition	Clearing		.StateType	
	ToTransition	Stopped		.InitialStateType	
RunningToAborting	HasProperty	StateNumber	6	.PropertyType	
	FromTransition	Running		.StateType	
	ToTransition	Aborting		.StateType	
StoppedToRunning	HasProperty	StateNumber	5	.PropertyType	
	FromTransition	Stopped		.InitialStateType	
	ToTransition	Running		.StateType	
StoppingToStopped	HasProperty	StateNumber	4	.PropertyType	
	FromTransition	Stopping		.StateType	
	ToTransition	Stopped		.InitialStateType	
AbortingToAborted	HasProperty	StateNumber	2	.PropertyType	
	FromTransition	Aborting		.StateType	
	ToTransition	Aborted		.StateType	
AbortedToClearing	HasProperty	StateNumber	1	.PropertyType	
	FromTransition	Aborted		.StateType	
	ToTransition	Clearing		.StateType	

Table 21 FunctionalUnitStateMachineType transitions

3.6 LADSDeviceStateMachineType

*Fig. 12 hierarchy LADSDeviceStateMachineType**Fig. 13 LADSDeviceStateMachineType*

Attribute	Value
BrowseName	1:LADSDeviceStateMachineType
IsAbstract	No
SubtypeOf	FiniteStateMachineType

Table 22 LADSDeviceStateMachineType

Reference	NodeClass	BrowseName	ModellingRule	TypeDefinition	DataType
Components					
HasComponent	Object	1:Standby		StateType	
HasComponent	Object	1:Shutdown		StateType	
HasComponent	Object	1:Operating		StateType	
HasComponent	Object	1:Maintenance		StateType	
HasComponent	Object	1:Powerup		InitialStateType	
HasComponent	Object	1:StandbyToOperating		TransitionType	
HasComponent	Object	1:PowerupToOperating		TransitionType	
HasComponent	Object	1:OperatingToStandby		TransitionType	
HasComponent	Object	1:OperatingToShutdown		TransitionType	
HasComponent	Object	1:OperatingToMaintenance		TransitionType	
HasComponent	Object	1:MaintenanceToShutdown		TransitionType	
HasComponent	Object	1:MaintenanceToOperating		TransitionType	

Table 23 LADSDeviceStateMachineType references

3.6.1 States

BrowseName	References	Target BrowseName	Value	Target Type Definition	Notes
Operating	HasProperty	StateNumber	1	.PropertyType	
	FromTransition	OperatingToStandby		TransitionType	
	FromTransition	OperatingToShutdown		TransitionType	
	FromTransition	OperatingToMaintenance		TransitionType	
	ToTransition	StandbyToOperating		TransitionType	
	ToTransition	PowerupToOperating		TransitionType	
Maintenance	ToTransition	MaintenanceToOperating		TransitionType	
	HasProperty	StateNumber	2	.PropertyType	
	FromTransition	MaintenanceToShutdown		TransitionType	
	FromTransition	MaintenanceToOperating		TransitionType	
Shutdown	ToTransition	OperatingToMaintenance		TransitionType	
	HasProperty	StateNumber	3	PropertyParams	
	ToTransition	OperatingToShutdown		TransitionType	
Powerup	ToTransition	MaintenanceToShutdown		TransitionType	
	HasProperty	StateNumber	4	PropertyParams	
	FromTransition	PowerupToOperating		TransitionType	
Standby	HasProperty	StateNumber	5	PropertyParams	
	FromTransition	StandbyToOperating		TransitionType	
	ToTransition	OperatingToStandby		TransitionType	

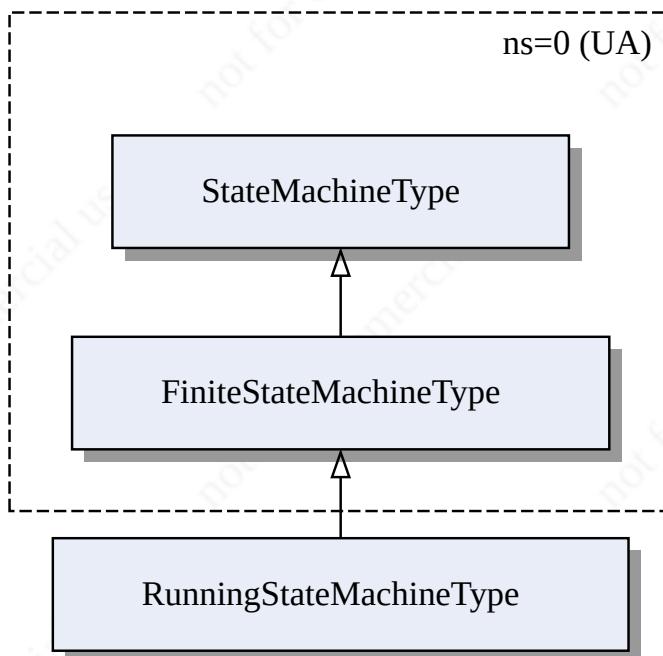
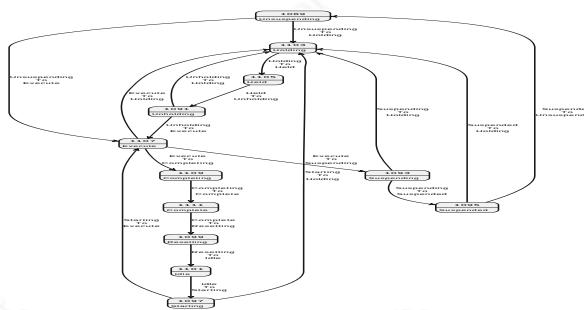
Table 24 LADSDeviceStateMachineType states

3.6.2 Transitions

BrowseName	References	Target BrowseName	Value	Target Definition	Type	Notes
StandbyToOperating	HasProperty	StateNumber	1	.PropertyType		
	FromTransition	Standby		.StateType		
	ToTransition	Operating		.StateType		
PowerupToOperating	HasProperty	StateNumber	7	.PropertyType		
	FromTransition	Powerup		.InitialStateType		
	ToTransition	Operating		.StateType		
OperatingToStandby	HasProperty	StateNumber	6	.PropertyType		
	FromTransition	Operating		.StateType		
	ToTransition	Standby		.StateType		
OperatingToShutdown	HasProperty	StateNumber	5	.PropertyType		
	FromTransition	Operating		.StateType		
	ToTransition	Shutdown		.StateType		
OperatingToMaintenance	HasProperty	StateNumber	4	.PropertyType		
	FromTransition	Operating		.StateType		
	ToTransition	Maintenance		.StateType		
MaintenanceToShutdown	HasProperty	StateNumber	3	.PropertyType		
	FromTransition	Maintenance		.StateType		
	ToTransition	Shutdown		.StateType		
MaintenanceToOperating	HasProperty	StateNumber	2	.PropertyType		
	FromTransition	Maintenance		.StateType		
	ToTransition	Operating		.StateType		

Table 25 LADSDeviceStateMachineType transitions

3.7 RunningStateMachineType

*Fig. 14 hierarchy RunningStateMachineType**Fig. 15 RunningStateMachineType*

Attribute	Value
BrowseName	1:RunningStateMachineType
IsAbstract	No
SubtypeOf	FiniteStateMachineType

Table 26 RunningStateMachineType

Table
27

Reference	NodeClass	BrowseName	ModellingRule	TypeDefinition	DataType
Components					
HasComponent	Object	1:Unsuspending		StateType	
HasComponent	Object	1:Unholding		StateType	
HasComponent	Object	1:Suspending		StateType	
HasComponent	Object	1:Suspended		StateType	
HasComponent	Object	1:Starting		StateType	
HasComponent	Object	1:Resetting		StateType	
HasComponent	Object	1:Idle		StateType	
HasComponent	Object	1:Holding		StateType	
HasComponent	Object	1:Held		StateType	
HasComponent	Object	1:Execute		StateType	
HasComponent	Object	1:Completing		StateType	
HasComponent	Object	1:Complete		StateType	
HasComponent	Object	1:UnholdingToHolding		TransitionType	
HasComponent	Object	1:UnsuspendingToHolding		TransitionType	
HasComponent	Object	1:SuspendedToHolding		TransitionType	
HasComponent	Object	1:StartingToHolding		TransitionType	
HasComponent	Object	1:SuspendingToHolding		TransitionType	
HasComponent	Object	1:UnholdingToExecute		TransitionType	
HasComponent	Object	1:HeldToUnholding		TransitionType	
HasComponent	Object	1:HoldingToHeld		TransitionType	
HasComponent	Object	1:ExecuteToHolding		TransitionType	
HasComponent	Object	1:UnsuspendingToExecute		TransitionType	
HasComponent	Object	1:SuspendedToUnsuspending		TransitionType	
HasComponent	Object	1:SuspendingToSuspended		TransitionType	
HasComponent	Object	1:ExecuteToSuspending		TransitionType	
HasComponent	Object	1:ResettingToIdle		TransitionType	
HasComponent	Object	1:CompleteToResetting		TransitionType	
HasComponent	Object	1:CompletingToComplete		TransitionType	
HasComponent	Object	1:ExecuteToCompleting		TransitionType	

Reference	NodeClass	BrowseName	ModellingRule	TypeDefinition	DataType
Components					
HasComponent	Object	1:Unsuspending		StateType	
HasComponent	Object	1:Unholding		StateType	
HasComponent	Object	1:Suspending		StateType	
HasComponent	Object	1:Suspended		StateType	
HasComponent	Object	1:Starting		StateType	
HasComponent	Object	1:Resetting		StateType	
HasComponent	Object	1:Idle		StateType	
HasComponent	Object	1:Holding		StateType	
HasComponent	Object	1:Held		StateType	
HasComponent	Object	1:Execute		StateType	
HasComponent	Object	1:Completing		StateType	
HasComponent	Object	1:Complete		StateType	
HasComponent	Object	1:UnholdingToHolding		TransitionType	
HasComponent	Object	1:UnsuspendingToHolding		TransitionType	
HasComponent	Object	1:SuspendedToHolding		TransitionType	
HasComponent	Object	1:StartingToHolding		TransitionType	
HasComponent	Object	1:SuspendingToHolding		TransitionType	
HasComponent	Object	1:UnholdingToExecute		TransitionType	
HasComponent	Object	1:HeldToUnholding		TransitionType	
HasComponent	Object	1:HoldingToHeld		TransitionType	
HasComponent	Object	1:ExecuteToHolding		TransitionType	
HasComponent	Object	1:UnsuspendingToExecute		TransitionType	
HasComponent	Object	1:SuspendedToUnsuspending		TransitionType	
HasComponent	Object	1:SuspendingToSuspected		TransitionType	
HasComponent	Object	1:ExecuteToSuspending		TransitionType	
HasComponent	Object	1:ResettingToIdle		TransitionType	
HasComponent	Object	1:CompleteToResetting		TransitionType	
HasComponent	Object	1:CompletingToComplete		TransitionType	
HasComponent	Object	1:ExecuteToCompleting		TransitionType	
HasComponent	Object	1:StartingToExecute		TransitionType	

HasComponent	Object	1:IdleToStarting	TransitionType	
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3.7.1 States

Table
29

BrowseName	References	Target BrowseName	Value	Target Type Definition	Notes
Complete	HasProperty	StateNumber	1	.PropertyType	
	FromTransition	CompleteToResetting		TransitionType	
	ToTransition	CompletingToComplete		TransitionType	
Completing	HasProperty	StateNumber	2	.PropertyType	
	FromTransition	CompletingToComplete		TransitionType	
	ToTransition	ExecuteToCompleting		TransitionType	
Execute	HasProperty	StateNumber	3	.PropertyType	
	FromTransition	ExecuteToHolding		TransitionType	
	FromTransition	ExecuteToSuspending		TransitionType	
	FromTransition	ExecuteToCompleting		TransitionType	
	ToTransition	UnholdingToExecute		TransitionType	
	ToTransition	UnsuspendingToExecute		TransitionType	
	ToTransition	StartingToExecute		TransitionType	
Held	HasProperty	StateNumber	4	.PropertyType	
	FromTransition	HeldToUnholding		TransitionType	
	ToTransition	HoldingToHeld		TransitionType	
Holding	HasProperty	StateNumber	5	.PropertyType	
	FromTransition	HoldingToHeld		TransitionType	
	ToTransition	UnholdingToHolding		TransitionType	
	ToTransition	UnsuspendingToHolding		TransitionType	
	ToTransition	SuspendedToHolding		TransitionType	
	ToTransition	StartingToHolding		TransitionType	
	ToTransition	SuspendingToHolding		TransitionType	
Idle	HasProperty	StateNumber	6	.PropertyType	
	FromTransition	IdleToStarting		TransitionType	
	ToTransition	ResettingToIdle		TransitionType	
Resetting	HasProperty	StateNumber	7	.PropertyType	
	FromTransition	ResettingToIdle		TransitionType	
	ToTransition	CompleteToResetting		TransitionType	

BrowseName	References	Target BrowseName	Value	Target Type Definition	Notes
Complete	HasProperty	StateNumber	1	.PropertyType	
	FromTransition	CompleteToResetting		TransitionType	
	ToTransition	CompletingToComplete		TransitionType	
Completing	HasProperty	StateNumber	2	.PropertyType	
	FromTransition	CompletingToComplete		TransitionType	
	ToTransition	ExecuteToCompleting		TransitionType	
Execute	HasProperty	StateNumber	3	.PropertyType	
	FromTransition	ExecuteToHolding		TransitionType	
	FromTransition	ExecuteToSuspending		TransitionType	
	FromTransition	ExecuteToCompleting		TransitionType	
	ToTransition	UnholdingToExecute		TransitionType	
	ToTransition	UnsuspendingToExecute		TransitionType	
	ToTransition	StartingToExecute		TransitionType	
Held	HasProperty	StateNumber	4	.PropertyType	
	FromTransition	HeldToUnholding		TransitionType	
	ToTransition	HoldingToHeld		TransitionType	
Holding	HasProperty	StateNumber	5	.PropertyType	
	FromTransition	HoldingToHeld		TransitionType	
	ToTransition	UnholdingToHolding		TransitionType	
	ToTransition	UnsuspendingToHolding		TransitionType	
	ToTransition	SuspendedToHolding		TransitionType	
	ToTransition	StartingToHolding		TransitionType	
	ToTransition	SuspendingToHolding		TransitionType	
Idle	HasProperty	StateNumber	6	.PropertyType	
	FromTransition	IdleToStarting		TransitionType	
	ToTransition	ResettingToIdle		TransitionType	
Resetting	HasProperty	StateNumber	7	.PropertyType	
	FromTransition	ResettingToIdle		TransitionType	
	ToTransition	CompleteToResetting		TransitionType	

	FromTransition	StartingToHolding		TransitionType
	FromTransition	StartingToExecute		TransitionType
	ToTransition	IdleToStarting		TransitionType
Suspended	HasProperty	StateNumber	9	.PropertyType
	FromTransition	SuspendedToHolding		TransitionType
	FromTransition	SuspendedToUnsuspending		TransitionType
	ToTransition	SuspendingToSuspended		TransitionType
Suspending	HasProperty	StateNumber	10	PropertyParams
	FromTransition	SuspendingToHolding		TransitionType
	FromTransition	SuspendingToSuspended		TransitionType
	ToTransition	ExecuteToSuspending		TransitionType
Unholding	HasProperty	StateNumber	11	PropertyParams
	FromTransition	UnholdingToHolding		TransitionType
	FromTransition	UnholdingToExecute		TransitionType
	ToTransition	HeldToUnholding		TransitionType
Unsuspending	HasProperty	StateNumber	12	PropertyParams
	FromTransition	UnsuspendingToHolding		TransitionType
	FromTransition	UnsuspendingToExecute		TransitionType
	ToTransition	SuspendedToUnsuspending		TransitionType

3.7.2 Transitions

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BrowseName	References	Target BrowseName	Value	Target Definition	Type	Notes
UnholdingToHolding	HasProperty	StateNumber	19	.PropertyType		
	FromTransition	Unholding		.StateType		
	ToTransition	Holding		.StateType		
UnsuspendingToHolding	HasProperty	StateNumber	18	.PropertyType		
	FromTransition	Unsuspending		.StateType		
	ToTransition	Holding		.StateType		
SuspendedToHolding	HasProperty	StateNumber	17	.PropertyType		
	FromTransition	Suspended		.StateType		
	ToTransition	Holding		.StateType		
StartingToHolding	HasProperty	StateNumber	16	.PropertyType		
	FromTransition	Starting		.StateType		
	ToTransition	Holding		.StateType		
SuspendingToHolding	HasProperty	StateNumber	15	.PropertyType		
	FromTransition	Suspending		.StateType		
	ToTransition	Holding		.StateType		
UnholdingToExecute	HasProperty	StateNumber	14	.PropertyType		
	FromTransition	Unholding		.StateType		
	ToTransition	Execute		.StateType		
HeldToUnholding	HasProperty	StateNumber	13	.PropertyType		
	FromTransition	Held		.StateType		
	ToTransition	Unholding		.StateType		
HoldingToHeld	HasProperty	StateNumber	12	.PropertyType		
	FromTransition	Holding		.StateType		
	ToTransition	Held		.StateType		
ExecuteToHolding	HasProperty	StateNumber	11	.PropertyType		
	FromTransition	Execute		.StateType		
	ToTransition	Holding		.StateType		
UnsuspendingToExecute	HasProperty	StateNumber	10	PropertyParams		
	FromTransition	Unsuspending		.StateType		
	ToTransition					

BrowseName	References	Target BrowseName	Value	Target Definition	Type	Notes
UnholdingToHolding	HasProperty	StateNumber	19	.PropertyType		
	FromTransition	Unholding		.StateType		
	ToTransition	Holding		.StateType		
UnsuspendingToHolding	HasProperty	StateNumber	18	.PropertyType		
	FromTransition	Unsuspending		.StateType		
	ToTransition	Holding		.StateType		
SuspendedToHolding	HasProperty	StateNumber	17	.PropertyType		
	FromTransition	Suspended		.StateType		
	ToTransition	Holding		.StateType		
StartingToHolding	HasProperty	StateNumber	16	.PropertyType		
	FromTransition	Starting		.StateType		
	ToTransition	Holding		.StateType		
SuspendingToHolding	HasProperty	StateNumber	15	.PropertyType		
	FromTransition	Suspending		.StateType		
	ToTransition	Holding		.StateType		
UnholdingToExecute	HasProperty	StateNumber	14	.PropertyType		
	FromTransition	Unholding		.StateType		
	ToTransition	Execute		.StateType		
HeldToUnholding	HasProperty	StateNumber	13	.PropertyType		
	FromTransition	Held		.StateType		
	ToTransition	Unholding		.StateType		
HoldingToHeld	HasProperty	StateNumber	12	.PropertyType		
	FromTransition	Holding		.StateType		
	ToTransition	Held		.StateType		
ExecuteToHolding	HasProperty	StateNumber	11	.PropertyType		
	FromTransition	Execute		.StateType		
	ToTransition	Holding		.StateType		
UnsuspendingToExecute	HasProperty	StateNumber	10	PropertyParams		
	FromTransition	Unsuspending		.StateType		
	ToTransition	Execute		.StateType		

SuspendedToUnsuspending	HasProperty	StateNumber	9	PropertyParams
	FromTransition	Suspended		StateType
	ToTransition	Unsuspending		StateType
SuspendingToSuspended	HasProperty	StateNumber	8	PropertyParams
	FromTransition	Suspending		StateType
	ToTransition	Suspended		StateType
ExecuteToSuspending	HasProperty	StateNumber	7	PropertyParams
	FromTransition	Execute		StateType
	ToTransition	Suspending		StateType
ResettingToIdle	HasProperty	StateNumber	6	PropertyParams
	FromTransition	Resetting		StateType
	ToTransition	Idle		StateType
CompleteToResetting	HasProperty	StateNumber	5	PropertyParams
	FromTransition	Complete		StateType
	ToTransition	Resetting		StateType
CompletingToComplete	HasProperty	StateNumber	4	PropertyParams
	FromTransition	Completing		StateType
	ToTransition	Complete		StateType
ExecuteToCompleting	HasProperty	StateNumber	3	PropertyParams
	FromTransition	Execute		StateType
	ToTransition	Completing		StateType
StartingToExecute	HasProperty	StateNumber	2	PropertyParams
	FromTransition	Starting		StateType
	ToTransition	Execute		StateType
IdleToStarting	HasProperty	StateNumber	1	PropertyParams
	FromTransition	Idle		StateType
	ToTransition	Starting		StateType