



## **Application Descriptions**

**7**

### **Common Functional Blocks**

**1**

### **Common Sensors**

**2**

## **Supplement 1 LTE-Mode Extensions**

### **Summary**

This document defines the LTE-Mode extensions to the common sensors FBs.

Version 01.01.04 is a KNX Approved Standard.

This document is part of the KNX Specifications v2.1.

## Document updates

Version	Date	Modifications
AN140 v01	2011.08.04	Preparation of the Draft Proposal.
AN140 v02	2011.09.09	Voting comments included.
AN140 v02	2011.10.27	Preparation of the Draft for Voting.
7/1/2 S1 v01.00.00	2012.03.15	Publication as Chapter 7/1/2 Supplement 1 “Common Sensors – LTE-Mode Extensions”
01.01.03	2013.10.29	Editorial updates for the publication of KNX Specifications 2.1.
01.01.04	2013.12.10	Final editorial review in view of publication of the KNX Specifications v2.1.

## References

[01] Chapter 7/1/2 “Common Sensors”

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## Notes

- The contents of this document are extensions to the specification of FB Scene Sensor in [01].
- The definitions of the LTE-Mode runtime process data are derived to a large extent from the Standard Mode definitions.
- In this document some additional parameters are defined which will be inherited in the Standard Mode definition.
- Property Identifier for LTE-Mode runtime process data are normally assigned in the range of PID 51 to 100 starting with PID 51. Whereas PID for parameters and diagnostic properties are assigned in the range of PID 101 to 150. However [01] the PID range starting from PID 51 was used for Parameters. Therefore definitions of LTE-Mode process data start with PID 61.

## Abbreviations

COV	Change Of Value
IR	LTE-Mode InfoReport service
SCS	Scene Sensor
LTE-Mode	Logical Tag Extended Easy Mode

# 1 FB Scene Sensor

## 1.1 Aims and objectives

The definitions in this document for FB Scene Sensor (SCS) are an add-on to the FB-specification in [01] to describe the LTE-Mode runtime interface and LTE-Mode specific parameters of FB SCS.

The FB SCS shall be used to call and teach-in scenes in other FBs.

The FB SCS is used in the Application Domain of Room Automation for providing scene control data to:

- Lighting, shutter & blinds, HVAC actuators (direct sensor – actuator communication)
- or to provide scene control data to e.g. Room Controllers (sensor – controller – actuator communication)

The runtime data interface and parameters of FB SCS are specified in this document but not the Human Machine Interface (HMI) and local mechanisms to trigger scene control messages. Consequently, the manufacturers of scene sensors have the possibility to implement their design and their operation methods.

## 1.2 Functional specification

### 1.2.1 Overview

The FB Scene Sensor supports 2 basic mechanisms to call/teach-in scenes.

- **Numbered scene** (mandatory)  
Trigger to recall/teach- in one out of a defined set of predefined scenes according to a scene number.  
  
Up to 64 scenes are supported by the SCS model.  
  
The actuator setpoints related to a scene number may be stored locally in the actuators or centrally in a room controller
- **1 Bit scene** (optionally supported)  
Trigger to recall/teach- in one out of two predefined scenes A / B. The related setpoints to scene A and B may be stored locally in the actuators or centrally in a room controller

In the LTE-Mode implementation of SCS, the following applies.

- *NumberedSceneControl* process signal is generally used to recall and to teach-in numbered scenes.
- The alternative process signal *SceneNumber* (to recall scenes only) is not supported.

It is optionally allowed that the functionality of SCS is solely limited to recalling scenes without teaching, under the condition that the configuration parameter *SceneTeachingEnable* is implemented to disable teach-in functionality globally on the SCS for all scenes.

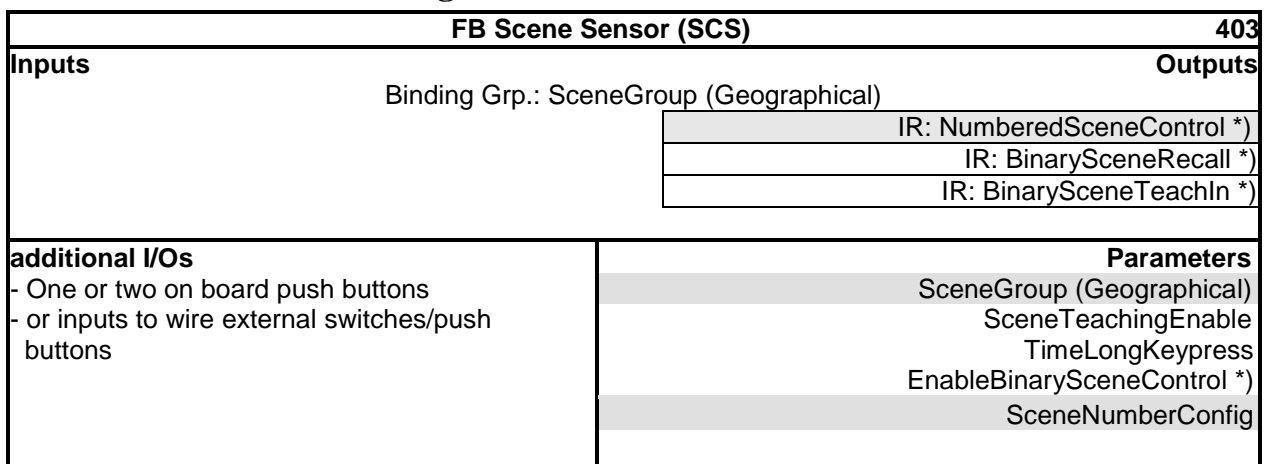
Parameter *SceneNumberConfig* defines for each scene,

- whether or not the scene is active and
- whether or not the teach-in function is enabled.

Binding of SCS and the corresponding actuator - or controller FBs is based on LTE-Mode zoning concepts. Scene control information is exchanged according to LTE-Mode mechanisms in a common *SceneGroup*.

In the LTE-Mode runtime system *SceneGroup* is mapped to existing LTE-Mode Geographical zones.

### 1.3 Functional Block diagram



mandatory



optional

IR: LTE-Mode InfoReport

\*) either numbered scene control or binary scene control shall be activated. If optional binary scene control function is implemented, the parameter EnableBinarySceneControl is mandatory to activate binary scene control and deactivate numbered scene control and vice versa.

Figure 1 – Functional Block Diagram for FB Scene Sensor

### 1.4 Datapoints

Datapoint	Description	Datapoint Type	SCS PID
<b>Outputs</b>			
NumberedSceneControl	Output signal to recall or teach-in a scene identified by the contained scene number	DPT_SceneControl (18.001)	61
BinarySceneRecall	Output signal to recall one out of two scenes (A/B)	DPT_Scene_AB (1.022)	62
BinarySceneTeachIn	Output signal to teach-in one out of two scenes (A/B)	DPT_Scene_AB (1.022)	63
<b>Inputs</b>			
--			
<b>Parameters</b>			
SceneGroup (3 Properties)	LTE-Mode Geographical Zone		
	Building zone like Floor, Apartment	DPT_UcountValue8_Z (202.002)	101
	Room within the Building zone	DPT_UcountValue8_Z (202.002)	102
	Subzone within the Room	DPT_UcountValue8_Z (202.002)	103
SceneTeachingEnable	Parameter to enable/disable globally the teach-in functionality of SCS	DPT_Enable (1.003)	51

Datapoint	Description	Datapoint Type	SCS PID
TimeLongKeypress	Time to detect long key press to trigger the teach-in command <ul style="list-style-type: none"> <li>- range: 0,3 s to 7 s</li> <li>- resolution: 100 ms</li> </ul>	DPT_TimePeriod100Msec (7.004)	122
EnableBinarySceneControl	If optional binary scene control function is implemented, this parameter is mandatory to activate binary scene control and deactivate numbered scene control and vice versa <ul style="list-style-type: none"> <li>- 0: numbered scene control</li> <li>- 1: binary scene control</li> </ul>	DPT_Enable (1.003)	110
SceneNumberConfig[n]	List of Scene Numbers that are supported by FB SCS. SceneNumberConfig is a single parameter or parameter set (array Property) to configure the features (scene active/inactive and teach-in feature enabled/disabled) and the scene number to be transmitted for each scene: <ul style="list-style-type: none"> <li>- 1 scene number in case of single push-button interface.</li> <li>- 2 scene numbers in case of a dual push-button interface.</li> <li>- n scene numbers in case of a more flexible HMI.</li> </ul>	DPT_SceneConfig (238.001)  Implementation of this Property (single parameter or array Property) depends on the functionality of the SCS and the number of scenes to be supported by the user interface	111

**Table 1- LTE-Mode specific Properties**

		Support
Parameter	SceneGroup	M

**Table 2 - Standard Properties of Interface Object**

		Support
Parameter	SceneTeachingEnable	O
	TimeLongKeypress	O
	EnableBinarySceneControl	C
	SceneNumberConfig	M
Diagnostic Data	--	

## 1.5 Detailed specification of the Datapoints

### 1.5.1 Output NumberedSceneControl

<b>FB:</b>	SCS	<b>LTE-Mode Server Output Name:</b>	NumberedSceneControl		Mandatory	<input checked="" type="checkbox"/>	Optional	<input type="checkbox"/>
<b>Description:</b>								
<p>This output shall be used to recall or teach-in a scene identified by the contained field <i>SceneNumber</i> (0 to 63). The maximum scene number that is supported is company specific.</p> <p>The mapping of user interactions (via push buttons, on the HMI, etc.) to the scene number value is product specific and may be controlled by the <i>SceneNumberConfig</i> parameter.</p>								
<b>DPT:</b>	Name	DPT_SceneControl	DPT ID	18.001	Datatype format	B <sub>1</sub> r <sub>1</sub> U <sub>6</sub>		
Field	Description		Sup.	Range	Unit	COV	Default	
c	Control information to recall or teach-in of the scene corresponding to the field <i>SceneNumber</i> : 0: recall command 1: teach-in command		M	{0, 1}	-	-	-	
SceneNumber	Selects the number of the scene to be controlled		M	[0 to 63]	-	-	-	
<b>Communication:</b>								
<b>Binding Group:</b>								
Class		Type			Default			
Geographical <input checked="" type="checkbox"/>		BuildingZone.Room.Subzone			cs (see parameter SceneGroup)			
Application Specific <input type="checkbox"/>								
Unassigned <input type="checkbox"/>		Broadcast <input type="checkbox"/> Configurable <input type="checkbox"/>						
<b>DP Address:</b>		IO Type(ID):		403 (SCS)	Property ID:		61	
<b>LTE-Mode-Services (event):</b>		COV <input checked="" type="checkbox"/>		MinRepTime:	-- sec	Heartbeat:	-- min	
InfoReport <input checked="" type="checkbox"/>		Output per default communicating <input checked="" type="checkbox"/>		Binding Group Wildcard allowed <input checked="" type="checkbox"/>				
(LTE-Mode Read-Response polling of the output shall always be supported)		Tx Prio:		High <input type="checkbox"/>	Normal <input checked="" type="checkbox"/>	Low <input type="checkbox"/>		
		Transm after Powerup: Stored Value <input type="checkbox"/> Act Value <input type="checkbox"/> Default Value <input type="checkbox"/>						
<b>Property-Service (individual access):</b>		Read only <input checked="" type="checkbox"/>		Read/Write <input type="checkbox"/>				
<b>Exception Handling:</b>						Save at Powerdown <input type="checkbox"/>		
--								
<b>Special Features:</b>								
<ul style="list-style-type: none"> <li>- It is optionally allowed that the functionality of SCS is solely limited to recalling numbered scenes without teaching, under the condition that the Parameter <i>SceneTeachingEnable</i> is implemented. If <i>SceneTeachingEnable</i> = "Disable", the c field shall be always '0'.</li> <li>- This Output may be activated and deactivated by the Parameter <i>EnableBinarySceneControl</i>. The <i>NumberedSceneControl</i> Output is deactivated if the binary scene control function is implemented and activated.</li> <li>- There shall be no spontaneous transmission of a default value after power-return. The transmission shall be triggered by user interaction only.</li> <li>- Interpretation of a scene number and the corresponding scene functions are usually restricted to a single room. Therefore LTE-Mode Wildcard addressing on 'BuildingZone' and 'Room' is usually not meaningful. However LTE-Mode Wildcard addressing on 'Subzone' is appropriate.</li> </ul>								

### 1.5.2 Output BinarySceneRecall

<b>FB:</b>	SCS	<b>LTE-Mode Server Output Name:</b>	BinarySceneRecall		Mandatory	<input type="checkbox"/>
					Optional	<input checked="" type="checkbox"/>
<b>Description:</b>						
<p>This trigger output shall be used to recall one out of two possible scenes (A/B).          The mapping of user interaction (via push buttons, on the HMI, etc.) to the Scene value A or B is product specific and controlled by the Parameter <i>SceneNumberConfig</i>.</p>						
<b>DPT:</b>	Name	DPT_Scene_AB	DPT ID	1.022	Datatype format	B <sub>1</sub>
Field		Description	Sup.	Range	Unit	COV
b		Control information to encode the scene to be recalled: 0: scene A 1: scene B	M	{0, 1}	-	-
<b>Communication:</b>						
<b>Binding Group:</b>						
Class		Type		Default		
Geographical <input checked="" type="checkbox"/>		BuildingZone.Room.Subzone		cs (see parameter SceneGroup)		
Application Specific <input type="checkbox"/>						
Unassigned <input type="checkbox"/>		Broadcast <input type="checkbox"/> Configurable <input type="checkbox"/>				
<b>DP Address:</b>		IO Type(ID): 403 (SCS)		Property ID: 62		
<b>LTE-Mode-Services (event):</b>		COV <input checked="" type="checkbox"/> MinRepTime: -- sec Heartbeat: -- min		Output per default communicating <input checked="" type="checkbox"/> Binding Group Wildcard allowed <input checked="" type="checkbox"/>		
InfoReport <input checked="" type="checkbox"/> (LTE-Mode Read-Response polling of the output shall always be supported)		Tx Prio: High <input type="checkbox"/> Normal <input checked="" type="checkbox"/> Low <input type="checkbox"/>		Transm after Powerup: Stored Value <input type="checkbox"/> Act Value <input type="checkbox"/> Default Value <input type="checkbox"/>		
<b>Property-Service (individual access):</b>		Read only <input checked="" type="checkbox"/> Read/Write <input type="checkbox"/>				
<b>Exception Handling:</b>					Save at Powerdown <input type="checkbox"/>	
--						
<b>Special Features:</b>						
<ul style="list-style-type: none"> <li>- This Output shall be activated and deactivated by the parameter <i>EnableBinarySceneControl</i>.</li> <li>- No spontaneous transmission of a default value after power-return. Transmission shall be triggered by user interaction only.</li> <li>- Interpretation of a scene number and the corresponding scene functions are usually restricted to a single room. Therefore LTE-Mode Wildcard addressing on 'BuildingZone' and 'Room' is usually not meaningful. However LTE-Mode Wildcard addressing on 'Subzone' is appropriate.</li> </ul>						



### 1.5.3 Output BinarySceneTeachIn

<b>FB:</b>	SCS	<b>LTE-Mode Server Output Name:</b>	BinarySceneTeachIn			<b>Mandatory</b>	<input type="checkbox"/>	<b>Optional</b>	<input checked="" type="checkbox"/>
<b>Description:</b>									
<p>This trigger Output shall be used to teach-in one out of two possible scenes (A/B).          The mapping of user interaction (via push buttons, on the HMI, etc.) to the Scene value A or B to be learned is product specific and controlled by the Parameter <i>SceneNumberConfig</i>.</p>									
<b>DPT:</b>	Name	DPT_Scene_AB	DPT ID	1.022	Datatype format	B <sub>1</sub>			
Field b	Description Control information to encode the scene to be learned: 0: scene A 1: scene B		Sup. M	Range {0, 1}	Unit -	COV -	Default -		
<b>Communication:</b>									
<b>Binding Group:</b>									
Class		Type				Default			
Geographical <input checked="" type="checkbox"/>		BuildingZone.Room.Subzone				cs (see parameter SceneGroup)			
Application Specific <input type="checkbox"/>									
Unassigned <input type="checkbox"/>		Broadcast <input type="checkbox"/>		Configurable <input type="checkbox"/>					
<b>DP Address:</b>		IO Type(ID):		403(SCS)	Property ID:		63		
<b>LTE-Mode-Services (event):</b>		COV <input checked="" type="checkbox"/>		MinRepTime: -- sec		Heartbeat: -- min			
InfoReport <input checked="" type="checkbox"/>		Output per default communicating <input checked="" type="checkbox"/>		Binding Group Wildcard allowed <input checked="" type="checkbox"/>					
(LTE-Mode Read-Response polling of the output shall always be supported)		Tx Prio: High <input type="checkbox"/>		Normal <input checked="" type="checkbox"/>		Low <input type="checkbox"/>			
		Transm after Powerup: Stored Value <input type="checkbox"/> Act Value <input type="checkbox"/> Default Value <input type="checkbox"/>							
<b>Property-Service (individual access):</b>		Read only <input checked="" type="checkbox"/>		Read/Write <input type="checkbox"/>					
<b>Exception Handling:</b>						Save at Powerdown <input type="checkbox"/>			
<p>- Implementation of this Output depends on the implementation of <i>BinarySceneRecall</i>.          - If the parameter <i>SceneTeachingEnable</i> = "Disable", this Output shall be inactive.</p>									
<b>Special Features:</b>									
<ul style="list-style-type: none"> <li>- This Output shall be activated and deactivated by the Parameter <i>EnableBinarySceneControl</i>.</li> <li>- No spontaneous transmission of a default value after power-return. Transmission shall be triggered by user interaction only</li> <li>- Interpretation of a scene number and the corresponding scene functions are usually restricted to a single room. Therefore LTE-Mode Wildcard addressing on 'BuildingZone' and 'Room' is usually not meaningful. However LTE-Mode Wildcard addressing on 'Subzone' is appropriate.</li> </ul>									

## 1.5.4 Parameter-set SceneGroup

### 1.5.4.1 General requirement

*SceneGroup* is implemented using the LTE-Mode Geographical zone concept. It consists of 3 Properties belonging together.

### 1.5.4.2 Parameter BuildingZone

FB:	SCS	Property Name (Server):	SceneGroup.BuildingZone				Mandatory	<input checked="" type="checkbox"/>
							Optional	<input type="checkbox"/>
Description:								
Part of SceneGroup Parameter set mapped to LTE-Mode Geographical zone: → BuildingEntity (Floor, Apartment, Building section etc.)								
DPT:	Name	DPT_UcountValue8_Z	DPT ID	202.002	Datatype format		U <sub>8</sub> Z <sub>8</sub>	
Field		Description			Sup.	Range	Unit	Default
CounterValue		Number of the BuildingZone			M	1 to 126	--	cs
Status - OutOfService - all other flags		zone active /inactive not supported, fixed to '0'			O NA	true/false	bitset	cs
Command - NormalWrite - SetOSV & ResetOSV - all other commands		set zone inactive / active not supported			M O NA		enum	
Communication:								
DP Address: (in the server)		IO Type(ID):	403 (SCS)	Property ID:		101		
		Start-Index:	1	N° of elements		1		
Property access:		Read only <input type="checkbox"/>	Read/Write <input checked="" type="checkbox"/>					
Protection		Read level	--	Write level		--		
Exception Handling:		Value after Powerup:	Stored Value <input checked="" type="checkbox"/>	Act Value <input type="checkbox"/>	Default Value <input type="checkbox"/>			
--								
Special Features:								
SCS runtime Datapoints are not LTE-Mode communicating if zone is 'OutOfService'. If Parameter BuildingZone is 'OutOfService' also the corresponding Room and Subzone Parameters are 'OutOfService' (common flag).								

### 1.5.4.3 Parameter Room

<b>FB:</b> SCS	<b>Property Name (Server):</b> SceneGroup.Room		Mandatory <input checked="" type="checkbox"/>		Optional <input type="checkbox"/>	
<b>Description:</b>						
Part of SceneGroup Parameter set mapped to LTE-Mode Geographical zone: → Room within BuildingZone.						
<b>DPT:</b>	Name	DPT_UcountValue8_Z	DPT ID	202.002	Datatype format	U <sub>8</sub> Z <sub>8</sub>
Field	Description			Sup.	Range	Unit Default
CounterValue	Room number			M	1 to 63	-- cs
Status - OutOfService - all other flags	zone active /inactive not supported, fixed to '0'			O NA	true/false	bitset cs
Command - NormalWrite - SetOSV & ResetOSV - all other commands	set zone inactive / active not supported			M O NA		enum
<b>Communication:</b>						
<b>DP Address:</b> (in the server)		IO Type(ID):	403 (SCS)	Property ID:	102	
		Start-Index:	1	N° of elements	1	
<b>Property access:</b>		Read only <input type="checkbox"/>	Read/Write <input checked="" type="checkbox"/>			
<b>Protection</b>		Read level	--	Write level	--	
<b>Exception Handling:</b> Value after Powerup: Stored Value <input checked="" type="checkbox"/> Act Value <input type="checkbox"/> Default Value <input type="checkbox"/>						
--						
<b>Special Features:</b>						
SCS runtime Datapoints are not LTE-Mode communicating if zone is 'OutOfService'. If Parameter BuildingZone is 'OutOfService' also the corresponding Room and Subzone Parameters are 'OutOfService' (common flag).						

### 1.5.4.4 Parameter Subzone

<b>FB:</b> SCS	<b>Property Name (Server):</b> SceneGroup.Subzone		Mandatory <input checked="" type="checkbox"/>		Optional <input type="checkbox"/>	
<b>Description:</b>						
Part of SceneGroup Parameter set mapped to LTE-Mode Geographical zone: → Subzone within BuildingZone.Room.						
<b>DPT:</b>	Name	DPT_UcountValue8_Z	DPT ID	202.002	Datatype format	U <sub>8</sub> Z <sub>8</sub>
Field	Description			Sup.	Range	Unit Default
CounterValue	Subzone number			M	1 to 15	-- cs
Status - OutOfService - all other flags	zone active /inactive not supported, fixed to '0'			O NA	true/false	bitset cs
Command - NormalWrite - SetOSV & ResetOSV - all other commands	set zone inactive / active not supported			M O NA		enum
<b>Communication:</b>						
<b>DP Address:</b> (in the server)		IO Type(ID):	403 (SCS)	Property ID:	103	
		Start-Index:	1	N° of elements	1	
<b>Property access:</b>		Read only <input type="checkbox"/>	Read/Write <input checked="" type="checkbox"/>			
<b>Protection</b>		Read level	--	Write level	--	
<b>Exception Handling:</b> Value after Powerup: Stored Value <input checked="" type="checkbox"/> Act Value <input type="checkbox"/> Default Value <input type="checkbox"/>						
--						
<b>Special Features:</b>						
SCS runtime Datapoints are not LTE-Mode communicating if zone is 'OutOfService'. If Parameter BuildingZone is 'OutOfService' also the corresponding Room and Subzone Parameters are 'OutOfService' (common flag).						

### 1.5.5 Parameter SceneTeachingEnable

FB:	SCS	Property Name (Server):	SceneTeachingEnable				Mandatory	<input type="checkbox"/>	
							Optional	<input checked="" type="checkbox"/>	
Description:									
This Parameter allows limiting the functionality of the scene control Outputs to only calling scenes without the functionality to teach scenes. If this Parameter is not implemented then the Outputs shall be implemented without limitation.									
DPT:	Name	DPT_Enable	DPT ID	1.003	Datatype format	B <sub>1</sub>			
Field	Description				Sup.	Range	Unit	Default	
b	Setting whether teaching of scenes shall be enabled or not.				M	{0, 1}	none	enabled	
Communication:									
DP Address: (in the server)		IO Type(ID):	403 (SCS)	Property ID:		51 <sup>*)</sup>			
		Start-Index:	1	N° of elements		1			
Property access:		Read only	<input type="checkbox"/>	Read/Write		<input checked="" type="checkbox"/>			
Protection		Read level	--	Write level		--			
Exception Handling:		Value after Powerup:	Stored Value	<input checked="" type="checkbox"/>	Act Value	<input type="checkbox"/>	Default Value		<input type="checkbox"/>
--									
Special Features:									
*) PID is kept to ensure compatibility with existing implementations.									

### 1.5.6 Parameter TimeLongKeypress

FB:	SCS	Property Name (Server):	TimeLongKeypress			Mandatory	<input type="checkbox"/>	
						Optional	<input checked="" type="checkbox"/>	
Description:								
Time to detect long key press 0,3 s to 7 s to change SCS from calling a scene to trigger the teach-in command								
DPT:	Name	DPT_TimePeriod100Msec	DPT ID	7.004	Datatype format	U <sub>16</sub>		
Field	Description			Sup.	Range	Unit	Default	
Timer value	Time indication with 100 ms resolution			M	300 to 7000	ms	cs	
Communication:								
DP Address: (in the server)		IO Type(ID):	403 (SCS)	Property ID:	122			
		Start-Index:	1	N° of elements	1			
Property access:		Read only	<input type="checkbox"/>	Read/Write	<input checked="" type="checkbox"/>			
Protection		Read level	--	Write level	--			
Exception Handling:		Value after Powerup:	Stored Value	<input checked="" type="checkbox"/>	Act Value	<input type="checkbox"/>	Default Value	<input type="checkbox"/>
--								
Special Features:								
--								

### 1.5.7 Parameter EnableBinarySceneControl

<b>FB:</b>	SCS	<b>Property Name (Server):</b>	EnableBinarySceneControl		<b>Mandatory</b>	<input type="checkbox"/>	<b>Optional</b>	<input checked="" type="checkbox"/> *)
<b>Description:</b>								
Parameter to activate binary scene control and deactivate numbered scene control and vice versa.								
<b>DPT:</b>	Name	DPT_Enable	DPT ID	1.003	Datatype format	B <sub>1</sub>		
Field b	Description Setting whether binary scene control function shall be enabled or not. - 0: disable binary scene control; ⇒ activated numbered scene control - 1: enable binary scene control ⇒ deactivated numbered scene control				Sup. M	Range {0, 1}	Unit none	Default disabled
<b>Communication:</b>								
<b>DP Address:</b> (in the server)		IO Type(ID):	403 (SCS)	Property ID:	110			
		Start-Index:	1	N° of elements	1			
<b>Property access:</b>		Read only	<input type="checkbox"/>	Read/Write	<input checked="" type="checkbox"/>			
<b>Protection</b>		Read level	--	Write level	--			
<b>Exception Handling:</b>		Value after Powerup:	Stored Value <input checked="" type="checkbox"/>	Act Value <input type="checkbox"/>	Default Value <input type="checkbox"/>			
--								
<b>Special Features:</b>								
*) If optional binary scene control function is implemented, this parameter is mandatory								

### 1.5.8 Parameter SceneNumberConfig

FB:	SCS	Property Name (Server):	SceneNumberConfig[n]	Mandatory	<input checked="" type="checkbox"/>		
				Optional	<input type="checkbox"/>		
Description:							
<p>This parameter contains the list of Scene Numbers that are supported by FB SCS. The list is implemented as an array Property with n (up to 64) elements.</p> <p>Each array element represents scene configuration information for one Scene Index.</p> <p>This parameter is used to configure numbered scene control and binary scene control. The number of supported scenes as well as the mapping of push buttons; user interaction on the HMI etc. to Scene Index 1..n is product specific</p> <p>Each array element defines the following configuration information for one dedicated Scene Index:</p> <ul style="list-style-type: none"><li>- SceneNumber (0 to 63)</li><li>- activation/inactivation</li><li>- teach-in function enable/disable</li></ul> <p><b>Usage for numbered scene control:</b></p> <p>Single parameter or parameter set (array Property) to configure per Scene Index the features and scene number to be transmitted on output NumberedSceneControl.</p> <p>Number of array elements:</p> <ul style="list-style-type: none"><li>- 1 scene number in case of single push-button interface (array index 1)</li><li>- 2 scene numbers in case of a dual push-button interface (array index 1, 2)</li><li>- n scene numbers in case of a more flexible HMI (array index 1-n; n ≤64)</li></ul> <p>Example: Room Unit supporting selection of up to 4 scenes</p> <p>SceneNumberConfig[1] = 00000011b ⇒ Scene1 with SceneNumber=3 activated; teach-in function enabled</p> <p>SceneNumberConfig[2] = 10001111b ⇒ Scene2 with SceneNumber=15 activated; teach-in function disabled</p> <p>SceneNumberConfig[3] = 00001000b ⇒ Scene3 with SceneNumber=8 activated; teach-in function enabled</p> <p>SceneNumberConfig[4] = 01000000b ⇒ Scene4 deactivated</p> <p><b>Usage for binary scene control:</b></p> <p>Single parameter or set of two parameters (array Property) to configure scene A or B to be transmitted in output BinarySceneRecall and BinarySceneTeachIn.</p> <p>Number of array elements:</p> <ul style="list-style-type: none"><li>- 1 scene A or B in case of single push-button interface (array index 1)</li><li>- 2 scenes A / B or B / A in case of a dual push-button interface (array index 1, 2)</li></ul> <p>Example: single push button interface connected to scene B</p> <p>SceneNumberConfig[1] = 00000001b ⇒ Scene B activated; teach-in function enabled</p>							
DPT:	Name	DPT_SceneConfig	DPT ID	238.001	Datatype format	B <sub>2</sub> U <sub>6</sub>	
Field	Description			Sup.	Range	Unit	Default
StorageFunction <sup>1)</sup>	This field shall indicate per scene whether teach-in function is enabled or disabled - 0: teach-in function enabled - 1: teach-in function disabled			O <sup>2)</sup>	{0, 1}	--	cs
SceneActive	This field shall indicate whether or not the scene is active. If this field has the value <i>inactive</i> then this Scene Index is inactive and the contained SceneNumber shall be regarded as void and not supported by the FB. 0 = scene is active 1 = scene is inactive ⇒ no scene message sent			O <sup>3)</sup>	{0, 1}	--	cs

SceneNumber	This field shall contain the Scene Number that is assigned to this Scene Index. In case less Scene Numbers are configured than supported by this FB, then the field SceneActive shall be set to "Inactive" for this index and the value of the field SceneNumber shall be don't care			
- 0...63: - Scene A/B	- for numbered scene control - for binary scene control (to be configured per push button) - 0: scene A - 1: scene B		0 to 63 0 to 1	-- -- cs cs
<b>Communication:</b>				
<b>DP Address: (in the server)</b>	IO Type(ID): Start-Index:	403 (SCS) 1	Property ID: N° of elements	111 1 to n, n ≤64
<b>Property access:</b>	Read only <input type="checkbox"/>	Read/Write <input checked="" type="checkbox"/>		
<b>Protection</b>	Read level	--	Write level	--
<b>Exception Handling:</b>	Value after Powerup:	Stored Value <input checked="" type="checkbox"/>	Act Value <input type="checkbox"/>	Default Value <input type="checkbox"/>
--				
<b>Special Features:</b>				
Field SceneNumber allows numbering the scene from 0 to 63. KNX Association recommends displaying these scene numbers in ETS, other software and controllers numbered from 1 to 64, this is, with an offset of 1 compared to the actual transmitted value.				
<sup>1)</sup> Note: inverse logic of this attribute in order to be compatible with existing implementations.				
<sup>2)</sup> Support of this control field is optional. Teach-in may be enabled/disabled globally via SceneTeachingEnable parameter. Behaviour of the Property server if this field is not supported: the receiver (server) shall ignore the written value of this bit and respond with the actual value.				
<sup>3)</sup> Support of this control field is optional. The reason is e.g. a PB that supports only a single scene. Inactivation of this scene is rather deactivation of the entire FB. Optional support does not apply to a larger scene sensor in e.g. a complex room unit. Behaviour of the Property server if this field is not supported: the receiver (server) shall ignore the written value of this bit and respond with the actual value.				