Application Descriptions

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11

Shutters and Blinds

Shutters and Blinds Channels

Summary:

This document provides the specification of the E-Mode channels in the application domain Shutters and Blinds.

Version 01.00.01 is a KNX Approved Standard.

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

Document updates

Version	Date	Modifications
v01	2007.09.27	Document creation. • **S12 "Channel Codes"** integrated.
	2007.10.03	• **AN050 "AN to Supplement 12"** integrated.
	2007.10.19	• **AN087 "New Channels 2005.05"** integrated.
v1.0	2009.06.26	Update in view of publication in the KNX Specifications v2.0.
01.00.01	2013.10.29	Editorial updates for the publication of KNX Specifications 2.1.

References

[01] Chapter 7/50/1 "Shutters and Blinds Sensors"
[02] Chapter 7/50/2 "Shutters and Blinds Actuators"

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Contents

1 Introduction

1.1 Overview of the application

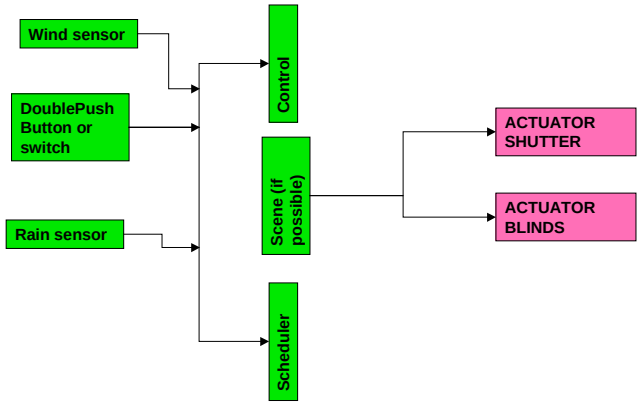


Figure 1 – The application "Shutters and Blinds"

1.2 Support of scenes

For Scene Number Datapoints, it is mandatory to deal at least with numbers from 1 to 8 (coded 0 to 7). It is allowed to deal with higher values. This shall thus be as specified in Table 1.

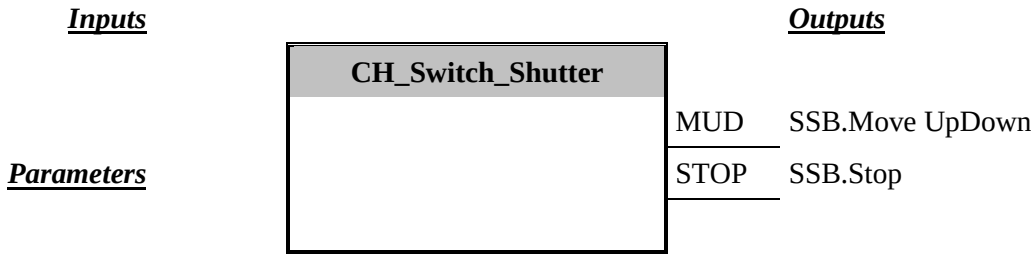
Table 1 – Scene numbering and coding in E-Mode Channels

Scene number	Scene letter	Coding
1	A	xx000000b
2	B	xx000001b
3	C	xx000010b
4	D	xx000011b
5	E	xx000100b
6	F	xx000101b
7	G	xx000110b
8	H	xx000111b

2 Channels Shutters and Blinds

2.1 CH_Switch_Shutter (Channel Code 0015h)

- **Name:** CH_Switch_Shutter
- **ID:** 0015h
- **Classification:** sensor
- **Functional Block:**
  - 801 – FB Sunblind Sensor Basic (SSB)
- **Graphical representation:**



- **Description: See Functional Block FB_SW_shutter/blind**

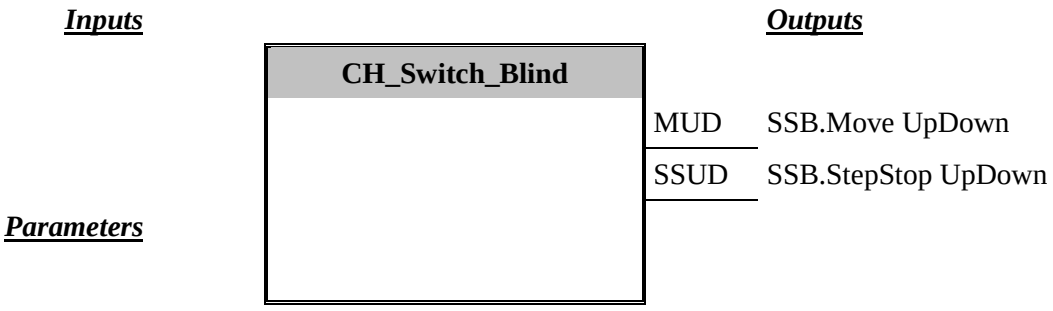
  The parameter "Sel_shutter/blind" is fixed to 0:shutter.

- **Datapoint list**

Index	FB / DP_Name	Name	Sub-unit	Main CC	Additional CCs	Flags (i/o,x,v,…)
1	801 / Move UpDown	Move UpDown	1	CC_Move UpDown	CC_Logical	O L
2	801 / Stop	Stop	1	CC_Stop	CC_StepStop_UpDown	O

2.2 CH_Switch_Blind (Channel Code 0016h)

- **Name:** CH_Switch_Blind
- **ID:** 0016h
- **Classification:** sensor
- **Functional Block:**
  - 801 – FB Sunblind Sensor Basic (SSB)
- **Graphical representation:**



- **Description:**

  See FB Sunblind Sensor Basic (SSB).

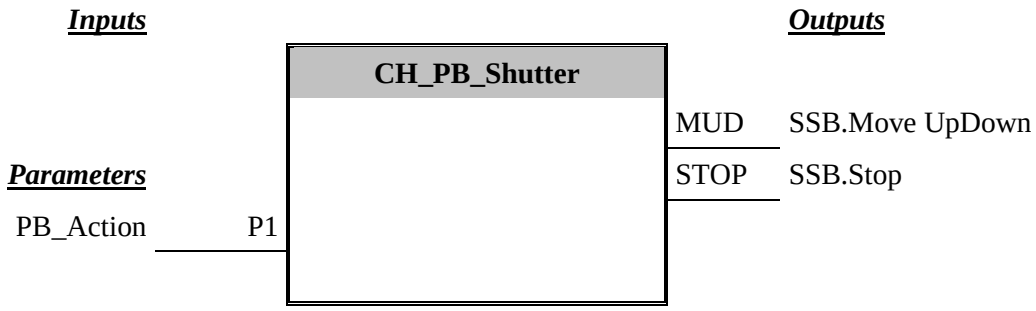
  Parameter sel_shutter/blind is fixed to 1 (blind)

- **Datapoint list**

Index	FB / DP_Name	Name	Sub-unit	Main CC	Additional CCs	Flags (i/o,x,v,…)
1	801 / Move UpDown	Move UpDown	1	CC_Move UpDown	CC_Logical	O L
2	801 / StopStep UpDown	StopStep UpDown	1	CC_StepStop_UpDown	CC_Stop	O

2.3 CH_PB_Shutter (Channel Code 0017h)

- **Name:** CH_PB_Shutter
- **ID:** 0017h
- **Classification:** sensor
- **Functional Block:**
  - 801 – FB Sunblind Sensor Basic (SSB)
- **Graphical representation:**



- **Description:**

  See FB Sunblind Sensor Basic.

  The parameter ”Sel_shutter/blind” is fixed to 0:shutter

  The parameter ”Device mode“ is fixed to 0:mormalmode (1/2 mode).

- **Datapoint list:**

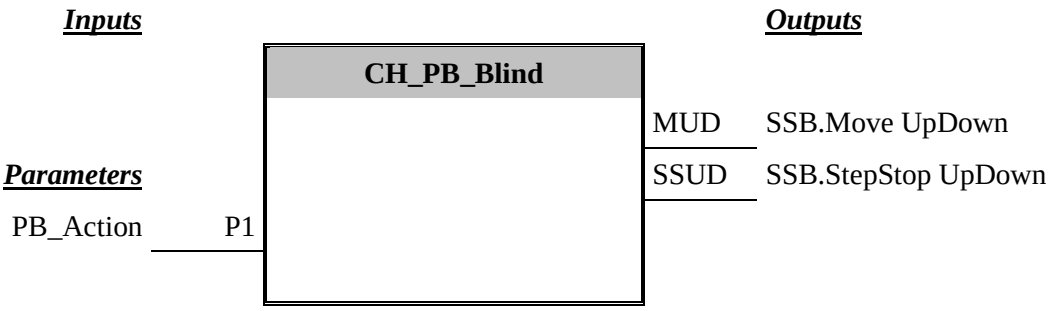
Index	FB / DP_Name	Name	Sub-unit	Main CC	Additional CCs	Flags (i/o,x,v,…)
1	801 / MoveUpDown	Move UpDown	1	CC_Move_UpDown	CC_Logical	O L
2	801 / Stop	Stop	1	CC_Stop	CC_StepStop UpDown	O

- **Parameter list:**

Index	Identifier	Name	Type	Recommended default value	Bit Offset
1	P1	PB action	PART_UpDown_Action	Up	7

2.4 CH_PB_Blind (Channel Code 0018h)

- **Name:** CH_PB_Blind
- **ID:** 0018h
- **Classification:** sensor
- **Functional Block:**
  - 801 – FB Sunblind Sensor Basic (SSB)
- **Graphical representation:**



- **Description:**

  See FB Sunblind Sensor Basic (SSB)

  The parameter "Sel_shutter/blind" is fixed to 1:blind

  The parameter ”Device mode“ is fixed to 0:normal mode (1/2 mode).

- **Datapoint list:**

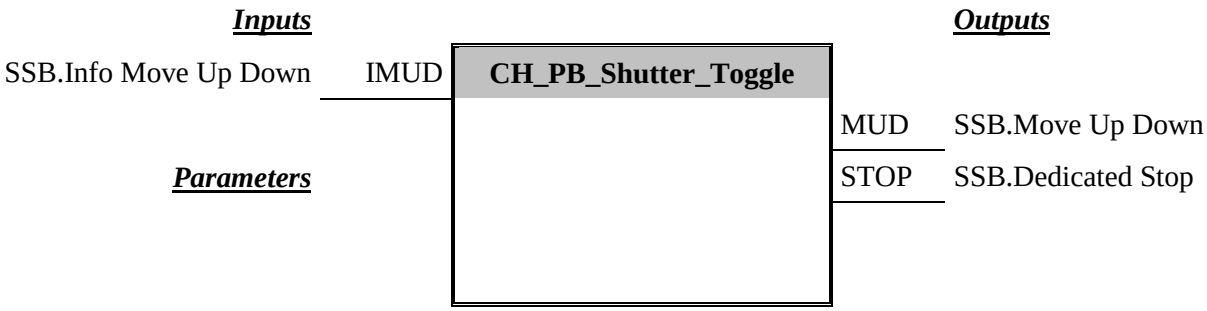
Index	FB / DP_Name	Name	Sub-unit	Main CC	Additional CCs	Flags (i/o,x,v,…)
1	801 / Move UpDown	Move UpDown	1	CC_Move_UpDown	CC_Logical	O L
2	801 / StopStep UpDown	StopStep UpDown	1	CC_StepStop_UpDown	CC_Stop	O

- **Parameter list:**

Index	Identifier	Name	Type	Recommended default value	Bit Offset
1	P1	PB action	PART_UpDown_Action	Up	7

2.5 CH_PB_Shutter_Toggle (Channel Code 0019h)

- **Name:** CH_PB_Shutter_Toggle
- **ID:** 0019h
- **Classification:** sensor
- **Functional Block:**
  - 801 – FB Sunblind Sensor Basic (SSB)s
- **Graphical representation:**



- **Description: See Functional Block FB Sunblind Sensor Basic**

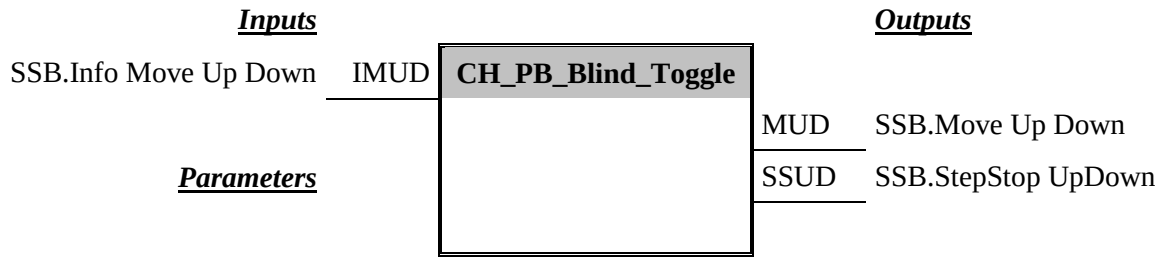
  The parameter ”Sel_shutter/blind is fixed to 0:shutter.The parameter ”Device mode“ is fixed to 1:togglemode, the parameter ”PB Action“ doesn't exist.

- **Datapoint list:**

Index	FB / DP_Name	Name	Sub-unit	Main CC	Additional CCs	Flags (i/o,x,v,…)
1	801 / Info Move UpDown	Info MoveUpDown	1	CC_Move_UpDown _Status		I
2	801 / Move UpDown	Move UpDown	1	CC_Move_UpDown	CC_Logical	O L
3	801 / Stop	Stop	1	CC_Stop	CC_StepStop UpDown	O

2.6 CH_PB_Blind_Toggle (Channel Code 001Ah)

- **Name:** CH_PB_Blind_Toggle
- **ID:** 001Ah
- **Classification:** sensor
- **Functional Block:**
  - 801 – FB Sunblind Sensor Basic (SSB)
- **Graphical representation:**



- **Description:**

  See FB Sunblind Sensor Basic (SSB).

  The parameter ”Sel_shutter/blind is fixed to 1:blind

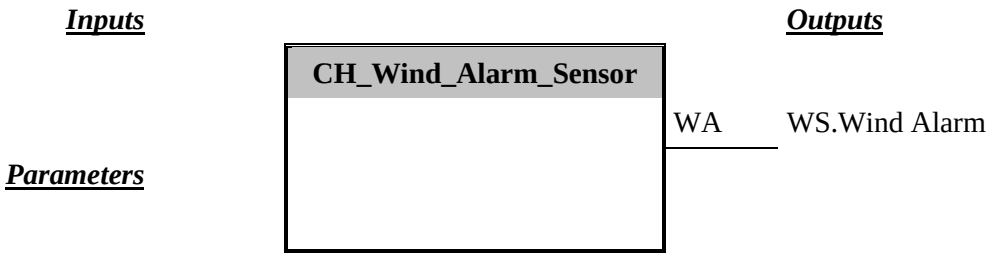
  The parameter ”Device mode“ is fixed to 1:togglemode, the parameter ”PB Action“ doesn't exist.

- **Datapoint list:**

Index	FB / DP_Name	Name	Sub-Unit	Main CC	Additional CCs	Flags (i/o,x,v,…)
1	801 / Info MoveUpDown	Info MoveUpDown	1	CC_Move_UpDown_-Status		I
2	801 / Move UpDown	Move UpDown	1	CC_Move_UpDown	CC_Logical	O L
3	801 / StopStep UpDown	StopStep UpDown	1	CC_StepStop_UpDown	CC_Stop	O

2.7 CH_Wind_Alarm_Sensor (Channel Code 001Bh)

- **Name:** CH_Wind_Alarm_Sensor
- **ID:** 001Bh
- **Classification:** sensor
- **Functional Block:**
  - 802 - FB Wind Sensor (WS) (See clause 4.2 in this document.)
- **Graphical representation:**



- **Description:**

  See FB Wind Sensor.

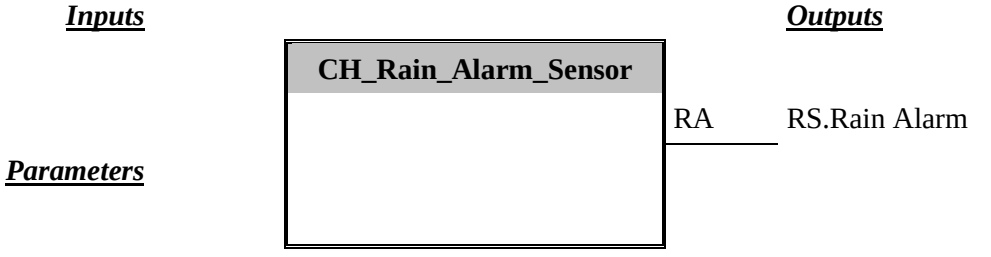
  The cycle time parameter is fixed to 10 minutes.

- **Datapoint list:**

Index	FB / DP_Name	Name	Subunit	Main CC	Additional CCs	Flags (i/o,x,v,…)
1	802 / Wind Alarm	Wind detected	1	CC_Wind	CC_Logical	O L

2.8 CH_Rain_Alarm_Sensor (Channel Code 001Ch)

- **Name:** CH_Rain_Alarm_Sensor
- **ID:** 001Ch
- **Classification:** sensor
- **Functional Block:**
  - 803 - FB Rain Sensor (RS) (See clause 4.3 in this document.)
- **Graphical representation:**



- **Description: See Functional Block FB Rain Sensor**

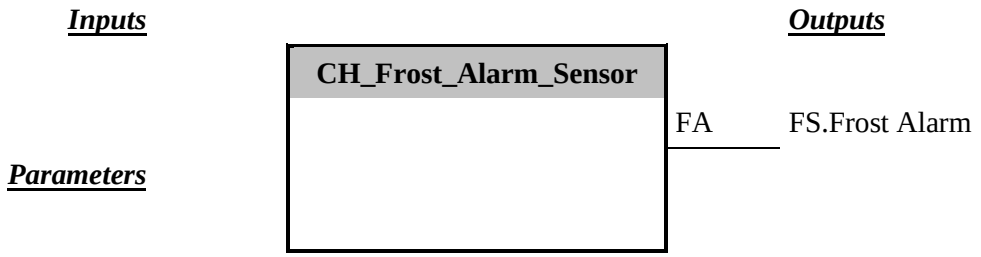
  The cycle Time parameter is fixed to 10 minutes.

- **Datapoint list:**

Index	FB / DP_Name	Name	Subunit	Main CC	Additional CCs	Flags (i/o,x,v,…)
1	803 / Rain Alarm	Rain Alarm	1	CC_Rain	CC_Logical	O L

2.9 CH_Frost_Alarm_Sensor (Channel Code 001Dh)

- **Name:** CH_Frost_Alarm_Sensor
- **ID:** 001Dh
- **Classification:** sensor
- **Functional Block:**
    - 804 - FB Frost Sensor (FS) (See clause 4.4 in this document.)
- **Graphical representation:**



- **Description: See Functional Block FB_Frost Alarm_Sensor**

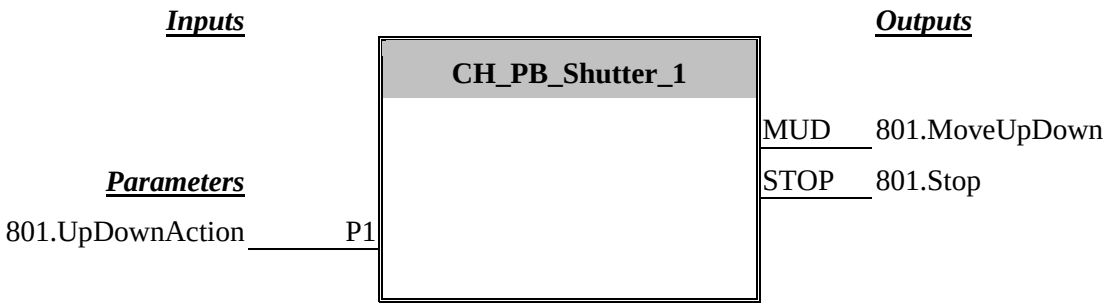
  The cycle time parameter is fixed to 10 minutes.

- **Datapoint list:**

Index	FB / DP_Name	Name	Sub-unit	Main CC	Additional CCs	Flags (i/o,x,v,…)
1	804 / Frost Alarm	Frost Alarm	1	CC_Frost	CC_Logical	O L

2.10 CH_PB_Shutter_1 (Channel Code 002Fh)

- **Name:** CH_PB_Shutter_1
- **ID:** 002Fh
- **Classification:** sensor
- **Functional Block:**
  - 801 - Sunblind Sensor Basic (See [01])
- **Graphical representation:**



- **Description:**

  Please refer to [01] for the FB specification of FB Sunblind Sensor Basic.

  The Parameter “Enable Blinds Mode” in that FB shall be fixed to the value 0 (disabled): the blinds mode shall be disabled; the Channel shall work as a shutter sensor.

  The parameter “Enable Toggle Mode” in that FB shall be fixed to the value 0 (disabled): the shutter Channel shall work in “1/2 mode”: the value of the Output MUD shall not toggle with each transmission.

- **Datapoint list:**

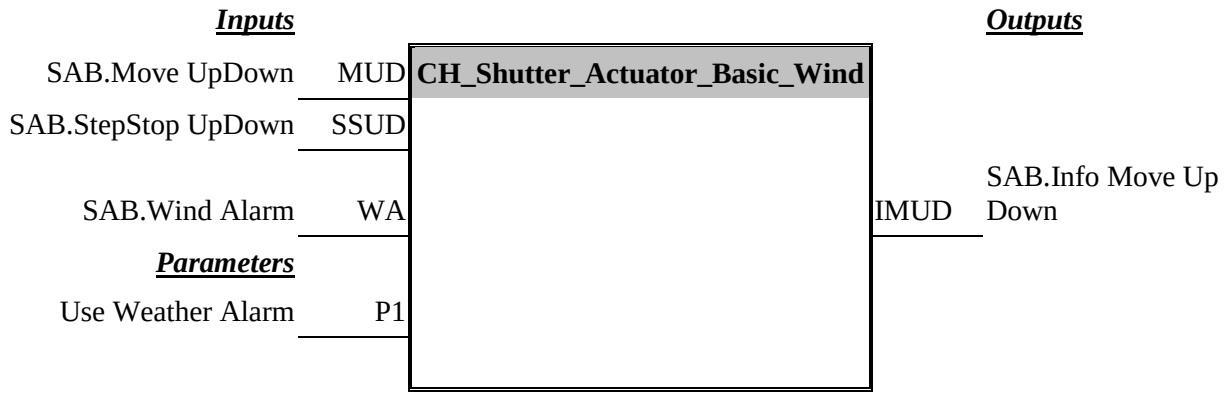
Index	FB / DP_Name	Name	Sub-unit	Main CC	Additional CCs	Flags (i/o,x,v…)
1	801.MoveUpDown	Move UpDown	1	CC_Move_UpDown	CC_Logical	O L
2	801.Stop	Stop	1	CC_Stop	CC_StepStop_Up Down	O

- **Parameter list**

Index	Identifier	Name	Type	Recommended default value	Bit offset
1	P1	Up Down Action	PART_UpDown_Switch_Action	Up	6

2.11 CH_Shutter_Actuator_Basic_Wind (Channel Code 0108h)

- **Name:** CH_Shutter_Actuator_Basic_Wind
- **ID:** 0108h
- **Classification:** actuator
- **Functional Block:**
  - 805 – FB Sunblind Actuator Basic (SAB)
- **Graphical representation:**



- **Description:**

  The operation mode is fixed to shutter.

  The alarm-cycle time parameter is fixed to 30 min.

- **Datapoint list:**

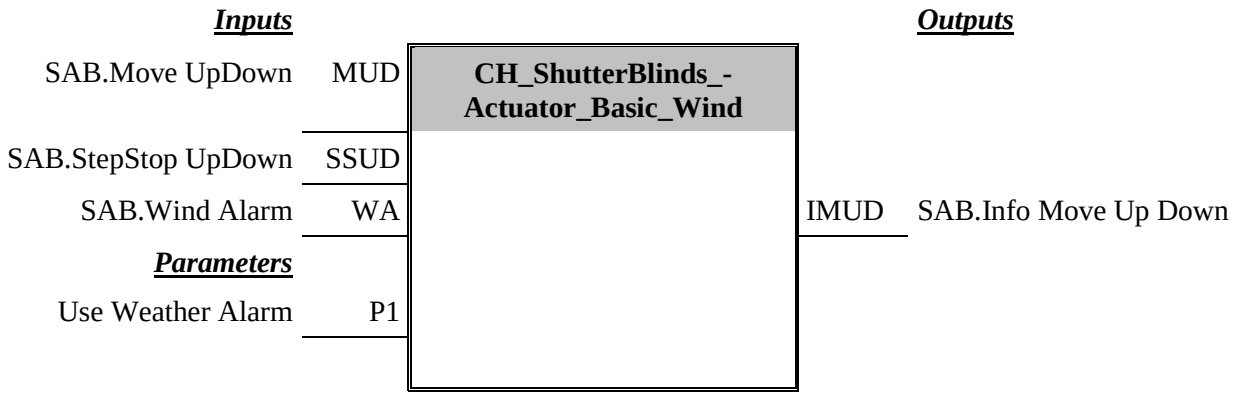
Index	FB / DP_Name	Name	Sub-unit	Main CC	Additional CCs	Flags (i/o,x,v, …)
1	805 / Move UpDown	Move UpDown	1	CC_Move_UpDown		I L
2	805 / StopStep UpDown	StopStep UpDown	1	CC_StepStop_UpDown		I
3	805 / Wind Alarm	Wind_Alarm	1	CC_Wind		I
4	805 / Info Move UpDown	Info UD	1	CC_Move_UpDown_Status	CC_Logical	O V LA

- **Parameter table:**

Index	Identifier	Name	Type	Recommended default value	Bit Offset
1	P1	Use Weather alarm	PART_Alarm_Reaction	“no alarm is used”	6

2.12 CH_ShutterBlinds_Actuator_Basic_Wind (Channel Code 0109h)

- **Name:** CH_ShutterBlinds_Actuator_Basic_Wind
- **ID:** 0109h
- **Classification:** actuator
- **Functional Block:**
  - 805 – FB Sunblind Actuator Basic (SAB)
- **Graphical representation:**



- **Description:**

  The alarm-cycle-time is fixed to 30 min.

  The operation mode is fixed to blinds.

- **Datapoint list:**

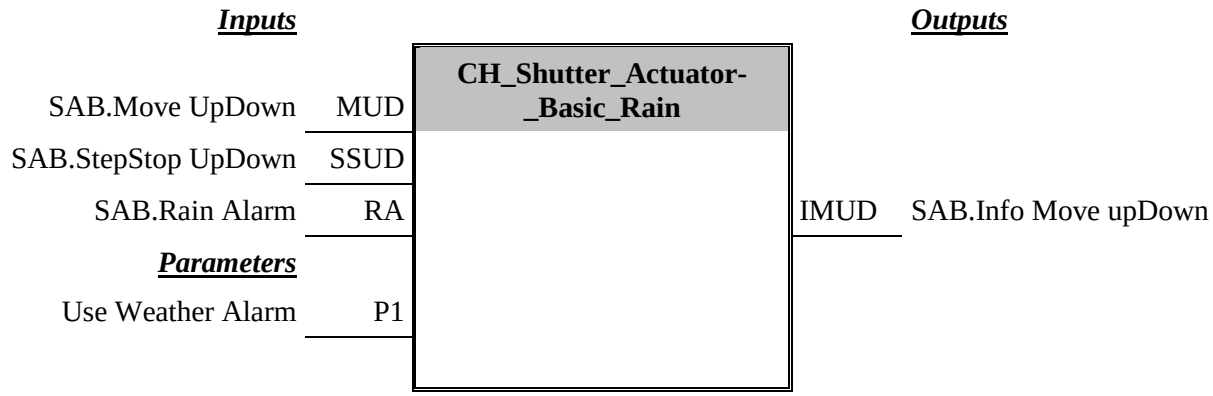
Index	FB / DP_Name	Name	Sub-unit	Main CC	Additional CCs	Flags (i/o,x,v, …)
1	805 / Move UpDown	Move UpDown	1	CC_Move_UpDown		I L
2	805 / StopStep UpDown	StepStop UpDown	1	CC_StepStop_UpDown		I
3	805 / Wind Alarm	Wind_Alarm	1	CC_Wind		I
4	805 / Info Move UpDown	Info UD	1	CC_Move_UpDown_Status	CC_Logical	O V LA

- **Parameter table:**

Index	Identifier	Name	Type	Recommended default value	Bit Offset
1	P1	Use Weather alarm	PART_Alarm_Reaction	“no alarm is used”	6

2.13 CH_Shutter_Actuator_Basic_Rain (Channel Code 010Ah)

- **Name:** CH_Shutter_Actuator_Basic_Rain
- **ID:** 010Ah
- **Classification:** actuator
- **Functional Block:**
  - 805 – FB Sunblind Actuator Basic (SAB)
- **Graphical representation:**



- **Description:**

  The alarm-cycle-time is fixed to 30 min.

  The operation mode is fixed to shutter.

- **Datapoint list:**

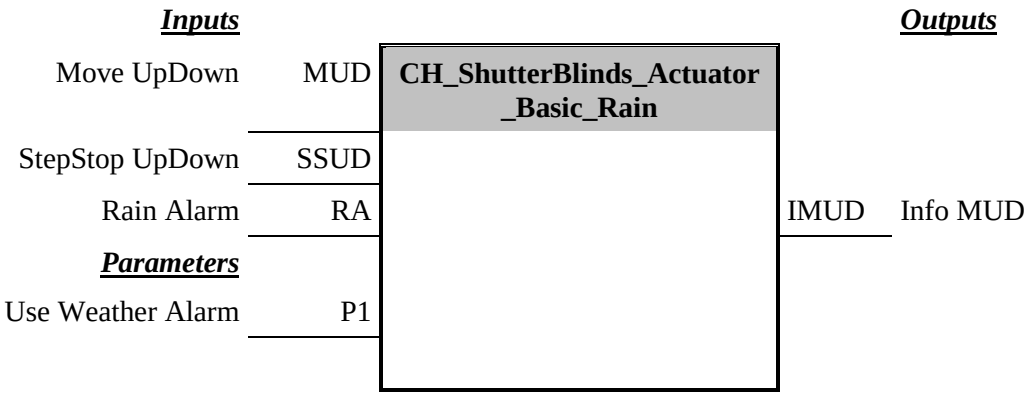
Index	FB / DP_Name	Name	Sub-unit	Main CC	Additional CCs	Flags (i/o,x,v,…)
1	805 / Move UpDown	Move UpDown	1	CC_Move_UpDown		I L
2	805 / StopStep UpDown	StopStep UpDown	1	CC_StepStop_UpDown		I
3	805 / Rain Alarm	Rain_Alarm	1	CC_Rain		I
4	805 / Info Move UpDown	Info UD	1	CC_Move_UpDown_Status	CC_Logical	O V LA

- **Parameter table:**

Index	Identifier	Name	Type	Recommended default value	Bit Offset
1	P1	Use Weather alarm	PART_Alarm_Reaction	“no alarm is used”	6

2.14 CH_ShutterBlinds_Actuator_Basic_Rain (Channel Code 010Bh)

- **Name:** CH_ShutterBlinds_Actuator_Basic_Rain
- **ID:** 010Bh
- **Classification:** actuator
- **Functional Block:**
  - 805 – FB Sunblind Actuator Basic (SAB)
- **Graphical representation:**



- **Description:**

  The alarm-cycle-time is fixed to 30 min.

  The operation mode is fixed to blinds.

- **Datapoint list:**

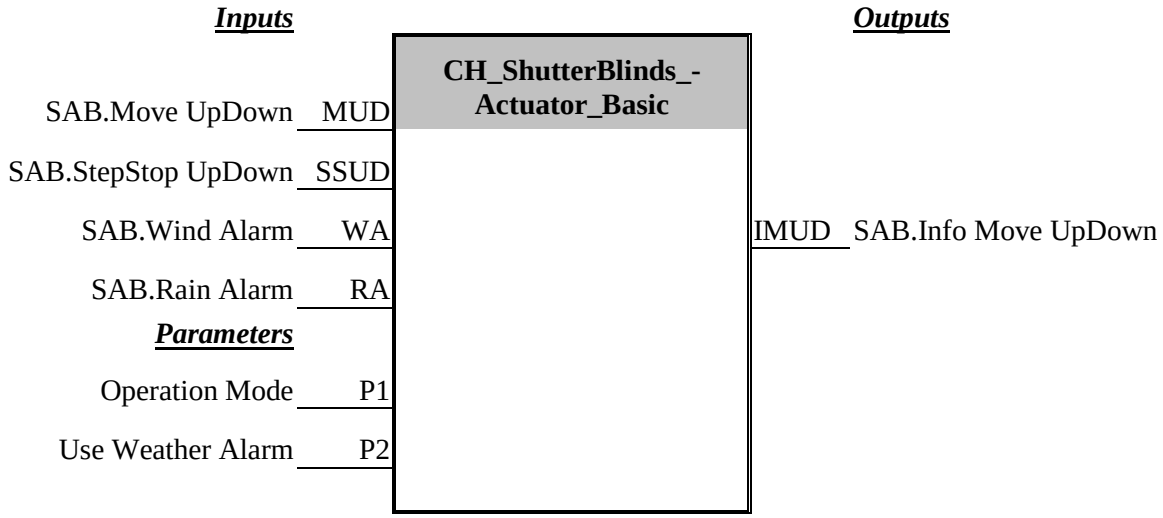
Index	FB / DP_Name	Name	Sub-unit	Main CC	Additional CCs	Flags (i/o,x,v,…)
1	805 / Move UpDown	Move UpDown	1	CC_Move_UpDown		I L
2	805 / StopStep UpDown	StopStep UpDown	1	CC_StepStop_UpDown		I
3	805 / Rain Alarm	Rain_Alarm	1	CC_Rain		I
4	805 / Info Move UpDown	Info MUD	1	CC_Move_UpDown_Status	CC_Logical	O V LA

- **Parameter table:**

Index	Identifier	Name	Type	Recommended default value	Bit Offset
1	P1	Use Weather alarm	PART_Alarm_Reaction	“no alarm is used”	6

2.15 CH_ShutterBlinds_Actuator_Basic (Channel Code 010Ch)

- **Name:** CH_ShutterBlinds_Actuator_Basic
- **ID:** 010Ch
- **Classification:** actuator
- **Functional Block:**
  - 805 – FB Sunblind Actuator Basic (SAB)
- **Graphical representation:**



- **Description:**

  The alarm-cycle-time is fixed to 30 min.

- **Datapoint list:**

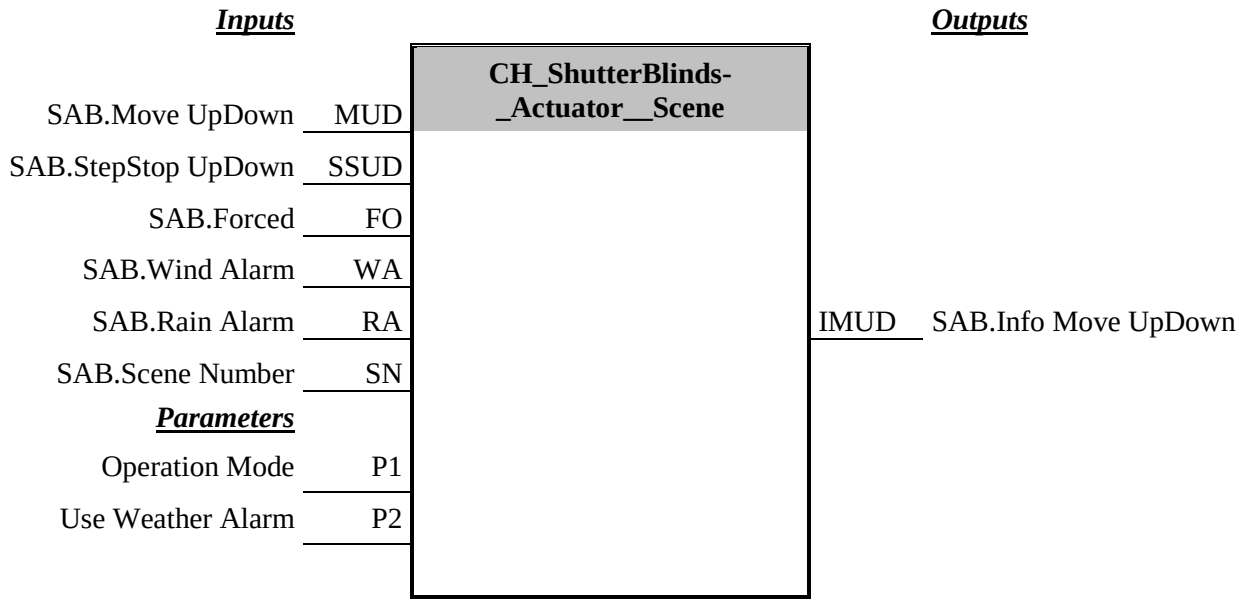
Index	FB / DP_Name	Name	Subunit	Main CC	Additional CCs	Flags (i/o,x,v,…)
1	805 / Move UpDown	Move UpDown	1	CC_Move_UpDown		I L
2	805 / StopStep UpDown	StepStop UpDown	1	CC_Step_UpDown		I
3	805 / Wind Alarm	Wind Alarm	1	CC_Wind		I
4	805 / Rain Alarm	Rain Alarm	1	CC_Rain		I
5	I805 / Info Move UpDown	Info MUD	1	CC_Move_UpDown _Status	CC_Logical	O V LA

- **Parameter table:**

Index	Identifier	Name	Type	Recommended default value	Bit Offset
1	P1	Operation Mode	PART_Blind_Mode	Shutter	0
2	P2	Use Weather Alarm	PART_Alarm_Reaction	“no alarm is used”	6

2.16 CH_ShutterBlinds_Actuator_Scene (Channel Code 010Dh)

- **Name:** CH_ShutterBlinds_Actuator_Scene
- **ID:** 010Dh
- **Classification:** actuator
- **Functional Block:**
  - 805 – FB Sunblind Actuator Basic (SAB)
- **Graphical representation:**



- **Description:**

  The alarm-cycle-time is fixed to 30 min.

  Number of scene to be supported is 8.

  This channel can only detect simultaneous failure of both wind sensor and rain sensor due to the presence of only one parameter for weather alarm.

- **Datapoint list:**

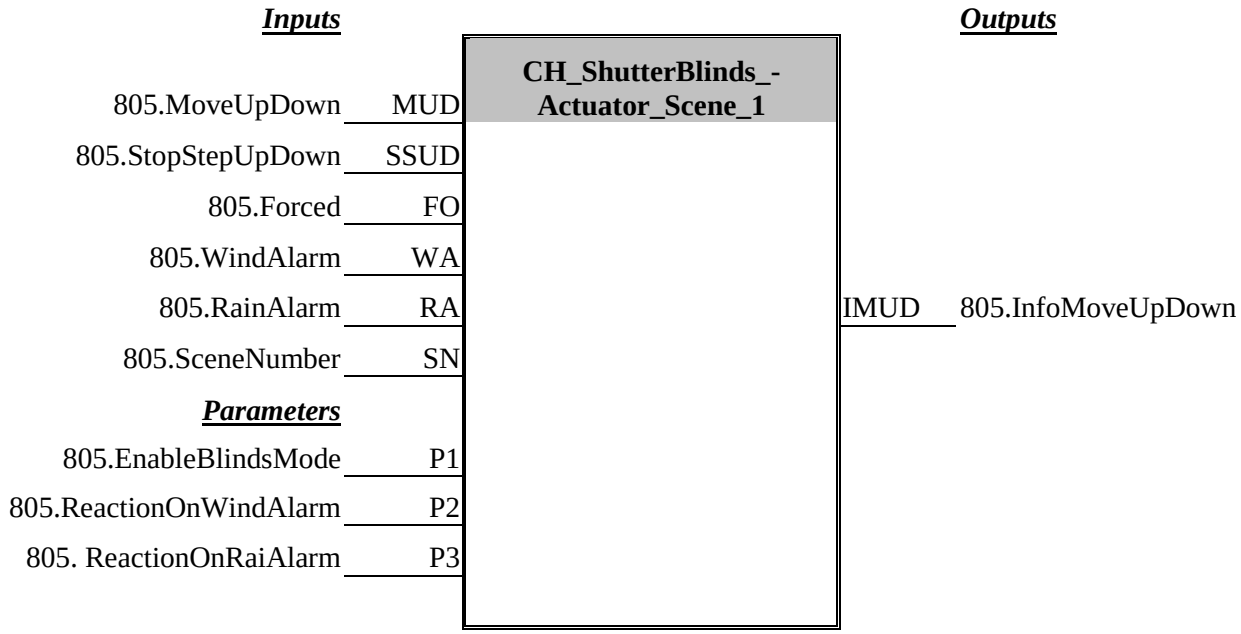
Index	FB / DP_Name	Name	Sub-unit	Main CC	Additional CCs	Flags (i/o,x,v…)
1	805 / Move UpDown	Move UpDown	1	CC_Move_UpDown		I L
2	805 / StopStep UpDown	StepStop UpDown	1	CC_StepStop_UpDown		I
3	805 / Forced	Forced	1	CC_Forced		I
4	805 / Wind Alarm	Wind_Alarm	1	CC_Wind		I
5	805 / Rain Alarm	Rain Alarm	1	CC_Rain		I
6	805 / Scene Number	Scene Number	1	CC_Scene_Number		I
7	805 / Info MUD	Info MUD	1	CC_Move_UpDown_Status	CC_Logical	O V LA

- **Parameter table:**

Index	Identifier	Name	Type	Recommended default value	Bit Offset
1	P1	Operation Mode	PART_Blind_Mode	Shutter	0
2	P2	Use Weather Alarm	PART_Alarm_Reaction	“no alarm is used”	6

2.17 CH_ShutterBlinds_Actuator_Scene_1 (Channel Code 0480h)

- **Name:** CH_ShutterBlinds_Actuator_Scene_1
- **ID:** 0480h
- **Classification:** actuator
- **Functional Block:**
  - 805 - FB Shutter Actuator Basic (See [02])
- **Graphical representation**



- **Description:**

  The alarm-cycle-time shall be fixed to 30 min.

  The number of scenes that shall be supported is 8.

  The priority between the two alarms has to be determined by the manufacturer and shall be documented.

- **Datapoint list:**

Index	FB / DP_Name	Name	Sub-unit	Main CC	Additional CCs	Flags (i/o,x,v…..)
1	805.MoveUpDown	Move UpDown	1	CC_Move UpDown		I L
2	805.StopStepUpDown	StopStep UpDown	1	CC_StepStop_-UpDown		I
3	805.Forced	Forced	1	CC_Forced		I
4	805.ReactionOnWind-Alarm	Wind Alarm	1	CC_Wind		I
5	805.ReactionOnRain-Alarm	Rain Alarm	1	CC_Rain		I
6	805.SceneNumber	Scene Number	1	CC_Scene_Numbered		I
7	805.InfoMoveUpDown	Info Move Up Down	1	CC_MoveUpDown_-Info	CC_Logical	O V

- **Parameter table**

Index	Identifier	Name	Type	Recommended default value	Bit offset
1	P1	Enable Blinds Mode	PART_Blind_Mode	Shutter	0
2	P2	Reaction On Wind Alarm	PART_Alarm_reaction	Disabled	4
3	P3	Reaction On Rain Alarm	PART_Alarm_reaction	Disabled	6

3 Examples

There are no examples available yet.

4 Functional Blocks

4.1 Usage requirements

The Functional Block specifications below only provide complementary information to the Channel Definitions specified in this document. They are only provided for completeness and understanding of the these channel definitions.

These Functional Blocks shall be used only for implementation of Easy Configuration mode devices.

These Functional Block specifications shall not be used for any other goal; in particular, no implementation for S-Mode devices shall be based on these specifications.

KNX Association will take care of compatibility between any currently specified Channel Definition and the final version of these Functional Blocks.

To this, the KNX Association Application Specification Groups shall take the functionality achieved by these Functional Blocks as the minimal mandatory basis for further work.

4.2 Functional Block FB Wind Sensor (FB WS)

4.2.1 Definitions

- **Name:** FB Wind Sensor
- **Application description Block:** weather sensor
- **Object type:** 802

4.2.2 FB Description

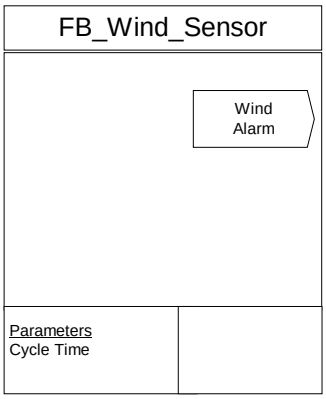
If the wind-Sensor detects wind then it sends a 1-Value (1-bit-Value like on/off)

If the wind-Sensor detects no wind then it sends a 0-Value.

The lowest windspeed value to send a 1 Value (wind alarm) is manufacturer specific.

The output has always to be sent at a cycle-time defined by parameter.

4.2.2.1 FB description



4.2.2.2 Datapoints

Datapoint	Abbr.	Description	Datapoint Type
Outputs			
Wind_Alarm	WA	To detect wind (alarm)	1.005 DPT_Alarm
Parameters			
CycleTime	P1	Value of the Periodic sending	7.005 DPT_TimePeriodSec

4.2.2.2.1 Distribution Table

		Basic FB	STANDARD MODE	EXTENDED MODE	
			S-Mode	Standard Mode Interface	LTE-Mode
Outputs	**WA**	(GO)	-	-	-
Parameters	**P1**	O	-	-	-

4.2.2.2.2 Output Wind_Alarm

DP Name:	Wind_Alarm	Abbr.:	WA	Mandatory	☐
FB Name:	802 FB Wind Sensor			Can be internal	☐
Description					
See functional description					
Datapoint Type					
DPT_Name:	DPT_Alarm				
DPT Format:	B_1			DPT_ID:	1.005

♦ Output								
this → M	☒	this → 1	☐					
Spontaneous	☒	COV:	☐	Δ-Value		Min repetition period:		
		Cyclic	☐	Period:				
Request	☐							

Communication Type					
♦ Group Object Datapoint				Mandatory:	☐
Default Group Address:	---				
♦ Interface Object Property Datapoint				Mandatory:	☐
• Client	Object_type (server):		PID (property server):		
	Start_index:		Nr_of_elements:		

Dynamics						
Power down:	Save:	☐				
Power up:	Value:	No initialisation:	☐	Default value:		☐
		Saved value:	☐	Actual value (not for input):		☐
	Transmit on bus (only for output):		☐	Read from bus (only for input):		☐
Exception Handling						

Special Features						

4.2.2.2.3 Parameter CycleTime

DP Name:	CycleTime	Abbr.:	P1	Mandatory	☐
FB Name:	802 FB Wind Sensor			Can be internal	☐
Description					
See functional description					
Datapoint Type					
DPT_Name:	DPT_TimePeriodSec				
DPT Format:	U_{16}			DPT_ID:	7.005
Exception Handling					

Special Features					

4.3 Functional Block FB Rain Sensor (FB RS)

4.3.1 Definitions

- **Name:** FB Rain Sensor
- **Application description Block:** weather sensor
- **Object type:** 803

4.3.2 Functional specification

4.3.2.1 Functional description

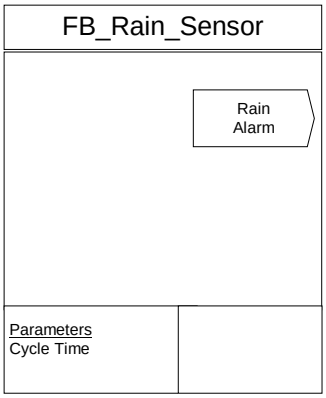
If the rain sensor detects rain, it shall send value 1 (DPT_Alarm).

If the rain sensor detects no rain, it shall a value 0 (DPT_Alarm).

The lowest rain intensity to send a 1 value (rain alarm) is manufacturer specific.

The output shall always be sent at a cycle-time defined by a parameter.

4.3.2.2 FB description



4.3.2.3 Datapoints

Datapoint	Abbr.	Description	Datapoint Type
Outputs			
Rain_Alarm	RA	To detect rain (alarm)	1.005 DPT_Alarm
Parameters			
CycleTime	P1	Value of the Periodic sending	7.005 DPT_TimePeriodSec

4.3.2.3.1 Distribution Table

		Basic FB	STANDARD MODE	EXTENDED MODE	
			S-Mode	Standard Mode Interface	LTE-Mode
Outputs	**RA**	(GO)	-	-	-
Parameters	**P1**	O	-	-	-

4.3.2.3.2 Output Rain_Alarm

DP Name:	Rain_Alarm			Abbr.:	RA	Mandatory	☒
FB Name:	803 FB Rain Sensor					Can be internal	☐
Description							
See functional description							
Datapoint Type							
DPT_Name:	DPT_Alarm						
DPT Format:	B_1					DPT_ID:	1.005
♦ Output							
this → M	☒		this → 1	☐			
Spontaneous	☒	COV:	☐	∆-Value		Min repetition period:	
		Cyclic	☐	Period:			
Request	☐						
Communication Type							
♦ Group Object Datapoint						Mandatory:	☐
Default Group Address:	---						
♦ Interface Object Property Datapoint						Mandatory:	☐
• Client	Object_type (server):				PID (property server):		
	Start_index:				Nr_of_elements:		
Dynamics							
Power down:	Save:	☐					
Power up:	Value:	No initialisation:	☐		Default value:		☐
		Saved value:	☐		Actual value (not for input):		☐
	Transmit on bus (only for output):		☐		Read from bus (only for input):		☐
Exception Handling							

Special Features							

4.3.2.3.3 Parameter CycleTime

DP Name:	CycleTime	Abbr.:	P1	Mandatory	☐
FB Name:	803 FB Rain Sensor			Can be internal	☐
Description					
See functional description					
Datapoint Type					
DPT_Name:	DPT_TimePeriodSec				
DPT Format:	U_{16}		DPT_ID:	7.005	
Exception Handling					

Special Features					

4.4 Functional Block FB Frost Sensor (FB FS)

4.4.1 Definitions

- **Name:** FB Frost Sensor
- **Application description Block:** weather sensor
- **Object type:** 804

4.4.2 Functional specification

4.4.2.1 Functional description

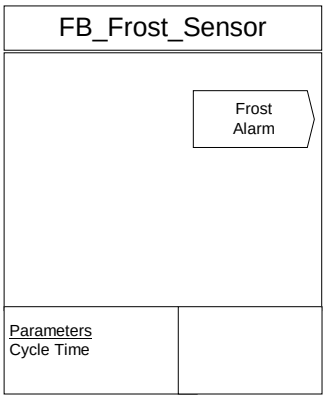
If the frost sensor detects frost, it shall send a value 1 (DPT_Alarm).

If the frost sensor detects no frost, it shall send a value 0 (DPT_Alarm).

The lowest frost intensity value to send a value 1 (frost alarm) is manufacturer specific.

The output shall always be sent at a cycletime defined by parameter.

4.4.2.2 FB description



4.4.2.3 Datapoints

Datapoint	Abbr.	Description	Datapoint Type
Outputs			
Frost_Alarm	FA	To detect frost (alarm)	1.005 DPT_Alarm
Parameters			
CycleTime	P1	Value of the Periodic sending	7.005 DPT_TimePeriodSec

4.4.2.3.1 Distribution Table

		Basic FB	STANDARD MODE	EXTENDED MODE	
			S-Mode	Standard Mode Interface	LTE-Mode
Outputs	**FA**	(GO)	-	-	-
Parameters	**P1**	O	-	-	-

4.4.2.3.2 Output Frost_Alarm

DP Name:	Frost_Alarm	Abbr.:	FA	Mandatory	☒
FB Name:	804 FB Frost Sensor			Can be internal	☐
Description					
See functional description					
Datapoint Type					
DPT_Name:	DPT_Alarm				
DPT Format:	B_1			DPT_ID:	1.005

♦ Output								
this → M	☒	this → 1	☐					
Spontaneous	☒	COV:	☐	Δ-Value		Min repetition period:		
		Cyclic	☐	Period:				
Request	☐							

Communication Type					
♦ Group Object Datapoint				Mandatory:	☐
Default Group Address:	---				
♦ Interface Object Property Datapoint				Mandatory:	☐
• Client	Object_type (server):		PID (property server):		
	Start_index:		Nr_of_elements:		

Dynamics						
Power down:	Save:	☐				
Power up:	Value:	No initialisation:	☐	Default value:		☐
		Saved value:	☐	Actual value (not for input):		☐
	Transmit on bus (only for output):		☐	Read from bus (only for input):		☐
Exception Handling						

Special Features						

4.4.2.3.3 Parameter CycleTime

DP Name:	CycleTime	Abbr.:	P1	Mandatory	☐
FB Name:	804 FB Frost Sensor			Can be internal	☐
Description					
See functional description					
Datapoint Type					
DPT_Name:	DPT_TimePeriodSec				
DPT Format:	U_{16}			DPT_ID:	7.005
Exception Handling					

Special Features					