

Technical Manual



MDT Motion Detector/Automatic Switch 55/63

SCN-BWM55.02

SCN-BWM63.02

SCN-BWM55.G2

SCN-BWM55T.G2

SCN-BWM63T.02

Further Documents:

Datasheet:

https://www.mdt.de/EN_Downloads_Datasheets.html

Assembly and Operation Instructions:

https://www.mdt.de/EN_Downloads_Instructions.html

Solution Proposals for MDT products:

https://www.mdt.de/EN_Downloads_Solutions.html

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2 Overview

2.1 Overview Devices

The manual refers to the following devices (Order code printed in bold type):

- **SCN-BWM55.02** Motion Detector/Automatic Switch 55, White matt finish
 - Flush mounted, Integrated bus coupling unit
- **SCN-BWM55.G2** Motion Detector/Automatic Switch 55, White glossy finish
 - Flush mounted, Integrated bus coupling unit
- **SCN-BWM55T.G2** Motion Detector/Automatic Switch TS 55, White glossy finish
 - Version with temperature sensor and 2 sensor keys
 - Flush mounted, Integrated bus coupling unit
- **SCN-BWM63.02** Motion Detector/Automatic Switch 63, Studio white glossy finish
 - Flush mounted, Integrated bus coupling unit
- **SCN-BWM63T.02** Motion Detector/Automatic Switch TS 63, Studio white glossy finish
 - Version with temperature sensor and 2 sensor keys
 - Flush mounted, Integrated bus coupling unit

2.2 Connection diagram

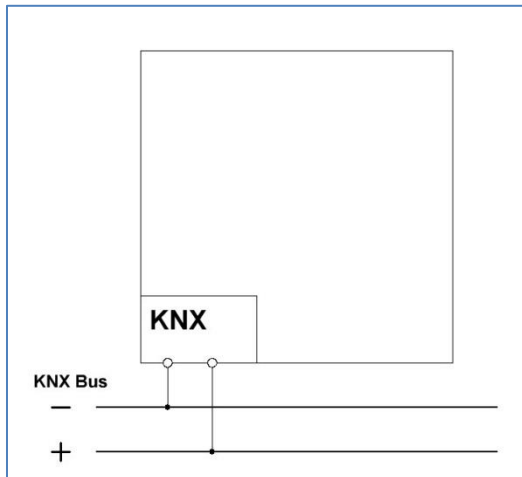


Figure 1: Connection diagram

2.3 Structure & Handling

The following picture shows the structure of the MDT Motion Detector/Automatic Switch (with the example of SCN-BWMxxT.x2):

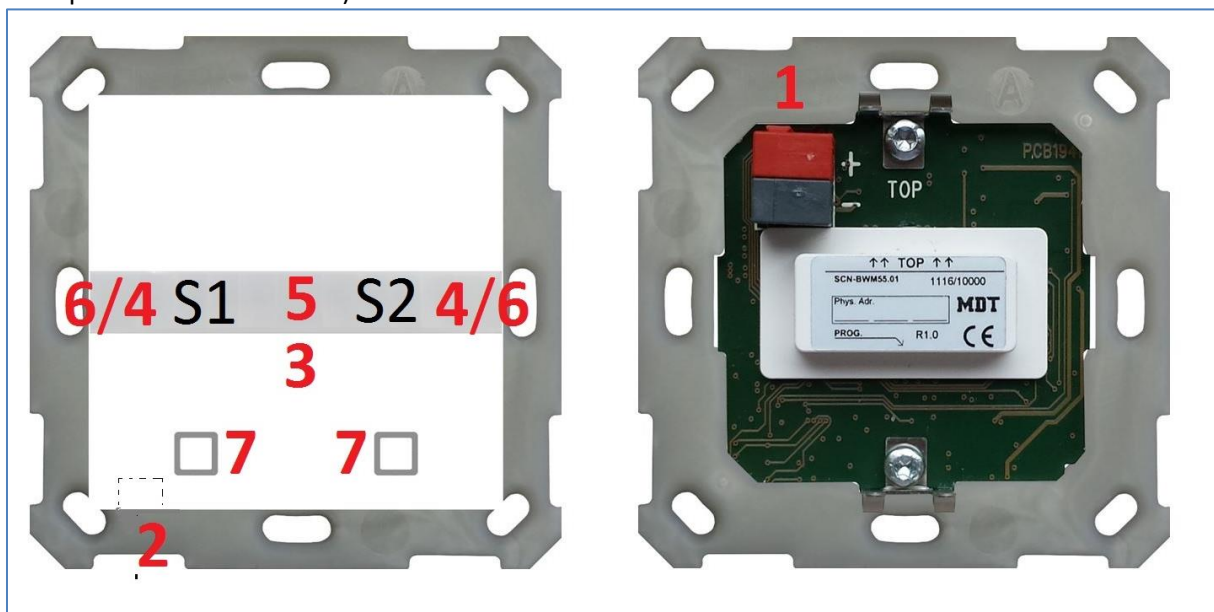


Figure 2: Overview – Hardware module

- | | |
|---|---------------------------|
| 1 = KNX bus connection terminal | 2 = Programming button |
| 3 = LED red | 4 = LED white |
| 5 = Brightness sensor | 6 = LED green |
| 7 = Sensor buttons (only SCN-BWMxxT.x2) | S1/S2 = Sensor 1/Sensor 2 |

2.4 Functions

The functions of the motion detector are divided into the area's "General settings", "Light channel 1 and 2", "HVAC channel", "Detection channel (Alarm)", "Logic", "LED", "Scenes", and "Brightness". For the SCN-BWM55/63T.x2, the areas "Temperature" and "Buttons" are also available:

General Settings

The general settings are used for the basic configuration of the unit. Basic settings for sensitivity and basic settings for brightness can be made here as well as the fallback times can be configured. Furthermore, a cyclically transmitted "Operation" telegram can be activated.

Light channel 1 and 2

Light channel 1 and 2 can be configured and activated/deactivated separately from each other. The active sensors can be configured for each light channel. The operating modes fully automatic and semi-automatic (manual switch-on) are available. Furthermore, different values can be sent for Day/Night (depending on the Day/Night object). A switching object, a scene object, or an absolute value (dimming absolute) can be sent as an output object. Each light channel can be switched with priority via a forced guidance object or a block object.

HVAC channel

The heating, ventilation and air-conditioning channel is the interface between the motion detector and other systems. In contrast to the light channels, the HVAC channel has adjustable observation windows with which the presence in the room can be monitored. By using this channel, it is possible, for example, to control the ventilation of a room according to demand or to switch other HVAC functions on presence/absence.

Detection channel (Alarm)

This channel is used to detect movements during absence. For this purpose, the channel has a separate sensitivity setting and its own enable/disable object with which monitoring can be started. In this menu you can also activate the motion direction detection.

Logic

Up to 4 different logics can be activated. These can be set with the functions AND, OR, XOR. Each logic block can be activated with up to two internal logic objects and up to four external logic objects. Switching commands, scenes, values or 2-bit priority control objects can be sent as output objects.

LED

A white, a green and a red LED are available for display.

The green LED can be used to signal motions, or the LED can be switched depending on an external object.

The white LED can be configured as a night light or as a motion indicator. Furthermore, the LED can be switched via a separate object. The brightness of the LED can be set from 1 - 100%.

The red LED can optionally be used as a pure programming LED or switched via a separate object.

Scenes

Up to 8 scenes can be activated which can cause adjustable actions in the light channels 1/2.

Brightness

The correction of the measured brightness value and the sending conditions for the light value can be set here.

Buttons (only SCN-BWM55/63T.x2)

Two buttons are available on the unit. Using these buttons, functions such as switching, dimming, blinds or sending a value can be carried out - both individually and in groups - as well as internal functions that relate to switching to manual mode or lock/forced operation.

Temperature (only SCN- BWM55/63T.x2)

By activating the sensor, the measured temperature can be sent to the bus. In addition, the transmission behaviour of the measured value as well as a correction value can be configured.

Long Frame Support

Device supports the sending of longer telegrams and thus the storage of more user data per telegram. This significantly shortens the programming time (from ETS5).

Requirements: Use of a programming interface which supports the transmission of long frames, e.g., MDT SCN-USBR.02 or SCN-IP000.03 / SCN-IP100.03.

Updateable via DCA (from Hardware Version R2.0)

If necessary, the actuators can be updated with the help of the MDT Update Tool.

2.5 Commissioning

After wiring, the allocation of the physical address and the parameterization of every channel follows:

- (1) Connect the interface with the bus, e.g., MDT USB interface.
- (2) Switch on the bus voltage.
- (3) Press the programming button on the side of the unit (red programming LED lights up).
- (4) Loading of the physical address out of the ETS-Software by using the interface (red LED goes out, as well this process was completed successful).
- (5) Loading of the application, with requested configuration.
- (6) When the unit is ready for operation, the desired function can be tested (is also possible with the help of the ETS software).

3 Communication objects

3.1 Standard settings of the communication objects

The following tables show the default settings of the communication objects:

Standard settings – Channels								
No.	Name	Object Function	Length	C	R	W	T	U
0	Light channel 1 – Output 1	Switch	1 Bit	X	X		X	
0	Light channel 1 – Output 1 (Day)	Switch	1 Bit	X	X		X	
0	Light channel 1 – Output 1	Dimming absolute	1 Byte	X	X		X	
0	Light channel 1 – Output 1	Scene	1 Byte	X	X		X	
1	Light channel 1 – Output (Night)	Switch	1 Bit	X	X		X	
2	Light channel 1 – Output 2 (Additional)	Switch	1 Bit	X	X		X	
3	Light channel 1 – Input	External push button short	1 Bit	X		X		
4	Light channel 1 – Input	External push button long	1 Bit	X		X		
5	Light channel 1 – Input	External motion (Slave)	1 Bit	X		X		
6	Light channel 1 – Input	Status of actuator channel	1 Bit	X		X		
7	Light channel 1 – Input	Lock motion detection	1 Bit	X		X		
8	Light channel 1 – Input	Forced guidance	2 Bit	X		X		
8	Light channel 1 – Input	Lock object	1 Bit	X		X		
9	Light channel 1 – Input	Lock object ON	1 Bit	X		X		
10	Light channel 1 – Status	Automatic mode	1 Bit	X	X		X	
10	Light channel 1 – Status	Lock/Manual mode	1 Bit	X	X		X	
11	Light channel 1 – Input	Switch dark	1 Bit	X		X		
12	Light channel 1 – Input	Teach-in dimming value for ON	1 Byte	X	X	X		
13	Light channel 1 – Input	Follow-up time 10-65000s	2 Byte	X	X	X		
+15	Next light channel							
60	HVAC – Output	Switch	1 Bit	X	X		X	
60	HVAC – Output	Dimming absolute	1 Byte	X	X		X	
60	HVAC – Output	Scene	1 Byte	X	X		X	
63	HVAC – Input	External push button short	1 Bit	X		X		
64	HVAC – Input	External push button long	1 Bit	X		X		
65	HVAC – Input	External motion	1 Bit	X		X		
66	HVAC – Input	Status of actuator channel	1 Bit	X		X		
67	HVAC – Input	Lock motion detection	1 Bit	X		X		
68	HVAC – Input	Forced guidance	2 Bit	X		X		
68	HVAC – Input	Lock object	1 Bit	X		X		

69	HVAC – Input	Lock object ON	1 Bit	X		X		
70	HVAC – Status	Automatic mode	1 Bit	X	X		X	
70	HVAC – Status	Lock/Manual mode	1 Bit	X	X		X	
72	HVAC – Input	Teach-in dimming value for ON	1 Byte	X	X	X		
73	HVAC – Input	Follow-up time 10-65000s	2 Byte	X	X	X		
75	Alarm – Output	Switch	1 Bit	X	X		X	
75	Alarm – Output (Day)	Switch	1 Bit	X	X		X	
76	Alarm – Output (Night)	Switch	1 Bit	X	X		X	
83	Alarm – Input	Lock	1 Bit	X		X		
83	Alarm – Input	Enable	1 Bit	X		X		

Table 1: Communication objects – Channels

Standard settings – Buttons								
No.	Name	Object Function	Length	C	R	W	T	U
131	Button left	Switch	1 Bit	X	X		X	
131	Button left	Forced guidance	2 Bit	X	X		X	
131	Button left	Toggle	1 Bit	X	X		X	
131	Button left	Send state	1 Bit	X	X		X	
131	Button left	Send value	1 Byte	X	X		X	
131	Button left	Send percent value	1 Byte	X	X		X	
131	Button left	Send scene	1 Byte	X	X		X	
131	Button left	Dimming On/Off	1 Bit	X		X		
131	Button left	Blinds Up/Down	1 Bit	X		X		
131	Buttons left/right	Dimming On/Off	1 Bit	X		X		
131	Buttons left/right	Blinds Up/Down	1 Bit	X		X		
131	Buttons left/right	Switch On/Off	1 Bit	X		X		
131	Button left short	Switch	1 Bit	X	X		X	
131	Button left short	Toggle	1 Bit	X	X		X	
131	Button left short	Send value	1 Byte	X	X		X	
131	Button left short	Send percent value	1 Byte	X	X		X	
131	Button left short	Send scene	1 Byte	X	X		X	
132	Button left Buttons left/right	Dimming relative	4 Bit	X	X		X	
132	Button left Buttons left/right	Slats adjustment / Stop	1 Bit	X	X		X	
132	Button left	Status for toggle	1 Bit	X		X	X	X
132	Button left short	Status for toggle	1 Bit	X		X	X	X
133	Button left	Status for change of direction	1 Bit	X		X	X	X
133	Button left long	Switch	1 Bit	X	X		X	
133	Button left long	Toggle	1 Bit	X	X		X	

133	Button left long	Send value	1 Byte	X	X		X	
133	Button left long	Send percent value	1 Byte	X	X		X	
133	Button left long	Send scene	1 Byte	X	X		X	
134	Button left long	Status for toggle	1 Bit	X		X	X	X
+5	Button right							

Table 2: Communication objects – Buttons

Standard settings – Common objects, LED, Logic								
No.	Name	Object Function	Length	C	R	W	T	U
90	Day/Night	Day = 0 / Night = 1	1 Bit	X		X	X	X
90	Day/Night	Day = 1 / Night = 0	1 Bit	X		X	X	X
91	LED green	Switch	1 Bit	X		X		
92	LED red	Flashing	1 Bit	X		X		
93	LED white	Switch	1 Bit	X		X		
94	Scene	Input	1 Bit	X		X		
95	Operating	Output	1 Bit	X	X		X	
97	Brightness	Measured value	2 Byte	X	X		X	
98	Brightness	Set switch-on threshold for light channels	2 Byte	X	X	X		
101	Direction of movement 1	Switch on movement from right to left	1 Bit	X	X		X	
102	Direction of movement 2	Switch on movement from left to right	1 Bit	X	X		X	
110 - 113	Logic 1	Input C-F	1 Bit	X		X	X	X
114	Logic 1	Output 1	1 Bit/ 2 Bit/ 1 Byte	X	X		X	
+5	next logic							
130	Temperature	Measured value	2Bytes	X	X		X	

Table 3: Communication objects – Common objects, LED, Logic

The tables above show the default settings. The priority of the individual communication objects and the flags can be adjusted by the user as required. The flags assign the communication objects their respective tasks in the programming. "C" stands for communication, "R" for reading, "W" for writing, "T" for transmitting and "U" for updating.

4 Reference ETS-Parameter

4.1 General settings

The following picture shows the submenu for the general settings:

Send "Operating" cyclically	10 min	▼
Day/Night object	request after reset	▼
Value for Day/Night	<input checked="" type="radio"/> Day = 1 / Night = 0 <input type="radio"/> Day = 0 / Night = 1	
Toggle Day/Night	<input checked="" type="radio"/> at next presence <input type="radio"/> directly at toggle	
Basic setting of sensitivity		
Trigger sensitivity "Day"	6	▼
Trigger sensitivity "Night"	3 (low)	▼
Presence sensitivity	8 (high)	▼
Basic setting of brightness		
Switch-on threshold "Day"	100	▲▼ Lux
Switch-on threshold "Night"	10	▲▼ Lux
Switch-off if exceedance	<input type="radio"/> not active <input checked="" type="radio"/> active	
Switch OFF when exceeding...	800	▲▼ Lux
Fallback of forced guidance/lock		
Follow-up time for forced guidance/lock (Day)	3 min	▼
Follow-up time for forced guidance/lock (Night)	3 min	▼
Fallback for external push button long (Manual => Auto)		
Manual mode, follow-up time at ON (Day)	3 min	▼
Manual mode, follow-up time at OFF (Day)	3 min	▼
Manual mode, follow-up time at ON (Night)	3 min	▼
Manual mode, follow-up time at OFF (Night)	3 min	▼
Push-button short is interpreted as motion and starts the follow-up time (adjustable in corresponding channel menu), push-button long switches to manual operation.		

Figure 3: General Settings

The following table shows the possible settings for this menu:

ETS-Text	Dynamic range [Default value]	Comment
Send „Operating“ cyclically	<ul style="list-style-type: none"> • not active • 1 min – 24 h 	Activation of a cyclic "in operation" telegram.
Day/Night object	<ul style="list-style-type: none"> • not active • active, not request • request after reset 	Definition of whether a Day/Night object is to be used and whether this is to be requested in the event of a reset.
Value for Day/Night	<ul style="list-style-type: none"> ▪ Day = 1 / Night = 0 • Day = 0 / Night = 1 	Sets the polarity for Day/Night switching.
Toggle Day/Night	<ul style="list-style-type: none"> • at next presence • directly at toggle 	Determining when the Day/Night switchover takes place.
Basic setting of sensitivity		
Trigger sensitivity “Day”	0 – 8 [6]	Setting the triggering sensitivity in Day/Night mode. Sensitivity 0 (lowest level) only possible from DB V4.4 and from device HW R2.5.
Trigger sensitivity “Night”	0 – 8 [3]	
Presence sensitivity	1 – 10 [8]	Setting the sensitivity when presence is detected.
Basic setting of brightness		
Switch-on threshold “Day”	5 – 1000 Lux [100]	Setting of the brightness threshold below which the sensor is activated in Day mode.
Switch-on threshold “Night”	5 – 1000 Lux [10]	Setting of the brightness threshold below which the sensor is activated in Night mode.
Switch-off if exceedance	<ul style="list-style-type: none"> • not active • active 	Setting whether an OFF telegram should be sent when a certain brightness threshold is exceeded.
Switch-off when exceeding...	75 – 1000 Lux [800]	Setting the brightness threshold from when the sensor sends an OFF telegram.

Fallback of forced guidance/lock	<ul style="list-style-type: none"> • not active • After presence and follow-up time • after fixed time 	Activation of a fallback time from the forced guidance.
Follow-up time for forced guidance/lock (Day)	1 s – 9 h 3 min	Setting of a follow-up time for forced guidance/locking for Day/Night. Displayed if the fallback of forced guidance is activated to "after presence and follow-up time".
Follow-up time for forced guidance/lock (Night)	1 s – 9 h 3 min	
Fallback time for forced guidance/ lock (Day)	1 s – 9 h 10 min	Setting of a fallback time for forced guidance/locking for Day/Night. Displayed if the fallback of forced guidance is activated to "after fixed time".
Fallback time for forced guidance/lock at (Night)	1 s – 9 h 10 min	
Fallback for external push button long (Manual => Auto)	<ul style="list-style-type: none"> • not active • After presence and follow-up time • after fixed time 	Activation of a fallback time from override by an external push-button.
Manual mode, follow-up time at ON (Day)	1 s – 9 h 3 min	Setting of a follow-up time for manual operation for ON or OFF in Day or Night mode. Displayed if "Fallback external push-button long (manual => auto)" is activated to "after presence and follow-up time".
Manual mode, follow-up time at OFF (Day)	1 s – 9 h 3 min	
Manual mode, follow-up time at ON (Night)	1 s – 9 h 3 min	
Manual mode, follow-up time at OFF (Night)	1 s – 9 h 3 min	
Manual mode, fallback time at ON (Day)	1 s – 9 h 10 min	Setting of a fallback time for manual operation for ON or OFF in Day or Night mode. Displayed if "Fallback external push-button long (manual => auto)" is activated to "after fixed time".
Manual mode, fallback time at OFF (Day)	1 s – 9 h 10 min	
Manual mode, fallback time at ON (Night)	1 s – 9 h 10 min	
Manual mode, fallback time at OFF (Night)	1 s – 9 h 10 min	

Table 4: General Settings

Value for Day/Night determines whether the detector is in Day or Night mode. The parameters set for Day/Night then apply accordingly.

Sensitivity

The sensitivity of the sensors is set here. 1 means very low, the higher the value, the more sensitive the sensors become. This setting has an influence on the detection range. If the value is set low, movement is only detected relatively close to the detector. If the value is set to e.g. 8, a movement is already detected at a greater distance from the detector.

Note: From database V4.4 onwards and from device HW R2.5 onwards, it is also possible to set the sensitivity to level 0 (lowest level).

Brightness

This allows a specific operating range to be specified for the Presence Detector. The parameters "**Switch-on threshold "Day/Night"**" defines the brightness threshold below which the detector detects presence. Above this threshold, no more movement is detected, but the detector does not switch off the light as soon as the brightness is exceeded; instead, the follow-up time runs normally. The set threshold value can be changed via object "98 - Set switch-on threshold for light channels". The value always applies to the current operation. If the detector is in Day mode, the threshold for "Day" is changed. If the detector is in Night mode, the threshold for "Night" is changed. The "**Switch off if exceedance**" parameter causes the light channel to switch off immediately when the set value is reached. The value should not be set too low, however, as this could result in the light channel switching on/off continuously.

Example: If the detector switches ON and the brightness in the room with the light switched on is brighter than the "Switch off if exceeded" value, the channel switches off again immediately.

Fallback forced guidance/lock: If the detector is in a certain state via forced guidance or locking, it can be defined whether it should fall back into automatic mode **after a fixed time**.

With the setting "**after presence and follow-up time**", the presence in the room continues to be detected during forced guidance/lock. If there is now no one in the room and the follow-up time of the channel has elapsed, the set "Manual mode follow-up time..." starts from this point, after which the detector switches back to automatic mode.

Fallback for external push-button long (manual => auto): If the detector is switched to manual mode via "External push-button long", a fallback to automatic mode "with fixed time" or "after presence and follow-up time" can also be achieved here. The procedure corresponds to the description in the previous point "Fallback forced guidance/lock".

The following table shows the general communication objects:

Number	Name/Object Function	Length	Usage
90	Day/Night – Day = 1 / Night = 0, Day = 0 / Night = 1	1 Bit	Switching between Day/Night Mode. Polarity depending on parameter setting.
95	Operating – Output	1 Bit	Sending a cyclic "In operation" telegram

Table 5: General communication objects

4.2 Channel selection

Up to 4 channels can be activated:

Light channel 1	<input type="radio"/> not active	<input checked="" type="radio"/> active
Light channel 2	<input type="radio"/> not active	<input checked="" type="radio"/> active
HVAC channel	<input type="radio"/> not active	<input checked="" type="radio"/> active
Detection channel (Alarm) / Direction of movement	<input type="radio"/> not active	<input checked="" type="radio"/> active

Figure 4: Basic settings – Channel selection

A new submenu is displayed for each activated channel.

4.3 Light channel/HVAC channel

Since light channels and the HVAC channel differ only in individual settings, they are summarised in this subitem.

4.3.1 Basic settings – Light channel

Light channel

The following picture shows the basic settings for a light channel:

Active sensors	12
Information about sensor assignment	<input type="checkbox"/>
Sensitivity	<input checked="" type="radio"/> basic setting (General setting) <input type="radio"/> individual
Brightness	<input checked="" type="radio"/> basic setting or object "Dark switch" is active <input type="radio"/> independent of brightness
Channel mode	<input checked="" type="radio"/> fully automatic <input type="radio"/> half automatic (manual switching)
Motion filter in standby	<input type="radio"/> not active, no filtering <input checked="" type="radio"/> active, filter short motions
Reduction of follow-up time	<input type="radio"/> not active <input checked="" type="radio"/> active
Maximum duration for short time presence	20 s
Follow-up time for short time presence	60 s
Follow-up time "Day"	3 min
Follow-up time "Night"	30 s

Figure 5: Basic settings – Light channel

The following table shows the possible settings:

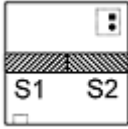
ETS-Text	Dynamic range [Default value]	Comment
Active sensors	<ul style="list-style-type: none"> • -- • 1- • -2 • 12 	Setting which sensors are active for this channel.
Information about sensor assignment Position of sensors	<input checked="" type="checkbox"/> 	If the mark is set by clicking on the checkbox, a sketch appears with information about the positions of the sensors S1 and S2.
Sensitivity	<ul style="list-style-type: none"> • basic setting (General settings) • individual 	Selection of whether the values for the sensitivity from the "General settings" menu are used or whether they are set individually for the light channel. Individual: Sensitivity 0 (lowest level) only possible from DB V4.4 and from device HW R2.5.
Brightness	<ul style="list-style-type: none"> • basic setting or object „Dark switch“ active • Independent of brightness 	Basic setting or object „Dark switch“ active: The light channel uses the brightness settings of the "General settings" but can be switched brightness-independently with a "1" to the "Switch dark" object. Independent of brightness: The light channel switches independently of the measured brightness.
Channel mode	<ul style="list-style-type: none"> • fully automatic • half automatic (manual switching) 	Setting whether the device operates as a fully automatic or semi-automatic device
Motion filter in standby	<ul style="list-style-type: none"> • not active, no filtering • active, filter short motions 	Activation of a motion filter in readiness (= output is switched off). Only in fully automatic operating mode!
Reduction of follow-up time	<ul style="list-style-type: none"> • not active • active 	Setting whether a shortening of the follow-up time is to be activated
Maximum duration for short time presence	10 s, 20 s , 30 s,	Setting the maximum duration for a short-time presence
Follow-up time for short time presence	10 s, 20 s, 30 s , 45 s, 60 s, 90 s, 120 s	Setting the follow-up time for the short-time presence
Follow-up time "Day"	1 s – 4 h [3 min]	Setting the follow-up time for Day mode
Follow-up time "Night"	1 s – 4 h [30 s]	Setting the follow-up time for Night mode

Table 6: Basic settings – Light channel

Active sensors

The active sensors can be set for each light channel. This allows the detection range of the channel to be limited. For example, if only one area in a corridor is to be detected, only one sensor can be activated. The alignment of the sensors becomes recognisable by activating the parameter "Information about sensor assignment".

Sensitivity

If a channel is set to "**basic setting (General settings)**", the sensitivity always refers to the settings, made in the "General settings" menu. If set to "**individual**", the parameters for trigger sensitivity and presence sensitivity appear and can be made individually for the corresponding light channel.

Note: From database V4.4 onwards and from device HW R2.5 onwards, it is also possible to set the sensitivity to level 0 (lowest level).

Brightness

With "**Basic setting or object "Dark switch" active**", brightness refers to the settings in "General setting". However, this can become brightness-independent via the "Dark switch" object with a 1 and thus switches at any brightness.

No threshold applies via the "**independent of brightness**" setting and the channel always switches.

Fully automatic

If the presence detector is set as fully automatic, every detected presence causes the output to switch on and is switched off again after the follow-up time has elapsed.

Half automatic (manual switching)

In half-automatic mode, the output is switched on via the object "External push-button short" and automatically switched off again after the follow-up time has elapsed.

The **follow-up time** describes the time that elapses after the last detection of a movement until the output is switched off. The follow-up time can be set differently for Day/Night. For example, with a follow-up time of 3 minutes, the light would be switched on for at least 3 minutes if movement was detected. Each new detection leads to a retriggering and thus a restart of the follow-up time.

In addition, a "**reduction of the follow-up time**" can be activated. In this case, two additional parameters are displayed:

Maximum duration for short-time presence: Indicates the duration between the first and the last movement detection to activate the short-time presence.

Follow-up time for short-time presence: Indicates the duration of the follow-up time when the short-time presence was activated.

If the first and last movement was detected within the set duration for short-time presence when short-time presence was activated, the output is not switched on for the regular follow-up time, but only for the follow-up time of the short-time presence.

4.3.2 Basic settings – HVAC channel

HVAC channel

The following picture shows the basic settings for the HVAC channel:

Active sensors	12
Information about sensor assignment	<input type="checkbox"/>
Channel mode	<input checked="" type="radio"/> fully automatic <input type="radio"/> half automatic (manual switching)
Number of monitoring time slots	3
Length of monitoring time slot	30 s
Follow-up time "Day"	3 min
Follow-up time "Night"	30 s

Figure 6: Basic settings – HVAC channel

The following table shows the possible settings for these parameters:

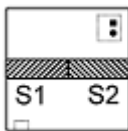
ETS-Text	Dynamic range [Default value]	Comment
Active sensors	<ul style="list-style-type: none"> • -- • 1- • -2 • 12 	Setting which sensors are active for this channel.
Information about sensor assignment	<input checked="" type="checkbox"/>	If the mark is set by clicking on the checkbox, a sketch appears with information about the positions of the sensors S1 and S2.
Position of sensors		
Channel mode	<ul style="list-style-type: none"> • fully automatic • half automatic (manual switching) 	Setting whether the device operates as a fully automatic or semi-automatic device.
Number of monitoring time slots	1 – 30 [3]	Setting the number of observation time windows.
Length of monitoring time slot	0 ... 30000 [30]	Setting the length for each of the observation time windows.
Follow-up time "Day"	1 s – 4 h [3 min]	Setting the follow-up time for Day mode.
Follow-up time "Night"	1 s – 4 h [30 s]	Setting the follow-up time for Night mode.

Table 7: Basic settings – HVAC channel

Active sensors

The active sensors can be set for each channel. This allows the detection range of the channel to be limited. For example, if only one area in a corridor is to be detected, only one sensor can be activated. The alignment of the sensors can be recognised by activating the parameter "Information about sensor assignment".

Fully automatic

If the presence detector is set as fully automatic, every detected presence causes the output to switch on and is switched off again after the follow-up time has elapsed.

Half automatic (manual switching)

In half-automatic mode, the output is switched on via the object "External push-button short" and automatically switched off again after the follow-up time has elapsed.

Monitoring time slot

The monitoring time slot is available for the HVAC. This causes a longer detection to be required for switching on. To switch on the channel, at least one detection must have taken place in each of the set monitoring time slots.

The length of the monitoring time slot determines how long the system waits for a detection within a time slot.

The **follow-up time** describes the time that elapses after the last detection of a movement until the output is switched off. The follow-up time can be set differently for Day/Night. For example, with a follow-up time of 3 minutes, the light would be switched on for at least 3 minutes if movement was detected. Each new detection leads to a retriggering and thus a restart of the follow-up time.

4.3.3 Forced guidance/Lock object

- Light channel
- HVAC channel

The following picture shows the possible settings:

Figure 7: Settings – Forced guidance/Lock object

The following table shows the possible settings:

ETS-Text	Dynamic range [Default value]	Comment
Forced guidance or lock object	<ul style="list-style-type: none"> • force object (2Bit) • lock object • lock object und lock object ON 	Selection of whether a forced guidance object or a lock object is to be used.
Action at locking	<ul style="list-style-type: none"> • Lock motion (lock current state) • switch ON • switch OFF 	Defines the status that is to be sent during locking. Parameter only available if "Lock object" is selected.
Fallback of forced guidance/lock (General settings)	<ul style="list-style-type: none"> • not active • active 	Setting whether the channel should react to "Fallback forced guidance/lock" in the menu "General settings".

Table 8: Settings – Forced guidance/Lock object

The presence detector can be overridden with the forced guidance/lock object and call up a certain status.

The forced guidance object knows 3 possible states:

- **Force control ON (control = 1, value = 1)**
The command for "ON" is sent unconditionally to the output object. The evaluation is then stopped and the release time for force control begins. If nothing is received on the force control object after the release time has expired, normal operation is resumed.
- **Force control OFF (control = 1, value = 0)**
The command for "OFF" is sent unconditionally to the output object. The evaluation is then stopped and the release time for force control begins. If nothing is received on the force control object after the release time has expired, normal operation is resumed.
- **Force control AUTO (control = 0, value = 0)**
After that the normal operation of the detector is continued

As an alternative to the force control object, 1 or 2 locking objects of size 1 bit can be displayed. 3 different states can be configured for the lock object:

- **Lock motion (lock current state)**
The channel is locked in its current state and remains locked until the locking process is deactivated.
- **Switch ON**
The light channel sends the output value ON and remains in the ON state until the locking process is deactivated.
- **Switch OFF**
The light channel sends the output value OFF and remains in the OFF state until the locking process is deactivated.

By activating "**Lock object ON**", the light channel sends the output value ON and remains in the ON state until the locking process is deactivated.

With the parameter "**Fallback of forced guidance/lock (general setting)**", it is possible to set individually for each channel whether it should react to the configuration for "Fallback of forced guidance/lock" in the "General settings" or not.

The following table shows the corresponding communication objects:

Number	Name/Object Function	Length	Usage
8	Light channel 1 - Input – Lock object	1 Bit	Locking the light channel
8	Light channel 1 - Input – Forced guidance	2 Bit	Activate/deactivate forced guidance
9	Light channel 1 - Input – Lock object ON	1 Bit	Switching on the light channel and locking the light channel in the ON state
68	HVAC - Input – Lock object	1 Bit	Locking the light channel
68	HVAC - Input – Forced guidance	2 Bit	Activate/deactivate forced guidance
69	HVAC - Input – Lock object ON	1 Bit	Switching on the light channel and locking the light channel in the ON state

Table 9: Communication objects – Forced guidance/lock

4.3.4 Output objects

- Light channel
- HVAC channel

Three different objects are possible for the output object.

The following table shows possible settings (here: switch, light channel):

Figure 8: Settings – Output objects

The following parameters are relevant for the output objects:

ETS-Text	Dynamic range [Default value]	Comment
Object type for output – Light / HVAC	<ul style="list-style-type: none"> • switch • dimming absolute • scene 	Selection of the object type that is sent when a motion is detected.
Output 2 (Additional switch object)	<ul style="list-style-type: none"> • not active • ON and OFF 	Activation of an additional switching object. Only available for light channels!

Table 10: Settings – Output object

Output 2 (Additional switch object)

In addition, a separate switching object can be activated - regardless of the object type. This is always a 1-bit object.

If, for example, a dimming value is sent as output object 1, a 1-bit telegram can also be sent via output 2 to control a status LED or similar.

Important: This object is only available for the light channels!

Object type for output

The parameter defines the data point type of the output object.

These are explained below:

4.3.4.1 Output object: Switch

4.3.4.1.1 Switch – Light channel

The following settings are available for the **light channels**:

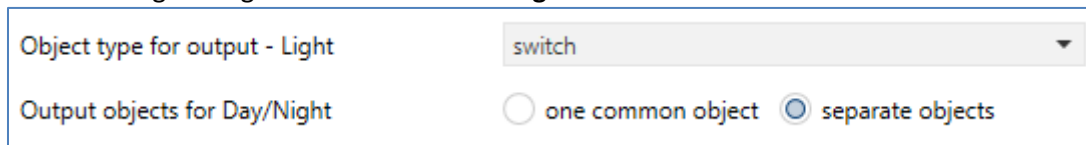


Figure 9: Settings – Output object: Switching (Light channel)

The parameter **Output objects for Day/Night** can be used to select whether a common object is used for Day/Night or separate objects. In the case of "separate objects", a separate switching object is displayed for Night mode, so that two objects are available for Day and Night. For example, the main light can be switched on in Day mode and a small orientation light can be switched on in Night mode.

4.3.4.1.1 Switch – HVAC channel

The following settings are available for the **HVAC channel**:

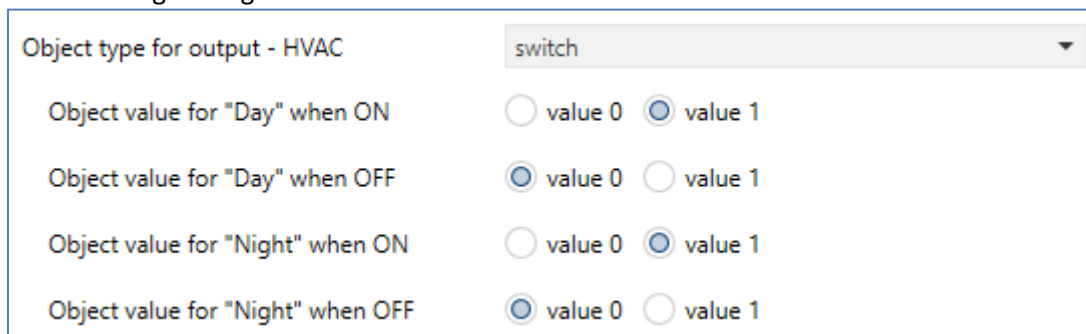


Figure 10: Settings – Output object: Switching (HVAC)

There is only one output here. The **object values** for Day/Night and for ON and OFF are set directly.

D The following table shows the available communication objects:

Number	Name/Object Function	Length	Usage
0	Light channel 1 - Output 1 – Switch	1 Bit	Switching function of the light channel for Day/Night operation
0	Light channel 1 - Output 1 (Day) – Switch	1 Bit	Switching function of the light channel for Day operation
1	Light channel 1 - Output (Night) – Switch	1 Bit	Switching function of the light channel for Night operation
2	Light channel 1 - Output 2 (Additional)	1 Bit	Activation of an additional switch object
60	HVAC - Output 1 – Switch	1 Bit	Switching function of the HVAC channel

Table 11: Communication objects – Output object: Switch

4.3.4.2 Output object: Dimming absolute

For this purpose, the following settings are available:

Object type for output - light	dimming absolute
Dimming value for "Day" when ON	100%
Dimming value for "Day" when OFF	0%
Dimming value for "Night" when ON	30%
Dimming value for "Night" when OFF	0%
Behaviour after expiry of follow-up time	<input type="radio"/> switch-off immediately <input checked="" type="radio"/> other dimming value and switch-off delay
Switch-off delay for "Day"	30 s
Switch-off dimming value for "Day"	30%
Switch-off delay for "Night"	30 s
Switch-off dimming value for "Night"	20%

Figure 11: Settings – Output object: Dimming absolute

With the “**Dimming values for Day/Night when ON/OFF**”, the corresponding absolute values are defined that the channel sends after detection or after the follow-up time has elapsed. New values can be specified via the "Teach-in dimming value for ON" objects.

If the channel is in “Day” mode, the corresponding ON value for “Day” is changed.

If the channel is in “Night” mode, the corresponding ON value for “Night” is changed.

In addition, the "**Behaviour after expiry of follow-up time**" can be configured. On the one hand, the light can switch off immediately, on the other hand, a kind of "orientation light" can be set. In this case, the light is switched to a defined dimming value for a certain time before it is switched off. The light channel is only switched off when the switch-off delay has expired.

The values for "Day" or "Night" mode can be set individually.

For the light channels (not HVAC), an additional "Switch" output object can also be displayed.

The following table shows the available communication objects:

Number	Name/Object Function	Length	Usage
0	Light channel 1 - Output 1 – Dimming absolute	1 Byte	Dimming function of the light channel
2	Light channel 1 - Output 2 (Additional) – Switch	1 Bit	Second switching function of the light channel
12	Light channel 1 - Input – Teach-in dimming value for ON	1 Byte	Setting a new dimming value when switching ON
60	HVAC - Output 1 – Dimming absolute	1 Byte	Dimming function of the HVAC channel
72	HVAC - Input – Teach-in dimming value for ON	1 Byte	Setting a new dimming value when switching ON

Table 12: Communication objects – Output object: Dimming absolute

4.3.4.3 Output object: Scene

The following settings are available:

Object type for output - Light	scene
Scene number for "Day" when ON	1
Scene number for "Day" when OFF	2
Scene number for "Night" when ON	3
Scene number for "Night" when OFF	4

Figure 12: Settings – Output object: Scene

With “Scene number for Day/Night when ON/OFF”, the corresponding scenes are defined, which the channel sends after detection has taken place or after the follow-up time has elapsed.

The following table shows the available communication objects:

Number	Name/Object Function	Length	Usage
0	Light channel 1 - Output 1 – Scene	1 Byte	Scene function of the light channel
2	Light channel 1 - Output 2 (Additional) – Switch	1 Bit	Second switching function of the light channel
60	HVAC - Output 1 – Scene	1 Byte	Scene function of the HVAC channel

Table 13: Communication objects – Output object: Scene

4.3.4.4 Sending conditions for output objects

The sending conditions can be set for all three object types (here: switch):

Output object 1 sends	ON and OFF
Output object 1 sends ON cyclically	not active

Figure 13: Settings – Sending conditions for output objects

When selecting "**Output object 1 sends**", it is possible to define what is to be sent at the output. The selection, according to the selected type, is as follows:

- Switch: only ON / only OFF / ON and OFF
- Dimming absolute: only dimming value for ON / only dimming value for OFF / dimming value for ON and OFF
- Scene: only scene number for ON / only scene number for OFF / ON and OFF

Send "ON" cyclically

The output object 1 (depending on the configuration switch, dimming absolute or scene) can send the configured value for "ON" cyclically. The time interval can be set between 10 s and 60 min. In addition, the second switching object (only light channel) can send its value cyclically.

4.3.5 External push button short/long

- Light channel
- HVAC channel

The following picture shows the settings for the external push-button inputs:

External push button short starts the follow-up time. External push button long switches to manual mode with fallback time dependig on setting.

External push button short reacts to ON and OFF

Idle time after external button short is OFF 5 s

External push button long reacts to ON and OFF

Idle time after presence end 1 s

External push button short:

If Night light is active switch to Day light stay at Night light

If output "Day" is already ON stay in automatic mode switch to manual mode

Figure 14: Settings – External push button short/long

The following table shows the possible settings:

ETS-Text	Dynamic range [Default value]	Comment
External push button short/long reacts to	<ul style="list-style-type: none"> • ON and OFF • only ON • only OFF • toggle on telegram input 	Selection of which telegrams are valid for the external button
External push button short:		
If Night light is active	<ul style="list-style-type: none"> • switch to Day light • stay at Night light 	Setting what should happen when external button is shortly pressed while Night light is active.
If output "Day" is already ON	<ul style="list-style-type: none"> • stay in automatic mode • switch to manual mode 	Setting the operating mode when output is already ON at "Day". Visible with setting "switch to Day light".
If output is already ON	<ul style="list-style-type: none"> • stay in automatic mode • switch to manual mode 	Setting the operating mode when the output is already ON. Visible with setting "stay at Night light".

Table 14: Settings – External push button short/long

The **external push-button short** is used to manually switch between the states of the light channel or to switch on the light channel in the half-automatic operating mode.

The **external push-button long** is used to manually switch the light channel ON/OFF.

The external push-button input can be used to switch on the light/HVAC channel independently of a motion detection. The exact procedures for the "external push-button short/long" are explained in more detail in chapter [4.3.8 Process diagrams](#).

The parameters for "Idle time" are described in the following chapter [4.3.6 Idle time](#).

The following table shows the available communication objects:

Number	Name/Object Function	Length	Usage
3	Light channel 1 - Input – External push button short	1 Bit	Object for the input of an external push button
4	Light channel 1 - Input – External push button long	1 Bit	Object for the input of an external push button
63	HVAC - Input – External push button short	1 Bit	Object for the input of an external push button
64	HVAC - Input – External push button long	1 Bit	Object for the input of an external push button

Table 15: Communication objects – External push button short/long

4.3.6 Idle time

- Light channel
- HVAC channel

The idle time defines the time for which the device is locked for further detection after it has been switched off. Two settings are available for this:

Idle time after external button short is OFF	5	s
Idle time after switch off	1	s

Figure 15: Settings – Idle time

The following settings are available:

ETS-Text	Dynamic range [Default value]	Comment
Idle time after external button short is OFF	1 ... 30 s [5 s]	Setting of the time for which the device is locked for further detection after it has been switched off via "external push-button short".
Idle time after switch-off	0 ... 60 s [1 s]	Setting the time for which the device is locked for further detection after the follow-up time has expired.

Table 16: Settings – Idle time

The parameter "**Idle time after external button short OFF**" is useful, for example, to leave the room briefly after switching OFF via the external push-button without avoiding a renewed switching ON of the light by detection.

4.3.7 Status information

- Light channel
- HVAC channel

The following parameter can be activated here:

The screenshot shows a settings window with a dropdown menu. The dropdown is open, showing the selected option 'not active' and a small downward arrow. The text 'Status information' is visible to the left of the dropdown.

Figure 16: Settings – Status information

The following settings are possible for this:

ETS-Text	Dynamic range [Default value]	Comment
Status information	<ul style="list-style-type: none"> • not active • send value 1 for automatic mode • send value 1 for lock/manual mode 	Activation of a status object.

Table 17: Settings – Status information

A status object is available for each of the Light channels and the HVAC channel. This can be used to visualise current information as to whether lock/manual mode or automatic mode is active or inactive.

The following communication objects are available:

Number	Name/Object Function	Length	Usage
10	Light channel 1 - Status – Automatic mode	1 Bit	Sends the set status
10	Light channel 1 - Status – Lock/Manual mode	1 Bit	Sends the set status
70	HVAC - Status – Automatic mode	1 Bit	Sends the set status
70	HVAC - Status – Lock/Manual mode	1 Bit	Sends the set status

Table 18: Communication objects – Status information

4.3.8 Process diagrams

Fully automatic without orientation light:

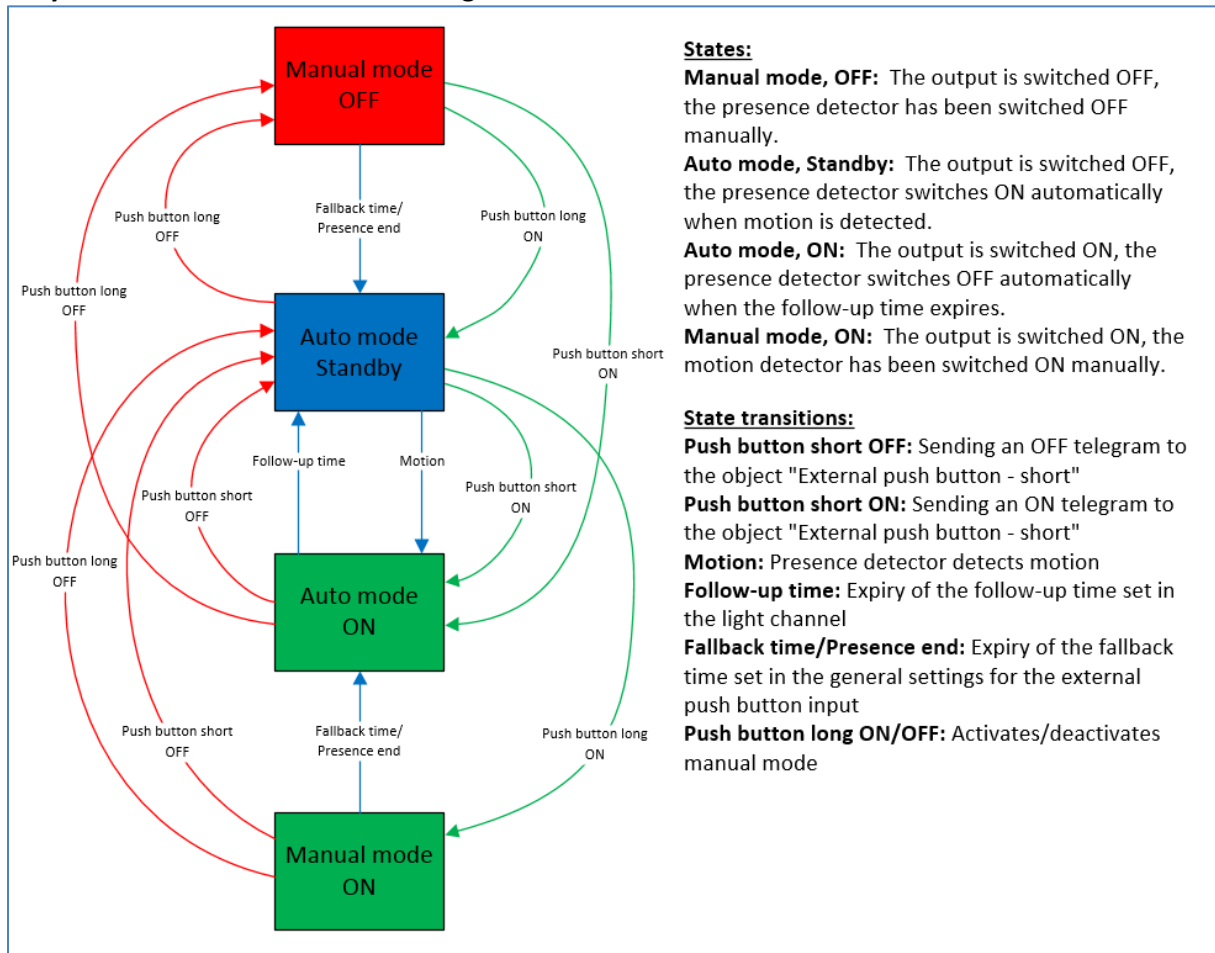


Figure 17: Process diagram – Fully automatic without orientation light

In the operating mode "Fully automatic" the Presence Detector switches on automatically when motion is detected. The object "External push button short" can be used to override the automatic mode of the motion detector and forces the presence detector into manual mode. From this mode, the detector automatically returns to auto mode according to the settings in the menu "General settings" - "Fallback for external push button".

If the output of the light channel is switched on (automatic mode - ON or manual mode - ON) and the light channel is switched off via the object "External push button short", then the light channel is blocked for 10 seconds for motion detection in order to leave the room and prevent brief restart. The detector can be switched to manual mode via the "external push-button - long" object. From this mode, the detector automatically returns to auto mode according to the settings in the "General settings" menu – "Fallback for external push button".

Extended application example 1:

The room is entered, the detector detects presence and switches on the lighting group. However, the light should be switched off for the duration of the presence and automatically switched on again when the room is entered again.

To implement this scenario, you must set the parameter "Fallback for external push button long" in the "General settings" as follows:

Fallback for external push button long (Manual => Auto)	after presence and follow-up time
Manual mode, follow-up time at ON (Day)	3 min
Manual mode, follow-up time at OFF (Day)	3 min
Manual mode, follow-up time at ON (Night)	3 min
Manual mode, follow-up time at OFF (Night)	3 min

The follow-up time for the pushbutton can be set as desired according to your own requirements. Now the object 4 - external push-button long (light channel 1) is connected to the push-button which is to switch off the light.

After pressing the button, the light remains OFF (manual mode state, OFF) if the detector detects presence and then for the set follow-up time for the external button. The light is then switched off and the light channel changes to the state "Auto mode, ready".

Extended application example 2:

The room is entered, the detector detects presence, but the light is not switched on because the set brightness threshold is not exceeded. However, the light should be switched on for the duration of the presence and switched off again automatically after leaving the room.

To implement this scenario, you must set the parameter "Fallback for external push button long" in the "General settings" as follows:

Fallback for external push button long (Manual => Auto)	after presence and follow-up time
Manual mode, follow-up time at ON (Day)	3 min
Manual mode, follow-up time at OFF (Day)	3 min
Manual mode, follow-up time at ON (Night)	3 min
Manual mode, follow-up time at OFF (Night)	3 min

The follow-up time for the pushbutton can be set as desired according to your own requirements. Now the object 4 - external push-button long (light channel 1) is connected to the push-button which is to switch on the light.

After the push-button has been pressed, the light remains ON (manual mode state, ON) if the detector detects presence and then for the set follow-up time for the external push-button. The light is then switched OFF and the light channel changes to the state "Auto mode, ready".

Fully automatic with orientation light:

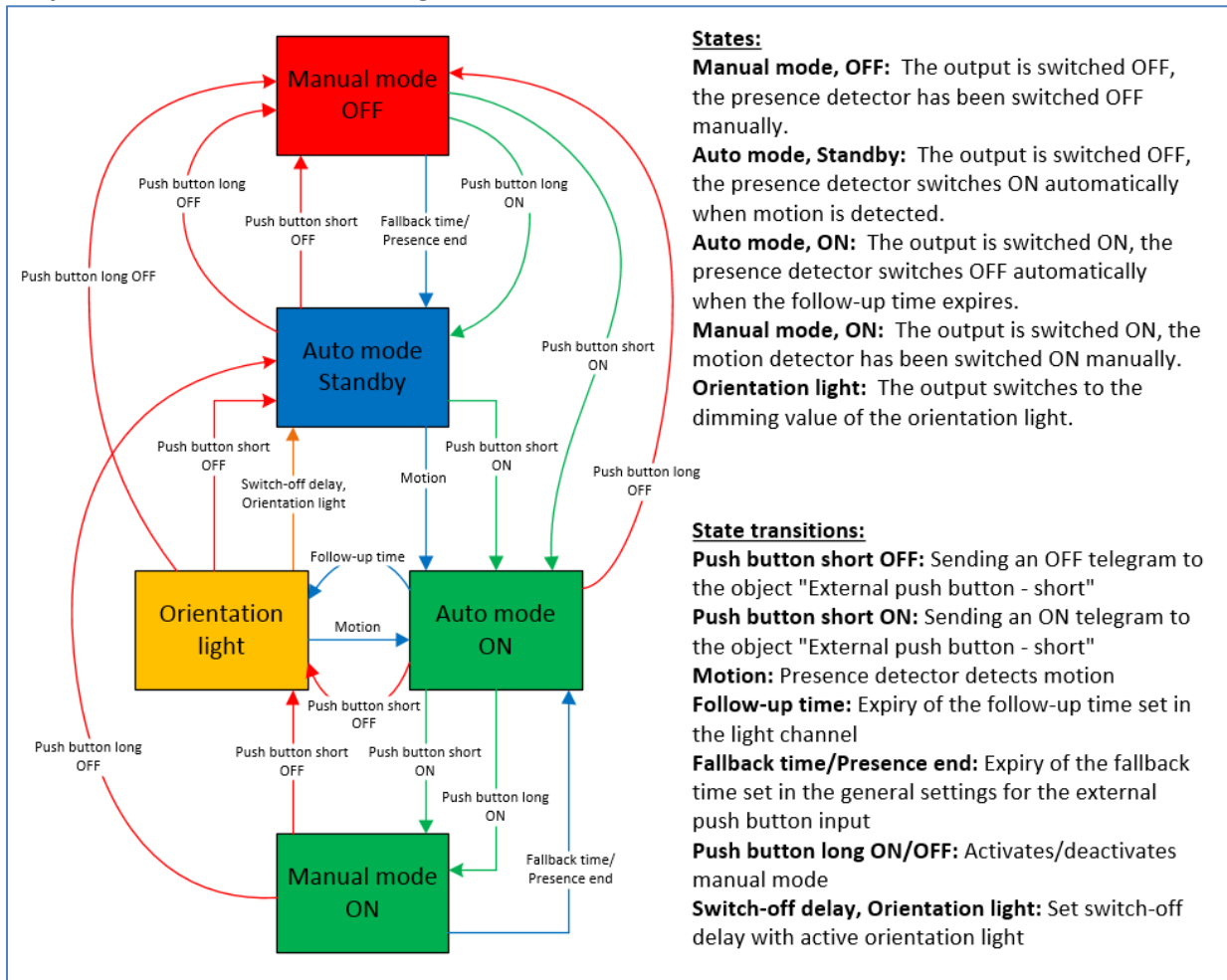


Figure 18: Process diagram – Fully automatic with orientation light

The operating mode "fully automatic with orientation light" extends the operating mode fully automatic by the status orientation light. The orientation light can be activated as soon as the "Object type for output - light" parameter is set to "dimming absolute". The orientation light is switched on as soon as the follow-up time of the light channel has elapsed. The output is then switched to the orientation light state and can therefore dim the light to a darker level to leave the room safely.

Half automatic without orientation light:

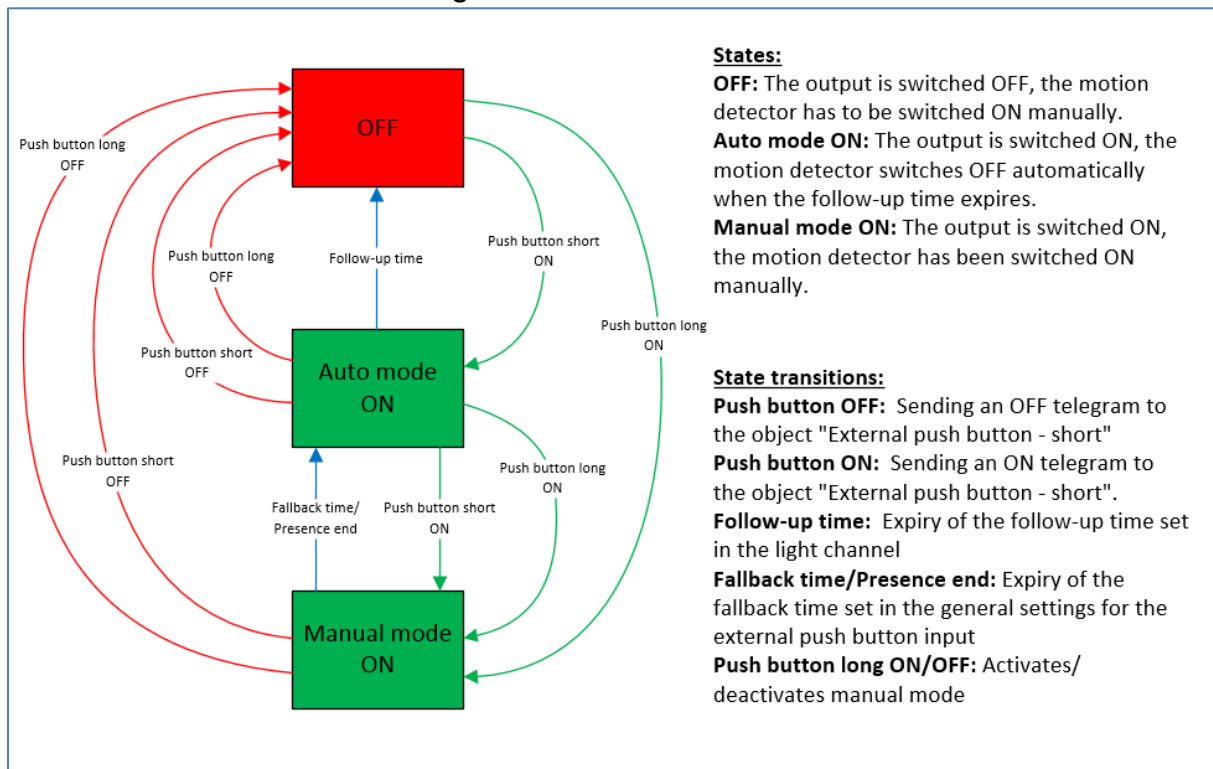


Figure 19: Process diagram – Half automatic without orientation light

In the operating mode "half-automatic", the motion detector must be switched on manually via the object "external push-button - short". The light channel is automatically switched off again after the follow-up time (=no movement detection for the set follow-up time) has elapsed.

The light channel can also be overridden via the "external push-button - short" object. The motion detector can be switched to manual mode by pressing twice

Half automatic with orientation light:

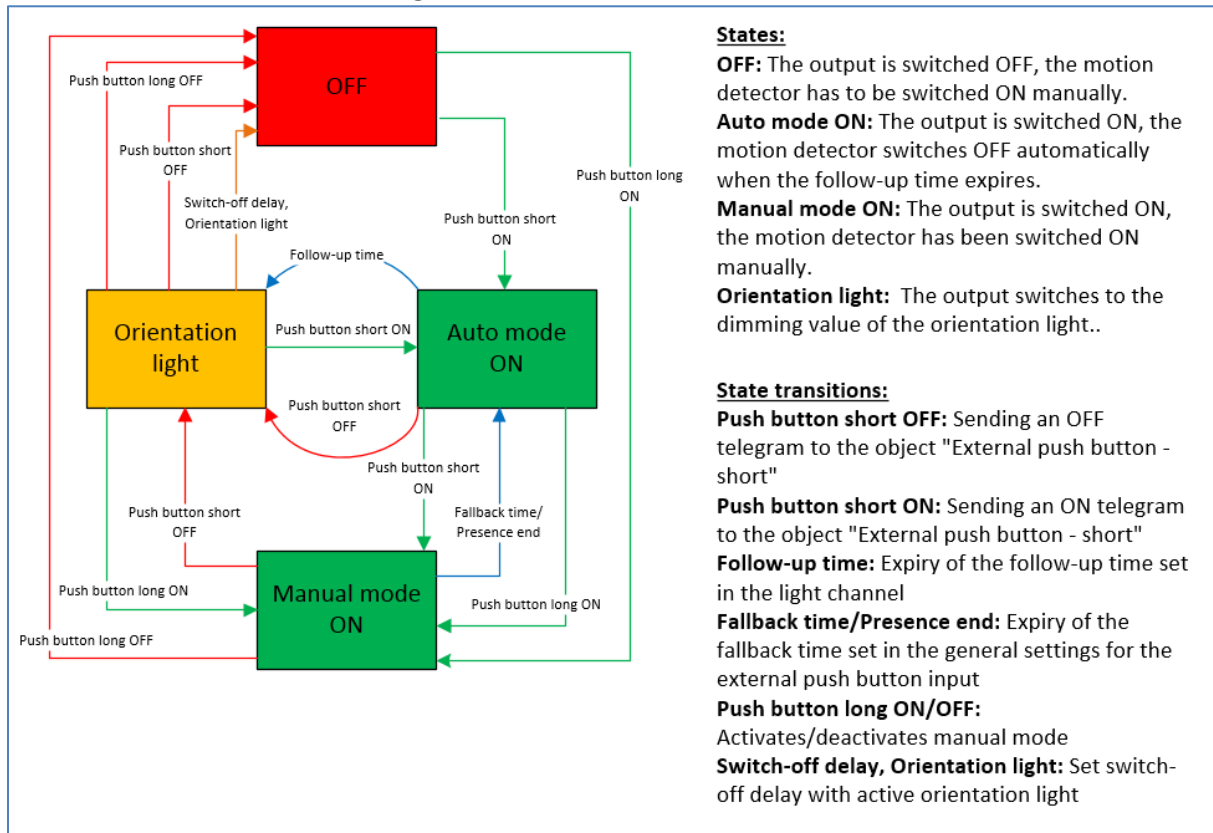


Figure 20: Process diagram – Half automatic with orientation light

The operating mode half-automatic with orientation light extends the operating mode half-automatic by the orientation light state. The orientation light can be activated as soon as the "Object type for output - light" parameter is set to "dimming absolute". The orientation light is switched on as soon as the follow-up time of the light channel has elapsed. The output is then switched to the orientation light state and can therefore dim the light to a darker level to leave the room safely.

4.3.9 Master-Slave-Operation

The following is a short description of the settings. For more details, there is a suggested solution on our website https://www.mdt.de/EN_Downloads_Solutions.html under „Presence/Motion Detector“.

4.3.9.1 Light channels

In larger rooms, the use of a single motion detector is often not sufficient. To detect motion in every corner of the room, several detectors must be used throughout the entire room. Here, however, a detected motion should always lead to the same settings regardless of the corner of the room in which the presence was detected. For this purpose, one detector is switched as master and any number of others as slaves.

The settings for the master-slave control are made in the menu of the respective light channels.

The master is configured as desired as a fully or half-automatic unit.
A value of 3-5 minutes is recommended for the follow-up time.

Slaves are set as follows:

- The brightness must be set to "**independent of brightness**".
- Set the operating mode of the channel to "**fully automatic**".
- The **follow-up time** should be significantly shorter than that of the master.
- Object type for output – light to "**Switching**".
- The output object transmits "**only ON**".
- A value of **30 seconds** is recommended for the time "**sending cyclic ON**".

The "slaves" send their output object for "switch" to the "external motion (slave)" object of the master.

4.3.9.2 HVAC / Alarm channel

The master-slave control can also be applied to the HVAC/Alarm channels. The settings for the "slave" are the same as for the slaves for the lighting groups. However, the settings for the brightness values are omitted for the HVAC/alarm channel. The observation windows are to be set according to the individual requirements.

Attention: If the slave is in its follow-up time, it cyclically sends a "1" to the master. After the last "1" has been sent to the master, the master's follow-up time elapses before the master switches off its output. In this case, the follow-up time of the master and slave are added up.

4.4 Detection channel (Alarm) / Direction of movement

The “Alarm” function can be used to monitor a room in case of absence and to call up certain actions in the KNX system when motion is detected.

The “Detection channel (Alarm)” is always independent of brightness.

In addition, a movement direction detection can be implemented with this channel. This makes it possible to detect in which direction a person is moving.

4.4.1 Detection channel (Alarm)

The following image shows the available settings:

Active sensors	12
Information about sensor assignment	<input type="checkbox"/>
Trigger sensitivity "Day"	3 (low)
Trigger sensitivity "Night"	2
Presence sensitivity	6
<hr/>	
Interference / motion filter	<input type="radio"/> not active, no filtering <input checked="" type="radio"/> active, filter interferences / short motions
Length of monitoring time slot	2s
Number of monitoring time slots	3
Follow-up time "Day"	3 min
Follow-up time "Night"	30 s
<hr/>	
Lock or enable object	<input checked="" type="radio"/> lock object <input type="radio"/> enable object
Fallback of forced guidance/lock (General setting)	<input type="radio"/> active <input checked="" type="radio"/> not active
Output objects for Day/Night	<input checked="" type="radio"/> one common object <input type="radio"/> separate objects
Output object sends at	<input type="radio"/> only ON <input checked="" type="radio"/> ON and OFF
Object sends cyclically every...	not active

Figure 21: Settings – Detection channel (Alarm)

The following table shows the possible settings:

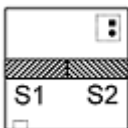
ETS-Text	Dynamic range [Default value]	Comment
Active sensors	<ul style="list-style-type: none"> • -- • 1- • -2 • 12 	Setting, which sensors are active for this channel.
Information about sensor assignment Position of sensors	<input checked="" type="checkbox"/> 	If the mark is set by clicking on the checkbox, a sketch appears with information about the positions of the sensors S1 and S2.
Trigger sensitivity "Day"/"Night"	1 – 6 [3 (Day), 2 (Night)]	Setting the sensitivity for triggering the alarm in standby mode (no movement detected).
Presence sensitivity	1 – 8 [6]	Setting the sensitivity after a first movement has been detected.
Interference/motion filter	<ul style="list-style-type: none"> • not active, no filtering • active, filter interferences/short motions 	Activation of a motion filter on standby (= output is switched off).
Length of monitoring time slot	1 – 5 s [2 s]	Only if "Interference/ motion filter" is set to "active, filter interferences/ short motions".
Number of monitoring time slots	2 – 5 [3]	Setting the number and length of monitoring time slots for detecting the channel.
Follow-up time Day/Night	1 s – 4 h [3 min]	Setting the follow-up time for Day or Night operation.
Lock or enable object	<ul style="list-style-type: none"> • lock object • enable object 	Setting whether a lock or enable object is to be used.
Fallback of forced guidance/lock (General settings)	<ul style="list-style-type: none"> • active • not active 	Only available with lock object. Setting whether the channel should react to "Fallback forced guidance/lock" in the menu "General settings".
Output objects for Day/Night	<ul style="list-style-type: none"> • one common object • separate objects 	Setting whether to send via one object or separate objects for Day and Night
Output object sends at	<ul style="list-style-type: none"> • Only ON • ON and OFF 	Output filter for the first output object.
Output object sends cyclically every...	not active 10 s – 60 min	Activation of cyclic sending for the first output object.

Table 19: Settings – Detection channel (Alarm)

“**Active sensors**” can be set for each channel. This allows the detection range of the channel to be limited. For example, if only one area in a corridor is to be detected, only one sensor can be activated. The position of the sensors can be recognised by activating the parameter “**Information about sensor assignment**”.

The “**Trigger sensitivity Day/Night**” describes the sensitivity in standby mode (the output is switched-off, no movement was detected).

The “**Presence sensitivity**” describes the sensitivity in presence mode (the output is switched on, movement was detected).

To avoid false detections, an **interference/motion filter** can be activated that filters out very short motions, e.g., due to draughts. If this filter is activated, 2 additional parameters appear: “**Length of monitoring time slot**” and “**Number of monitoring time slots**”.

This means that a longer detection is required for switching on. To switch on the channel at least one detection must have taken place in each of the set monitoring time slots. For example, with 3 monitoring time slots and a length of 2 seconds for a monitoring time slot, at least one detection would have to take place in the first 2 seconds, at least one detection in the second 2s and at least one detection in the third 2 seconds. Thus, it takes at least 6 seconds for the alarm channel to trigger. If the motion filter is not activated, the detection takes place for only one movement with the sensitivity set accordingly.

The **follow-up time** describes the time that elapses after the last detection of a movement until the output is switched off. For example, with a follow-up time of 3 minutes, the light would be switched on for at least 3 minutes if movement was detected. Each new detection restarts the follow-up time. This time can be set differently for Day and Night.

A **lock object or enable object** can be activated to lock or enable the Alarm channel. The lock object switches the channel off with a 1. The enable object activates the Alarm channel with a 1.

Attention: An active lock of the channel has no effect on the movement direction detection!

With the parameter “**Fallback of forced guidance/lock (General settings)**”, you can set whether the channel should react to the configuration for “Fallback forced guidance/lock” in the “General settings” or not.

With “**Output objects for Day/Night**” you can set whether switching is done via a common object or separate objects for Day and Night. Using separate objects, for example, a different action can be carried out for Day than for Night.

With the parameter “**Output object sends**”, a send filter can be activated for the output. If the output is only to send ON commands the setting “only ON” can be used.

Via “**Output object sends cyclically every...**”, it can be set that the output object sends its value cyclically to the bus at an interval to be defined.

The following table shows the corresponding communication objects:

Number	Name/Object Function	Length	Usage
75	Alarm - Output – Switch	1 Bit	Output of the alarm function (common object for Day and Night)
75	Alarm - Output (Day)– Switch	1 Bit	Output of the alarm function in Day mode
76	Alarm - Output (Night)– Switch	1 Bit	Output of the alarm function in Night mode
83	Alarm - Input – Lock	1 Bit	Locking the alarm function
83	Alarm - Input – Enable	1 Bit	Enabling the alarm function

Table 20: Communication objects – Detection channel (Alarm)

4.4.2 Direction of movement

The following image shows the parameters for direction of movement detection:

Figure 22: Settings – Direction of movement

The following table shows the available settings:

ETS-Text	Dynamic range [Default value]	Comment
Direction of movement	<ul style="list-style-type: none"> not active active 	Activation of the movement direction detection.
Installation site	<ul style="list-style-type: none"> corridor room 	Setting where the motion detector is mounted.

Table 21: Settings – Direction of movement

The direction of movement detection makes it possible to detect in which direction a person is moving.

The setting for the "**installation site**" determines the behaviour of the detection. For example, frontal movements are filtered out more strongly in the "**room**" setting than in the "**corridor**" setting. For elongated rooms, the "**corridor**" setting should be used. In this installation location and configuration, the direction of movement detection shows the best results

Attention: An active lock of the channel has no effect on the movement direction detection!

The following table shows the corresponding communication objects:

Number	Name/Object Function	Length	Usage
101	Direction of movement 1 – Switch on movement from right to left	1 Bit	Object sends a 1 if first the right sensor has detected a movement and then the left sensor.
102	Direction of movement 2 – Switch on movement from left to right	1 Bit	Object sends a 1 if first the left sensor has detected a movement and then the right sensor.

Table 22: Communication objects – Direction of movement

4.5 Buttons

Buttons only available with SCN-BWM55T.G2 and SCN-BWM63T.02!

For the SCN-BWMxxT.x2 versions, two buttons are available on the unit. Using these buttons, functions such as switching, dimming, blinds or sending a value can be carried out - both individually and in groups - as well as internal functions that relate to the switchover to manual mode or lock/forced operation.

In the "Buttons" menu, the function of the buttons is selected first. Selection is as follows:

ETS-Text	Dynamic range [Default value]	Comment
Function Buttons	<ul style="list-style-type: none"> ▪ not active ▪ Two-button function ▪ Single -button function ▪ internal function/ (Light channel 1) 	Setting the button assignment (left/right button).

Table 23: Settings – Function Buttons

4.5.1 Two-button function

For all functions, the "**Time for long keypress**" can be set via parameters.

When selecting "**Two-button function**", the functions switch, dimming, blinds/shutter are available. The individual functions are described below:

4.5.1.1 Basic function – Switch

Two-button function

With the two-button function, the respective value (On/Off) can be assigned to the left and the right button. The following picture shows the available settings:

Figure 23: Settings – Two-button function: Switch

The following table shows all available settings:

ETS-Text	Dynamic range [Default value]	Comment
Button assignment (left/right)	<ul style="list-style-type: none"> ▪ ON / OFF ▪ OFF / ON 	Setting the button assignment for the direction (brighter/darker).

Table 24: Settings – Two-button function: Switch

The following table shows the available communication object:

Number	Name/Object Function	Length	Usage
131	Buttons left/right – Switch On/Off	1 Bit	Switching function of the buttons

Table 25: Communication objects – Two-button function: Switch

4.5.1.2 Basic function – Dimming

Two-button function

The following picture shows the available settings:

Figure 24: Settings – Two-button function: Dimming

The following table shows all available settings:

ETS-Text	Dynamic range [Default value]	Comment
Button assignment (left/right)	<ul style="list-style-type: none"> ▪ brighter/darker ▪ darker/brighter 	Setting the button assignment for the direction (brighter/darker).

Table 26: Settings – Two-button function: Dimming

The two-button function “dimming” can be set either as brighter/darker or as darker/brighter. The relationships are shown in the following table:

Button	Function brighter/darker		Function brighter/darker	
	Button left	Button right	Button left	Button right
Dimming function	brighter	darker	darker	brighter
Switching function	ON	OFF	OFF	ON

Table 27: Functionality – Two-button Dimming

The dimming function is a start-stop dimming, i.e., as soon as the dimming function becomes active, a bright or dark command is assigned to the input until it is released. After release, a stop telegram is sent, which ends the dimming process.

The following table shows the available communication objects:

Number	Name/Object Function	Length	Usage
131	Buttons left/right – Dimming On/Off	1 Bit	Switching command for the dimming function
132	Buttons left/right – Dimming relative	4 Bit	Command for relative dimming

Table 28: Communication objects – Two-button function: Dimming

4.5.1.3 Basic function – Blinds/Shutter

Two-button function

The blinds/shutter function is used to control shutter actuators, which can be used for the adjustment and control of blinds/shutters.

The following figure shows the available settings:

Figure 25: Settings – Two-button function: Blinds/Shutter

The following table shows the available settings:

ETS-Text	Dynamic range [Default value]	Comment
Button assignment (left/right)	<ul style="list-style-type: none"> Up/Down Down/Up 	Setting the button assignment (left/right) for the move function.
Operation function	<ul style="list-style-type: none"> long=move short=stop/slats Open/Close short=move long=stop/slats Open/Close 	Setting the concept of how to operate with long/short buttons.

Table 29: Settings – Two-button function: Blinds/Shutter

Two communication objects are displayed for the "blind/shutter" function: The object "Stop/slats open/close" and the object "blinds up/down ".The moving object is used to move the blinds/shutters up and down. The stop/step object is used to adjust the slats. In addition, this function stops the up/down movement as far as the end position has not yet been reached.

In the case of the two-button function, the key assignment can be set.

The table below shows the relationships:

Input	Function Up/Down		Function Down/Up	
	Button left	Button right	Button left	Button right
Moving object	Up	Down	Down	Up
Stop/Step object	Stop/slats open	Stop/slats close	Stop/slats close	Stop/slats open

Table 30: Two-button function – Blind function

It is also possible to swap the action for the long and short button presses.

The following table shows the available communication objects:

Number	Name/Object Function	Length	Usage
131	Buttons left/right – Blinds Up/Down	1 Bit	Up/down command for the shutter actuator.
132	Buttons left/right – Slats adjustment / Stop	1 Bit	Slats open/close; stop command

Table 31: Communication objects – Two-button function: Blinds/Shutter

4.5.2 Single-button function

For all functions, the "Time for long keypress" can be set via parameters.

When selecting "Single-buttons function", the following functions are available: switch, switch/send values short/long (with 2 objects), dimming, blinds/shutter, send state and send value.

Important: When "Single-button function" is activated, the basic functions for the left button as well as for the right button always appear on the screen. Both can be configured completely freely.

In the following descriptions of the basic functions, the left button is always listed. The settings for the right button are identical for the same function!

The individual functions are described below:

4.5.2.1 Basic function – Switch

Single-button function

The following figure shows the available settings:

The screenshot shows a settings panel with three rows. The first row is 'Basic function: Left button' with a dropdown menu showing 'switch'. The second row is 'Subfunction' with a dropdown menu showing 'switch when button is pressed'. The third row is 'Value' with two radio buttons: 'OFF' (unselected) and 'ON' (selected).

Figure 26: Settings – Single-button function: Switch

With the basic function "Switch - **Subfunction: Switch when button is pressed**", the button sends the respective fixed set value ON or OFF when pressed.

With the "**Subfunction - Toggle when button is pressed**", the button sends the respective inverted value in relation to the last received status value. For this purpose, the status object "Status for toggle" is connected to the status of the actuator to be controlled. If an ON-signal was received as the last value, the button sends an OF-command the next time it is pressed.

With the "**Subfunction - Send value when button is pressed**", the set value is always sent, either as a percentage value, decimal value, or scene.

The values that can be set are 0 - 100% (percentage value), 0 - 255 (value) or 1 - 64 (scene).

The following table shows the available communication objects:

Number	Name/Object Function	Length	Usage
131	Button left: – Switch	1 Bit	Switching function of the button. Subfunction: Switch when button is pressed
131	Button left: – Toggle	1 Bit	Toggle function of the button. Subfunction: Toggle when button is pressed
131	Button left: – send value, send percent value, send scene	1 Byte	Sending the value. DPT depending on the parameter setting. Subfunction - Send value when button is pressed
132	Button left: – Status for toggle	1 Bit	Status to update the button. Must be linked to the status of the actuator to be switched. Subfunction: Toggle when button is pressed

Table 32: Communication objects – Single-button function: Switch

4.5.2.2 Basic function – Switch/send values short/long (with 2 objects)

Single-button function

The following figure shows the available settings:

Basic function: Left button	switch/send values short/long (with 2 objects) ▼
Action for short keypress	ON ▼
Action for long keypress	not active ▼

Figure 27: Settings – Single-button function: Switch/send values short/long (with 2 objects)

The following table shows the available settings:

ETS-Text	Dynamic range [Default value]	Comment
Action for short/long keypress	<ul style="list-style-type: none"> ▪ OFF ▪ ON ▪ toggle ▪ send value ▪ not active 	Setting the function for the short/long button.
Datapoint type	<ul style="list-style-type: none"> ▪ 1Byte DPT 5.005 Decimal factor (0...255) ▪ 1Byte DPT 5.001 Percent (0...100%) ▪ 1Byte DPT 17.001 Scene number 	Only shown if "Action" is set to "Send value". Setting of the data point type for the value to be sent.

Table 33: Settings – Single-button function: Switch/send values short/long (with 2 objects)

With this basic function, 2 different values can be sent for the short and long button. The short and long buttons have different objects, so it is also possible to send different types of datapoints.

"OFF" or **"ON"**: The same, fixed value is always sent.

"toggle": ON/OFF is sent alternately.

"send value": The set value is always sent, either a percentage value (0 - 100%), decimal value (0 – 255), or scene (1 - 64).

The following table shows the available communication objects:

Number	Name/Object Function	Length	Usage
131	Button left short: – switch, toggle, send value...		Sending the value for the short button. DPT depending on the parameter setting
132	Button left short: – Status for toggle	1 Bit	Status to update the button. Must be linked to the status of the actuator to be switched (for subfunction "toggle").
133	Button left long: – switch, toggle, send value...		Sending the value for the long button. DPT depending on the parameter setting
134	Button left long: – Status for toggle	1 Bit	Status to update the button. Must be linked to the status of the actuator to be switched (for subfunction "toggle").

Table 34: Communication objects – Single-button function: Switch short/long

4.5.2.3 Basic function – Dimming

Single-button function

The following figure shows the available setting:

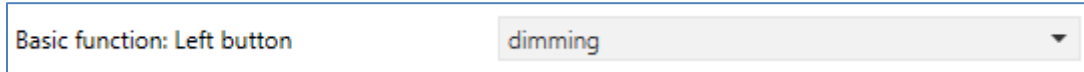


Figure 28: Setting – Single-button function: Dimming

With the single button function "Dimming", 3 communication objects appear for this button. On the one hand, the function for the short button press, the "Dimming on/off" object, and on the other hand, the function for the long button press, the "Dimming relative" object.

The direction (brighter/darker) is reversed depending on the "Status for toggle" communication object.

The dimming function is a start-stop dimming, i.e., as soon as the dimming function becomes active with "long button", a "brighter" or "darker" command is assigned until the button is released. After release, a stop telegram is sent which ends the dimming process.

The following table shows the available communication objects:

Number	Name/Object Function	Length	Usage
131	Button left – Dimming On/Off	1 Bit	Switching command for the dimming function
132	Button left – Dimming relative	4 Bit	Command for relative dimming
133	Button left – Status for toggle	1 Bit	Receipt of the status with current information about the status of the actuator to be controlled

Table 35: Communication objects – Single-button function: Dimming

4.5.2.4 Basic function – Blinds/Shutter

Single-button function

The blinds/shutter function is used to control shutter actuators, which can be used for the adjustment and control of blinds/shutters.

The following figure shows the available settings:

Figure 29: Settings – Single-button function: Blinds/Shutter

The following table shows the available settings:

ETS-Text	Dynamic range [Default value]	Comment
Operation function	<ul style="list-style-type: none"> ▪ long=move / short=stop/slats Open/Close ▪ short=move / long=stop/slats Open/Close 	Setting whether to move or stop with a long button or a short button.

Table 36: Settings – Single-button function: Blinds/Shutter

3 communication objects appear for the blind function. On the one hand, the movement object "Blinds up/down" and on the other hand the function for the stop/step object "Slats adjustment/stop". The movement object is used to raise and lower the blinds/shutters. The "Stop/step object" is used to adjust the slats. In addition, this function stops the up or down movement if the end position has not yet been reached.

With the single-button function, the system switches between up and down after each button is pressed. The direction is reversed depending on the "Status for change of direction" object. Since blind actuators always use a 1 signal for the downward movement and a 0 signal for the upward movement, the unit outputs this as well.

It is additionally possible to swap the action for the long and short button press.

The following table shows the available communication objects:

Number	Name/Object Function	Length	Usage
131	Button left – Blinds Up/Down	1 Bit	Up/down command for the shutter actuator
132	Button left – Slats adjustment / Stop	1 Bit	Open/close slats and stop command
133	Button left – Status for change of direction	1 Bit	Receipt of the status with current information about the direction of the shutter actuator

Table 37: Communication objects – Single-button function: Blinds/Shutter

4.5.2.5 Basic function – Send state

Single-button function

With the single button function: switch - subfunction: send state - fixed values can be sent for a pressed button (rising edge) and a released button (falling edge). This function can be used to implement triggering applications.

The following figure shows the available settings:

The screenshot shows a settings window with the following options:

- Basic function: Left button**: send state (dropdown menu)
- Value for pressed button**: OFF ON
- Value for released button**: OFF ON
- Cyclic sending**: not active active
- Send cyclically every...**: 300 s (input field with up/down arrows)
- Send state after bus power return**: not active active

Figure 30: Settings – Single-button function: Send state

The following table shows the available settings:

ETS-Text	Dynamic range [Default value]	Comment
Value for pressed button	<ul style="list-style-type: none"> ▪ OFF ▪ ON 	Defines the sending behaviour of the button.
Value for released button	<ul style="list-style-type: none"> ▪ OFF ▪ ON 	Defines the sending behaviour of the button.
Cyclic sending	<ul style="list-style-type: none"> ▪ not active ▪ active 	Determine whether values are to be sent cyclically.
Send cyclically every...	1 ... 3000 s [300 s]	Only if "Cyclic sending" is active. Defines the distance between two telegrams.
Send state after bus power return	<ul style="list-style-type: none"> ▪ not active ▪ active 	Specifies whether the current status is to be sent after bus voltage return.

Table 38: Settings – Single-button function: Send state

The following table shows the available communication objects:

Number	Name/Object Function	Length	Usage
131	Button left – Send state	1 Bit	Sends the respective value when the button is pressed and released

Table 39: Communication objects – Single-button function: Send state

4.5.2.6 Basic function – Send value

Single-button function

The following figure shows the available settings:

Figure 31: Settings – Single-button function: Send value

Each time the button is pressed, the set value is always sent, either as a percentage, decimal value or scene.

The following table shows the available settings:

ETS-Text	Dynamic range [Default value]	Comment
Datapoint type	<ul style="list-style-type: none"> ▪ 1Byte DPT 5.005 Decimal factor (0...255) ▪ 1Byte DPT 5.001 Percent (0...100%) ▪ 1Byte DPT 17.001 Scene number 	Setting the datapoint type for the value to be sent.

Table 40: Settings – Single-button function: Send value

The value to be sent can be set according to the set datapoint type.

The values that can be set are 0 - **100%** (percentage value), **0** - 255 (value) or **1** - 64 (scene).

The following table shows the available communication object:

Number	Name/Object Function	Length	Usage
131	Button left – Send percent value, send value, send scene	1 Byte	Sending the value. DPT depending on the parameter setting

Table 41: Communication objects – Single-button function: Send value

4.6 LED

The following picture shows the setting options (here: SCN-BWMxxT.x2):

The screenshot shows the following settings:

- LED green: active on motion (dropdown)
- Light channel 1: not active active
- Light channel 2: not active active
- LED red, object "LED red flashing": not active active
- If the white LED (Night light) is active, the brightness value is not evaluated.
- LED white (Night light): always active at "Night" (dropdown)
- Brightness at "Night": 10% (dropdown)
- Display button operation with white LED: not active active
- Light channel 1:
 - Display "manual mode ON" with green LED: not active active
 - Display "manual mode OFF" with red LED: not active active
 - Display "lock/forced guidance ON" with green LED: not active active
 - Display "lock/forced guidance OFF" with red LED: not active active

Figure 32: Settings – LED

The following table shows the available settings:

ETS-Text	Dynamic range [Default value]	Comment
LED green	<ul style="list-style-type: none"> not active active on motion active on motion, only during „Day“ active via external object active via external object, flashing 	Setting the lighting behaviour of the green LEDs
Light channel 1	<ul style="list-style-type: none"> not active active 	Setting whether the green LED for this channel should signal a detected motion.
Light channel 2	<ul style="list-style-type: none"> not active active 	
LED red, object „LED red flashing“	<ul style="list-style-type: none"> not active active 	Activation of an object to control the red LED

LED white (Night light)	<ul style="list-style-type: none"> • not active • active at „Night“ and when motion (Light channel 1) • active at „Night“ and when motion (Light channel 2) • active at „Night“ and when motion (Light channel 1 and 2) • active at „Night“ via external object „switch“ • always active at „Night“ 	Setting whether and how the white LED (Night light) is switched on.
Brightness at „Night“	0 – 100% [10%]	Only shown if "Night" is active. Defines the brightness value at which the white LED switches on.
Display button operation with white LED	<ul style="list-style-type: none"> • not active • active 	Setting whether the white LED should light up when the button is pressed. Only available for device with buttons and when buttons are active!
Light channel 1		
Display „manual mode ON“ with green LED	<ul style="list-style-type: none"> • not active • active 	Setting whether LED green/red should indicate the status (only light channel 1) for manual operation or forced guidance/lock.
Display „manual mode OFF“ with red LED	<ul style="list-style-type: none"> • not active • active 	
Display “lock/forced guidance ON” with green LED	<ul style="list-style-type: none"> • not active • active 	
Display “lock/forced guidance OFF” with red LED	<ul style="list-style-type: none"> • not active • active 	

Table 42: Settings – LED

The following table shows the available communication objects:

Number	Name/Object Function	Length	Usage
91	LED green – Switch	1 Bit	Object only available if "active via external object" is set. Controlling the LED via an external object
92	LED red – Flashing	1 Bit	Control of the LED via an external object
93	LED white – Switch	1 Bit	Object only available if "active via external object" is set. Controlling the LED via an external object

Table 43: Communication objects – LED

Important: When the white LED (Night light) is active, the brightness value is not evaluated!

4.7 Scenes

The following picture shows the setting options for scenes:

Scene A number	1
Scene A Light channel 1	lock active, ON
Scene A Light channel 2	set external push button short to value 1
Scene B number	not active
Scene C number	not active

Figure 33: Settings – Scenes

The following table shows the setting options for scenes:

ETS-Text	Dynamic range [Default value]	Comment
Scene A – H number	1 – 64 [not active]	Setting of the scene number
Scene A – H Light channel 1 / 2	<ul style="list-style-type: none"> • not active • lock active, ON • lock active, OFF • lock active • disable lock (last state) • lock disable, OFF • Set external push-button short to value 1 • Set external push-button short to value 0 • Set external push-button long (manual mode) to value 1 • Set external push-button long (manual mode) to value 0 • Set object Day/Night to Day (for all channels) • Set object Day/Night to Night (for all channels) 	Settings of the action to be performed for the light channels 1/2 by calling up a scene. Important: Actions can only be set for active light channels!

Table 44: Settings – Scenes

With the scene function, actions for light channels 1 and 2 (not HVAC and Alarm) can be triggered by sending the corresponding scene numbers.

Important: Actions can only be configured for light channels that have also been activated via "Channel selection"! If, for example, only light channel 1 is active, only "Scene X light channel 1" will be displayed for the corresponding scene X.

The following table shows the corresponding communication object:

Number	Name/Object Function	Length	Usage
94	Scene – Input	1 Byte	Call-up of a scene

Table 45: Communication object – Scene

4.8 Brightness

The following picture shows the available settings:

Figure 34: Settings – Brightness

The following table shows the possible settings:

ETS-Text	Dynamic range [Default value]	Comment
Light channels influence the brightness measurement	<ul style="list-style-type: none"> yes (several lights in the room) no (separate functions) 	Setting whether the brightness measurement is influenced by several light sources in the room or not.
Correction Lux value	-50 % ... 70 % [0 %]	Increase/decrease by the set value.
Send brightness on change of	not active 5 % – 50 % [10 %]	Minimum rate of change for the current brightness value to be sent.
Send measured value cyclically	not active 5 s – 30 min	Defining a fixed period of time after which the current brightness measurement value is sent repeatedly.

Table 46: Settings – Brightness

The parameter "**Light channels influence brightness measurement**" can be used to set whether several light sources in a room influence each other or not.

Example for setting "Yes": Light channel 1 and 2 react to the basic setting for brightness (general setting) and switch 3 independent light sources in the room. If, for example, light channel 1 is switched on via an external button and the brightness value of the switch-on threshold is exceeded, the other two channels automatically become "brightness-independent" and can therefore also switch their lamps via motion.

Example for setting "No": If several light sources are switched in a staircase with one detector, but the positions of these sources have no influence on each other (e.g., indirect LED lighting), each light group can be set to "Basic setting" of the switch-on threshold. If it is now bright due to daylight and the switch-on threshold is exceeded, all indirect LED lights should also no longer switch on.

Via **correction lux value**, the measured lux value is shifted by an adjustable percentage offset. Thus, with a set value of -50%, the measured value is reduced by 50%. Thus, with a measured value of 400 lux and a correction value of -50%, the presence detector would output the value 200.

Furthermore, the sending conditions for the measured brightness value can be defined. This can be sent both at a specific **change of** (value in %) and **cyclically** at specific intervals.

The following table shows the relevant communication object:

Number	Name/Object Function	Length	Usage
97	Brightness – Measured value	2 Byte	Sending the current measured brightness value

Table 47: Communication object – Brightness

4.9 Temperature

Temperature measurement only available with SCN-BWM55T.G2!

The following picture shows the available settings:

Figure 35: Settings – Temperature

The following table shows the possible settings:

ETS-Text	Dynamic range [Default value]	Comment
Temperature measurement	<ul style="list-style-type: none"> not active active 	Activation of the temperature measurement.
Send measured value on change of	not active 0,1 – 1 K [0,2 K]	Minimum rate of change for the current measured value to be sent.
Send measured value cyclically	not active 1 min – 120 min	Defining a fixed period after which the current brightness measurement value is sent repeatedly.
Correction value for sensor	-80 ... 50 x0,1 K (0)	Setting the value by which the temperature is corrected.

Table 48: Settings – Temperature

With temperature measurement, the temperature in the room can be measured and sent to the bus. The temperature can be sent to the bus both at an adjustable change and cyclically (at fixed time intervals).

The measured temperature can be shifted up or down via the "Correction value for sensor" parameter. For example, a correction value of "50" corresponds to a correction of 5 K.

The following table shows the available communication object:

Number	Name/Object Function	Length	Usage
130	Temperature – Measured value	2 Byte	Sending the current temperature value

Table 49: Communication object – Temperature

4.10 Logic

4.10.1 Activation of the logic function

The following picture shows the activation of logic functions 1-4:

Logic function 1	<input type="radio"/> not active	<input checked="" type="radio"/> active
Logic function 2	<input checked="" type="radio"/> not active	<input type="radio"/> active
Logic function 3	<input checked="" type="radio"/> not active	<input type="radio"/> active
Logic function 4	<input checked="" type="radio"/> not active	<input type="radio"/> active
Request inputs after bus power return	<input checked="" type="radio"/> not active	<input type="radio"/> active

Figure 36: Settings –Activation of the logic function

After activating the logic function, a submenu for the corresponding logic function is displayed in which the logic can be further configured accordingly.

The parameter "**Request inputs after bus voltage return**" defines whether the external inputs of the logics are to be actively requested after a restart.

4.10.2 Logic settings

There are 2 text fields available:

Description of function	Lighting outside
Additional text	Outdoor lighting terrace

Figure 37: Settings –Text fields logic function

Texts with up to 40 characters can be stored for both fields.

The text entered for the "**Description of function**" appears in the menu behind the corresponding logic as well as with the communication objects of the logic.

- Logic		
Logic 1 Lighting outside		
114	Logic 1 Lighting outside	Output 1

The "**Additional text**" is merely additional information to the logic. This is not visible anywhere else.

The following picture shows the submenu for logic:

Function	AND
Output object	switch
Sending condition	on change of output
Output	<input checked="" type="radio"/> normal <input type="radio"/> inverted
Internal input A	not active
Internal input B	not active
External input C	inverted
Preset logic input after reset with...	<input checked="" type="radio"/> value 0 <input type="radio"/> value 1
External input D	not active
External input E	not active
External input F	not active

Figure 38: Settings – Logic

With the logic function, different objects can be logically linked. Each logic function can link and evaluate up to 2 internal objects and up to 4 external objects. The sending behaviour of the output can be adjusted via the sending condition.

The following table shows the parameter settings for the logic:

ETS-Text	Dynamic range [Default value]	Comment
Function	<ul style="list-style-type: none"> • AND • OR • XOR 	Setting of the logic function
Output object	<ul style="list-style-type: none"> • switch • scene • value • forced guidance 2bit 	Setting the output object for the logic
Scene number for output value "False/True"	<p>not active 1 – 64</p>	Visible with "Output object" – "Scene" . Setting the scene number to be sent
Datapoint type	<ul style="list-style-type: none"> • 1 Byte Decimal (DPT 5.005) • 1 Byte Percent (DPT 5.001) 	Visible with "Output object" – "Value" . Setting the DPT for value to be sent
Percent value for output value "False/True"	<p>0 – 100 % [0 %]</p>	Visible with "1 Byte Percent" . Setting the value to be sent
Value for output value "False/True"	<p>0 ... 255 [0 %]</p>	Visible with "1Byte Decimal" . Setting the value to be sent

Forced guidance for output value "False/True"	<ul style="list-style-type: none"> • 00 - no priority, Off • 01 - no priority, On • 10 - priority, Off • 11 - priority, On 	<p>Visible when "forced guidance 2Bit" is selected.</p> <p>Setting the value to be sent</p>
Sending condition	<ul style="list-style-type: none"> • on input telegram • on output change • send only 0 on change of output • send only 1 on change of output • send only 0 on input telegram • send only 1 on input telegram 	<p>Setting the Sending Condition:</p> <p>On input telegram: The output value is sent with every input telegram, regardless of whether the output value has changed or not</p> <p>On change of output: The output value is only sent if the output has changed.</p> <p>Send only 1 on change of output: The output value is only sent if the output changes and the logic have the corresponding value (0/1).</p> <p>Send only 0/1 on input telegram: Output value is sent with each input telegram if the logic has the corresponding value (0/1)</p>
Output	<ul style="list-style-type: none"> • normal • inverted 	Defines how the output object is sent.
Internal Input A/B	<ul style="list-style-type: none"> • not active • normal • inverted 	Activation of an internal object as logic input
Object number	0-129 [0]	Selection of the internal object - Attention: Only bit values are evaluated correctly!
External Input C-F	<ul style="list-style-type: none"> • not active • normal • inverted 	Activation of an external object as logic input
Preset logic input after reset with...	<ul style="list-style-type: none"> • value 0 • value 1 	Setting of a pre-assignment of the logic after a bus voltage recovery. Available when "External input" is "normal" or "inverted".

Table 50: Settings – Logic

The following table shows the associated communication objects:

Number	Name/Object Function	Length	Usage
110	Logic 1 – Input C	1 Bit	External input for the logic function
111	Logic 1 – Input D	1 Bit	External input for the logic function
112	Logic 1 – Input E	1 Bit	External input for the logic function
113	Logic 1 – Input F	1 Bit	External input for the logic function
114	Logic 1 – Output 1	1 Bit/ 2 Bit/ 1 Byte	Output of the logic function. DPT depending on the output object parameter

Table 51: Communication objects – Logic

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6 Appendix

6.1 Statutory requirements

The devices described above must not be used in conjunction with devices which directly or indirectly serve human, health, or life-safety purposes. Furthermore, the devices described must not be used if their use may cause danger to people, animals, or property.

Do not leave the packaging material carelessly lying around. Plastic foils/ bags etc. can become a dangerous toy for children.

6.2 Disposal

Do not dispose of the old devices in the household waste. The device contains electrical components that must be disposed of as electronic waste. The housing is made of recyclable plastic.

6.3 Assembly



Danger to life from electric current!

The device may only be installed and connected by qualified electricians. Observe the country-specific regulations and the applicable KNX guidelines

The units are approved for operation in the EU and bear the CE mark. Use in the USA and Canada is not permitted!

6.4 History

V 1.0 First Version of Technical Manual

DB V4.4

03/2022