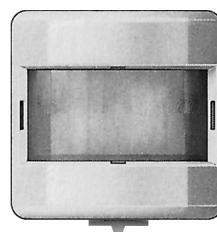
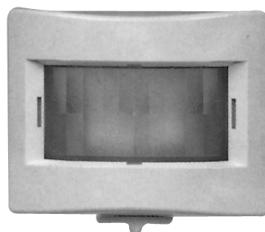


**Movement controller comfort,
Flush-mounted (Up)
752613xx, 752614xx**

Mounting height 1.1 m and 2.2 m

B.
Berker



Order no.:
752613xx
752614xx

The *instabus* movement controller comfort is designed for internal use and is pushed onto a flush-mounted bus coupling unit (BCU). It reacts to heat movements triggered by persons, animals or objects and sends telegrams to the *instabus* EIB in dependence on the set mode. The operating modes are switching, value transmitter and light scene request, and also the "less sensitive" signalling mode. Here the monitor does not react until the movement signal has been queried several times. A slide switch enables manual mode of the movement controller comfort. The device can be adapted to the local situation by means of three potentiometers.

General technical data

Supply

via BCU (24V; +6V/-4V) from internal supply with 5 V

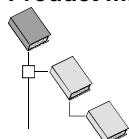
Protection class

IP 20

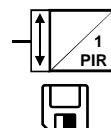
Connection:

on BCU 2 x 5-pole user interface

Product management:



Gebr. Berker



Movement controller comfort

Order no.: 752613xx

752614xx

Physical sensors

PIR Comfort A00801

Movement controller

Order data

Design

Colour

Order no.
Installation height:
1.10 m

Order no.
Installation height:
2.20 m

Module 2*

White
Polar white

75261312
75261319

75261412
75261419

ARSYS*

White
Polar white
Light bronze, lacquered
Stainless steel, lacquered

75261342
75261349
75261344
75261343

75261442
75261449
75261444
75261443

CLIPTEC*

Polar white
Light grey
Deep black
Platinum, lacquered

75261359
75261350
75261355
75261358

75261459
75261450
75261455
75261458

Twinpoint

Polar white
Red
Black

75261369
75261366
75261365

75261469
75261466
75261465

B1/B3

Polar white
Alu
Anthracite

75261389
75261383
75261385

75261489
75261483
75261485

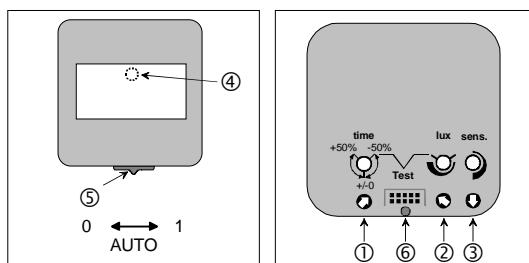
Illustration of control elements:

1) Changes the default "additional transmission"

Movement controller comfort, Flush-mounted (Up) 752613xx, 752614xx

Mounting height 1.1 m and 2.2 m

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delay" by $\pm 50\%$ (this potentiometer has no function in extension mode).

2) Twilight level potentiometer: fine adjustment of the default twilight level.

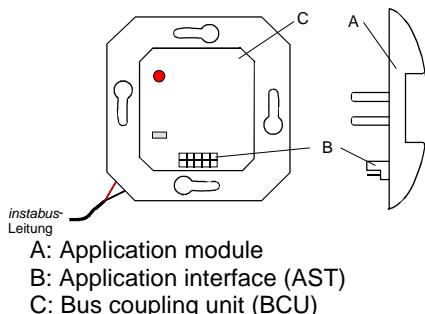
3) Sensitivity potentiometer for stepless setting of the range between 100 % and 20 %

4) Diagnosis LED for walk test function and dismantling signal slide switch. (The slide switch has no function in message mode and in extension mode)

5) Locks the mode switch in the position AUTO

Wiring diagram:

Terminal assignment:



The application interface (B) of the application module must be underneath, otherwise the appliance will not function correctly.

Comments on the hardware

The optimum range is achieved when the sensor is mounted sideways to the direction of motion. If this is not done, the range will be restricted.

Make sure there is no interference (lamps, heaters, etc.) in the detection field (e.g. fit the adapter cover plates).

Do not align the sensors in the direction of the sun. The sun's heat can damage the sensors irreparably.

On reconnection of power (or after the application module is pushed on) there is an immunity period of approx. 80 seconds before the appliance is ready for operations again. The sensor will not detect any movement in this period.

**Movement controller comfort,
Flush-mounted (Up)
752613xx, 752614xx**

Mounting height 1.1 m and 2.2 m

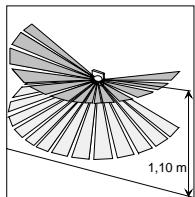
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Technical data

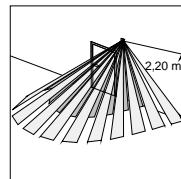
Protection class:	IP 20	
Insulation voltage:	in accordance with VDE 0829 Part 230	
Test mark:	EIB	
Ambient temperature:	- 5 °C to + 45 °C	
Storage temperature:	- 25 °C to + 70 °C (storage at temp. over 45°C reduces the service life)	
Installation position:	The detection ranges indicated are reached with vertical installation of the FM bus coupling unit and the AST underneath.	
Fastening method:	Push onto BCU	
Supply instabus EIB		
Voltage:	24 V DC (+6 V / -4 V) via BCU	
Power consumption:	typ. 110 mW	
Terminal:	2 x 5-pole plug connector	
Behaviour on voltage failure		
Bus voltage only:	Light and signalling mode: no reaction	
Bus and mains voltage:	Light and signalling mode: no reaction	
Behaviour on voltage return:		
Bus voltage only:	Lighting mode: Software-dependent (80 s immunity time) Signalling mode: No reaction (80 s immunity time)	
Bus and mains voltage:	Lighting mode: Software-dependent (80 s immunity time) Signalling mode: No reaction (80 s immunity time)	
Input		
Adapter lens type:	for 1.10 m installation height	for 2.20 m installation height
Detection angle:	180°	180°
Nominal range, front:	10 m	12 m
Nominal range, side:	2 x 6 m	2 x 6 m
Installation height for nominal range	1.10 m	2.20 m
No. of lenses/lens levels:	18 / 2	18 / 2

Detection field:

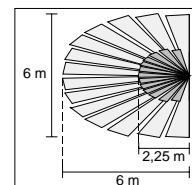
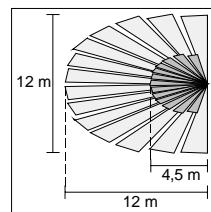
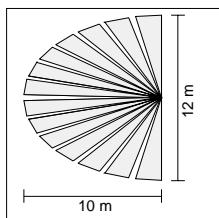
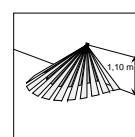
Adapter lens type for 1.10 m:



Adapter lens type for 2.20 m:



Adapter lens type for 2.20 m at installation height 1.10 m:



The enclosed adapter cover plates can be used to eliminate sources of interference through limiting the detection field. The cover plates can cover the left or right half of the detection field (90° in each case).

**Movement controller comfort,
Flush-mounted (Up)
752613xx, 752614xx**

Mounting height 1.1 m and 2.2 m

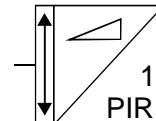


Software description

ETS search path:

Physical sensors, movement, movement controller comfort Up

ETS symbol:



AST type	00 Hex	00 Dez	No adapter
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Applications:

No.	Short description:	Name:	Version:
1	PIR comfort	A00801	1

Application description: PIR comfort A00801

Runs from mask version: 1.1

No. of addresses (max): 28

No. of associations (max): 28

Communications objects: max. 9 (dynamic)

Object	Function	Name	Type	Flag
0	Switching (status)	Output	1 bit	C W T
1	Value transmitter	Output	1 byte	C W T
1	Light scene extension	Output	1 byte	C W T
2	Locking	Input	1 bit	C W
3	Recognition depend. on brightness	Twilight level	1 bit	C W T
4	Motion	Message from extension unit	1 bit	C W T
4	Motion	Message to master unit	1 bit	C W T
5	Message	Message	1 bit	C W T
6	Switch object / message op.	Switch object / message op.	1 bit	C T
7	Operating mode	Input	1 bit	C W T
8	Alarm	Output	1 bit	C W T

Extent of function

Detecting heat movements in dependence on the set twilight value

Sending switching, value transmitter or light scene request telegrams after a detected movement

Modes: switching mode (telegram after first movement impulse) and message mode

(telegram after a configurable number of movement impulses) can be set

Changeover possible between switching mode and message mode via the object "Switch object / message op."

Telegram at beginning and end of a detection or of locking mode can be set

Telegram on bus voltage return can be set

Application types single appliance, master station and extension unit can also be combined with standard monitors

Twilight value can be configured and varied using the twilight value potentiometer (2)

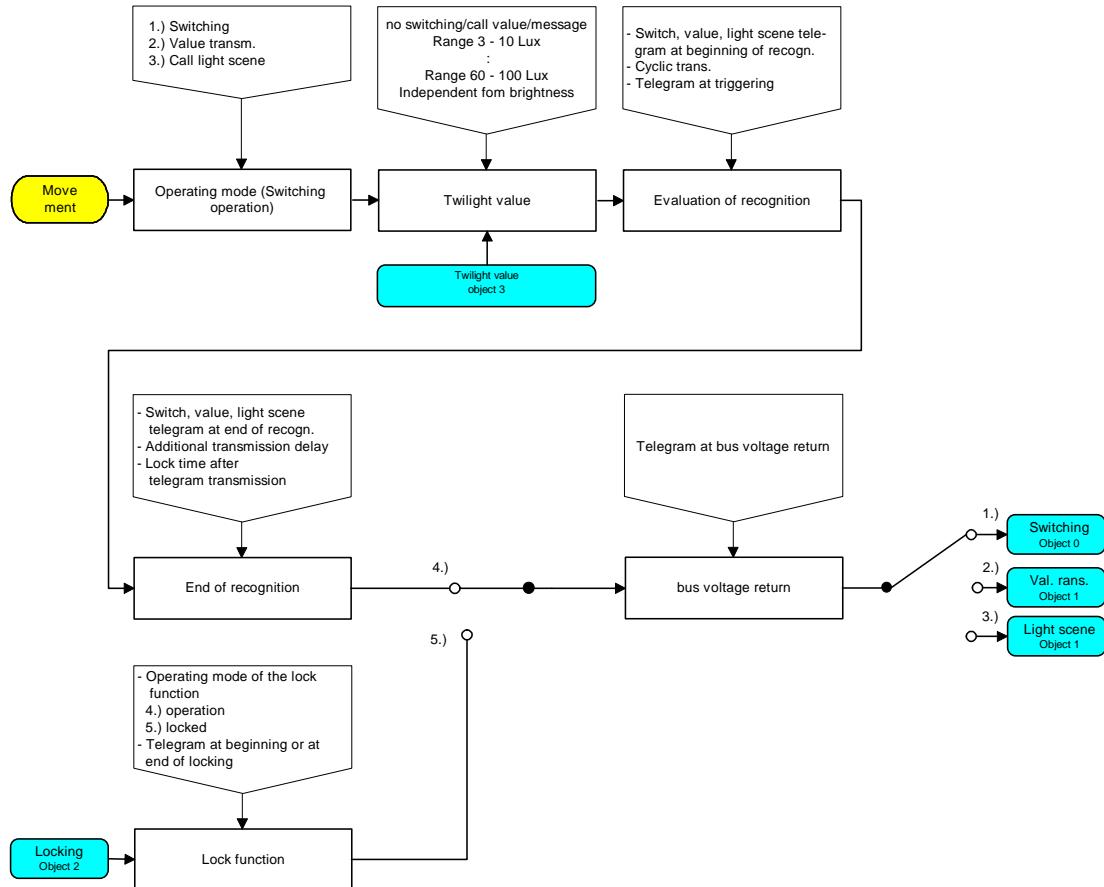
Cyclic transmission possible during detection

Walk test function for comfortable setting of sensitivity with the sensitivity potentiometer (3)

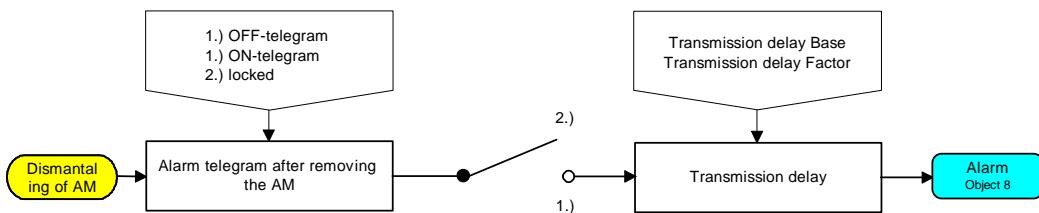
- Dismantling signal when appliance pulled off bus coupling unit is possible

Function diagram

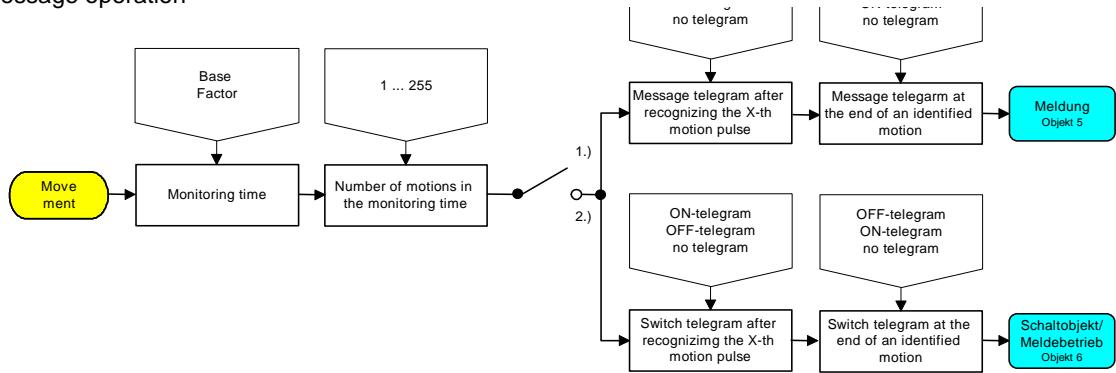
- Switching, value transmitter and light scene request in switching mode (application type: single appliance)



- Pull-off detection dismantling signal



- Message operation



- 1.) Switch open: number of movements detected in the configured monitoring time is less than X.
- 2.) Switch closed: number of movements detected in the configured monitoring time is the same as X.

Object description

Object 0: Switching

1 bit object for sending a switch telegram. With main/extension mode (switching) during a detected movement the twilight level is deactivated through a switching object = 1 and activated via a switching object = 0 (exception: twilight level object is set to detection independent of brightness). This ensures that movement can still be detected even if a light is switched on. The switching object is only visible with the modes "Switching mode" and "Message mode/switching mode" respectively.

Object 1: Value transmitter

1 byte object for sending a value telegram. With main/extension mode (value transmitter) during a detected movement the twilight level is deactivated by value object = 1-255, and activated by a value object = 0 (exception: twilight level object is set to detection independent of brightness). This ensures that movement can still be detected even if a light is switched on. The switching object is only visible with the modes "Value transmitter mode" and "Message mode/value transmitter mode" respectively.

Object 1: Light scene extension

1 byte object for sending a light scene extension telegram. The light scene object is only visible with the modes "Light scene recall mode" and "Message mode/light scene recall mode" respectively.

Object 2: Locking

1 bit object for switching the locking mode On/Off. The locking object has a higher priority than the sliding switch. The locking object is only visible with the modes "Switching mode" and "Message mode/switching mode" respectively.

Object 3: Twilight level

The twilight level object is a 1 bit object for switching between movement detection dependent on brightness and movement detection independent of brightness. The object polarity is fixed and cannot be configured:

Twilight levels object value = 0 \Rightarrow twilight level in accordance with ETS parameter "twilight level"
Twilight levels object value = 1 \Rightarrow movement detection independent of brightness

The twilight level object becomes active when an update for the object is received for the first time after bus voltage return. Up to this time, the value set by the ETS parameter and potentiometer applies for the twilight level (because all object values = 0 after microcontroller reset).

If the twilight level object is "dependent on brightness" (object value = 0), the value set using the ETS parameter and twilight levels potentiometer applies. In contrast, the twilight level is always switched off when the twilight level object is set to "independent of brightness" (object value = 1). \Rightarrow Object twilight level has a higher priority than parameter twilight level.

With main/extension mode with light scenes the twilight level is deactivated during movement detection and reactivated after expiry of the additional transmission delay (exception: twilight level object is set to detection independent of brightness).

The twilight level object is only visible in the modes "Switching mode" and "Message mode/switching mode" respectively.

Object 4: Motion (signal to master unit, signal from extension):

1 bit object for communication between master unit and extension unit. If a movement is detected by a master unit (extension), a 1 telegram is sent once (cyclically) through the movement object to inform the extension unit (master station) about the movement. Cyclical transmission ends with the detected movement. The movement object is only visible with the application types "Extension unit" and "Master unit".

Object 5: Message

1 bit object for sending out a signal telegram in message mode. The message object is only visible with the modes "Message mode" and "Message mode/switching mode" respectively.

Object 6: Switching object / message operation

1 bit object for sending out a signal telegram in signalling mode. The switching object/message mode is only visible in the modes "Signalling mode" and "Signalling mode/lighting mode" respectively.

Object 7: Operating mode

With this 1 bit object switching between message mode and switching mode is possible with the configured modes:

- message mode / switching mode
- message mode / value transmitter mode
- message mode / light scene recall mode.

Before the switchover to the newly set mode the previous mode is brought to its defined basic status with no movement.

If there is still a movement in the switching or message mode at the time of the switchover, the previous mode is initially retained, and using the mode object a negative acknowledgement is sent in the form of the object value of the previously set mode. The switchover request is stored by the detector. At the end of the recorded movement, and where applicable after the corresponding telegram is triggered at the end of the detection, the system switches to the new mode. This is done by sending a positive acknowledgement in the form of the object value of the newly set mode through the modes object.

The following applies in addition only where the switchover is from switching mode to message mode:
if there is an additional transmission delay at the time of the desired changeover, or if the detector is in locked mode by means of the locking object or through the switch position '0'/'1', first of all the switching/light scene or value telegram configured at the end of detection is sent before the switchover to the new mode.

The following applies in addition only where the switchover is from signalling to lighting mode:
if the detector was locked in switching mode by means of the locking object, the locking mode is reactivated on the transition from message mode to switching mode and the telegram that was configured at the begin of locking is triggered as well.

If the detector was locked in switching mode by means of the sliding switch (position '0'/'1') this locking mode is reactivated, and in addition the telegram is triggered that is appropriate to the switch position ('0'/'1') and dependent on the set mode (switching, value transmitter or light scene recall; cf. as well the function "Sliding switch").

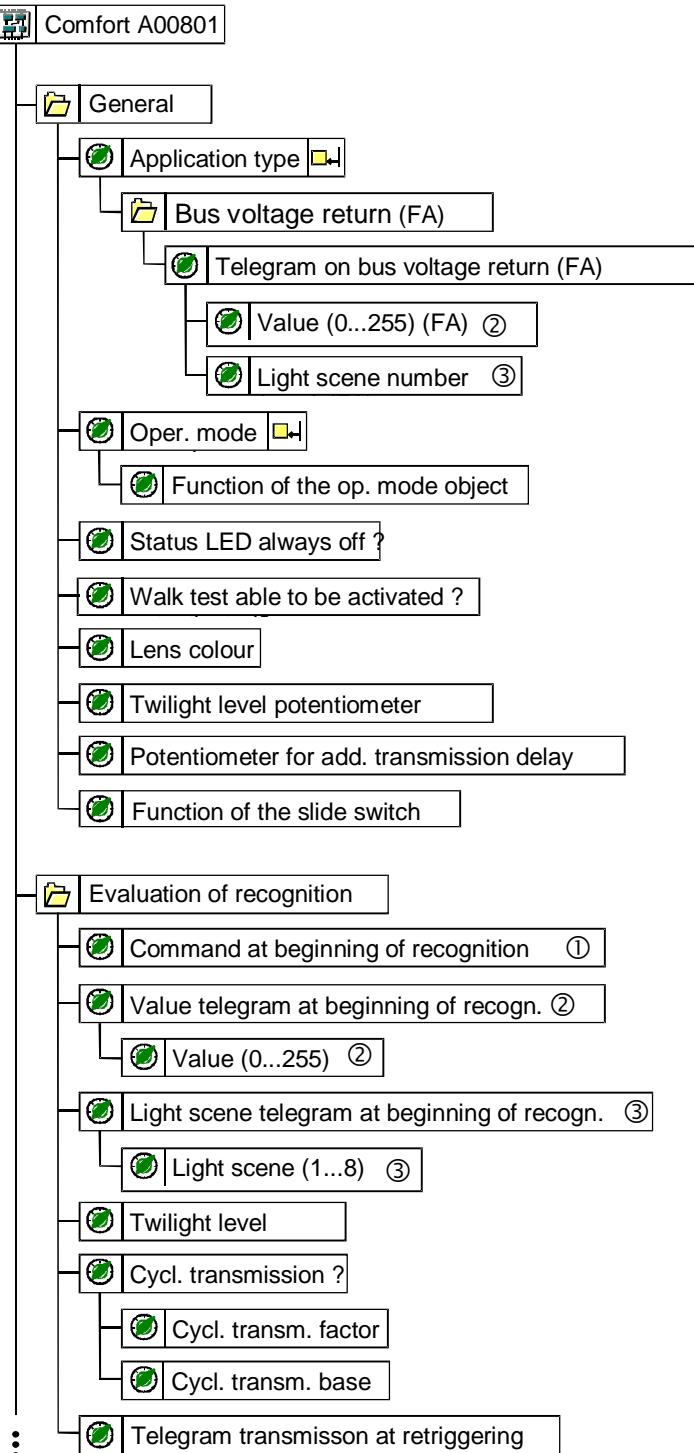
If a brightness-independent operation was set through a twilight levels object value = 1, this is reactivated by the twilight level being switched off again.

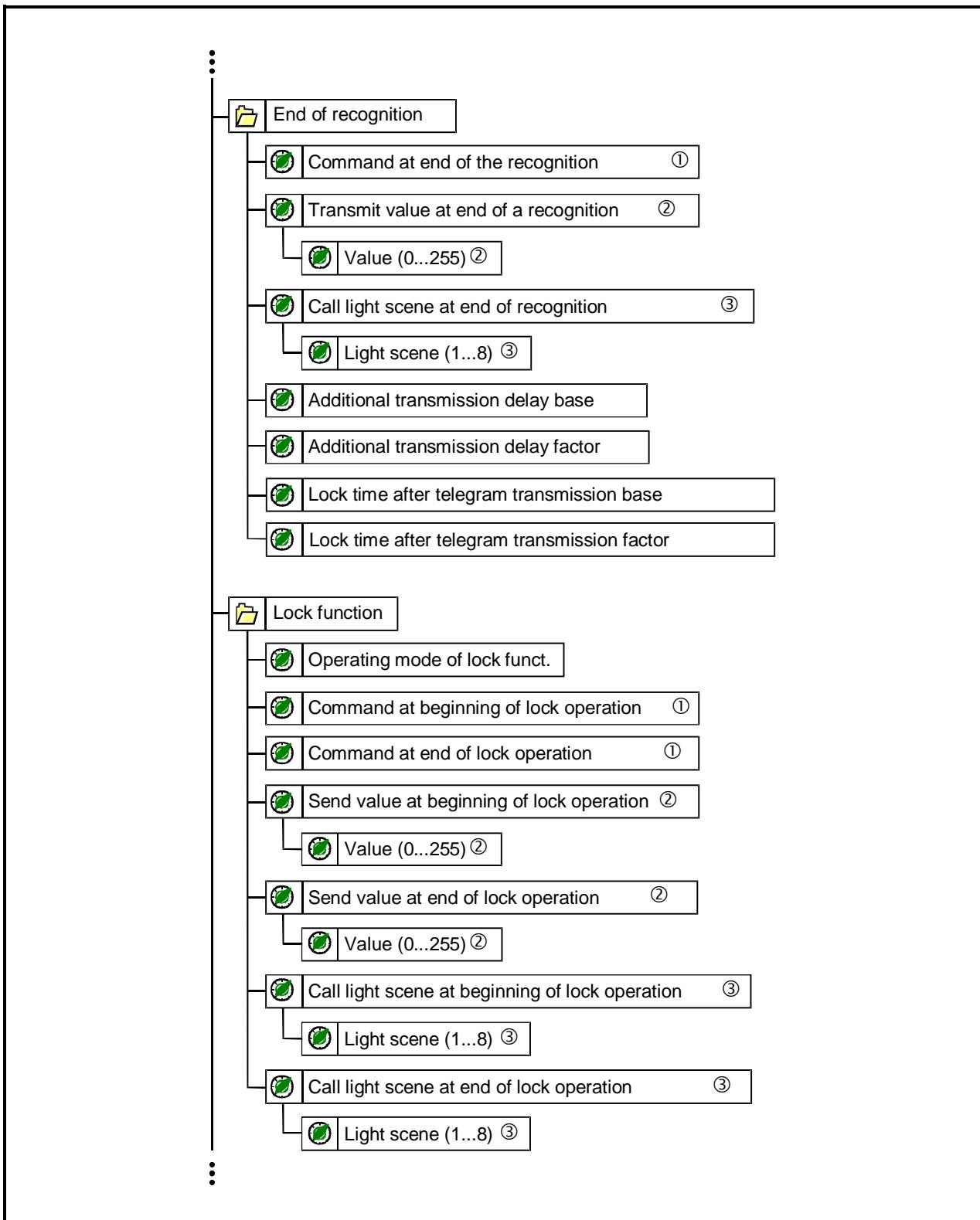
The operating modes object is only visible with mixed operations (message mode/switrching mode).

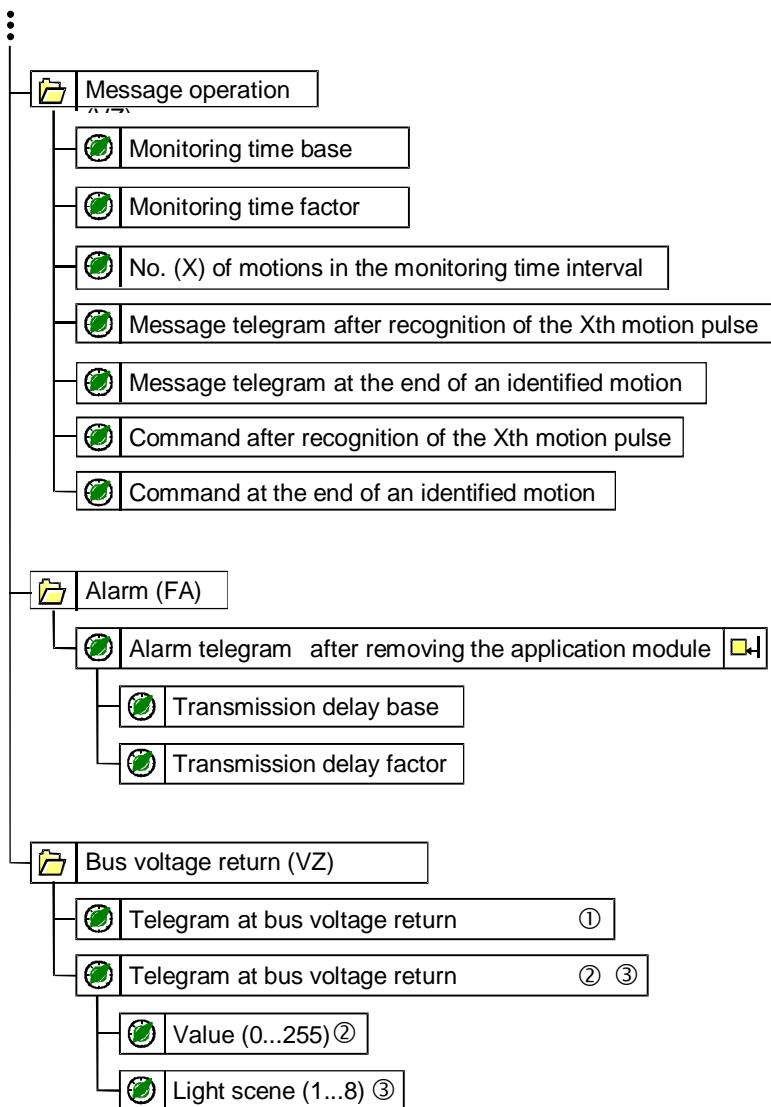
Object 8: Alarm

1 bit object for transmitting an alarm signal in the form of an ON or OFF telegram.

Parameter tree







FA = Full access

- ① = These parameters apply to the operating modes "switching mode" and "message mode/switching mode" respectively.
- ② = These parameters apply to the operating modes "value transmitter mode" and "message mode/value transmitter mode" respectively.
- ③ = These parameters apply to the operating modes "light scene mode" and "message mode/light scene mode" respectively.

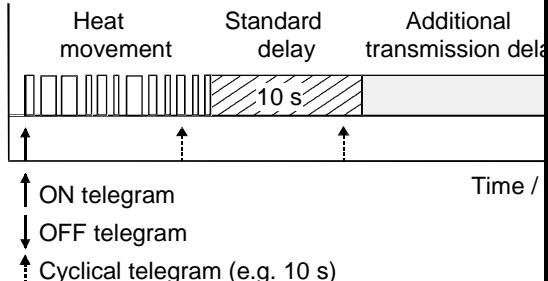
Parameters		
Description:	Values:	Comments:
 General		
Application type	Single unit Master unit Extension unit	The detector works as a single device or in master unit/extension unit mode.
Operation mode	Switching mode Value transmitter mode Light scene mode Message operation	The detector works in switching mode and sends corresponding switching, value, and light scene telegrams.
	Message operation/switching mode Message operation/value transmitter mode Message operation/light scene mode	The detector works in message mode "less sensitively" to detected movements, i.e. a telegram is not sent until after several queries of the movement signal (cf. functions description).
Value of the operating mode object	0 = lighting op., 1 = message op. 1 = lighting op., 0 = message op.	The detector works in mixed operations, i.e. switchover is possible between message mode and switching mode (switching, value transmitter, lighting arrangement) through the operating mode object. <i>Only relevant with mixed operating modes.</i>
		Telegram allocation to switching mode and message mode. The operating modes object can be used to switch between these two operating modes.
Status LED always off?	NO YES	The status LED can be activated for the walk test and the alarm function. The status LED is always off.
Walk test able to be activated?	NO YES	The walk test is used to set the detector's sensitivity during commissioning. When the walk test is activated, the LED switches on if a movement is detected. At the end of detection the LED switches off again (see "Functions description" as well).
Lens colour	Bright lens Dark lens	The detector works with a clear lens. The detector works with a dark lens.
Twilight level potentiometer	Released Locked	The twilight level potentiometer is released (or locked respectively)
Potentiometer " additional transmission delay "	enabled disabled	The potentiometer for the additional transmission delay is released (or locked respectively)
Function of the slide switch	Slide switch: 1 / AUTO / 0 Slide switch: 1 / AUTO / -- Slide switch: -- / AUTO / 0 Slide switch: -- / AUTO / --	Allocation of the functions to the slide switch. In message mode the slide switch has no function.

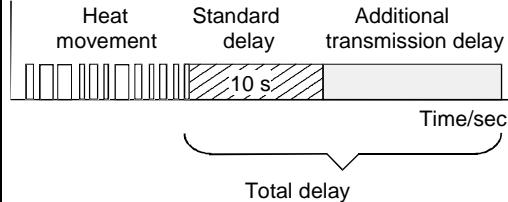
 Evaluation of recognition		
Command at beginning of the recognition	ON OFF No telegram	<i>Only relevant with: switching in switching mode (single device or main station).</i> An ON, OFF or no telegram is sent at start of detection.
Value telegram at beginning of the recognition	YES NO	<i>Only relevant with: value transmitter in switching mode (single device or main station).</i> A value telegram or no telegram is sent at beginning of recognition
Value 1 Byte (0...255)	0...255; 255	Defines the value of the telegram to be sent.
Light scene telegram at beginning of the recognition	YES NO	<i>Only relevant with: light scene in switching mode (single device or main station).</i> A light scene telegram or no telegram is sent at start of detection.
Light scene number (1...8)	1...8; 1	Defines the number of the light scene to be sent.
Twilight level	No switching / value query / signal Independent from brightness Range 3-10 Lux Range 10-30 Lux Range 30-60 Lux Range 60-100 Lux	Telegram triggering is suppressed. Telegram triggering is independent of brightness. With the lighting switched off telegrams are only triggered if the brightness is below the set value. This value results from the range set with ETS and from the released twilight levels potentiometer as follows: Central potentiometer setting = middle value of the range set with ETS Zero potentiometer setting = lower limit value of the range set with ETS Max. potentiometer setting = upper limit value of the range set with ETS

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752613xx, 752614xx**

Mounting height 1.1 m and 2.2 m

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Cyclic transmission?		NO YES	Cyclic transmission during a detected movement can be activated or deactivated. A movement is understood as the period from the start of the first detection impulse plus the standard delay (10 sec) which starts with the last rising edge of the heat movement.  Time /		
Cyclic transmission base		1.0 s 2.1 s 4.2 s 8.4 s 17 s	34 s 1.1 min 2.2 min 4.5 min	9 min 18 min 36 min 1.2 h	Base for cyclic transmission. Cyclic transmission = Base x Factor
Cyclic transmission factor (10...255)		10...255; 10	Factor for cyclic transmission. Cyclic transmission = Base x Factor		
Telegram transmission at retrigerring?		NO YES	Retriggering during the additional transmission delay period can be triggered with or without a telegram.		
End of recognition					
Command at end of recognition (default delay time = 10 sec)		ON OFF No telegram	<i>Only relevant with: switching in switching mode (single device or main station).</i> An ON, OFF or no telegram is sent at end of detection.		
Value telegram at end of a recognition (default delay time = 10 sec)		YES NO	<i>Only relevant with: value transmitter in switching mode (single device or main station).</i> A value telegram or no telegram is sent at end of detection		
Value 1 Byte (0...255)		0...255; 0	Defines the value of the telegram to be sent.		
Call light scene at end of recognition (standard delay = 10 sec)		YES NO	<i>Only relevant with: light scene in switching mode (single device or main station).</i> A light scene telegram or no telegram is sent at end of detection.		
Light scene number (1...8)		1...8; 2	Defines the number of the light scene to be sent.		

Additional transmission delay , base	130 ms 260 ms 520 ms 1.0 s 2.1 s 4.2 s	8.4 s 17 s 34 s 1.1 min 2.2 min 4.5 min	9 min 18 min 36 min 1.2 h	The total delay time results from the addition of the standard delay (10 s) and the additional transmission delay. 
Additional transmission delay, factor (0...255)	0...255; 10			Additional transmission delay = Base x Factor Definition of the time factor for the additional transmission delay. Additional transmission delay = Base x Factor
Lock time after telegram transmission , base	8 ms 130 ms 2.1 s 33 s			On expiry of the total delay a locking time can be activated which prevents the consumers being switched on again through cooling processes. The detector is not ready to receive again until expiry of the locking time. Locking time = Basis · Factor
Lock time after telegram transmission, factor (0...255)	0...255; 23			Definition of the time factor for the locking time. Lock time = Base x Factor

 **Lock function**

Operating mode of the lock object	0 = operation; 1 = locked 1 = operation; 0 = locked	<i>Only relevant in lighting mode.</i> The lock object is activated if lock object value = 1. The lock object is activated if lock object value = 0.
Command at the beginning of lock function	ON OFF No telegram	Defines whether ON, OFF or no telegram sent at start of lock operation.
Command at the end of lock function	ON OFF No telegram	Defines whether ON, OFF or no telegram sent at end of lock operation
Send value at beginning of lock operation	YES NO	Defines whether value telegram sent at start of lock operation.
Value 1Byte (0...255)	0...255; 255	Defines the value of the value telegram to be sent at the start of lock operation.

Send value at end of lock operation	YES NO	Defines whether a value telegram is sent at end of lock operation.		
Value 1 Byte (0...255)	0...255; 0	Defines the value of the value telegram to be sent at end of lock operation.		
Call light scene at beginning of lock operation	YES NO	Defines whether a lighting arrangements telegram is sent at start of lock operation.		
Light scene number (1...8)	1...8; 3	Defines the value of the light scene telegram to be sent at start of lock operation.		
Call light scene at end of lock operation	YES NO	Defines whether a lighting arrangements telegram is sent at end of lock operation.		
Light scene number (1...8)	1...8; 4	Defines the value of the light scene telegram to be sent at end of lock operation.		
Message operation				
Monitoring time, base (FA)	130 ms 260 ms 520 ms 1.0 s 2.1 s 4.2 s	8.4 s 17 s 34 s 1.1 min 2.2 min 4.5 min	9 min 18 min 36 min 1.2 h	A signal telegram is triggered if there is a number N of movement impulses within a set monitoring time. Monitoring time = Base x Factor
Monitoring time, factor (1...255) (FA)	1...255; 10			A signal telegram is triggered if there is a number N of movement impulses within a set monitoring time. Monitoring time = base x Factor
Number (X) of motions in the monitoring time interval (1...255) (FA)	1...255; 4			A signal telegram is triggered if there is a number N of movement impulses within a set monitoring time.
Message telegram after recognizing of the Xth motion pulse (FA)	ON OFF No telegram			Defines whether an ON, OFF or no telegram is sent after detection of the Nth movement impulse.
Message telegram at end of an identified motion (FA)	ON OFF No telegram			Defines whether an ON, OFF or no telegram is sent at end of an identified movement. The end of a movement is detected after the absence of movement impulses for 10 seconds.
Command after recognizing the Xth motion pulse (FA)	ON OFF No telegram			In addition to the signal telegram a switch telegram (ON, OFF or No telegram) can be generated for the option of sending the value after detection of the Nth movement impulse e.g. to a siren.
Command at end of an identified motion (FA)	ON OFF No telegram			In addition to the signal telegram a switch telegram can be generated for the option of sending the value after detection of the Nth movement impulse e.g. to a siren. The end of a movement is detected after the absence of movement impulses for 10 seconds.

 Alarm (FA)			
Alarm telegram after removing the application module (FA)	Locked ON telegram OFF telegram		When the user module is pulled off the bus coupling unit an ON or OFF alarm telegram can be triggered through the alarm object with a time delay.
Transmission delay, base (FA)	0.5 ms 8 ms 130 ms	2.1 s 33 s	The time after the application module is pulled off until the alarm telegram is triggered (transmission delay) results from: Transmission delay = Base x Factor
Transmission delay, factor (0...255) (FA)	0...255; 5		The time after the application module is pulled off until the alarm telegram is triggered (transmission delay) results from: Transmission delay = Basis x Factor
 Bus voltage return (FA)			
Telegram on bus voltage return (will be sent by object 0) (FA)	ON OFF No telegram		<i>Only relevant with: switching in switching mode (single device or main station).</i> An ON, OFF or no telegram is sent on bus voltage reconnection.
Telegram on bus voltage return (will be sent by object 1) (FA)	YES NO		<i>Only relevant with: value transmitter in switching mode (single device or main station).</i> A value telegram can be sent on bus voltage reconnection.
Value 1 Byte (0...255) (FA)	0...255; 0		Defines the value of the value telegram to be sent.
Telegram on bus voltage return (will be sent by object 0) (FA)	YES NO		<i>Only relevant with: light scene in switching mode (single device or main station).</i> A light scene telegram can be sent at end of detection.
Light scene number (1...8) (FA)	1...8; 8		Defines the number of the light scene to be sent.

• **Twilight level**

The twilight levels potentiometer can be locked through the ETS parameter "Twilight level potentiometer". The following two different appliance responses apply:

- The twilight level potentiometer was only released for the fine adjustment of the twilight level and was then locked:
The setting carried out by means of the twilight level potentiometer is retained even after the activated locking of the twilight level potentiometers, and in fact even after a microcontroller reset. If the bus coupling unit is re-programmed with the still-existent parameter setting "Twilight level potentiometer = disabled", this is recognised in the microcontroller and the fixed set value of the twilight level potentiometer is again transmitted to the BCU EEPROM.
- The twilight level potentiometer was always locked:
The middle value of the brightness range set with the ETS parameters "Twilight level" applies for the set twilight level.

The status of the appliance, that the twilight level potentiometer was permanently locked, can be restored if the bus coupling unit is reprogrammed through the ETS without the application module in place (parameter setting "Twilight level potentiometer "disabled"").

• **Walk test**

The walk test is used to set the sensitivity of the detector during commissioning. It is not a mode that is still to be active on conclusion of commissioning.

Characteristics of an activated walk test:

- If a movement is detected, the LED switches ON. At the end of detection the LED switches off again.
- Telegrams are not sent, with the exception of the dismantling signal when the application module is pulled off.
- Detection of movements is always independent of the brightness.
- With the applications "master unit" and "extension unit" and activated walk test each appliance works autonomously.
- In contrast to normal operations, the 80 second immunity period after the application module is replaced is not active with the walk test.
- The parameter "Behaviour after bus voltage return" is not evaluated.

The walk test function is activated after the application module is pulled off and then replaced again, or after a bus reset, if:

- 1.) the ETS parameter "Walk test able to be activated ? (y/n)" is set to "yes" and
- 2.) the potentiometer for twilight level is set to max. setting,
- 3.) and the potentiometer for additional transmission delay is set to "-50%" (zero setting).

The walk test function is deactivated after the application module is pulled off and then replaced again, or after a bus reset, if:

- 1.) the ETS parameter "Walk test able to be activated ? (y/n)" is set to "no" or
- 2.) the potentiometer for twilight level is not set to max. setting or
- 3.) the potentiometer for additional transmission delay is not set to "-50%" (zero setting).

• **Pull-off detection - dismantling signal**

When the application module is pulled off the bus coupling unit a signal in the form of an ON or OFF telegram can be triggered through the alarm object. Alternatively, the telegram triggering can be suppressed through the ETS parameter setting "Alarm telegram after removing the application module".

The time from when the module is pulled off until the telegram is triggered can be varied through the ETS parameters "time factor" and "time base". To exclude the possibility of bouncing the set time should not be less than 1 second.

After the application module has been pulled off, a telegram triggered and the application module replaced, the status LED blinks with a frequency of 2 Hz (precondition: parameter "Status LED always off?" is set to NO). As long as the value of the alarm object corresponds to the value of the alarm telegram that was sent, this status is retained and the application is locked.

The application is not re-processed in the microcontroller, and the status LED switched off again, until the alarm object is reset through an acknowledgement telegram with the inverted value of the alarm telegram.

A currently locked application can also be released by a new ETS programming of the appliance. The pull-off detection is in principle not activated until an application module has been pushed onto the bus coupling unit for the first time.

After a bus voltage return with the application module not in place, a dismantling signal sent before the bus voltage failure is not repeated.

• **Message operation**

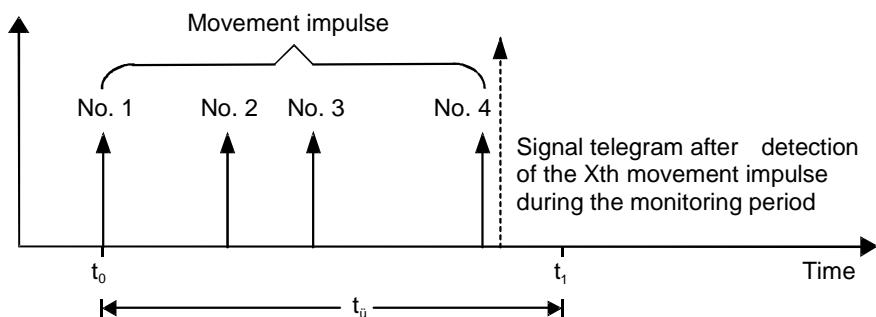
In message operation the detector reacts "less sensitively" to detected movements, i.e. a telegram is not sent by means of the signal object until the movement signal has been queried several times.

The criterion for triggering a signal telegram is the number X of movement impulses that occur within a set monitoring period.

In this mode there is no longer any allocation from master unit or extension unit, each appliance works separately and where applicable sends a telegram to the central station by means of the signal object after detecting and evaluating a movement.

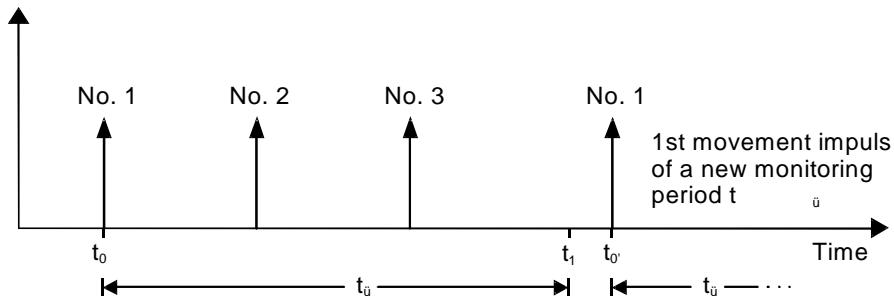
The following examples show clearly the behaviour of the appliance with message mode set. In the examples, the parameter "Number X of movements in the monitoring time" is set to 4.

Example 1: x=4 movement impulses in the monitoring period t_u



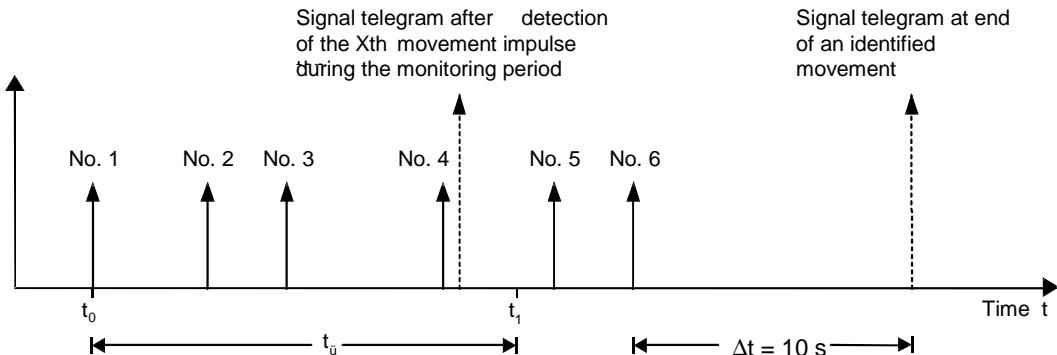
⇒ After detection of the 4th movement impulse (x=X) in the monitoring period t_u a signal telegram is sent in accordance with the configuration.

Example 2: $x=3$ movement impulses in the monitoring period $t_{\bar{u}}$



⇒ In the 1st monitoring period only 3 movement impulses ($x < X$) are detected. The consequence is that a signal telegram is not triggered. After expiry of $t_{\bar{u}}$ the next movement impulse is the first one of a new monitoring period $t_{\bar{u}}$.

Example 3: Signal telegram at end of an identified movement



⇒ After detection of the 4th movement impulse ($x=X$) in the monitoring period $t_{\bar{u}}$ a signal telegram is sent in accordance with the configuration. At the end of the identified movement (i.e. 10 seconds after the last movement impulse) the configured "Signal telegram at end of an identified movement" is triggered.

In addition to the signal object, as separate switch object can be activated in signalling mode, to enable the option of sending the value of the signal telegram through this switch object as well (e.g. to a siren in small installations). This additional switch object (object designation "Switching/signalling mode") is always active if a message mode is configured and the object is correctly linked in the ETS.

The following functions are fixed in signalling mode:

- Twilight level: Independent of brightness
- Potentiometer twilight level: Locked
- Cyclic transmission during detection: Inactive
- Additional transmission delay at end of detection: 0 s
- Potentiometer 'Additional transmission delay': Locked
- Locking time at end of detection: 0 s
- Lock function: Inactive
- Slide switch: Inactive

The message mode can be the sole mode or a mixed operating mode with the lighting mode. In the last example, the switchover between the two modes takes place through the modes object (object 7). See "Object description" on page 10 on behaviour on mode switchover through object 7.

• **Master unit/extension unit operations**

Any number of extension units can work with a master unit. Only the master unit sends switching, value and light scene telegrams. The appliances communicate with one another through the object "Movement". When an extension unit detects a movement it transmits the object value = 1 to the master unit cyclically (cycle time = 9 s) for the duration of the movement.

The master station itself checks cyclically (cycle time = 10 s) whether it is receiving movement signals. If these are not received, the movement is ended.

In addition, the twilight level between the start of detection and the end of the additional transmission delay must be set to "brightness-independent". This ensures that movements can still be detected even if a lamp is switched on. If the twilight level is already set to "brightness-independent" before the start of a detected movement (e.g. through an additional push button), the process described above does not take place.

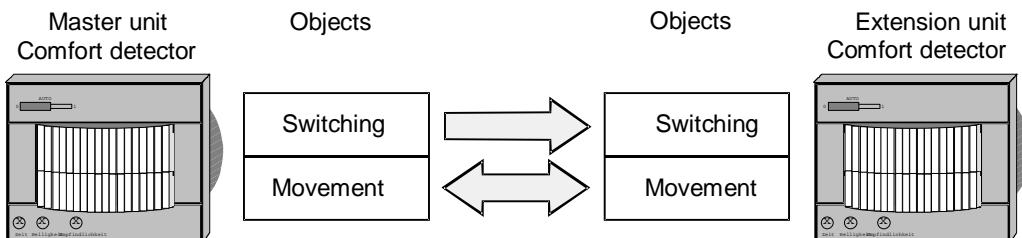
Because master unit/extension unit mode is also possible in combination with standard detectors and different conditions apply for the different modes (switching, value transmitter, light scene) the individual examples will be explained below:

Master unit: Movement controller comfort

Extension unit: Movement controller comfort

Mode: Switching

The twilight level is switched on and off through the linking of the switch objects. A switch object = 1 at the start of detection leads to deactivation of the twilight level (twilight levels value = 1) and a switch object = 0 after expiry of the additional transmission delay time leads to reactivation of the twilight level (twilight level value = 0).



This means that it is not necessary to transmit the twilight level through the twilight levels object at the beginning of the movement or after expiry of the additional transmission delay time, so that the transmission flag of the twilight levels object should be cancelled in the main station.

After expiry of the total delay time a set locking time is started in the extension unit through the reception of the switch telegrams at the end of detection and the absence of the movement telegram.

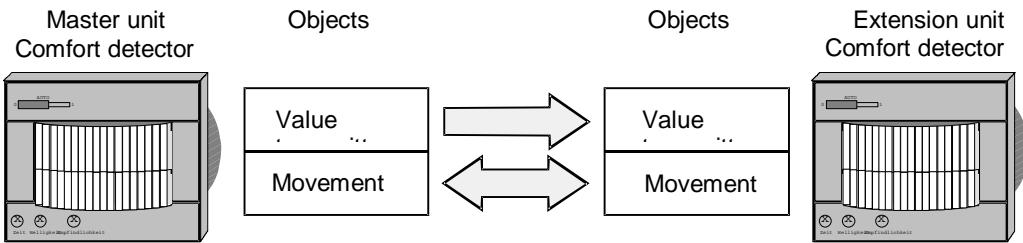
**Movement controller comfort,
Flush-mounted (Up)
752613xx, 752614xx**

Mounting height 1.1 m and 2.2 m

B.
Berker

Master unit: Movement controller comfort
Extension unit: Movement controller comfort
Mode: Value transmitter

The twilight level is switched on and off through the linking of the value transmitter objects. A value object = 1...255 at the start of detection leads to deactivation of the twilight level (twilight level value = 1) and a value object = 0 after expiry of the additional transmission delay time leads to reactivation of the twilight level (twilight level value = 0).

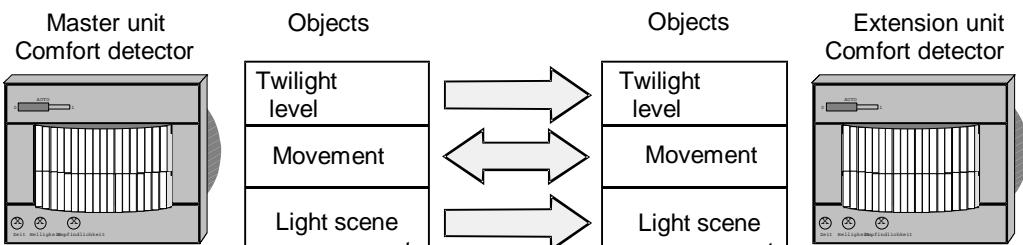


This means that it is not necessary to transmit the twilight level through the twilight level object at the start of the movement, or after expiry of the additional transmission delay, so that the transmission flag of the twilight level objects in the main station should be deleted.

After expiry of the total delay time a set locking time is started in the extension unit through the reception of the switch telegrams at the end of detection and the absence of the movement telegram.

Master unit: Movement controller comfort
Extension unit: Movement controller comfort
Mode: Light scene

The twilight level is switched on and off through the linking of the value transmitter objects, because the light scene number does not permit any conclusions on the brightness of the triggered lamps. At the start of detection the main station transmits the twilight level value = 1 for brightness-independent detection. After expiry of the additional transmission delay the twilight level value = 0 returns to brightness-dependent detection.



This means that it is necessary to transmit the twilight level through the twilight level object at the start of the movement, or after expiry of the additional transmission delay, so that the transmission flag of the twilight level objects in the main station should be set.

If a light scene which raises the current lighting status in the room above the detector's set twilight level is recalled after expiry of the additional transmission delay, the detector cannot detect any more movements. Because of this, special care should be taken when setting the function "Light scene and preset brightness-dependent movement detection (=> twilight level not configured to brightness-independent), to avoid errors like this when configuring.

After expiry of the total delay time a set locking time is started in the extension unit through the activation of the twilight level and the absence of the movement telegram.

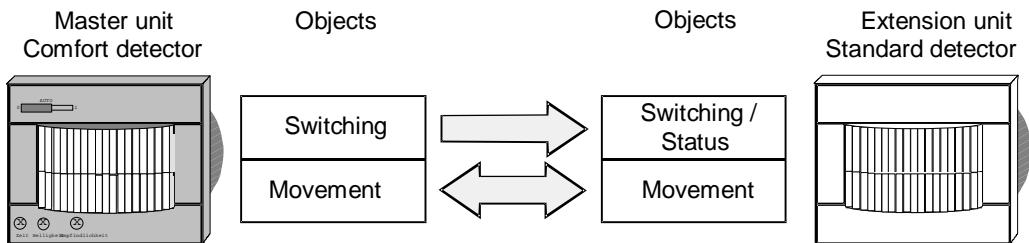
**Movement controller comfort,
Flush-mounted (Up)
752613xx, 752614xx**

Mounting height 1.1 m and 2.2 m

B.
Berker

Master unit: Movement controller comfort
Extension unit: Movement controller (standard)
Mode: Switching

The twilight level is switched on and off through the linking of the switch objects of the master unit (comfort detector) with the switching/status object of the extension unit application (standard detector). A switch object = 1 at the start of detection leads to deactivation of the twilight level (twilight levels value = 1) and a switch object = 0 after expiry of the additional transmission delay time leads to reactivation of the twilight level (twilight level value = 0).

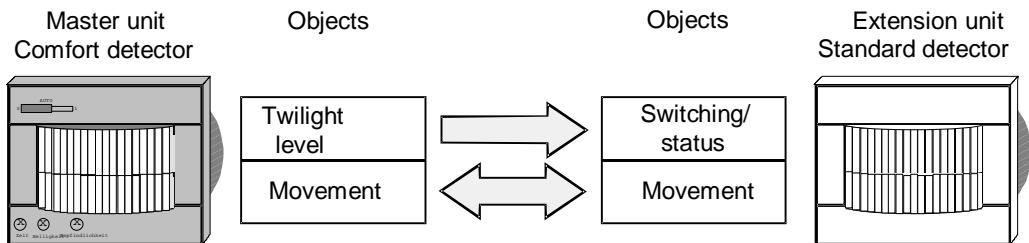


This means that it is not necessary to transmit the twilight level object at the start of the movement, or after expiry of the additional transmission delay, so that the transmission flag of the twilight level objects in the main station should be deleted.

After expiry of the total delay time a set locking time is started in the extension unit through the reception of the switch telegrams at the end of detection and the absence of the movement telegram.

Master unit: Movement controller comfort
Extension unit: Movement controller (standard)
Mode: Value transmitter

The twilight level is switched on and off through the linking of the switch objects of the master unit (comfort detector) with the switching/status object of the extension unit application (standard detector). At the start of detection, along with the actual value telegram the movement controller comfort also transmits the twilight levels object value = 1, which deactivates the twilight level through the switching/status object of the extension unit.



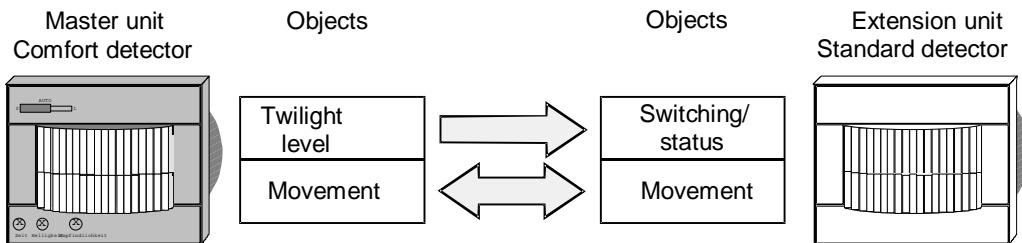
After expiry of the additional transmission delay a twilight levels object value = 0 in the master unit has the effect of activating the twilight level in the extension units through their switching/status object.

This means that it is necessary to transmit the twilight level through the twilight level object at the start of the movement, or after expiry of the additional transmission delay, so that the transmission flag of the twilight level objects in the master unit should be set.

After expiry of the total delay time a set locking time is started in the extension unit through the activation of the twilight level and the absence of the movement telegram.

Master unit: Movement controller comfort
Extension unit: Movement controller (standard)
Mode: Light scene

The twilight level is switched on and off through the linking of the twilight level objects of the master unit (comfort detector) with the switching/status object of the extension unit application (standard detector). At the start of detection, along with the actual light scene telegram the movement controller comfort also transmits the twilight levels object value = 1, which deactivates the twilight level through the switching/status object of the extension unit.



After expiry of the additional transmission delay a twilight levels object value = 0 in the master unit has the effect of activating the twilight level in the extension units through their switching/status object.

This means that it is necessary to transmit the twilight level through the twilight level object at the start of the movement, or after expiry of the additional transmission delay, so that the transmission flag of the twilight level objects in the master unit should be set.

If a light scene is recalled after expiry of the additional transmission delay which raises the current lighting status in the room above the detector's set twilight level, the detector cannot detect any more movements.

Because of this, special care should be taken when setting the function "Light scene and preset brightness-dependent movement detection (=> twilight level not configured to brightness-independent), to avoid errors like this when configuring.

After expiry of the total delay time a set locking time is started in the extension unit through the activation of the twilight level and the absence of the movement telegram.

• Function of the slide switch

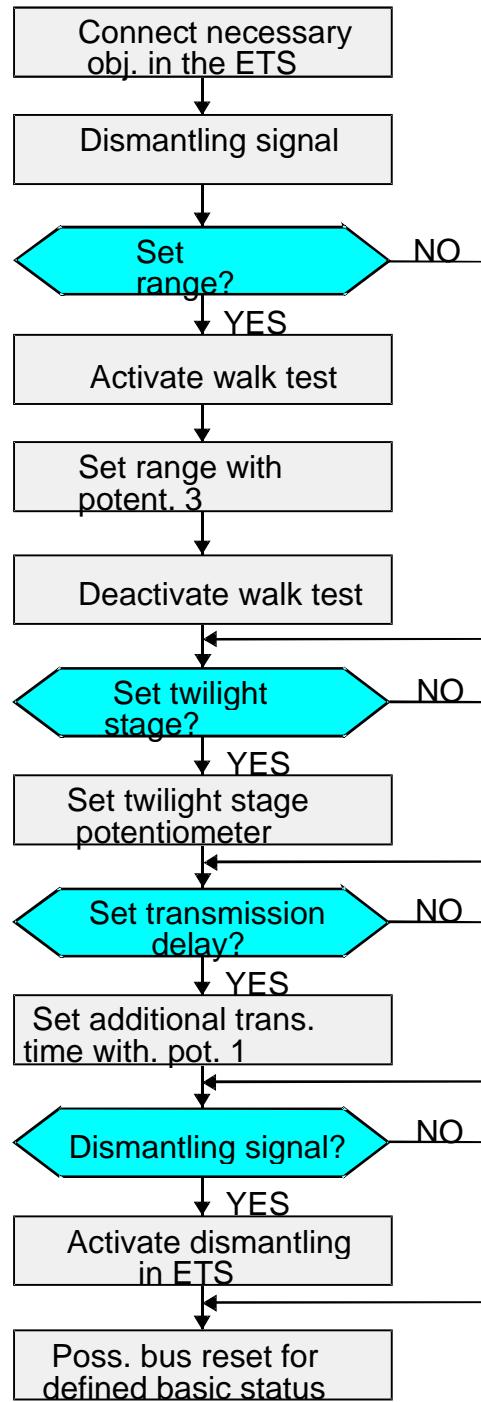
The slide switch is only effective in switching mode with inactive locking function (object 2).

After cancellation of a detector lock in switching mode and triggering of the telegram configured at the end of the locking period, an existing switch position ('0' / '1') is evaluated again. A telegram is triggered for an existing switch setting ('0' / '1') that is dependent on the set mode (switching, value transmitter or light scene).

The following functions are triggered by the slide switch in dependence on the set mode:

	New switch position '1'	New switch position '0'	New switch position 'AUTO'
Switching	ON telegram Movement controller in locking mode	OFF telegram Movement controller in locking mode	No telegram Movement controller in automatic mode
Value transmitter	Value telegram (255) Movement controller in locking mode	Value telegram (0) Movement controller in locking mode	No telegram Movement controller in automatic mode
Light scene	Arrangement 2 (sent value 1) Movement controller in locking mode	Arrangement 1 (sent value 0) Movement controller in locking mode	No telegram Movement controller in automatic mode

Flow chart for commissioning the comfort detector



Notes on the software

To enable all parameters to be processed, parameter processing must be set to "Full access" (FA).