EAE KNX DALI Gateway

Product Manual DA100

Content

1   General

1.1 Device Description

DA100 KNX-DALI Gateway operates as an interface device between KNX bus and DALI bus. Device can control 64 DALI devices on a DALI line. This DALI line is powered by internal power supply. DALI compatible ECGs (electronic control gear) can be controlled via 16 DALI groups and DALI compatible presence sensors can be utilized via 8 sensor slots. Also DALI compatible ECK (emergency conversation kit) devices can be operated on a test schedule.

Device features are listed below;

- Maximum 64 DALI devices (e.g. electronic ballast, transformer, ECK, sensor) can be connected to DALI output.
- DA100 enables to control 16 DALI groups and can store 64 different lighting scenes.
- DA100 can manage DALI ECK (emergency conversion kit) devices by means of downloading configured automatic test schedules, triggering tests and monitoring test results as well as other fault conditions.
- DA100 utilizes DALI sensors* for internal corridor and constant light level control on DALI groups. It is also possible to transmit current presence statuses and measured brightness values of DALI sensors on KNX bus. Maximum 8 DALI sensors can be utilized on DALI bus.
- Fault statuses of DALI devices can be monitored by both device based or group based via different communication objects on the KNX.
- Creating of overlapping DALI groups is possible.
- Addressing and grouping of DALI devices is made via EAE DALI Tool (PC Software). DALI Tool can be downloaded from website. www.eaetechnology.com.

* Supported DALI sensor device: Tridonic - MSensor02, Art. No: 86459303

Also each DALI group channel can realize any of these following functions;

- Corridor
- Constant light level
- Burn-in
- Sequencer
- Sweep

DALI groups and sensor slots are parameterized individually via ETS.

NOTE: Each channel is uniform. Device factory default physical address is "15.15.255".

1.2 Technical Data

Type of protection	IP 20	EN 60529
Safety class	II	EN 61140
KNX supply[4]	Voltage Current consumption	21 – 30 V DC, SELV < 10 mA
Main supply[6]	Voltage Power consumption Current consumption	85 – 300 V AC @ 50-60Hz Max. 8 W 100mA @ 85 V AC
DALI supply[5]	Voltage Current	16V DC typical Max. 120 mA
Connections	Screw terminals Max tightening torque KNX terminal	0,05 - 2,5 mm² solid wire 0,03 - 1,5 mm² stranded wire 0.5 Nm Red-Grey bus connect terminal
Output	Number of DALI devices Cable lengths	Max. 64 1.5 mm² Max. 300 m 0.75 mm² Max. 150 m 0.5 mm² Max. 100 m
Installation	35 mm mounting rail	EN 60715
Temperature range	Ambient Storage Transport	-5°C +45°C -25°C +55°C -25°C +70°C
Humidity	Max. air humidity	95 % no moisture condensation
Dimensions	 Width (W) in mm Width (W) in units	70 x (W) x 91 mm 69 mm 4 modules (18mm modules)
Weight	0.15 kg	
Box	Plastic, polycarbonate, colour grey	
CE	In accordance with the EMC guideline and low voltage	

Application program	Communications object count	Number of addresses (max)	Number of assignments (max)
	249	254	255

1.3 Connection Example
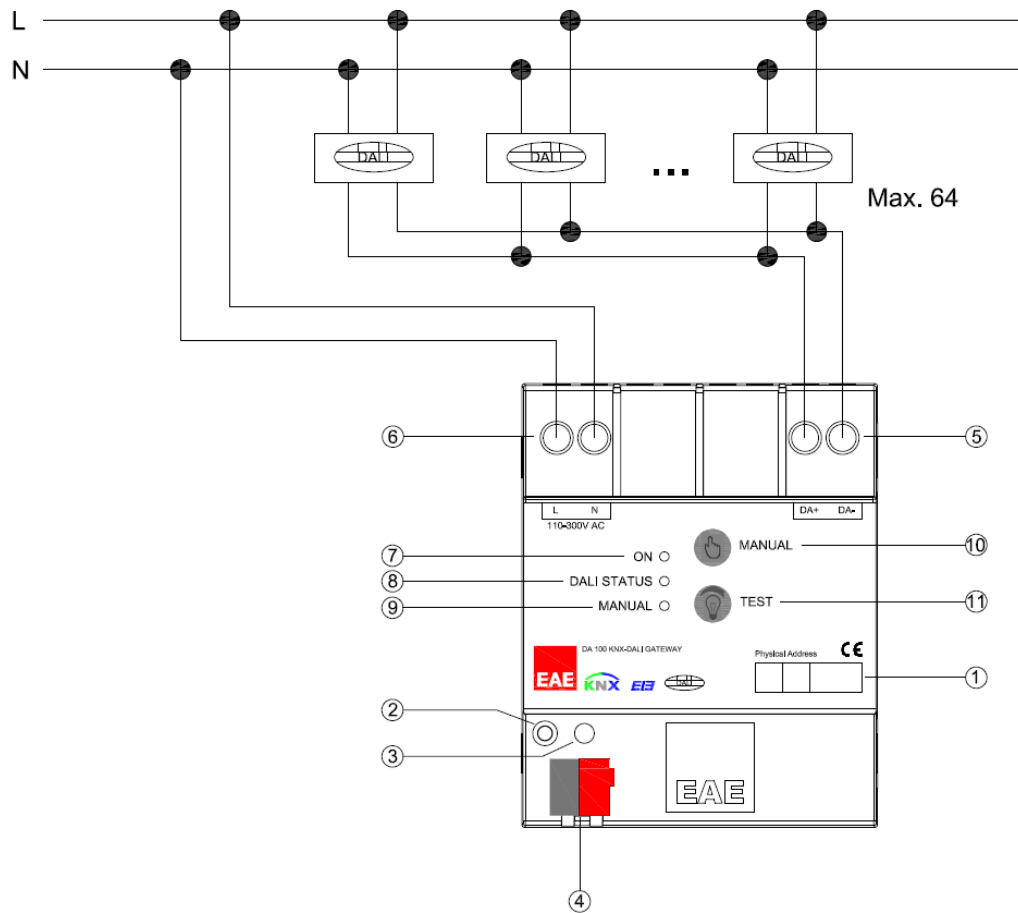
Connection Example of DA100

1.4 Operation and Display

Power OK LED [7]:
- OFF   : Mains power failure.
- ON   : Mains power is ok.

DALI Status LED [8]:
- OFF   : No problem.
- ON   : DALI line failure. Possible causes; mains supply failure, DALI line is short-circuit, mains power is connected to DALI line.
- Slow Blink : A DALI device fault is present. (Fault lamp, fault ballast, fault converter, fault sensor…)
- Fast Blink : Initialization is active.

Manual LED [9]   : Lights up when manual control is activated by pressing manual button.

Manual Button [10]: Activate/Deactivate manual control. (Press the manual button for 3 seconds to activate. Press shortly to deactivate manual control.)

Note: KNX commands cannot operated when manual control is activated.

Test Button [11] : If manual operation is activated, short press sends broadcast on/off command and long press sends broadcast dim up/down command to DALI line. (Commands are sent in sequent.)

Programming LED and Button [3]: Physical address localization.

2 Communication Object Information

2.1 Communication Object Table

Overview of all communication objects of the device application can be seen on the following table.

No	Function	Name	DTP Type	Length	Flags
0	In operation	General	1.002	1 bit	CT
1	Enable manual operation	General	1.003	1 bit	CRW
2	Start sequence	General	1.010	1 bit	CW
	Start sequence / status				CRWT
3	Device status	General	Non-DPT	3 byte	CWT
4	Trigger emergency test	General	Non-DPT	1 byte	CW
5	Auto emergency test start	General	1.010	1 bit	CRW
6	Coded status switch	Coded	Non-DPT	2 byte	CWT
7	Coded status brightness value	Coded	Non-DPT	2 byte	CWT
8	Coded remaining burn-in time	Coded	Non-DPT	3 byte	CWT
9	Coded faults	Coded	237.600	2 byte	CWT
10	Coded duration test result	Coded	Non-DPT	3 byte	CWT
11	Fault gateway supply	Broadcast	1.005	1 bit	CRT
12	Fault lamp	Broadcast	1.005	1 bit	CRT
13	Fault ballast	Broadcast	1.005	1 bit	CRT
14	Fault converter	Broadcast	1.005	1 bit	CRT
15	Fault sensor	Broadcast	1.005	1 bit	CRT
16	Fault mains connected	Broadcast	1.005	1 bit	CRT
17	Scene 8 bit	Scene	18.001	1 byte	CW
18	Scene 1 / 2 recall	Scene 1 / 2	1.022	1 bit	CW
19	Scene 1 / 2 store	Scene 1 / 2	1.022	1 bit	CW
20…33	Scene 3…15 / 4…16 same as scene 1 / 2				
34	Switch	Broadcast	1.001	1 bit	CWU
	Switch / status				CRWTU
35	Status switch	Broadcast	1.001	1 bit	CRT
36	Brightness value	Broadcast	5.001	1 byte	CWU
	Brightness value / status				CRWTU
37	Status brightness value	Broadcast	5.001	1 byte	CRT
38	Relative dimming	Broadcast	3.007	4 bit	CW
39	Trigger sweep	Broadcast	1.017	1 bit	CW
40	Burn-in in lamps	Broadcast	1.010	1 bit	CW

	Burn-in in lamps / status				CRWT
41	Switch	Group 1	1.001	1 bit	CWU
	Switch / status				CRWTU
42	Status switch	Group 1	1.001	1 bit	CRT
43	Enable corridor function	Group 1	1.003	1 bit	CWU
	Enable corridor function / status				CRWTU
	Status additional function				CRT
44	Brightness value	Group 1	5.001	1 byte	CWU
	Brightness value / status				CRWTU
45	Status brightness	Group 1	5.001	1 byte	CRT
46	Relative dimming	Group 1	3.007	4 bit	CW
47	Trigger sweep	Group 1	1.017	1 bit	CW
48	Fault lamp	Group 1	1.005	1 bit	CRT
	Fault ballast	Group 1	1.005	1 bit	CRT
	Fault lamp/ballast	Group 1	1.005	1 bit	CRT
49	Burn in lamps	Group 1	1.010	1 bit	CW
	Burn-in in lamps / status				CRWT
50…184	Group 2…16 (Same as group 1)				
185	Enable constant light level control	Sensor Slot 1	1.003	1 bit	CWU
	Enable constant light level control / status				CRWTU
186	Status constant light control	Sensor Slot 1	1.003	1 bit	CRT
187	Enable corridor control	Sensor Slot 1	1.003	1 bit	CWU
	Enable corridor control / status				CRWTU
188	Status corridor control	Sensor Slot 1	1.003	1 bit	CRT
189	Set target lux value	Sensor Slot 1	9.004	2 byte	CRW
190	Set presence hold-up time	Sensor Slot 1	5.010	1 byte	CRW
191	Measured brightness value	Sensor Slot 1	9.004	2 byte	CRT
192	Presence output	Sensor Slot 1	1.001	1 bit	CRT
193…248	Sensor 2…8 (Same as sensor slot 1)				

2.2 Communication Object Descriptions

No	Function	Name	DTP Type	Length	Flags
0	In operation	General	1.002	1 bit	CT

This object is used to report that device is still alive and connected to the KNX line by sending cyclic 1 bit telegrams. If a telegram is not received, device may be defective or KNX cable would be intercepted.

- Object will be activated if "Device alive operation active" parameter in the General tab is selected as "yes".
- Telegram type (ON or OFF) can be selected via "In operation bit" parameter in General parameters tab.
- Cyclic period of transmitted telegrams can be selected via "In operation send interval" parameter in General parameters tab.

No	Function	Name	DTP Type	Length	Flags
1	Enable manual operation	General	1.003	1 bit	CRW

This object is used for enabling or disabling the manual operation button located on the device. If the manual operation disabled, manually switching or dimming of the connected DALI devices is not possible. Furthermore, the status of manual operation can be read via this communication object.

- Value of the object will be "1" after an ETS download if the "Enable manual operation" parameter in General tab is selected as 'yes'. Value will be "0" if parameter is selected as "no".

(value "1" = manual operation enable, value "0" = manual operation disable)

No	Function	Name	DTP Type	Length	Flags
2	Start sequence	General	1.010	1 bit	CW

This object is used to start or stop the sequence function.

- Object will be activated if "Enable scenes" and "Enable sequencer" parameters in the General tab are selected as "yes".

(value "1" = start sequence function, value "0" = stop sequence function)

No	Function	Name	DTP Type	Length	Flags
2	Start sequence / status	General	1.010	1 bit	CRWT

This communication object has the same functions and properties as the communication object "Start Sequence". The status is additionally feedback.

- Object will be activated if "Enable scenes" and "Enable sequencer" parameters in General tab are selected as "yes" and "Sequence status transmit mode" parameter in Sequence tab is selected as any other value other than "none".
- Feedback will be sent only after a read request if "Sequence status transmit mode" parameter in Sequence tab is selected as "after request" or only after a value change if parameter is selected as "after change". Feedback will be sent on both occasions if the parameter is selected as "after change or request".

(value "1" = start sequence function, value "0" = stop sequence function)

| 3 | Device status | General | Non-DPT | 3 byte | CWT |

This communication object is used for getting all current faults and states of a DALI device in one comprehensive telegram. In order to make a read request, a write should be made to object with read/response bit is set.

Object consists of three bytes. Higher two bytes of telegram contains all fault and state data and lowest byte contains DALI address of subjected device and information of whether telegram is a status request or sent status.

- Object will be activated if "Enable "Device status" object" parameter in Feedback tab is selected as "yes".
- Feedback will be sent only after a request if "transmit mode" parameter in Feedback tab is selected as "after request" or only after a value change if parameter is selected as "after change". Feedback will be sent on both occasions if the parameter is selected as "after change or request".

Bit numbers and data which they represented is explained below;

| 23 | 22 | 21 | 20 | 19 | 18 | 17 | 16 | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 |

Byte	Bit Field	Description
1	Bit 0 - 5	DALI device address [0 - 63]
	Bit 6	Reserved and should be '0'
	Bit 7	Read or response flag: '1' = read, '0' = response
2	Bit 8	Device offline flag: '1' = offline, '0' = online
	Bit 9	Device malfunction flag: '1' = failure '0' = no failure
	Bit 10	Lamp failure flag: '1' = failure, '0' = no failure
	Bit 11	Burn-in activate flag: '1' = active, '0' = passive
	Bit 12	Functional test running flag: '1' = test running, '0' = test not present (ECK only)
	Bit 13	Duration test running flag: '1' = test running, '0' = test not present (ECK only)
	Bit 14	Battery duration failure flag: '1' = failure, '0' = no failure (ECK only)
	Bit 15	Battery failure flag: '1' = failure, '0' = no failure (ECK only)
3	Bit 16	Emergency lamp failure flag: '1' = failure, '0' = no failure (ECK only)
	Bit 17	Functional test failed flag: '1' = failure, '0' = no failure (ECK only)
	Bit 18	Duration test failed flag: '1' = failure, '0' = no failure (ECK only)
	Bit 19	Short circuit flag: '1' = failure, '0' = no failure (LED only)
	Bit 20	Open circuit flag: '1' = failure, '0' = no failure (LED only)
	Bit 21	Current protector active flag: '1' = failure, '0' = no failure (LED only)
	Bit 22	Thermal shutdown flag: '1' = failure, '0' = no failure (LED only)
	Bit 23	Reserved

| 4 | Trigger emergency test | General | Non-DPT | 1 byte | CW |

This object is used to start or stop, duration or functional test of a selected ECK.

- Object will be activated if "Enable manual emergency test" parameter in the Emergency tab is selected as "yes".

Bit numbers and data which they represented is explained below;

7	6	5	4	3	2	1	0

Byte	Bit Field	Description
1	Bit 0 - 5	DALI device address [0…63]
	Bit 6, 7	00b: Stop any currently running test
		01b: Trigger functional test
		10b: Trigger duration test

5	Auto emergency test start	General	1.010	1 bit	CRW

This object is used for activating or deactivating automatic self-test procedures of DALI ECK devices. Furthermore, automatic emergency test status can be read via this communication object.

- Value of the object will be "1" after an ETS download if the "Enable auto emergency test after download" parameter in Emergency tab is selected as "yes". Value will be "0" if parameter is selected as "no".

(value "1" = manual operation enable, value "0" = manual operation disable)

6	Coded status switch	Coded	Non-DPT	2 byte	CWT

This object is used to get switch status of a DALI group or an individual DALI ballast/driver. In order to make a read request, a write should be made to object with read/response bit is set.
Object consists of two bytes. High byte of telegram contains switch status and low byte contains DALI address of subjected device or group number, information of whether telegram is a status request or sent status and information of whether a device or a group is selected.

- Object will be activated if "Enable "Coded status switch" object" parameter in Feedback tab is selected as "yes".
- Feedback will be sent only after a request if "transmit mode" parameter in Feedback tab is selected as "after request" or only after a value change if parameter is selected as "after change". Feedback will be sent on both occasions if the parameter is selected as "after change or request".

Bit numbers and data which they represented is explained below;

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0

Byte	Bit Field	Description
1	Bit 0 - 5	DALI device address [0 - 63] or DALI group number[0 - 15]
	Bit 6	Individual device or group flag: '1' = device address, '0' = group number
	Bit 7	Read or response flag: '1' = read, '0' = response
2	Bit 8	Switch status: '1' = ON, '0' = OFF (DPT 1.001)
	Bit 9 - 15	Reserved

7	Coded status brightness value	Coded	Non-DPT	2 byte	CWT

This object is used to get brightness value of a DALI group or an individual DALI ballast/driver. In order to make a read request, a write should be made to object with read/response bit is set.

Object consists of two bytes. High byte of telegram contains brightness value and low byte contains DALI address of subjected device or group number, information of whether telegram is a status request or sent status and information of whether a device or a group is selected.

- Object will be activated if "Enable "Coded status brightness value" object" parameter in Feedback tab is selected as "yes".
- Feedback will be sent only after a request if "transmit mode" parameter in Feedback tab is selected as "after request" or only after a value change if parameter is selected as "after change". Feedback will be sent on both occasions if the parameter is selected as "after change or request".

Bit numbers and data which they represented is explained below;

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0

Byte	Bit Field	Description
1	Bit 0 - 5	DALI device address [0 - 63] or DALI group number[0 - 15]
	Bit 6	Individual device or group flag: '0' = device address, '1' = group number
	Bit 7	Read or response flag: '1' = read, '0' = response
2	Bit 8 - 15	Brightness value [0 - 255] (DPT 5.001)

8	Coded remaining burn-in time	Coded	Non-DPT	3 byte	CWT

This object is used to get remaining burn-in time of an individual DALI ballast/driver in hours. In order to make a read request, a write should be made to object with read/response bit is set.

Object consists of three bytes. High two bytes of telegram contains remaining time in hours and low byte contains DALI address of subjected device and information of whether telegram is a status request or sent status.

- Object will be activated if "Enable "Coded remaining burn-in time" object" parameter in Feedback tab is selected as "yes".
- Feedback will be sent only after a request if "transmit mode" parameter in Feedback tab is selected as "after request" or only after a value change if parameter is selected as "after change". Feedback will be sent on both occasions if the parameter is selected as "after change or request".

Bit numbers and data which they represented is explained below;

23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0

Byte	Bit Field	Description
1	Bit 0 - 5	DALI device address [0 - 63] or DALI group number[0 - 15]
	Bit 6	Reserved and should be '0'
	Bit 7	Read or response flag: '1' = read, '0' = response
2	Bit 8 - 23	Remaining burn-in time [0 - 65535] (DPT 7.007)

9	Coded faults	Coded	237.600	2 byte	CWT

This object is used to get fault data of a DALI group or an individual DALI device. In order to make a read request, a write should be made to object with read/response bit is set.

Object consists of two bytes. High byte of telegram contains fault data and low byte contains DALI address of subjected device or group number, information of whether telegram is a status request or sent status and information of whether a device or a group is selected.

- Object will be activated if "Enable "Coded faults" object" parameter in Feedback tab is selected as "yes".
- Feedback will be sent only after a request if "transmit mode" parameter in Feedback tab is selected as "after request" or only after a value change if parameter is selected as "after change". Feedback will be sent on both occasions if the parameter is selected as "after change or request".

Bit numbers and data which they represented is explained below;

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0

Byte	Bit Field	Description
1	Bit 0 - 5	DALI device address [0 - 63] or DALI group number[0 - 15]
	Bit 6	Individual device or group flag: '1' = device address, '0' = group number
	Bit 7	Read or response flag: '1' = read, '0' = response
2	Bit 8	Device is offline or malfunction flag: '1' = failure '0' = no failure
	Bit 9	Lamp failure flag: '1' = failure '0' = no failure
	Bit 10	Converter failure flag: '1' = failure '0' = no failure (ECK only)
	Bit 11 - 15	Reserved

10	Coded duration test result	Coded	Non-DPT	3 byte	CWT

This object is used for getting an ECK device's last duration test result (battery life) in minutes. In order to make a read request, a write should be made to object with read/response bit is set. If a request would make for a device whose device type is not ECK, than response will be zero.

Object consists of three bytes. Higher bytes of telegram contain test result. Low byte contains DALI address of subjected device and information of whether telegram is a status request or sent status.

- Object will be activated if "Enable "Coded duration test result" object" parameter in Feedback tab is selected as "yes".
- Feedback will be sent only after a request if "transmit mode" parameter in Feedback tab is selected as "after request" or only after a value change if parameter is selected as "after change". Feedback will be sent on both occasions if the parameter is selected as "after change or request".

Bit numbers and data which they represented is explained below;

23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0

Byte	Bit Field	Description
1	Bit 0 - 5	DALI device address [0 - 63] or DALI group number[0 - 15]
	Bit 6	Reserved and should be '0'
	Bit 7	Read or response flag: '1' = read, '0' = response
2	Bit 8 - 23	Last duration test result [0 - 65535] (DPT 7.007)

11	Fault gateway supply	Broadcast	1.005	1 bit	CRT

This object is used for reporting DALI gateway supply fault. Possible causes of the fault are no mains connection to gateway supply terminal, power supply malfunction or short circuiting DALI line more than 100ms.

- Object will be activated if "Enable "Fault gateway supply" object" parameter in Feedback tab is selected as "yes".
- Feedback will be sent only after a request if "transmit mode" parameter in Feedback tab is selected as "after request" or only after a value change if parameter is selected as "after change". Feedback will be sent on both occasions if the parameter is selected as "after change or request".

(value "0" = gateway supply works properly, value "1" = gateway supply fault)

12	Fault lamp	Broadcast	1.005	1 bit	CRT

This object is used for reporting whether there is any device that has a fault lamp is present or not.

- Object will be activated if "Enable "Fault lamp" object" parameter in Feedback tab is selected as "yes".
- Feedback will be sent only after a request if "transmit mode" parameter in Feedback tab is selected as "after request" or only after a value change if parameter is selected as "after change". Feedback will be sent on both occasions if the parameter is selected as "after change or request".

(value "0" = no fault lamp, value "1" = at least one of the DALI devices has a lamp fault)

13	Fault ballast	Broadcast	1.005	1 bit	CRT

This object is used for reporting whether there is any offline or malfunctioned ballast/driver is present or not.

- Object will be activated if "Enable "Fault ballast" object" parameter in Feedback tab is selected as "yes".
- Feedback will be sent only after a request if "transmit mode" parameter in Feedback tab is selected as "after request" or only after a value change if parameter is selected as "after change". Feedback will be sent on both occasions if the parameter is selected as "after change or request".

(value "0" = no ballast/driver fault, value "1" = at least one of the DALI ballasts/drivers is offline or malfunctions)

14	Fault converter	Broadcast	1.005	1 bit	CRT

This object is used for reporting whether there is any ECK device which is offline or has any fault is present or not.

- Object will be activated if "Enable "Fault converter" object" parameter in Feedback tab is selected as "yes".
- Feedback will be sent only after a request if "transmit mode" parameter in Feedback tab is selected as "after request" or only after a value change if parameter is selected as "after change". Feedback will be sent on both occasions if the parameter is selected as "after change or request".

(value "0" = no ECK fault, value "1" = at least one of the DALI ECKs is offline or has a fault)

15	Fault sensor	Broadcast	1.005	1 bit	CRT

This object is used for reporting whether there is any offline or malfunctioned sensor is present or not.

- Object will be activated if "Enable "Fault sensor" object" parameter in Feedback tab is selected as "yes".
- Feedback will be sent only after a request if "transmit mode" parameter in Feedback tab is selected as "after request" or only after a value change if parameter is selected as "after change". Feedback will be sent on both occasions if the parameter is selected as "after change or request".

(value "0" = no sensor fault, value "1" = at least one of the DALI sensors is offline or malfunctions)

16	Fault mains connected	Broadcast	1.005	1 bit	CRT

This object is used for reporting a misconnection of mains to the DALI line.

- Object will be activated if "Enable "Fault mains connected" object" parameter in Feedback tab is selected as "yes".
- Feedback will be sent only after a request if "transmit mode" parameter in Feedback tab is selected as "after request" or only after a value change if parameter is selected as "after change". Feedback will be sent on both occasions if the parameter is selected as "after change or request".

(value "0" = no misconnection, value "1" = mains connected to DALI line)

NOTE:
Overvoltage sense circuitry on the DALI line is triggered on voltages above 40V. So any voltage above 40V is considered as mains.

17	Scene 8 bit	recall / store	18.001	1 byte	CW

This object is used to recall or store any of 64 scenes that are available on the gateway device.

- Object will be activated if "Enable scenes" parameter in the General tab is selected as "yes".

Bit numbers and data which they represented is explained below;

7	6	5	4	3	2	1	0

Byte	Bit Field	Description
1	Bit 0 - 5	Scene number - 1 [0 - 63 for scenes 1 - 64]
	Bit 6	Reserved and should be 0
	Bit 7	Recall or store flag: '1' = store scene, '0' = recall scene

Example of recall and store byte codes for some scenes;

Scene	Recall		Store	
	Hexadecimal	**Decimal**	**Hexadecimal**	**Decimal**
1	0x00	0	0x80	128
2	0x01	1	0x81	129
3	0x02	2	0x82	130
4	0x03	3	0x83	131
5	0x04	4	0x84	132
6	0x05	5	0x85	133
7	0x06	6	0x86	134
8	0x07	7	0x87	135
9	0x08	8	0x88	136
10	0x09	9	0x89	137
11	0x0A	10	0x8A	138
...	...	...	...	...
63	0x3E	62	0xE2	190
64	0x3F	63	0xE3	191

18	Scene 1 / 2 recall	Scene 1 / 2	1.022	1 bit	CW
This object is used for recalling scene 1 or scene 2. (value "0" = recall scene 1, value "1" = recall scene 2					
19	Scene 1 / 2, Scene 1 / 2 store	scene A / scene B	DPT_Scene_ AB 1.022	1 bit	CW
This object received from the KNX line; the current brightness value of ballast store on the Scene 1 or 2. "0" : saving the current brightness value of ballasts[1…64] to the scene 1 "1" : saving the current brightness value of ballasts[1…64] to the scene 2 **NOTE**: If the parameter "Overwrite scene on download" selected yes, stored scene values are overwritten and lost on next ETS download.					
20…33	Scene 3…15/4…16 same as before				
34	Broadcast, Switch	on / off	DPT_Switch 1.001	1 bit	CRWT
This object is used to switch all connected DALI ballasts on or off. You can configure broadcast switched on brightness value, using "Brightness value when switch on" parameter.					
35	Broadcast, Status switch	on / off	DPT_Switch 1.001	1 bit	C*RT*
This object is used to transmitting feedback of broadcast switch value (on/off). If the "Switch status response mode" selected "via separate object", this object can be visible.					
36	Broadcast, Brightness value	0…100 %	DPT_Scaling 5.001	1 byte	C*RW T*
This object is used to set the brightness value of all connected DALI ballasts (ECG).					
37	Broadcast, Status brightness value	0…100 %	DPT_Scaling 5.001	1 byte	C*RT*
This object is used to get all connected DALI ballasts on average, highest or lowest brightness value (%0…%100) according to parameter.					
38	Broadcast, Relative dimming	increase / decrease	DPT_Control _Dimming 3.007	4 bit	CW
This object is used to dim all connected DALI ballast. The brightness value is changed in the defined direction with the parameterized speed. 4 bit: $B_1 U_3$ c = {0,1} StepCode = [000b…111b]					

| C | Increase or decrease the brightness | 0 = Decrease
1 = Increase | | | |
| Step-Code | The amount of intervals into which the range of 0 % … 100 % is subdivided or the break indication. | - 001b…111b: Step
  Number of interval = $(2)^{(stepcode-1)}$
- 000b   : Break | | | |

39	Broadcast, Trigger sweep	trigger 0 / 1	DPT_Trigger 1.017	1 bit	C*R*W*T*

This function is used to start sweep function on whole DALI line. It's an alternative way for turning off the group with pre-warning. The sweep function is desired to warn a person that lights will go out shortly.

40	Broadcast, Burn-in in lamps	start / stop	DPT_Start 1.010	1 bit	C*R*W*T*

This object is used to control the burn-in start or stop for all DALI ballasts. After receipt of a telegram with start command all ballasts which are intended for burn-in can only be controlled with %0 or %100.

41	Group 1, Switch	on / off	DPT_Switch 1.001	1 bit	C*R*W*T*

This object is used to switch group 1 on or off.

42	Group 1, Status switch	on / off	DPT_Switch 1.001	1 bit	C*RT*

This object is used to transmitting feedback of group 1 switch value (on/off). If the "Switch status response mode" selected as "via separate object", this object can be visible.

43	Group 1, Enable corridor function Group 1, Status additional function	enable / disable	DPT_Enable 1.003	1 bit	C*RWT*

"Enable corridor function" object is enabled if the parameter "Additional function" is set to "Corridor function with KNX sensor" in parameter window "Group 1". Corridor function can be enabled or disabled via this object. If "Additional function" parameter selected "Corridor function with DALI sensor", "constant light function with DALI sensor" or "Sequence member" and "Additional function status transmit mode" feedback is active, than "Status additional function" object is enabled.

"0" : Group additional function not active
"1" : Group additional function active

44	Group 1, Brightness value	0…100%	DPT_Scaling 5.001	1 byte	C*R*W*T*

This object is used to set group 1 ballast brightness value (%0…%100).

45	Group 1, Status brightness	0…100%	DPT_Scaling 5.001	1 byte	C*RT*

This object is used to get group 1 ballasts brightness value (%0…%100).

46	Group 1, Relative dimming	increase / decrease	DPT_Control _Dimming 3.007	4 bit	CW

This object is used to dimming group 1. The brightness value is changed in the defined direction with the parameterized speed.

47	Group 1, Trigger sweep	trigger 0 / 1	DPT_Trigger 1.017	1 bit	CW

This function is used to start sweep function. It's an alternative way for turning off the group with pre-warning. The sweep function is desired to warn a person that lights will go out shortly.

48	Group 1, Fault lamp	alarm /no alarm	DPT_Alarm 1.005	1 bit	CRT
	Group 1, Fault ballast	alarm /no alarm	DPT_Alarm 1.005	1 bit	CRT
	Group 1, Fault lamp/ballast	alarm /no alarm	DPT_Alarm 1.005	1 bit	CRT

This object is used to report fault ballasts or lamps in the group 1 (at least one of the group 1 ballasts or lamps has a fault). "0" : no fault ballast or lamp, "1" : fault ballast or lamp

49	Group 1, Burn in lamps	start / stop	DPT_Start 1.010	1 bit	CRWT

This object is used to start or stop burn-in for group 1. After receipt of a telegram with start command, group 1's ballasts which are intended for burn-in can only be controlled with %0 or %100.

20…33	Group 2…16 (Same as group 1)				
185	Sensor Slot 1, Enable constant light control	enable / disable	DPT_Enable 1.003	1 bit	CRWT

This object is used to enable or disable constant light control function for which groups assigned to sensor 1. After a received enable telegram, DALI sensor can control the lighting groups.

186	Sensor Slot 1, Status constant light control	enable / disable	DPT_Enable 1.003	1 bit	CRT

This object is used get feedback of constant light control status.

187	Sensor Slot 1, Enable corridor control	enable / disable	DPT_Enable 1.003	1 bit	CRWT

This object is used to enable or disable corridor control function for which groups assigned to sensor 1. After a received enable telegram, DALI sensor can be control the lighting groups.

188	Sensor Slot 1, Status corridor control	enable / disable	DPT_Enable 1.003	1 bit	CRT

This object is used to get feedback of corridor control status.

189	Sensor Slot 1, Set target lux value	Lux value	DPT_Value_ Lux 9.004	2 byte	CRW

	This object is used for receiving the lighting level (in lux). This object can also be used for requesting the current set lux value.				
190	Sensor Slot 1, Set present hold-up time	1 byte unsigned value	DPT_Value 5.010	1 byte	CRW
	This object is used for receiving the presence detected hold-up time (in minutes) by bus. This object can also be used for requesting the current presence hold-up time.				
191	Sensor Slot 1, Measured brightness value	2 byte float value	DPT_Value_ Lux 9.004	2 byte	CRT
	This object is used for sending the light lux measured by the detector to KNX bus.				
192	Sensor Slot 1, Presence output	on / off	DPT_Switch 1.001	1 bit	CRT
	This object is sent to the bus by sensor slot, indicating whether the presence of persons has been detected. "0" : no person detected "1" : person detected				
193…248	Sensor Slot 2…8 (Same as sensor slot 1)				

3 Parameters

"Parameters" chapter describes ETS parameters of the device. Please find detailed descriptions of objects in 2.2 Communication Object Descriptions. **Default parameters** are written in bold letters.

3.1 General

Device: 1.1.2 DA100 DALI-Gateway 8-Sensor Slot, Emergency Light

General	Enable manual operation	yes
Feedback	Enable automatic addressing	yes
Fault Condition	Device alive operation active	no
Emergency	Telegram limit active	no
Broadcast		
- Status		
Group 1	Dimming curve selection	linear dimming curve
- Status	Maximum brightness value	100 % (255)
Group 2	Minimum brightness value	1 % (3)
- Status	Enable scenes	no
Group 3	Enable burn-in function	no
- Status		
Group 4	Switch status for different values in a group	ON
- Status	Brightness value status for different values in a group	avarage brightness

General Parameters

Enable manual Operation	*yes no
Parameter determines whether lightings can be controlled manually or not by push button on DALI Gateway. If parameter is selected "yes"; manual operation will be possible. (For manual control: Hold down manual button for 3 seconds than press test button consecutively.)	

Enable automatic addressing	*yes no
If parameter is selected "yes"; DALI Gateway assigns address to Dali devices which have not an address. If a new Dali device is connected to the Dali line instead of a faulty Dali device, new one takes the address and all properties of faulty device. If several Dali devices are connected to line, they take addresses one by one starting with undermost free address on Dali line. If parameter is selected "no"; Automatic addressing function is disabled.	

Device alive operation active	yes ***no**
This object is used to report that device is still alive and connected to KNX line. (Heartbeat) If alive telegram is not received, device may be defective or KNX cable can be disconnected. If parameter is selected "yes", following parameters come up.	
In operation value	***send value "0"** send value "1"
Telegram value can be selected as "1" or "0".	
Operation send interval [sec]	1…***300**…65535
Telegram value is sent cyclically according to time interval.	

Telegram limit active	yes ***no**
Telegrams which are sent by the gateway can be limited with this parameter. If "yes" is selected, following parameters come up.	
Telegram limit period	50ms…***10s**…1min
The limit period can be selected via telegram limit period parameter.	
Max. number of transmitted telegrams within a period	1…**20**…255
Maximum number of telegrams can be sent freely within a period.	

Dimming Curve Selection	***linear dimming curve** logarithmic dimming curve
Dimming curve type of DALI devices can be selected by this parameter.	

Maximum brightness value	%1(3)…%**100(255)**

This parameter defines the maximum brightness value of DALI devices. All Dali devices take this value as upper limit brightness value and cannot accept higher values.

Minimum brightness value	%**1(3)**…%100(255)

This parameter defines the minimum brightness value of DALI devices. All Dali devices take this value as undermost brightness value and cannot accept lower brightness values.

Enable scenes	yes ***no**
If parameter is selected "yes", "Scenes" section will be visible in parameter titles and "Enable sequencer" parameter will be available.	
Enable sequencer	yes ***no**
If parameter is selected "yes", "Sequence" section will be visible in parameter titles.	
Enable burn-in function	yes ***no**

Fluorescent lamps must be operated without dimming for a specific period of time in order to increase lifetime and efficiency. Function that performs this operation is called "Burn-In function". Please find detailed information within 4.6 Function 'Burn-in'
If parameter is selected "yes", "burn-in period" and "Enable automatic burn-in" parameters will be visible.

Burn-in period[hour]	1…*100…255

In this period of time, dimming commands will not send to Dali groups which has any Dali device working according to "Burn-in function".

Enable automatic burn-in	yes *no

If parameter is selected "Yes", any faulty lamp is replaced with a new lamp, burn-in period will start automatically for new one. Dali group of this new lamp cannot be dimmed before burn-in period is expired.

Switch status for different values in a group	*ON OFF

This parameter defines the switch status of a DALI group which has ECGs (electronic control gear) in different values. If parameter is selected "ON", one ECG which has current value "ON" is enough to make group status as "ON".

Brightness value status for different values in a group	*average brightness highest brightness lowest brightness

This parameter defines brightness value status of a DALI group which has ECGs (electronic control gear) in different values.

Burn-in status for different values in a group	*yes no

Parameter is activated when "Burn-in function" is enabled. After selecting "yes", if a DALI group has at least one ECG in burn-in period, Burn-in status of group will be indicated as active.

3.2 Feedback

Feedback

Enable "Fault gateway supply" object	yes *no
Parameter enables "Fault gateway supply" object. This object is used for reporting DALI gateway supply fault. Possible causes of the fault are no mains connection to gateway supply terminal, power supply malfunction or short circuiting DALI line more than 100ms. Please check 2.2 Communication Object Descriptions for detailed object information.	
Transmit mode	*after request after change after request or change
"After request" option only response to a read request to status object. "After change" mode always sends the status of object when changed. If both selected, object will send the status with a change and response to read requests.	

Enable "Fault mains connected" object	yes *no
Parameter enables "Fault mains connected" object. This object is used for reporting a misconnection of mains to the DALI line.	
Transmit mode	*after request after change after request or change
"After request" option only response to a read request to status object. "After change" mode always sends the status of object when changed. If both selected, object will send the status with a change and response to read requests.	

Enable "Fault lamp" object	yes
	*no
Parameter enables "Fault lamp" object. This object is used for reporting whether there is any device that has a fault lamp is present or not.	
Transmit mode	***after request**
	after change
	after request or change
"After request" option only response to a read request to status object. "After change" mode always sends the status of object when changed. If both selected, object will send the status with a change and response to read requests.	

Enable "Fault ballast" object	yes
	*no
Parameter enables "Fault ballast" object. This object is used for reporting whether there is any offline or malfunctioned ballast/driver is present or not.	
Transmit mode	***after request**
	after change
	after request or change
"After request" option only response to a read request to status object. "After change" mode always sends the status of object when changed. If both selected, object will send the status with a change and response to read requests.	

Enable "Fault converter" object	yes
	*no
Parameter enables "Fault converter" object. This object is used for reporting whether there is any ECK device which is offline or has any fault is present or not.	
Transmit mode	***after request**
	after change
	after request or change
"After request" option only response to a read request to status object. "After change" mode always sends the status of object when changed. If both selected, object will send the status with a change and response to read requests.	

Enable "Fault sensor" object	yes
	*no
Parameter enables "Fault sensor" object. This object is used for reporting whether there is any offline or malfunctioned sensor is present or not.	
Transmit mode	***after request**
	after change
	after request or change
"After request" option only response to a read request to status object. "After change" mode always sends the status of object when changed. If both selected, object will send the status with a change and response to read requests.	

Enable "Device status" object	yes
	*no
Parameter enables "Device status" object. This communication object is used for getting all current faults and states of a DALI device in one comprehensive telegram.	
Transmit mode	***after request**
	after change
	after request or change
"After request" option only response to a read request to status object. "After change" mode always sends the status of object when changed. If both selected, object will send the status with a change and response to read requests.	

Enable "Coded faults" object	yes
	*no
Parameter enables "Coded faults" object. This object is used to get fault data of a DALI group or an individual DALI device.	
Transmit mode	***after request**
	after change
	after request or change
"After request" option only response to a read request to status object. "After change" mode always sends the status of object when changed. If both selected, object will send the status with a change and response to read requests.	

Enable "Coded remaining burn-in time" object	yes
	*no
Parameter enables "Coded remaining burn-in time" object. This object is used to get remaining burn-in time of an individual DALI ballast/driver in hours.	
Transmit mode	***after request**
	after change
	after request or change
"After request" option only response to a read request to status object. "After change" mode always sends the status of object when changed. If both selected, object will send the status with a change and response to read requests.	

Enable "Coded duration test result" object	yes
	*no
Parameter enables "Coded duration test result" object. This object is used for getting an ECK device's last duration test result (battery life) in minutes.	
Transmit mode	***after request**
	after change
	after request or change
"After request" option only response to a read request to status object. "After change" mode always sends the status of object when changed. If both selected, object will send the status with a change and response to read requests.	

Enable "Coded status switch" object	yes
	*no
Parameter enables "Coded status switch" object. This object is used to get switch status of a DALI group or an individual DALI ballast/driver.	
Transmit mode	***after request**
	after change
	after request or change
"After request" option only response to a read request to status object. "After change" mode always sends the status of object when changed. If both selected, object will send the status with a change and response to read requests.	

Enable "Coded status brightness" object	yes
	*no
Parameter enables "Coded status brightness" object. This object is used to get brightness value of a DALI group or an individual DALI ballast/driver.	
Transmit mode	***after request**
	after change
	after request or change
"After request" option only response to a read request to status object. "After change" mode always sends the status of object when changed. If both selected, object will send the status with a change and response to read requests.	

3.3 Fault Condition

Fault Condition

Lamp values on ballast power on	1 %(3)…*100 %(255)
Parameter defines the brightness value of ballasts when power on.	

Lamp percent on KNX voltage failure	1 %(3)…*100 %(255)
Parameter defines the brightness value of ballasts on KNX line voltage loss.	

Lamp percent on DALI voltage failure	1 %(3)…*100 %(255)
Parameter defines the brightness value of ballasts on DALI line voltage loss.	

Lamp percent on KNX voltage recovery	1 %(3)…*100 %(255)
Parameter defines the brightness value of ballasts on KNX voltage return.	

Group function statuses on KNX voltage recovery	*inactive
	  active
	  status before failure

Parameter defines the situation of groups which are operating corridor function by KNX sensor on KNX voltage return. Default value of parameter is "inactive". After voltage return, groups will discontinue operating corridor function. If "Active" is selected, groups will carry on to operate corridor function when voltage returns.	

Sensor control statuses on KNX voltage recovery	*inactive Active1 status before failure
Parameter defines the situation of groups which are run with corridor/constant light function by DALI sensor on KNX voltage return. Default value of parameter is "inactive". After voltage return, groups will discontinue running with corridor/constant light function. If "Active" is selected, groups will carry on to run with corridor/constant light function when voltage come back.	

Sequence status on KNX voltage recovery	*inactive active status before failure
If "active" is selected, sequence will be started on KNX voltage return. If "status before failure" is selected, sequence will start on KNX voltage return only if sequence is interrupted by KNX voltage lose.	

Lamp percent on DALI voltage recovery	1 %(3)…*100 %(255)
Parameter defines the brightness value of ballasts on DALI voltage return.	

Group function statuses on DALI voltage recovery	*inactive active status before failure
Parameter defines the situation of groups which are run with corridor function by KNX sensor on DALI voltage return. Default value of parameter is "inactive". After voltage return, groups will discontinue running with corridor function. If "Active" is selected, groups will carry on to run with corridor function when voltage returns.	

Sensor control statuses on DALI voltage recovery	*inactive active status before failure
Parameter defines the situation of groups which are run with corridor/constant light function by DALI sensor on DALI voltage return. Default value of parameter is "inactive". After voltage return, groups will discontinue running with corridor/constant light function. If "Active" is selected, groups will carry on to run with corridor/constant light function when voltage come back.	

Sequence status on DALI voltage recovery	*inactive active status before failure
If "active" is selected, sequence will be started on DALI voltage return. If "status before failure" is selected, sequence will start on DALI voltage return only if sequence is interrupted by DALI voltage lose.	

3.4 Emergency

All emergency conversion kits have the same configuration which is to be set on Emergency parameter section. If there is no available ECK on the project, parameters will be inexpressive.

Emergency

Emergency brightness value	1 %(3)…***100 %(255)**

This parameter defines the emergency brightness value of ECKs. These value is written on ECKs themselves by Dali Gateway. If ECK does not support that changing the emergency brightness value, this parameter will be inexpressive.

Prolong time[min]	**0**…127

Prolong time defines that how long will emergency conversion kits continue to illuminate when electricity returns after an electricity interruption.

Test execution timeout[day]	1…**24**…255

If a functional test or duration test cannot be applied to an ECK in this period, a fault will be created for related ECK.

Enable auto emergency test after download	yes ***no**

If "yes" is selected, auto emergency test will be start as activated for ECKs after download. If "no" is selected, "auto emergency test start" communication object must be triggered in order to start emergency test.

Functional test interval[day]	1…**14**…255

This parameter determines the time interval which is used automatically by function test of emergency conversion kits. Functional test of ECKs will be started in every 14 days with default value.

Note: The automatic start of functional test is an optional function of ECK. Functions depend on ECK's automatic testing properties. To be able to use these functions please check properties of ECK beforehand.

Duration test interval[week]	1…**12**…97

Emergency Conversion Kit starts an automatically duration test (battery life) in the time interval which is selected on this parameter.

Note: The automatic start of functional test is an optional function of ECKs. Functions depend on ECK's automatic testing properties. To be able to use these functions please check properties of ECK beforehand.

Test delay multiplier x 15 [min]	0…**72**…1000

This parameter defines the test delay multiplier which is used to calculate the offset time for the start of automatic test between two neighbour ECKs. This offset time is needed to prevent that all emergency lightings are simultaneously in the test or recharging cycles after a test. Test delay multiplier x15 [min] will be multiplied by ECKs respective DALI short addresses to specify the test start time with different offsets. The formula is calculated as follows,

Test delay multiplier x 15 x DALI short address [min] = Offset time

ECK 1:   72 x 15 x 1 (ECK 1)   = 1080 min (18 hour)

ECK 2:   72 x 15 x 2 (ECK 2)   = 2160 min (36 hour)

:

:

ECK 64:   72 x 15 x 64 (ECK 64)   = 69120 min (48 day)

Note: It is recommended that select the test delay multiplier depending on charging time of ECKs in the project. Offset time difference of two neighbour ECKs must be at least equal to charging time of ECK batteries so that previous ECK will have full battery when the next ECK starts battery duration test.

Enable manual emergency test	yes
	*no

If "yes" is selected, "Trigger emergency test" communication object will be created for triggering the emergency test via KNX bus. Please find object details on [2.2 Communication Object Descriptions](#).

3.5 Scenes

"Enable scenes" parameter must be selected "yes" in General tab to open "Scenes" tab. DA100 KNX-DALI Gateway can store 64 different lighting scenes. All of 64 scenes can be recalled and stored via "Scene 8 bit" object. A maximum of 16 scenes can be recalled and store via "Scene x/y recall", "Scene x/y store" 1 bit communication object. Other scenes can be recalled and stored only via "Scene 8 bit" object.

Scenes

Enable scene 1...64	yes
	*no

All scenes are disabled as default and they can be enabled by selecting "yes" in Scenes tab. "Scene x" tab will be available after enabled.

3.5.1   Scene 1 (...64)

Scene 1

Overwrite scene on download	*yes
	no

If "Overwrite scene on download" parameter is selected "yes", scene will be overwritten on download.

Overwrite scene on download	jump to...**1s**...90s

Fade time can be selected for related scene.

3.5.1.1 Ballast Values

Ballast values

Ballast 1...64 brightness value	*keep brightness value in scene 0% (off)...100% (255)

Select the brightness value of ballasts for related scene.

3.5.1.2 Sensor reactions

Device: 1.1.1 DA100 DALI-Gateway 8-Sensor Slot, Emergency Light

General	Scene sensor reactions 1	keep control statuses on scene ▼
Feedback	Scene sensor reactions 2	keep control statuses on scene ▼
Fault Condition		
Emergency	Scene sensor reactions 3	keep control statuses on scene ▼
Scenes	Scene sensor reactions 4	keep control statuses on scene ▼
Scene 1		
- Ballast values	Scene sensor reactions 5	keep control statuses on scene ▼
- Sensor reactions	Scene sensor reactions 6	keep control statuses on scene ▼
Scene 2		
- Ballast values	Scene sensor reactions 7	keep control statuses on scene ▼
- Sensor reactions	Scene sensor reactions 8	keep control statuses on scene ▼
Broadcast		
- Status		
Group 1		
- Status		

Sensor reactions

Scene sensor reactions 1…8	*keep control sensor statuses on scene disable corridor on scene disable constant light on scene disable all control on scene enable corridor on scene enable constant light on scene enable all control on scene disable corridor enable constant light on scene enable corridor disable constant light on scene

*keep control sensor statuses on scene: Sensor status will not change when scene recalled.

Disable corridor on scene   : Corridor function will be disabled when scene recalled.

Disable constant light on scene : Constant light function will be disabled when scene recalled.

Disable all control on scene   : Corridor function and constant light function will be both disabled when scene recalled.

Enable corridor on scene   : Corridor function will be enabled when scene recalled.

Enable constant light on scene : Constant light function will be enabled when scene recalled.

Enable all control on scene   : Corridor function and constant light function will be both enabled.

Disable corridor enable constant light on scene: Corridor function of sensor will be enabled, constant light control function of sensor will be disabled at the same time.

Enable corridor disable constant light on scene: Constant light function of sensor will be enabled, corridor function of sensor will be disabled at the same time.

3.6 Sequence

Sequence

Sequence status transmit mode	*none
	  after request
	  after change
	  after change or request

Sequence status will be transmitted according to selected option on this parameter.

Lamp percent on sequence termination	*no change 0% (off)…100% (255)

Lamp percent of sequence member groups can be selected for sequence termination. (Sequence termination means "end of sequence repeat count" or "manual disabling")

Sequence repeat count 0 = repeat indefinitely	*0…255

Sequence will be repeated indefinitely as default value "0". It is possible to change repeat count of sequence function.

3.6.1   Step 1 (…24)

Sequence step

Step fade time	*jump to…90 s

Fade time of step can be selected on this parameter.

Step scene number	*1…15

Selected scene number will be called by sequence step.

Step duration[sec]	1...**30**...65535

The period of time during which sequence step continues until next sequence step.

Enable next step	yes
	*no

If parameter selected "yes" next step will be available.

Note: Ballasts of selected scenes in the sequence steps must belong to a Dali group and additional function of these groups must be selected as sequence member at the same time.

3.7 Broadcast

Broadcast

Brightness value when switch on	1% (3)...***100% (255)**

Parameter defines the brightness value when a "switch on" command is received over Broadcast Switch communication object.

Allow switch on via brightness value	***yes**
	no
Allow switch off via brightness value	***yes**
	no
Allow switch on via relative dimming	***yes**
	no
Allow switch off via relative dimming	***yes**
	no
"Switch on" and "Switch off" conditions can be defined for brightness value and relative dimming commands separately. If these parameters are selected "no", then it is not possible to switch "on" or "off" the lighting fixtures via broadcast brightness value (1 byte) and relative dimming (4 bit) commands.	

Fade time for brightness value and switch commands	jump to…**1 s**…90 s
Fade time for relative dimming commands	jump to…**2 s**…90 s
This parameters define the fade time for brightness value and relative dimming commands which are received via broadcast communication objects.	

Enable sweep function	yes ***no**
If parameter selected "yes", "Broadcast- Trigger Sweep" object and additional sweep parameters will be enabled.	
Sweep repeat count	1…**3**…10
Sweep wait time [min]	1…**5**…30
Please read description of Sweep Function.	

3.7.1   Status

Broadcast Status

Switch status response mode	***no response** via same object via separate object
Status of broadcast switch object can be read from this object itself or separate status object.	
Transmit mode	***after request** after change after change or request
Status transmit mode can be selected. "After request" option only response to a read request to status object. "After change" mode always sends the status of object when changed. If both selected, object will send the status with a change and response to read requests.	
Brightness value status response mode	***no response** via same object via separate object
Status of broadcast brightness value object can be read from this object itself or separate status object.	
Transmit mode	***after request** after change after change or request

> Status transmit mode can be selected. "After request" option only response to a read request to status object. "After change" mode always sends the status of object when changed. If both selected, object will send the status with a change and response to read requests.

3.8 DALI Groups (1…16)

Dali groups must be enabled in order to use in "DALI Groups" section.

Device: 1.1.1 DA100 DALI-Gateway 8-Sensor Slot, Emergency Light

General	DALI group 1	enable ▼
Feedback		
Fault Condition	DALI group 2	disable ▼
Emergency		
Broadcast	DALI group 3	disable ▼
- Status	DALI group 4	disable ▼
DALI Groups		
Group 1	DALI group 5	disable ▼
- Status	DALI group 6	disable ▼
DALI Sensor Slots		
	DALI group 7	disable ▼

DALI Groups

3.8.1 Group 1

Device: 1.1.1 DA100 DALI-Gateway 8-Sensor Slot, Emergency Light

General	Additional function	normal mode ▼
Feedback		
Fault Condition		
Emergency	Brightness value when switch on	100 % (255) ▼
Broadcast		
- Status		
DALI Groups	Allow switch on via brightness value	yes ▼
Group 1		
- Status	Allow switch off via brightness value	yes ▼
DALI Sensor Slots		
	Allow switch on via relative dimming	yes ▼
	Allow switch off via relative dimming	yes ▼
	Fade time for brightness value and switch commands	1 s ▼
	Fade time for relative dimming commands	1 s ▼
	Enable sweep function	no ▼

Group 1

Additional function	***normal mode**
	corridor function with KNX sensor
	corridor function with DALI sensor
	constant light function with DALI sensor
	sequence member

Dali groups can be operated with different functions according to needs. Find below descriptions of functions.

Normal mode	:	Dali group is operated as a normal dali group which has default communication objects.
Corridor function with KNX sensor	:	Dali group will operated with corridor function by KNX sensor. All corridor function parameters are arranged on #Corridor function parameters section of Dali Gateway. Only presence information is sent to the group by KNX sensor. Find more information about #Function 'Corridor' with KNX sensor.
Corridor function with DALI sensor	:	Dali group will be operated with #Corridor function by assigned DALI sensor. Find more information about #Function 'Corridor' with DALI sensor.
Constant light function with DALI sensor	:	Dali Gateway will perform constant light function to Dali group using assigned Dali sensor. Find more information about #Function 'Constant light' with DALI sensor.
Sequence member	:	Groups which are selected as sequence member will actualize the sequence steps. Only if their ballasts are defined in the scenes of sequence steps.

Brightness value when switch on	0%**…100%…**value before switch off

Allow switch on via brightness value	***yes**
	no
Allow switch off via brightness value	***yes**
	no
Allow switch on via relative dimming	***yes**
	no
Allow switch off via relative dimming	***yes**
	no

"Switch on" and "Switch off" conditions can be defined for brightness value and relative dimming commands separately. If these parameters are selected "no", then it is not possible to switch "on" or "off" the lighting fixtures via brightness value (1 byte) or relative dimming (4 bit) objects of the group.

Fade time for brightness value and switch commands	jump to…**1 s**…90 s
Fade time for relative dimming commands	jump to…**2 s**…90 s

These parameters define the fade time for brightness value and relative dimming commands for group.

Enable sweep function	yes ***no**
If parameter is selected "yes", "Group 1 - Trigger Sweep" object and additional sweep parameters will be enabled.	
Sweep repeat count	1…**3**…10
Sweep wait time [min]	1…**5**…30
Please read description of [Sweep Function]().	

3.8.1.1 Status

Group - Status

Switch status response mode	***no response** via same object via separate object
Switch status of the group can be read from this object itself or separate status object. "No response" option disables the "Read" flag of object.	
Transmit mode	***after request** after change after change or request
"After request" mode; status object only response to a read request. "After change" mode; status object always sends its status when changed. If both selected; object will send the status with a change and response to read requests.	
Brightness value status response mode	***no response** via same object via separate object
Brightness value status of the group can be read from this object itself or separate status object. "No response" option disables the "Read" flag of object.	
Transmit mode	***after request** after change after change or request
"After request" mode; status object only response to a read request. "After change" mode; status object always sends its status when changed. If both selected; object will send the status with a change and response to read requests.	

Enable fault lamp/ballast object	***no**
	Yes
Parameter enables the fault lamp/ballast object of group.	

Fault type	***group lamp and ballast fault**
	group lamp fault
	group ballast fault
Selected fault types will be informed by fault object of group.	

Fault transmit mode	***after request**
	after change
	after change or request
Transmit mode of fault lamp/ballast object can be selected on this parameter.	

Burn-in transmit mode	***none**
	after request
	after change
	after change or request
Burn-in status of group can be transmitted according to selected option.	

3.8.1.2 Corridor function

Group - Corridor Function

On period brightness value	1% (3)…***100% (255)**
On period [sec] (0=unlimited) *(only available for KNX sensor)*	**0**…65535
Group lights up to selected brightness value when switch object of group receives an "On" command. *On period as value "0"* : Group keeps the brightness value until receiving an "Off" command. *On period as value other than "0":* Group keeps the brightness value until on period is up.	

Wait period brightness value	**1% (3)**…*100% (255)
Wait period [sec]	0…**30**…65535

(0=unlimited)	
After "On period" is ended, similarly group will start to light as value set by "Wait period brightness value" until wait period is expired.	

Fade time corridor	jump to...**2**...90
Transition time for brightness value changes that happened while corridor function activated is set by this parameter of the group.	

3.9 DALI Sensor Slots (1...8)

Desired sensor slots must be enabled in order to use in "DALI Sensor Slots" section.

DALI Sensor Slots

3.9.1 Sensor Slot 1

Sensor Slot 1

Enable "Presence output" object	*no yes
Presence output object will be enabled for selected sensor slot.	

Transmit measured brightness value	***no** yes
Transmit measured brightness value interval [sec]	1…**30**…60
Measured brightness value will sent with selected interval when it is enabled.	

Presence hold up time [min]	1…**10**…30
Presence hold up time can be changed by object	***no** yes
The hold-up time defines the power-on time. Detector sends "on" telegram via presence output object at detected movement until the adjusted hold-up time runs out. Hold-up time can be changed by object if changing parameter is enabled.	

3.9.1.1 Constant Light Function

Constant Light Function

Constant light status response mode	***no** Yes
Constant light status transmit mode	***after request** after change after change or request
Constant light status response mode can be enabled and transmit mode can be selected. "After request" mode; status object only response to a read request. "After change" mode; status object always sends its status when changed. If both selected; object will send the status with a change and response to read requests.	

Target lux value	50…**300**…1000
Target lux value defines desired lux for constant light function. Dali Gateway tries to keep constant the illumination of ambient at desired value.	
Target lux value can be changed by object	***no**

	yes
Overwrite target lux value on download	***no**
	yes
Target lux value can be changed by object if "Target lux value can be changed by object" is selected "yes". If "Overwrite target lux value on download" is selected "yes", then it's not matter what target lux value is written by object after an ETS download. Target lux value which is written on ETS parameter will be current value.	
Hysteresis lux value	4…**10**…50
Hysteresis lux value prevents the instant lighting variations while constant light function is operated. Find more information about #Function 'Constant light' with DALI sensor.	
Update interval [sec]	5…**10**…60
Update interval defines the time which is elapsed between two dim steps while going to target lux value.	

Brightness value when disable constant light	***no change**…%100…off
Groups are working with constant light function will go to selected brightness value when constant light is disabled.	

Disable constant light when switch off	***no**
	yes
If parameter selected "yes", constant light function will be disabled when group receives a "switch off" command.	

3.9.1.2 Corridor Function

Sensor Slot – Corridor Function

Corridor status response mode	***no response**
	via same object
	via separate object
Corridor status transmit mode	***after request**
	after change
	after change or request
Corridor function status response mode can be enabled and transmit mode can be selected. "After request" mode; status object only response to a read request. "After change" mode; status object always sends the status when it is changed. If both selected; object will send the status with a change and response to read requests.	

Brightness value when disable corridor	***no change**…%100…off
Groups are working with corridor function (by Dali sensor) will go to selected brightness value when corridor function is disabled.	

Disable corridor when switch off	***no** yes
If parameter selected "yes", corridor function will be disabled when group receives a "switch off" command.	

4   Function Descriptions

4.1 Function 'Switch'

- Function switch can be applied on both groups or to the whole DALI line (broadcast).
- A group shall switch off its lamps for a written value '0' on its own switch communication object. Nothing shall happen for a group that is already switched off.
- A group shall go to the value set by its "Brightness value when switch on" parameter for a written value '1' on its own switch communication object. If parameter is selected as 'Value before switch off', than group shall go to the value that the group had just before last switch off. Switch on commands will also be executed for groups that are being switched on at the reception time of command.
- Transition time for all brightness value changes that are triggered by a group's switch command is set by "Fade time for brightness value and switch commands" parameter of that group.

Collaboration with other functions:
- If a group's additional function is selected as 'Corridor function with KNX sensor' than for this group, switch commands shall be executed according the rules of corridor function (see page ...) while function is activated. Switch commands will be executed regularly after function is deactivated.
- If an additional function other than 'Corridor function with KNX sensor' is selected for a group, than switch commands addressed to this group shall be discarded while function is activated. Switch commands will be executed regularly for that group after function is deactivated.
- If a broadcast switch command sent while some groups have running additional functions, than this command shall be executed only for groups that are on normal operation. No change will be made for groups with activated functions.
- If a group switch command (either switch off or on) is received while that group is on sweep function (see page ...), sweep operation shall break. Similarly, if a group switch command is received while a broadcast sweep is running, sweep operation will be break for that group but all other groups that are running sweep function will continue. Broadcast switch commands breaks any sweep function that is running.
- If a group has any ECG with burn-in function (see page ..) running, switch on commands forces the group to have 100% brightness value level regardless of group's "Brightness value when switch on" parameter. Similarly, if a broadcast switch on command received when there is groups which has burn-

in active ECGs, those groups will have 100% brightness value while others will have the value set by "Brightness value when switch on" parameter of broadcast switch control.

4.2 Function 'Brightness Value'

- Function brightness value can be applied on both groups or to the whole DALI line (broadcast).
- A group shall go to the value written to its brightness value communication object after a write or update on that object. If a value other than 0 has written to a group's brightness value communication object when group is currently switched off, nothing happens if "Allow switch on via brightness value" parameter of that group is selected 'no'. Similarly, if value 0 has written to a group's brightness value communication object when group is currently switched on, nothing happens if "Allow switch off via brightness value" parameter of that group is selected 'no'.
- Transition time for all brightness value changes that are triggered by a group's brightness value command is set by "Fade time for brightness value and switch commands" parameter of that group.

Collaboration with other functions:
- If an additional function selected for a group, than brightness value commands addressed to this group shall be discarded while that function is activated. Brightness value commands will be executed regularly for that group after function is deactivated.
- If a broadcast brightness value command sent while some groups have running additional functions, than this command shall be executed only for groups that are on normal operation. No change will be made for groups with activated functions.
- If a group brightness value command is received while that group is on sweep function (see page ...), sweep operation shall break. Similarly, if a group brightness value command is received while a broadcast sweep is running, sweep operation will be break for that group but all other groups that are running sweep function will continue. Broadcast brightness value commands breaks any sweep function that is running.
- If a group has any ECG with burn-in function (see page ...) running, brightness value commands with value other than 0 forces the group to have 100% brightness value level regardless of command's value. Similarly, if a broadcast brightness value command with value other than 0 received when there are groups which have burn-in active ECGs, those groups will have 100% brightness values while others will have the value written to broadcast brightness value communication object.

4.3 Function 'Relative Dimming'

- Function relative dimming value can be applied on both groups or to the whole DALI line (broadcast).
- A group shall increase or decrease its brightness value relatively to its current value with a percentage amount that has written to group's relative dimming communication object after a write. In this equation, current value is determined by the current value of brightness value communication object of the group. If resulting brightness value is over 100% after an increase command, group shall go to the value set by "Maximum brightness value" parameter in general parameters tab, but if an increase command receives when the group is being switched off, nothing happens if "Allow switch on via dim" parameter of that group is selected 'no', otherwise group switches on and goes to the value calculated with increase. Similarly, if resulting brightness value of group is below 0% after an decrease command, group switches off if its "Allow switch off via dim" parameter is selected 'yes', otherwise group shall go to the value set by "Minimum brightness value" parameter in general parameters tab.

- A group shall stop its fading process instantly for a written break command (0%increases or 0% decreases) to its relative dimming communication object.

- Transition time for all brightness value changes that are triggered by a group's relative dimming command is set by "Fade time for relative dimming commands" parameter of that group.

Collaboration with other functions:

- If an additional function selected for a group, than relative dimming commands addressed to this group shall be discarded while that function is activated. Relative dimming commands will be executed regularly for that group after function is deactivated.

- If a broadcast relative dimming command sent while some groups have running additional functions, than this command shall be executed only for groups that are on normal operation. No change will be made for groups with activated functions.

- If a group relative dimming command is received while that group is on sweep function (see page ...), sweep operation shall break. Similarly, if a group relative dimming command is received while a broadcast sweep is running, sweep operation will be break for that group but all other groups that are running sweep function will continue. Broadcast relative dimming commands breaks any sweep function that is running.

- If a group has any ECG with burn-in function (see page ..) running, relative dimming commands other than 100% decrease shall discarded while the group is being switched on. Group shall switch off if its "Allow switch off via dim" parameter selected 'yes' after a 100% decrease command. When group is switched off and its "Allow switch off via dim" parameter selected 'yes', group shall go to 100% brightness value for any relative dimming increase command regardless of the increase percentage (excluding 0%).

4.4 Function 'Sweep'

- Function sweep can be applied on both groups or to the whole DALI line (broadcast).

- Sweep function is an alternative way of turning off the lights. After sweep function triggered, group shall give warning signals (flash lamps), wait for a while for interruption and -if no interruption receives- switches off the lamps. Group should be on switch on status at the reception of command for sweep function to get triggered. Group's switch status will be determined by current value of the switch communication object of group. Sweep function can be triggered with either value '1' or value '0' on sweep communication object of group.

- If a control command (switch, brightness value, relative dimming, scene) addressed to this group receives between sweep trigger time and end of the sweep wait period, it shall considered as an interruption. This interruption shall break sweep operation and group shall remain at the brightness value that it had before sweep trigger received.

- Warning signal count and wait period time for sweep operation are set by "Sweep repeat count" and "Sweep wait time" parameters of each group respectively.

- If a broadcast sweep command receives while some groups are on sweep operation, these groups stop their sweep and joins broadcast sweep operation. Similarly, if an interruption receives to a group while broadcast sweep operation is running, that group breaks out from sweep but other groups continue on sweep operation.

Collaboration with other functions:

- If an additional function selected for a group, sweep commands addressed to this group shall be discarded while that function is activated. Sweep commands will be executed regularly for that group after function is deactivated.

- If a broadcast sweep command sent while some groups have running additional functions, than this command shall be executed only for groups that are on normal operation. No change will be made for groups with activated functions.

4.5 Function 'Scene'

- Device is capable of storing 64 different scenes. These scenes can be stored into device memory via ETS download or via scene store commands during runtime. Each scene can control both DALI ECGs (electronic control gear) and sensor slots.

- DALI ECGs are configured as device based on scenes. So each ECG can be configured on each scene to have a specific brightness value or to keep its brightness value as it is. Similarly, sensors are also configured as slot based. Each sensor slot has its own control enable options for both of its functions. Call scene commands for any scene forces all the sensor slots and DALI ECGs to claim their according configurations as set in device memory for that scene.

- Transition time for brightness value changes that are triggered by a scene command is set by "Fade time scene" parameter of that scene.

- If there is any ECG that has lamp or device fault when a scene store command had received, than these devices shall be stored on that scene with 'keep brightness value in scene' option.

- When "Overwrite scene on download" parameter of a scene is selected as 'no' on an ETS download, this downloaded new scene values shall become irrelevant and device shall continue to use old scene data on runtime. Otherwise device shall overwrite downloaded new data for that scene and use it on runtime as well.

- Consecutive store scene commands shall not be executed if the execution of earlier store scene command is not yet completed. There must be more than 10 seconds interval between two consecutive store scene commands.

Collaboration with other functions:

- ECGs that belong to groups that have activated additional functions shall not change their brightness values upon call scene commands even if they are not configured as 'keep brightness value in scene' in that scene. When executing call scene commands, sensor reactions are processed before ECG brightness value changes to be compliant to this rule. So, ECGs of groups that have DALI sensor based additional functions shall not join the scene if their sensor slot function is activated in scene call even if their additional function were disabled before call scene command.

- ECGs that belong to groups with activated burn-in functions shall not change their brightness values upon call scene commands even if they are not configured as 'keep brightness value in scene' in that scene.

- Running sweep function of a group shall break upon a call scene command if at least one of the group's ECGs is configured to go to a brightness value (not configured as 'keep brightness value in scene').

- Store scene commands shall be discarded if there is any group that is on sweep operation or has activated burn-in function.

- ECGs that belong to groups that have activated additional functions at the time of received store scene command shall be saved as 'keep brightness value in scene'.

4.6 Function 'Burn-in'

- Function burn-in can be applied on both groups or to the whole DALI line (broadcast).

- Burn-in function is a lamp lifetime conservation method implemented in our application. Function prevents dimming of a group by any means for a period of time. Switch, brightness value and relative dimming commands for group resulting between 1% to 100% brightness values shall be converted to 100%. So, groups with active burn-in function cannot have a brightness value other than 0% or 100%. Also enabling of any additional function of a group is prevented since dimming would be required for proper functionality. Burn-in function of a group can be started with a written value '1' on burn-in communication object of group. It can also be stopped prematurely after a written '0'.

- Burn-in function period is set by "Burn-in period" parameter in general parameters tab. Time is kept ECG based. Total time shall count down for every ECG while it is being switched on. When all the ECGs of a group finish their burn-in periods, group's burn-in function ends. Remaining burn-in times are saved when a KNX power failure happens.

- When a burn-in enable command had received to a group, its additional function shall disabled and group shall go to 100% brightness value if it was switched on at the reception time of command.

- If an ETS download made to the device with "Enable burn-in function" parameter selected as 'no', all the burn-in data that saved in device's memory shall erased even if there were still some ECGs that had uncompleted burn-in periods.

4.7 Function 'Corridor' with KNX sensor

- Any group can be selected to utilize corridor function with KNX sensor as its additional function. Group's additional function parameter should selected as 'Corridor function with KNX sensor' for that purpose.

- When corridor function with KNX sensor is selected as additional function, group's "Enable additional function" communication object becomes active. Enabling the function or returning to normal operation is done via this communication object.

- After selecting corridor function with KNX as additional function, a new parameter tab called "Corridor function" becomes active. Functionality of the function is set by parameters in this tab. Group shall go to the value set by "On period brightness value" parameter after a switch on command when corridor function is active. After that there are two alternatives; if "On period" parameter is selected as value '0', group shall stay at "On period brightness value" until a switch off command receives, and when the switch off command receives group shall go to value set by "Wait period brightness value" parameter. If "On period" parameter selected other than value '0', group shall stay at "On brightness value" for that period and shall go to value set by "Wait period brightness value" parameter even if switch off command doesn't receives (a switch off command before on period expires shall also take group to wait time brightness value). There are again two alternatives after that; similarly, if "Wait period" parameter is selected as value '0', group shall stay at "Wait period brightness value" until a switch on command receives, but group shall switch off after "Wait period" if that value selected other than '0'.

- Transition time for brightness value changes that happened while corridor function activated is set by "Fade time corridor function" parameter of that group.

Collaboration with other functions:

- Group's brightness value, relative dimming and sweep controls shall be disabled while corridor function is active.

- Enabling of additional function shall be prevented if there is any ECG in group with active burn-in function. If start burn-in command receives to a group while its corridor function is enabled, function shall get disabled and group ECG's shall start burn-in function.

- ECGs belong to a group with active additional function shall not change their brightness values on scene calls.

- ECGs that belong to groups with active additional functions shall have not taken into account on status switch and status brightness value calculations of whole DALI line.

- Usage of additional functions with overlapping DALI groups is not recommended. No precautionary measures have taken in case of inconsistencies would occur by overlapping.

4.8 Function 'Corridor' with DALI sensor

- Any group can be selected to utilize corridor function with DALI sensor as its additional function. For that purpose, group's additional function parameter should be selected as 'Corridor function with DALI sensor' and sensor slot choice should be made via "Assigned sensor slot" parameter.

- Enabling and disabling of function will be done by "Enable corridor function" communication object of group's assigned sensor. All of the groups that are assigned to a sensor slot for corridor function shall start function after a written value '1' on "Enable corridor function" communication object. Similarly, all these groups shall return to normal operation after a written value '0' (empty sensor slots can't get enabled for any function).

- After selecting corridor function with DALI sensor as additional function, a new parameter tab called "Corridor function" becomes active. Functionality of the function is set by parameters in this tab. When sensor sensed a motion when its corridor function is active, it commands all its corridor function groups to go to the value set by their "On period brightness value" parameters. Groups shall stay at this value until sensor slot's presence status exists. When sensor slot's presence status ceased, it commands groups to go to the value set by their "Wait period brightness value" parameter. There are two alternatives after that; if "Wait period" parameter of group is selected as value '0', group shall stay at "Wait period brightness value" until sensor senses another motion, but group shall switch off after "Wait period" if that value selected other than '0'.

- Transition time for brightness value changes that happened while corridor function activated is set by "Fade time corridor function" parameter of that group.

- Sensor slot presence hold up time is set by "Presence hold up time" parameter of slot. Sensor slot's presence status ceases if sensor doesn't sense any movement over this period.

- When a disable corridor function command receives to sensor slot, it commands its corridor function groups to go to brightness value set by "Brightness value when corridor function disables" parameter of slot.

- If sensor slot's "Disable corridor function when a group switched off" parameter selected as 'yes', a switch off command addressed to one of the sensor slot's corridor function groups shall disable slot's corridor function when enabled.

Collaboration with other functions:

- Group's switch, brightness value, relative dimming and sweep controls shall be disabled while corridor function is active.

- Enabling of additional function shall be prevented if there is any ECG in group with active burn-in function. If start burn-in command receives to a group while its corridor function is enabled, function shall get disabled and group's ECGs shall start burn-in function. Group shall join back to corridor function if its sensor slot's corridor function is enabled when group's all ECGs finish their burn-in periods.

- ECGs belong to a group with active additional function shall not change their brightness values on scene calls.

- ECGs that belong to groups with active additional functions shall have not taken into account on status switch and status brightness value calculations of whole DALI line.

- Usage of additional functions with overlapping DALI groups is not recommended. No precautionary measures have taken in case of inconsistencies would occur by overlapping.

4.9 Function 'Constant light' with DALI sensor

- Any group can be selected to utilize constant light function with DALI sensor as its additional function. For that purpose, group's additional function parameter should be selected as 'Constant light function with DALI sensor' and sensor slot choice should be made via "Assigned sensor slot" parameter.

- Enabling and disabling of function will be done by "Enable constant light function" communication object of group's assigned sensor. All of the groups that are assigned to a sensor slot for constant light function shall start function after a written value '1' on "Enable constant light function" communication object. Similarly, all these groups shall return to normal operation after a written value '0' (empty sensor slots can't get enabled for any function).

- When first activated, sensor slot shall command all its constant light function groups to switch off if no presence sensed. If presence does exists or sensor senses a motion afterwards, control algorithm for constant light function shall be executed with an interval set by "Update interval" parameter of sensor slot. The first thing that control algorithm checks is presence status. If presence does not exist, groups shall switch off if groups are switched on. Nothing happens if groups are already switched off. If presence does exist, algorithm tries to close the error gap between current measured lux value and the value set by "Target lux value" parameter of sensor slot. Groups shall dim down or dim up if error gap is positive or negative respectively. Algorithm does not try to get to the absolute target lux value. Nothing happens if measured lux value is in the range of "Target lux value" parameter value ± "Hysteresis lux value" parameter value.

- Target lux value that used in the control algorithm of constant light functions can also be set at runtime by sensor slots' "Set target lux value" communication objects. Sensor slot's "Enable changing target lux value" parameter shall be selected as 'yes' for activating this communication object. If "Overwrite target lux value on download" parameter is selected 'no' on an ETS download, selected value of "Target lux value" shall be irrelevant after download. So any changes that made on runtime shall be preserved.

- Sensor slot presence hold up time is set by "Presence hold up time" parameter of slot. Sensor slot's presence status ceases if sensor doesn't sense any movement over this period.

- When a disable constant light function command receives to sensor slot, it commands its constant light function groups to go to brightness value set by "Brightness value when constant light function disables" parameter of slot.

- If sensor slot's "Disable constant light function when a group switched off" parameter selected as 'yes', a switch off command addressed to one of the sensor slot's constant light function groups shall disable slot's constant light function when enabled.

Collaboration with other functions:

- Group's switch, brightness value, relative dimming and sweep controls shall be disabled while constant light function is active.
- Enabling of additional function shall be prevented if there is any ECG in group with active burn-in function. If start burn-in command receives to a group while its constant light function is enabled, function shall get disabled and group's ECGs shall start burn-in function. Group shall join back to constant light function if its sensor slot's corridor function is enabled when group's all ECGs finish their burn-in periods.
- ECGs belong to a group with active additional function shall not change their brightness values on scene calls.
- ECGs that belong to groups with active additional functions shall not taken into account on status switch and status brightness value calculations of whole DALI line.
- Usage of additional functions with overlapping DALI groups is not recommended. No precautionary measures have taken in case of inconsistencies would occur by overlapping.