3927-DaliControl-01-0110

Using the application program

Application program:

Program name: 3927-DaliControl-01-0110
Product family: Lighting
Product type: Gateways
Manufacturer: IPAS

suitable for:

Product name: DaliControl SC 16
EIB-DALI Gateway
Art. no.: 3927-145-01

Function description

General information

The DaliControl SC16 connects the EIB installation bus, which covers all utilities, to the DALI bus, which is designed solely for lighting control. Cost-effective digital electronic input units with DALI interface can therefore be integrated into an EIB complete system in the form of a subsystem and operated by a wide range of available EIB devices.
The DaliControl SC16 is used as DALI master and power supply for the connected electronic input units. Up to 64 electronic input units can be switched and dimmed in 16 groups for each gateway. Additionally, up to 16 lightscenes can be programmed and retrieved at the individual groups. Brightness values and error messages are available as status objects on the EIB and can be visualised using appropriate display units. DALI commissioning (assignment of the DALI electronic input units to the individual groups) is carried out with the help of the integrated display and the control keys. The setting of the individual group parameters and the assignment of the scenes can also be carried out using the device's control keys or, alternatively, directly in ETS. Scenes that have already been programmed can be modified by the user at the device at all times.
In addition to the EIB and the DALI interfaces, the device has two passive inputs for connecting conventional push-buttons or movement detectors directly to the device.
Commissioning, testing as well as operating the DALI devices via the passive binary inputs can also be carried out without connecting the EIB line (e.g. "building site operation").
As a REG device (6 modules), the DALI gateway is suitable for installation on DIN rails in standard sub-distribution boards. The bus is connected using a bus terminal. Network, DALI and push-button cables are connected using screw terminals on the device.

The application program 3927-DaliControl-01-0110 is available for operating the device.

Communication objects

A maximum of 95 communication objects are available for the communication of the device via the *EIB*. In parts, the objects are displayed or hidden, depending on how the parameters are set. The communication objects can be linked using 95 associations with 95 group addresses.

5 objects are assigned to each of the 16 DALI groups.
The objects for group 1 are:

Obj	Function	Object name	Type	Flags
0	On/Off	Switch, group 1	1 bit	CWT
The lamps assigned to DALI group 1 are switched to the set switch ON or switch OFF value using this object. Whether switching is carried out immediately or dimmed to the final value when the object is received can be set in the parameters. The dimming time can be adjusted independent of the dimming time when the dimming telegram is received.				
1	Brighter/Darker	Dim, group 1	4 bit	CWT
The lamps assigned to DALI group 1 are dimmed up or down using this object. The dimming time required to dim from 0% to 100% can be set in the parameters.				
2	Value	Value, group 1	1 byte	CWT
The lamps assigned to DALI group 1 are set to a brightness value using this object. Whether the value is accepted immediately or dimmed to the final value when the object is received can be set in the parameters. The dimming time can be adjusted independent of the dimming time when the dimming telegram is received.				
3	On/Off Value	Status, group 1 Status, group 1	1 bit 1 byte	CRT CRT
The status of the lamps assigned to DALI group 1 can be provided using this object. Whether a 1 bit status (On/Off) or a 1 byte value status is transmitted, can be set in the parameters. The object type changes, depending on the parameter settings. The requirement for sending the object can be adjusted.				
4	Error	Error status, group 1	1 bit	CRT
This object is used for information about the error status within a DALI group. Whether only a lamp malfunction, a malfunction of the electronic input unit or both types of malfunction result in an error status can be set in the parameters. An object value of 0 means that no malfunction has occurred within the group. A value of 1 means that at least one malfunction has been detected within the group. The requirement for sending the object can be adjusted.				

Like objects 0 to 4 for DALI group 1, objects 5 to 9 are assigned to DALI group 2 in the same way. The same applies to objects 10 to 14 for DALI group 3 etc. up to objects 75 to 79 for DALI group 16.

3927-DaliControl-01-0110

Objects 80 to 88 are required for retrieving and programming set lightscenes. Whether scenes with 1 bit telegrams or 1 byte telegrams are retrieved can be set in the parameters. Bear in mind that the assignment of the individual DALI groups to the various scenes at the device is carried out using the operating menu (cf. also operating and installation instructions).

If 1 bit scenes are used, objects 80 to 88 are displayed.

Obj	Function	Object name	Type	Flags
80	Call up a scene	Scenes 1/2	1 bit	CW
This object is used to call up scene 1, when a '0' telegram is received and to call up scene 2, when a '1' telegram is received. The object can also be used to save the set lighting state in scene 1 or 2. For this purpose, the programming mode object (no. 88) must be set to 1 before a telegram is received.				
81	Call up a scene	Scenes 3/4	1 bit	CW
This object is used to call up scene 3, when a '0' telegram is received and to call up scene 4, when a '1' telegram is received. The object can also be used to save the set lighting state in scene 3 or 4. For this purpose, the programming mode object (no. 88) must be set to 1 before a telegram is received.				
82	Call up a scene	Scenes 5/6	1 bit	CW
This object is used to call up scene 5, when a '0' telegram is received and to call up scene 6, when a '1' telegram is received. The object can also be used to save the set lighting state in scene 5 or 6. For this purpose, the programming mode object (no. 88) must be set to 1 before a telegram is received.				
83	Call up a scene	Scenes 7/8	1 bit	CW
This object is used to call up scene 7, when a '0' telegram is received and to call up scene 8, when a '1' telegram is received. The object can also be used to save the set lighting state in scene 7 or 8. For this purpose, the programming mode object (no. 88) must be set to 1 before a telegram is received.				
84	Call up a scene	Scenes 9/10	1 bit	CW
This object is used to call up scene 9, when a '0' telegram is received and to call up scene 10, when a '1' telegram is received. The object can also be used to save the set lighting state in scene 9 or 10. For this purpose, the programming mode object (no. 88) must be set to 1 before a telegram is received.				
85	Call up a scene	Scenes 11/12	1 bit	CW
This object is used to call up scene 11, when a '0' telegram is received and to call up scene 12, when a '1' telegram is received. The object can also be used to save the set lighting state in scene 11 or 12. For this purpose, the programming mode object (no. 88) must be set to 1 before a telegram is received.				
86	Call up a scene	Scenes 13/14	1 bit	CW
This object is used to call up scene 13, when a '0' telegram is received and to call up scene 14, when a '1' telegram is received. The object can also be used to save the set lighting state in scene 13 or 14. For this purpose, the programming mode object (no. 88) must be set to 1 before a telegram is received.				
87	Call up a scene	Scenes 15/16	1 bit	CW
This object is used to call up scene 15, when a '0' telegram is received and to call up scene 16, when a '1' telegram is received. The object can also be used to save the set lighting state in scene 15 or 16. For this purpose, the programming mode object (no. 88) must be set to 1 before a telegram is received.				
88	Programming mode	Save scenes	1 bit	CWT
After receiving a '1' telegram via this object, the device is set to programming mode. If programming mode is activated, the setting for the current lighting state in the respective scene is saved when one of the objects 80 to 87 is received. After saving, programming mode is deactivated and a '0' telegram is sent back to object 88. The programming mode is automatically closed 60 seconds after receiving a '1' telegram at object 88. After that, the reception of one of the telegrams 80 to 87 is once more interpreted as retrieving a scene.				

If 8 bit scenes are used, then only object 88 is displayed.

Obj	Function	Object name	Type	Flags
88	Call up/save scenes	Scenes 1-16	1 byte	CW

This object is used to call up the respective scene from scenes 1 to 16, when a telegram is received with a value between 0 and 15. If the uppermost bit is also set (meaning a value from 128 to 143), the set lighting state is saved in the respective scene.

	Call up	Save
Scene 1	0	128
Scene 2	1	129
Scene 3	2	130
Scene 4	3	131
Scene 5	4	132
Scene 6	5	133
Scene 7	6	134
Scene 8	7	135
Scene 9	8	136
Scene 10	9	137
Scene 11	10	138
Scene 12	11	139
Scene 13	12	140
Scene 14	13	141
Scene 15	14	142
Scene 16	15	143

3927-DaliControl-01-0110

Objects 89 and 90 can be used to make the signal of the voltage-free push-button input available also to the EIB. The assignment of the push-button function is carried out at the device or by using the operating menu (cf. also operating and installation instructions). Bear in mind that even when setting parameters for the push-button as a dimming push-button for DALI groups for the EIB, only the switch object (short operation of the button) is available. When setting parameters for the push-button for calling up DALI scenes, the corresponding object has no function.

Obj	Function	Object name	Type	Flags
89	On/Off	Switch, input 1	1 bit	CRT
This object is used to make a switch signal available, depending on the assigned push-button function of voltage-free input 1.				
90	On/Off	Switch, input 2	1 bit	CRT
This object is used to make a switch signal available, depending on the assigned push-button function of voltage-free input 2.				

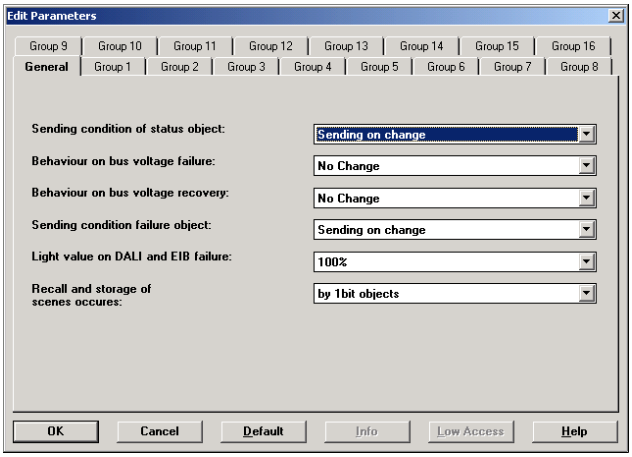
Objects 91 to 94 are used for information about fault conditions within the entire DALI segment. The objects are always sent when changes occur. They can however also be retrieved.
The following complete fault objects are available:

Obj	Function	Object name	Type	Flags
91	Error	Error status, all errors	1 bit	CRT
This object is used for information about the error status of the DALI segment, independent of the error type. The value 0 means that no error occurred. The value 1 means that there is an error in the segment.				
92	Error	Error status, DALI bus	1 bit	CRT
This object is used for information about the error status of the DALI short circuit. The value 0 means that no error occurred. The value 1 means that a DALI short circuit has occurred.				
93	Error	Error status, total Lamp malfunction	1 bit	CRT
This object is used for information about the error status regarding lamp malfunctions within the DALI segment. The value 0 means that no error occurred. The value 1 means that a malfunction has occurred in at least one of the lamps in the segment.				
94	Error	Error status, total Electronic input unit malfunction	1 bit	CRT
This object is used for information about the error status related to electronic input unit malfunctions within the DALI segment. The value 0 means that no error occurred. The value 1 means that a malfunction has occurred in at least one of the electronic input units in the segment.				

Parameters

For a better overview, the parameters in the application are spread out over various pages.
The following parameters are available:

General page:



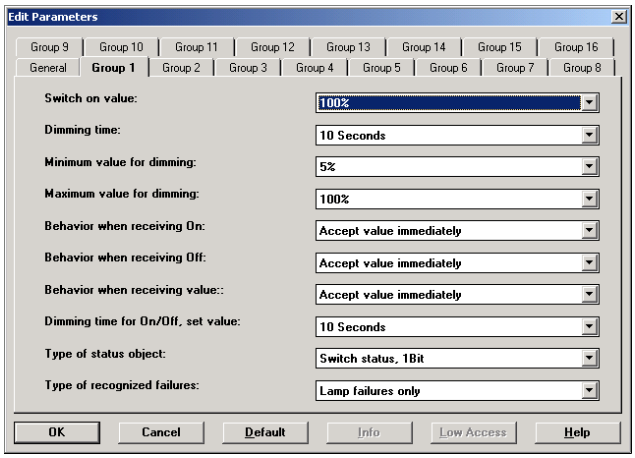
Parameters	Settings
Send condition light status	Only send on demand **Send on change**
Here the send condition for the light status of the DALI groups (4th communication object of each group) are set.	
Behaviour on bus voltage failure	**No change** Switch to error value Switch off
Here you can set which lighting condition should be set in the case of an EIB bus voltage failure.	
Behaviour on bus voltage recovery	**No change** Switch to error value Switch off
Here you can set which lighting condition should be set on EIB bus voltage recovery.	
Send condition error status	Only send on demand **Send on change**
Here the send condition for the error status of the DALI groups (5th communication object of each group) are set. The entire error statistics (objects no. 91 to 94) are always only sent on change.	
Light value on DALI and EIB errors	0 % 5 % 10 % .... (continued in steps of 5%)... 90 % 95 % **100 %**
Here you can set which light value is to be set in the case of a DALI or EIB fault.	

3927-DaliControl-01-0110

The scenes are called up and saved:	**using 1 bit objects** using 1 byte objects
Here you can set whether the scenes are called up and saved using 1 bit or 1 byte objects. The respective communication objects are displayed, depending on the setting.	

For each group, only one page is available for setting the group-specific parameters.

Groups 1 - 16:



Parameters	Settings
Value on being switched on:	0 % 5 % 10 % .... (continued in steps of 5%)... 90 % 95 % **100 %**
Here the parameter settings are made for the light value set in the respective DALI group on receiving a '1' telegram.	
Dimming time	5 seconds **10 seconds** 15 seconds 20 seconds 30 seconds 40 seconds 60 seconds
Here the setting is made for the time it should take to dim from 0% to 100% on receiving a dimming telegram (dimming speed).	
Minimum dimming value:	0% **5%** 10% 15% 20% 25% 30%

The minimum dimming value is set here. The setting 0% means that the dimmer can also be used to switch off the light. You can always switch on the light using the dimmer.	
Minimum dimming value	50% 55% 60% .... (continued in steps of 5%)... 90% 95% **100%**
The maximum dimming value is set here.	
Switching on behaviour	**Apply value immediately** Dim to the value
Here you can set whether the switch ON value should be applied immediately or whether to dim up to the switch ON value on receiving a '1' telegram.	
Switch off behaviour	**Apply value immediately** Dim to the value
Here you can set whether to switch off or dim to the OFF value on receiving a '0' telegram.	
Behaviour on setting the value	**Apply value immediately** Dim to the value
Here you can set whether the light value should be applied immediately or whether to dim up or down to the value on receiving a 1 byte telegram.	
Dimming time for On, Off, Setting the value:	**10 seconds** 15 seconds 20 seconds 30 seconds 40 seconds 1 minute 2 minutes 3 minutes 4 minutes 5 minutes 10 minutes 15 minutes 20 minutes
Here you can set the time for dimming from 0% to 100% on receiving an 'On', 'Off' or 'Set value' telegram, if the parameter was set to "Dim to the value".	
Type of status object	**Switch status, 1 bit** Value status, 0..100%
Here you can set whether the status object should only provide the ON/OFF switch status or the value status 0..100% for the respective DALI group.	
Recognisable error types:	No error status **Only lamp malfunction** Only electronic input unit malfunction Lamp and electronic input unit malfunctions
Here you can set for which malfunctions the error object of each respective group provides an error status.	