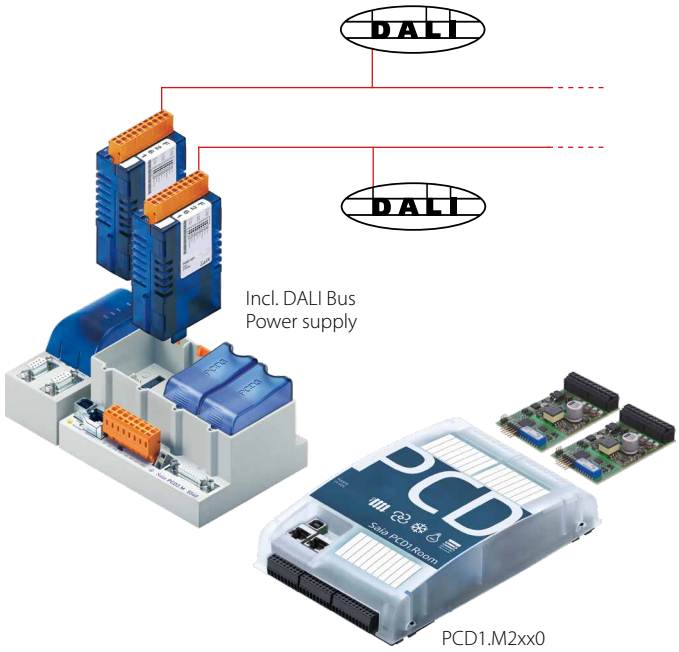
SAIA BURGESS CONTROLS

DALI field bus module for lighting systems

DALI is a communication system for lighting control, standardised in accordance with IEC 62386-101/102.



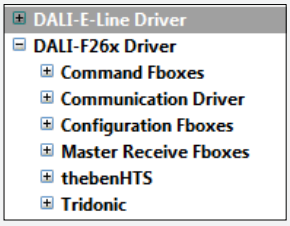
DALI master interface module

It was originally developed for stage technology and today it is used in a wide range of applications including building automation systems. Installation is easy. The DALI Bus simply needs 2 unshielded wires which can be threaded through the same cable along with the power supply, generally 230 V.

The light parameters are standardised. All upstream devices therefore have the same parameters for dimming, grouping and scenes, irrespective of the type of lighting.

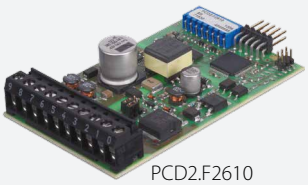
The DALI master module includes the Bus power supply for up to 64 DALI participants. The extensive PG5 FBox library has function modules for commissioning, operating and servicing with the PLC program. External software tools or other components are not required.

Smaller DALI controls can be implemented with the PCD1.F2611-C15 E-Line DALI module. Detailed information about this small controller can be found in the SBC System catalogue 26-215, chapter E-Line.



PG5 – DALI F26x FBox library


PCD3.F261


PCD2.F2610


PCD1.F2611-C15

Order details

Type	Description	Application note	Weight
PG5 – DALI F26x	PG5 – DALI communication library for connecting DALI lighting control systems	–	–
PCD3.F261	DALI master interface for up to 64 DALI participants incl. bus power supply	PCD3.Mxxx0: I/O slot 0-3 PCD3.T666: I/O slot 0-3	80 g
PCD2.F2610	DALI master interface for up to 64 DALI participants incl. bus power supply	PCD1.M2110R1: I/O slot 0 PCD1.M2xx0: I/O slot 0-1 PCD2.M5xx0: I/O slot 0-3	60 g
PCD1.F2611-C15	DALI master interface for up to 64 DALI participants incl. bus power supply	–	130 g

Please observe the information for the PCD firmware version and the PG5 version on the support page www.sbc-support.com

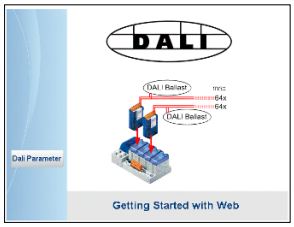
DALI communication library

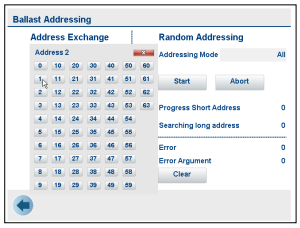
Commissioning and servicing made easy

When initialising, the "DALI F26x Driver" FBox is positioned once only when the program starts. The "Configuration Manager" FBox then parameterises all the DALI participants on the bus. The FBox also provides predefined symbols for further use, e.g. in S-Web. The parameters can also be used securely in the PCD file system. The "Backup to Flash" FBox stores all DALI parameters in parallel in two files. This guarantees the retention of data in PCD systems with no batteries, e.g. in the Smart RIO PCD3.T666, required.

When commissioning DALI systems, it is usual to install all DALI participants then issue the addresses and set the parameters via the DALI commissioning software. The "Random addressing" and "Exchange addresses" modules are in the Saia PG5® – DALI library.

Parameterisation takes place after the addressing process using the "Configuration manager" FBox. Group and scene parameters can alternatively be set using the "Edit Groups" and "Edit Scene Levels" FBoxes to provide a better overview.





Web visualisation for commissioning

Operation

The "Send Command Inputs", "Send Command Online", "Send Power Control" and "Send Scene" FBoxes are available for transmitting DALI commands. These FBoxes cover all standard DALI commands. The receipt of master telegrams is also supported by the "Receive Commands" and "Receive Raw" FBoxes. "Receive Raw" is useful for receiving non-standard telegrams. The raw data can then be processed further in the application program. The lamp status can be requested using the "Read Status" FBox. The "Query numeric" FBox provides the application program with access to a further 21 DALI standard data points such as the current light level. The "Read Memory" FBox is used to read any data from a DALI device. It is therefore possible to request brightness and presence information from one sensor, which would not be accessible with the DALI standard methods.

DALI controller with PCD1.F2611-C15

There are also different FBoxes within the "DALI E-Line Driver" rubric for commissioning and operation for this interface.

The current DALI standard does not guarantee a genuine multi-master function. Multi-master capable products such as those of Tridonic, Osram or Zumtobel are either based on the new draft DALI extension E DIN 62386-103 (2011-08) or accept the loss of telegrams in bus collisions. Permanent polling, e.g. of the status, should therefore be avoided in "multi-master" projects. The maximum number of DALI master devices can be restricted to 8 units, for example, depending on the product and hardware manufacturer.

DALI
DALI-F26x Driver
Clear
Link
Error
Code

Driver module

DALI
DALI E-Line GWay
Clear
ELink
Link
Error
Code

E-Line gateway driver

ref:DALI
DALI-Status
Enable
Busy
Error
Device
Gear
LpFail
LpOn
Limit
Fading
Reset
MissSA
PwFail

Status monitoring

ref:DALI
DALI-Command
Clear
Off
Min
Max
Up
Down
StepUp
OnStepUp
StepDown
StepDownOff
Busy
Error

Lighting control on/off, dimmable

ref:DALI
DALI-Power
Send
Stop
Auto
Level
Busy
Error

Direct lighting control

ref:DALI
DALI-Scene
Call
Busy
Error

Scene controller

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