

Technical Data / Instruction Manual

DALI-16B

Article no. 80027159

DALI module for controlling ECGs and electronic transformers



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1. Notes on documentation

These instructions are intended for qualified personnel who are familiar with the assembly, installation and operation of the ISYGLT system. It is essential that you read these operating instructions through before commissioning and keep them accessible for further use.

SEEBACHER cannot accept any liability for damage or malfunctions resulting from failure to observe these instructions.

1.1. Retention of documents

These instructions and all other applicable documents are part of the product. They must be handed over to the device operator. The operator will store the documents so that they can be made available if necessary.

1.2. Symbols used

Observe the following safety and other instructions in the manual:



Handling instruction

The hand indicates that you should carry out an act.



Danger!

Immediate danger to life!



Attention!

General notes, useful information and special features

2. Safety instructions



Observe the following general safety instructions when installing and commissioning the device:

Assembly and installation of the ISYGLT module may only be carried out by a qualified electrician. Other activities in connection with the ISYGLT module, such as assembly and installation of system components with tested standard plug connections, as well as operation and configuration of the ISYGLT module may only be carried out by trained staff.

Observe the electrical installation regulations of the country in which the device is installed and operated as well as its national accident prevention regulations. In addition, observe internal company regulations (work, operating and safety regulations).



Before working on the ISYGLT module system, it must be disconnected from the power supply and secured against being switched on again. After completion of the assembly, installation and maintenance work, an electrical check must be carried out! Check all protective conductor connections and the voltages at all connection plugs as well as at each individual module slot.

2.1. Intended usage

The module is exclusively suitable for regulation (control) in connection with ISYGLT system components. Any other use is not intended. The limit values stated in the technical data must not be exceeded under any circumstances. This applies in particular to the permissible ambient temperature range and the permissible IP protection type. For applications with a higher required IP protection type, the ISYGLT module must be installed in a housing or a cabinet with a higher IP protection type.

2.2. Predictable mishandling

The module must not be used in the following cases in particular:

- explosive area

When operating in explosive areas, sparking can lead to deflagration, fire or explosions.

2.3. Safe handling

This module corresponds to the state of the art and the recognised safety regulations. Each device is tested for function and safety before delivery.

Only operate this module in perfect condition in accordance with the operating instructions, the applicable regulations and directives of the country in which the device is installed and operated, and the applicable safety and accident prevention regulations.

The module is designed for cabinet installation on a 35mm DIN rail according to EN 60715 in corresponding standard housings. Extreme environmental conditions impair the function of the product.

- Protect module from shocks
- Use module indoors only
- Protect module from humidity

In addition to these safety instructions, you must also observe the special safety instructions listed in the individual chapters for the individual acts.

2.4. Qualification of staff

Assembly, commissioning, operation, maintenance, decommissioning and disposal may only be carried out by qualified staff. Work on electrical parts may only be carried out by a trained electrician in accordance with the applicable regulations and directives. Other activities in connection with the ISYGLT module, such as assembly and installation of system components with tested standard plug connections, as well as operation and configuration of the ISYGLT module may only be carried out by trained staff.

2.5. Changes to the product

Unauthorized modifications to the ISYGLT module which are not described in this or the other applicable instructions can lead to malfunctions and are prohibited for safety reasons.

2.6. Use of spare parts and additional equipment

The module may be damaged if unsuitable spare parts and additional equipment are used. Only use original spare parts and additional equipment from the manufacturer.

2.7. Liability notes

SEEBACHER accepts no liability or warranty whatsoever for damage and consequential damage caused by non-compliance with the technical regulations, instructions and recommendations. SEEBACHER shall not be liable for any costs or damage incurred by the user or third parties as a result of the use of this equipment, in particular improper use of the equipment, misuse or malfunction of the connection, malfunction of the equipment or connected devices.

SEEBACHER accepts no liability for printing errors.

3. Warranty

We provide warranty within the framework of the statutory provisions. These are limited to the intended use of the module and refer to the repair or replacement of the ISYGLT module. Please send the device with an attached error description to our company address given below.

4. Declaration of Conformity

The valid declaration of conformity for the module can be requested from us free of charge by stating type and article no. as follows:

By phone: +49(0)8041/77776
By fax: +49(0)8041/77772
By mail: info@seebacher.de

5. Service address

Seebacher GmbH

Marktstrasse 57
83646 Bad Tölz
GERMANY

Phone: +49 (0) 80 41 / 77 77 6
Fax: +49 (0) 80 41 / 77 77 2

www.seebacher.de
info@seebacher.de

6. Maintenance / Care / Disposal

The product is maintenance-free. It is sufficient from time to time to remove any dust deposits. This may only be done in a power-free state.

Disposal (European Union)

Do not dispose of product in household waste! Products with this symbol



must be disposed of according to the EU directive WEEE 2012/19/ EU on waste electrical and electronic equipment at the local collection points for waste electrical and electronic equipment!

7. Storage

The product must be stored in a dry place, protected from dirt and mechanical stress. After damp or dirty storage, the product may only be operated after a condition check by an authorised electrician.

8. Assembly

(Only by certified electrician!)

Mount the product only when it is in a power-free state!

Switch off the power supply, check that there is no voltage, secure against being switched on again!

The device may only be operated at voltages according to the technical data and loaded with the currents defined therein. Only use suitable equipment (system modules).

Check that there are no loose parts in the product. If this is the case and the presence of such parts is not explicitly described, do not install or commission the product.

Only use suitable cables and fixing screws.

Assembly site

- The product can be installed in any position in a casing to be determined by the electrician (distribution box, switch cabinet). Observe maximum ambient temperature!

Assembly steps

(Read completely before assembly!)

- Mount the device in a suitable casing.
- Make the electrical connections according to the wiring diagram.
- Configure the DIP switches according to your requirements.
- Only after a complete connection and a visual test by a qualified electrician, the system may be put under voltage.

9. Product description

The ISYGLT-DALI-16B module is used to control electronic ballasts for fluorescent lamps and electronic transformers that communicate with the DALI protocol. Up to 64 DALI ECGs (electronic ballasts) can be operated on one DALI BUS. Each of these 64 DALI devices (ECGs or electronic transformers) must be programmed with a unique device address (DALI short address). Each device address can be assigned one of 4, 8, 12 or 16 ISYGLT dimming groups in up to 3 configurations (setups) by parameterising the DALI-16B module. These dimming groups have all the features possible in the ISYGLT system in terms of scene storage, fade time calculations, etc.

The module is equipped with its own mains supply. This allows a freely configurable emergency function for the corresponding DALI-BUS. All DALI output devices are completely integrated into the possibilities of the ISYGLT system through our concept. Thus, the full functional range of the ISYGLT system is available. The module occupies 4 module addresses on the BUS.

According to the standard, the DALI ECGs always remain live, which ultimately leads to unnecessary energy consumption when switched off. A main contactor for the DALI ECGs can be controlled via a virtual output. If the mains voltage is simply switched on or off, operating devices may no longer operate correctly, as protocols can already be sent during the start phase. This effect is avoided by our new circuit logic.

New function as of firmware V2.31 (further information to the functions at www.isygl.com)

- DALI broadcast for commissioning and emergency operation
- extended emergency operation possibilities by 2 configurable potentiometers
- automatic addressing of new ECGs during exchange work
- ECG addressing and control in conjunction with the IP master and the DALI web plug-in




The following functions can be performed stand-alone by the DALI module:

- calculation of ups with time constants from 0.5 seconds to 18 hours
- automatically dimming from current analog actual values to predefined analog target values at a predefined speed (optionally in predefined time)
- feedback of the termination of the analog value output after the performance of time functions
- stop function during the performance of time functions
- OVERSAMPLING error correction (With the so-called „OVERSAMPLING“, the DALI module automatically corrects the jumps of the analog values caused by the cycle times of the BUS system. For this purpose, the analog values between the BUS cycles are transformed back into the resolution of 8 bits by linearization.)
- performance of blinking functions

Inputs / Outputs

- 1 DALI-BUS

Function displays

		LED state	Meaning
	1 x LED (red)	OFF	no operating voltage
		ON	operating voltage, no error
	1 x LED (yellow) operating voltage / BUS	OFF	no BUS signal detected
		ON	BUS signal detected, own address not detected
		Even blinking	BUS signal and own module address detected
	2 x LED (green)	D1 and D2 blink alternately	no parameter data in the module
		D1 ON, D2 OFF	module only works as DALI power supply

Connections

- 1 voltage connection 230V / 50Hz
- 2 outputs DALI-BUS
- 1 connection for the subnet (BUS A and B, RS-485)

Design

- plastic casing light grey, snap-on on 35mm DIN rail 6 HP

Special function DIP switch

DIP switch 8-pole

- S1 OFF = normal operation, ON = device works DALI-sided only as power supply (from version 1.01), i.e. no DALI commands are sent; necessary e.g. for addressing by external systems
- S2 to S8 module address ISYGLT

Parameterisation

In the ISYGLT ProgramDesigner there are various parameterisation possibilities:

- grouping of the individual ECGs
- 3 configurations can be stored
- determination of the switch-on behaviour
- crossfade times
- emergency operation in case of BUS failure DALI and ISYGLT

10. Technical Data

Type	DALI-16B
Article No.	80027159
Mains supply	230V / 50-60 Hz
Current consumption	15mA
Isolation voltage	3500V (ISYGLT, DALI / mains)
Subnet (RS-485)	max. 5.6V limitation by Z-diodes
Dimensions	WxHxD 106x90x59mm DIN rail device (6 HP)
Weight	300g 210g from production 2019 (hardware version HW2.0)
Connection	Screw terminals 1.5mm ² pluggable
Operating temperature	-10°C to +50°C
Storage temperature	-25°C to +70°C
Humidity	0-85% r.h. not condensing
Protection type	IP 30
Protection class	I
CE mark	yes

10.1. Pin assignment

4-pole plug (left)	
≅Ub	Operating voltage (only for through-wiring, not required in the module)
0V	0V Operating voltage (only for through-wiring, not required in the module)
A	Subnet (BUS A, RS-485)
B	Subnet (BUS B, RS-485)

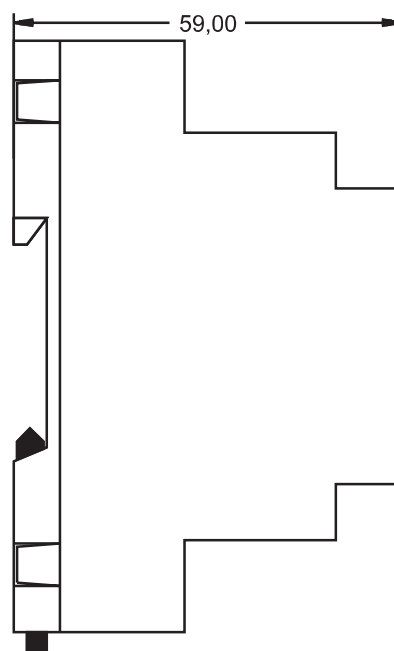
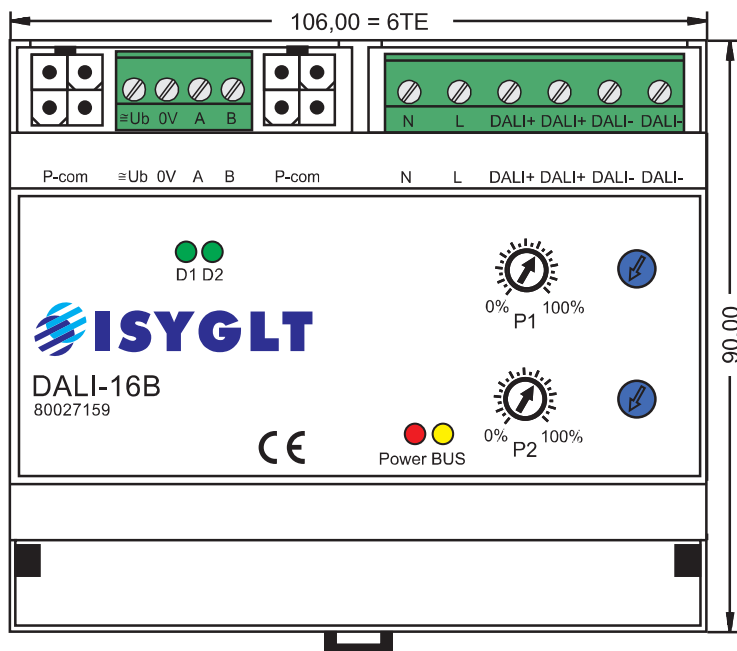
6-pole plug (right)	
N	Neutral conductor
L	Mains voltage 230V (50-60Hz)
DALI+	DALI-BUS +
DALI+	DALI-BUS +
DALI-	DALI-BUS -
DALI-	DALI-BUS -

Changed pin assignment from production 2019 (hardware version HW2.0):

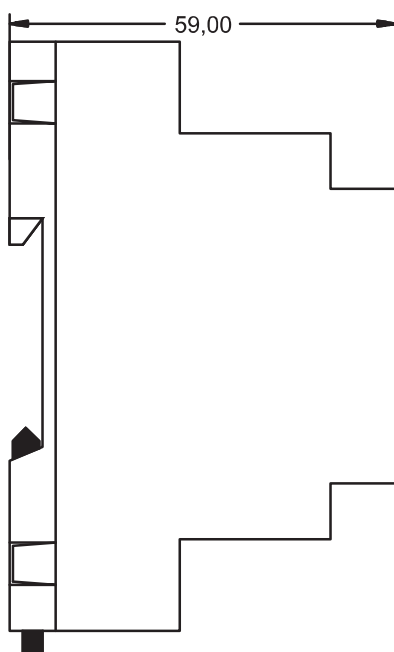
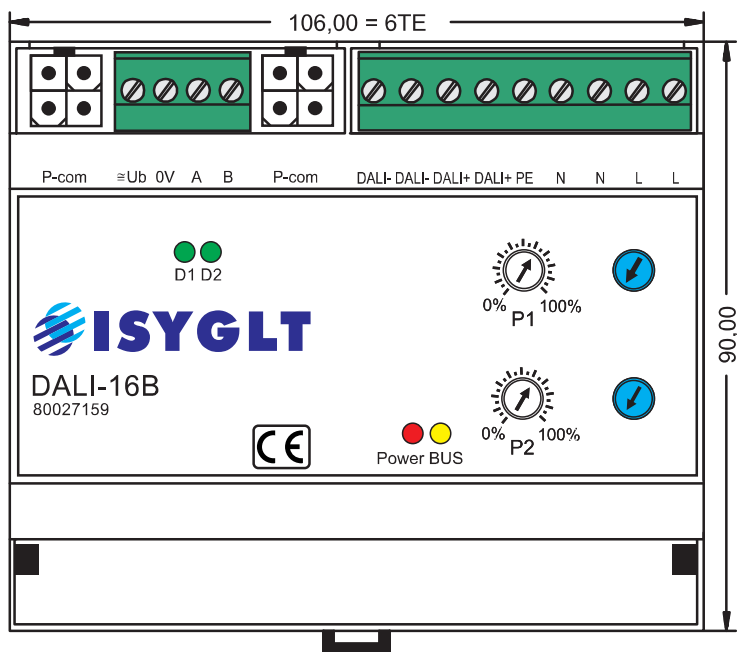
4-pole plug (left)	
≅Ub	Operating voltage (only for through-wiring, not required in the module)
0V	0V Operating voltage (only for through-wiring, not required in the module)
A	BUS A (Subnet RS-485)
B	BUS B (Subnet RS-485)

9-pole plug (right)	
DALI-	DALI-BUS -
DALI-	DALI-BUS -
DALI+	DALI-BUS +
DALI+	DALI-BUS +
PE	Protective conductor
N	Neutral conductor
N	Neutral conductor
L	Mains voltage 230V (50-60Hz)
L	Mains voltage 230V (50-60Hz)

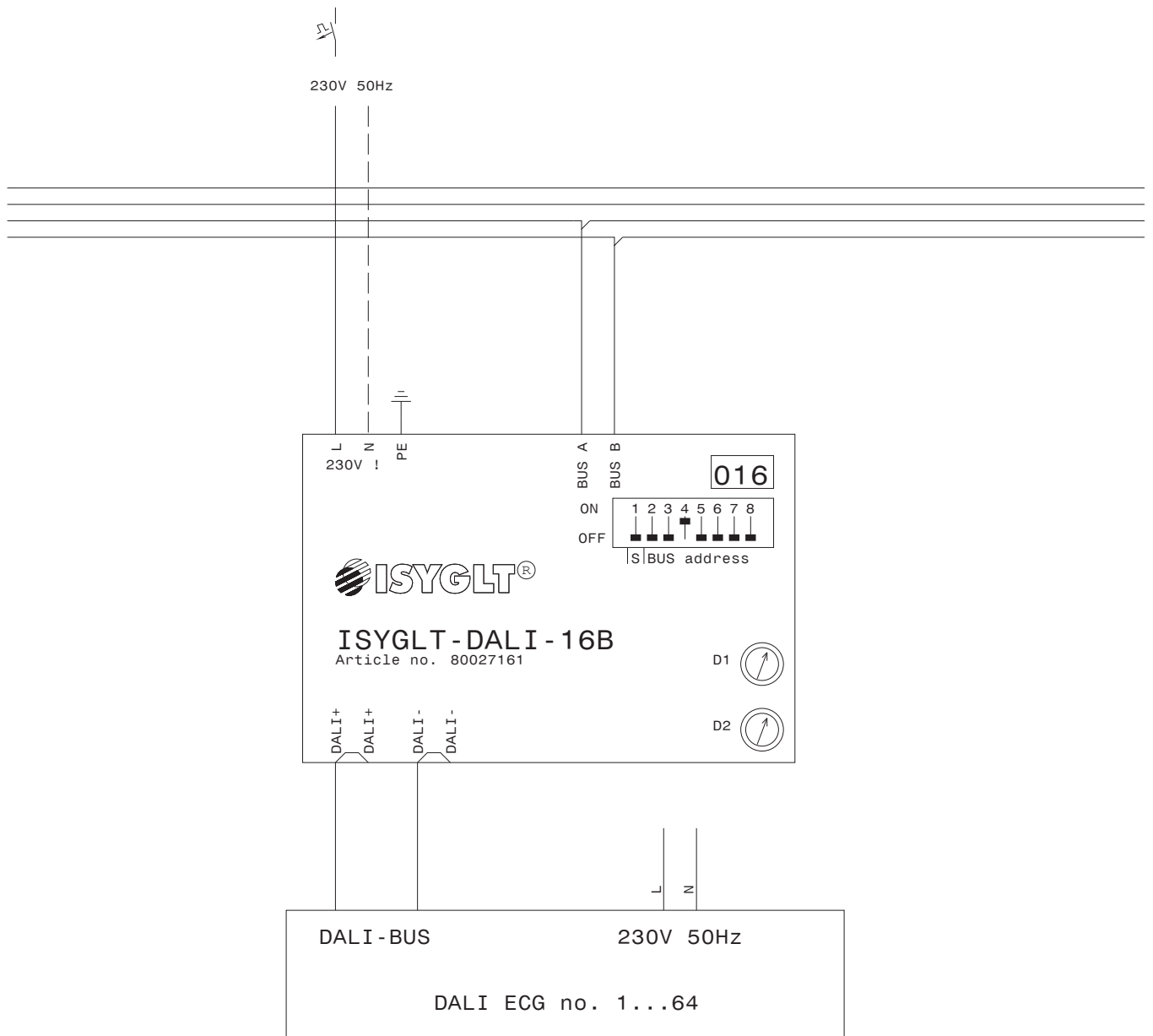
View



From production 2019 (HW2.0)



11. Wiring diagram



From production 2019 (HW2.0)

