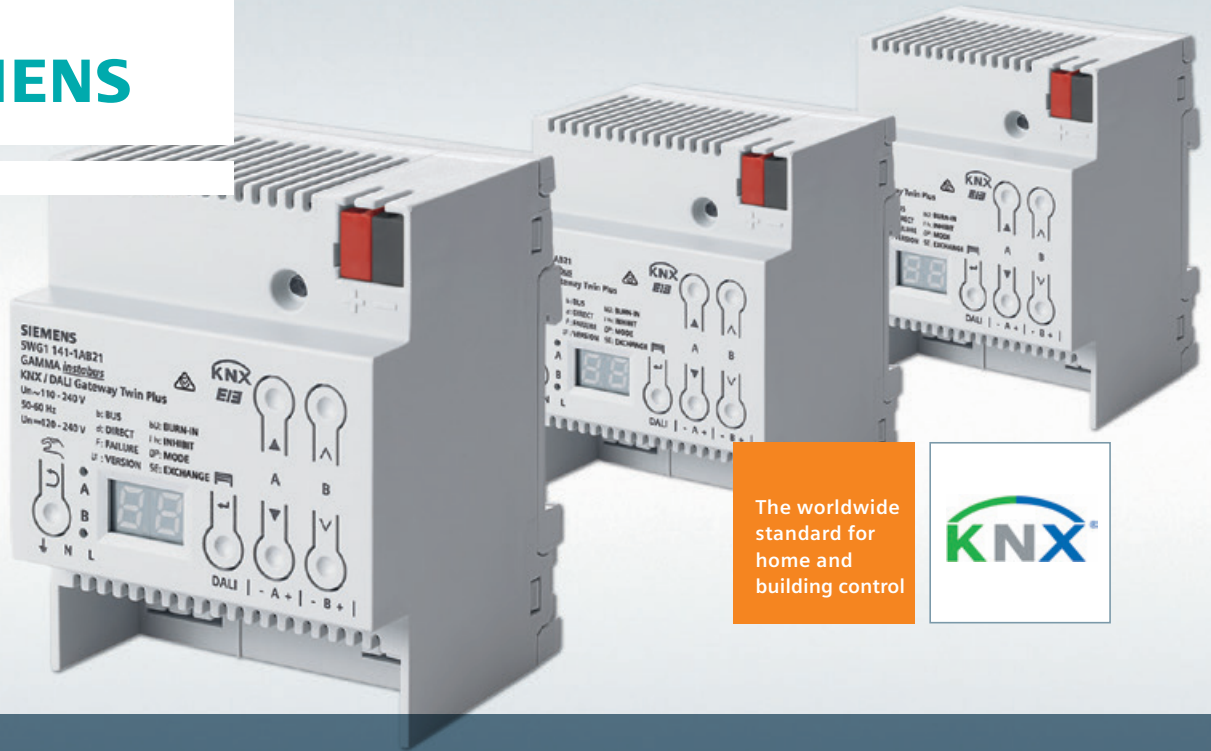


SIEMENS



The worldwide standard for home and building control



Highly flexible – the right KNX/DALI gateway for every requirement

Integrating DALI lighting control into building control safely, efficiently and comfortably with KNX

KNX/DALI – everything you need

Modern lighting systems can be controlled efficiently and conveniently with DALI. Their efficiency can be increased even more when combined with the advantages of the open communication standard KNX. That's why KNX/DALI gateways from Siemens offer both standards directly: for DALI digital lighting (IEC 62386) and for KNX building control (ISO/IEC 14543-3 or DIN EN 50090). It's possible to integrate DALI lighting into KNX installations quickly and easily, which allows all of the advantages of KNX and DALI to be combined.

The three current KNX/DALI gateways act as DALI master controllers and provide comprehensive functions for efficient lighting control. All variants support the control of DALI devices: for example, electronic ballasts, transformers and LED converters.

Efficient commissioning

A clear and user-friendly ETS plug-in and an optimized download time both play a significant role in reducing commissioning time. When changing applications, the ETS user is assisted by an ETS app. All devices allow faulty electronic ballasts to be replaced directly on the device with no software required.

All KNX/DALI gateways support selected DALI sensors that are compatible with the specification from Siemens. Independent DALI lighting systems can be implemented using a DALI pushbutton interface and optional DALI motion detectors.

Highlights

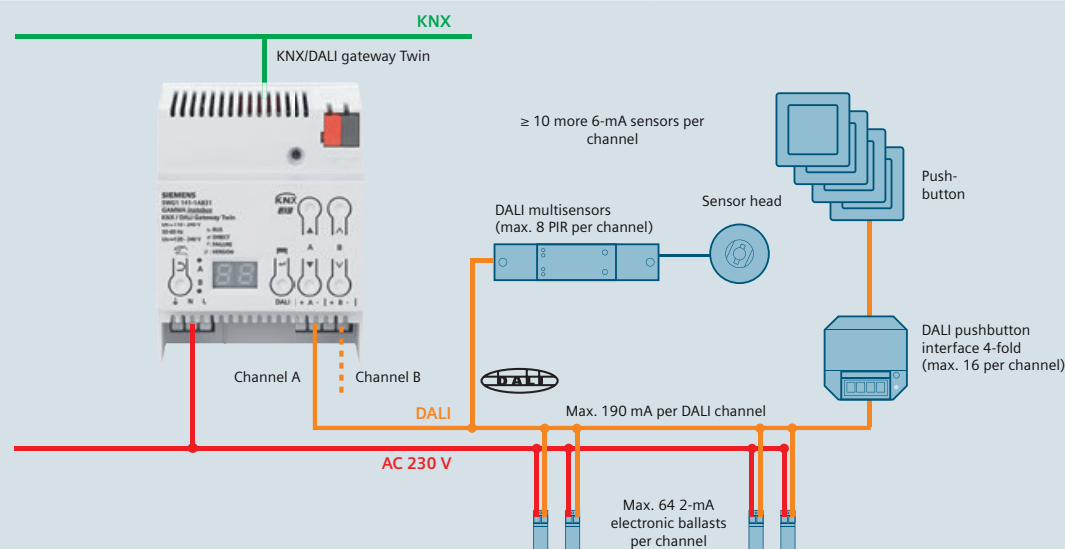
- Flexibility thanks to three different KNX/DALI gateways
- Increased efficiency due to two independent DALI outputs, each with 64 electronic ballasts
- Highly flexible installation due to the DALI sensors
- Faster configuration because of the optimized ETS plug-in
- Fast KNX download owing to an optimized process
- Replacement of faulty electronic ballasts with no software required



Efficient lighting control with KNX and DALI

The KNX/DALI gateways from Siemens combine KNX installations and DALI lighting control and thus lay the foundation for new design possibilities.

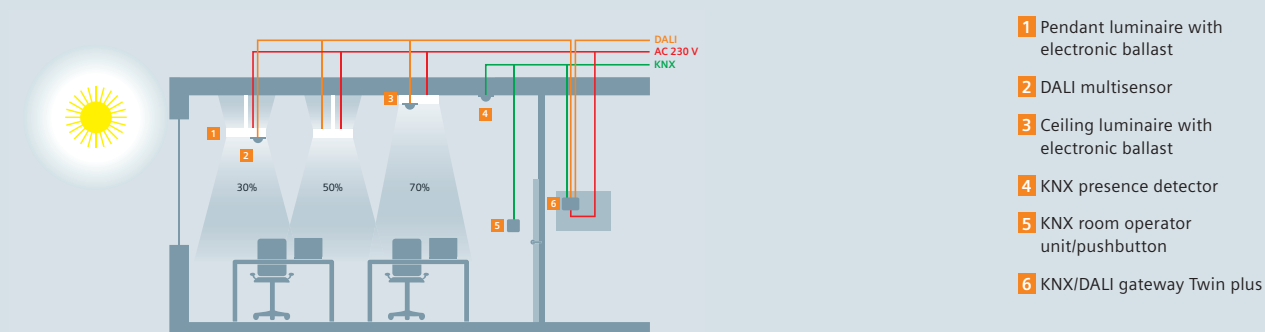
Lighting control with DALI



The specification for the DALI communication interface is defined in international standard IEC 62386.

The individual electronic ballasts in the system are addressed either on the basis of their short address (individual control) or on the basis of a DALI group address (group addressing). To achieve this, any number of electronic ballasts of one line can be arranged in up to 16 DALI groups.

Energy-saving constant light level control with DALI sensors













KNX allows the DALI lighting system to be fully integrated into a building automation system via a DALI or KNX interface. Employing brightness sensors that have an integrated DALI interface is an efficient approach, especially when pendant luminaires are used, because the sensor in the luminaire only has to be connected to DALI.

The KNX/DALI gateway Twin plus also has a built-in constant light level control that allows one main luminaire group and up to four secondary luminaire groups to be controlled for demand-based and energy-efficient room lighting.




All important data at a glance

The essential differences between the three gateway variants are the number of outputs and the scope of function. The "Twin" variant has two DALI outputs, while the "plus" variant has the full range of functions including scene and effect control, emergency lighting, etc.

Selection and ordering data									
	Type	Version	DT	Order no.	PU (ST, SZ, M)	PS/P unit	PG	Weight per PU (kg)	Price
	N 141/03	KNX/DALI gateway plus, 1 channel	A	5WG1 141-1AB03	1	1	A21	0.228	
	N 141/21	KNX/DALI gateway Twin plus, 2 channels	A	5WG1 141-1AB21	1	1	A21	0.228	
	N 141/31	KNX/DALI gateway Twin, 2 channels	A	5WG1 141-1AB31	1	1	A21	0.228	
	UP 141/71	DALI pushbutton interface 4-fold	A	5WG1 141-2AB71	1	1	A21	0.037	

Support of selected DALI sensors		
Switching/dimming	Motion detectors and brightness sensors for high installations	Motion detectors and brightness sensors for luminaire installation and ceiling installation*
Siemens DALI pushbutton interface 4-fold UP 141/71 5WG1 141-2AB71	Osram DALI sensor coupler HF LS LI EAN10 4052899141728	Osram DALI sensor coupler for various sensors EAN10 4008321379269
		
Osram DALI PRO PB coupler EAN10 4008321496461	Osram DALI HIGHBAY adapter for motion sensors HIGHBAY/VISION EAN10 4008321774132	Osram DALI sensor coupler LS/PD LI EAN10 4052899043954
		

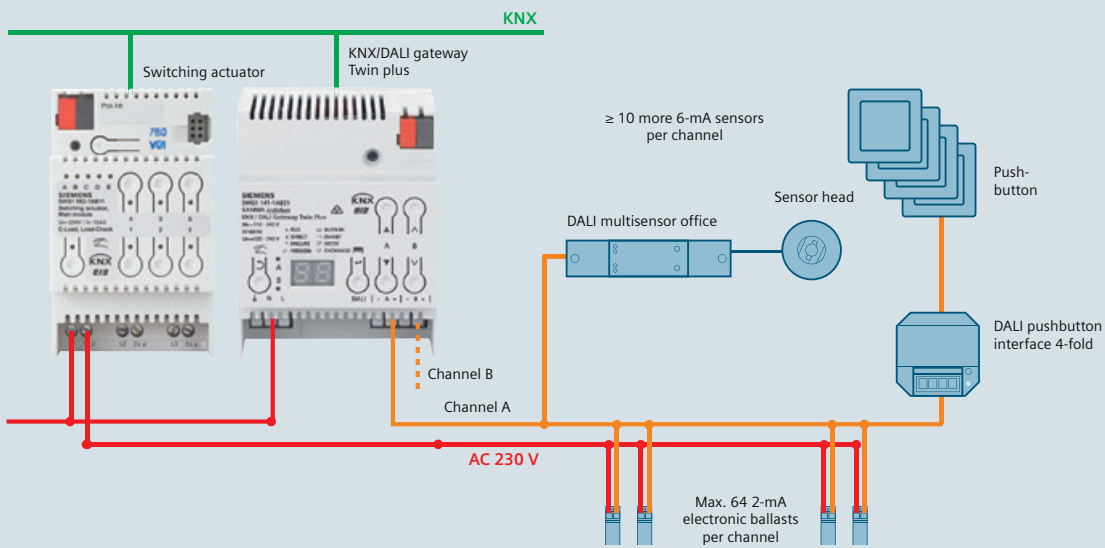
* DALI motion detectors compatible with the specification from Siemens

Technical data			
Type	 plus N 141/03	 Twin plus N 141/21	 Twin N 141/31
Outputs			
Control outputs			
DALI outputs (lines)	1	2	2
DALI IEC 62386-compliant output for DALI electronic ballasts (16 V, potential-free, short-circuit-proof)	■	■	■
Max. electronic ballasts per output	64	64	64
Selected DALI sensors ¹⁾	■	■	■
Functions			
Direct operation	■	■	■
Broadcast operation	■	■	■
Stand-alone operation	■	■	■
Parameterizable reaction in the event of bus voltage failure/recovery	■	■	–
CIN support	■	■	–
Scene control			
Integrated 8-bit scene control	■	■	■
Scenes to be integrated per DALI output	16	16	16
Control of effects			
Integrated control of effects (one-time or cyclical chaser light, color control)	4	4	–
Test function using ETS			
Testing individual electronic ballasts	■	■	■
Testing the group allocation	■	■	■
Testing scenes	■	■	■
Testing effects	■	■	–
Group control			
Up to 16 groups per DALI output with	■	■	■
• Switching on/off, dimming brighter/darker and setting value			
Controlling individual ballasts			
Activation of individual ballasts	■	■	–
• Switching on/off, dimming brighter/darker and setting value			
• ETS app in KNX online shop	■	■	■
• Switching off standby	■	■	–
• Standard applications	■	■	–
• Exchanging electronic ballasts without software	■	■	■
Emergency lighting			
Supporting mandatory test sequences of emergency lights	■	■	–
Control of individual battery lights	■	■	–
Saving test results	■	■	–
Status			
DALI short circuit	■	■	■
DALI power supply	■	■	■
Status output (on/off, value, lamp fault, ballast fault)	■	■	■
Status group (on/off, value, lamp fault, ballast fault)	■	■	■
Status electronic ballast (on/off, value, lamp fault, ballast fault)	■	■	–
Housing data			
Design	N	N	N
Rail-mounted device for installation on mounting rail TH35 DIN EN 60715	■	■	■
Dimensions			
Width (1 width unit = 18 mm)	4 WU	4 WU	4 WU
Display/control elements			
Status display per output	LED + 7 segment	LED + 7 segment	LED + 7 segment
Power supply			
Power supply to the electronics system via an integrated power supply unit	■	■	■
Power supply to the DALI outputs via an integrated power supply unit	■	■	■
Bus connection			
Integrated bus coupler	■	■	■
Bus connection via bus terminal	■	■	■

¹⁾ Selected sensors are currently supported with DALI interface; for more information, please go to www.siemens.com/gamma-td

■ possible, – not possible

Switching off standby for higher energy efficiency

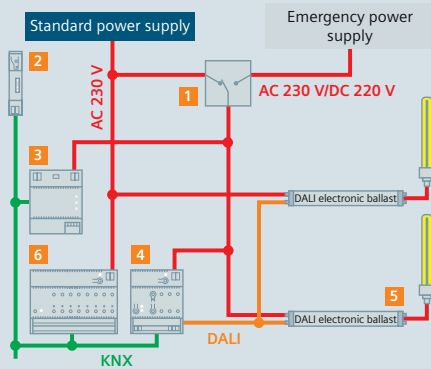


Luminaires with electronic ballasts usually need a closed-circuit current, even when the lighting system is turned off or is in standby mode. This energy consumption adds up, but can be conserved using the KNX/DALI gateway Twin plus by automatically cutting off power to the electronic ballasts.

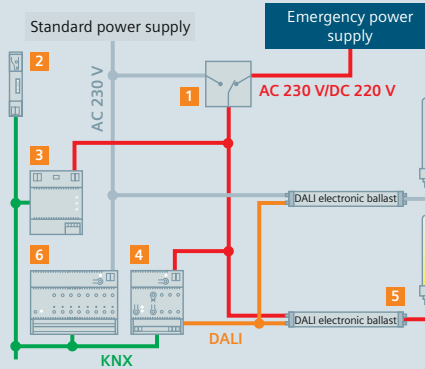
After the lighting is turned off and as soon as all electronic ballasts in a defined area are no longer needed for lighting, the ballasts can be disconnected from the power supply via a deactivation command from a switch actuator controlled for this purpose. If one or more luminaires are in operation, the switch actuator first restores power to the electronic ballast, and the gateway dims the luminaire to the required brightness level.

Reliable emergency lighting

Normal operation



Emergency operation



- 1 Switchover device
- 2 KNX line coupler
- 3 KNX power supply
- 4 KNX/DALI gateway
- 5 Emergency light
- 6 KNX binary input

KNX/DALI devices support luminaires that are used in normal operation, as emergency lighting or as emergency luminaires powered by individual batteries. In normal operation, error messages can be suppressed during emergency light tests if the electronic ballasts are disconnected.

If emergency luminaires powered by individual batteries in compliance with IEC 62386-202 are used, the mandatory self-tests are supported, and the test results are either transmitted via KNX or permanently stored in internal memory. Stored test results can be outputted and archived using ETS.

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The information in this document contains general descriptions of technical options available, which do not always have to be present in individual cases. The required features should therefore be specified in each individual case at the time of closing the contract. The document contains a general product overview. Availability can vary by country. For detailed product information, please contact the company office or authorized partners.

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Our world is undergoing changes that force us to think in new ways: demographic change, urbanization, global warming and resource shortages. Maximum efficiency has top priority – and not only where energy is concerned. In addition, we need to increase comfort for the well-being of users. Also, our need for safety and security is constantly growing. For our customers, success is defined by how well they manage these challenges. Siemens has the answers.

“We are the trusted technology partner for energy-efficient, safe and secure buildings and infrastructure.”