



MIDAM WDALI51

Wireless DALI bus powered converter/master 230V



Compact, wireless, serial DALI bus converter. This is the second generation multimaster converter harmonized according to EN60929 Edition 4: 2011 Annex E. The converter is 230 VAC mains supplied and provides DALI bus power supply up to 60 mA. It also features native modbus map. The communication is based on the encrypted Midam **KFP** protocol.

Application

- Wireless DALI bus control
- Reception from up to 16 WINXxx devices
- Wireless light control
- Wireless integration into SCADA systems

Function

Wireless communication is based on an unlicensed 868 MHz band. Embedded AES 128-bit, provides the most secure encryption standard for wireless connections. Commands from up to 16 WINXxx devices can be received and processed in autonomous mode. Button functions are press/release/hold, or off/on. Each event received from a button or switch generates a predefined DALI command that is broadcast on the bus by the user. In the case of DALI commands that are not in the "broadcast" mode, the DALI response is received and processed in the WDALI51 and can be read by the SCADA system via the WCOM01, or WCOM51 wireless gateways. DALI communication is harmonized according to EN60929 ed.4: 2011 Annex E, which allows the use of multimaster technology. The WDALI51 has an integrated DALI power supply of 60 mA, which is sufficient to power up to 26 DALI ballasts, or a combination of other passive power supply devices on the DALI bus. The device has factory-set values to ensure the correct default function and allows direct reading and writing of values

to the modbus map, which is available in a separate document. All settings are also stored in the Modbus map directly in the device. Before using the device for the first time, it is necessary to pair it and it is recommended to perform individual configuration, especially to change the encryption password.

SCADA system integration

WCOM01, resp. WCOM51 wireless gateways are recommended for direct integration into SCADA systems.

Pairing

Two devices are required for mutual communication. Both must be powered and located in close proximity to each other. Usually, wireless gateway or configuration dongle is used to set up remote wireless devices. Use look-up function in software tool to display a list of all available devices in range and assign or adjust parameters based on wireless ID code for each single device. There is a comprehensive help section integrated in the software tool to provide support during the wireless device set up procedure.

Midam KFP Password change

Prior to the first use, the encryption password (default "MIKROKLIMA1234AB") must be changed using the WUSB01 configuration dongle and the relevant software tool.





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Technical data

Power supply	230 V AC
Consumption	3 W
Communication	868,950 MHz, 100 kbps, WMBUS T1, KFP (default factory setting) 868,300 MHz, 32 kbps, WMBUS S1, KFP 868,100 MHz, 100 kbps, KFP 869,525 MHz, 100 kbps, WMBUS C, KFP 868,300 MHz, 38 kbps, KFP
Protocol	WMBUS (EN 13757-4), KFP (dual stack)
Encryption	AES 128 PCBC, EN 13757-4
RF power	+10 to -20 dBm, step 5 dB
Antenna	Integrated
Communication range	100 m in free space, 30 m in buildings
DALI bus	Standard EN60929 edition 4:2011 Annex E, integrated DALI bus power supply, max. 60 mA
DALI bus power supply	Up to 26 DALI ballasts
Mechanical and dimensions	49x49x21 mm Polycarbonate enclosure, IP20 1 x switch (PRG) 2 x M3 screw terminal (DALI) 2x wires 1.5 mm ² , length 70 mm, stripped tinned ends 10 mm (230V AC power supply)
Ambient conditions	-5 to +45 °C, 5 % to 95 % rH (EN 60721-3-3 class 3K5)



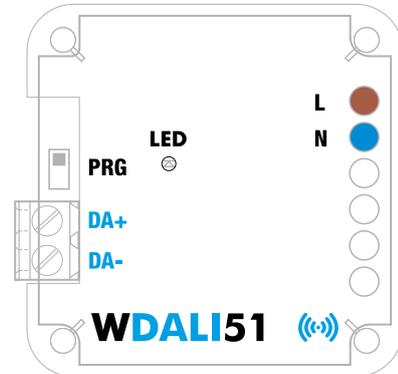
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Terminals and connection

PRG	Without clamp - user defined frequency and password With clamp - default frequency and password
DA +	DALI bus, positive
DA -	DALI bus, negative
L, N	Power supply, 230 V AC
LED	RED/GREEN LED - sending/receiving data, RED still ON - error indication



WIRELESS SOLUTIONS

Changes in versions

02/2020	New datasheet version (v20/02).
07/2025	The wording of the section "Midam KFP Password change" has been modified (v25/07).

Subject to technical changes and General Terms and Conditions.

