MIDAM
CONTROL SYSTEM

MIDAM WDALI01

Wireless DALI bus powered converter/master

Compact, wireless, serial DALI bus converter. This is the second generation multimaster converter harmonized according to EN60929 Edition 4: 2011 Annex E. The device is powered from the DALI bus and features native modbus map. The communication is based on the AES128 encrypted Midam KFP protocol, which allows to update the device firmware on a wireless basis.

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 received event 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 WDALI01 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 WDALI01 is passively powered directly from 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.

WIRELESS SOLUTIONS

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Technical data

Power supply	Passive from DALI bus
Consumption	0.5 W max., 0.15 W typical
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, passive power supply
Mechanical and dimensions	49x49x21mm Polycarbonate enclosure, IP20 1 x clamp (PRG) 2 x M3 screw terminal (DALI)
Ambient conditions	-5 to +45 °C, 5 % to 95 % rH (EN 60721-3-3 class 3K5)

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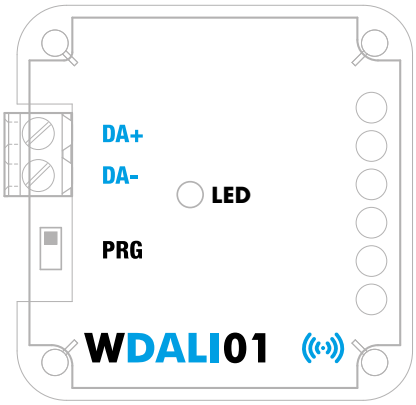
Terminals and connection

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



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).