



# MIDAM WIN451

Wireless 4 digital input module/230 VAC



**Wireless, 230 VAC operated module featuring four digital inputs. Native modbus map grants seamless integration into any SCADA systems. The communication is based on the AES128 encrypted Midam KFP protocol, which allows to update the device firmware on a wireless basis.**

## Application

- 4 digital inputs wireless module
- Control of four or two (twin mode) light circuits (wireless DALI)
- Two shutters/blinds control (BMS)
- Wireless integration into SCADA systems
- General use

## Function

The WIN451 module monitors up to 4 digital inputs. The signal is sent to a receiver, such as a wireless DALI converter (WDALI01, WDAU51), wireless digital outputs (WOUT251, WOUT261), or a wireless gateway (WCOM01 or WCOM51). Wireless communication is based on an unlicensed 868 MHz band. Embedded AES 128-bit, provides the most secure encryption standard for wireless connections. All digital inputs are configurable and four buttons or combinations can be used. Inputs 3 and 4 can be configured to use the status function (rocker switch monitoring) and inputs 1 and 2 to use the push button function. 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

The module can be integrated through the fan coil controller WFC01001, via the Modbus RTU (RS485). For direct integration of the device, use of wireless gateways, such as WCOM01, or WCOM51 is recommended.

## 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

<b>Power supply</b>	230 V AC
<b>Consumption</b>	max. 3 W
<b>Communication</b>	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
<b>Protocol</b>	WMBUS (EN 13757-4), KFP (dual stack)
<b>Encryption</b>	AES 128 PCBC, EN 13757-4
<b>RF power</b>	+10 to -20 dBm, step 5 dB
<b>Antenna</b>	Integrated
<b>Communication range</b>	100 m in free space, 30 m in buildings
<b>Mechanical and dimensions</b>	49x49x21 mm Polycarbonate enclosure, IP20 1 x clamp (PRG), 5 x M3 screw terminals (COM, DI) 2 x wires 1.5 mm <sup>2</sup> , length 70 mm, stripped tinned ends 10 mm
<b>Ambient conditions</b>	-5 to +45 °C, 5 % to 95 % rH (EN 60721-3-3 class 3K5)





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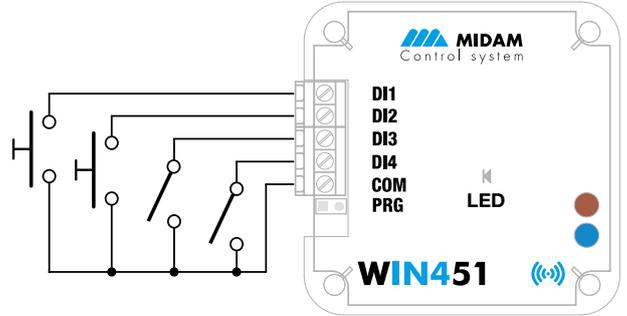
## Wireless 4 digital input module/230 VAC

### Terminals and connection

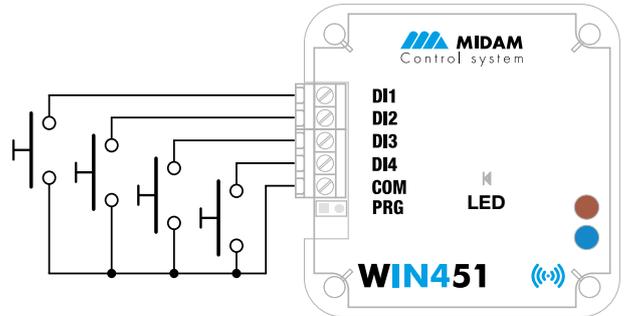
<b>PRG</b>	Without clamp - user defined frequency and password With clamp - default frequency and password
<b>DI1</b>	Dry contact input 1 (push button)
<b>DI2</b>	Dry contact input 2 (push button)
<b>DI3</b>	Dry contact input 3 (push button, or rocker switch)
<b>DI4</b>	Dry contact input 4 (push button, or rocker switch)
<b>COM</b>	Common potential (ground)

<b>LED</b>	RED/GREEN LED - sending/receiving data, RED still ON - error indication
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2x push button, 2x rocker switch



4x push button



WIRELESS SOLUTIONS

### Changes in versions

01/2023	New datasheet version (v23/01).
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.

