MIDAM
CONTROL SYSTEM

MIDAM WOUT261

Wireless 2 digital outputs module (combined)

Small wireless module featuring two digital outputs (relay and SSR - with PWM function) designed to switch appropriate end devices. Native modbus map grants seamless integration into the 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

- Wireless module with two digital outputs (relay + SSR)
- Control of lights or shutters/blinds
- Power Control Panels, Remote Switching
- Gas Pump Electronics, Contactors
- Solenoids, Motor or Heater Controls
- Wireless control of PWM functions on output 2
- Wireless integration into SCADA systems
- General use

Function

The module features two outputs (1x relay and 1x Solid State Relay) and thanks to its compact dimensions it is suitable for flush mounted installation. SSR works according to „zero cross turn on" function. Output 2 can be controlled by a PWM signal with adjustable period. Wireless communication is based on an unlicensed 868 MHz band. Embedded AES 128-bit, provides the most secure encryption standard for wireless connections. Signals are received from a transmitter, for example, WINXxx, WKEY401, or WRU01001 (WRU90001) room controller for direct control according to the desired value (setpoint with hysteresis). 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

MIDAM
CONTROL SYSTEM

MIDAM WOUT261

Wireless 2 digital outputs module (combined)

Technical data

Power supply	230 V AC
Consumption	3 W
Output 1 (relay)	Standardized load is according to EN60947-4-1 ed4: For AC1 (non inductive) 230 VAC, 0.005 to 4 A For AC3 (motor) 230 VAC, 5 to 500 mA, cos fi > 0.45 For AC5a (ballast) 230 VAC, 5 to 1300 mA, cos fi > 0.45 For DC1 (non inductive) 5 to 30 VDC, 0.1 to 4 A For DC3 (motor) 5 to 30 VDC, 0.1 to 1 A For DC6 (lamp) 5 to 30 VDC, 0.1 to 2.5 A Contact lifespan > 10^5 cycles.
Output 2 (SSR)	AC frequency range 20 to 400 Hz, standardized load is according to EN60947-4-1 ed4: For AC1 (non-inductive) 230 VAC, 0.005 to 1 A For AC3 (motor) 230 VAC, 5 to 125 mA, cos fi > 0.45, minimum on-time 5 ms For AC5a (ballast) 230 VAC, 5 to 330 mA, cos fi > 0.45, minimum on-time 5 ms PWM signal - adjustable period from 0.1 to 100 seconds.
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
Mechanical and dimensions	49x49x21mm Polycarbonate enclosure, IP20 6x wire 1.5 mm^2, length 70 mm, stripped tinned ends 10 mm
Ambient conditions	-5 to +45 °C, 5 % to 95 % rH (EN 60721-3-3 class 3K5)

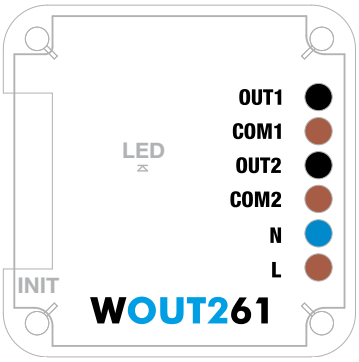
WIRELESS SOLUTIONS

MIDAM WOUT261

Wireless 2 digital outputs module (combined)

Terminals and connection

OUT1	Output SSR 1
COM1	Common SSR 1
OUT2	Output SSR 2
COM2	Common SSR 2
L,N	Power supply 230 V AC
INIT	INIT area (based on HALL sensor actuated by magnetic field)



LED indication

LED	Green LED – power (ON: power OK; OFF: no power applied, weak or damaged power supply, ...)

Changes in versions

09/2020	New datasheet version (v20/09).
09/2021	Minor changes in LED indication description (v21/09).
04/2022	Change in relay/SSR assembly and terminals (v22/04).
11/2022	Added PWM signal control on output 2 (v22/11).
10/2024	INIT function added (v24/10).
07/2025	The wording of the section "Midam KFP Password change" has been modified (v25/07).

WIRELESS SOLUTIONS

Subject to technical changes and General Terms and Conditions.