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Wireless Modbus Relay

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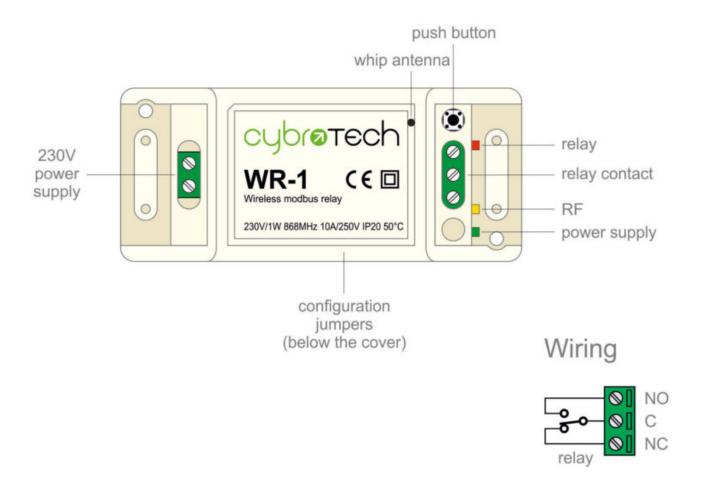
Model number:	WR-1
Frequency:	ISM 868MHz (EU)
Dimensions:	93x45x27 mm

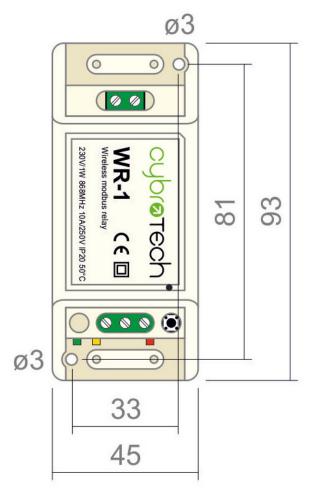
Applications

 Remote controlled relay. Act as modbus RTU slave. Optimal for long range, no hopping.

Installation and mounting

- Carefully open WR-1 module and configure address with jumpers. (Default address is 200)
- Place WR-1 module at least 10cm from other objects. Installation is not recommended inside metal cabinets.
- Connect relay terminals
- Connect to 230V power supply
- · Configure radio pairing





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Features

- remote controlled relay
- act as modbus RTU slave
- very long range, no hopping
- up to 8 relays per network
- protected private connection
- multiple addressable groups

Technical specification

Power supply:	230V, 50/60Hz, 1W
Ingress protection:	IP20
Operating temperature:	-2050°C
Storage temperature:	-4085°C
Relative humidity:	085% n/c

Modbus

	Address range:	200207
	Relay mapping	coil 1(start address 00h)
	Data bits & parity	8n1
		01 - read coil
	Supported functions	05 - write single coil
		15 - write multiple coils

Relay output

Nominal rating	10A 250Vac (NO), 3A 250Vac (NC)
(resistive)	5A 30Vdc (NO), 3A 30Vdc (NC)

Radio

Frequency band	ISM 868MHz (EU)
Subband	L 866.8MHz, 25mW, 1% utility
Modulation	fSK 38.4kbps 80kHz bandwidth
Listen before talk	yes, delay limited to 20ms
Group address	32-bit, automatically generated
Connection time	10s power-on to network ready
Message delay	5ms from tx start to relay on
Output power	25mW
Operating range	3300m with optical visibility

Terminals and wiring

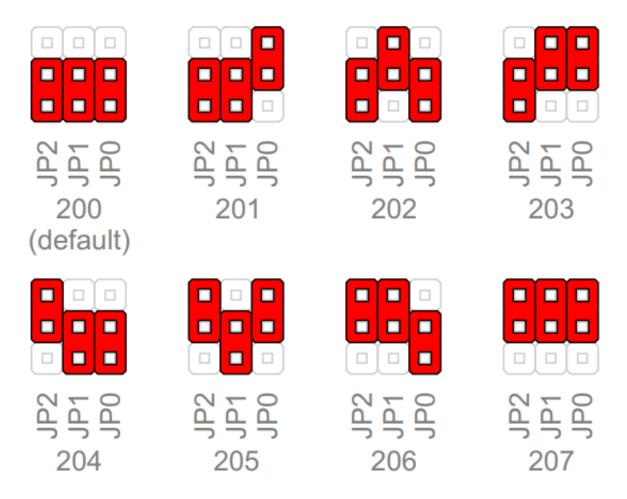
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	NO
Relay	С
	NC
To power supply	L
	N

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Modbus address setting

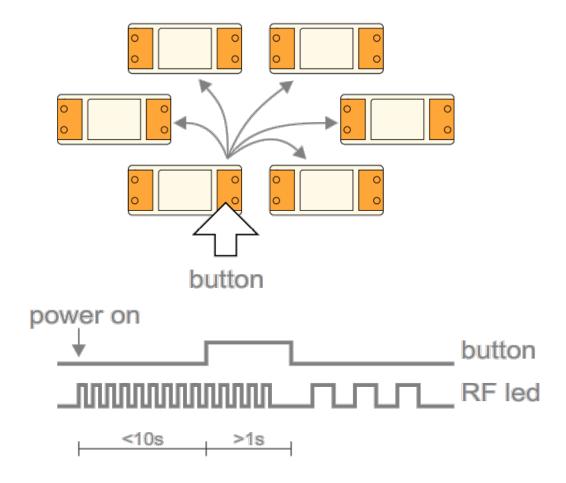
Change is applied right away, no reset needed.



Radio pairing configuration

Create new secure group

- * turn on all devices as the same time
- st within 10 seconds, while RF LED is blinking, press and hold button on one of the devices
- * after a second, the new address is randomly generated and sent to all devices. RF LED will blink 3 times to confirm the new address.

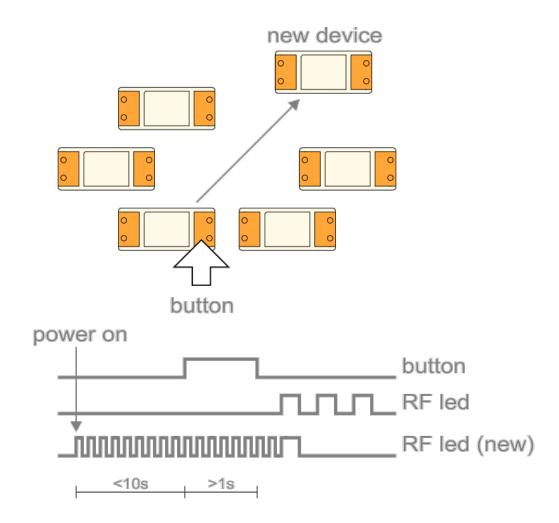


Add new device to the group

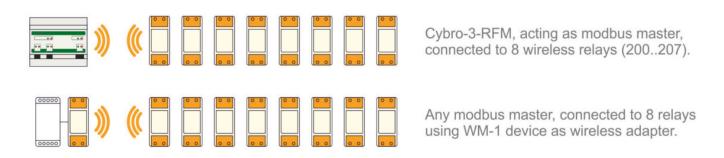
- * turn on the device
- * within 10 seconds, press and hold button on one of the existing devices
- * after a second, the existing group address is sent to the new device. RF LED will blink 3 times to confirm the address is sent.

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Examples



Connection check

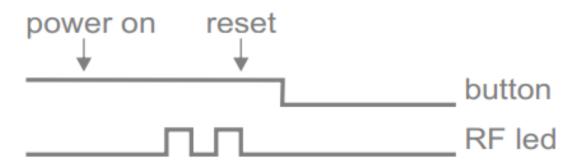
• press the button shortly

With each press of the button, the relay will switch on/off. Other devices are not affected.



Factory reset

- · Hold button and turn the device ON
- RF led will blink twice. Group address is now reset to default.
- Other devices will not be affected.



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