Relay Interface for the Battery-free Button

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Introduction

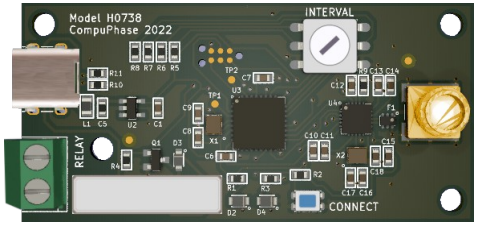
The Relay Interface temporarily closes an array contact when it receives a signal from a wireless button. The array contact is a potential free, mechanical contact.

This interface is only compatible with H0736* model “Battery-free” Wireless Buttons.

The Relay Interface has a USB C connector for 5 V power input. It is suitable for a USB power supply or powerbank. The interface does not use the USB port for control or programming.

Connecting the Relay Interface

1. Mount the antenna to the SMA connector.
2. Use a USB C cable to connect the interface to a power supply. The green LED should light up.
3. Connect a device that you want to switch on/off to screw terminals marked “RELAY”.



Linking the Interface to a Button

The interface responds to only a single wireless button. Before use, the interface must be linked to the button. The procedure is:

1. Briefly press the button marked “CONNECT” on the interface board. The red LED should blink slowly.
2. Press the battery-free wireless button that you want to link. The red LED blinks quickly three times to confirm.

The wireless button should be pressed within 10 seconds of pressing “CONNECT”. After 10 seconds, the red LED stops blinking and the procedure is aborted.

Setting the Contact Duration

The rotary switch marked “INTERVAL” allows you to set the duration that the relay stays actuated, on receiving a signal from a wireless button. The delay is in seconds, and can be set from 1 to 9 seconds.

Setting the rotary switch to 0 (zero) keeps the relay actuated until the wireless button is pressed another time. That is, a first press makes the contact until a second press breaks the contact.

We recommend to use a small screwdriver to change the setting of the rotary switch.

Mounting the Relay Interface

The interface has four mounting holes. Three are in the corners of the board and the fourth is just behind the screw terminals for the relay contact. The mounting holes have a diameter of 3.2 mm.

Alternatively, the circuit board can be attached to a flat surface by means of double-sided foam tape. There are no components on the bottom side of the circuit board. However, due to the pins of the screw terminals, the bottom side is not entirely flat. So thin double-sided tape is unsuitable.

Moving the Antenna

When the relay interface is built into a metal object or cabinet, the antenna should be moved to outside that object. Large metallic surfaces just behind the antenna may negatively affect reception as well.

You can move the antenna to a better position by using an antenna stand on a coax extension cable, and SMA connectors. An antenna stand must be separately purchased.

To increase reception sensitivity, you may also replace the provided antenna by a high-gain antenna (of the correct frequency).

Specifications

Mechanical

Dimensions.....62×30 mm.
Mounting holes.....four holes, Ø3.2 mm.

Operating conditions

Operating temperature….-25 °C to +40 °C.
Humidity.....5% to 95% non-condensing.

Electronic interface

Operating voltage.....5.0 V, powered through USB C port.
Current.....35 mA nominal.
Radio frequency.....868 MHz or 915 MHz, depending on model.

Relay contact

Rated voltage.....AC: 250 V / DC: 30 V.
Rated current.....3 A continuous / 5 A peak.
Contact resistance.....30 mΩ at 100 mA, 6 V DC.

Conformity

Radio Equipment Directive (RED).....Compliant with EU Directive 2014/53/EU:
ETSI EN 301 489-3:2002 V1.4.1,
ETSI EN 300 220-2:2012 V2.4.1,
ETSI EN 300 220-1:2012 V2.4.1
EMC.....Compliant with EU Directive 2014/30/EU: EN 55022 and EN 55024 + A1 (2001) + A2 (2003).
Electrical safety.....Compliant with EU Directive 2014/35/EU: EN 60950-1

RoHS.....Compliant with EU Directive 2011/65/EU: EN 50581:2012.

Legal disclaimer

CompuPhase shall not be liable for the incidental or consequential losses or damage to tangible property, injury or death of a person in connection with the use of this device.