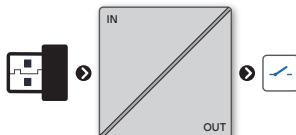




USB RELAY



OMT 01

- USB 2.0
- Output Relay
- Power supply 5 VDC/100 mA from USB
- Galvanic separation 4 kVAC
- Compact design

Optional

Timer relay with RTC

The OMT 01 allows you to control electrical appliances via the computer's USB port and can be used for various applications such as home and industrial automation, hobby projects or temperature measurement and control. Relay actions can also be performed automatically based on user-configurable time schedules.

OPERATION

Freely downloadable OMT 01 Control software is used for setting up and controlling the OMT 01. You can find it at www.orbitmerret.eu/en/omt-01 in the software section, including the driver for Windows. OMT 01 normally works without the need for manual driver installation.

After launching the OMT 01 Control SW and connecting the device to the PC, OMT 01 is automatically detected and a connection is established. This is signalled in the SW by the Device icon turning green and further by loading the ID, name and the current status of the OMT 01.

In automatic connection mode "Auto connect" OMT 01 automatically connects and disconnects depending on the physical state of the OMT 01 device. In case of connecting multiple devices or when a manual connection is preferred, "Auto connect" mode can be deactivated. In this case, it is necessary to use the "Refresh" button to search for available devices on the PC's COM ports, select the required port in the drop-down list, and finally connect to the OMT 01 with the "Connect" button. OMT 01 can be disconnected from PC by simply unplugging the device out of the PC USB port or by pressing the "Disconnect" button. For direct control of the relay from a PC, an ON/OFF button is available on the line "Relay" for switching ON/OFF the relay contact. On the line called "Identification", there is an ON/OFF button that, when activated, makes the LED inside the OMT 01 flash and thus enables its physical identification. On the line titled "Name" there is a space for inserting text. You can create a name for easier identification (maximum length of 10 characters).

For the OMT 01 version with RTC (optional), time frames can be set for selected days of the week. In the table with the heading "Time Configuration", there are days of the week listed, each one on an individual line. After clicking the selected day, you must first activate the given day by the "Activate" button. When the day is active, you can enter up to 3 time frames per day.

"Start" stands for the time when the relay contact is to close. It is entered in the format hh:mm, where hh represent hours 0-23 and mm represent minutes 0-59. "Duration" defines the time frame during which the relay contact is to be closed. Each time frame needs to be activated by the ON/OFF button on the "Frame" line. Desired configuration is sent to the device by the "Upload to device" button. Data from the OMT 01 is read out by PC automatically.

COMMANDS

Relay ON	FF 01 01 (HEX) or 255 11 (DEC)
Relay OFF	FF 01 00 (HEX) or 255 10 (DEC)
Start device ident.	FF C8 01 (HEX) or 255 200 1 (DEC)
Stop device ident.	FF C8 02 (HEX) or 255 200 2 (DEC)
Read serial No.	FF C9 03 (HEX) or 255 201 3 (DEC)
Read Name	FF C9 01 (HEX) or 255 201 1 (DEC)
Set Name	FF C9 02 (HEX) or 255 201 2 (DEC)

FOR VER. B (WITH RTC) FOLLOWING COMMANDS ARE AVAILABLE

Time	FF 02 01 XX XX XX XX (HEX) XX XX XX XX - 32-bit time value in UNIX format
Day	FF 03 01 XX YY (HEX) or 255 3 1 X Y (DEC) XX > value 1-7 according to the day of the week YY > 0 - OFF, 1 - ON
Time frame	FF 04 01 XX HH MM YY YY (HEX) XX > time frame id 1-3, HH MM > art of time frame, hours and minutes (24h format) YY YY > duration of ON in seconds (UINT16)

Example

1/1/2023 00:00, to switch ON every Tuesday at 10:30 and stay ON for 20 min:

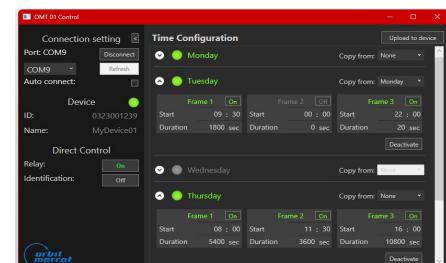
Time FF 02 01 63 B0 CD 00
Day FF 03 01 02 01
Frame FF 04 01 10A 00 04B0

OMT 01 CONTROLL

variant A



variant B



TECHNICAL DATA

INPUT

Connection with PC	
Type	USB 2.0
Rate	12 Mb
Connection	connector USB A
Signalling	
Type	color LED in transducer
USB	green indication of power supply from USB
Relay	green indication of relay switching

INSTRUMENT SPECIFICATION

TC	50 ppm/°C
Function	var. A USB relay var. B USB relay with timer and RTC - 3 time frames for 7 days
RTC	time is backed up for about 90 days accuracy is ±12 s/month
Watch-dog	reset after 500 ms

RELAYS OUTPUT

No. of outputs	1
Type	digital, configurable in PC app
Output	1x relay with switch-on contact (Form A) (250 VAC/30 VDC, 3 A)*
Relay	1/8 HP 277 VAC, 1/10 HP 125 V, Pilot Duty D300

* values apply for resistance load

POWER SUPPLY

Power	5 VDC/100 mA, powered from USB
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MECHANIC PROPERTIES

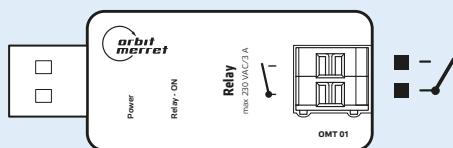
Material	PC, incombustible UL 94 V-0, blue
Dimensions	50 x 24 x 14 mm (w x h x d)

OPERATING CONDITIONS

Connection	USB-A connector, section < 0.5...2.1 mm ²
Working temp.	0°...60°C
Storage temp.	-10°...85°C
Working humidity	< 95 % r.h., non condensing
Protection	IP20
El. safety	EN 61010-1, A2
ESD	< 15 kV
Dielectric strength	4 kVAC for 1 min. between signal input and relays
Insulation resist.*	for pollution degree II, measurement cat. III Input/outputs > 600 V (Pi), 300 V (Di)

* Pi = Primary insulation, Di = Double insulation

CONNECTION



ORDER CODE

OMT 01

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Function

basic
Timer with RTC

A
B