

Creasol DomBus & DomESP

Domoticz and Home Assistant* home automations



Our range of **home automation modules for Domoticz and Home Assistant***

- optimized for **very low power consumption**: less than 10mW in standby, *DomBus31* uses **<500mW with all 8 relays ON!**
- **plug&play**: just **connect the module to the bus, assign a unique address and all ports are immediately available**
- **fully configurable**: several ports can be configured by user interface as input, output, analog or digital, ...
- **wired bus**, using a standard 4 wires shielded cable with 5mm diameter, to carry both data and 12V power supply with backup battery to **work also in case of power outage, safely**, with **no RF pollution** and **no annoying batteries!**
- **DCMD commands** are sent from a module to another one in case of events, to get reliability (**work even if the controller is not operational**) and easy programming (**no need to create automations, just add events on DomBus devices**).

* *Home Assistant support is temporarily suspended*

Creasol DomBus12

7x configurable I/O (digital, analog,)
2x open-drain outputs (can drive 2 external relays or 50mA white Leds)
 Compact: 40x30x11mm, with wires for an easy connection to pushbuttons and other devices



Creasol DomBus23

2x SPST (NO) relays, 5A 250V
1x mosfet 30V 12A (dimming led stripes)
2x 0-10V analog outputs, that can be configured as **open-drain outputs (option)**
 2x inputs/outputs (configurable)
 2x low voltage opto input (9-40V, AC or DC)
 1x 230V optoisolated input



Less than 10mW standby power!!

Creasol DomBus31

6x SPST (NO) relays, 5A 250V
2x SPDT (NO+NC) relays, 10A 250V
 DIN-rail case, very low power usage: **only 500mW with ALL 8 relays ON!!**



Creasol DomBusTH



Module to be installed on a blank cover.
Temperature + Humidity calibrated sensors.

3x LEDs: white, red, green, that can be used to send notification or show statuses
4x inputs, each one is fully configurable as digital input, pushbutton, double pushbutton, counter, buzzer, analog input, low current digital output
2x open-drain outputs, with 40V 50mA capability, that can control external relays for blinds, curtains, lights,
1x analog input to monitor Vbus or external voltage up to 30Vdc

Creasol DomRelay2

Compact module, 43x24x25mm, within **2 relays with 12V 200mW coil, 250V 5A SPST contact** with special material designed to **prevent contact welding**.
Protected from overvoltage by metal oxide varistors. Relay coil should be driven at 12Vdc 17mA: **using DomBusTH, DomBus12 or DomBus23** it's possible to drive relays using a smart technology that **reduce coil power consumption to 50mW**.



Creasol DomESP1 & DomESP2

Electronic board, without case, designed for ESP8266 NodeMCU WiFi 2.4GHz module.

Integrates the whole circuitry to manage **digital inputs, 1 analog input, 4 relay outputs, 1 Solid State Relay output 60V 100mA, 1°C bus** (for sensors and relay outputs boards), **1wire bus** (for temp/humidity sensors) and 2 mosfets (for dimming Led stripes or other DC loads).

Switching mode power regulator, to reduce power consumption and dissipation, can be supplied from **8 to 25Vdc**.

Using ESPEasy firmware, can be used to **expand Domoticz and Home Assistant I/Os and sensors by a WiFi connection**.

Applications:

Home/office alarm system: controls hundreds of magnetic contact sensors and PIRs. Send notifications by Telegram, and emails.

Automatically activates **Controlled Mechanical Ventilation** when needed (CO₂ or humidity) and **stops it in case of external pollution (particulates)**.

Controls **heating and cooling system**, optimizing the energy own-consumption, using the most energy from photovoltaic.

Measures the produced/consumed power and energy, and automatically activates radiators/dryers or other appliances in case of extra power from **photovoltaic**.

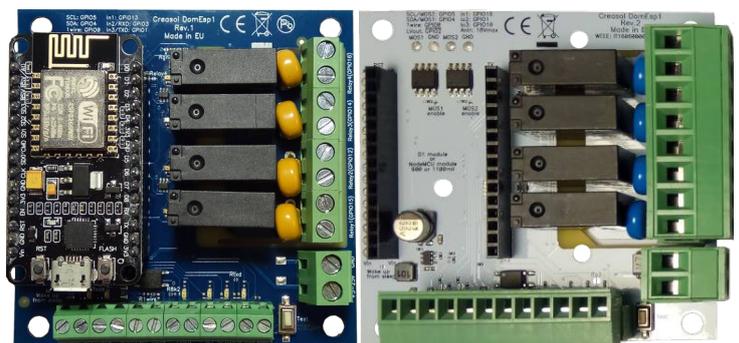
Controls **lights and outputs by pushbuttons, switches and smartphone**.

Automatically **turns on the external lights after sunset and turns off before sunrise**.

Open/close **gate, garage door, ... by smartphone**.

When door bell rings, sends a photo by Telegram.

Measures water tank level, and activates garden watering.



Creasol DomBus32

3x relays 5A 250V

3x 115/230V AC inputs (optoisolated)

5x configurable I/O (digital, analog,)

Relays and AC inputs share the same common (7 terminal blocks)

10mW power consumption, 150mW with all relays ON.

DIN rail enclosure, 52mm wide

Creasol DomBus33

3x relays 5A 250V

3x 115/230V AC inputs (optoisolated)

5x configurable I/O (digital, analog,)

Relays and AC inputs share the same common (7 terminal blocks)

Special firmware to work with existing light system using pushbuttons and step-by-step relays.

DIN rail enclosure, 52mm wide

Creasol DomBusEVSE

EVSE module designed to make a **DIY electric vehicle charging station** (wallbox)

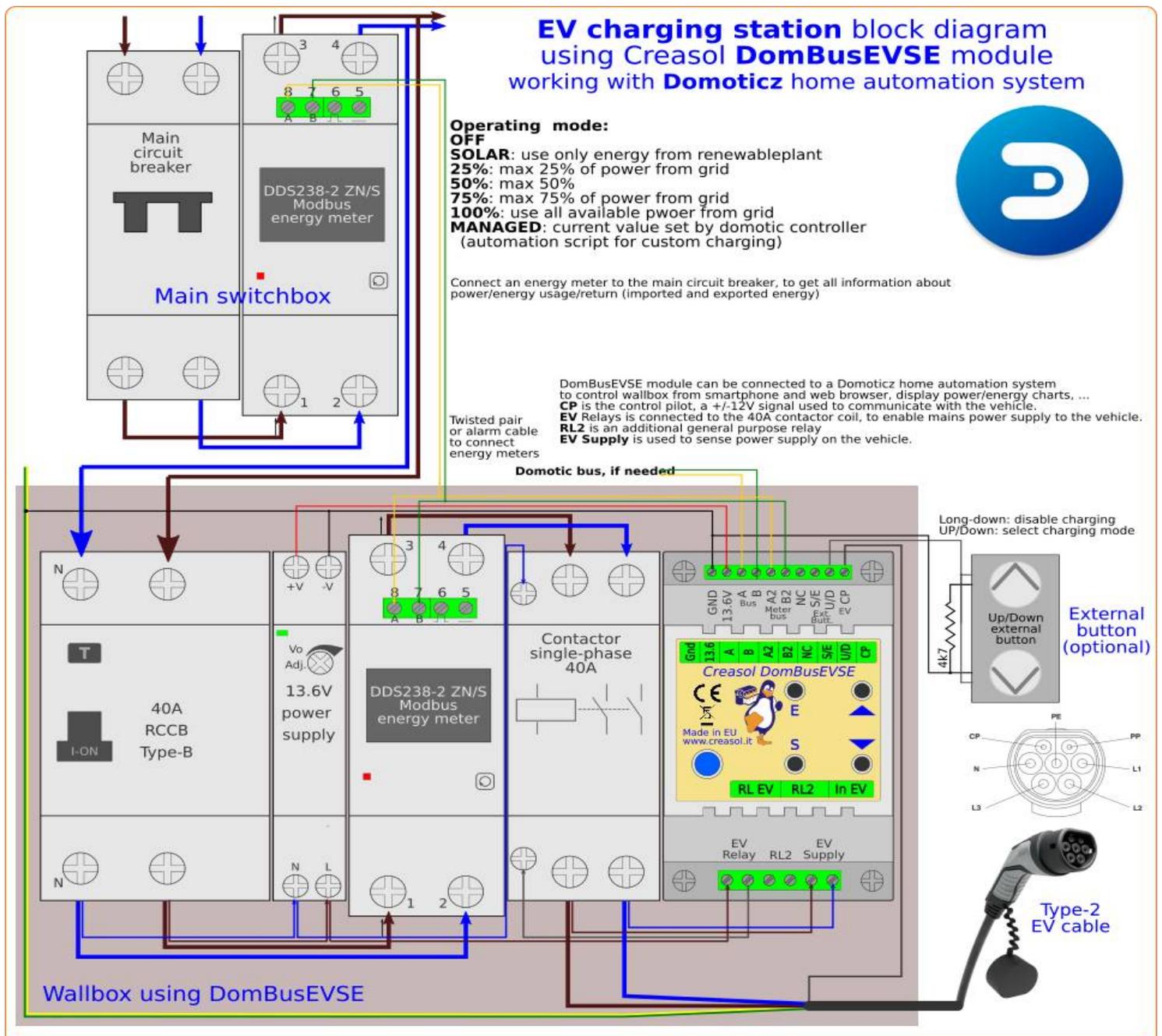
Works with any electric car, AC charging from 1 to 8kW, single phase.

Three-phase version coming soon!

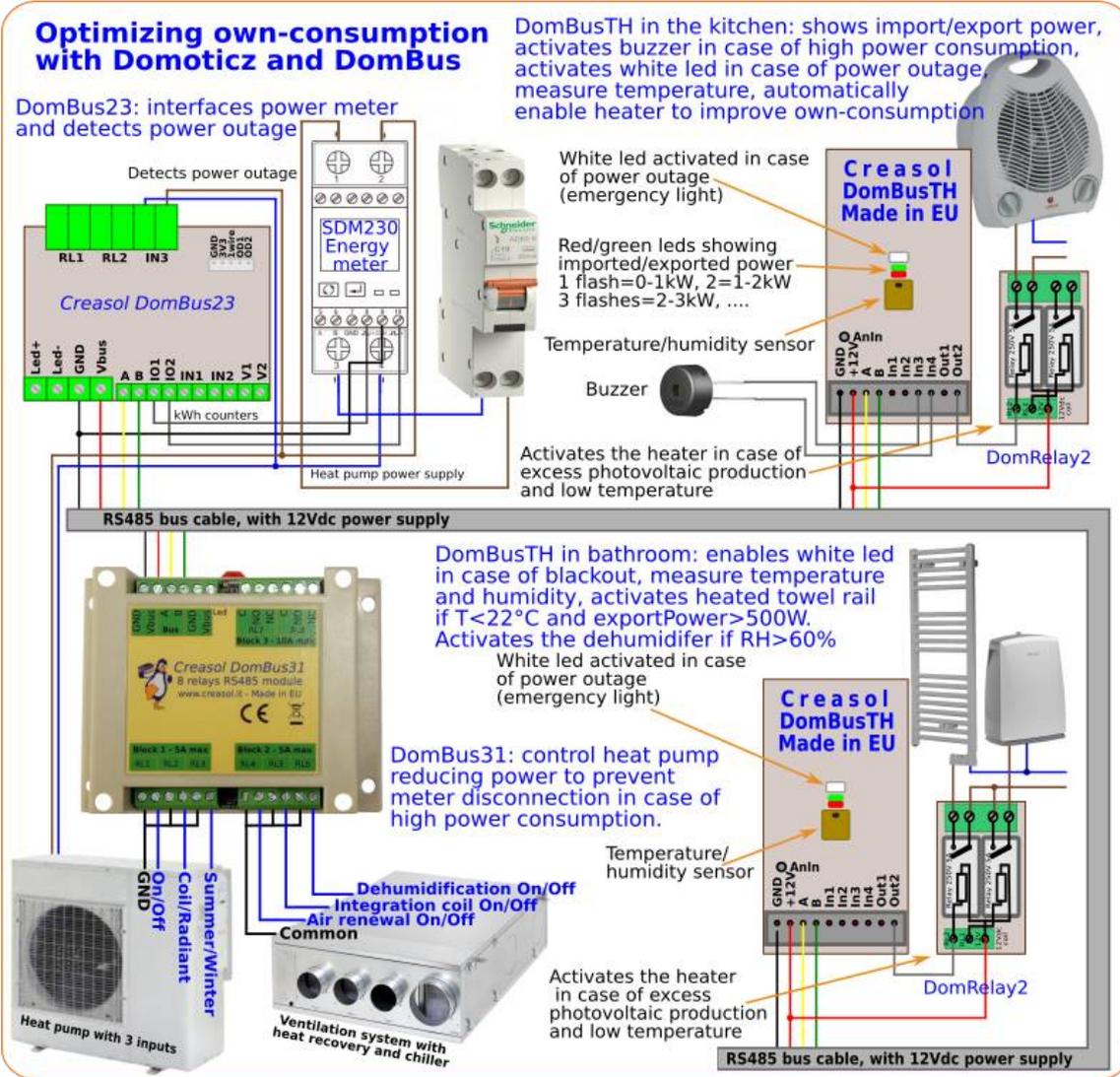
DIN-rail case, 52mm wide, works in **SOLAR mode** (using only renewable power from photovoltaic or wind turbine), or using **25%, 50%, 75% or 100% of grid power.**

Can work in **managed mode** where charging current is set by Domoticz.

Nice charts of the charging energy, distinguishing energy from solar and energy from grid.



Using Domoticz open-source controller + DomBus modules it's possible to measure and manage import/export energy optimizing own-consumption



Scenes

AlarmAway	On	Off
AlarmNight	Burglar alarm state	On Off
AlarmDay		On Off
Timeout_cantina_reset		On

Light/Switch Devices

SIREN_External	On	Off
Display_Lab_12V	Activates Cam display in case of events	On Off
Cancelletto	Pedestrian gate	Unlocked Locked
Irrigazione	Garden watering	On Off
Ricircolo ACS	Hot water recirculation pump	On Off
LightOut1	External lights	On Off
LightOut2		On Off
LightOut3		On Off
Light_Camera	Ventilation+Dehumidification	On Off
VMC_Rinnovo		On Off
VMC_Ricircolo		On Off
VMC_Deumidificazione		On Off
VMC_CaldoFreddo		On Off
VMC_Attenuazione		On Off
HeatPump	Heat pump control	On Off
HeatPump_Fancoil		On Off
HeatPump_FullPower		On Off
HeatPump_Summer		On Off
Valve_Radiant_Coil		On Off
Pranzo_Stufetta	Electric heater	On Off
Dehumidifier_Cantina	Dehumidifiers	On Off
Dehumidifier_Camera		On Off
Bagno_Scaldasalviette	Heated towel rail	On Off
GasHeater	Aux boiler	On Off
Kia eNiro - Socket	Electric vehicle charge	On Off
Garden_Socket	230V socket in the garden	On Off

Temperature Sensors

Temp+humidity on the roof	18.6° C, 62% (Normal)	Dew Point: 11.18° C
Meteo outdoor	21.9° C, 72% (Normal)	Dew Point: 16.62° C
Temp_FluidRadIn	21.3° C	
Temp_Cucina	Some temperatures	22.8° C
Temp_Studio		23.4° C
Temp_Bagno		22.1° C
Temp_Camera		21.3° C
TempRH_Cucina	22.8° C, 62% (Normal)	Dew Point: 15.14° C
TempRH_Cantina	16.9° C, 62% (Normal)	Dew Point: 9.57° C
TempRH_Camera	21.3° C, 65% (Normal)	Dew Point: 14.45° C
Temp_HeatPumpFluidOut	21.2° C	
Temp_HeatPumpFluidIn	19.9° C	

Weather Sensors

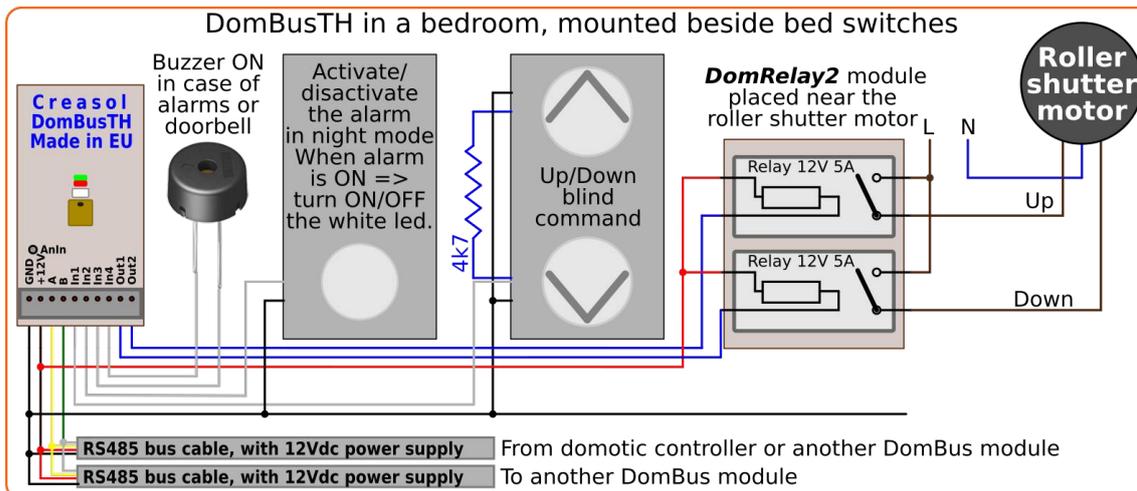
Meteo outdoor	1012 hPa, Prediction: No Info	
Wind	135 SE, Speed: 2.5 m/s, Gust: 3.4 m/s	
Rain	0.0 mm, Rate: 0 mm/h	

Utility Sensors

Water tank level	Irrigation tank	144.1 cm
PV VoltageAC	Electricity values	248.404 V
PV Frequency		50.0038 Hz
Energy/power from photovoltaic		T: 8.100 kWh Actual: 3754.53 Watt
PowerMeter		T: -3.797 kWh Actual: -1813 Watt
PowerMeter Import		T: 1.403 kWh Actual: 0 Watt
PowerMeter Export		T: 4.119 kWh Actual: 1798 Watt
Kia eNiro - Range	Electric vehicle range and battery %	281 km
Kia eNiro - Battery state of charge		57%

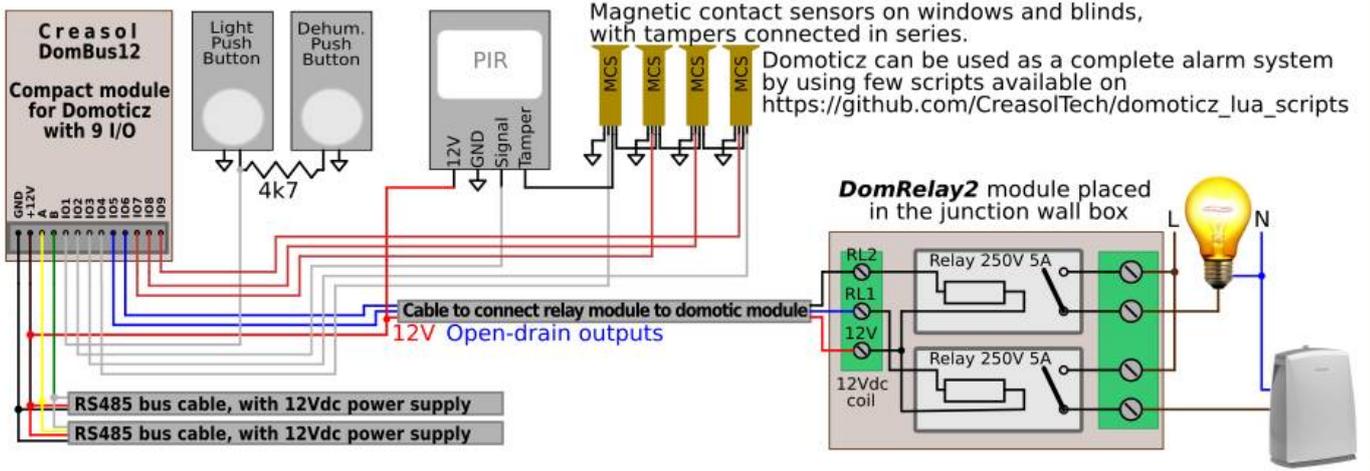
DomBusTH near the bed switches, in the bedroom

- * controls, by a pushbutton switch, the alarm system and white led:
 - short pulse when alarm is off => enable night alarm and turn red Led ON for 2 seconds;
 - short pulse when alarm is on => toggle white Led ON/OFF (smooth night light)
 - long pulse when alarm is on => disable alarm and turn green Led ON for 2 seconds;
- * white Led ON in case of power outage
- * controls, by a double-pushbutton UP/DOWN, the roller shutters: two external relays are needed to drive the roller shutter motor UP/DOWN;
- * buzzer alert in case of intrusion detection (alarm) and in case that someone rings the door bell;
- * measures the room temperature and relative humidity.

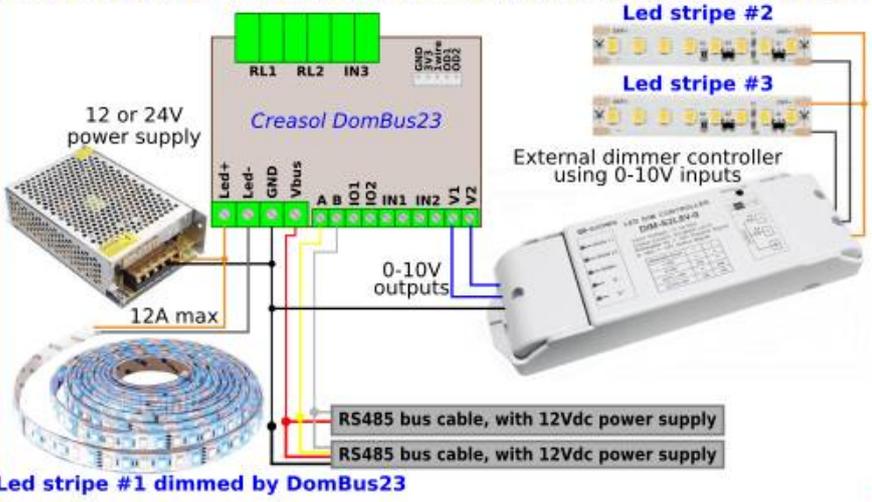


Using DomBus12 to connect 2 loads, 2 buttons, 1 PIR and 4 magnetic contact sensors

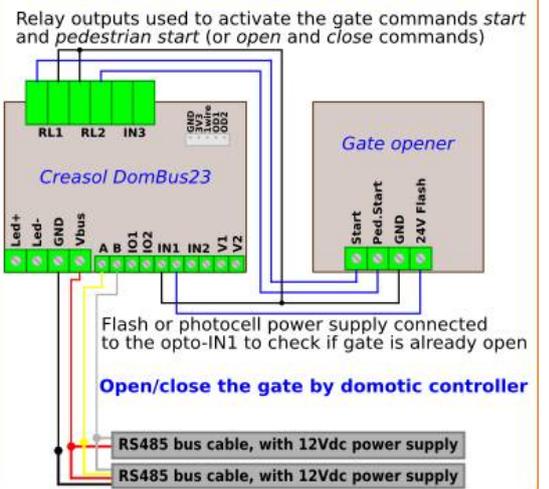
Buttons are connected in "twinbutton" mode: 2 buttons on a single input (normally used for UP/DOWN buttons). The button directly connected to the DomBus input (Light) is managed as DOWN button, the other (Dehum.) as UP button.



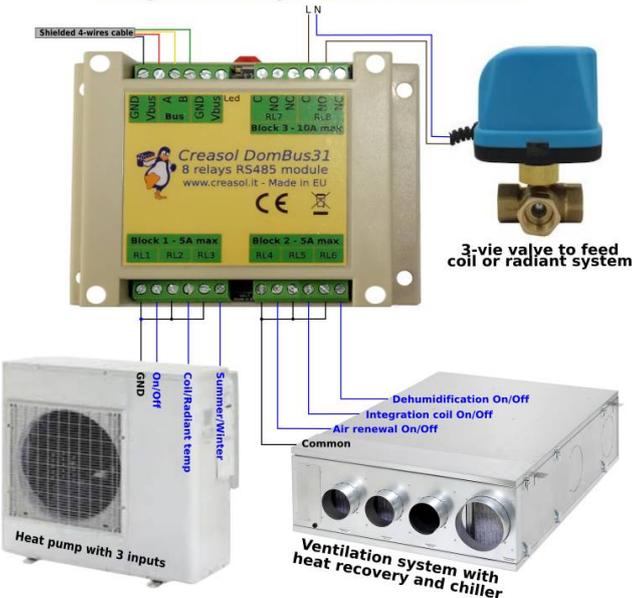
DomBus23 has internal mosfet to drive a led stripe and also can control external dimmer by 2 analog outputs 0-10V



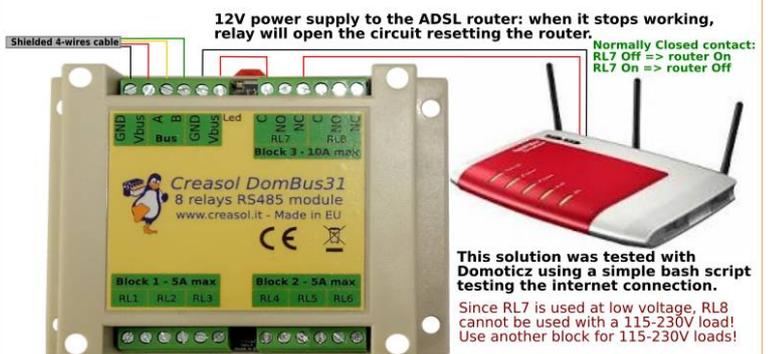
Using DomBus23 to interface the gate/garage door opener



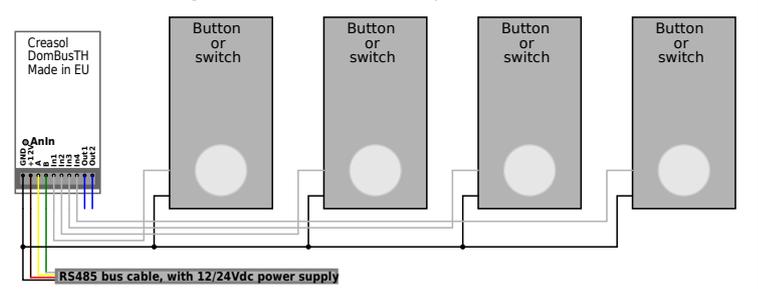
Controlling Heat Pump and Ventilation using the 8-relays module DomBus31



Using DomBus31 + Domoticz to reset ADSL router when internet connection stops working



Connecting DomBusTH to 1 or more pushbuttons or switches



Enter the Telegram group **DomBus!!** <https://t.me/DomBus>



Example2: house with 1 Raspberry + 6x DomBusTH + 3x DomBus12 + 3x DomBus1 + 2x DomBus31 and 1x DomESP1
 Raspbian and Domoticz are free open-source software. Domoticz is a user friendly controller that is fully customizable through LUA scripts, and provides a clear web interface for PC and smartphone, and one app for Android and iOS.
RS485 bus easily connect all devices by a 4 wire cable (data+power supply), cabling up to 1km and avoiding RF pollution.

