

myTEM FT RGBW Modul
MTRGB-100-FT

The myTEM FT RGBW Modul is used for controlling and dimming 4-coloured LED strips or 4-coloured LED bulbs. The programmable behavior allows a flexible use in the house.

The device is intended for installation in a flush-mounted box.

Further information can be found on our website:
www.mytem-smarthome.com/web/en/downloads/



ATTENTION:

This device is not a toy. Please keep it away from children and animals!

Please read the manual before attempting to install the device!

These instructions are part of the product and must remain with the end user.

Warning and safety instructions

WARNING!

This word indicates a hazard with a risk that, if not avoided, can result in death or serious injury. Work on the device must only be carried out by persons with the necessary training or instruction.

CAUTION!

This word warns of possible damage to property.

SAFETY INSTRUCTIONS

- Operate this device only as described in the manual.
- Do not operate this device if it has obvious damage.
- This device shall not be altered, modified or opened.
- This device is intended for use in buildings in a dry, dust-free location.
- This device is intended for installation in a flush-mounted box. After installation, it must not be openly accessible.

DISCLAIMER

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Product description

The myTEM FT RGBW Modul is used for controlling and dimming 4-coloured LED strips or 4-coloured LED bulbs. The LEDs are no longer switched directly via a (possibly existing light) switch, but from the switch a signal is sent to the Smart Server or the Radio Server, which in turn controls the FT RGBW Modul. The programmable behavior allows therefore a flexible use in the house.

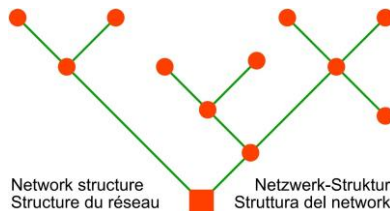
The myTEM FT RGBW Modul must be powered by a 24 VDC power supply and can control a separately supplied 12 VDC or 24 VDC RGBW LED light. The device is intended for installation in a flush-mounted box, e.g. directly behind the lights.

Applications:

- Switching of 4-coloured LED lights
- Dimming of LED lights
- Wiring according to the tree topology. Supply and communication each have four connection points for distribution to other devices. These push-in terminals can be pulled upwards for easy replacement of the device.
- Operation via the central server

Functions:

- Supply voltage device 24 VDC with 4-pole push-in support terminals for further wiring. The device is working properly even if the supply voltage drops down to 10 VDC.
- Four dimmable, electronic MOSFET outputs (R / G / B / W) with 2 A per channel, i.e. 48 W per channel with a 24 VDC LED supply or 24 W per channel with a 12 VDC LED supply.
- Up to 50 FT devices can be connected per CFT bus.
- CFT bus with free wiring according to the tree topology as indicated in the picture below. The total length of the lines can be up to 500 m.



Installation

WARNING! Depending on national safety standards, only authorized and/or trained technicians may be allowed to make electrical installations on the power supply. Please inform yourself about the legal situation before installation.

WARNING! To avoid electrical shock and/or equipment damage, disconnect power to the main fuse or circuit breaker before installation or maintenance. Prevent the fuse from being accidentally switched on again and check that the system is de-energized.

WARNING! The device shall be connected according to the wiring diagram only. Covers of the flush-mounted boxes must comply with relevant safety standards.

WARNING! The electrical installation must be protected with a fuse of max. 10 A.

WARNING! The myTEM FT RGBW Modul should be installed in a flush-mounted box (wall, ceiling) in compliance with relevant national safety standards and with a depth of not less than 60 mm.

CAUTION! The myTEM FT RGBW Modul and the LED lighting should be placed close to each other. The cross-section and cable length of the LED supply should be dimensioned so that the voltage drop is lower than 1 Volt. **A cable with 1.5 mm² should therefore not exceed 5 m in length** in order to be able to use the maximum drive power.

Use a separate LED supply per FT RGBW Modul. To avoid ground loops, do not connect its ground (GND) to the ground of the FT RGBW Modul.

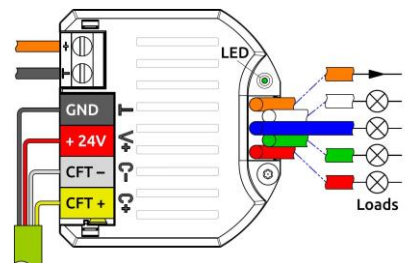
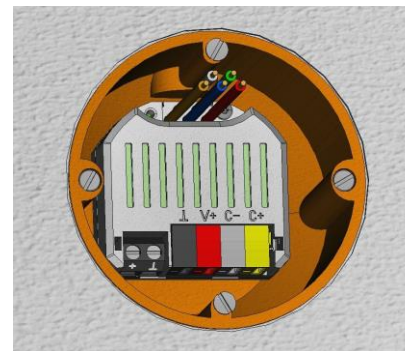
WARNING! The maximum length of the cables on the output side must not exceed 2 m.

WARNING! Maximum loads must not exceed 2 A for each channel.

Please install the device according to the following steps:

- For your safety, switch off the mains voltage (break fuse) during installation. Make sure that wires are not short-circuited during and after installation, as this may damage the device.
- Connect the device according to the circuit diagram from the picture below. Use solid wires (Ø0.8 mm) for supply and communication, stripped by 5 to 6 mm. Insert the conductors until they hit the backstop. Use up to 2.5 mm² wires as LED supply, stripped by 6 mm. Connect the 1.0 mm² strands to your loads via terminals, using the orange strand as power supply for the LED lighting.
- Check the wiring and then push the device into the flush-mounted box.
- Switch on the mains voltage and include the device with the myTEM ProgTool in the server.
- Switch off the mains voltage and fit a cover over the flush-mounted box. When you switch the mains voltage back on again is your device ready.

NOTE! To release a wire from the push-in terminal, hold it firmly and pull it out of the terminal by simultaneously twisting it back and forth.



LED display

The LED next to wires may show the following states:

- LED flash- ing green:** Device is connected to the FT Base Modul and is in normal operating mode
- LED green:** Device gets network configurations from the FT Base Modul
- LED flash- ing blue:** Device is identified using the myTEM ProgTool
- LED flash- ing green and red:** Device started and connected to the FT Base Modul but not yet added to a Smart Server or Radio Server. (Requires an action in myTEM ProgTool.)
- LED red:** Device started but has no connection to the FT Base Modul
- LED off:** Device not powered, not started or broken

Behavior after power failure

After a power failure, all outputs are switched off until the new settings are received from the Smart Server or Radio Server.

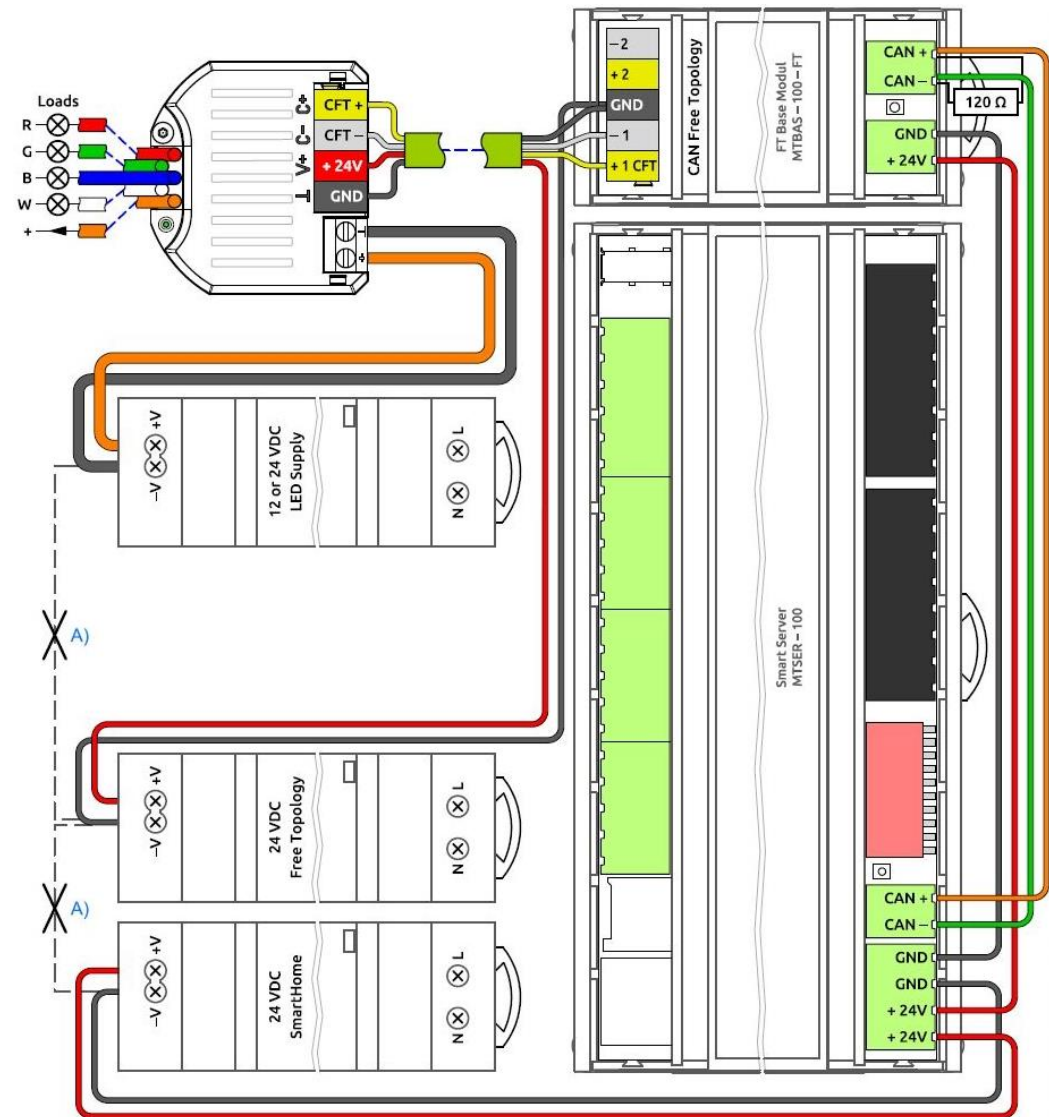
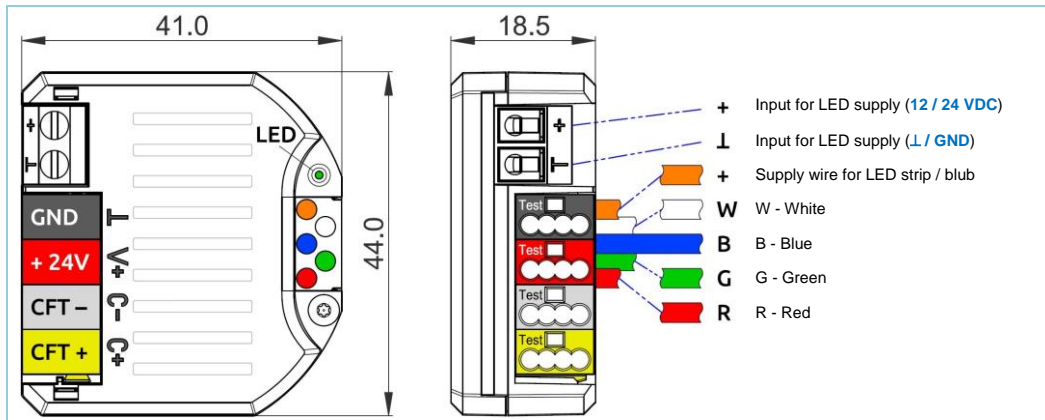
Quick trouble shooting

The following hints may help solving trouble:

- Make sure that the power supply is connected with the correct polarity. With wrong polarity the device does not start.
- Make sure that the voltage has not dropped below the allow operating voltage. The push-in terminals have openings (Test) for test probes.
- If a device cannot establish communication to the myTEM FT Base Modul, check if the CFT bus (C+/C-) is correctly wired and the ground (L / GND) is connected. A missing ground connection can affect the communication.

Technical specifications

Dimensions (W x H x D)	44 x 41 x 18.5 mm	
Installation / mounting	In flush-mounted box (wall, ceiling) $\geq \varnothing 60$ mm, depth ≥ 60 mm	
Operating voltage	24 VDC (The device is working between 10 VDC and 26 VDC)	
Operating voltage for LED output	12 VDC or 24 VDC (to be set according to the LED strip / bulb – attention to cable lengths)	
Power consumption in standby	Continuous operation, therefore no standby operation	
Power consumption in operation	0.1 W (MTRGB-100-FT only, without consumption of external devices)	
Switchable load	Max. 2.0 A per LED channel (48 W per channel with 24 VDC / 24 W per channel with 12 VDC)	
Ambient temperature for operation	0 °C – 40 °C	
Ambient temperature for storage	-20 °C – 60 °C	
Ambient humidity	5 %RH – 85 %RH (non condensing)	
Wire cross-section 4-pole push-in terminals	0.6 mm – 0.8 mm solid, when using identical conductor diameters – 1.0 mm solid	
Stripping length for 4-pole push-in terminals	5.0 mm – 6.0 mm	
Wire cross-section screw terminals	0.34 mm ² – 2.5 mm ² solid / flexible	22 – 14 AWG
Stripping length for screw terminals	6.0 mm \pm 0.5 mm	
Tightening torque for connectors	0.4 Nm	
Wire cross-section fixed conductors	1.00 mm ² WARNING! The fixed conductors can be shortened but cannot be replaced. If they are damaged the device should be discarded.	
Degree of protection provided by enclosure	IP 20 (after installation)	(according to EN 60529)
Protection class	III	(according to EN 60730-1)
Overtoltage category	I	(according to EN 60730-1, resp. EN 60664-1)
Pollution degree	2	(according to EN 60730-1)
Electrical safety	EN 60730-1:2016 + A1:2019	
EMC	EN 60730-1:2016 + A1:2019 EN IEC 61000-6-2:2019	EN 61000-6-3:2007 + A1:2011 / AC:2012
RoHS	EN IEC 63000:2018	
CE conformity	2014/30/EU (EMC)	2011/65/EU (RoHS)



A) The ground is required for reliable communication, but must only be connected at a single point (inside the FT Base Modul the grounds (GND) are connected). If more than one supply or device is used, care must be taken with the connections to avoid ground loops.