

Instruction assembly

FMC920 GATE CONTROL MODULE
v 23.07



WARNINGS

Please read this manual before proceeding with the installation. All connection operations must be performed without the power supply connected. For security reasons, the module should be installed by specialists with appropriate qualifications. It is not allowed to interfere with the structure or carry out independent repairs.

1. LIST OF DEVICES

Gate power	List of devices necessary for assembly:
230V*	<ol style="list-style-type: none"> 1. FMC920 Gate Control Module 2. 12VDC power supply (Mean Well HDR-15-12) 3. Electromagnetic relay RELPOL RM84-2012-35-1012 (socket for RELPOL GZS-80 relay) 4. Kit housing (ELEKTRO-PLAST OH-1B.1) 5. SPAMEL LK\269 limit switch (one or 2 pcs. depending on the user's requirements regarding information on the gate status) - optional
12-24VDC	<ol style="list-style-type: none"> 1. FMC920 Gate Control Module;
12-24VAC*	<ol style="list-style-type: none"> 1. FMC920 Gate Control Module; 2. Electromagnetic relay RELPOL RM84-2012-35-1012 (socket for RELPOL GZS-80 relay) 3. Power converter from 24VAC to 12VDC ACTii AC1628 (optional); 4. Kit housing (ELEKTRO-PLAST OH-1B.1) 5. SPAMEL LK\269 limit switch (one or 2 pcs. depending on the user's requirements regarding information on the gate status) - optional

* no additional devices can be purchased from Treesat except for the FMC920 gate control module.

2. DESCRIPTION

To meet the expectations of the dynamically changing market of mobile services, Treesat Sp. z o. o. created the Click2open product. It allows remote control of home automation from anywhere in the world via smartphone. The Click2open system will open gates, garages, barriers, wickets, vehicles, and all kinds of locks.

The module works with the Click2open application, which can be downloaded for free from the App Store and Google Play. The Click2open application allows you to easily share control with your loved ones, contractors, couriers, etc. The indicated person (via telephone number or e-mail address) is granted access, and the time of access is specified.

3. START-UP

1. Please refer to the user manual .
2. Install the application and register your account .
3. Add your device by entering your device details into the app .
4. Have the device connected by a qualified specialist .
5. Check the operation of the device by reading the behavior of the LED light in the device :
 - LED light blinks every second - normal operation, GSM signal has been stabilized,
 - LED light flashes quickly for a short time - GSM is sending data to the server,
 - Continuous blinking of the diode - the device is being updated,

- The LED light is off – the GSM modem is faulty.
- 6. The device is ready for operation - check the possibility of controlling the gate in the application.
- 7. Contact an employee via the hotline who will verify the correctness of the assembly (and will provide a verification code to be entered in the assembly report)



4. ASSEMBLY OF THE DEVICE



Attention! We mount the FMC920 module away from metal elements, sideways printed on the outside of the housing.

TECHNICAL SPECIFICATION of the FMC920 module

- 2G/4G: B2, B3, B5, B7, B8, B20,
- LTE Cat 1
- 1 gate control output
- 2 gate position inputs
- Internal high-gain GSM antenna
- Internal high-gain GNSS antenna
- 2 device status LEDs
- Power supply 10-30VDC ~250mA
- Integrated 170 mAh Li-Ion backup battery
- Operating temperature: -40 °C to +40 °C
- Humidity: 5% to 95%
- Dimensions: L(79mm) x W(43mm) x H(12mm)
- IP54

Leads FMC920 :

Color	Destiny	Installation tips
Red	Powering the device	Connect to a permanent power supply of 6-30VDC 1A
Black	Device weight	Connect to ground
Yellow	DIN1	Gate open signal (0-30V, high detected)
Gray	AIN1	Closed gate signal (0-30V, high detected)
White	DOUT1	Gate control signal (ground control, NO output)



Before installation, check the supply voltage available in the gate controller, it is possible that you will need additional accessories that are not included with the device!

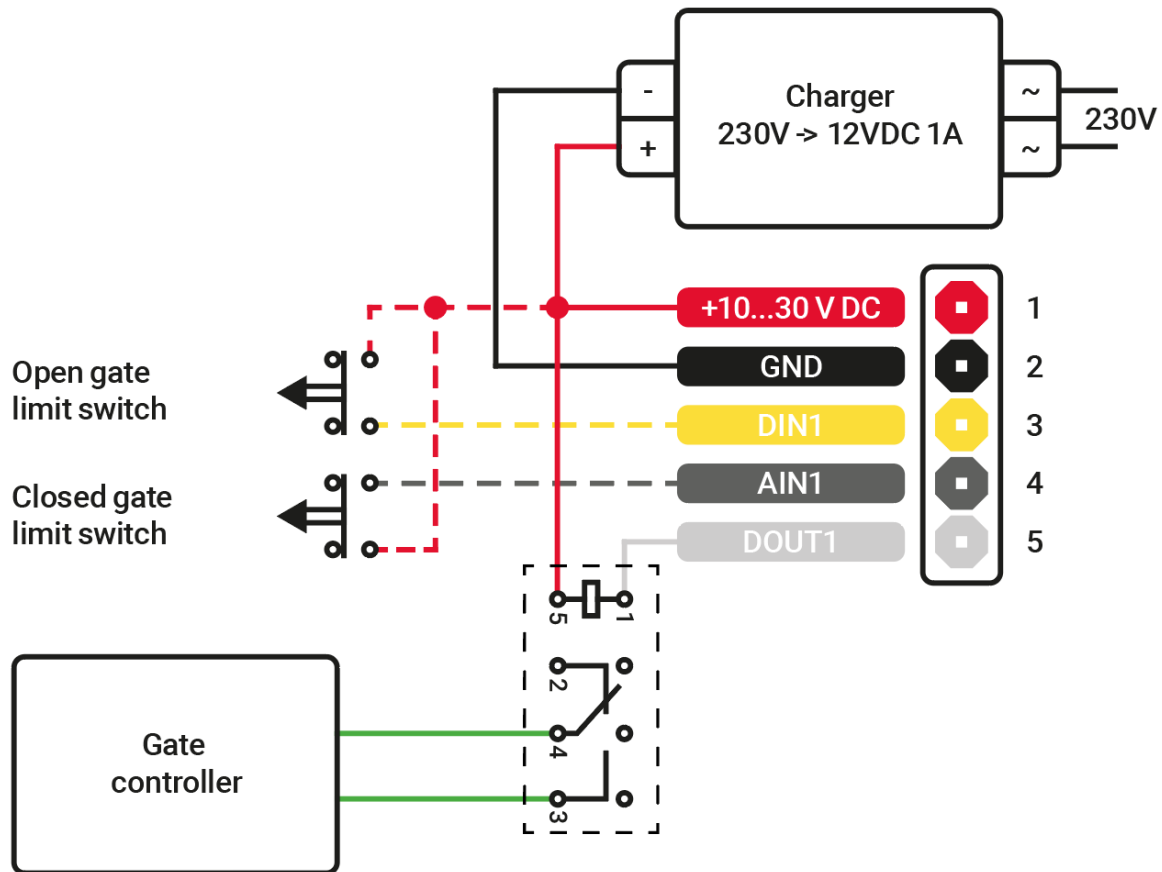
The FMC920 module can be connected to the controlled device in 3 ways:

- A. Using an additional 230V 1.25A power supply and an additional control relay - the preferred method is completely isolated from the controlled device,
- B. If we do not have 230V available, and 24VAC is available, then using a 24VAC->12VDC voltage converter and an additional control relay,
- C. If we do not have 230V available and the controlled device is powered by 12-24VDC, we can connect it directly (without a power supply/converter and an additional relay).

For each type of installation, we suggest setting the option of automatic closing of the gate after a certain time!

4A. BASIC CONNECTION DIAGRAM, WHEREVER 230V VOLTAGE IS AVAILABLE

This connection scheme requires additional devices (12V power supply and gate opener relay, possibly optional status switches) which are not included in the kit. The diagram below shows the preferred connection of the Click2open FMC920 module to the gate control panel.



In the case of gate control only, it is required to connect the relay shown in the diagram above (not included in the set).

The dotted lines indicate the possibility of obtaining optional information about the position of the gate (open, moving and closed) - this option requires additional limit switches that are not included in the set.

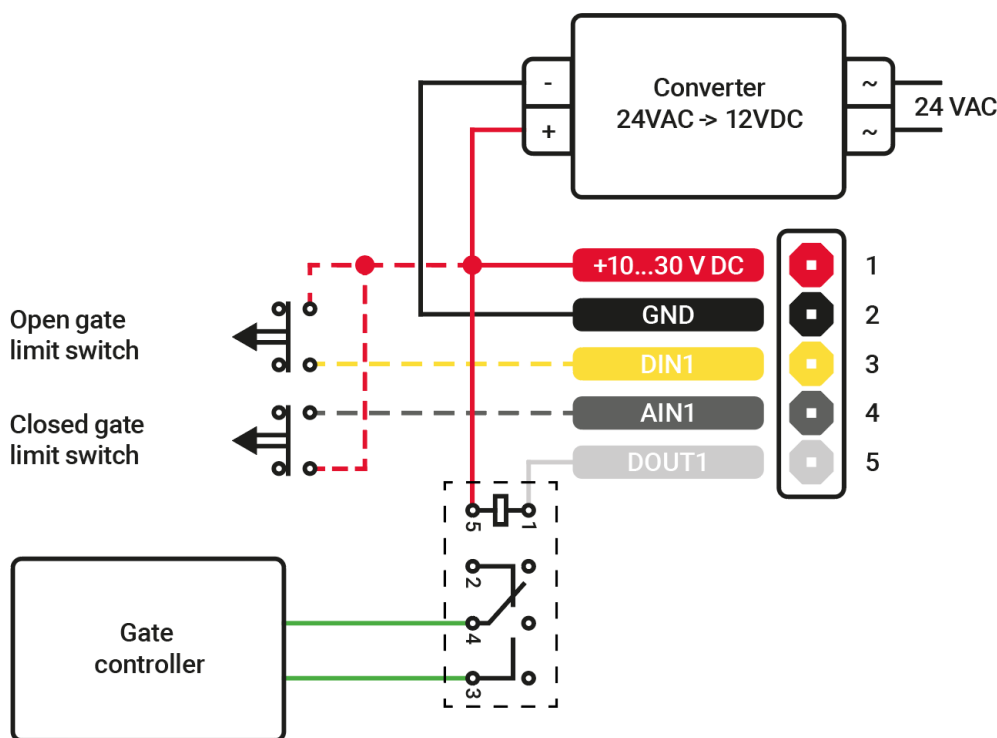
Connect the closed gate limit switch to the gray FMC920 wire, and connect the open gate limit switch to the yellow FMC920 wire. We can also connect only one signal, e.g. a closed gate - in this case we lose information about the gate movement, which will be displayed as an open gate.

After installation, provide information about whether both limit sensors are connected (if one, which one) to the person adding the device in the application in order to properly set the limit switch options. In the application, it is possible to negate the signals from the limit switches if an incorrect gate status is displayed.

4B . _ EXAMPLE DIAGRAM CONNECTION IF WE DO NOT HAVE 230V AVAILABLE AND 12-24VAC IS AVAILABLE

This connection scheme requires additional devices (12VAC-24VAC to 12VDC Converter and gate opener relay, possibly optional status relays) which are not included in the kit.

The diagram below shows an example of connecting the Click2open module (FMC920) with the gate control panel, only if there is no 230V voltage available and the controller has an output for 12VAC-24VAC accessories.



Before connecting the converter, make sure that the available power supply for the accessories in the gateway has the appropriate current capacity for the FMC920 and the gate control relay.

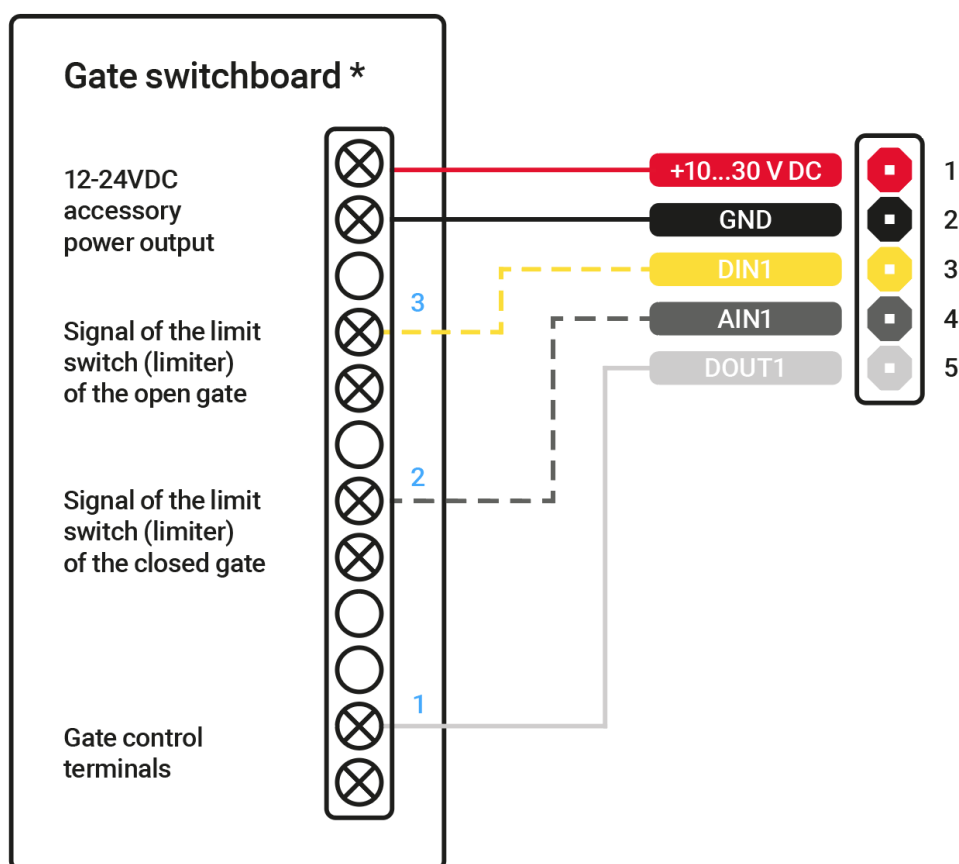
The dotted lines indicate the possibility of obtaining optional information about the position of the gate (open, moving and closed) - this option requires additional limit switches that are not included in the set.

Connect the closed gate limit switch to the grey FMC920 wire, and connect the open gate limit switch to the yellow FMC920 wire. We can also connect only one signal, e.g. a closed gate - in this case we lose information about the gate movement, which will be displayed as an open gate.

After installation, provide information about whether both limit sensors are connected (if one, which one) to the person adding the device in the application in order to properly set the limit switch options. In the application, it is possible to negate the signals from the limit switches if an incorrect gate status is displayed.

4C. EXAMPLE OF CONNECTION DIAGRAM IF 230V VOLTAGE IS NOT AVAILABLE AND 12-24VDC IS AVAILABLE

Attention! Connection does not require any additional accessories. The FMC920 is connected directly to the gate controller.



Before connecting, check whether the accessory power supply output has sufficient current capacity (min. 12VDC 250mA). The White wire should be connected to the gate control terminal (1). Optional features are marked with dashed lines. They make it possible to obtain information about the state of the gate position (open, in motion and closed). These functions require connection in accordance with the above diagram, signals from the gate limiters, sometimes signaling lamps or adding additional limit switches if in the gate control panel they are not led

out to the connection strip. We connect the signal to the gray wire of FMC920 when the gate is closed, and to the yellow wire of FMC920 we connect the signal when the gate is open.

After installation, provide information about whether both limit sensors are connected (if one, which one) to the person adding the device in the application in order to properly set the limit switch options. In the application, it is possible to negate the signals from the limit switches if an incorrect gate status is displayed.

5. APPLICATION

Click2open App Download

The Click2open application for Google Android can be downloaded from the Google Play store, and for Apple iOS - from the Apple iTunes Store. Using the appropriate reader on your phone, use the link in the QR code. The selection page will open.



Requirements

For the correct operation of the application, a mobile device (smartphone, tablet) with the Google Android operating system version 6.0 or higher or an Apple mobile device with the Apple iOS operating system version 11 or higher is required.

6. EXAMPLES OF CONTROL TERMINAL DESIGNATIONS OF POPULAR GATE AUTOMATION MANUFACTURERS

Producer	Gate control terminals*	Gate status information terminals (closed/open)
Nice ROX600	"9" and "13"	Additional optional limit switches
Came BX-74	"2" and "7"	Additional optional limit switches
Beninca Bull 5	"COM" and "PP"	Additional optional limit switches
Faac 740	"Open A" and "-"	Additional optional limit switches
Electrobeam KSE180	"9" and "5"	Additional optional limit switches
Life RG DL	"6" and "10"	Additional optional limit switches
BFT DEIMOS BT MA	"OPEN" and "COM"	Additional optional limit switches
Summer Starter+	"2" and "3"	Additional optional limit switches
Wiśniowski AWSO2018	"OPEN" and "GND"	Additional optional limit switches

* The information presented above regarding the gate control terminals are only indicative data and require verification with the installation manual provided by the manufacturer of the automatic machine. Treesat is not responsible for damage caused in case of incorrect connection of the device.

7. MARKINGS

Treesat Sp. z o. o. has used all the possibilities available to provide the most up-to-date information about its products. Treesat Sp. z o. o. makes no warranties related to the content of this manual and disclaims any implied warranties regarding its market value or suitability for specific purposes. The information contained herein serves as guidance for the use of the device. Treesat Sp. z o. o. reserves the right to make corrections, changes or translations of the User's Manual without prior notification of such changes. It is therefore recommended that you visit our website regularly for the latest information.

Treesat Sp. z o. o. is not liable for damages resulting from improper use of the Click2open system and incorrect installation of the control module. Before installing the device, check whether the gate manufacturer allows the installation of external devices. The warranty for additional accessories (such as power supplies, handles, cables) and expendable (non-rechargeable) batteries and accumulators is 6 months for both consumers and traders from the date of purchase.

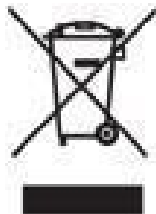
After the expiry of any annual package, the user must purchase a new package within 30 days via the application or panel. If the package is not purchased, the SIM card is deactivated. Reactivation of the device will involve the user incurring the costs of SIM replacement and its reactivation.



Warning risk of electric shock - do not open. This inscription warns against opening the receiver housing. Only authorized service personnel are allowed to open the housing.



CE mark. This marking informs that the device complies with the provisions of Directive 2004/108/EC concerning the observance of electromagnetic compatibility regulations by Member States and the conditions of Directives 2006/95/EC concerning compliance with low voltage regulations and safety related to the operation of electrical equipment by Member States.



The symbol of the crossed-out waste bin attached to the product means that the product is covered by the European Directive 2002/96/EC. Information on separate collection points for waste electrical and electronic products can be obtained from the place of residence. Please follow the guidelines of your local authorities and do not dispose of this type of equipment with other household waste. The correct disposal of your old products helps prevent environmental pollution and loss of health.



If this logo is found on the product, it means that the fees related to the appropriate recycling and recovery system have been paid.



This logo informs that the device is compliant with the terms of Directive 2011/65/EU (commonly known as the Restriction of Hazardous Substances Directive or RoHS). The RoHS directive covers restrictions at the production stage in the introduction of hazardous substances in electronics.