GASTOP®

CONTROL MODULE **MAGTRONIC**

ZABR3 / ZA2AL / BR2AL

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CONTROLLER SOFTWARE

Device's control logic is controlled by the device manufacturer's software. The manufacturer grants licence to using the software only in cooperation with the purchased device and in order to control it. The abovementioned licence is granted by the

manufacturer for products purchased at the authorised distributors only. The licence is granted for:

1. The time of one month from the devices sales date (on the base of a trade credit).
2. An indefinite time - after the payment for the device has been made.

Changes or modifications to the software of whatever kind may be introduced by a detailed and written consent of the device manufacturer only. Making changes or modifications to the software without the manufacturer's consent are not covered by the licence regarding using the software. The manufacturer bears no responsibility for proper and safe operation of the device if changes of whatever kind have been made to the device's controlling software, without the device manufacturer's consent.

The manufacturer reserves the right to introduce changes or updates to the software. To obtain terms and manners of the software update, it is advised to contact our Sales Department. All devices are supplied with a stored standard software described in the manual herein. If a need to make changes of whatever kind to the device's software occurs, it is advised to contact the manufacturer's Sales Department. A software carrier is the device's control logic.

TECHNICAL DATA

Supply power	24VDC
Storage humidity	10 - 90 %RH
Storage temperature	-40 - 85 °C
Operation humidity	10 - 90 %RH
Operation temperature	-20 - 70 °C
Power output load	max 120W
Fuse	5A

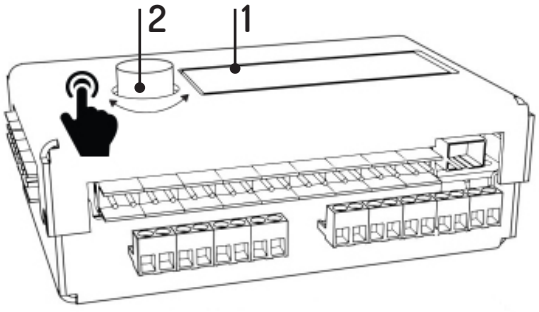
- Module's input signals- Short circuit to ground of an appropriate input pin with potential of 5V. Duration should be MIN: 0.2s, MAX: 1s.
- Module's output signals- Relay signals. Depending on which pair of pins is used, output signals can be normal opened or normal closed. Duration of the output signal can be configured in the driver's menu.

GLOBAL FUNCTIONS

Global functions are functions that are common to all types of devices. Functions specific to a given device series are described in sections referring to a particular series of devices

NAVIGATION

Use the rotary encoder to navigate through the menu. Turn it left or right to switch between menu positions. Press the encoder to enter the submenu or edit settings values.



1. Display	2. Encoder

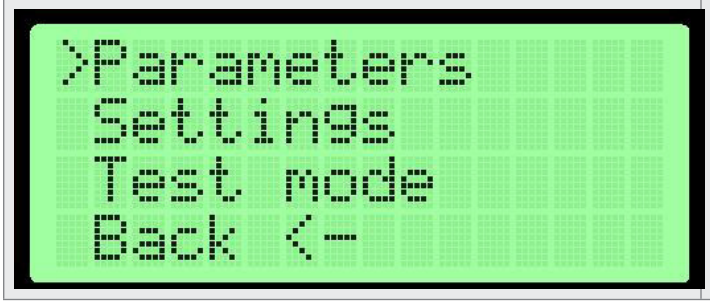
MAIN SCREEN

The main led screen is displayed when the power supply is on. On the left, the queue status is displayed (Q0 – queue for left direction, Q1 – queue for right direction). Errors are displayed in the upper right corner. Possible errors are:

- Enc_error – encoder error, not connected or damaged
- Lic_error – inactive license
- Default_sett – memory read incorrectly – factory settings loaded

In the bottom right corner the current version of software is displayed.
Press the encoder to continue to the main menu.

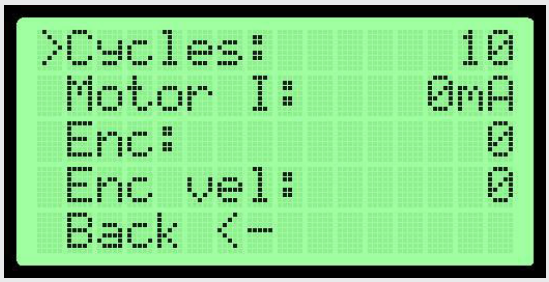
MAIN MENU



Currently chosen position is pointed by an arrow. Pressing the encoder confirms the choice.
Main menu positions:

- Parameters – current parameters preview
- Settings – configuration of the device
- Test mode
- Back – return to the main screen

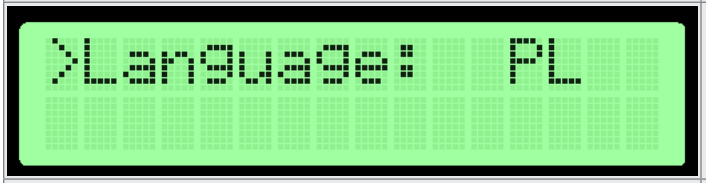
PARAMETERS MENU



Items displayed in the parameters menu:

- Cycles – quantity of cycles completed by the device
- Motor I – motor measured current value
- Enc – the position of the rotor encoder
- Vel – current velocity of the rotor
- Back – return to the main menu

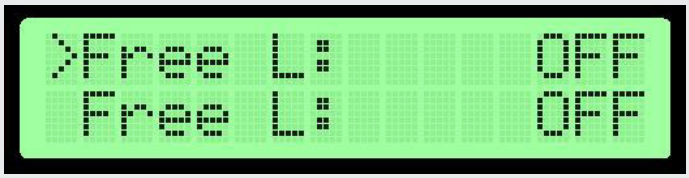
SETTINGS MENU



Language configuration

Choose the interface language.

Default setting: PL



Free entrance function

Set the free entrance in desired direction. Possible settings:

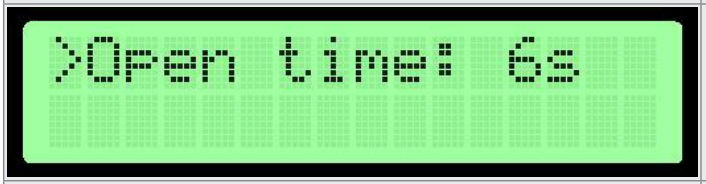
- OFF – free entrance off. Passage possible only after receiving an external signal.
- ON – free entrance on. Device is unlocked in the desired direction

Default setting: OFF

Queue size

Queue length is the maximum number of release signals sent at short intervals that can be stored in the device's memory.
Values to choose from: 1-99

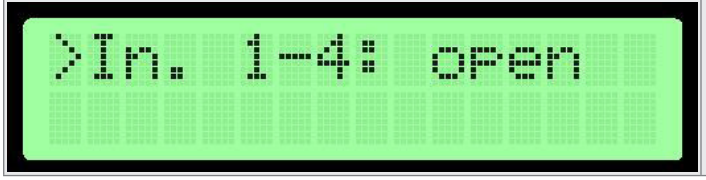
Default setting: 3



Opening time

The time is counted from the moment of receiving the release signal. After the expiration of the time the passage is blocked again.
Possible values to choose from: 3-60 seconds.

Default settings: 6s

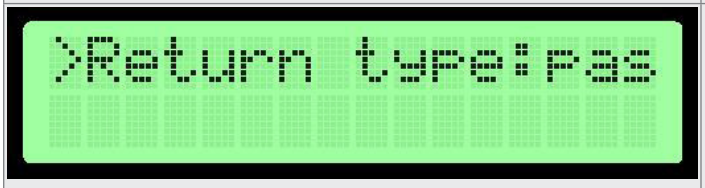
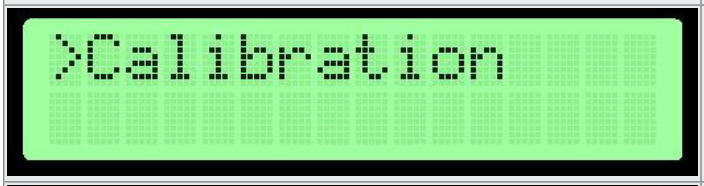
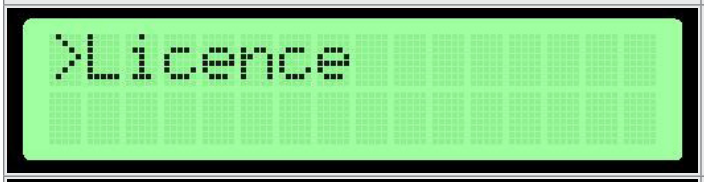
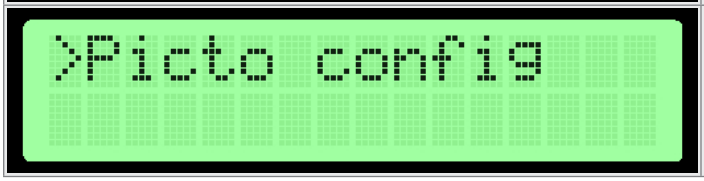


Input signals configuration

In. 1-4 setting defines the function of IN 1-2 and IN 3-4 inputs. Possible configurations:

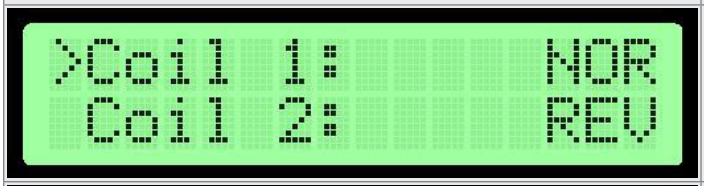
- open – short circuit results in releasing the rotor blockade
- free – short circuit triggers the free entrance function
- lock - short circuit results in blocking the external signals

Default setting: open

SETTINGS MENU	
	Feedback signal type This setting defines the type of feedback signal emitted by the device. Possible configurations: • OPN/REC - a feedback signal is sent immediately after the passage is unlocked • CLS/END - a feedback signal is sent after the passage is locked • PAS - a feedback signal is sent after a correct passage detection in a given direction • STR - a feedback signal is sent after initiating the rotor's movement
	Feedback signal duration Values to choose from: 0,5 – 1,5 s. Default setting: 0.8s
	Position zero Selecting the Zero config option triggers the position zero configuration mode. This mode, along with the calibration mode is described in the sections below.
	Calibration Calibration submenu allows to set the engine movement necessary parameters. They are described in the following points. This option is not available in gates of the following series: GA, BASIC
	License This menu allows you to insert the license key to unlock the license. Submitting an incorrect key results in a temporary blockade of this menu item.
	Pictograms configuration Pictograms configuration submenu allows to configure information pictograms. It is described in the following points.

PICTOGRAMS CONFIGURATION	
	When you enter the pictograms configuration menu, you can choose two options:: • Standard - standard pictograms • RGB - gives a possibility to choose from amongst 16 pictogram option signaling an open passage (for the left and right side separately) and from amongst 4 pictogram options signaling a closed passage (for the left and right side)

SETTINGS MENU



Coils type

There are two options for each coil:

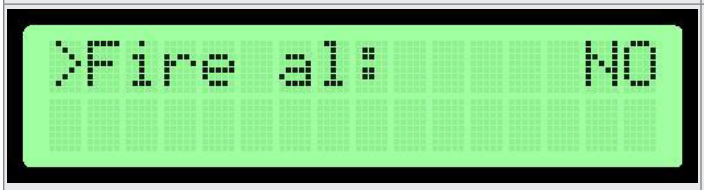
- NOR – normal coil, during power failure the rotor stays blocked.
- REV – reverse coil, during power failure the rotor stays unblocked

Default setting: NOR

Rotor speed

This setting defines the power of the engine that supports the movement of the rotor.
Possible values to choose from: 1-9

Default setting: 5
This option is not available in GA and BASIC series gates.

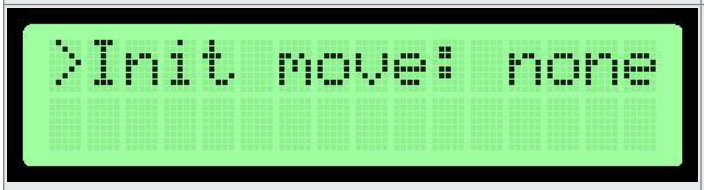


Fire alarm signal function

Fire alarm signal can function in normal closed mode or normal opened mode.

- NO – normal opened
- NC – normal closed

Default setting: NO



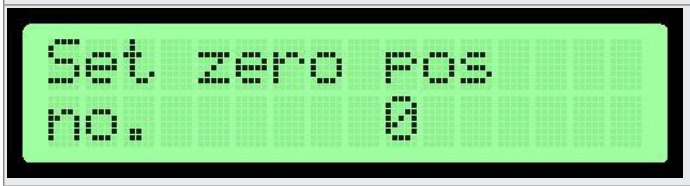
Initiating movement

This setting defines if the device should perform the initiating move.
Possible configurations:

- L – movement in the left direction
- R – movement in the right direction
- none - no initiating movement

Default setting: none
This option is not available in GA and BASIC series gates.

ZERO POSITION CONFIGURATION



After entering the configuration mode, set each of the arms in blocked position. Each of the three positions has to be confirmed by pressing the encoder. Display shows the number of zero position which is currently being modified (0, 1 or 2).

After all three zero positions are set, the display shows saved values. If the values are correct, "OK" message is displayed. If the values are not correct, "Error" message is displayed. This means that the values of zero positions are not saved and the procedure shall be repeated. Regardless of the result of the configuration, after pressing the encoder, settings menu will be displayed.
To save changes, choose the Save & Exit option.

CALIBRATION

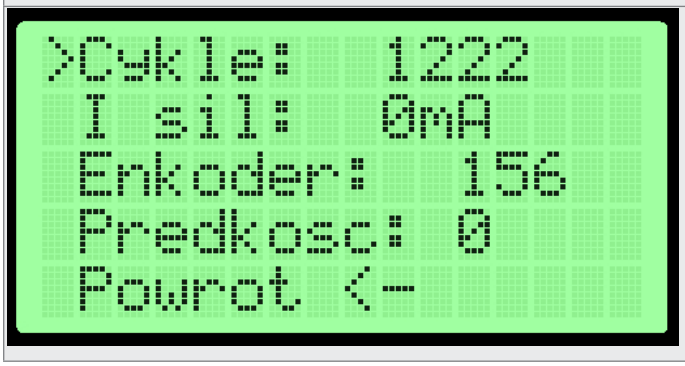
After choosing the calibration option in the bottom row of the screen the rotor speed is shown. The controller will try to slowly move the device's motor to identify it's parameters.

Notice: During the calibration nothing shall interrupt the rotor's movement. Otherwise the procedure has to be repeated.

This option is not available in GA and BASIC series gates.

After the calibration procedure is finished, the identified parameters are displayed. After pressing the encoder, controller returns to the Settings menu.
To save changes, choose the Save & Exit option.

This option is not available in GA and BASIC series gates.

TEST MODE	
	In the test mode the device is working independently. It performs 5 cycles alternately in both directions. During the test, all the mechanisms connected to the controller are being used. Work parameters are shown on the screen. To cancel the test mode choose Back option. In devices of the BA3, BR2 and GA series the mode is used only in devices equipped in the rotor's movement support system.

CAUTION!

While starting the test mode no person can be found within the device moving elements range.

CONTROL DEVICE INPUTS AND OUTPUTS

Feedback signal indicates the detection of pedestrian passage (arm rotation) through the device in the selected direction (Entry or Exit). Terminal 13, 16 – NO, Terminals 14, 17 – COM, Terminals 15, 18 – NC.

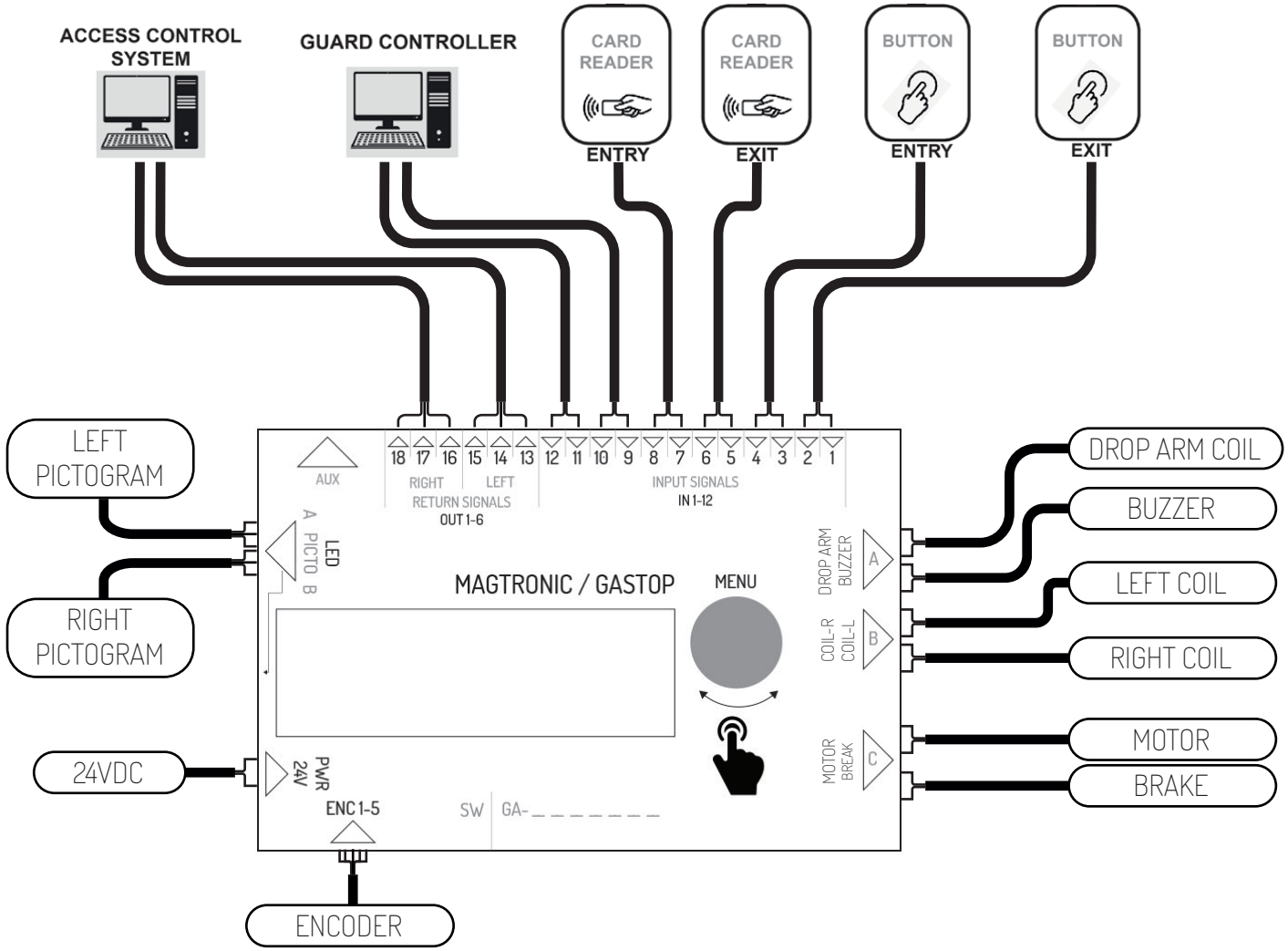
Connection of blocking signals (the gate remains locked for as long as the signal is applied) – inputs 11 and 12. The signal has priority over inputs 1 to 8.
Connection of free passage signals (the gate remains unlocked for as long as the signal is applied; pedestrians can pass through the passage section without access control) – inputs 9 and 10. The signal has priority over all other inputs.

Signal input connector for passage authorization in the entry direction. Inputs 7 and 8 – authorization is granted by short-circuiting the connector terminals.

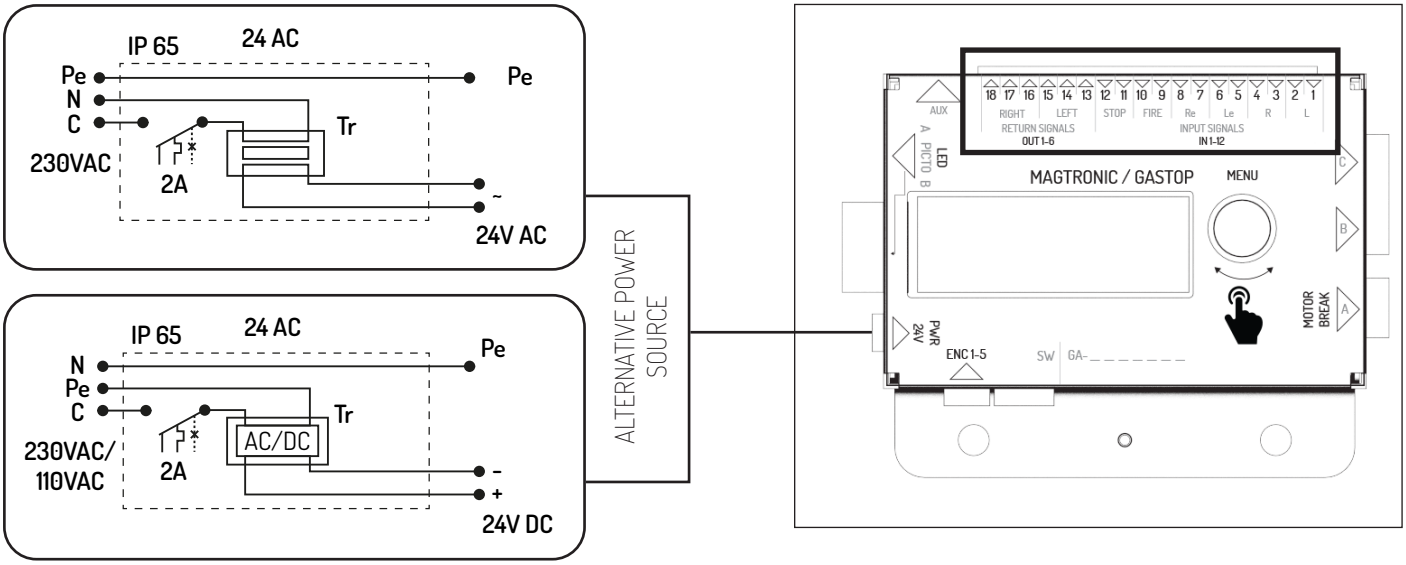
Signal input connector for passage authorization in the exit direction. Inputs 5 and 6 – authorization is granted by short-circuiting the connector terminals.

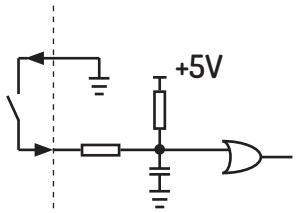
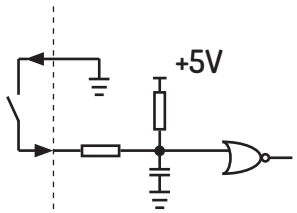
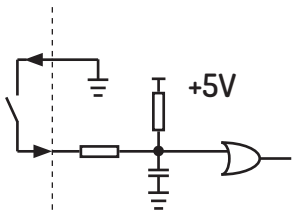
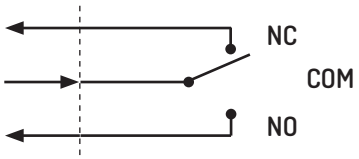
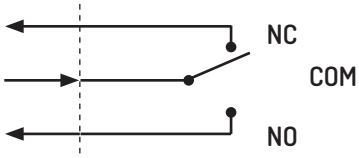
External signal input connector for the entry direction. Inputs 3 and 4 – the signal is triggered by short-circuiting the terminals. The function of this input can be configured via the controller menu. By default, it is configured as a passage authorization signal.

External signal input connector for the exit direction. Inputs 1 and 2 – the signal is triggered by short-circuiting the terminals. The function of this input can be configured via the controller menu. By default, it is configured as a passage authorization signal.



DETAILED DESCRIPTION OF INPUTS AND OUTPUTS FOR CONTROL DEVICES



	PIN	DESCRIPTION	ELECTRICAL INFO	CONTROL SCHEME
INPUTS	1	LEFT DIRECTION - INPUT	Imax = 1mA	
	2	GND	TTL Hi/Low	
	3	RIGHT DIRECTION	Imax = 1mA	
	4	GND	TTL Hi/Low	
	5	LE	Imax = 1mA	
	6	GND	TTL Hi/Low	
	7	RE	Imax = 1mA	
	8	GND	TTL Hi/Low	
	9	FIRE	Imax = 1mA	
	10	GND	TTL Hi/Low	
	11	STOP	Imax = 1mA	
	12	GND	TTL Hi/Low	
OUTPUTS	13	LEFT RETURN - OUTPUT NO	Imax = 0,5A	
	14	LEFT RETURN - OUTPUT COM	Imax = 0,5A	
	15	LEFT RETURN - OUTPUT NC	Imax = 0,5A	
	16	RIGHT RETURN - OUTPUT NO	Imax = 0,5A	
	17	RIGHT RETURN - OUTPUT COM	Imax = 0,5A	
	18	RIGHT RETURN - OUTPUT NC	Imax = 0,5A	