

531R CONTROL UNIT

These instructions apply to control unit:
531R

The 531R control unit (Fig. 1), installed on 531R and 531K operators, has an integrated receiver (433 MHz) to command, by remote control, the opening and closing of the automated system, and does not require any outside radio receivers.

1. 531R CONTROL BOARD

1.1. TECHNICAL SPECIFICATIONS

Power supply voltage	230 Vac. (+6% -10%) - 50 Hz
Power supply for accessories	24 Vdc.
Max load for accessories	200 mA.
Operating temperature	-20 °C + 55 °C
Fuses	F1, F2, (Table 1)
Function logics	Automatic / Semiautomatic
Terminal board inputs	OPEN/STOP/SAFETY DEVICES/FAIL-SAFE
Courtesy light timer	2 min.
Radio frequency systems	433 HMz with hopping code

1.2. PARTS OF 531R BOARD (Table 1)

F1	Fuse 5x20 rapid 10 A./250 V. (motor protection)
F2	Restorable fuse (accessories)
J1	Low voltage terminal board for inputs/accessories
J3	Terminal board for 230 Vac power input
J4	Connector for transformer primary winding
J5	Courtesy light connector
J7	Connector for transformer secondary winding
J8	Motor output connector
J10	Connector for external antenna
P1	OPEN push-button
P2	SET-UP push-button
DS1	Programming dip-switches
LD1	OPEN input status LED
LD2	STOP input status LED
LD3	FSW input status LED

1.3. DESCRIPTION

1.3.1. Terminal boards and connectors

TERMINAL BOARD J1 (low voltage)

OPEN= Open command (N.O.)

Any device (push-button, etc.) which, by closing a contact, supplies an opening (or closing) pulse to the door.

To install several Open devices, connect N.O. contacts in parallel.

STOP= Stop command (N.C.)

Any device (e.g. a push-button) which, by opening a contact, stops movement of the door.

To install several stop devices, connect the N.C. contacts in series.

N.B.: if stop devices are not used, jumper connect STOP to the inputs common contact.

⊖ = Inputs common contact/accessories supply negative pole.

⊕ = Accessories supply positive pole (24Vdc 200mA max)

FSW = Closing safety-devices contact (N.C.)

Safety devices are all devices (photocells, sensitive edges, ...) with N.C. contact, which, if there is an obstacle in the area they protect, operate to reverse door closing movement.

If the safety devices are activated when the door is locked or open, they prevent it from closing.

To install several safety devices, connect the N.C. contacts in

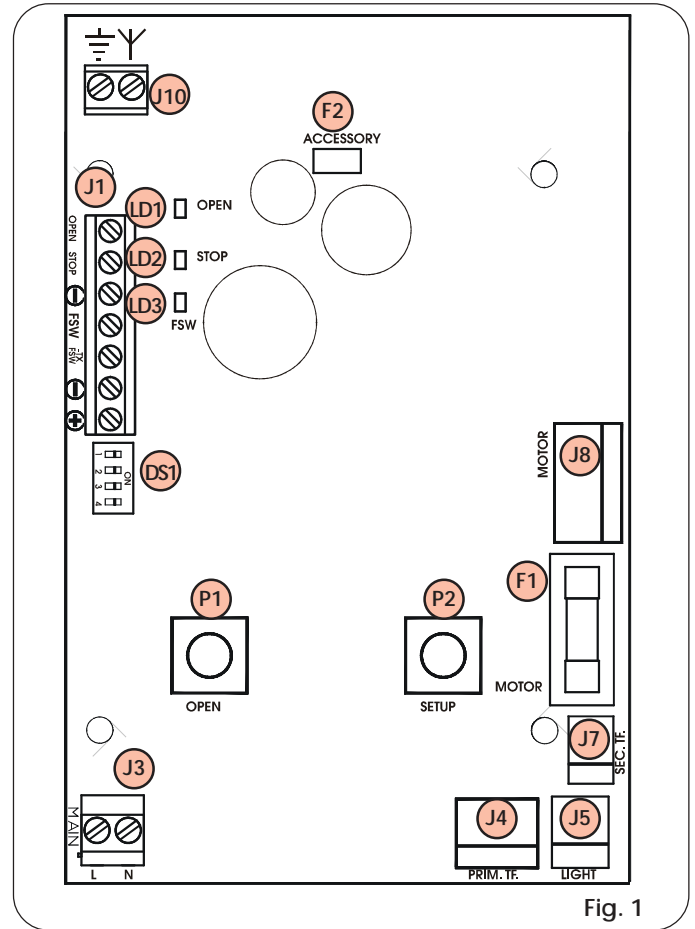


Fig. 1

series.

N.B.: if no safety devices are connected, jumper connect FSW to the -TX FSW terminal

-TX FSW= Terminal for connection of the negative pole (-) of the photocell transmitter (TX).

J3 TERMINAL BOARD (high voltage)

Terminal board for connecting 230Vac 50Hz power supply.

J10 TERMINAL BOARD (external antenna)

A terminal board for connecting an external antenna (Optional item) instead of the supplied standard conductor.

⏏ terminal for connecting the shielding of any external antenna.

1.3.2. Programming dip-switches (DS1)

No.	Function	OFF	ON
1	Failsafe	Active	Inactive
2	Anti-crushing sensitivity	Low	High
3	Radio codes programming	Inactive	Active
4	Carriage speed	High	Low

Failsafe

If activated, it enables the photocell operating test before every movement.

Anti-crushing sensitivity

For doors with an irregular movement, it reduces the sensitivity of the anti-crushing device to prevent unwanted action by it.

Radio codes programming

If activated, it enables the 531R board to save the radio codes of the remote controls. (see chapter 4.1).

Speed adjustment

If door movement is too quick or irregular, you can select low carriage speed.

1.3.3. Input status LEDs

Meaning of status LED	Light OFF	Lighted
LD1 OPEN input status	Inactive	Active
LD2 STOP input status	Active	Inactive
LD3 FSW input status	Safety devices tripped	Safety devices disabled

The status with the automated system stopped and at rest is indicated in bold for every input.

2. FLASHING LIGHT AND PRE-FLASHING

A flashing light cannot be connected to this operator.

3. CONNECTIONS OF SAFETY DEVICES

No changes to the connection of the safety devices. Refer to the main instructions of the 531 EM operator.

4. RADIO CODES PROGRAMMING

4.1. PROGRAMMING RADIO CODES FROM THE BOARD

The 531R control board can save up to 10 radio codes. If other remote-controls (T4 LC) are installed over this limit, the radio codes input first are over-written.

Programming procedure:

- 1) To learn the remote-controls, turn switch No.3 of the DS1 programming dip-switches to ON position (Fig.1).
- 2) The courtesy light begins to flash rapidly and the board remains in learning status.
- 3) Press, for at least 1 second, the key of the selected remote-control.
- 4) When the courtesy light lights up for 2 sec on a steady beam, this signals that the transmitted radio code was correctly learnt.
- 5) To save the code of other remote-controls, repeat the operations from point 3.
- 6) When learning has finished, turn switch No.3 of the DS1 programming dip-switches to OFF position, and check if the courtesy light has gone off.

4.2. PROGRAMMING RADIO CODES FROM THE REMOTE-CONTROL

Attention: This programming procedure can be activated only with remote-controls already known to the 531R board. (see paragraph 4.1)

Programming procedure:

- 1) Press push-buttons P1 and P2 of the remote-control (Fig.2) and always hold them down.
- 2) The courtesy light lights up on a steady beam
- 3) The courtesy light goes off after 5 secs.
- 4) Release the P1 and P2 push-buttons of the remote-control.
- 5) Within ten seconds after the courtesy light went off, press for at least 1 second the push-button of the remote-control you had programmed, and which was therefore recognised by the 531R board.
- 6) The courtesy light will start to flash rapidly and the 531R board will go into learning status for 10 sec. Another radio code must be taught within this time:press, for at least 1 second, the key of the selected remote-control.
- 7) The transmission of a radio code will restart the 10 sec count, during which the board is in programming status.
- 8) When the 10 seconds have elapsed, the courtesy light goes off.
Restart from point 1.

4.3. DELETING RADIO CODES

Attention: with this procedure, all the radio codes in the memory are deleted.

- 1) Turn switch No.3 of the DS1 programming dip-switches to ON position.
- 2) Press and hold down the SET-UP push-button, and then press the OPEN push-button for at least 1 sec.
- 3) Release both push-buttons.
- 4) The board deletes all the radio codes in its memory and automatically returns to programming status.
- 5) Proceed as from point 1 of chapter 4.1, or turn switch No. 3 of the DS1 programming push-buttons to OFF position, to end the procedure.

5. REMOTE CONTROLS T4 LC 433 MHZ.

For remote control of the 531R operator, use the T4 LC remote controls only.

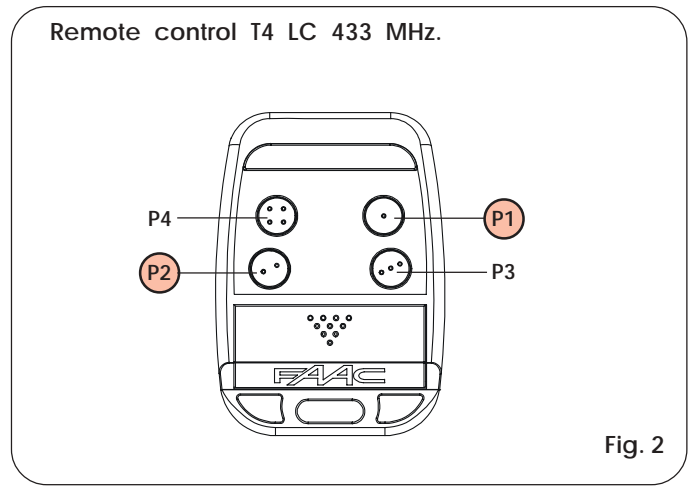


Fig. 2

6. GENERAL INSTRUCTIONS

For anything not expressly specified in these instructions, consult the instructions of the 531 EM operator.

EC DECLARATION OF CONFORMITY

Manufacturer: FAAC S.p.A.
Address: Via Benini, 1 - 40069 Zola Predosa BOLOGNA - ITALY
Declares that: 531R control board,
 • conforms to the essential safety requirements of the following directives:
 73/23/EEC and subsequent amendment 93/68/EEC.
 89/336/EEC and subsequent amendment 92/31/EEC and 93/68/EEC
Additionalnote:
 This product underwent tests in a typical uniform configuration (all products manufactured by FAAC S.p.A.).

Bologna, 01 January 2005.

The Managing Director

A. Bassi

