FAAC per la natura
carta riciclata 100%

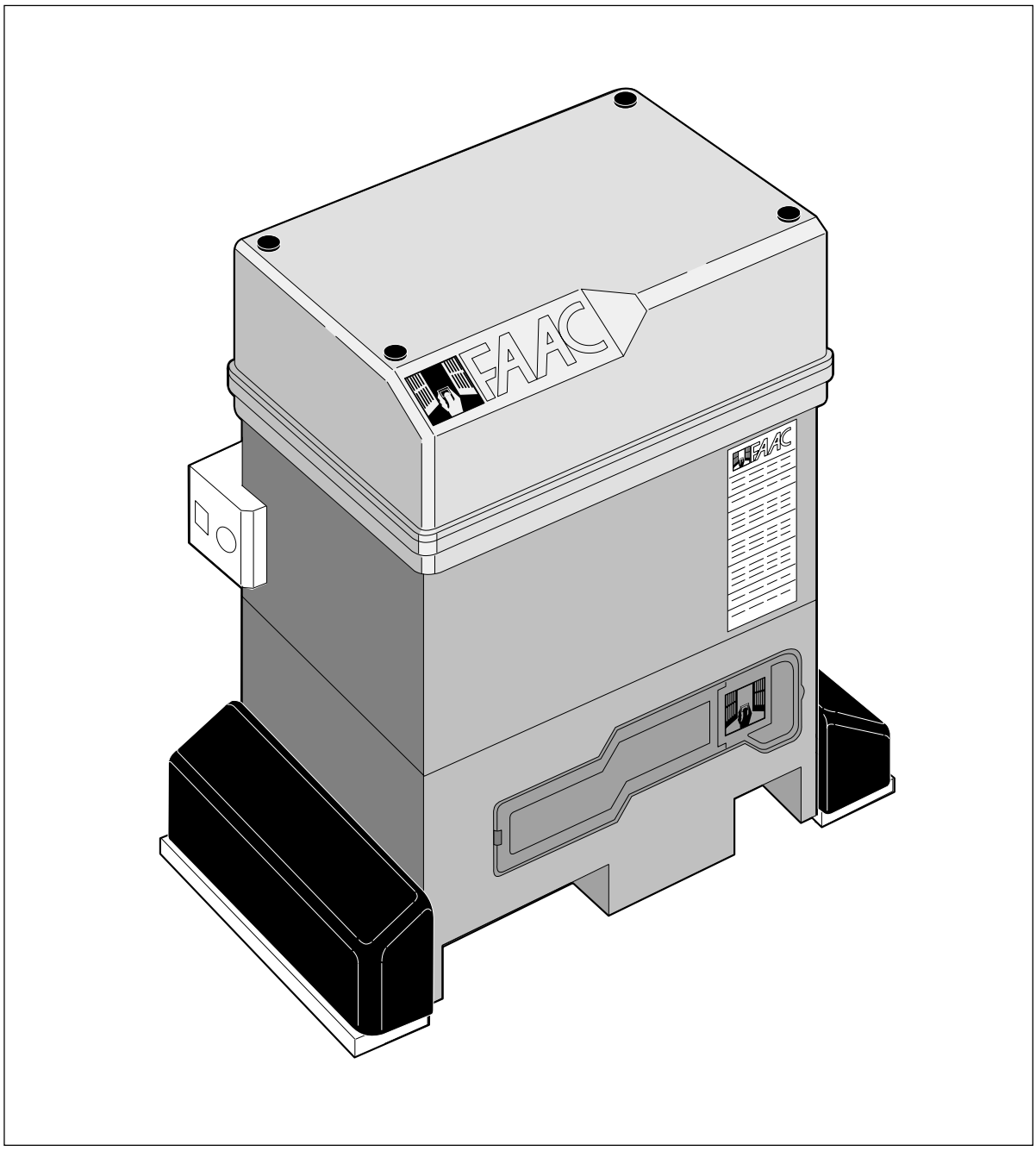
FAAC for nature
recycled paper 100%

FAAC pour la nature
papier recyclé 100%

FAAC ist umweltfreundlich
100% Altpapier

FAAC para la naturaleza
100% papel reciclado

746 & 746 MPS



FAAC

CERMET
AZIENDA CERTIFICATA
UNI EN ISO 9001-085

ENGLISH

5. START-UP

5.1. CONNECTION TO ELECTRONIC CONTROL UNIT

➲ **Always disconnect the electrical power supply before carrying out any operations on the control unit (connections, programming, maintenance).**
Warning: On disconnecting connector J6, high voltages may be present on the capacitor output.

Observe points 10, 11, 12, 13 and 14 in the GENERAL SAFETY INSTRUCTIONS.
Lay the cables in the conduits as shown in Fig. 3 and make the electrical connections to the chosen accessories.
Always route the power supply cables separately from the control and safety cables (keyswitch, receiver, photocells, etc.). Use separate conduits to avoid any interference.

5.1.1. 746MPS ELECTRONIC CONTROL UNIT

TABLE 2 TECHNICAL CHARACTERISTICS OF 746MPS

Power supply	230V~ (+6 -10 %) 50Hz
Motor max. load	300 W
Accessories power supply	24Vdc
Accessories max. load	360 mA
Warning light power supply	24V~ (3W max)
Temperature range	- 20°C + 55°C
Fuses	motor accessories
Quick connectors	- for decoding cards or RP receivers- - capacitor - limit switch -
Inputs	OPEN/STOP/CLOSING SAFETY/LIMIT-SWITCH
Outputs	warning light flashing light motor 24Vdc power supply for accessories
Programming	pause time (5-10-30-120 sec.) logic (automatic A1/A2 - semiautomatic E1/E2) pre-flashing
Motor braking	adjustable by trimmer
Safety timing	255 sec.

5. 1. 2. 746MPS LAY-OUT

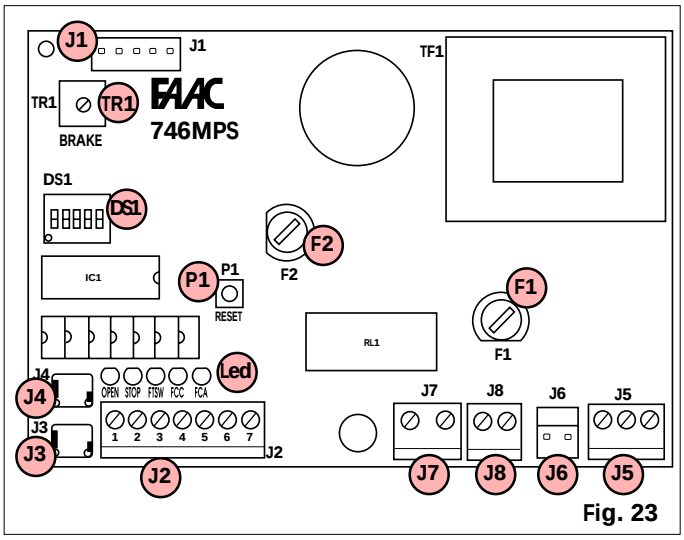


Fig. 23

TABLE 3 746MPS Control unit components

F1	Fast-acting fuse F1 5x20 F5A/250V (motor)
F2	Time delay fuse F2 5x20 T500mA/250V (accessories)
P1	RESET button
TR1	Braking adjustment trimmer
DS1	Programming dipswitches
Led	Input status indicator LEDs
J1	Quick connector for decoding cards/RP receiver
J2	Low voltage inputs/accessories terminal block
J3	Quick connector for limit switch (LH closure)
J4	Quick connector for limit switch (RH closure)
J5	Motor output terminal block
J6	Quick connector for capacitor
J7	Line input terminal block
J8	Flasher unit output terminal block (230V~ max 60W)

5. 1. 3. ELECTRICAL CONNECTIONS

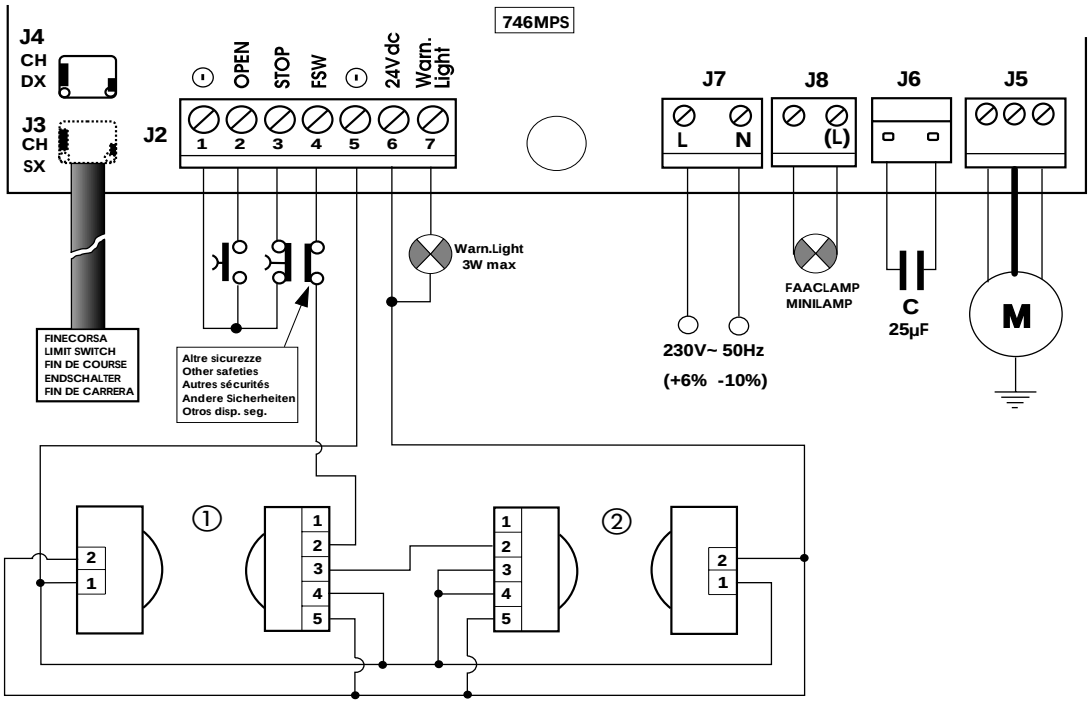


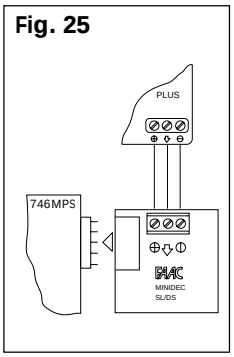
Fig. 24

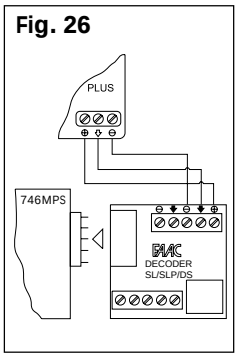
ENGLISH

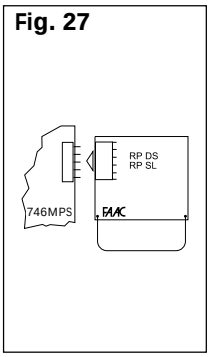
5.2. DESCRIPTION

5.2.1. CONNECTOR J1

The connector J1 is used for the quick connection of MINIDEC, DECODER, RP RECEIVER boards (Figs. 25,26,27).
Accessory boards are to be inserted with their component sides facing the inside of the 746MPS electronic control unit.
Always disconnect the power supply before inserting or removing accessory boards.







5.2.2. TERMINAL BLOCK J2 (low voltage)

1& 5 = Common/Negative of accessory power supply (-)

2 = OPEN control device (N.O.)
Any control device (pushbutton, detector,..) which, on closing the contact, relays an open and/or close impulse to the gate.
To install more than one Open control device, connect the N.O. contacts in parallel.

3 = STOP control device (N.C.)
Any control device (e.g. pushbutton) which, on opening a contact, stops the movement of the gate.
To install more than one Stop control device, connect the N.C. contacts in series.
➲ If no Stop control devices are to be connected, place a jumper across the input and the common terminal (terminal 1 or 5).

4 = FSW closure safety device (N.C.)
Any control device (photocells, safety edges, magnetic loops) with an N.C. contact which reverses the movement of the gate when an obstacle is detected within the protected area during the closing movement. If a closure safety device is tripped when the gate is open or during a pause time, they will prevent gate closure. These devices do not intervene during gate opening movements.
To install more than one safety device, connect the N.C. contacts in series.
➲ If no closure safety devices are to be installed, place a jumper across this input and the common terminal (terminal 1or 5).

6 = 24Vdc accessories power supply positive (+)
The maximum load of the accessories is 360mA.
To calculate power draw, refer to the instructions for the individual accessories.

7 = Warning Light output
For information regarding operation of the warning light, refer to the table below.

	Gate status	
Closed	**Opening/Open**	**Closing**
Off	On	Flashing

5.2.3. CONNECTORS J3-J4 (limit switch)

J3 = Connection of limit switch for left-hand closure
J4 = Connection of limit switch for right-hand closure

Refer to Figs. 28-29 for quick connection of the inductive limit switch sensor for the corresponding gate closure direction.

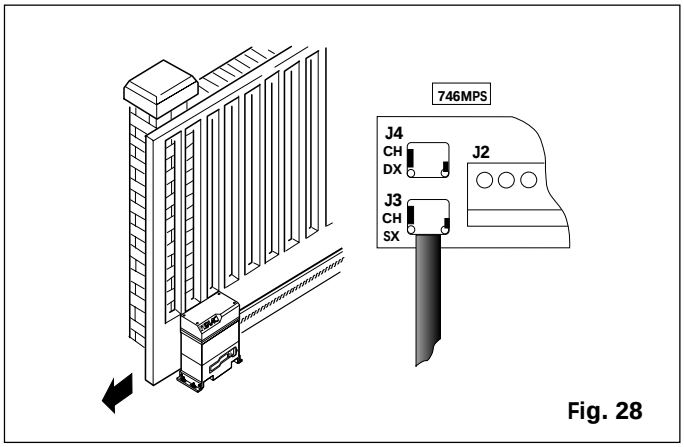


Fig. 28

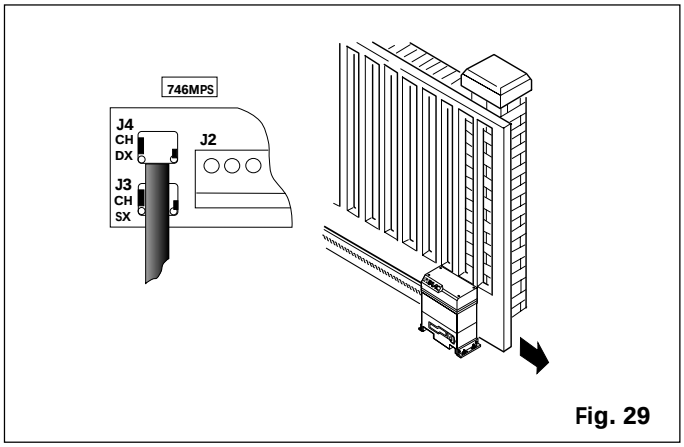


Fig. 29

5.2.4. TERMINAL BLOCK J5 (high voltage)

Terminal block for motor connection.
Connect the wires to the terminals of J5 as shown in Fig.30.
BLACK AND BROWN WIRES = electric motor supply phases
BLUE WIRE= electric motor common

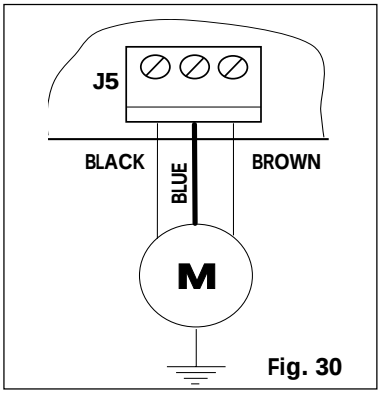


Fig. 30

5.2.5. CONNECTOR J6 (high voltage)

Connector for quick connection of the capacitor.

5.2.6. TERMINAL BLOCK J7 (high voltage)

230V~ terminal block for connection of the flashing light (max 60W).

5.2.7. TERMINAL BLOCK J8 (high voltage)

Terminal block for connection of the 230V~ 50Hz power supply (L=Phase N=Neutral)
Connect the earth wire to the operator as shown in Fig.31

5.2.8. INDICATOR LEDS

5 LEDs on the board indicate the status of the terminal inputs:
LED ON = contact closed
LED OFF = contact open

TABLE 4 MEANING OF STATUS INDICATOR LEDS

LED	ON	OFF
OPEN	Command active	Command not active
STOP	Command not active	Command active
FSW	Safeties disengaged	Safeties engaged
FCC	Closing limit disengaged	Closing limit engaged
FCA	Opening limit disengaged	Opening limit engaged

ENGLISH

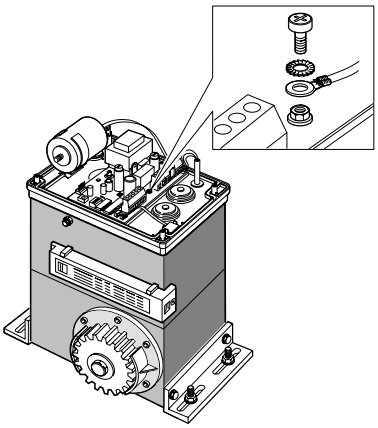


Fig. 31

5.3. DIPSWITCH SETTINGS

To program the operation of the automation, set the dipswitches as shown in the diagram above.

➲ Press the RESET button after all programming operations.

Logic	SW1	SW2
E1	ON	ON
A1	OFF	ON
E2	ON	OFF
A2	OFF	OFF

ON
OFF
1 2 3 4 5

Pause time (sec)	SW3	SW4
5	ON	ON
10	OFF	ON
30	ON	OFF
120	OFF	OFF

Pre-flashing	SW5
Yes	ON
No	OFF

Operating logics

There are four operating logics available:

A1 = Automatic **A2** = Automatic Plus

E1 = Semi-automatic **E2** = Semi-automatic Plus

Operation of the different logics is described in tables 5-6-7-8.

Pause time

The pause time is amount of time the gate remains open before it recloses when an automatic control logic is selected. Pause times include the pre-flashing time, if selected.

Pre-flashing

It is possible to select 5 seconds pre-flashing of the flashing light before any gate movement. This serves to warn any persons in the vicinity that the gate is about to start moving.

TABLE 5 LOGIC A1 (AUTOMATIC)

LOGIC A1	IMPULSES		
GATE STATUS	OPEN	STOP	SAFETY
CLOSED	opens and recloses after pause time (1)	no effect	no effect
OPEN	recloses after 5" (2)	stops counting	freezes pause untill disengagement
CLOSING	inverts motion	stops	inverts motion
OPENING	no effect	stops	no effect
STOPPED	recloses immediately (1)	no effect	no effect

TABLE 6 LOGIC E1 (SEMI-AUTOMATIC)

LOGIC E1	IMPULSES		
GATE STATUS	OPEN	STOP	SAFETY
CLOSED	opens (1)	no effect	no effect
OPEN	recloses (1)	no effect	no effect
CLOSING	inverts motion	stops	inverts motion
OPENING	stops	stops	no effect
STOPPED	recloses (reopens when safety devices are engaged) (1)	no effect	no effect

TABLE 7 LOGIC A2 (AUTOMATIC PLUS)

LOGIC A2	IMPULSES		
GATE STATUS	OPEN	STOP	SAFETY
CLOSED	open and recloses after pause time (1)	no effect	no effect
OPEN	recloses after 5" (2)	stops counting	on disengagement recloses after 5" (1)
CLOSING	inverts motion	stops	stops and inverts motion when disengaged (1)
OPENING	no effect	stops	no effect
STOPPED	recloses immediately (1)	no effect	no effect

TABLE 8 LOGIC E2 (SEMI-AUTOMATIC PLUS)

LOGIC E2	IMPULSES		
GATE STATUS	OPEN	STOP	SAFETY
CLOSED	opens (1)	no effect	no effect
OPEN	recloses (1)	no effect	no effect
CLOSING	invert motion	stops	stops and inverts motion when disengaged (1)
OPENING	stops	stops	no effect
STOPPED	recloses (reopens when safety devices are engaged) (1)	no effect	no effect

(1) With the pre-flashing selected, movement starts after 5 seconds.
(2) If the impulse is sent during pre-flashing, the timer is reset to zero.

5.4. FAULT CONDITIONS

The following conditions effect normal operation of the automation:

① microprocessor error
② intervention of the electronic safety timer (interruption of operation after continuous working time exceeds 255 seconds).
③ disconnection of the limit switch cable connector

- Conditions ① and ② have the sole effect of causing the automation to stop.
- Condition ③ causes an alarm condition inhibiting all operation:
  normal operation is only resumed after the cause of the alarm has been eliminated and the RESET button has been pressed (or the power supply has been momentarily interrupted).

To signal this condition, the warning light must be connected: an alarm condition is signalled by rapid flashing (0.25 sec) of the warning light.

5.5. POSITIONING THE TRAVEL STOP PLATE

The 746 operator is fitted with an inductive proximity limit switch (Fig.1 - ref.3). When the latter detects the passage of a plate fastened to the top of the rack, it stops the movement of the gate.

To position the two travel stop plates correctly, proceed as follows:

1) Connect the limit switch connector to the 746MPS control unit in accordance with the direction of gate closure (paragraph 5.2.3. and Figs. 28/29).
2) Assemble the limit switch, positioning the stop plate centrally relative to the threaded studs of the bracket (Fig.32).
3) Switch on the power supply.
4) Move the gate by hand towards it closed position, stopping approximately 2 cm from the physical travel stop.
5) Set brake-adjusting trimmer TR1 approximately to its central position (Fig.23 - ref.TR1).