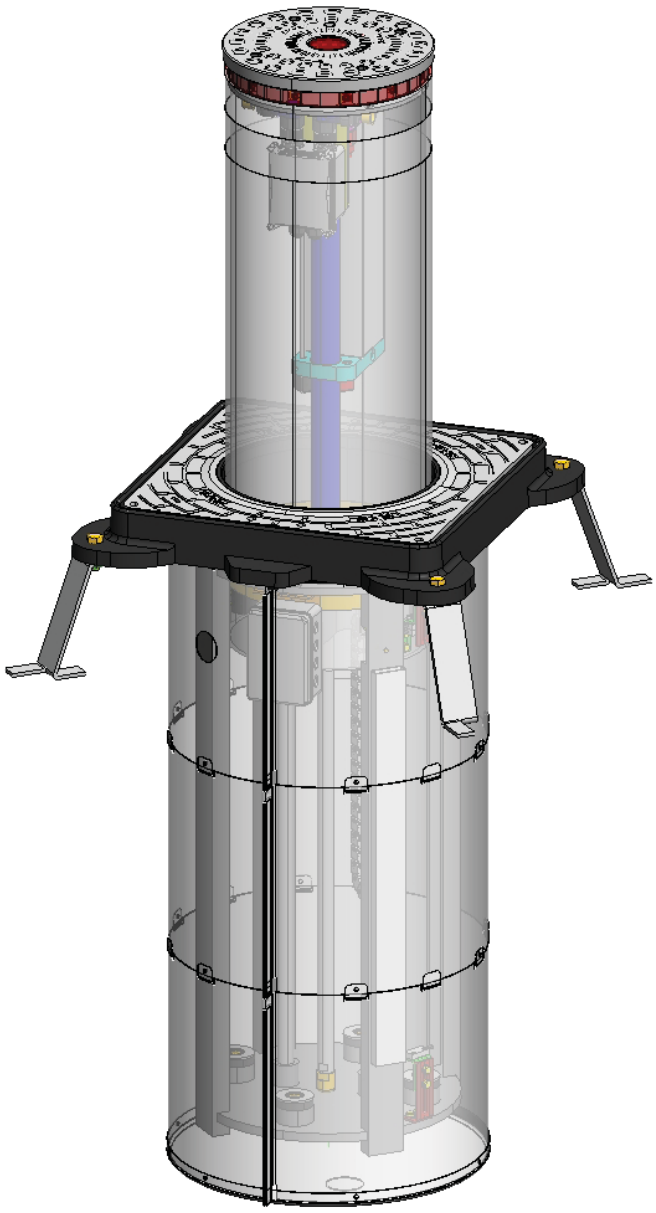
J275/600 HA
J275/800 HA



CE DECLARATION OF CONFORMITY FOR MACHINES

(DIRECTIVE 2006/42/EC)

Manufacturer: FAAC S.p.A.

Address: Via Calari, 10 - 40069 Zola Predosa BOLOGNA - ITALY

Declares that: the operator mod. J275/600 HA or J275/800 HA

is built to be integrated into a machine or to be assembled with other machinery to create a machine under the provisions of Directive 2006/42/EC;

conforms to the essential safety requirements of the following EEC directives:

2006/95/EC Low Voltage Directive
2004/108/EC Electromagnetic Compatibility Directive

and also declares that it is prohibited to put into service the machinery until the machine in which it will be integrated or of which it will become a component has been identified and declared as conforming to the conditions of Directive 2006/42/EEC and subsequent amendments.

Bologna, 01st September 2014

CEO
A. Marcellan

WARNINGS FOR THE INSTALLER

GENERAL SAFETY OBLIGATIONS

1. **ATTENTION! To ensure the safety of people, it is important that you read all the following instructions. Incorrect installation or incorrect use of the product could cause serious harm to people.**
2. Carefully read the instructions before beginning to install the product.
3. Do not leave packing materials (plastic, polystyrene, etc.) within reach of children as such materials are potential sources of danger.
4. Store these instructions for future reference.
5. This product was designed and built strictly for the use indicated in this documentation. Any other use, not expressly indicated here, could compromise the good condition/operation of the product and/or be a source of danger.
6. FAAC declines all liability caused by improper use or use other than that for which the automated system was intended.
7. Do not install the equipment in an explosive atmosphere: the presence of inflammable gas or fumes is a serious danger to safety.
8. For non-EU countries, to obtain an adequate level of safety, the Standards mentioned above must be observed, in addition to national legal regulations.
9. FAAC is not responsible for failure to observe Good Technique in the construction of the closing elements to be motorised, or for any deformation that may occur during use.
10. Installation must be performed in compliance with current Standards.
11. Before attempting any job on the system, cut out electrical power.
12. The mains power supply of the automated system must be fitted with an all-pole switch with contact opening distance of 3 mm or greater. Use of a 6A thermal breaker with all-pole circuit break is recommended.
13. Make sure that a differential switch with threshold of 0.03 A is fitted upstream of the system.
14. Make sure that the earthing system is perfectly constructed and connect metal parts of the closure to it.
15. The automated system is supplied with an intrinsic anti-crushing safety device consisting of a torque control. Nevertheless, its tripping threshold must be checked as specified in the Standards indicated at point 10.
16. The safety devices (EN 12978 standard) protect any danger areas against **mechanical movement Risks**, such as crushing, dragging, and shearing.
17. Use of at least one indicator-light (i.e. flashing lamp incorporated in the bollard head) is recommended for every system, as well as a warning sign adequately secured to the frame structure, in addition to the devices mentioned at point "16".
18. FAAC declines all liability as concerns safety and efficient operation of the automated system, if system components not produced by FAAC are used.
19. For maintenance, strictly use original parts by FAAC.
20. Do not in any way modify the components of the automated system.
21. The installer shall supply the user with the necessary information for the manual operation of the system in the event of emergency
22. Do not allow children or adults to stay near the product while it is operating.
23. Keep remote controls or other pulse generators away from children, to prevent the automated system from being activated involuntarily.
24. Transit on the bollard is permitted only when the device is completely down.
25. The user must not attempt any kind of repair or direct action whatever and contact qualified personnel only.
26. **Anything not expressly specified in these instructions is not permitted.**

ENGLISH

Translation of the original instructions

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J275/600-800 HA BOLLARD

Please read with the utmost care this manual supplied with the product, since it contains important indications about safety, installation, use and maintenance.

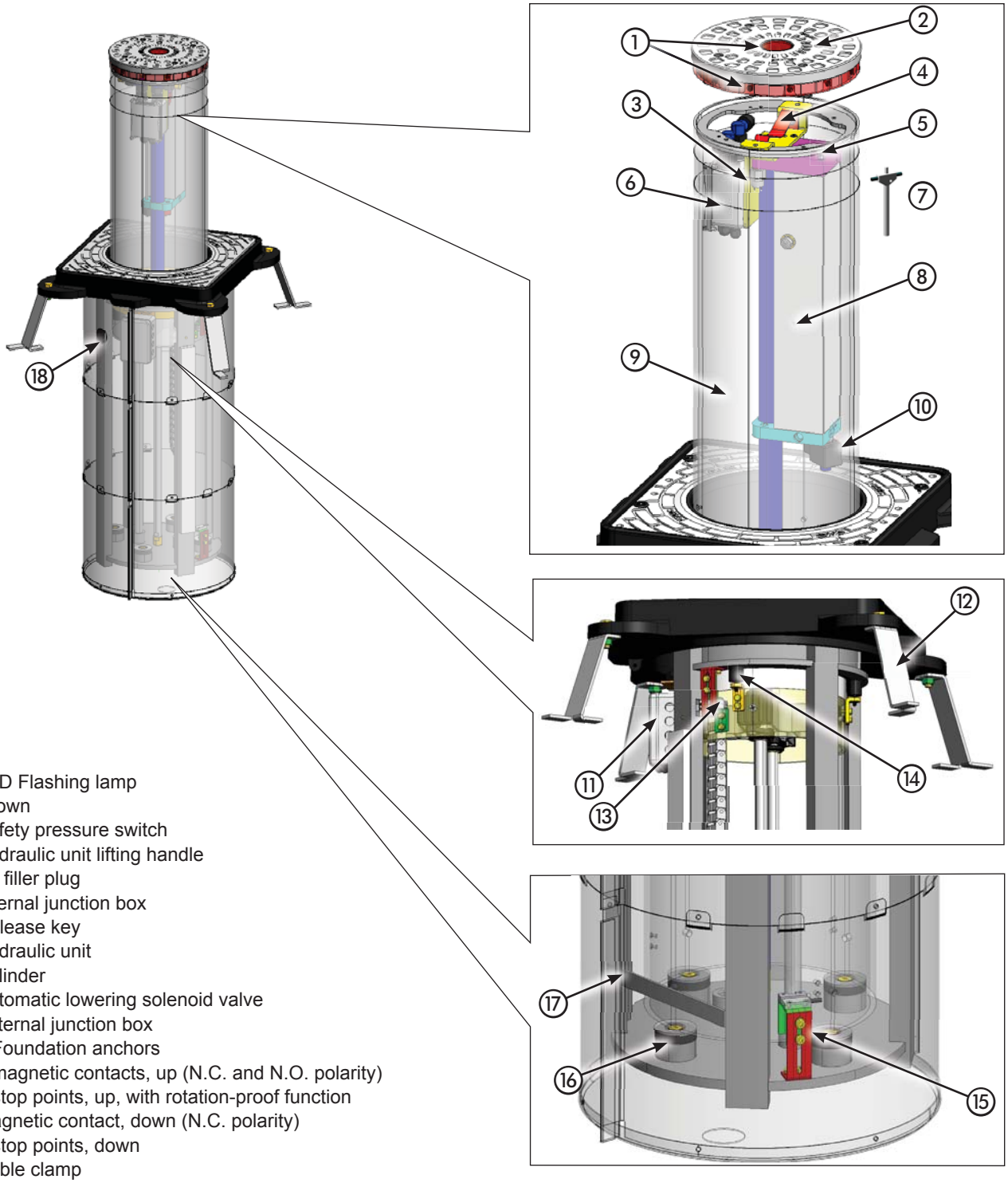
1 GENERAL NOTES

These instructions apply to the following models:

J 275/600 H A and J 275/800 H A

These models are automatic hydraulic traffic bollards. The cylinder is moved by a hydraulic unit located inside the cylinder. The hydraulic release occurs automatically in the event of a power cut or, as an alternative, by direct action on the hydraulic unit. The choice can be made by acting on the solenoid valve (see paragraph 10.1).

2 DESCRIPTION AND TECHNICAL SPECIFICATIONS



1. LED Flashing lamp
2. Crown
3. Safety pressure switch
4. Hydraulic unit lifting handle
5. Oil filler plug
6. Internal junction box
7. Release key
8. Hydraulic unit
9. Cylinder
10. Automatic lowering solenoid valve
11. External junction box
12. 4 Foundation anchors
13. 2 magnetic contacts, up (N.C. and N.O. polarity)
14. 4 stop points, up, with rotation-proof function
15. Magnetic contact, down (N.C. polarity)
16. 4 stop points, down
17. Cable clamp
18. Cable routing hole

Fig. 1

Tab. A - Technical Specifications

MODEL	J275
Power supply	230 V~ 50 Hz
Max. absorbed power (W)	220
Max. force (N)	1000
Max. pump delivery (lpm)	3
Minimum lifting time H600 (sec)	5
Minimum lowering time H600 (sec) (1)	1
Minimum lifting time H800 (sec)	7
Minimum lowering time H800 (sec) (1)	1,2
Use temperature (°C)	-15 +55
Weight H600 / H800 (Kg)	150 / 170
Oil quantity (l) (2)	1,5
Protection class	IP56
Overall dimensions	See Fig.2
Capacitor (3)	16µF - 400V
Use frequency	Intensive use
Impact resistance (J) (4)	38000 (steel) 67000 (stainless steel)
Break-in resistance (J) (4)	128000 (steel) 207000 (stainless steel)
R.O.T. at 55°C - J275/600HA (min)	40
R.O.T. at 23°C - J275/600HA (min)	100

(1) The indication of time refers to lowering operation with solenoid valve activated. If it is disactivated (see par. 10.2) the time value changes to 2.5 sec (H600) and 3 sec (H800)

(2) Fig. 13

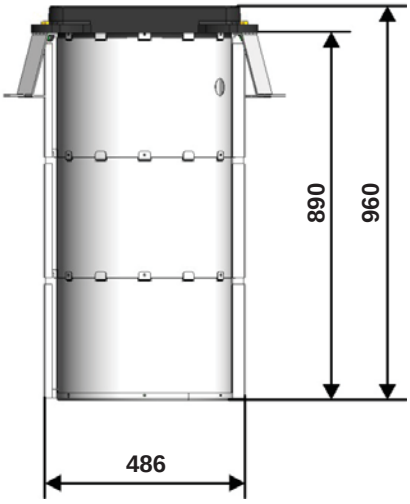
(3) The thrust capacitor (16µF - 400v) is prewired in the junction box on the hydraulic unit.

(4) certified by the third body

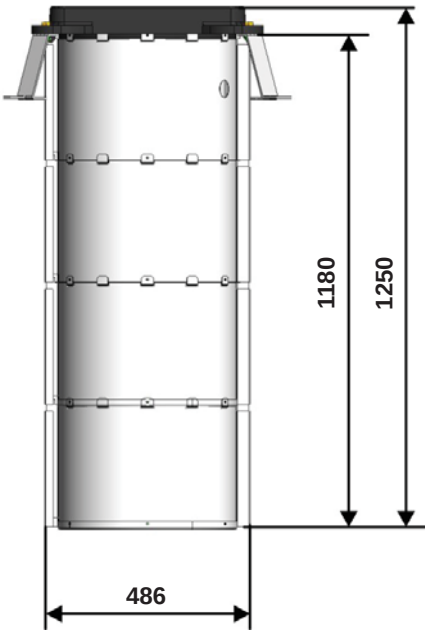
3 DIMENSIONS

Dimensions in mm

J 275 H600



J 275 H800



J 275 H600 / H800

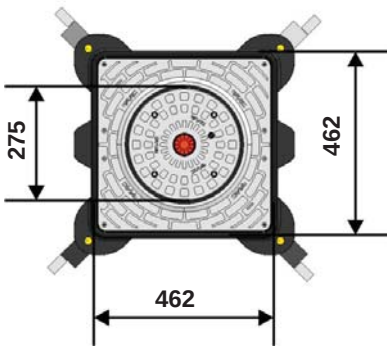


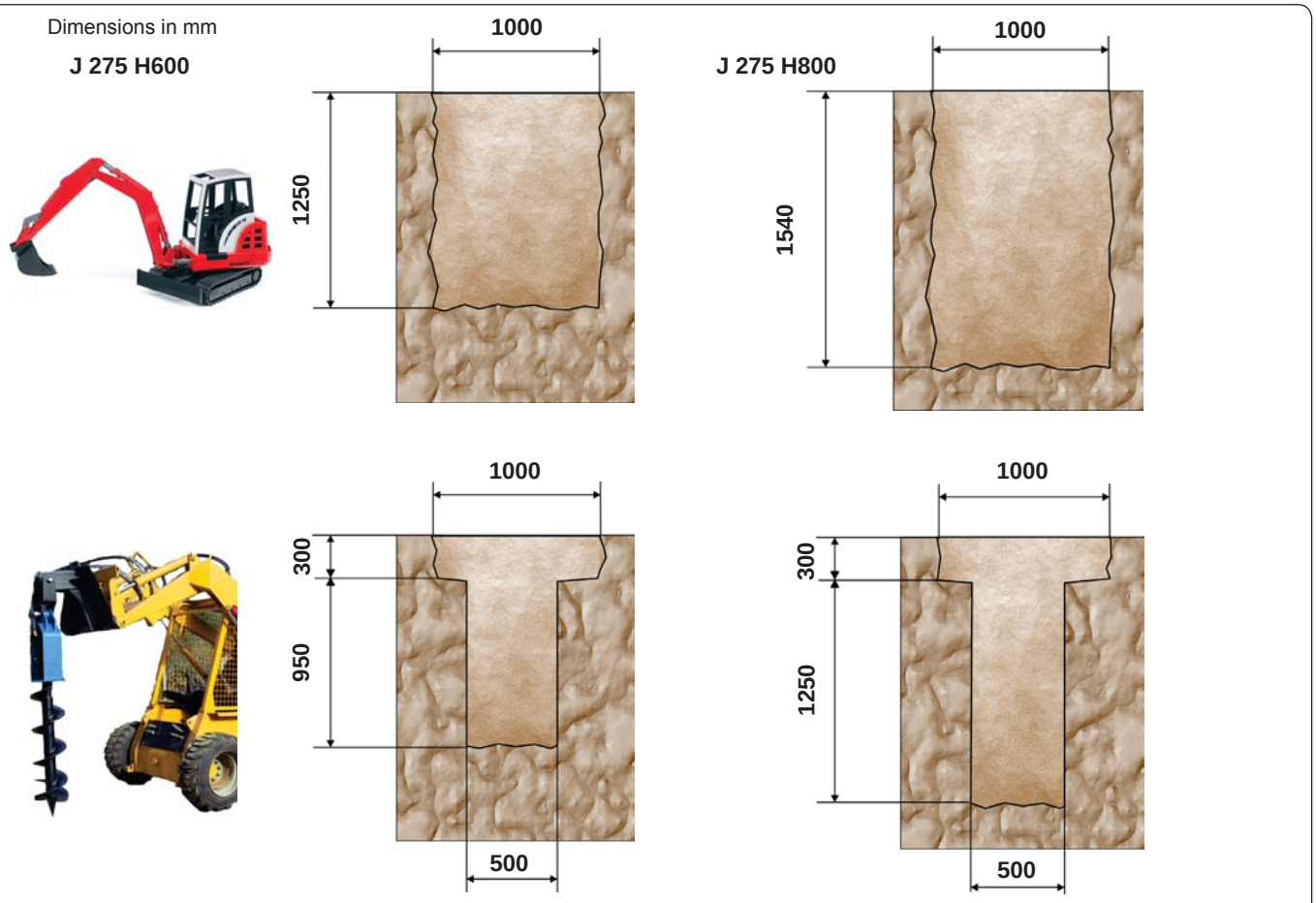
Fig. 2

4 FACILITIES

Make sure that the place where the bollard is to be installed is not a cavity; if this is the case, partially protect the bollard with a drainage channel equipped with covering grid.

Dig up to a depth of about 1.25 m (275 H600) or about 1.54 m (275 H800)

The dig can be square and have a side of about 1 m (fig. 3). Otherwise it can be carried out using an earth drill with a diameter of 50 cm up to the depth mentioned above and widened in the last 30 cm giving a square shape of 1 m per side



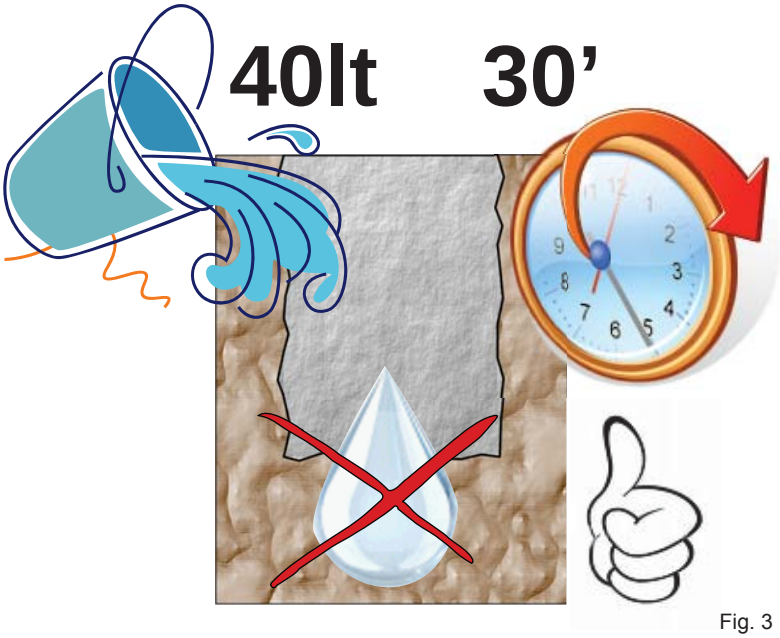


Fig. 3

Make sure that the ground is able to absorb water: pour about 40 l water and evaluate if draining requires less than 30 minutes. If this is not the case, discharge rain water by means of a pipeline with a diameter of 60mm connected to the drainage system or, as an alternative, connected to a pit, equipped with a drainage system (such as a motor pump), having a depth greater than the pit for the collection and drainage of rain water

Introduce gravel (grain diameter: approx. 20 mm.) to obtain a thickness of about 30 cm, taking care to compact it well to avoid future settlements

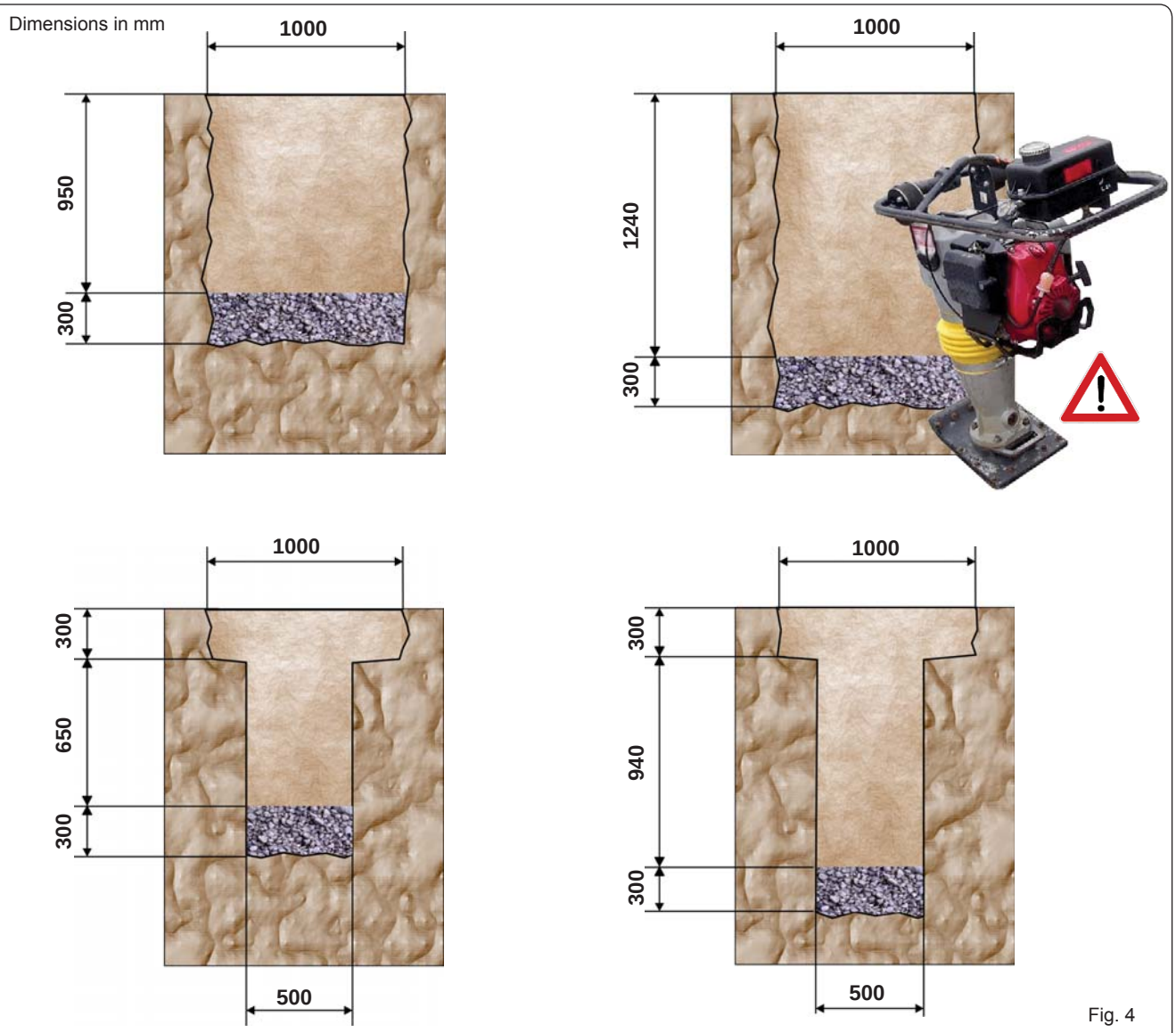


Fig. 4

Fig. 5

Fit the metallic pit as shown in the figure using the supplied rivets and secure it to the counter-frame with two screws and relevant bolts supplied (also refer to the instructions supplied with the pit).

Dimensions in mm

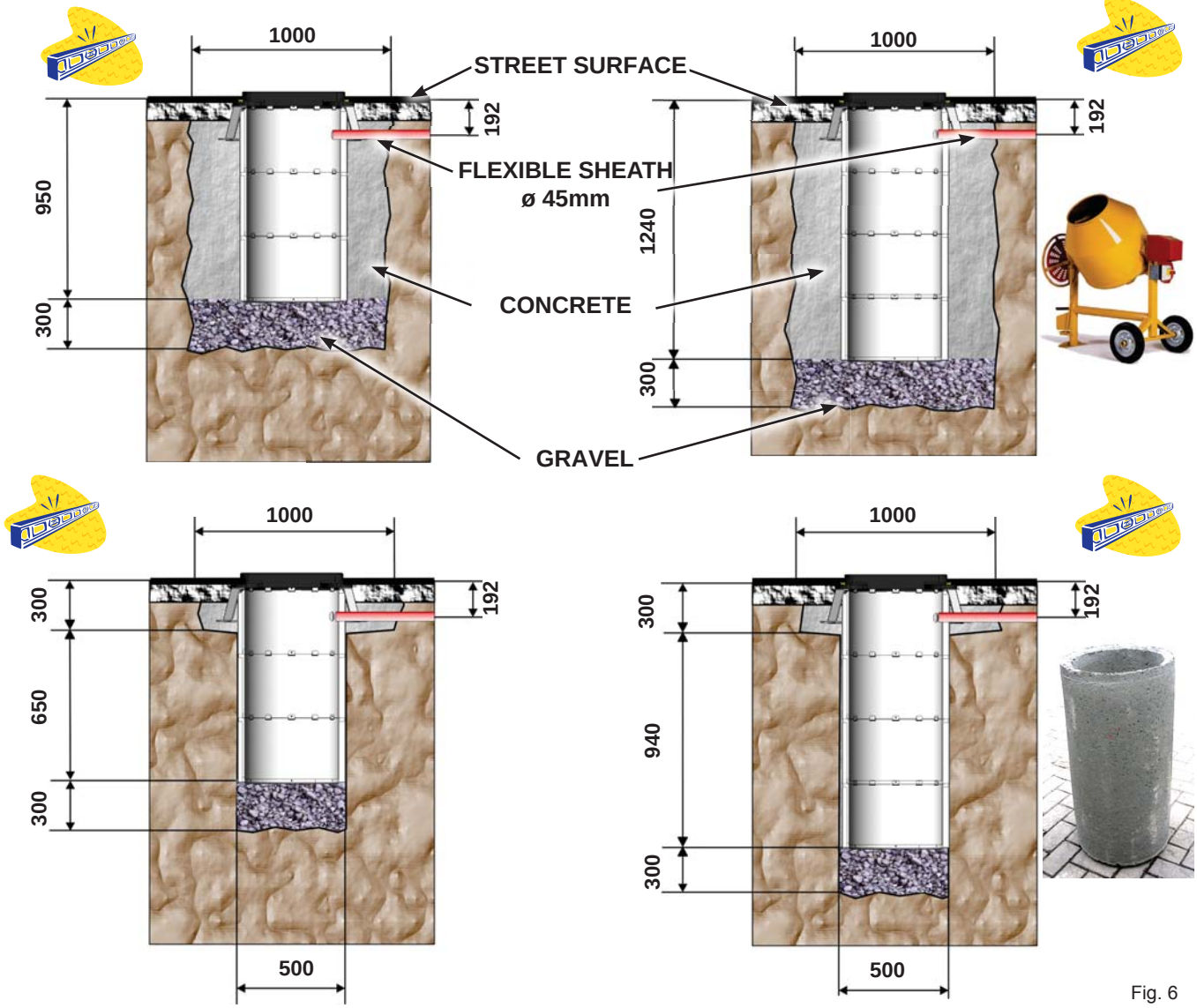
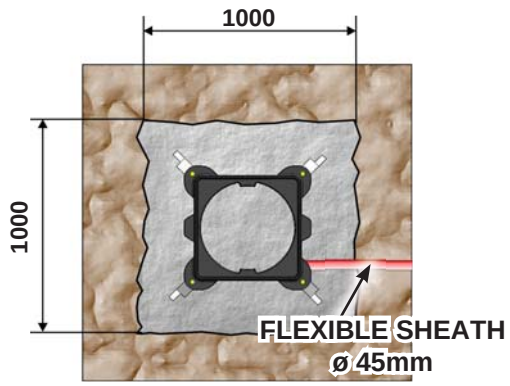


Fig. 6



⚠ *After installation of the pit, lay a flexible sheath, internal diameter 45mm, from the connection in the metallic pit to the drive control station.*

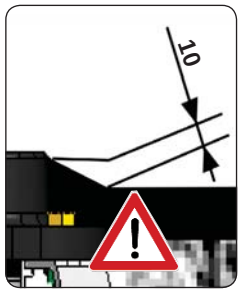
⚠ *Cast concrete, type RCK25, all around the pit to secure it firmly (if necessary, lay a cement tube around the pit, see fig. 6), up to about 10cm from the floor surface, and make sure that the anchors supplied with the pit are well positioned. After having secured the pit, finish the street surface using the same type of material.*

⚠ *Lay the pipelines, that are necessary for the connection between the control unit and any additional device (i.e. traffic lights – inductive loops – card reader – etc.) and every other bollards, if any. Prepare the electrical connection and the earthing.*

⚠ *To connect the bollard to the control board, use a cable, type <u>FG7OR-0,6/1kV-16G1,5, having a max. length of 50 m.</u>*

⚠ *Every pipe must be laid in compliance with the current rules.*

⚠ *Place the metallic pit complete with counter-frame, taking care to position it plumb. The top level of the counter-frame must be approx. 10 mm higher than the floor surface (to limit the inlet of rainwater in the pit).*



<u>To reduce any stumble risk, level the pit to the street surface</u>.

5 ELECTRIC WIRING

For the connection of the bollard to the control unit, use a multi-pole cable, type **FG7OR-0,6/ kV- 6G 1,5 (16 cables of 1,5mm²) with max. length of 50 m**. This cable must be laid inside a sheath ø 45mm, secured to the cable clamp in the bottom part of the frame (fig. 7 ref. ①) and must come out of the pit by 1,2 m for the version H600 and by 1,6 m for the version H800.
Perform the electric wiring in the junction box on the bollard side, as shown in the figure below.

Any additional accessory (i.e. photocells, opening/closing push-buttons, etc.), that have to be connected to the control unit, must compulsorily have double insulation.

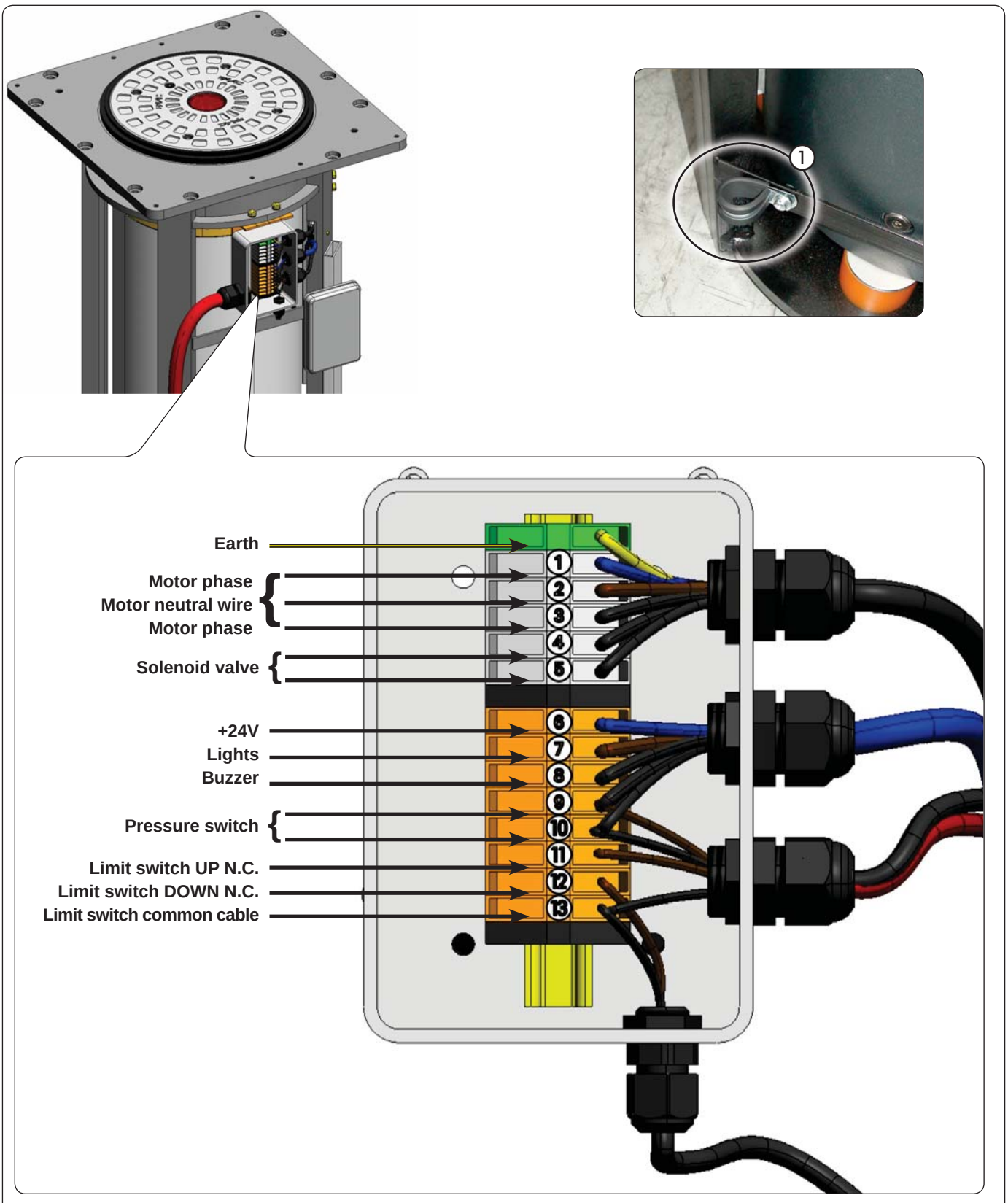


Fig. 7

6 INSERTING THE BOLLARD IN THE PIT

To place the bollard in the previously prepared pit (wait for the cement to set), you must screw two eyebolts M10 on the top part, as shown in the figure below, using them as hooking points for the lifting operation with belts or chains.

Before placing the bollard into the pit, check its correct operation and make sure that the safety devices operate correctly (see from page 12).

Lift and insert completely the bollard in the pit.

Take special care when positioning the cable between pit and bollard during the descent as well as to the junction box located on the bollard side (see fig. 8)

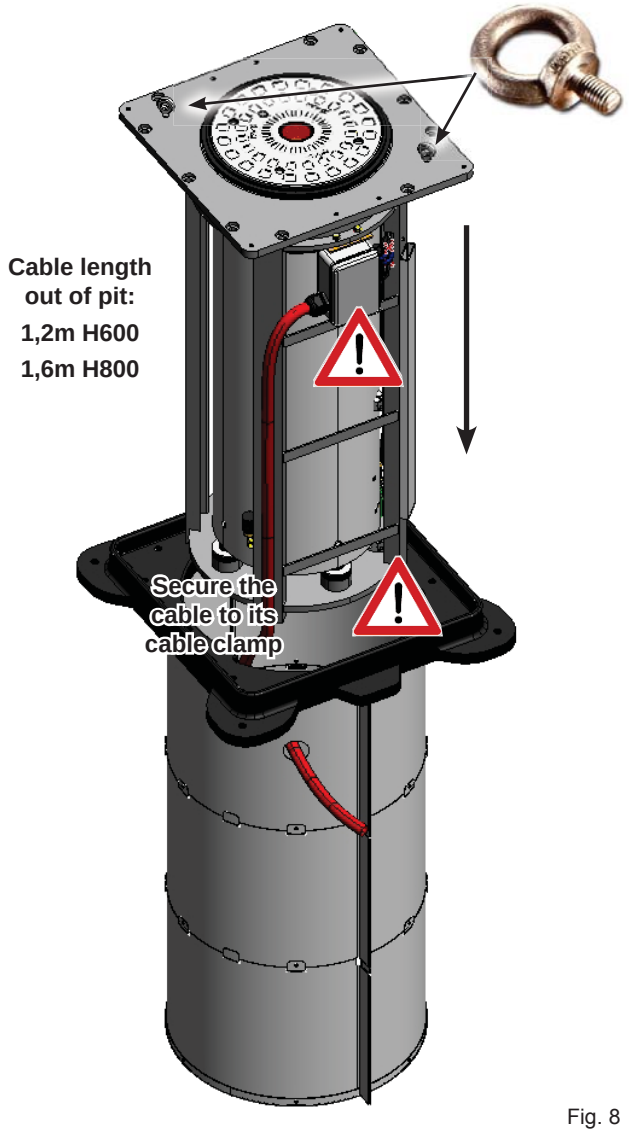


Fig. 8

After having positioned the bollard in place, remove both eyebolts and firmly secure the bollard to the pit using 10 cylindrical head screws with hexagon socket M12x30 INOX supplied standard.

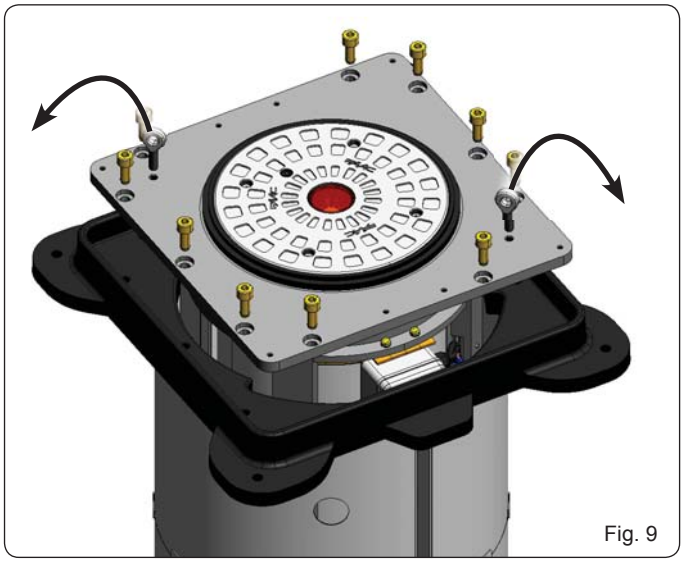


Fig. 9

7 FASTENING THE TOP CROWN

After having secured the bollard, complete the installation positioning and securing the top crown with 8 cylindrical head screws with hexagon socket M6x10 INOX supplied standard

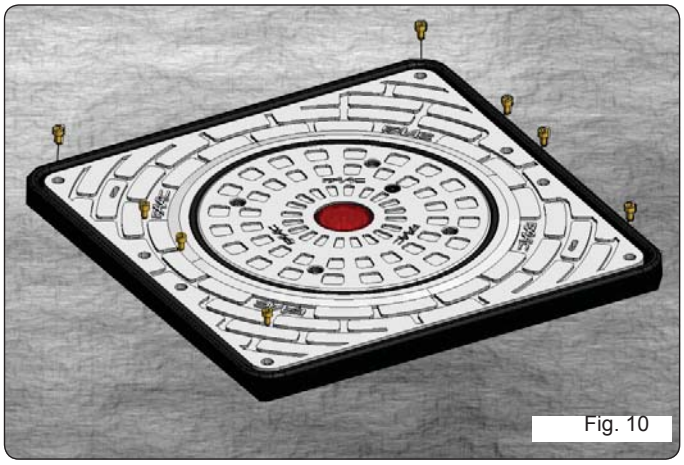
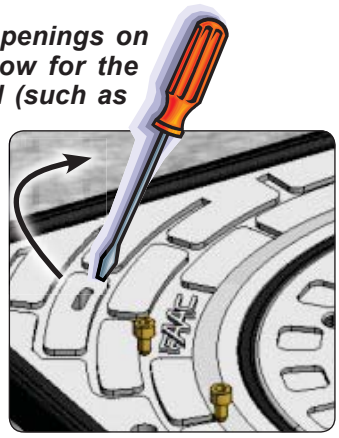


Fig. 10

The two slotted openings on the top crown allow for the insertion of a tool (such as a screwdriver) to lift the crown when necessary.



8 MANUAL OPERATION

The lowering of the bollard normally occurs by cutting the mains power supply thanks to the solenoid valve located on the hydraulic unit (see fig. 1 ref. ⑧).
To lower the bollard by hand, you need to act on the release device.

1. Loosen the closing screw located on the bollard head (fig. 11 ref. ①).
2. Introduce the supplied key into the relevant hole.
3. Turn counter-clockwise to lower the bollard (fig. 11 ref. ②)

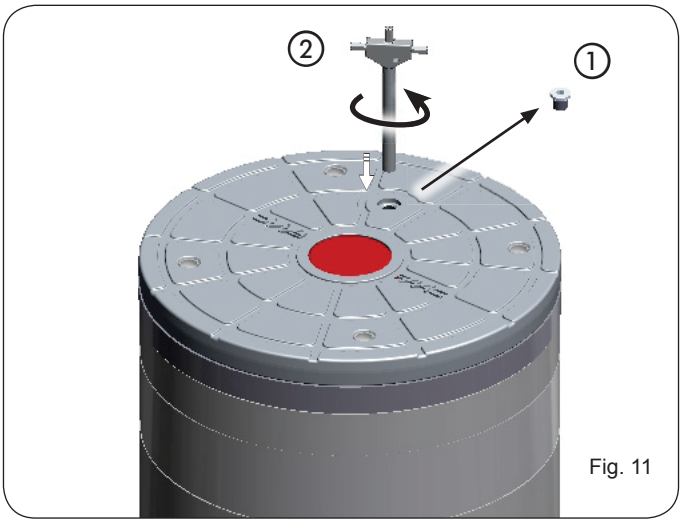


Fig. 11

9 AUTOMATIC OPERATION

TTo restore the automatic operation:

1. Introduce the supplied key into the relevant hole.
2. Turn clockwise till end of stroke (fig. 12 ref. ①).
3. Tighten again the closing screw on the bollard head (fig. 12 ref. ②).

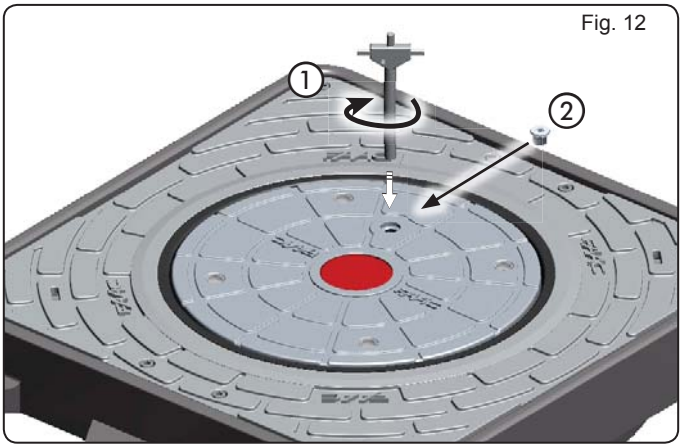
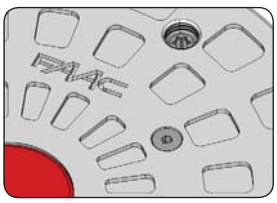


Fig. 12

The closing screw on the bollard head can also be tightened upside-down to prevent access to manual hydraulic lowering. This operation has to be performed, of course, after having removed the head by unscrewing the 4 securing screws (see fig. 13 ref. ①)



10 MAINTENANCE

Perform the following operations to have total access to the hydraulic unit of the bollard in order to carry out maintenance operations or due to faulty operation:

1. lift the top head by unscrewing the four TAMPERTORX T30 screws (fig. 13 Aref. ①)
2. disconnect both plug-in connectors from the internal junction box (fig. 13 A ref. ②)
3. loosen both screws securing the hydraulic unit to the cylinder (fig. 13 A ref. ③).
4. completely lift the unit seizing it by its handle (fig. 13 ref. ④).

10.1 STANDARD PROCEDURE FOR A 6-MONTHLY

Ordinary maintenance standard procedure:

1. Clean the pit and remove any settled material by suction
2. Clean the water drainage systems on the pit bottom
3. Clean and lubricate the central sliding guide
4. Check (and replace, if necessary) the bottom limit-stop gaskets
5. Check (and repair, if necessary) any oil leakages from the driving piston
6. Check the correct tightening of the bollard screws
7. Clean the driven cylinder and touch up paint, if necessary
8. Check the hydraulic unit and top up oil, if necessary. Check the setting of the operating pressure
9. Check the functions of the safety pressure switch

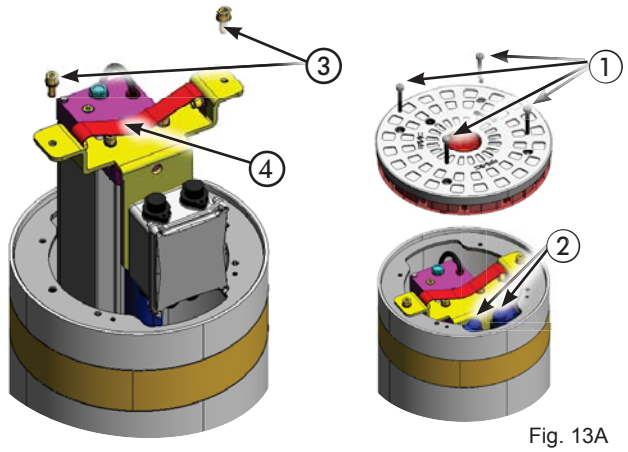


Fig. 13A

Check correct oil level through the oil top-up lid, with bollard fully down, (Fig.13 rif ⑤) . Close the relevant lid, exclusively with the bollard in the high position.

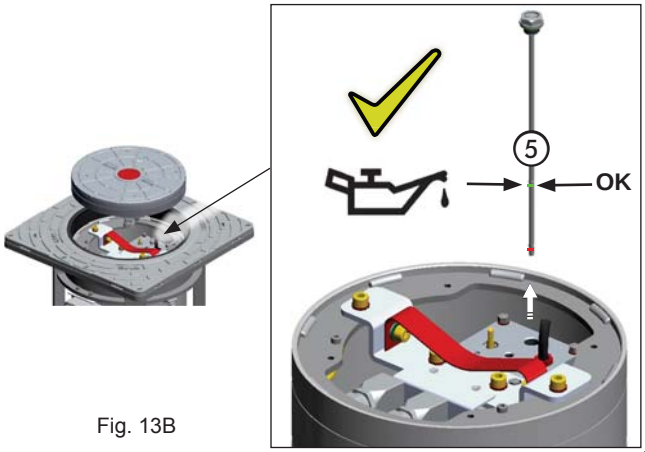


Fig. 13B

ENGLISH

Translation of the original instructions

10.2 MODIFYING THE OPERATION OF THE SOLENOID VALVE (see Tab. B)

You can modify the operation of the solenoid valve. Normally, in the event of a voltage cut, the bollard automatically lowers at an extra high speed, thanks to the solenoid valve which opens the hydraulic circuit and lets the bollard descend freely due to the gravity effect, or at standard speed letting it descend without disactivating the solenoid valve (see Tab. A page 4). If you want the bollard to remain in up position even when voltage cut occurs, perform the following operations:

1. remove the hydraulic unit as indicated in paragraph 10.
2. press completely the pin at sight on the solenoid valve (fig. 14 ref. ①)
3. turn the pin to end of stroke as shown in figure (fig. 14 ref. ②).

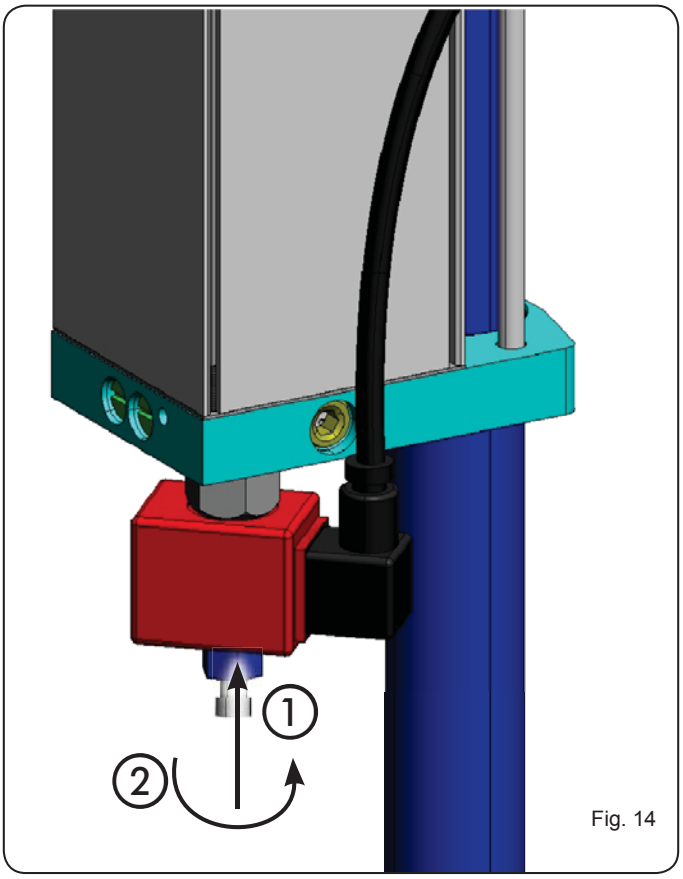


Fig. 14

11 ACCESSORIES

11.1 COVER

If the pit has already been installed but the bollard has not, you'd better close the hole using the cover accessory.
Place and secure it with 4 cylindrical head screws with hexagon socket M12x30 INOX supplied standard.

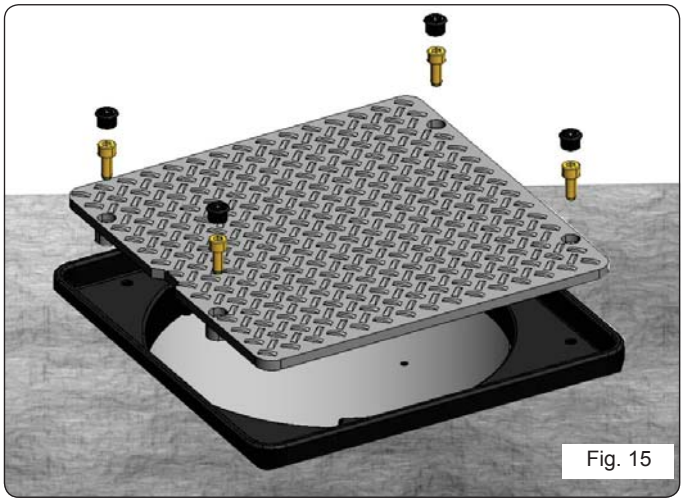


Fig. 15

Use the facility provided to lift the cover at a later stage.

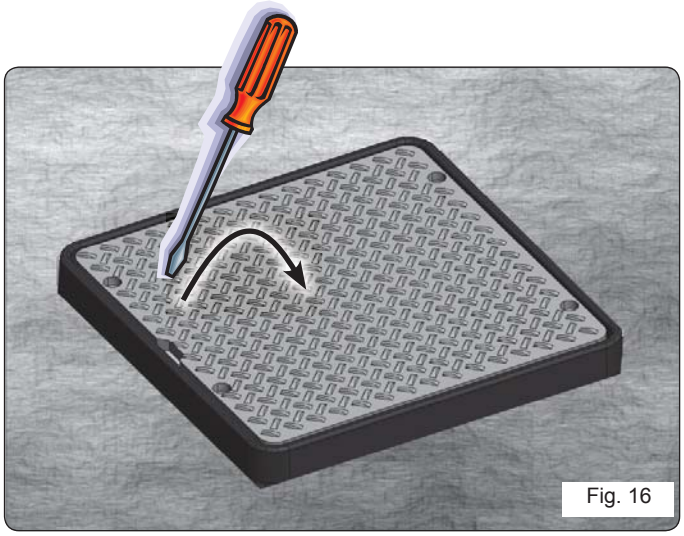
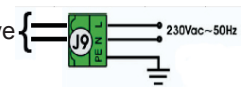
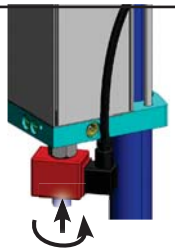


Fig. 16

Tab. B - Automatic lowering solenoid valve

AUTOMATIC LOWERING IN THE EVENT OF A VOLTAGE CUT	Extra rapid lowering using the solenoid valve	Connect the solenoid valve to the FAN output of the JE275 (624BLD) board (22-23 on J2)	Solenoid valve
	Standard lowering using the hydraulic circuit	Connect the solenoid valve directly to the mains power supply of the JE275 (624BLD) board (L-N on J9)	Solenoid valve 
HOLDING THE UP POSITION IN THE EVENT OF A VOLTAGE CUT	Standard lowering using the hydraulic circuit	Operate on the solenoid valve as per par. 10.1	

JE275 CONTROL UNIT

The JE275 control unit is supplied with the control board 624 BLD and the housing, model E.

- Always cut the power supply before performing any intervention on the control unit (connections, maintenance).
- Install a differential thermal-magnetic switch with suitable threshold (0.03A) upstream of the system.
- Connect the earth cable to the relevant terminal on the connector J9 of the unit (see figure below).
- Check if the power disconnecting switch is provided with locking key exept if it's installed under operator/ maintenance man control.
- The control unit installation must be done between 0,4 m and 2,0 m height

12 ELECTRICAL CONNECTIONS

JE275 (624BLD) BOARD SIDE

BOLLARD SIDE

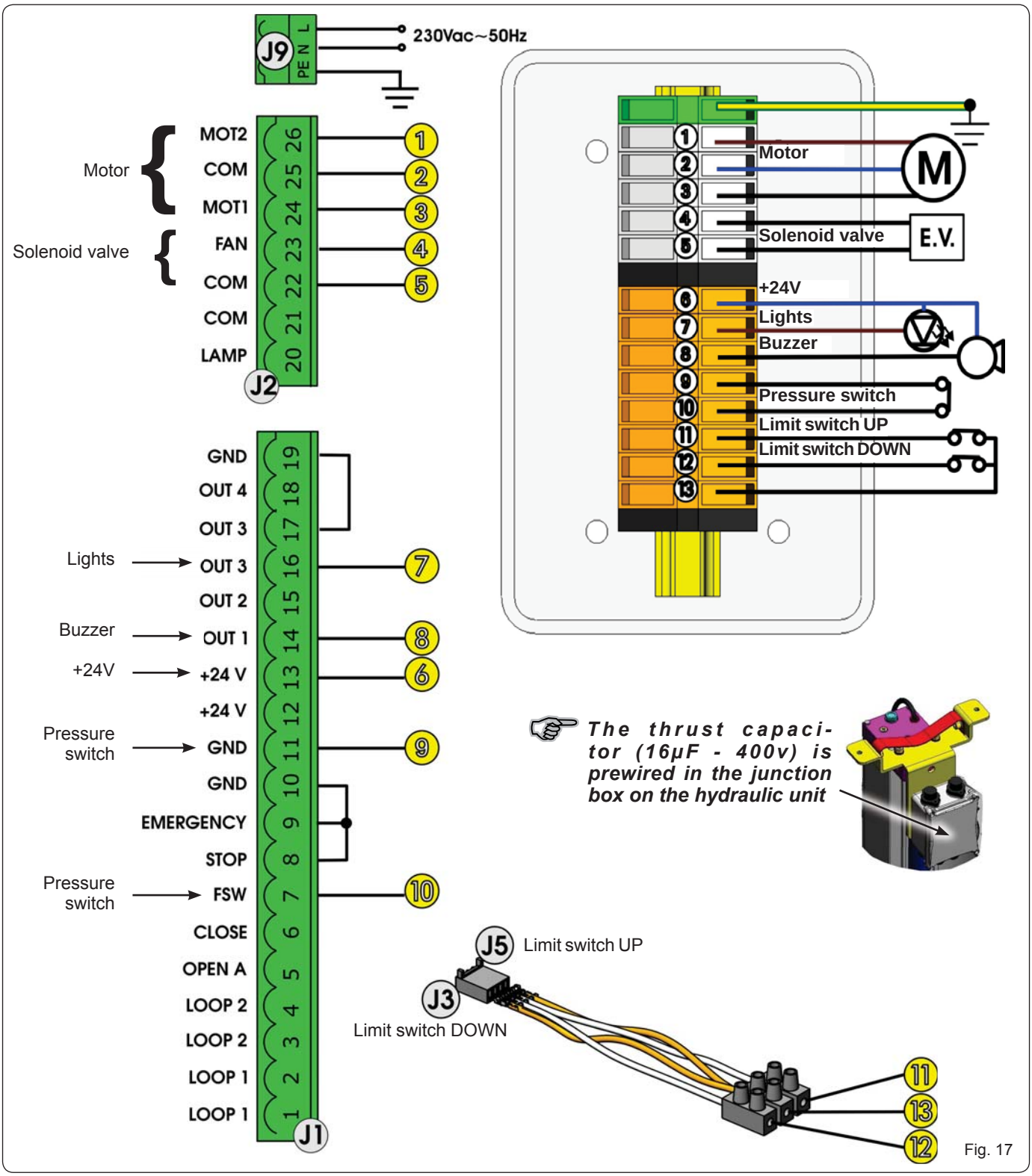
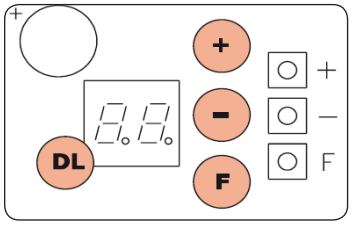


Fig. 17

13 PRE-SETTING SELECTION

After having connected the board and after having supplied it with power according to the previous paragraph, you must select the work pre-setting for the bollard J275 following the operations below:

1. Enter the 1st level programming, holding down key **F** on the board. The initials **dF** will appear on the display.
2. Release key **F** and select **05** with the key **+**
3. Simultaneously press keys **F** and **-** to exit programming and save the changes performed.



For any further information on the unit programming, please refer to the relevant instructions.

14 POSITIONING THE LOOPS

Below you will find some examples for the realization of magnetic loops with one or more bollards:

1. Installation of a single bollard and two magnetic loops to detect vehicle transit.
2. Installation of a single bollard and of a magnetic loop to protect the perimeter.
3. Installation of four bollards (on a single JE275 (624BLD)) and four loops to protect large passages
4. Installation of eight bollards (4 on JE275 (624BLD) MASTER board + 4 on JE275 (624BLD) SLAVE board, see par. 15.1) and eight loops to protect large passages

The loops must be realized according to the instructions provided for the magnetic detector (control unit); they must be connected each other in series or you can use more magnetic detectors and connect the relevant relay contacts in series.

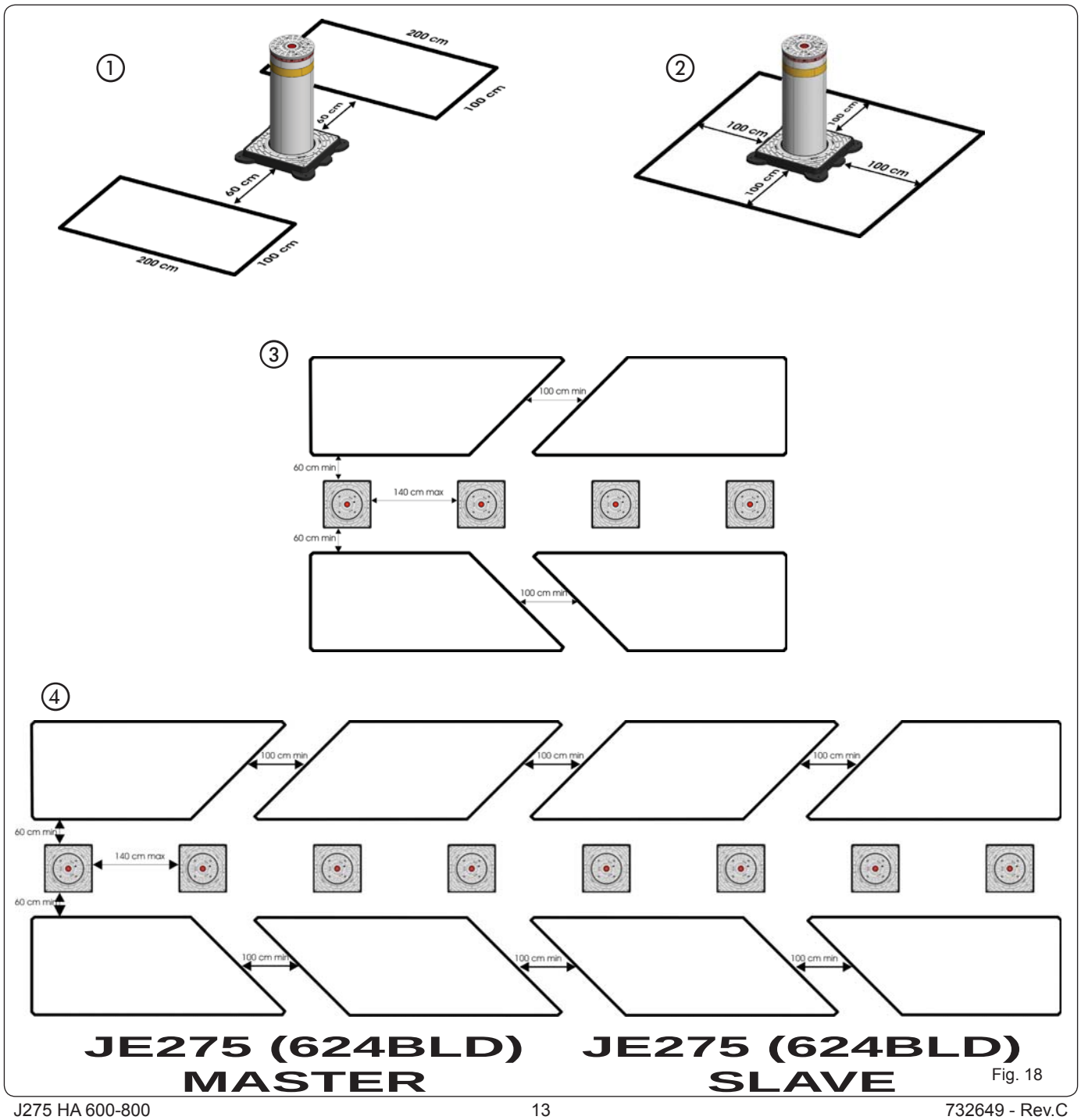


Fig. 18

15 CONNECTING MORE BOLLARDS

15.1 CONNECTION OF UP TO 4 BOLLARDS ON A SINGLE BOARD

Up to 4 bollards can be connected to the same unit and operate simultaneously.
Follow the instructions below for a correct wiring and operation (par. 15.3).

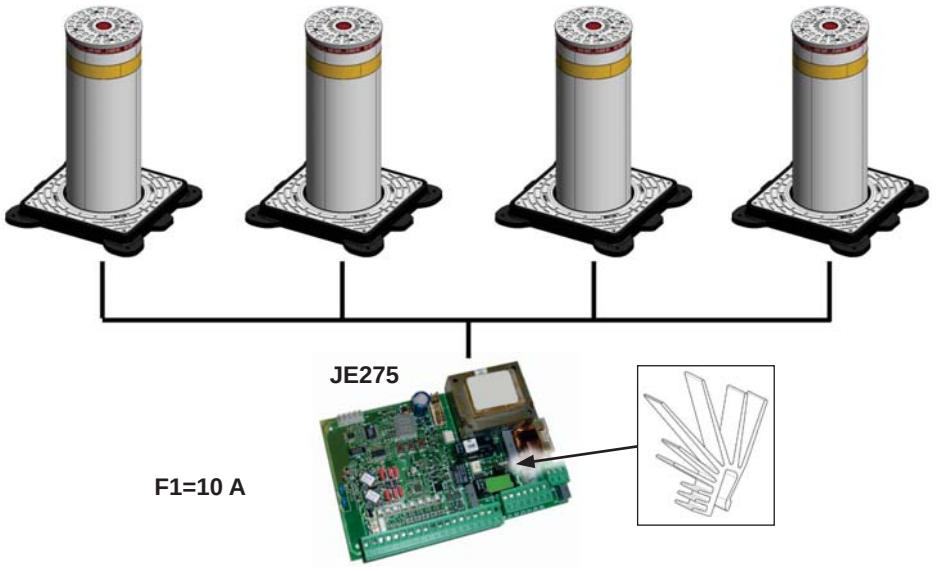


Fig. 19

15.2 CONNECTION OF UP TO 8 BOLLARDS ON TWO JE275 (624BLD) MASTER – SLAVE CONNECTION

You can connect 2 JE275 (624BLD) units in a MASTER-SLAVE configuration for the simultaneous control of 8 bollards. Follow the instructions below for a correct wiring and operation (par.15.4).

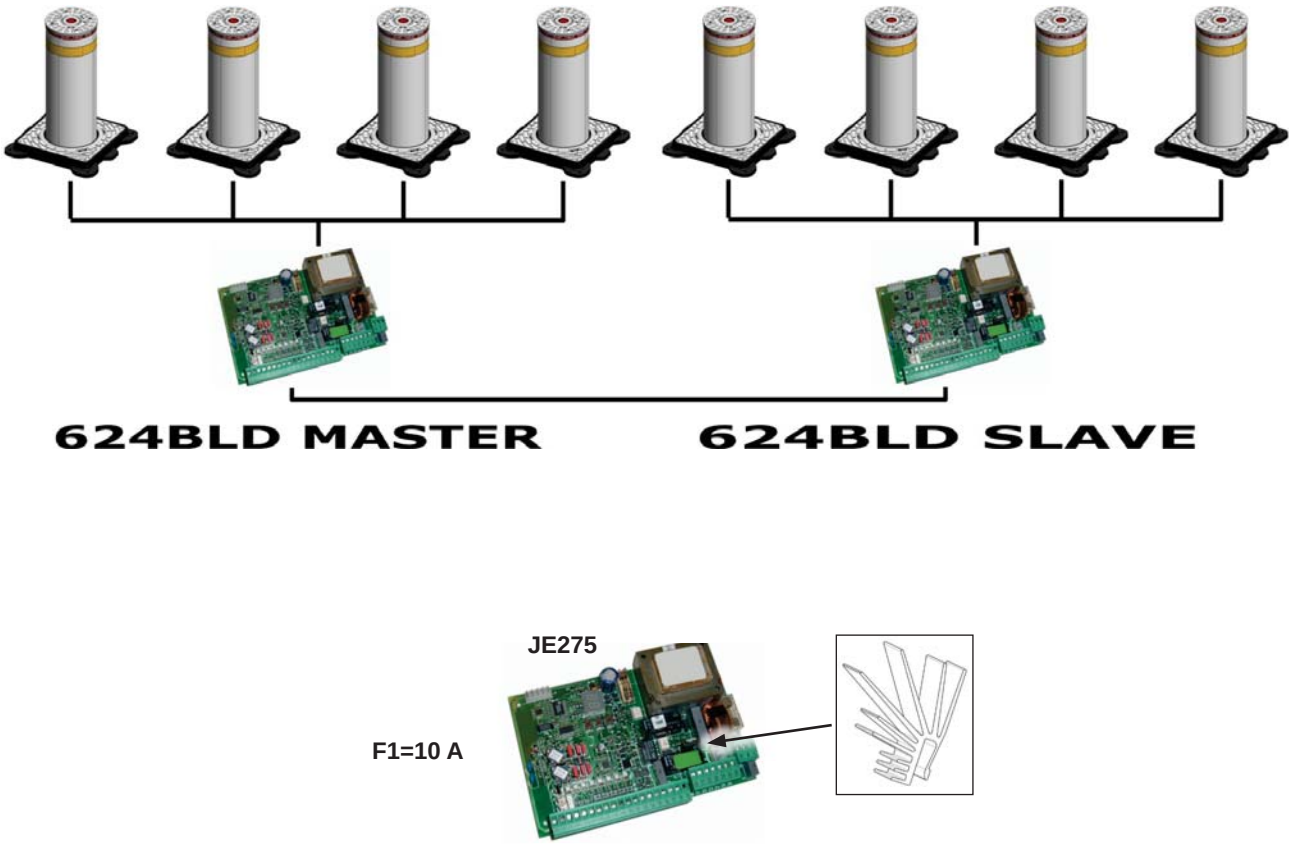


Fig. 20

15.3 WIRING OF UP TO 4 BOLLARDS ON A SINGLE BOARD

Connection of 4 motors and 4 solenoid valves

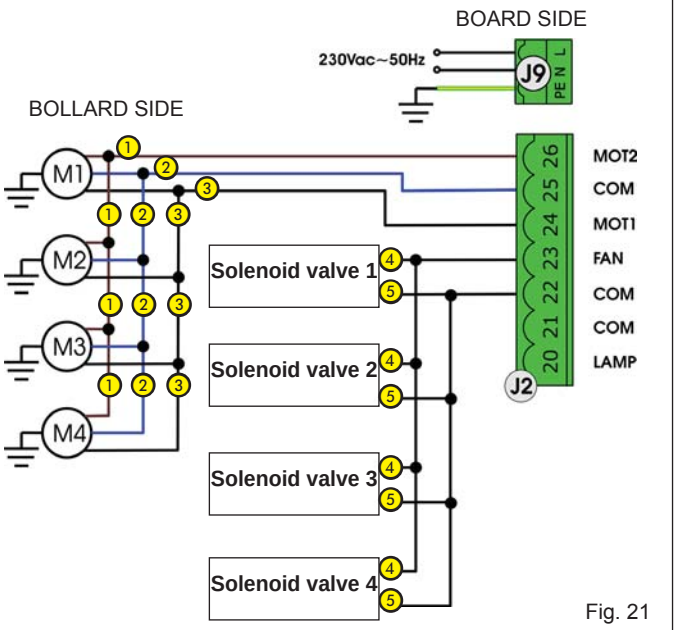


Fig. 21

Connection of lights / buzzer

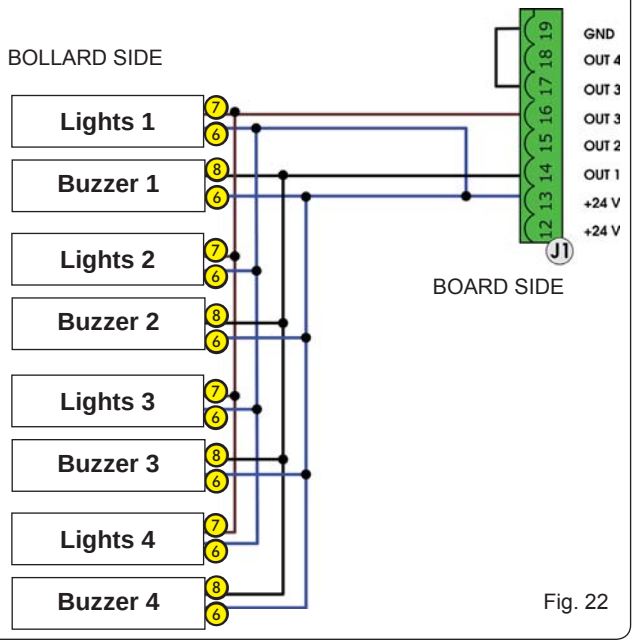


Fig. 22

Connection of 4 limit switches DOWN in parallel. The bollards stop when all 4 limit switches are engaged

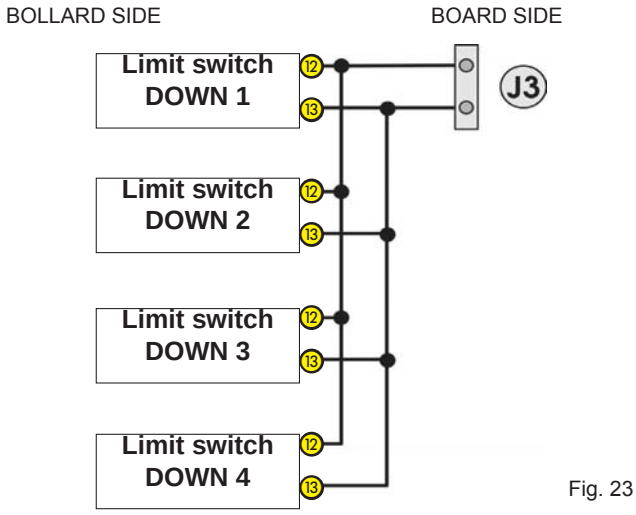


Fig. 23

Connection of 4 limit switches UP in parallel. The bollards stop when all 4 limit switches are engaged

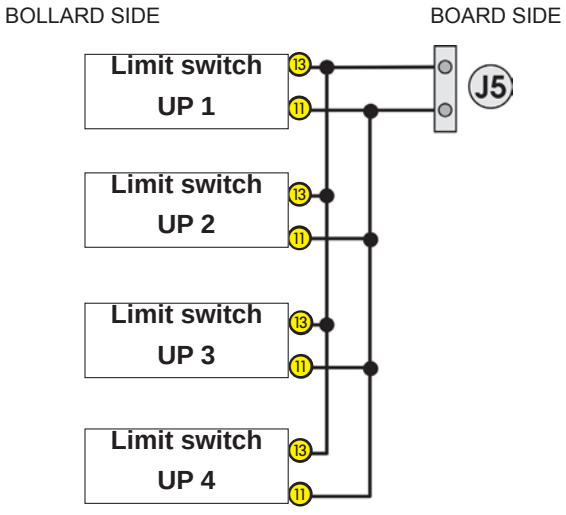


Fig. 24

Connection of 4 pressure switches in series. The first operation of a pressure switch causes the reversal of all bollards

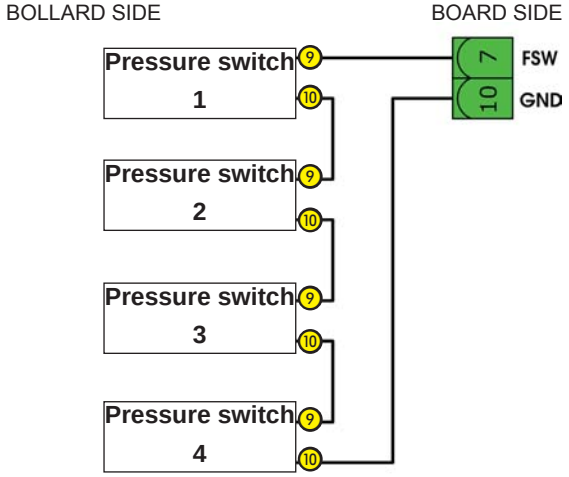


Fig. 25

15.4 WIRING OF UP TO 8 BOLLARDS ON TWO JE275 (624BLD) IN MASTER – SLAVE CONNECTION

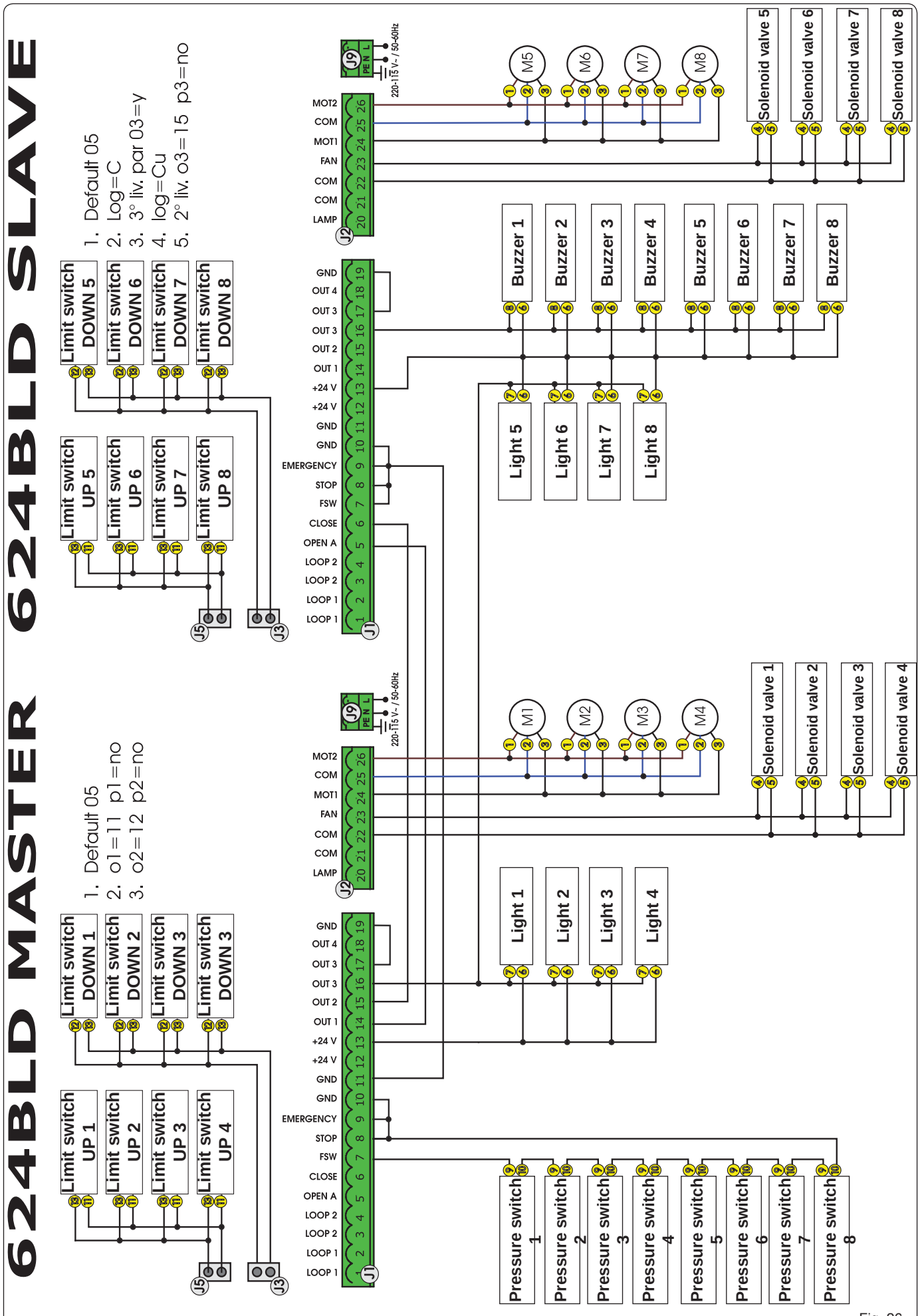


Fig. 26

ENGLISH

Translation of the original instructions

16 TROUBLESHOOTING

The indications below will help you locate and solve particular conditions.

	CONDITION	ADVICE
1	The bollard rises for a few centimetres and then lowers immediately	• Make sure you have selected the default no. 5 or no. 6 on the JE275 (624BLD) board • Check if the safety pressure switch wiring was performed correctly, see par.12 • Make sure that the LED DL3 (FSW) on the JE275 (624BLD) board remains ON for the whole movement • Adjust the pressure switch • Replace the pressure switch
2	As soon as the bollard reaches the position, it reverses immediately	• Check if the wiring of the limit stops was performed correctly, see par. 12 • Make sure that the up position limit stops are correctly positioned, see ref. 13 fig.1
3	The bollard does not rise, it remains down.	• Make sure you have selected the default no. 5 or no. 6 on the JE275 (624BLD) board • Check if the wiring of the solenoid valve was performed correctly, see par. 12 • Check if the solenoid valve was adjusted correctly, see par. 10.1 • Replace the solenoid valve • Make sure the bollard is hydraulically locked, see par. 9
4	The bollard remains up in closed position.	• Make sure nothing between the cylinder and the sliding bush prevents the bollard movement; try and shake the cylinder to facilitate its downstroke
5	The buzzer and the LED flashing lamp do not operate	• Make sure you have selected the default no. 5 or no. 6 on the JE275 (624BLD) board • Check if the wiring of the solenoid valve was performed correctly, see par. 12 • Check if the power connector under the head was fitted correctly

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