

*installer's manual/original instructions*



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## 1.1 GENERAL RECOMMENDATIONS



Before installing the automation the installer must read and understand all parts of this manual.


- 📖 This manual is an integral part of the automation unit and must be kept by the installer, with all the enclosed documentation, for future reference.
- 📖 This manual provides all instructions necessary to ensure correct installation and maintenance of the automation: TOPP srl is not liable for any damage to persons, animals and property caused by failure to follow these instructions.
- 📖 This manual was written by TOPP srl, which holds the copyright. No part of this manual may be reproduced or published without the manufacturer's written authorization.
- 📖 TOPP srl reserves the right to amend or improve the manual and the products described therein at any time without notice.
- 📖 The data contained in this manual were written and checked with the maximum care; TOPP srl is not liable for possible errors due to omissions or printing errors, or errors in transcription.


## 1.2 GENERAL SAFETY RULES

- 📖 **IMPORTANT!** – The personnel must be informed of the risks of accident, about the safety devices for the operators and about the general rules for accident prevention foreseen by the international directives and laws in force in the country in which the automation is installed. In any case, the personnel must comply scrupulously with the safety regulations for prevention of accidents in force in the country in which the automation is installed.
- 📖 **IMPORTANT!** – During handling and installation of the parts, the personnel shall be equipped with suitable personal protection equipment (PPE) so as to perform the works required under safe conditions.
- 📖 **IMPORTANT!** – To prevent injury and risks for the health of the workers, the maximum limits shall be applied for manual handling of loads, as provided in standard ISO 11228-1.
- 📖 Any tampering with or unauthorized replacement of parts or components of the automation mechanisms and any use of accessories or consumables other than the originals may represent a hazard and relieves the manufacturer of any civil and penal liability.
- 📖 In order for the automation unit to operate correctly, shall be carried out periodical maintenance on it, as indicated in par. 6.1 of this manual. Maintenance operations that require the automation unit to be even partially disassembled should be carried out exclusively after the power supply to the same has been cut off.
- 📖 Do not remove or alter the plates and labels applied by the manufacturer on the automation and its accessories.
- 📖 Never try to oppose the movement of the door and work near the hinges or other mechanical moving parts in motion (such as belts, carriages, etc.). The manufacturer is not liable for any damages caused by improper or unreasonable use of the automation.
- 📖 When handling electric parts always wear grounded antistatic conductive bracelets as electrostatic charges can damage the electronic parts on the circuits.
- 📖 The automation contains mobile mechanical parts, electrical connections and electronic circuits for control of door movement; the automation must therefore be protected, along its entire length, by an aluminum casing.
- 📖 This device may be used by children no younger than 8 years of age, by people with reduced physical, sensory or mental capacities and by inexperienced users, as long as they are supervised or as long as they have received instructions on the safe use of the device.
- 📖 Children must not play with the device.

## 1.3 INSTALLER

- 📖 Installation of the automation must be done exclusively by qualified technical personnel in possession of the professional requisites foreseen by the laws in the country of installation.
- 📖 The installer must verify compliance with the current directives and regulations on the safe use of motorized doors.
- 📖 The installer must be able to install the automation, start it and operate it with the power on in electrical cabinets or shunt boxes, and must be qualified to perform all actions of an electrical and mechanical nature and any kind of adjustment.
- 📖 After installing the automation, the installer must analyze the system for risks and verify that the sliding door installation does not present risks of crushing or shearing, adopting adequate corrective measures, if necessary, and applying the warning signs foreseen by the laws in force to identify hazardous zones.
- 📖 Every installer must provide visible annotation of the data identifying the drive system.

 The installer must also supply the owner with all information regarding automatic, manual and emergency function of the automation.

 The installation technician shall accept full responsibility for any installation errors and for any failure to adhere to the instructions provided in this manual. The installation technician shall therefore be exclusively liable for any damages caused to users and/or third parties that may arise as a result of incorrect installation.

## 1.4 USER

The user must be able to operate the automation under normal conditions and perform simple operations or startup or resetting the automation following any forced interruptions, using the devices provided (digital switch, analogue switch, etc.).

The user must not open the casing or perform any operations restricted to maintenance personnel or specialized experts. In case of breakdown or malfunction of the door, the user should simply switch off the circuit breaker and abstain from any attempt to repair the system.

Use of the automation must be exclusively permitted to users who comply with the instructions in this manual and in the manuals of the TOPP devices connected to it.

## 1.5 SERVICING

Contact the installation technician or retailer for assistance.

# 2 TECHNICAL DESCRIPTION

## 2.1 RATING PLATE AND "CE" MARKING

The "CE" marking certifies the conformity of the machine to the essential health and safety requisites foreseen by the European product directives.

It is formed of an adhesive plate made from polyester, screen-printed black, with the following dimensions: W=50mm - H=36mm.

It should be applied by the installation technician in a clearly visible position on the outside of the automation unit.

## 2.2 PROPER USE

The K200 automation mechanism was designed and produced exclusively to operate (open and close) linear sliding doors in residential, public and industrial buildings.

It is strictly forbidden to use the automation for purposes other than those described herein, in order to guarantee at all times the safety of the installer and user and the correct function of the automation.

The door may be used in escape routes only if equipped with anti-panic break-through systems. It must be possible to break through in the direction of escape no matter what the position of the door.



The automation software is designed to perform automatic recovery in the instance where anomalous events as described in chapters 5.8-5.10.

The automation in order to perform the above, if set in a mode other than "Closed", perform a reset called "Near" that provides for the complete opening and closing of the doors at a low speed, before returning in the set state the function selector.




**The recovery action must be taken into account in applications where there are features that provide access control with inputs different from those of the radar (example reader badge) for which automation could not ensure the operating mode set.**

In case you want to exclude the auto recovery please contact support Topp Srl.

## 2.3 TECHNICAL DATA

Tab. 1 lists the technical data that characterize the K200 automation.

Tab. 1

MODEL	K200	
POWER SUPPLY	230V ~ 50Hz	
PERIPHERAL POWER OUTPUT	24V  500mA max	
ABSORPTION	0,41A	
POWER ABSORBED	90W	
TYPE OF USE	Continuous	
OPENING/CLOSING SPEED	Adjustable 10 ÷ 80 cm/s	
OPENING/CLOSING APPROACH SPEED	Adjustable 1 ÷ 5 cm/s	
OPENING/CLOSING ACCELERATION	Adjustable 1 ÷ 12	
AUTOMATIC CLOSING TIME	Adjustable 0 ÷ 60 s	
MAINS VOLTAGE FUSE 230V	5 x 20 - T800 delayed	
PROTECTION OF ELECTRIC DEVICES	IP X0	
WORKING TEMPERATURE	 -20°C  +50°C	
<b>NUMBER OF DOOR PANELS</b>	<b>1 PANEL</b>	<b>2 PANELS</b>
MAXIMUM CAPACITY	140 kg	100 + 100 kg
SIZE OF OPENING	800÷2800 mm	1000÷2800 mm

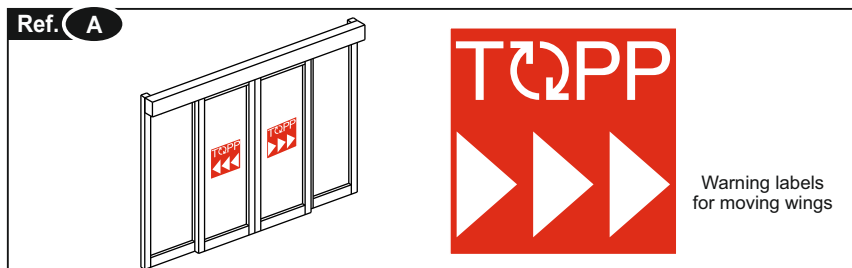
## 2.4 PACKING

Every standard product package (cardboard carton) contains:

- % N.1 K200 automatic door (complete with motor unit and belt transmission preassembled on the crossbar, side caps, casing, door stop limit switch, cable raceway, emergency battery, raceway, rubber cable sleeves);
- % N.1 package of hardware consisting of 2 self-tapping screws TC d6x70 and 2 nylon anchor bolts 10x60;
- % N.2 Carriage units with relative hardware for fastening to the adapter;
- % N.2 Supporting brackets on the crossbar;
- % N.1 Adapter for framed door panels;
- % N. 2 warning labels for moving wings that have to be stuck on the centre of the moving wings (refer to picture A);

Make sure the parts described above are in the package and that the automation has not undergone any damage in shipment. If you find anything unusual, do not install the automation and request the service department of the local retailer or the manufacturer.

The number of some of the parts described above may vary depending on the type of configuration (e.g. number of door panels). If more parts are necessary, contact the manufacturer.



## 2.5 MODELS

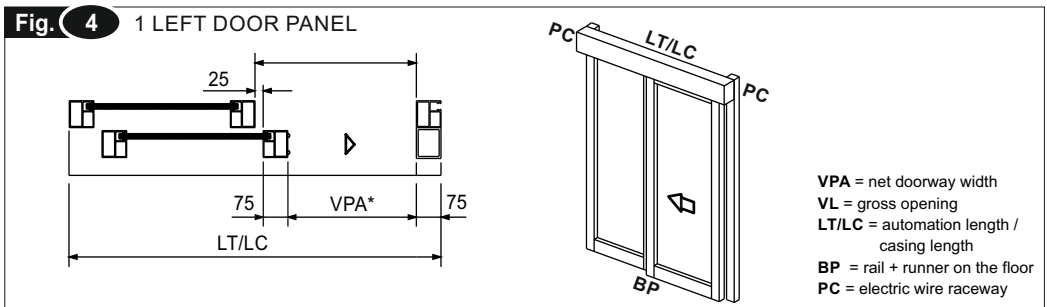
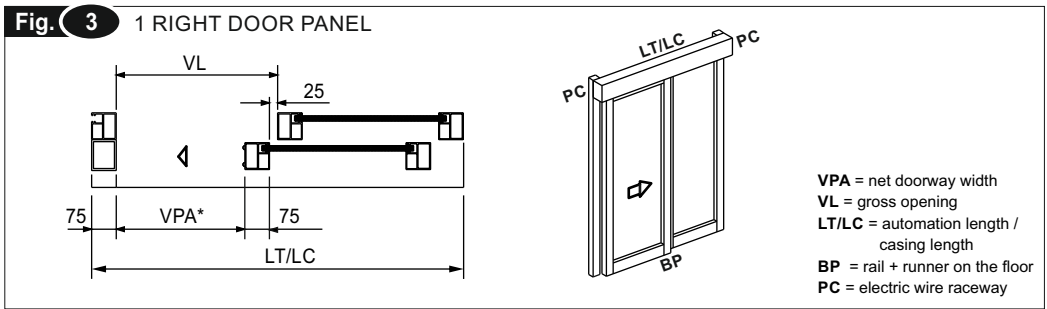
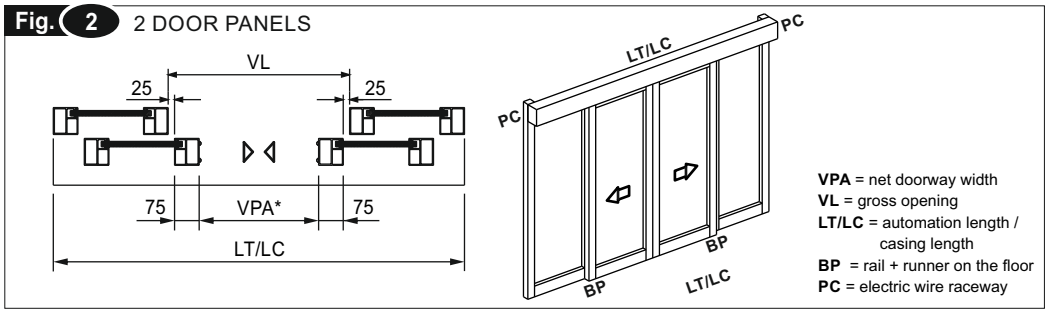
Two models of automation are available:

- % automation with 2 door panels (Fig.2) which allows a pair of door panels to glide simultaneously in opposite directions;

- % automation with 1 door panels which allows a single door panel to glide in one direction; Fig.3 shows an application with a single door that opens toward the right (seen from the front of the automation); Fig.4, shows a single door that opens toward the left (seen from the front of the automation).

- ☒ When order a single door panel application, always specify the direction of opening of the door, seen from the front of the automation.

- ☒ To comply with the safety regulations, the glide of the door panel **VPA** must be less than the door opening width **VL**. The glide of the door panel **VPA** is equal to **VL** when the upright on the door does not have any roundings and/or protrusions that could cause a shearing effect.



## 2.6 DESCRIPTION OF PARTS AND DIMENSIONS

To reduce the hazard of getting the fingers caught, we recommend the assembly type as shown in Fig.5a and Fig.5b, where the wall and/or tubular frame act as a jamb and stop the door panel.

Alternatively, proceed as shown in Fig.6 overlapping the end of the wall (and/or closing upright) with the profile of the sliding panel and moderating the closing speed and speed of approach of the door.

✂ In some countries the laws forbid this type of assembly as there is a possible risk of getting the fingers caught.

Fig. 5a

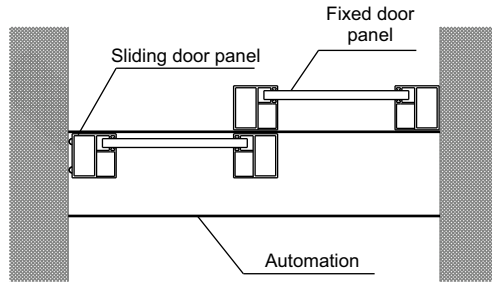


Fig. 5b

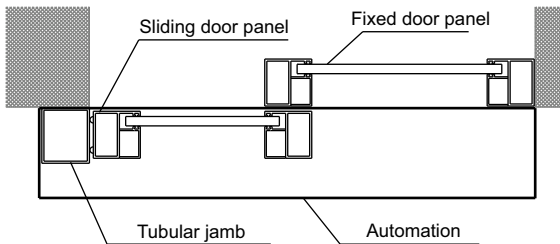


Fig. 6

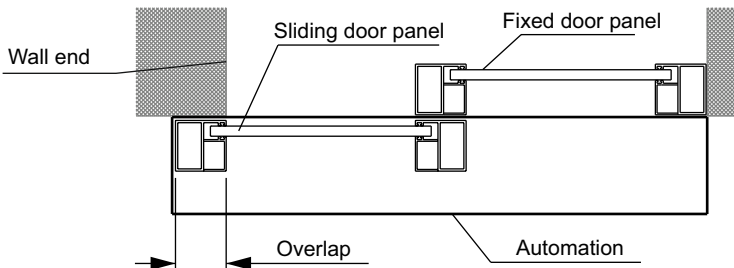
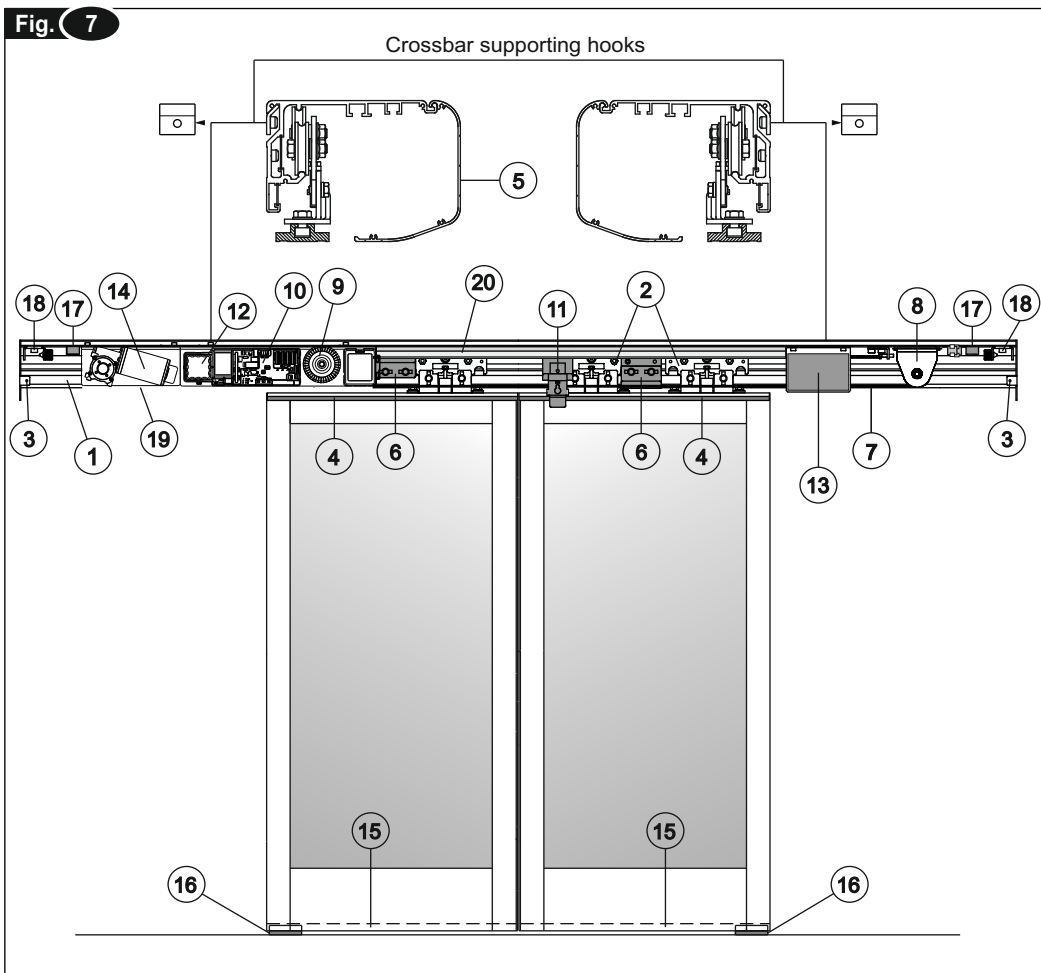




Fig. 7



- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li>1 - Main crossbar</li> <li>2 - Carriage with double wheel</li> <li>3 - Lateral case fastener</li> <li>4 - Adapter for door panel suspension</li> <li>5 - Casing</li> <li>6 - Door panel drive bracket</li> <li>7 - Toothed transmission belt</li> <li>8 - Belt transmission with pulley</li> <li>9 - Low voltage transformer</li> <li>10 - Electronic control circuit</li> </ul> | <ul style="list-style-type: none"> <li>11 - Door lock with manual release</li> <li>12 - Emergency battery</li> <li>13 - Photocell control unit</li> <li>14 - Gearmotor</li> <li>15 - Rail for door guide</li> <li>16 - Plastic runner on floor</li> <li>17 - Wire raceway</li> <li>18 - Door stop</li> <li>19 - Metal motor module</li> <li>20 - Logline</li> </ul> |
|---|---|

Fig. 8

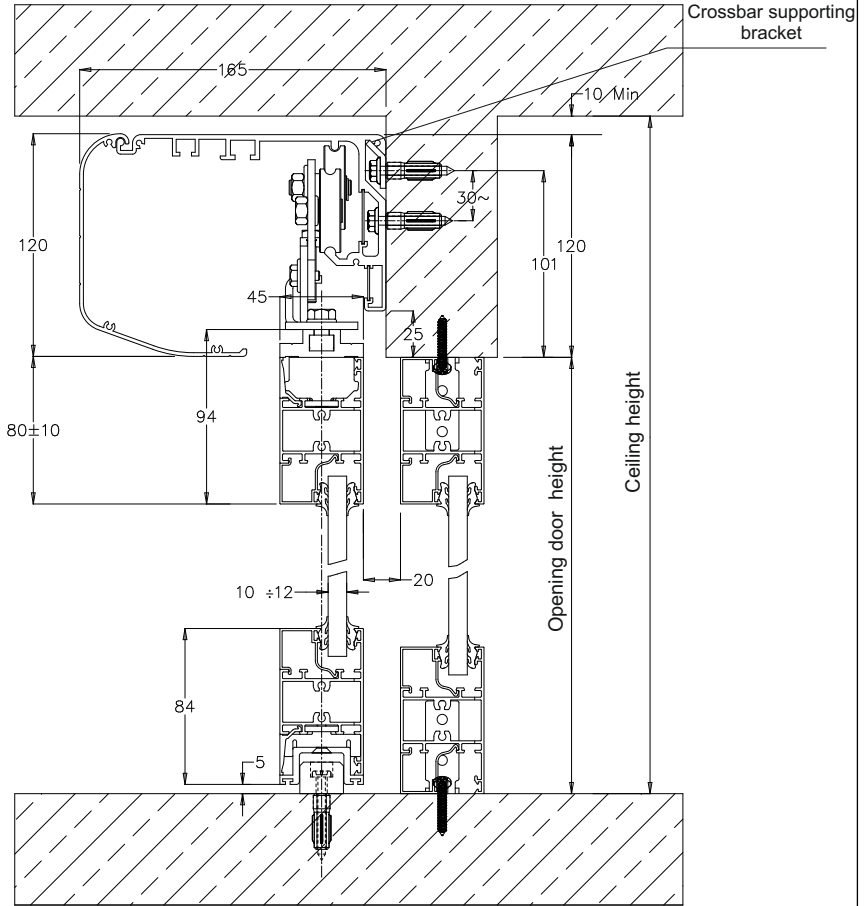
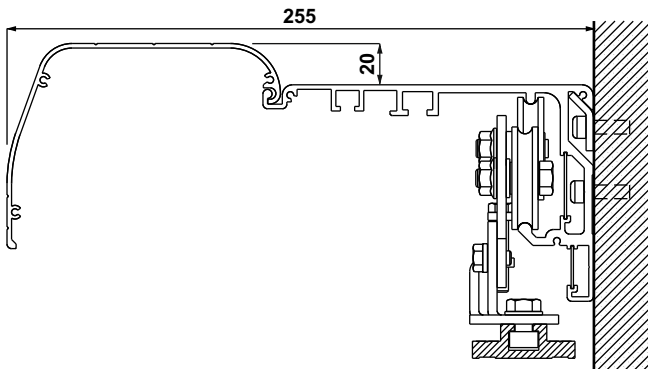








Fig. 9



### 3.1 GENERAL RECOMMENDATIONS



The automation must be installed exclusively by competent, qualified technical personnel in possession of the technical requisites foreseen by the legislation in force in the country of installation.

-  Do not install the automation on the external wall of the building, subject to atmospheric agents (rain, snow, etc.).
-  Do not use the automation in environments with a potentially explosive atmosphere.
-  The glass for door panels shall comply with the provisions of the Standard (EN 16005 4.4.2 - Materials: tempered glass in accordance with EN 12150\_1; stratified glass in accordance with EN ISO 12543-1 and EN ISO 12543-2).
-  During installation of the door, take care to avoid any risks during the movement of closure and/or opening the door, and to protect against risks in accordance with the provisions of standard EN 16005 at item 4.6.21 for the door opening movement and item 4.6.2.2 for door closure. Protection of the primary closing edge should take account of the types of users of the door (see EN 16005, 4.6.2.2).
-  The forces developed by the complete system during operation must respect the regulations in force in the country of installation; if this is not possible, protect and signal by means of electronic safety devices the zones affected by those forces.
-  Before installing the automation, verify that the structure to be automated is stable, sturdy and able to withstand the weight of the automation and, if necessary, take steps to ensure that it is. Topp Srl is not liable for failure to comply with the rules of good workmanship in the construction of the door panels to motorize, or for any distortions that may develop with use of the device.

### 3.2 INSTALLING THE CROSSBAR

**(Model with two panels)** To install the crossbar, proceed as follows:

- % Mark the surface where the automation will be fastened at the center of the opening VL that is also the center of the crossbar;
- % Decide the position of fastening the crossbar supporting brackets, referring to the measurements shown in Fig.8;
  - ⊗ If the floor is not perfectly flat, decide the position of the supporting brackets referring to the highest point of the floor.
- % Fasten the crossbar supporting brackets to the wall using self-drilling/self-tapping screws type d5.5 or d6,3;
- % Remove the cover on the casing;
- % Install the crossbar and make sure it is aligned;
- % Fasten the crossbar to the wall with 3 self-tapping screws type d6.3 for every meter of crossbar and paying careful attention not to damage the gliding base of the carriages with the drill spindle. In case of damage it will be necessary to replace the entire crossbar;
- % After fastening the crossbar clean the glide zone soiled by drilling residues.

**((Model with 1 panel)** To install the crossbar, proceed as follows:

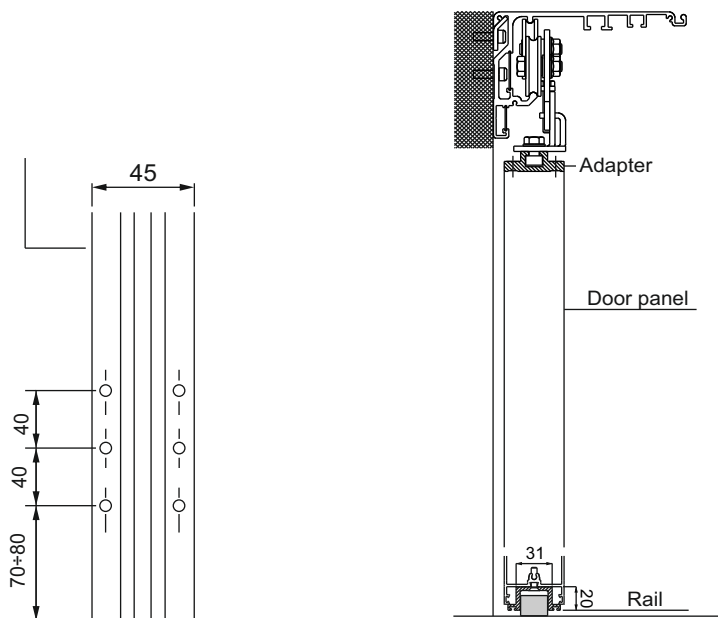
- % Mark the surface where the automation will be fastened at the center of the crossbar that corresponds:
  - to the line of the wall end on the left of the doorway for application of 1 door panel with the opening toward the left;
  - to the line of the wall end on the left of the doorway for application of 1 door panel with the opening toward the right;
- % Decide the position of fastening the crossbar supporting brackets, referring to the measurements shown in Fig.8;
  - ⊗ If the floor is not perfectly flat, decide the position of the supporting brackets referring to the highest point of the floor.
- % Remove the cover on the casing;
- % Fasten the crossbar supporting brackets to the wall using self-drilling/self-tapping screws type d5.5 or d6,3.
- % Install the crossbar and make sure it is aligned;
- % Fasten the crossbar to the wall with 3 self-tapping screws type d6.3 for every meter of crossbar and paying careful attention not to damage the gliding base of the carriages with the drill spindle. In case of damage it will be necessary to replace the entire crossbar.
- % After fastening the crossbar clean the glide zone soiled by drilling residues.

Materials of the fastening surface	Minimum thickness
IRON	2 mm (with lesser thickness use threaded rivets)
ALUMINUM	3 mm (with lesser thickness use threaded rivets)
REINFORCED CONCRETE	100 mm
SOLID WOOD	50 mm
PERFORATED CONCRETE	110 mm (with lesser thickness use chemical bolts)

### 3.3 INSTALLING THE ADAPTER AND RAIL

- % Cut the adapter and rail to the measurement of the finished door width, removing another 2 mm from the jamb sider;
- % Make sure the upper part of the panel crossbar is reinforced at the base (minimum thickness 3 mm);
- % Drill the adapter and rail starting at about 70/80 mm from the end;
  - ✂ The number of fastening holes will depend on the size and weight of the door.
- % Mark the fastening points on the door using the adapter and rail as a templat;
- % Drill the door panel at the top and fasten the adapter using cylindrical M6 screws or cylindrical self-tapping d5.5 screws depending on the type of material;
- % Drill the door at the bottom and fasten the rail using flared self-tapping cylindrical screws diam. 4.8.

Fig. 10

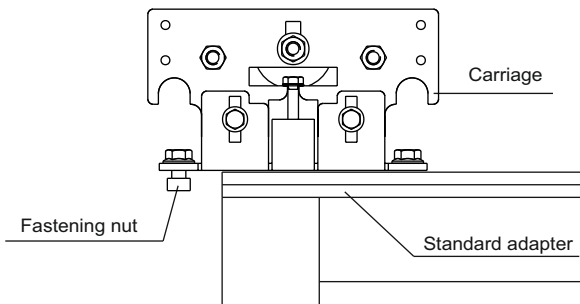


### 3.4 INSTALLING THE CARRIAGES ON THE DOOR

Install the carriages on the adapter as shown in the figure.

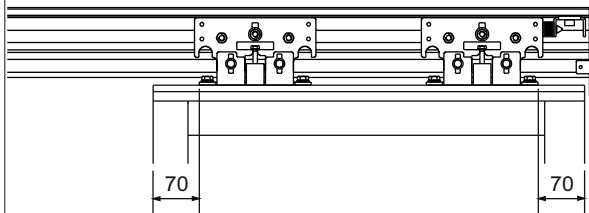
- ⚠ Make sure the carriages are installed correctly and are aligned with each other, with the adapter and with the crossbar.

**Fig. 11** Installation by insertion

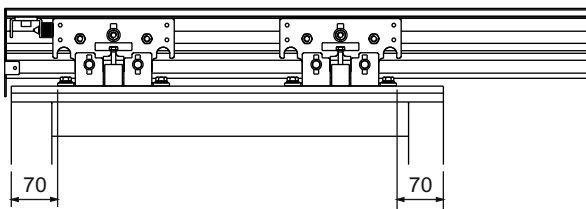


**Fig. 12**

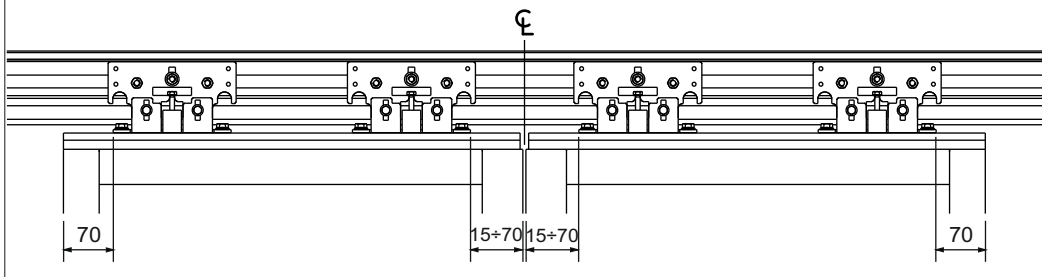
Single door panel, opening toward the left



Single door panel, opening toward the right



**Fig. 13** Double door panel, simultaneous opening toward the right and left



### 3.5 FASTENING AND ADJUSTMENT OF THE SLIDING PANELS

To fasten the sliding panels to the crossbar, proceed as follows:

- % Lower the anti-derailing wheels of the carriages (Fig. 14);
- % Bring the panels to the crossbar and make sure the gliding base of the carriages is clean and free of any scraps;
- % Fasten the door panel to the crossbar by raising it slightly and hooking it first on one side and then on the other, or both sides at once (Fig. 15);
- % Loosen the fastening screws on the carriages and insert the no. 10 fixed wrench in the height adjustment screw on the carriage and turn it to the left or right so that the door panel is about 5 mm off the floor (height for the standard runner);
- % Determine the distance "A" for adjustment of the door panel (Fig. 17);
  - ⊗ If an air seal brush must be installed between the sliding panel and the upright or wall, adjust the panel so that there is a space of about 1 mm between it and the brush along the entire length;
- % Fasten the runner to the floor at point "A" using the anchor bolt and self-tapping screw d 6x70 contained in the hardware package (Fig. 16).
- % Adjust the distance "A" (Fig.17) by loosening the two screws that hold the lower bracket of the carriage to the adapter. The holes on the brackets are in slot form to permit movement of the door by about 18 mm.
- % Before tightening the screws make sure the carriages are aligned with each other and with the crossbar.
- % Adjust the height of the sliding panels (Fig.18) using the special adjustment screws on the carriages (Fig.17). After performing this operation, tighten the screws on the load-bearing wheels and raise the anti-derailing wheel.
- ⊗ Using the height adjustment screws on the carriages you can raise or lower the door by  $\pm 10$ mm (with the crossbar installed on the basis of the measurements shown in Fig.8).

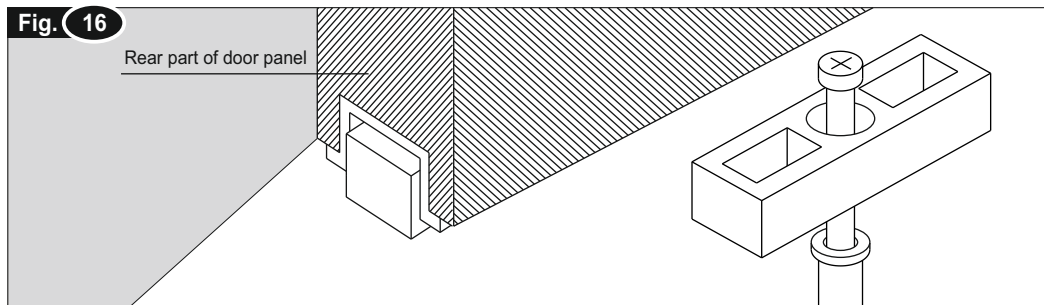
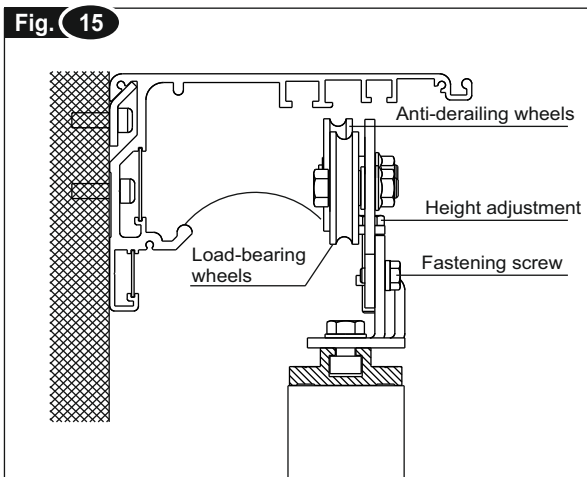
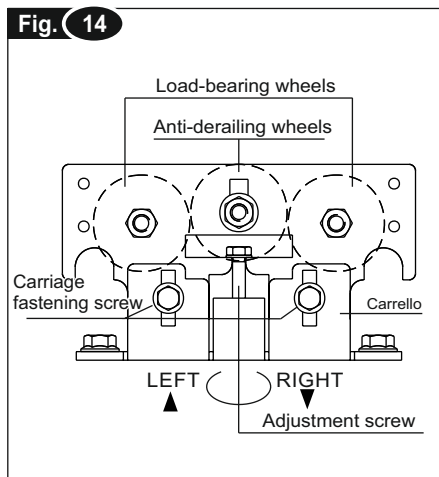


Fig. 17

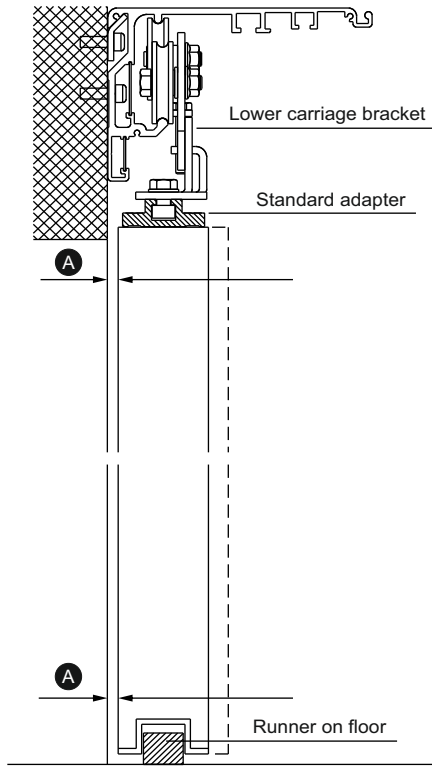
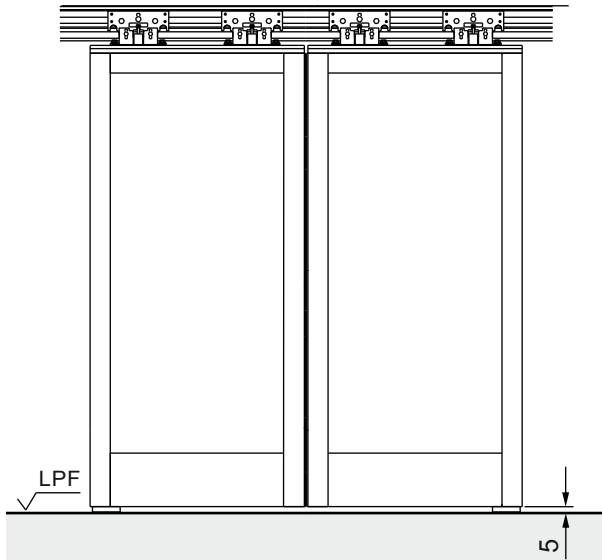


Fig. 18



### 3.6 INSTALLING THE MOTOR MODULE, BELT TRANSMISSION, BELT, LOGLINE

#### K200 - model with 2 door panels (Fig.19)

VPA	A	B	L Belt	L Logline
1000	876	876	2 x 1736	942
1100	928	928	2 x 1840	1046
1200	980	980	2 x 1944	1150
1300	1032	1032	2 x 2048	1254
1400	1084	1084	2 x 2152	1358
1500	1136	1136	2 x 2256	1462
1600	1188	1188	2 x 2360	1566
1700	1240	1240	2 x 2464	1670
1800	1292	1292	2 x 2568	1774
1900	1344	1344	2 x 2672	1878
2000	1396	1396	2 x 2776	1982
2100	1448	1448	2 x 2880	2086
2200	1500	1500	2 x 2984	2190
2300	1552	1552	2 x 3088	2294
2400	1604	1604	2 x 3192	2398
2500	1656	1656	2 x 3296	2502
2600	1708	1708	2 x 3400	2606
2700	1760	1760	2 x 3504	2710
2800	1812	1812	2 x 3608	2814

#### K200 - model with 1 door panel (Fig.20)

VPA	A	B	L Belt	L Logline
800	120	1058	1 x 2104	248
900	120	1162	1 x 2312	352
1000	120	1266	1 x 2520	456
1100	120	1370	1 x 2728	560
1200	120	1474	1 x 2936	664
1300	120	1578	1 x 3144	768
1400	120	1682	1 x 3352	872
1500	120	1786	1 x 3560	976
1600	120	1890	1 x 3768	1080
1700	120	1994	1 x 3976	1184
1800	120	2098	1 x 4184	1288
1900	120	2202	1 x 4392	1392
2000	120	2306	1 x 4600	1496
2100	120	2410	1 x 4808	1600
2200	120	2514	1 x 5016	1704
2300	120	2618	1 x 5224	1808
2400	120	2722	1 x 5432	1912
2500	120	2826	1 x 5640	2016
2600	120	2930	1 x 5848	2120
2700	120	3034	1 x 6056	2224
2800	120	3138	1 x 6264	2328

Fig. 19

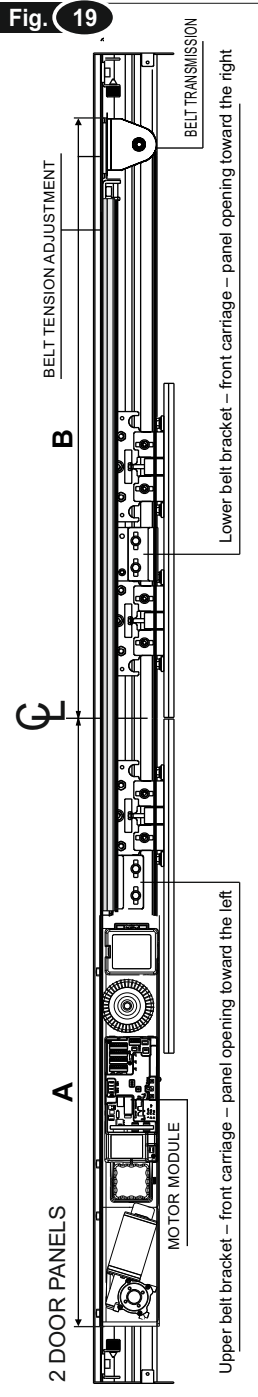
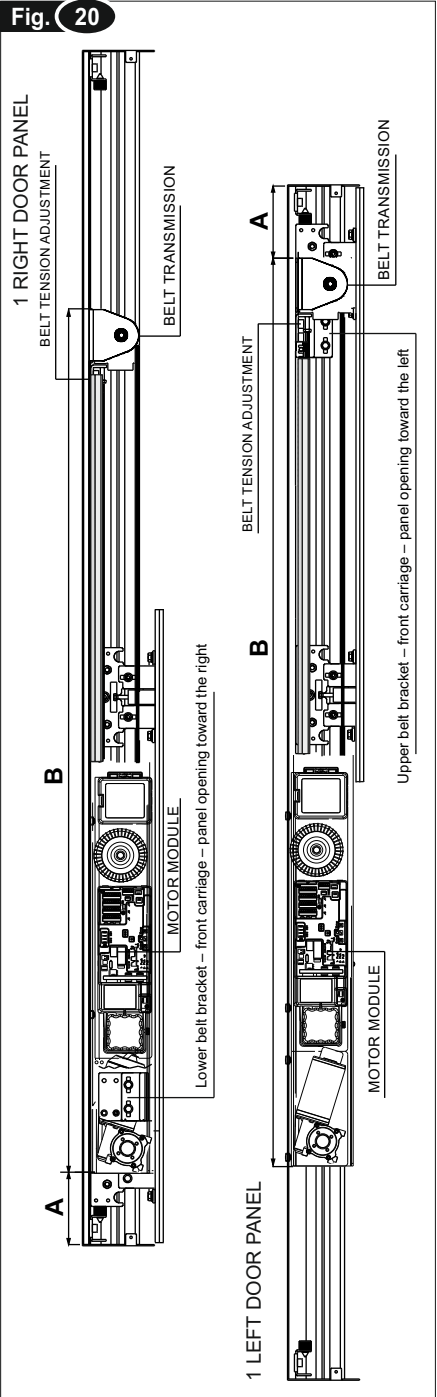


Fig. 20





Before installing the motor module, belt transmission and belt on the crossbar, prepare and install the wires necessary for the electrical connections and make sure the carriages, door panels and runners on the floor have been fully adjusted and positioned.

**Installing the motor module (Fig.21):**

- Mark the reference measurements on the crossbar using the tables on page 16;
- Loosen the two VTM screws on the crossbar for fastening the motor module;
- Fit the motor module with the slots provided for fastening in the VTM screws, check the reference mark on the crossbar once more and tighten the VTM screws.

**Installing the belt transmission (Fig.22):**

- Mark the reference measurements on the crossbar using the tables on page 16;
- Remove the two VTF screws on the crossbar for fastening the belt transmission;
- Fit the transmission with the specific fastening holes in the VTF screws and tighten them;

**Installing the transmission belt (Fig. 23a, 23b):**

- Install the transmission belt on the motor and transmission pulley making sure the belt junction brackets are positioned as shown in Fig. 24. (Upper bracket for door opening to the left, lower bracket for door opening to the right).
- Fig. 23a** Slightly loosen screws "A" on the tension adjustment, take the belt transmission to the end of its run and tighten screws "A".
- To tighten the belt, loosen screws "VTF" on the transmission and turn screw "C" to obtain the proper belt tension.
- To check the tension, with the handshake bring the two edges of the belt as shown in Fig. 23b. The tension is enough if there is some resistance before the contact of the two edges.
- Tighten screws "VTF" after checking that the transmission is aligned with the crossbar.

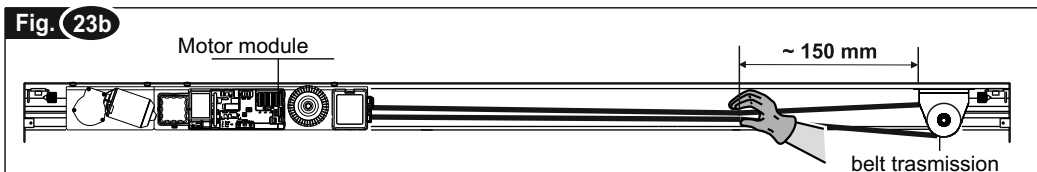
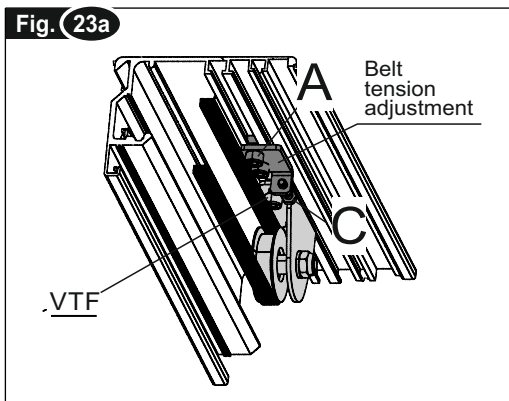
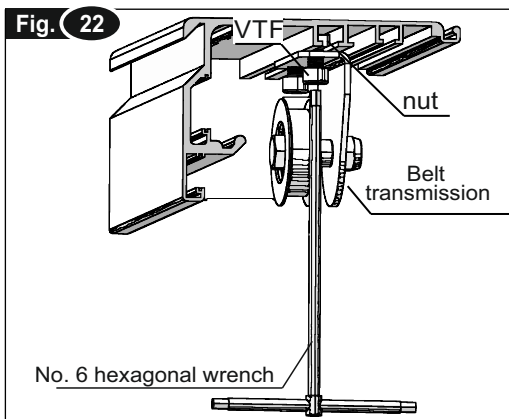
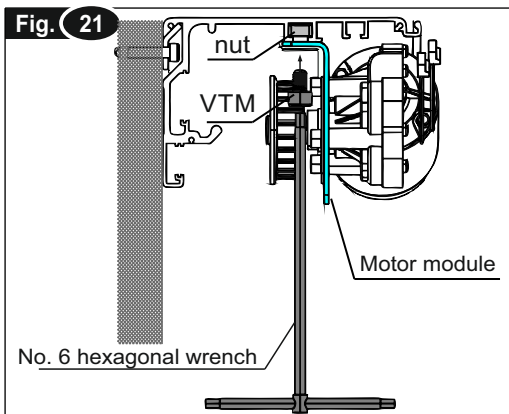
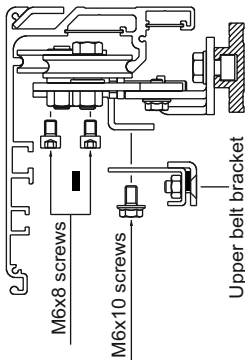


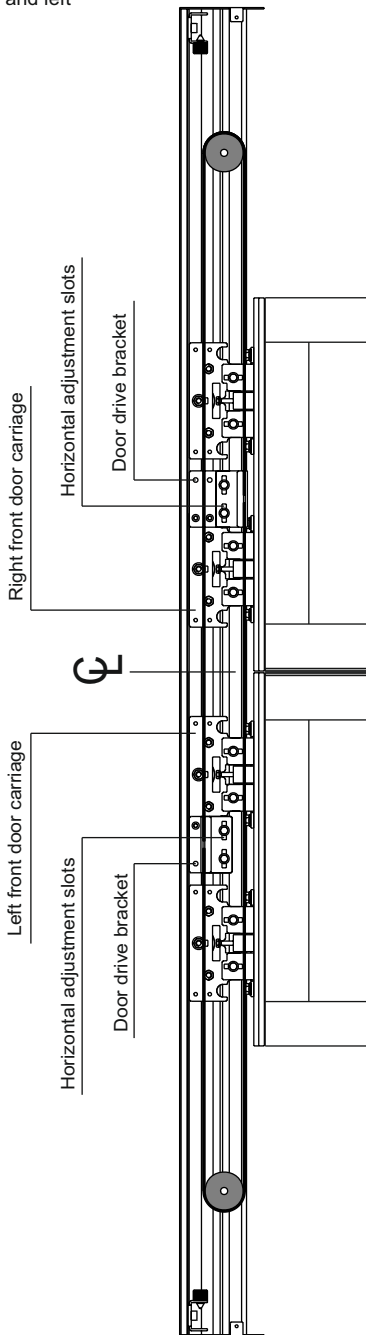
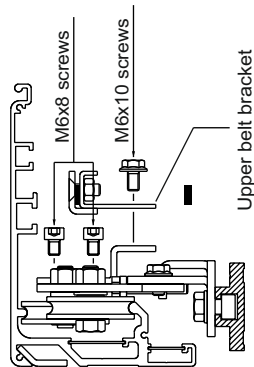
Fig. 24

2 DOORS – simultaneous opening toward the right and left

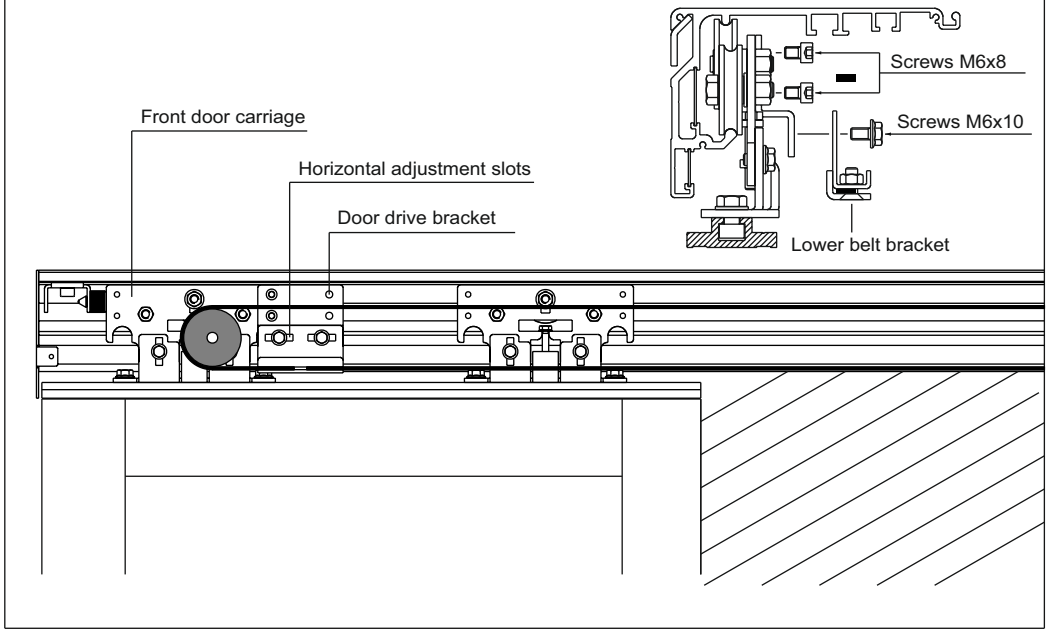
DOOR OPENING TO RIGHT



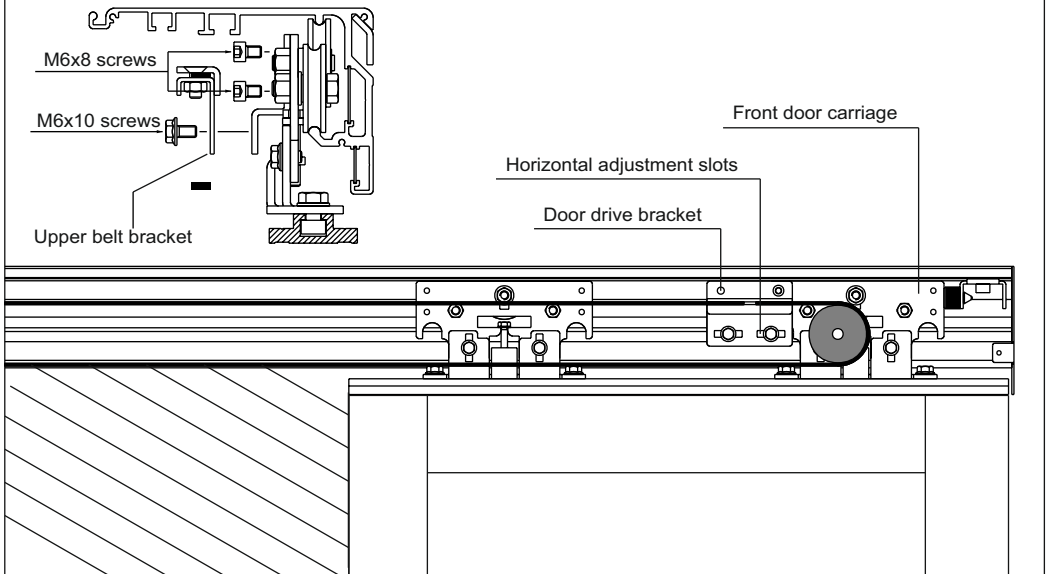
DOOR OPENING TO LEFT



**Fig. 25** 1 RIGHT DOOR – opening toward the right



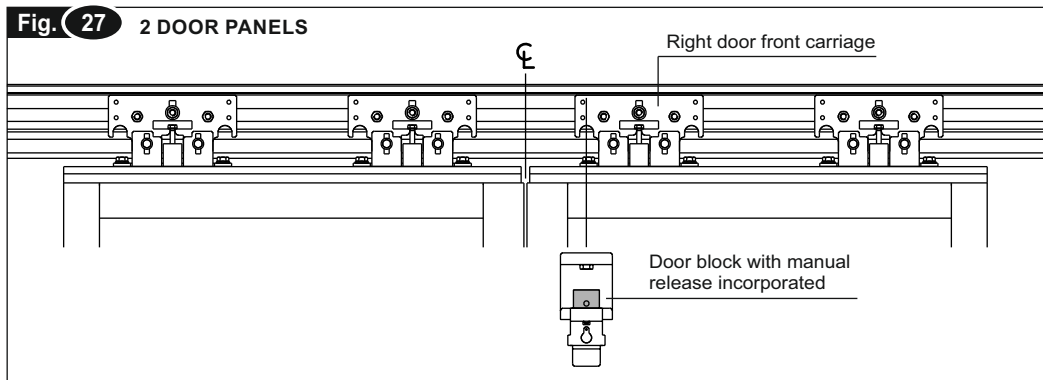
**Fig. 26** 1 LEFT DOOR – opening toward the left



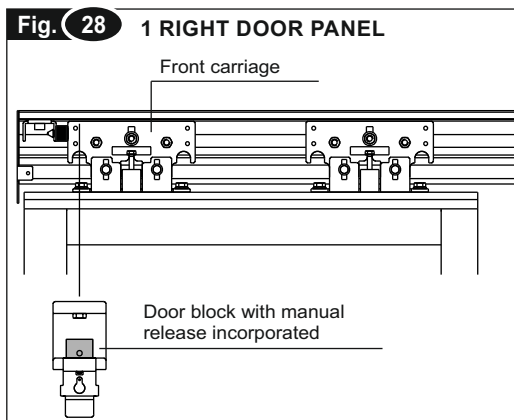
### 3.8 INSTALLING THE DOOR BLOCK

During installation, make sure that when the door is closed with the block on, it must be possible to open the door manually by at least 2-3 mm. This tolerance is necessary to enable the block to be released without difficulty.

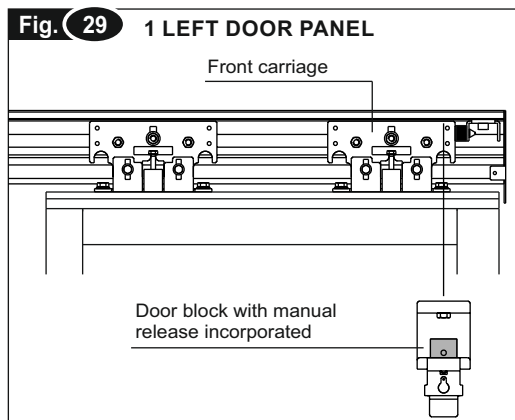
**Fig. 27** 2 DOOR PANELS



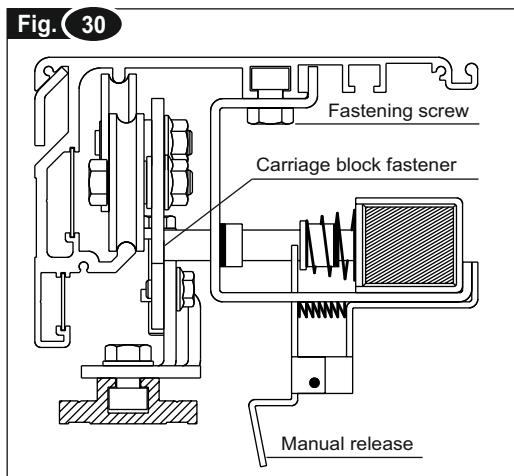
**Fig. 28** 1 RIGHT DOOR PANEL



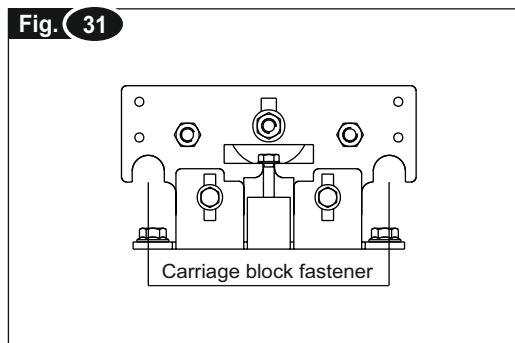
**Fig. 29** 1 LEFT DOOR PANEL



**Fig. 30**



**Fig. 31**



To release and open the door, push the manual release lever under the casing forward and, at the same time, pull the door with your hand until it opens.

**Attention!** The door block system is not to be considered as a device for protection against break-ins.

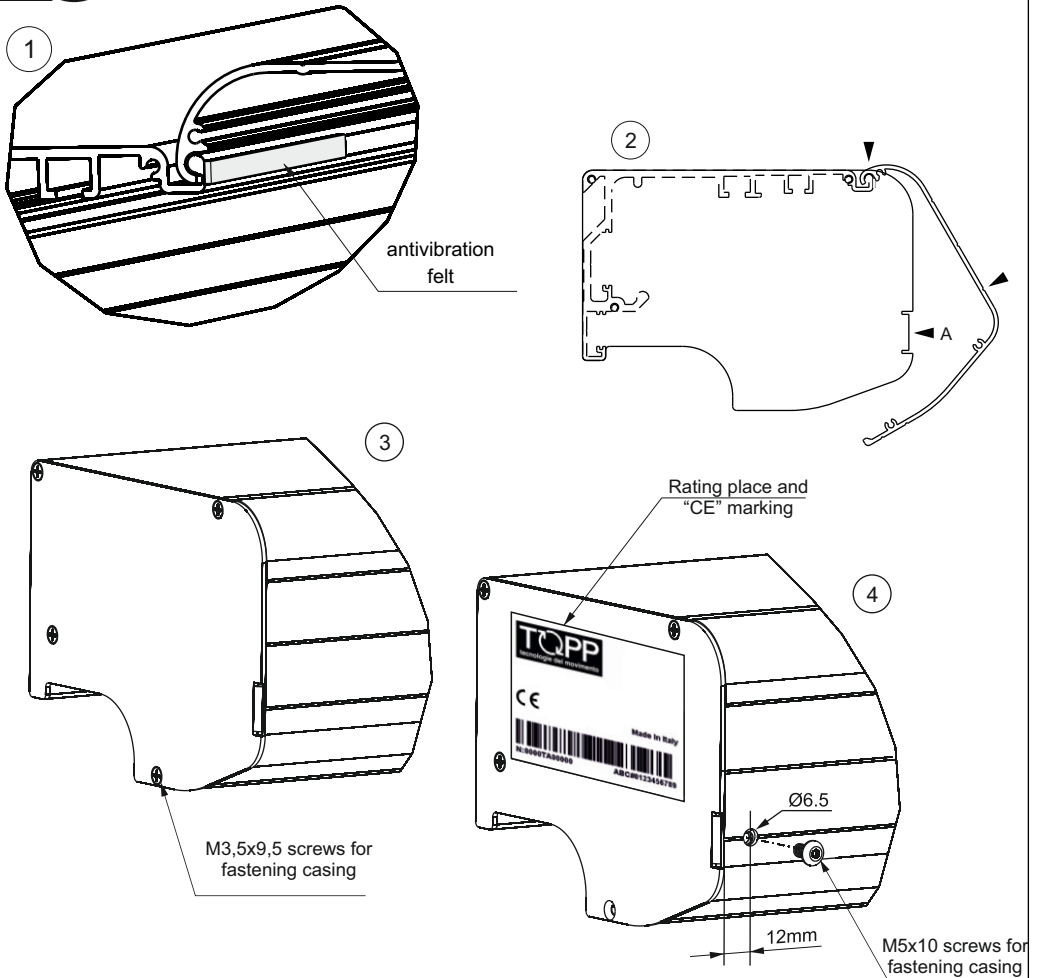
### 3.9 INSTALLING THE CASING

Fasten the lateral caps on the beam using 3 screws type TSP d3.5x9.5 for each cap, supplied in the hardware package. Apply an antivibration felt strip every 300mm along the beam (**Fig.32 Ref.1**). Fit the upper part of the casing in its housing on top of the beam, holding it in a tilted position at a 30° angle and insert it until it is flush (**Fig.32 Ref.2**). Fasten the casing to the beam using two more screws type TSP d3.5x9.5 (**Fig.32 Ref.3**).

If it should not be possible to fasten the casing from the side, proceed as follows:

- % Drill symmetrical holes in the casing cover using a suitable drill with a  $\text{Ø}6.5$  bit for aluminum, with the measurements and position indicated in **Fig.32 Ref.4**
- % Fasten the casing to the beam using the two screws type TCEI M5x10.

**Fig. 32**



### 4.1 GENERAL RECOMMENDATIONS



Electrical connection of the automation must be made exclusively by qualified technical personnel in possession of the professional requisites foreseen by the laws in the country of installation, who must issue the client a certificate of conformity of the connection and/or installation made.

Whatever type of electrical material is used for connection (plug, cord, terminals, etc.), it must be suitable for the use, with the "CE" seal of approval and must comply with the requisites foreseen by the laws in force in the country of installation. For the wiring, use cables with double insulation up to the immediate vicinity of the connectors.

The electrical power line to which the control unit is connected must comply with the requisites foreseen by the laws in force in the country of installation, and must comply with the technical requisites listed in **table 1** and on the "CE" rating plate.

The power supply system to which the equipment is connected shall be provided with an omnipolar magneto-thermal differential 30mA switch with aperture of at least 3 mm between the contacts. This device shall be installed in the power supply system in accordance with the requisites contemplated in the legislation in force in the country of installation.

The installation must include a ground wire longer than the power cord so that, in case of traction, the ground wire is the last to stretch.

We recommend the following types of power cables: H05VV-F 3X0.75, H05RN-F 3X0.75. For the analogue switch cable we recommend using a multipole 8 x 0.5 cable type LI-YY, and for the digital switch 4x0.5 LI-YY. (Cable 'shielding' should only be used for cable lengths in excess of 20 meters).

Before making electrical connection of the automation, make sure the power cord has not been damaged.

The hole drilled on the profile for passage of the power cord must be made without any rough or sharp edges or sharp corners that could damage the wire.

### 4.2 ELECTRICAL CONNECTION

- Before fastening the door to the wall, drill a hole on the bottom of the crossbar (or more than one if you need to connect accessories) where the power cables emerge from the wall. The holes should be 10 mm in diameter, fitted with the rubber cable sleeves supplied.

- If the raceway has not already been installed, cut it to size in accordance with the tables in paragraph 3.6, and drill it as shown on figure 1 by using an aluminium drill bit having diameter 6.5mm.

Then fasten it to the crossbar using the screws and nuts supplied, as shown in figure 2.

The spacing between nut and nut should be 400 mm.

- Make sure there is a switch with a contact opening of at least 3 mm between the automation and the mains, for omnipolar disconnection of power.

- Thread the power cable through the cable sleeve as shown in figure 3.

Pass the cable towards the right along the track of the crossbeam, using the plates provided to keep the cables in their housing. Make them come out near the right end-of-travel stop.

- Make sure the cables are securely fastened, possibly using special clamps to keep them in order.

- Pass the cables in the front section over the belt/encoder transmission, using the groove on the crossbar, and inside the special raceway.

Insert the power supply cable into the dedicated band and secure it using the bolt provided. Connect it to the terminal after having stripped the cable;

- Connect the cables of any accessories as described in the appropriate figures (see from fig. 35 to fig. 40)

Make sure that all the cables are inside the duct and that they cannot come into contact with moving parts once positioned. During installation, make sure that the conductor cables are secured by an additional attachment near the terminals or electrical connections, i.e. using bands.

Make sure that the cables are stripped near the terminals.

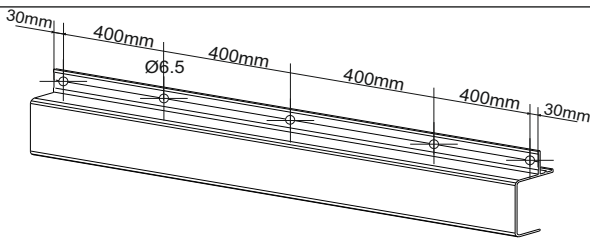


Figure 1

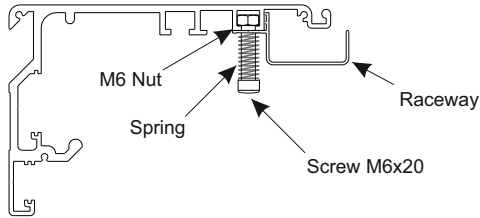


Figure 2

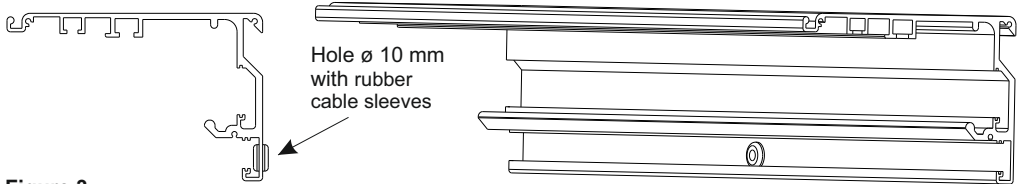
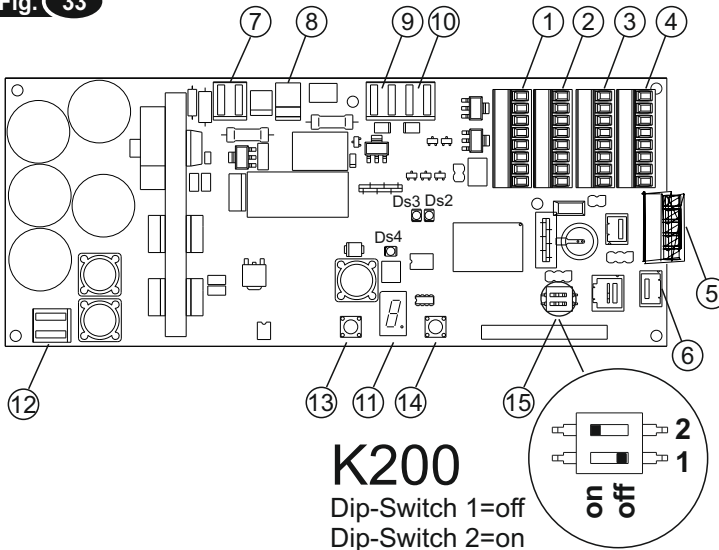


Figure 3

### 4.3 ELECTRONIC CIRCUIT BOARD

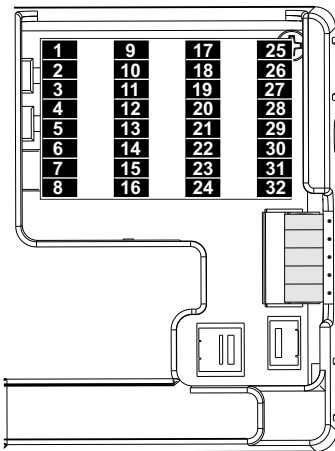
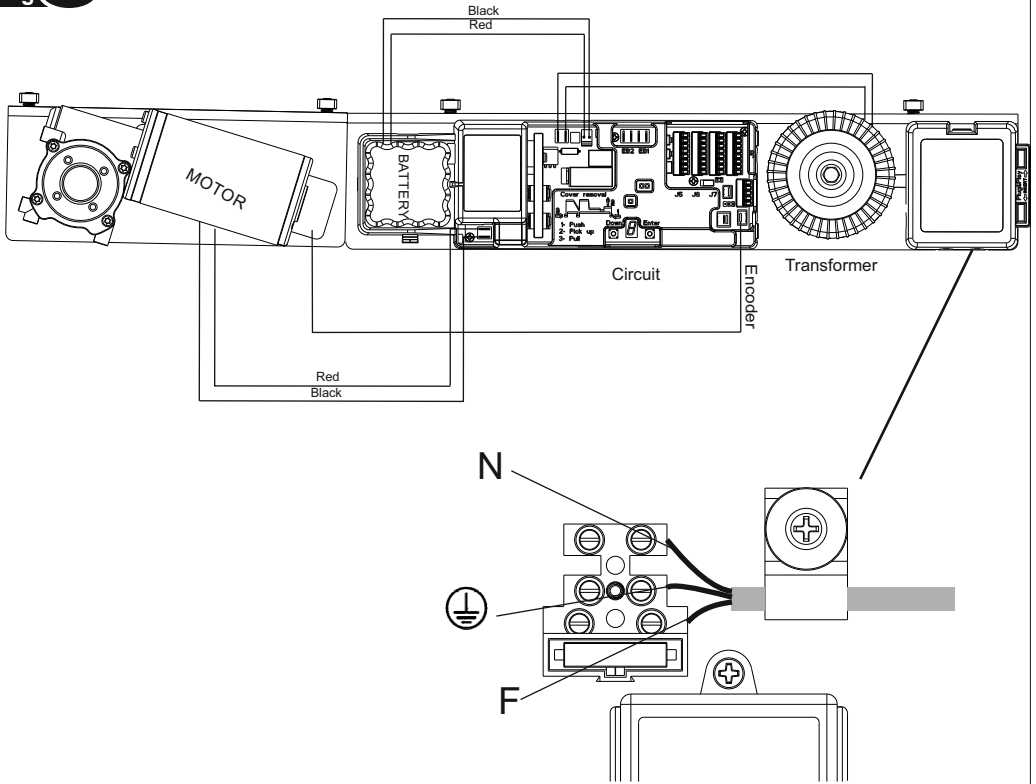
Fig. 33



1. Input for air curtain, lamp, key switch, emergency key, smoke detectors
2. Input for lateral guards, antipanic device and test sensors
3. Infrared sensor input, microwave sensors, photocells, door opening safety guard
4. Input for program selector with knob
5. Digital switch input
6. Encoder cord input
7. Transformer input
8. Emergency battery system
9. Door block 2 input (pharmacy)
10. Door block 1 input
11. Lighted display
12. Gearmotor input
13. DOWN key
14. ENTER key
15. Dip-switch

## 4.4 PRE-WIRED ELECTRIC CONNECTIONS

Fig 34



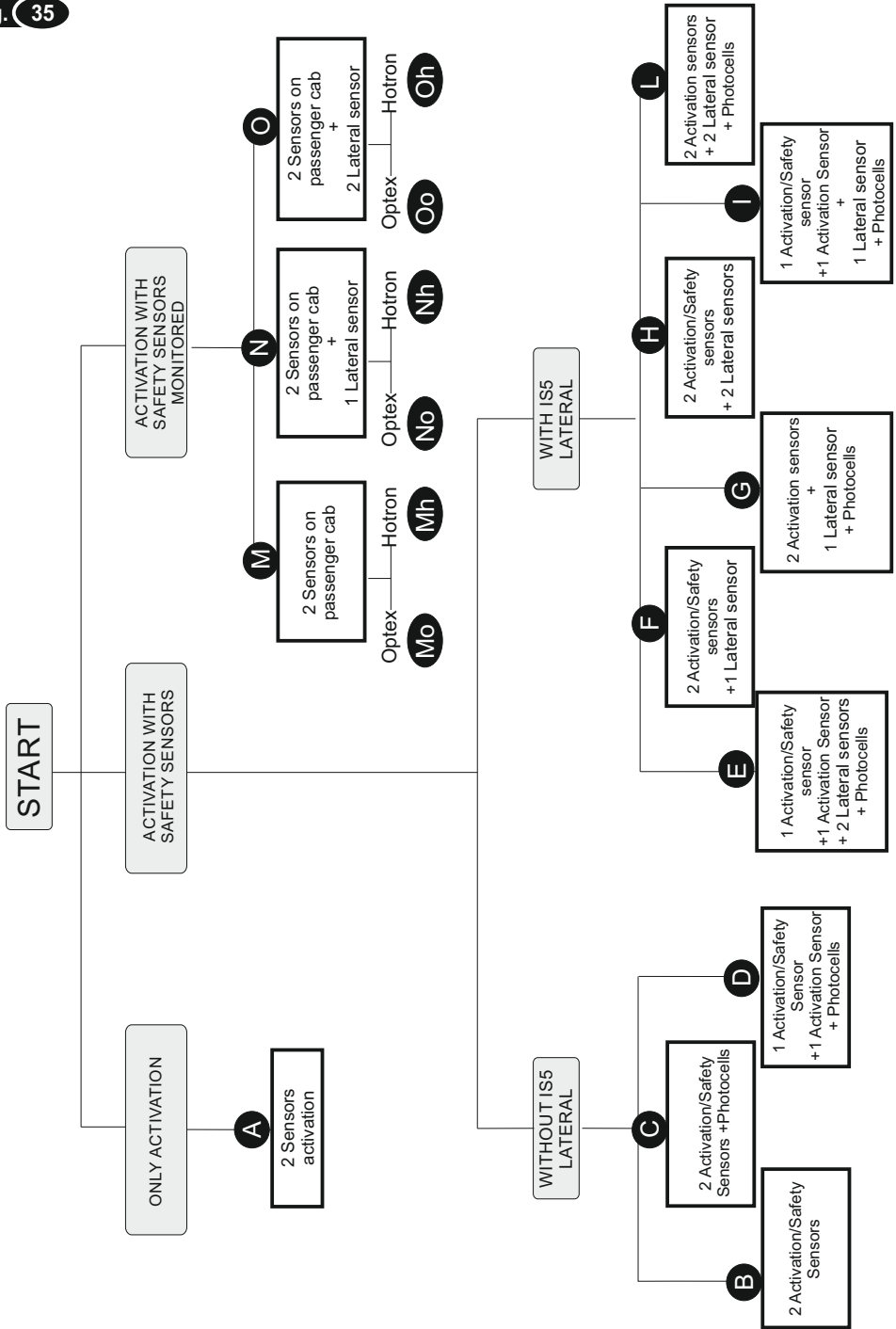
1. SMOKE FIRE SYSTEM	9. TEST+	17. INTERNAL SECURITY	25. RESET (NEAR)
2. EMERGENCY CLOSURE KEY	10. TEST+	18. INTERNAL SECURITY RADAR	26. OPEN
3. OPENING KEY	11. GND	19. GND	27. PARTIAL
4. LAMP	12. ANTIPANIC DEVICE	20. GND	28. EXIT ONLY
5. AIR CURTAINS	13. LATERAL SAFETY 2	21. EXTERNAL SECURITY RADAR	29. ENTER ONLY
6. GND	14. LATERAL SAFETY 1	22. EXTERNAL SECURITY RADAR	30. CLOSED
7. 24V*	15. GND	23. GND	31. GND
	16. 24V	24. 24V	32. 24V

24V  
GND  
SIGNAL A  
GND (shield)  
SIGNAL B

\* Unregulated



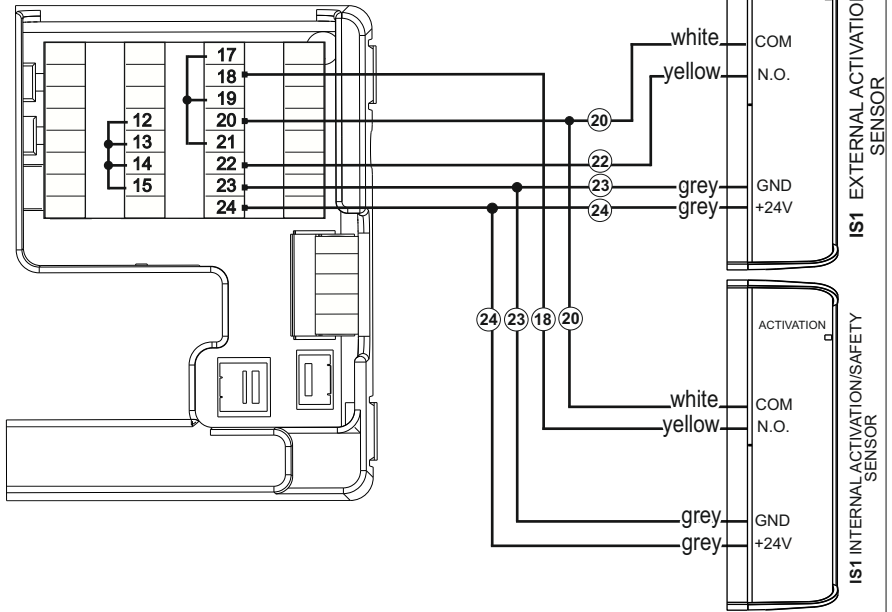
Fig. 35



## 4.6 CONNECTION OF DETECTION SENSORS

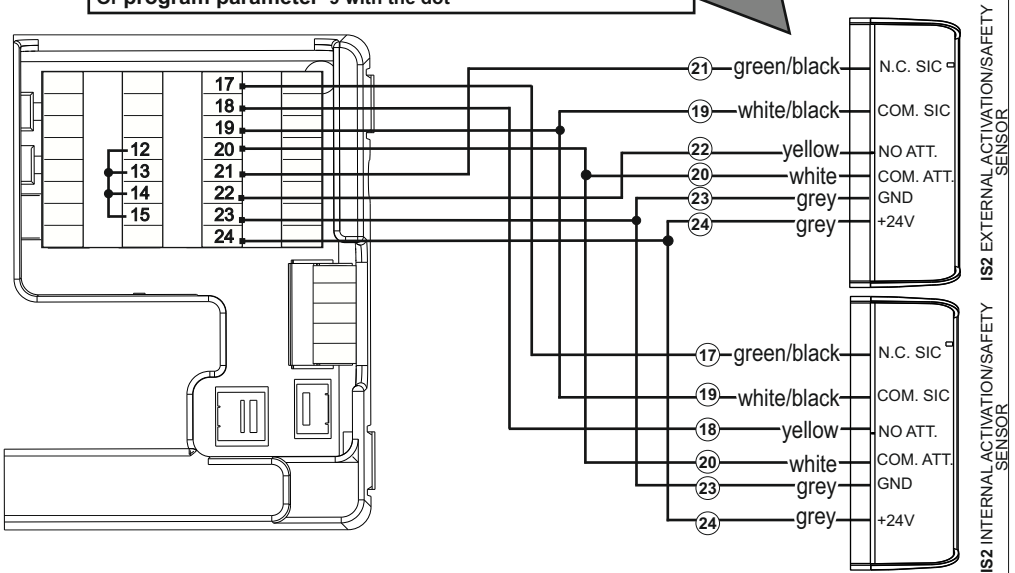
**Fig. A**

\* Digital program switch menu: PARAMETERS> OTHER PARAMETERS> SAFETY SENSOR LOGIC: N.C. WITHOUT TEST  
Or program parameter 9 with the dot

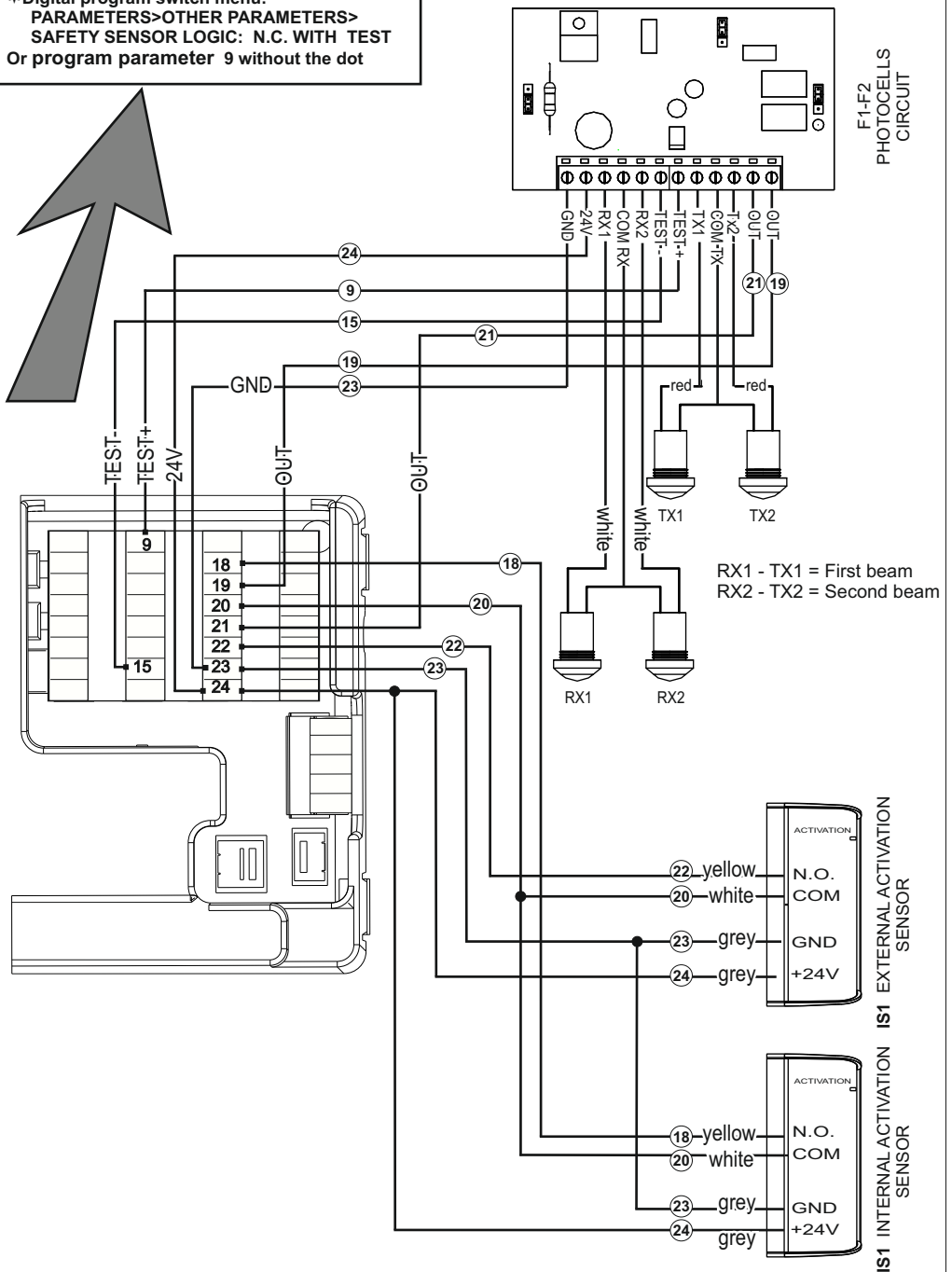
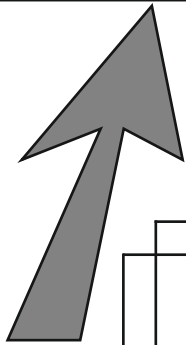


**Fig. B**

\* Digital program switch menu: PARAMETERS> OTHER PARAMETERS> SAFETY SENSOR LOGIC: N.C. WITHOUT TEST  
Or program parameter 9 with the dot

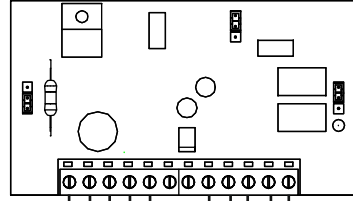
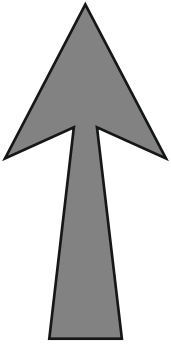


\*Digital program switch menu:  
 PARAMETERS>OTHER PARAMETERS>  
 SAFETY SENSOR LOGIC: N.C. WITH TEST  
 Or program parameter 9 without the dot

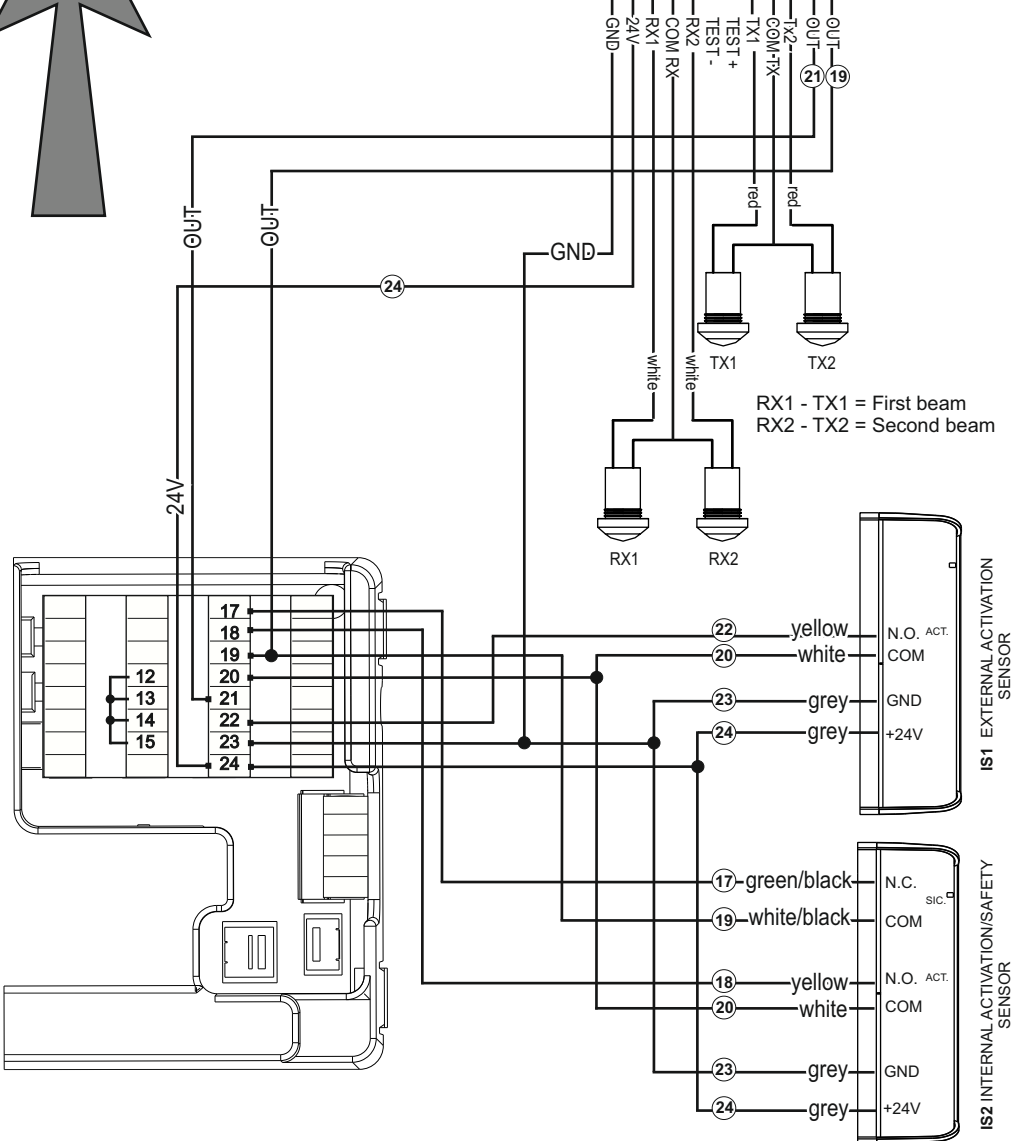


**Fig. D**

\*Digital program switch menu:  
**PARAMETERS>OTHER PARAMETERS>**  
**SAFETY SENSOR LOGIC: N.C. WITHOUT TEST**  
 Or program parameter 9 with the dot

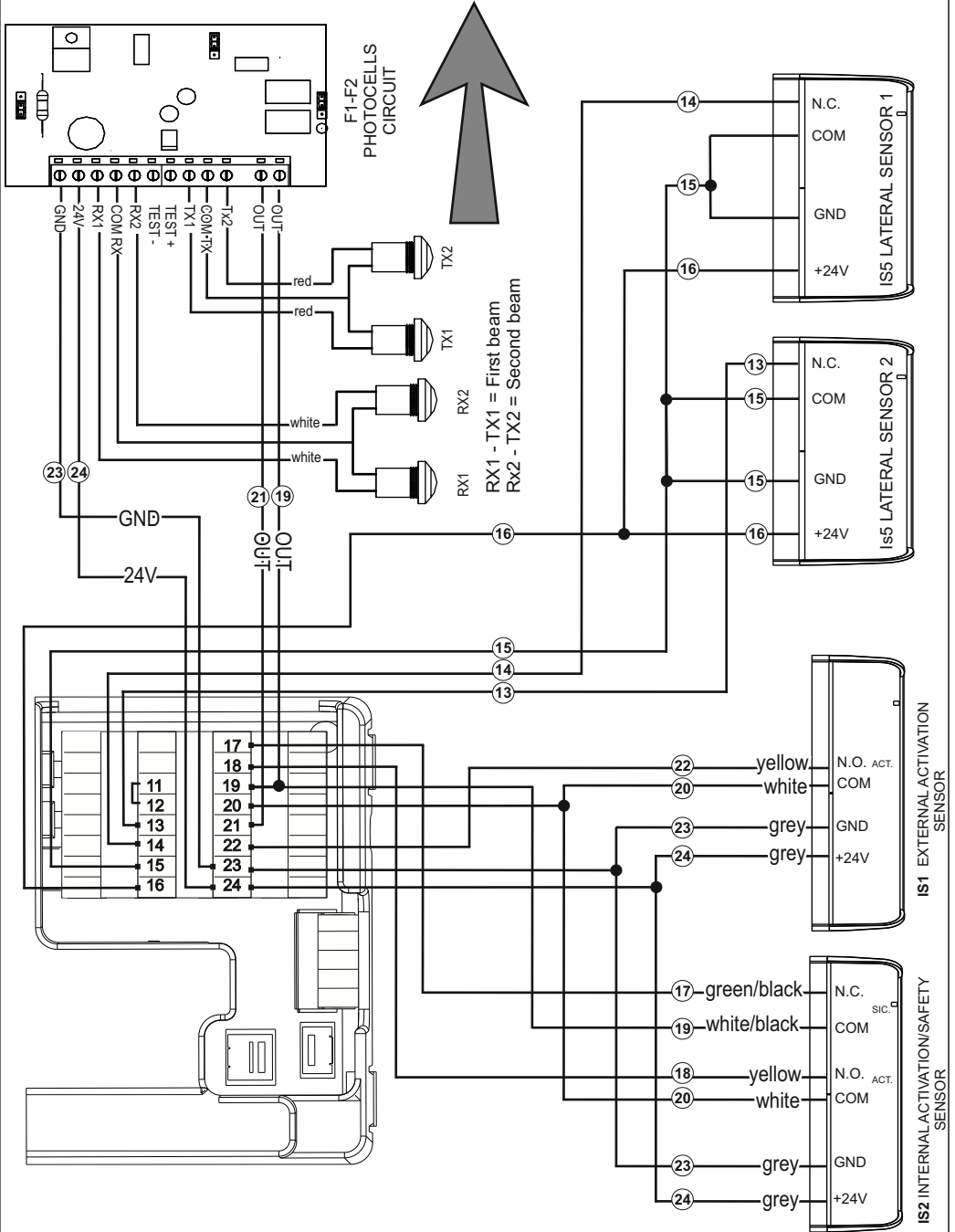


F1-F2  
PHOTOCELLS  
CIRCUIT

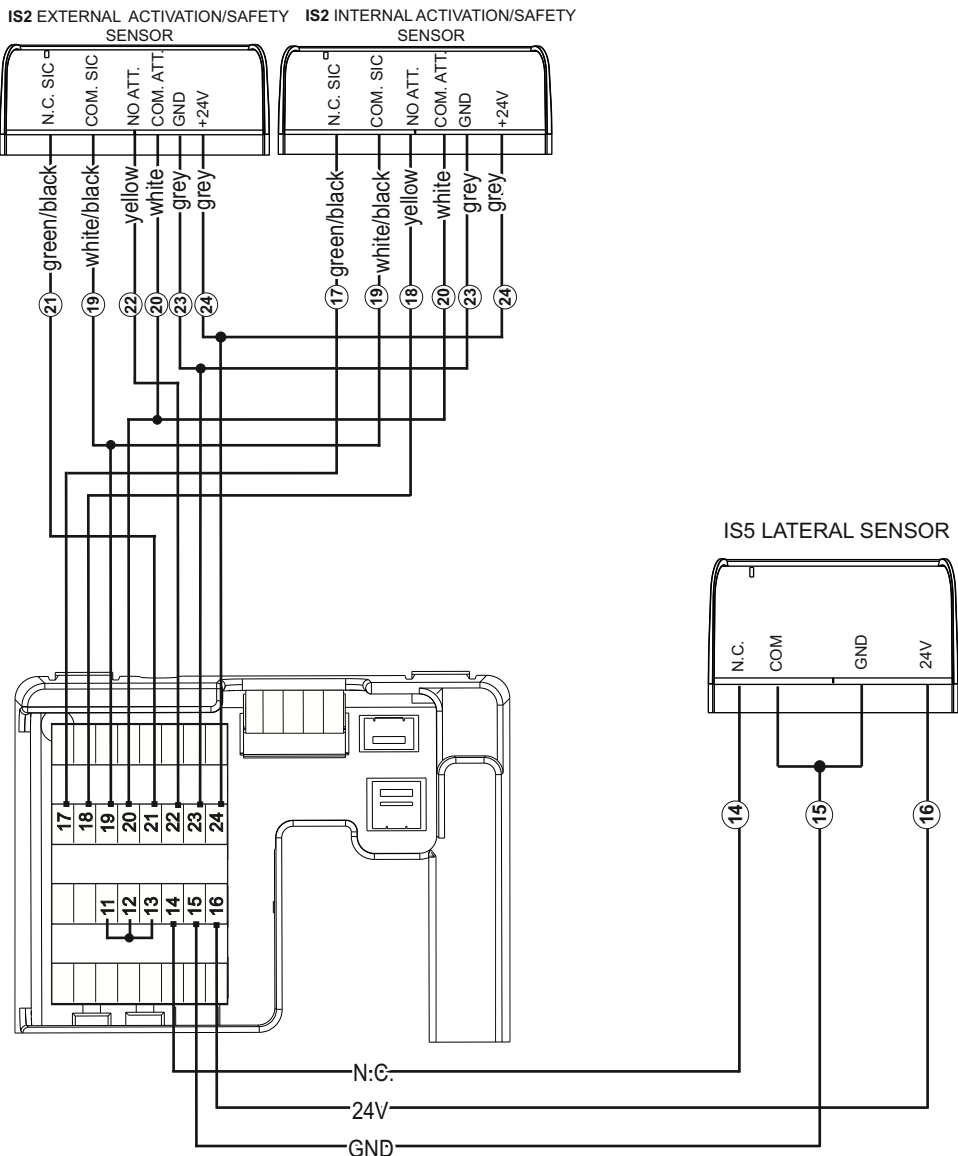
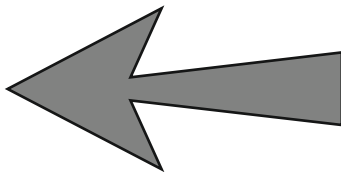


**Fig. E**

**\* Digital program switch menu:  
PARAMETERS>OTHER PARAMETERS> SAFETY SENSOR LOGIC: N.C. WITHOUT TEST  
Or program parameter 9 with the dot**

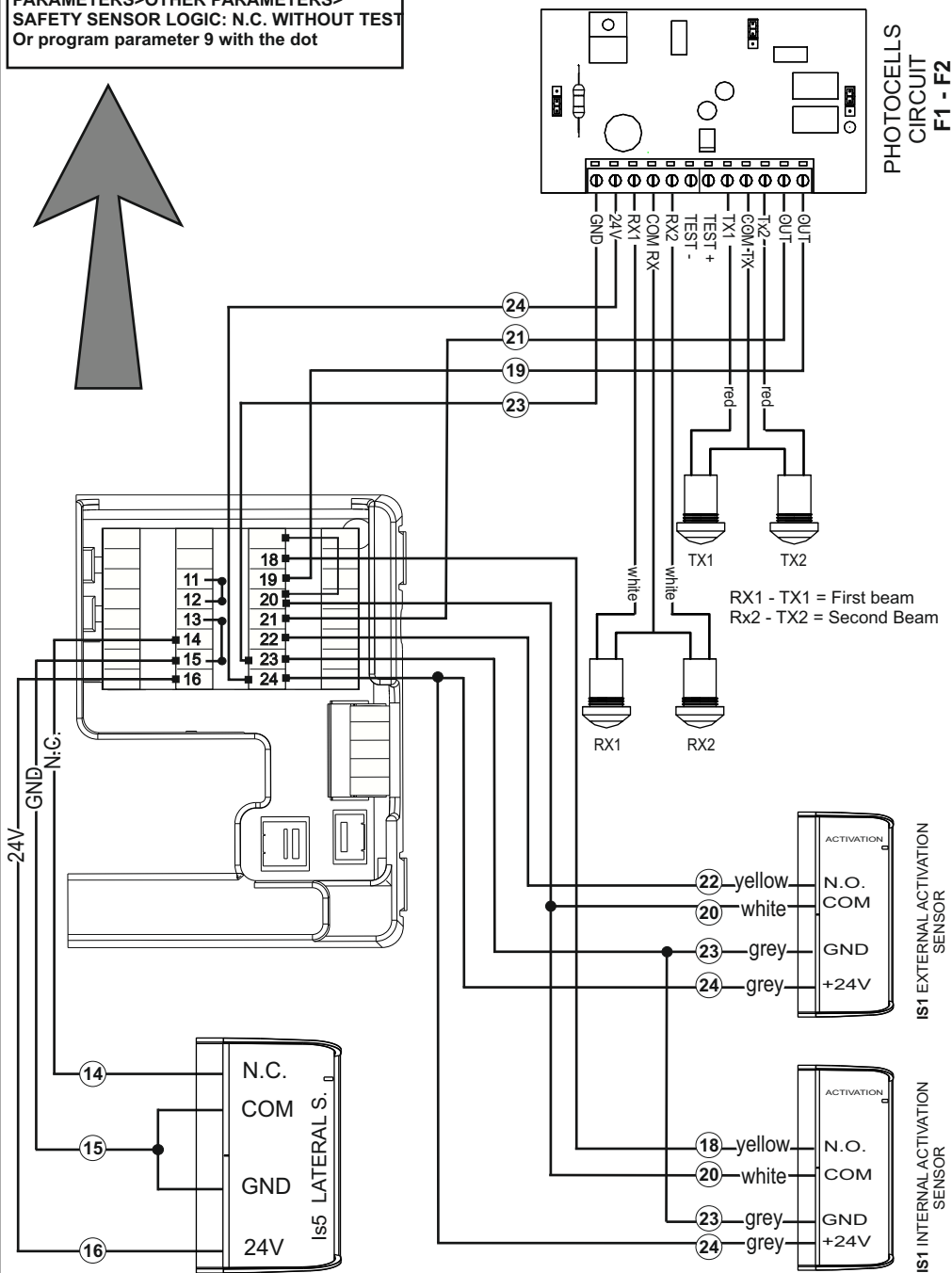
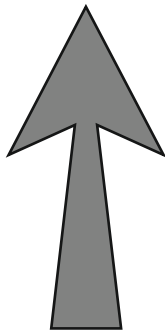


\*Digital program switch menu:  
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**SAFETY SENSOR LOGIC: N.C. WITHOUT TEST**  
 Or program parameter 9 with the dot



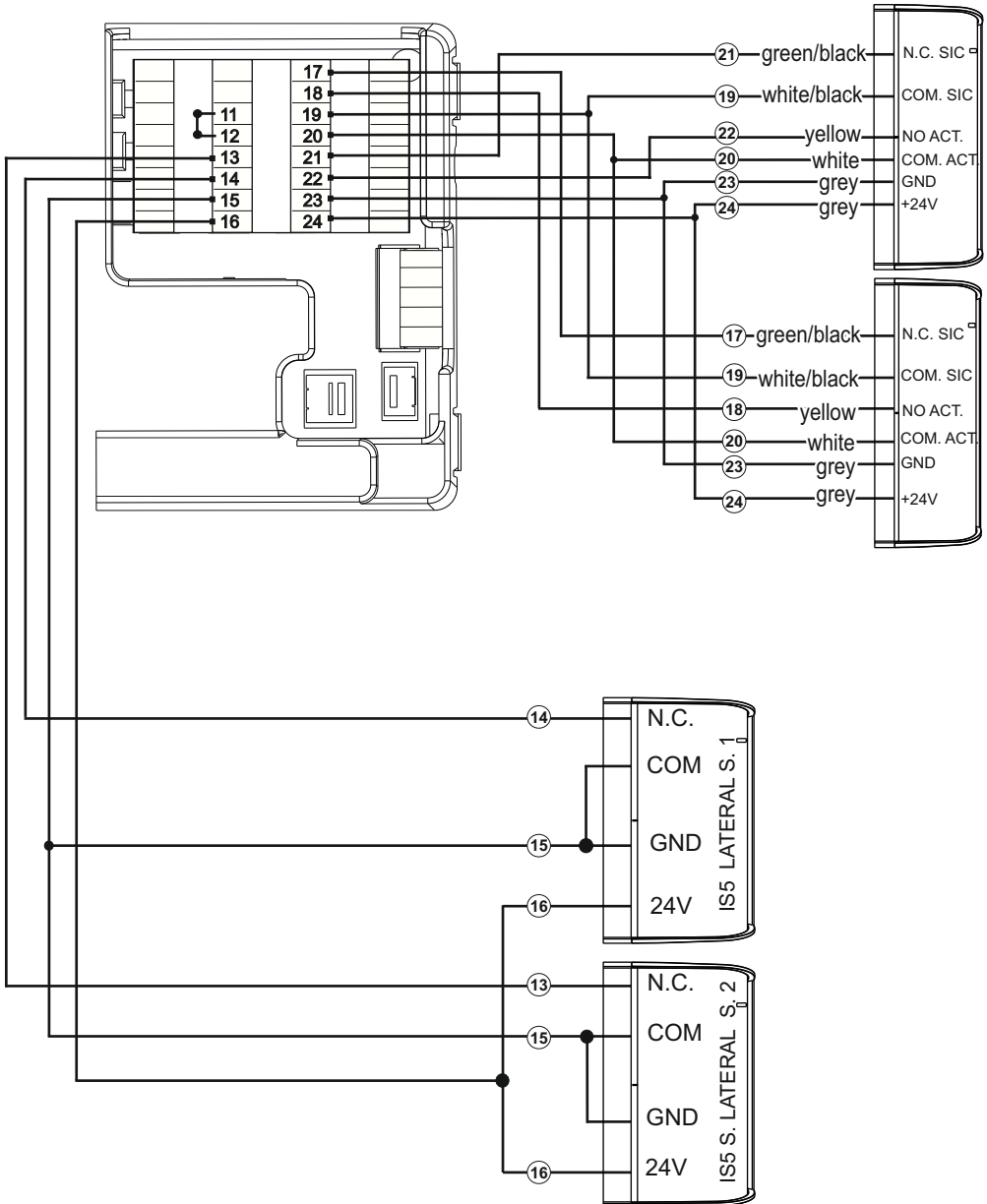
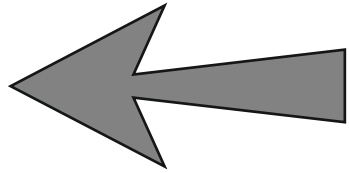
**Fig. G**

\* Digital program switch menu:  
**PARAMETERS>OTHER PARAMETERS>**  
**SAFETY SENSOR LOGIC: N.C. WITHOUT TEST**  
 Or program parameter 9 with the dot



**Fig. H**

\* Digital program switch menu:  
**PARAMETERS>OTHER PARAMETERS>  
 SAFETY SENSOR LOGIC: N.C. WITHOUT TEST**  
 Or program parameter 9 with the dot

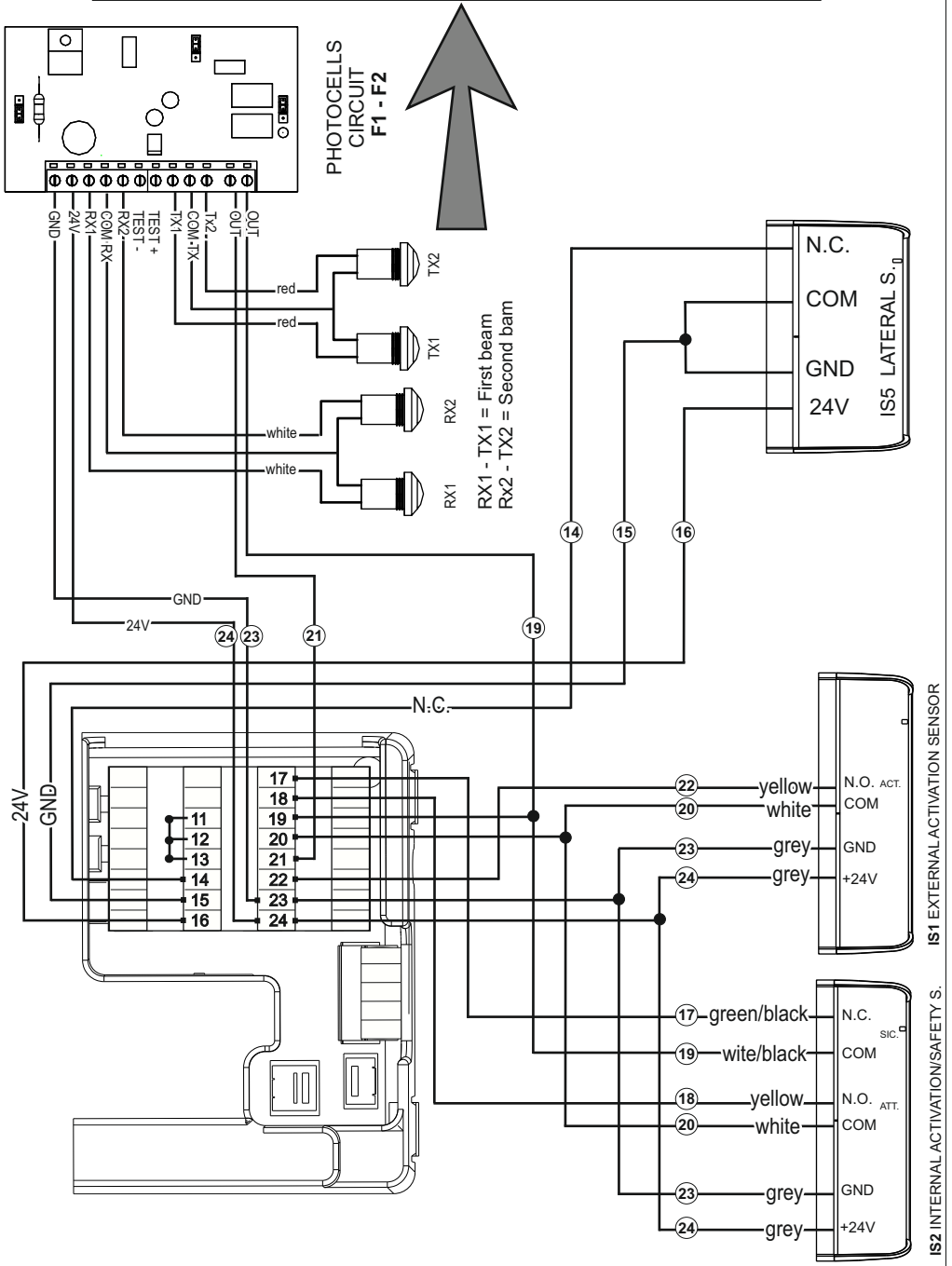


IS2 INTERNAL ACTIVATION/SAFETY S. IS2 EXTERNAL ACTIVATION/SAFETY S.



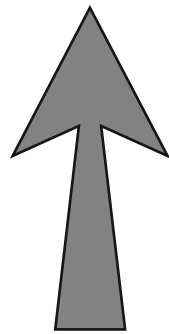
**Fig. 1**

**\* Digital program switch menu:  
PARAMETERS>OTHER PARAMETERS>SAFETY SENSOR LOGIC: N.C. WITHOUT TEST  
Or program parameter 9 with the dot**

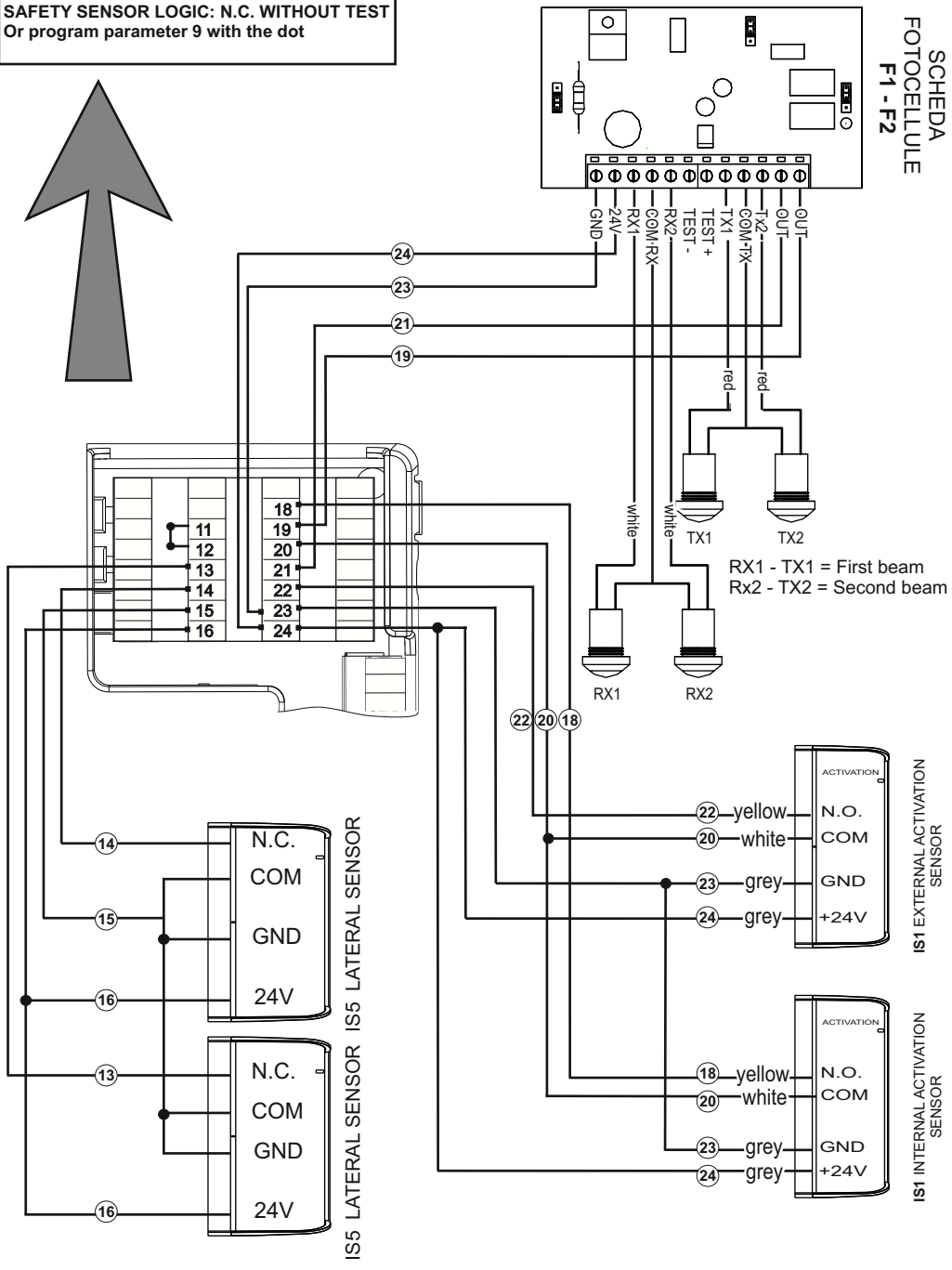


**Fig. L**

\* Digital program switch menu:  
**PARAMETERS>OTHER PARAMETERS>**  
**SAFETY SENSOR LOGIC: N.C. WITHOUT TEST**  
 Or program parameter 9 with the dot

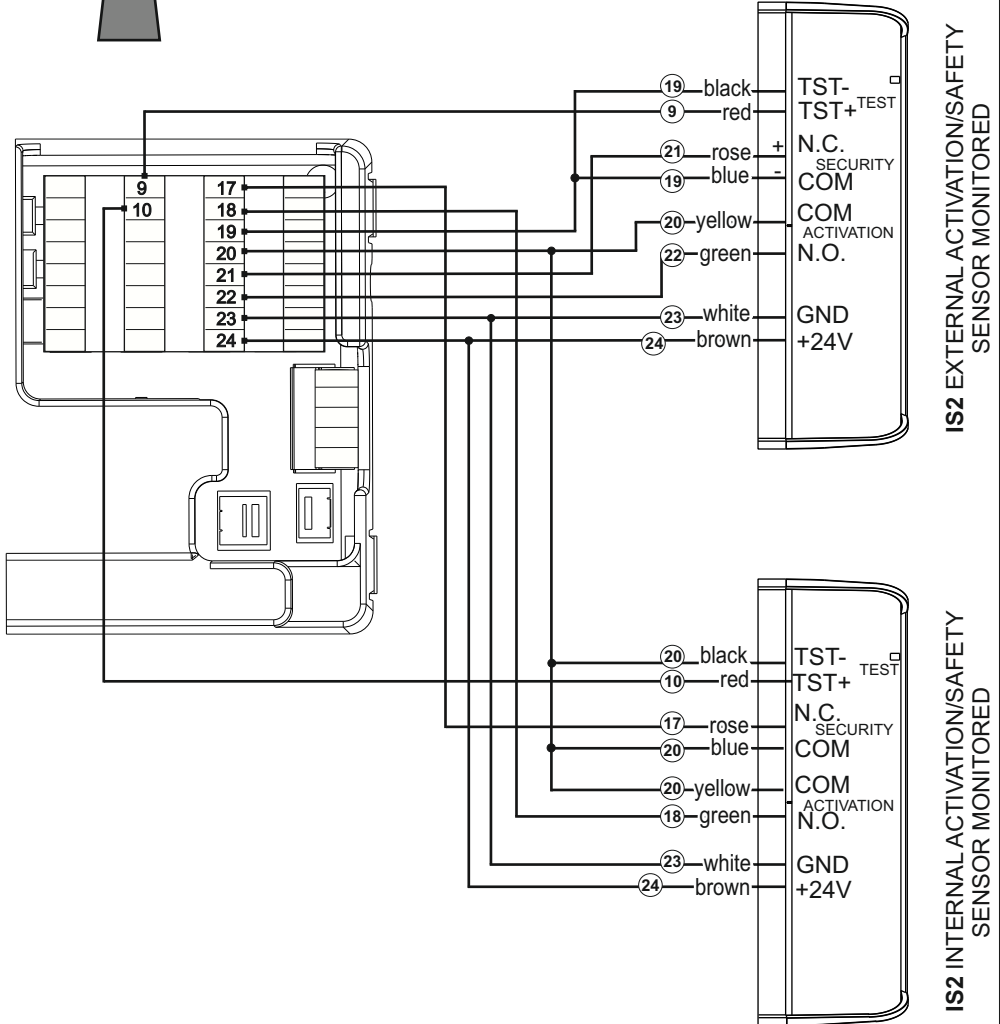
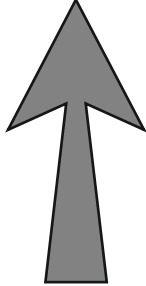


**SCHEDA  
 FOTOCELLULE  
 F1 - F2**



\* Digital program switch menu:  
 PARAMETERS>OTHER PARAMETERS> SAFETY SENSOR LOGIC:  
 N.C. WITH TEST  
 Or program parameter 9 without the dot

ELECTRICAL WIRING DIAGRAM FOR USING **OPTEX**  
 ACTIVATION/SAFETY SENSOR MONITORED



- \* Digital program switch menu:
- \* **PARAMETERS>OTHER PARAMETERS> SAFETY SENSOR LOGIC: N.C. WITH TEST**
- \* Or program parameter 9 without the dot

ELECTRICAL WIRING DIAGRAM FOR USING **HOTRON** ACTIVATION/SAFETY SENSOR MONITORED

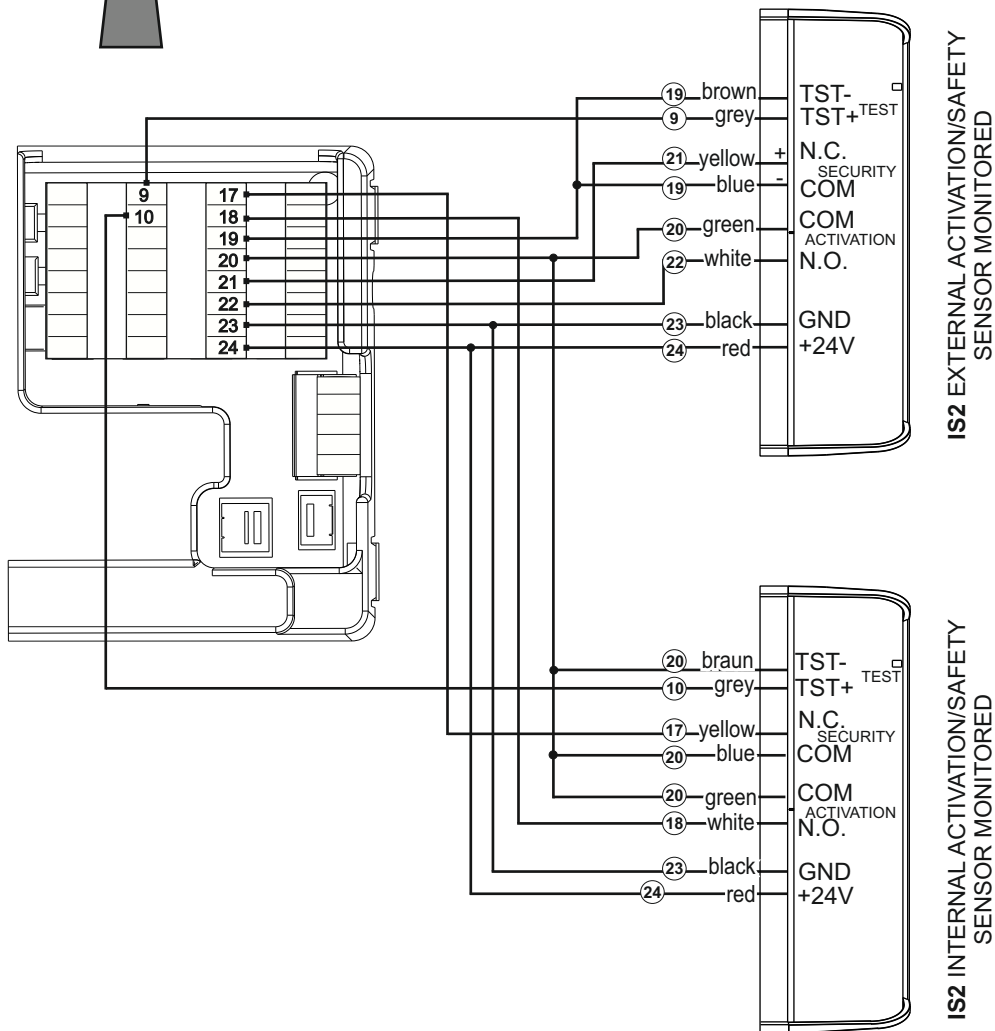
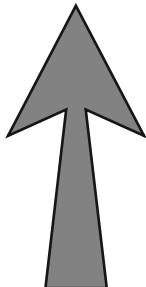
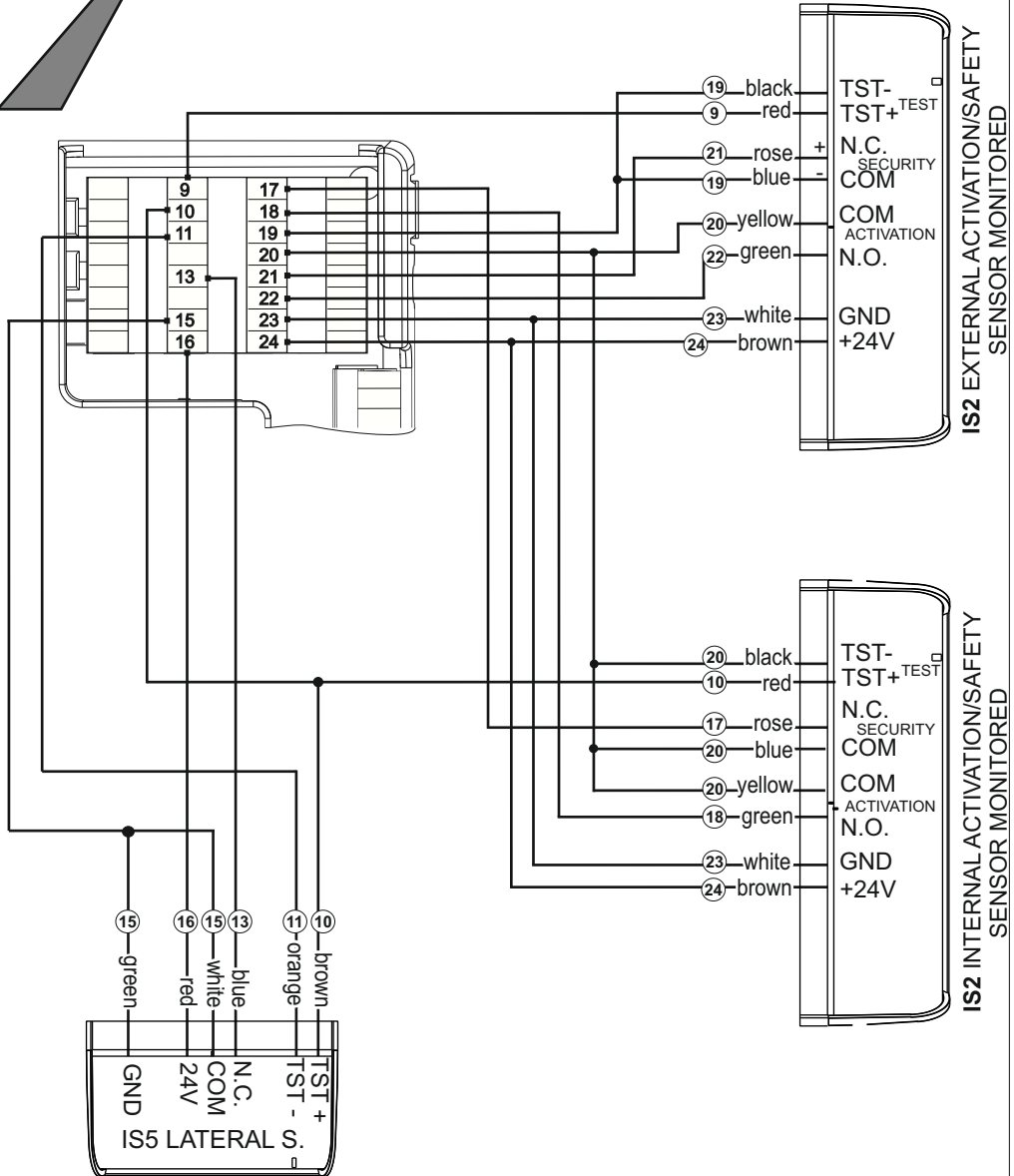


Fig. **No**

\* Digital program switch menu:  
**PARAMETERS>OTHER PARAMETERS> SAFETY SENSOR**  
**LOGIC: N.C. WITH TEST**  
 Or program parameter 9 without the dot

SELECTRICAL WIRING DIAGRAM FOR USING **OPTEX**  
 ACTIVATION/SAFETY SENSOR MONITORED



\* Digital program switch menu:  
 PARAMETERS>OTHER PARAMETERS> SAFETY SENSOR  
 LOGIC: N.C. WITH TEST  
 Or program parameter 9 without the dot

ELECTRICAL WIRING DIAGRAM FOR USING **HOTRON**  
 ACTIVATION/SAFETY SENSOR MONITORED

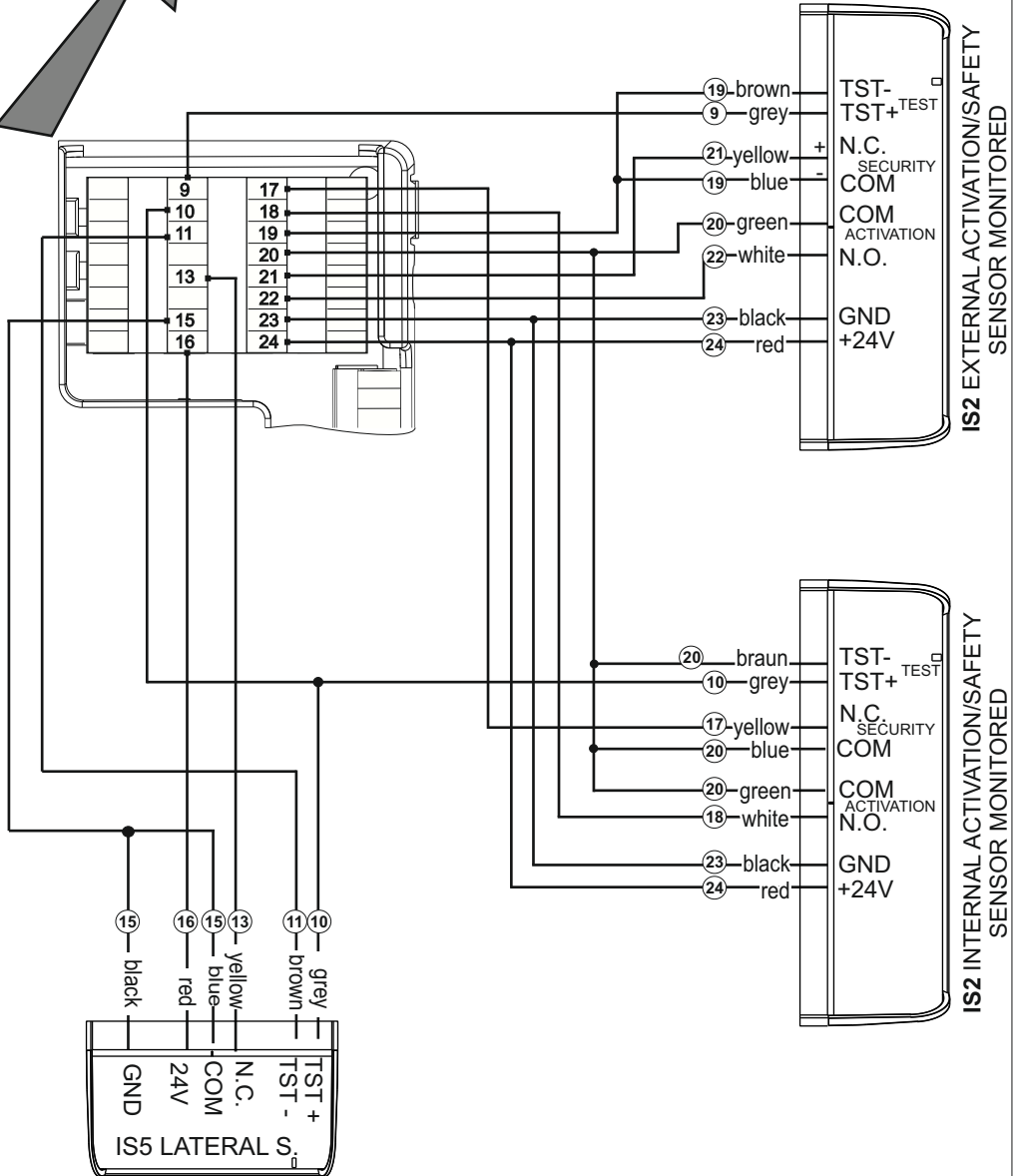
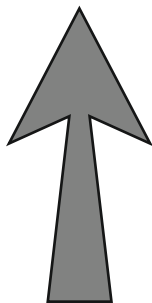


Fig. 00

\* Digital program switch menu:  
 PARAMETERS>  
 OTHER PARAMETERS>  
 SAFETY SENSOR LOGIC:  
 N.C. WITH TEST  
 Or program  
 parameter 9 without the dot



ELECTRICAL WIRING  
 DIAGRAM FOR  
 USING **OPTEX**  
 ACTIVATION/SAFETY  
 SENSOR MONITORED

IS2 EXTERNAL ACTIVATION/SAFETY  
 SENSOR MONITORED

IS2 INTERNAL ACTIVATION/SAFETY  
 SENSOR MONITORED

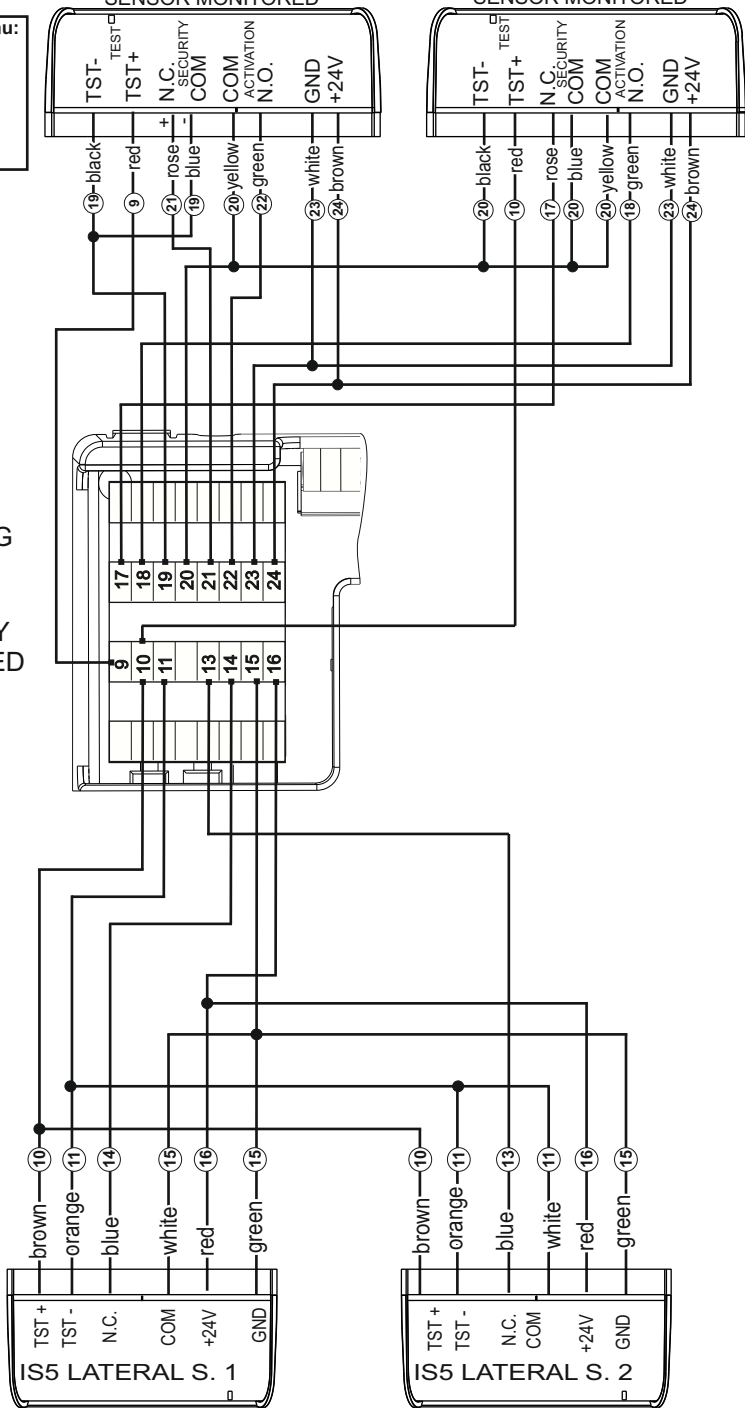
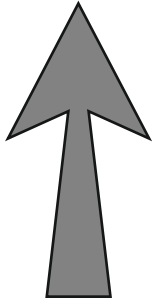


Fig. Oh

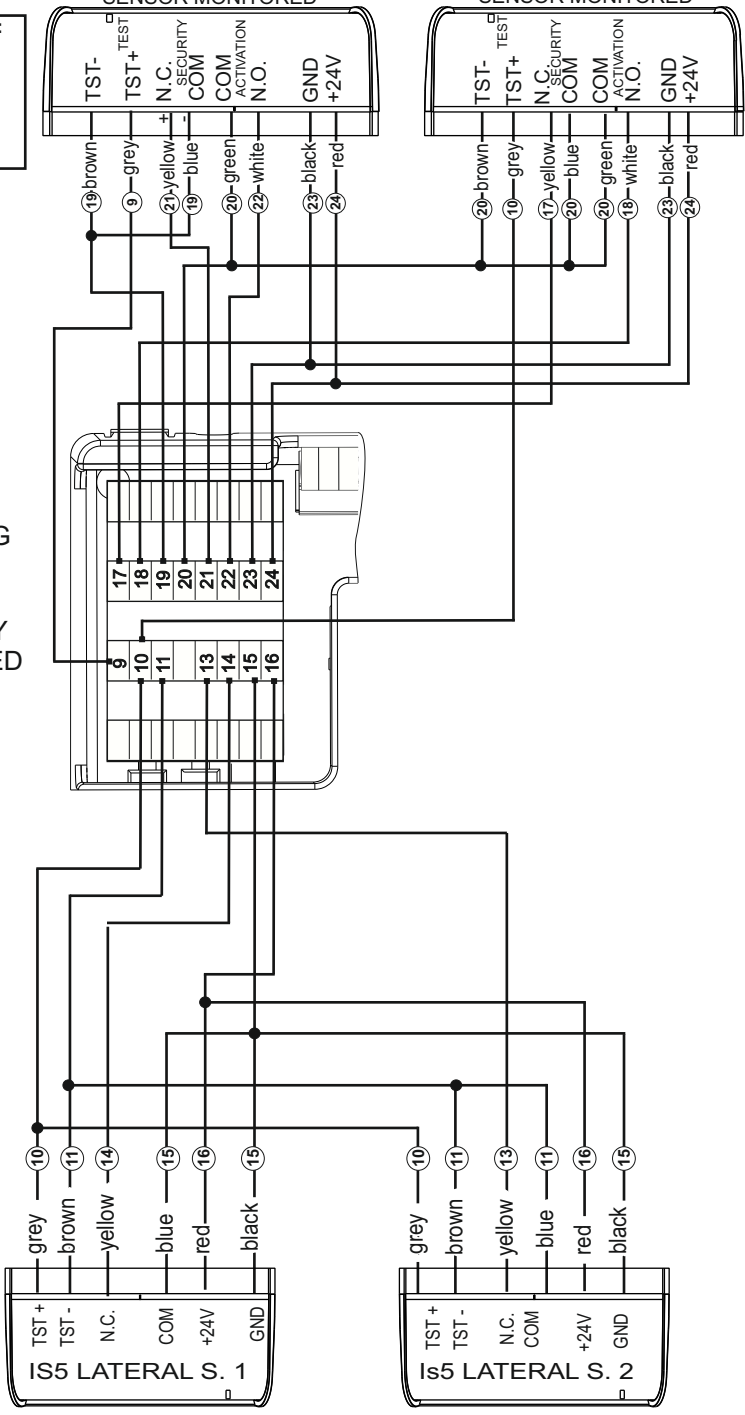
\* Digital program switch menu:  
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 OTHER PARAMETERS>  
 SAFETY SENSOR LOGIC:  
 N.C. WITH TEST  
 Or program  
 parameter 9 without the dot



ELECTRICAL WIRING  
 DIAGRAM FOR  
 USING **HOTRON**  
 ACTIVATION/SAFETY  
 SENSOR MONITORED

IS2 EXTERNAL ACTIVATION/SAFETY  
 SENSOR MONITORED

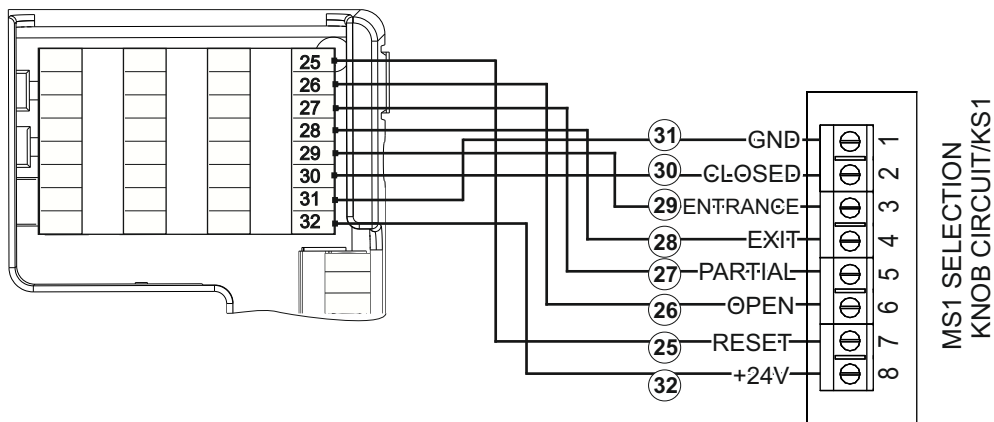
IS2 INTERNAL ACTIVATION/SAFETY  
 SENSOR MONITORED





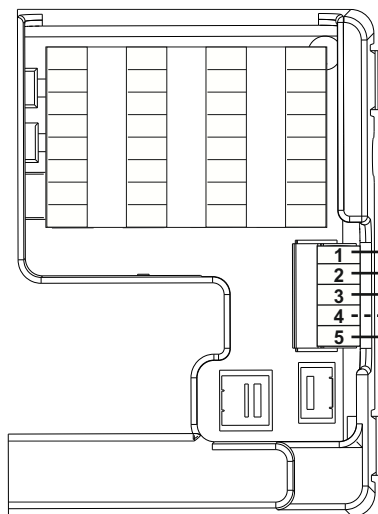
## 4.7 PROGRAM SELECTION WITH MS1 KNOB/KS1

Fig. 36



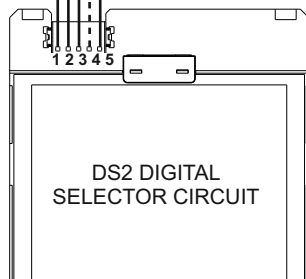
## 4.8 DS2 DIGITAL CONNECTION

Fig. 37



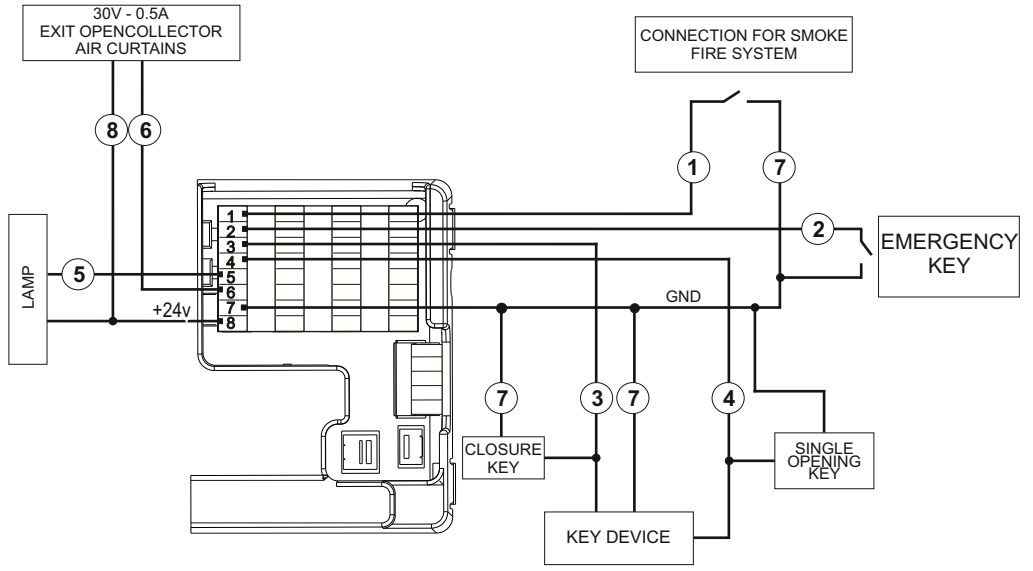
- 1 +24V
- 2 GND
- 3 Serial A
- 4 Shielding\*
- 5 Serial B

\* Cable 'shielding' should only be used for cable lengths in excess of 20 meters. For shorter cables cut the wire at the level of the sheath



## 4.9 KEY DEVICE CONNECTION

Fig. 38



## 4.10 ANTIPANIC CONNECTION

Fig. 39

diagram of connection for use combined with monitored sensors

\* Digital program switch menu:  
**PARAMETERS>**  
**OTHER PARAMETERS>**  
**SAFETY SENSOR LOGIC:N.C. WITH TEST**  
 Or program parameter 9 without the dot

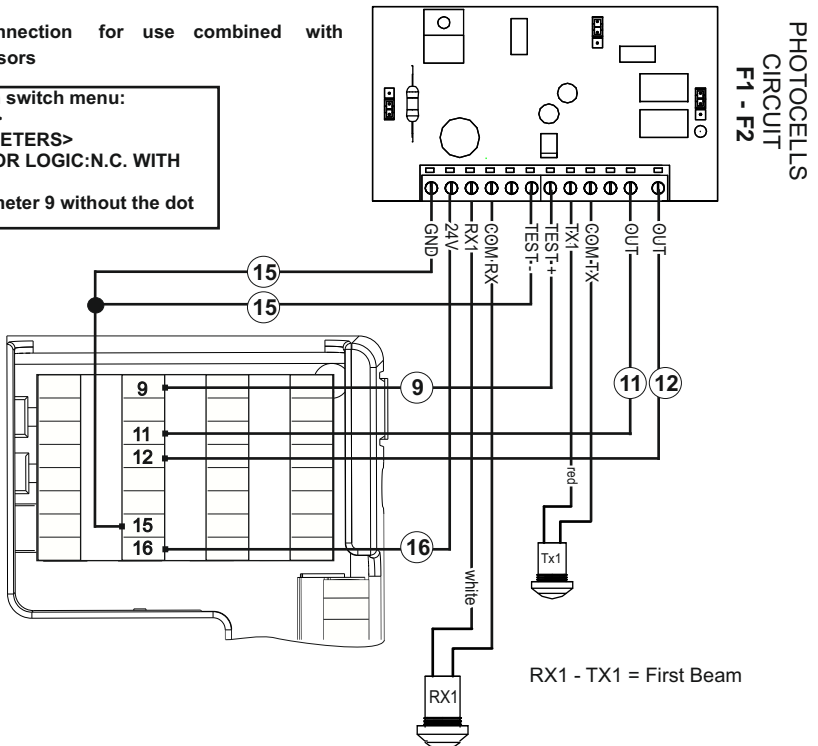
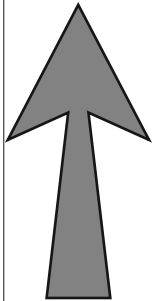
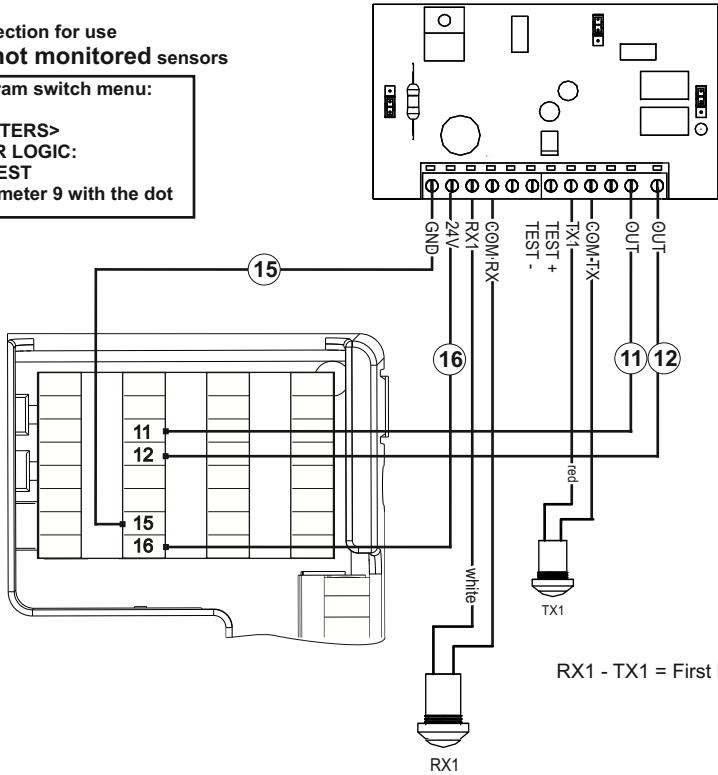
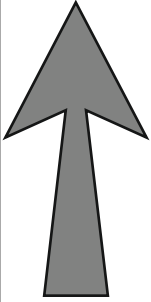


Fig. 40

diagram of connection for use combined with **not monitored** sensors

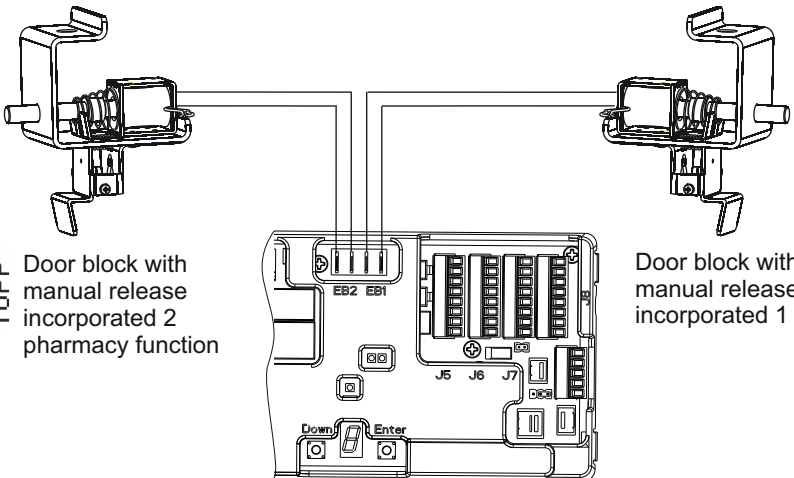
\* Digital program switch menu:  
PARAMETERS>  
OTHER PARAMETERS>  
SAFETY SENSOR LOGIC:  
N.C. WITHOUT TEST  
Or program parameter 9 with the dot

PHOTOCELLS  
CIRCUIT  
F1 - F2



RX1 - TX1 = First Beam

#### 4.11 CONNETION OF DOOR BLOCK AND PHARMACY FUNCTION



Door block with manual release incorporated 2 pharmacy function

Door block with manual release incorporated 1

**5.1 TECHNICAL DESCRIPTION**

The automation is electromechanical, without clutch or brakes, to prevent possible blockage of a continuous nature due to damages or breakage of the structure.

The power supply is 230V~ 50/60 Hz with low voltage transformer 22V AC ~ 150 VA.

The main section bar/crossbar of the automation is made of high resistance anodized extruded aluminum. The gearmotor, toothed belt and electronic control circuit are incorporated in a covered casing in anodized extruded aluminum, fastened by fitting for more rapid, simple access in case of maintenance. The carriages supporting the door are made of sheet steel, and are equipped with high-density plastic wheels with lifetime lubrication of the bearings, on a rail inside the main section bar/crossbar. The transmission and movement via gearmotor function at 24V 45W on a wormscrew with lifetime lubrication and a toothed belt in anti-static rubber material with steel cable strands that are long-lasting and wear-resistant. The electronic control circuit is a microprocessor type with keys for adjustment of the parameters such as speed of opening and closure, slowing space, low approach speed, automatic reclosing time and mode of operation. The movement, position and speed of the door are managed by the electronic control circuit via a reading device and optical encoder installed on the gearmotor.

Safety anti-crushing device on both closure and opening, that enables the door to reverse its movement if it meets an obstacle.

**5.2 EMERGENCY BATTERY**

**Door operation in emergency case:** The automation equipped with an emergency battery, will perform, in case of power failure, the "default battery operation mode": the "continuous operation mode" and will continue to operate as set as in the selector program. The "battery operation mode" can be changed in other modes, using the Topp DS2 digital program switch. Emergency opening or closing can be set. In the case has been selected a different mode operation than the standard one, the automation will resume to function as the program set by the selector after restoring the 230V mains.

**Supervision and automatic testing of the emergency battery:** The emergency battery function is kept under constant control by the electronic microprocessor control circuit. This supervision and test constantly verifies the efficiency of the battery that, in case of malfunction, blocks the door and thereby signals the malfunction. Emergency opening or closure depends on the function entered in the program setting of the electronic circuit board.

**Manual emergency opening:** When it is required that the emergency opening not be performed automatically in case of power outage on the 230V mains, it is possible to install a key for management of this function.

When the key is installed, the emergency battery will not act in case of power outage, until the key is pressed.

Contact a qualified technician in the event that the battery requires replacement;

In the event that the battery is fully discharged, the time required to fully recharge it is **10 hours**.

**Emergency battery performance:** To ensure the maximum performance of the emergency batteries and prevent their deterioration, the batteries should be recharged every 3 months in case of disuse or for products in storage.

To recharge the battery, proceed as follows:

- 1) Switch on automation / electronic unit;
- 2) Enter the programming function, see Chap.5.6 Programming parameters;
- 3) Set "parameter 5: Emergency battery", without a dot (no dot after the 5 on the display);
- 4) Exit the programming function. Disconnect power to the automation/electronic unit from the 230V mains (see Chap.4.4 Electrical connections);
- 5) Disconnect the emergency battery wire;
- 6) Connect the wire to the emergency battery again;
- 7) Plug into the 230V mains;
- 8) Charge the battery for 24 hours.

**5.3 FIRST CARD START-UP**

The first start-up function serves to return the card to the original factory settings.

Instructions for performing this procedure:

- Remove 230V power and disconnect the battery from the circuit board;
- Simultaneously press the two buttons "ENTER" and "DOWN" on the electronic board (see Figure 8);
- Connect the battery and return power to the circuit board 230 by continuing to hold the two keys "ENTER" and "DOWN";
- After 4 seconds, the card is placed in the "FIRST START" and the 7-segment display the letter "A" flashing.
- At this point, the card will wait to be reset (see para. 5.4).

This procedure will delete all the previous settings, except:

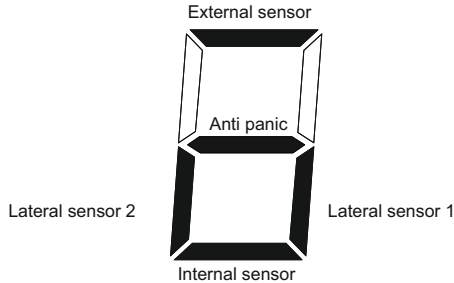
- Error history; Counters; Cycles and expiry dates of the maintenance menu.

## 5.4 RESET PHASE: LEARNING

The first time the card is switched on it pauses, awaiting the learning procedure. The letter "A" flashes intermittently on the Screen. On the digital controller, set the number of doors INFO->MAINTENANCE->No. of DOORS.

This procedure can be activated either by pressing and holding both the DOWN and ENTER keys for at least five seconds, or using the relative item in the menu PARAMETERS->RESET on the DS2 digital controller. After starting the learning procedure and reset, they cannot be halted except by switching off the door. These procedures consist of a complete cycle and a brief acceleration on open, and are necessary to learn the parameters necessary to operate the door.

**Sensors monitored:** If you want to connect the sensors equipped with test input will need to select the use by the digital switch or the 7-segment display (**point 9 Sec. 5.4**). In the reset phase is detected the presence of security sensors (max 2 on the passage, no. 2 and no. 1 lateral panic). Learned sensors can be displayed on digital switch in "state" in the submenu 'PARAMETERS> RESET' or the 7-segment display by a rapid flashing of the segment corresponding to the sensor learned, as shown below:



During the reset phase, the sensors must not be engaged by any person / obstacle.

In the case of failure of one or more sensors during the learning phase or reset them may not be learned; verify that the sensors has been learned and verify the self learning.

Once the procedure the card goes to the normal operating condition, the yellow LED should flash, the green LED should be solid and the red LED must be off.

The door is then opened in safe mode (the installer will still occur, if necessary impacts with the tool). E 'can subsequently increase performance by 3 setting set directly from the card or vary independently and more accurately the various parameters through digital switch DS2.

## 5.5 RESTART IN CASE OF POWER FAILURE: ZERO (NEAR)

On restart of operation following power failure and subsequent discharge of the emergency battery is performed the reset procedure (near) which consists of an opening and closing of the automation at reduced speed. If the transit space is different from the transit area stored on the 7-segment display will show the error B.

During the zeroing phase (near) the safety sensors are active, and if:

- During the slow closing, the employment of safety sensors of the transit space commands a reopening slow.
- During the slow opening in the preceding paragraph, the occupation of the side sensors causes a slow reclosing
- During the movement, the contemporary employment of at least one safety sensor side and a sensor safety compartment passage controls the stop of the door.

Once freed sensors the reset (near) resumes automatically. Throughout the zeroing phase (near) the automation will move at a reduced speed.

If the power failure and subsequent discharge of the battery is done until it is set to the "CLOSED" by DS2 digital or analog selector switch MS1, automation will not perform any reset (near) as long as this mode will not be changed or if the request will be 'opening to boost key or emergency opening / fire. Once changed how automation will perform the reset (near) as shown above.

## 5.6 PROGRAMMING PARAMETERS ON THE K200

It is possible to enter the basic parameters using the 7 segment display (detail 11 fig.33 ) and the <ENTER> and <DOWN> keys.

Press and hold <ENTER> for 5 sec to enter the configuration menu.


Press <DOWN> to pass from a parameter to another, press <ENTER> to enable/disable the function.

The presence on the display of a dot next to a parameter code indicates that the function is enabled.





Code	Description
0	Parameters set from digital switch or PC
1	Opening speed adjustment at 45cm/s and closure at 25cm/s
2	Opening/closing speed increase at 45cm/s
3	Opening speed increase at 65cm/s and closure at 35cm/s
4	Presence of electric lock ( without dot=electric lock not present )
5	Presence of battery ( without dot=battery present)
6	Partial opening (without dot=disabled =70%, with dot=enabled =40%)
7	Seal on closure ( without dot=disabled=0; with dot=enabled=Level 2 )
8	Automatic and partial reclosing time ( without dot=disabled=5 ; with dot=enabled=0 )
9	Safety logic: WITHOUT DOT-monitored sensors (with test) type Optex OA-Axist T or Hotron HR100_CT WITH DOT-NC not monitored sensors (without test connection)
E	Not used
Y	Change the function of the buttons on accessories TS1, TS2 and MS1 in the "WINGS FREE" Operating mode. ( with dot=enabled ; without dot=disabled ) (Allows the use of "Wings free", if the automation board is set up for the "Wings free", function)

### Description of behavior / y parameter = with dot

If the **TS2** remote control is available, pressing the button "Enter only" , "Free Panels" operation mode is activated .

If the **MS1** program selection knob is available, selecting "Enter only" , "Free Panels" operation mode is activated .

If the **TS1** remote control is available, pressing the button "Open" , "Free Panels"  operation mode is activated.

Pressing the button "Open"  for more than 10 seconds, the "Open"  operation mode activates.

### To program the radio control devices (up to 8):

1. Press the "DOWN" key and hold for 5 seconds. The sequence of characters "Radio" appears on the 7-segment display.

2. If you have the Topp remote control **TS2** press the smooth side of the first key (open function).

If the Topp **TS1** 4-channel remote control is available, press the second key (Close Function).

To confirm that the remote control has been memorized, the "Radio" character sequence will no longer be displayed.

### To deactivate all radio control devices:

1. Press the "DOWN" key and hold for 5 seconds, then release it. The sequence of characters "Radio" appears on the 7- segment display.

2. Press the "DOWN" key and hold for a further 5 seconds, all remote controls connected to the electronic board will be deactivated.

To confirm that all programmed remote controls have been deactivated, the sequence of characters "Radio" will no longer be displayed.

## 5.7 LIST OF ERRORS AND WARNING

Display code 7 segments	Code-error list ( switch)	Description
A	A	First startup signal. The learning/reset procedure is necessary.
b	B	Time out (120s) during the learning/reset procedure.
c	C	Malfunction of the motor driver.
d	D	The encoder is not functioning properly.
E	E	Battery malfunction.
F	F	Safety external sensor malfunction.
g	g	Safety internal sensor malfunction.
G	G	Not used
h	h	Lateral sensor 1 malfunction.
I	I	Lateral sensor 2 malfunction.
J	J	Antipanic sensor malfunction.
H	K	Obstacle not removed. Check for obstacles or friction.
L	L	Motor poles inverted. Reverse the cables.
ii	M	Doors free.
n	n	Bus voltage low.
o	O	Bus voltage high.
P	P	Motor bridge voltage high. Causes the door block.

Display code 7 segments	Code-error list ( switch)	Description
9	Q	Inside warning. Check for any short circuits peripherals.
r	r	Antipanic alarm activated
R	R	Motor over-temperature
S	S	Battery not installed. Check connector.
t	t	Motor prevented by obstacle from opening. Check for obstacles or friction.
U	U	Motor prevented by obstacle from closing. Check for obstacles or friction.
V	V	Clock malfunction/not adjust. Set the exact time.
W	W	Motor bridge voltage low.
X	X	Motor bridge voltage high. The door operates: the LED flashes
Z	Z	Internal safety.

Warnings are displayed every five seconds for one second.

Every error is reset during the reset/learning stage or by switching off the equipment.

## 5.8 SELF RESTORE MANAGEMENT OF ERRORS C-D-E-K-N-P-Q

Errors **C-D-K-N-P-Q** cause a momentary arrest of automation, pending the launch of the procedure for restoring normal operation.

The procedure involves the automatic execution of a reset command (near) and will be carried out as follows:

- Zeroing (near) is successful -> automation continues to work properly;
- Zeroing (near) fails order -> automation performs a new attempt to reset (near) that is repeated for the number 5 consecutive times;
- The 5 attempts are successful -> automation opens and remains stationary in the open for 5 minutes and then repeated two more attempts to reset at intervals of 5 minutes;
- Additional 2 resets not complete successfully -> automation finally stops in error and you will need the intervention of a qualified technician.

During the zeroing phase (near) the safety sensors are active, and if:

- During the slow closing, the employment of safety sensors of the transit space commands a reopening slow.
- During the slow opening in the preceding paragraph, the occupation of the side sensors causes a slow reclosing
- During the movement, the contemporary employment of at least one safety sensor side and a sensor safety compartment passage controls the stop of the door.



Once freed sensors the reset (near) resumes automatically. Throughout the zeroing phase (near) the automation will move at a reduced speed.

If there is one of the errors mentioned above as long as it is set to the "CLOSED" by DS2 digital or analog selector switch MS1, automation will not perform any reset (near) as long as this mode will not be changed, or if it will request the opening of impulse key or emergency opening / fire. Once changed how automation will perform the reset (near) as shown above.

## 5.9 SELF RESTORE MANAGEMENT OF ERRORS F-g-h-I-J

Should errors **F, g, h, I** or **J** occur, the automation will automatically perform the sensors resetting operation. If the first resetting operation is positive, the automation will start working properly again though storing the error in the error history file.

Should the first reset fail, the automation will make an attempt every 30 sec for max 24 hours. If the error is not solved within 24 hours, the automation will eventually stop working and the intervention of a professional will become necessary.

## 5.10 SELF RESTORE MANAGEMENT AFTER ANTI PANIC ALARM

Following the collapsing of the leaves, only for model with pre-panic, automation stops waiting for the manual repositioning of the doors themselves. Subsequent to closing the automation will remain stationary in the position taken before the breakthrough for a time equal to 20 seconds, after which it will perform a reset (near).

If the doors are smashed until the automation mode is closed and subsequently repositioned does not run no movement reset.

For proper operation of the automated system with panic mounted photocells TOPP F3.

## 5.11 SELF RESTORE MANAGEMENT AFTER OPENING FIRE OR AN OPENING OF EMERGENCY

The opening of emergency or fire causes the immediate opening of the automation, but in case where the sensors side are occupied. As long as the contact remains active automation remains open, once the contact is deactivated automation will return to the operation previously set by digital switch DS2 or analog selector Ms1.

The emergency opening or opening fire is manageable via a control unit or an emergency button connected to the card (**see page 24**). The setting of the logic of contact on the card type is NO (normally open). The logic of contact it can be varied only by the digital switch DS2 in the PARAMETERS MENU -> PAR. VARIOUS -> LOGIC EMER. for the logic of emergency contact and PARAMETERS -> PAR. VARIOUS -> LOGIC ANTINC. for logic fire.

## 5.12 DIGITAL PROGRAM SWITCH

The switch with digital keys. model DS2, for surface installation, serves to select different operating modes of the door using the keys. The program function selected is signaled on the luminous display.

### LIST OF MODES



**TOTAL ENTRY/EXIT** - The external/internal sensors are enabled, the door block is off and the automatic opening of the door is total.



**PARTIAL ENTRY/EXIT** - The external/internal sensors are enabled, the door block is off and the automatic opening of the door is reduced.



**OPEN** - The door opens automatically from whatever position it is in, and remains blocked with the door open.



**PHARMACY** - The door has a reduced opening for safe exchange of goods, all sensors are disabled. Requires an additional electric lock. Opening is activated via remote control or key impulse.



**CLOSED** - The door closes automatically from whatever position it is in, all the sensors are disabled and the door block is on.



**ENTER ONLY** - The internal exit sensor is disabled, the external entry sensor is enabled and the door block is on.



**EXIT ONLY** - The external entry sensor is disabled, the internal exit sensor is enabled and the door block is on.

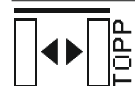


**INTERBLOCK** - You enable the interlock function of a pair of doors (eg. 1/2 and 3/4). The interlock provides the Combined operation of two doors operated by a single switch that can be set in DS2: single output, single entry and automatic. Here's an example:

Door 1 open -> door 2 does not open as long as the door 1 is open

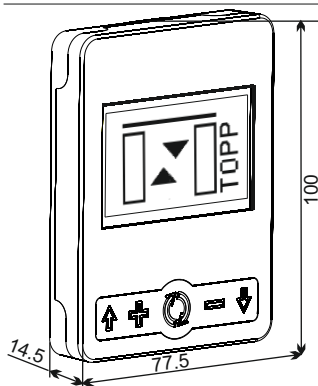
Door 2 opening -> door 1 does not open as long as the door 2 is open.

To enable interlock enter the menu PARAMETERS -> INTERLOCK -> YES.



**WINGS FREE** - The door stops, all sensors and inputs are disabled. The panel locking system disconnects (if any). Panels are free. The door can be opened or closed manually.

(Allows the use of "Wings free", if the automation board is set up for the "Wings free", function)



	This will allow you to scroll the menu upward.
	This allows you to increase the value of the function selected
	This allows you to confirm the function selected and change mode . In case of error, if you press this key for 3sec, it will reset to zero (near).
	This allows you to decrease the value of the function selected and return to the previous menu
	This allows you to scroll the menu downward. Hold for 4 sec to enter the menu

## 6.1 MAINTENANCE

In order for the automation unit to operate correctly, the user shall be carried out periodical maintenance on the same. This maintenance activity may be carried out either by TOPP, in accordance with a specific agreement made with the user, or by the installation technician or by other competent and qualified technical personnel in possession of all legal requirements.

**IMPORTANT!** – During maintenance operations, the personnel shall be equipped with suitable personal protection equipment (PPE) so as to perform the works required under safe conditions.

At the end of the cycles or data entered manually by the maintenance personnel, the 'hex wrench' symbol will appear on the display to indicate that maintenance is needed. This 'alarm' can be reset by the maintenance personnel.

The maintenance activities should in any case involve the periodical execution of at least the following operations:

**Every 6 months (the words “Check/cleaning” will appear on the digital switch):**

- % clean the glide surface of the carriages and wheels, using a cloth lightly moistened with solvent;
- % clean the glasses of the activation and safety sensors with a cotton cloth slightly moistened with water. Do not use solvents or other aggressive products;
- % verify the correct operation of the sensors;
- % make sure there are no uncovered areas in the vicinity of the mobile doors that are not detected by the sensors;
- % verify the correct operation of the photocells, if any, the blocking system and their fastenings;
- % check the belt tension, the stability of the automation and the tension of all the screws;
- % check the correct alignment of the doors and position of the door on the jamb when closed;
- % check the connections and electric wiring;
- % with the automation powered, check the stability of the door ensuring that the movement is regular without friction; disconnect the power supply and check that the emergency battery system opens the doors in the entirety of the passageway;
- % if worn, replace the central gaskets and brushes on the doors.

**Every 24 months (the words “Battery replacement” will appear on the digital switch):**

- % replace the emergency battery system (after disconnecting the power supply).

⚠ The duration of the battery pack is affected by the environmental and functional conditions of the automation.

**Every 250,000 cycles or 1 year (the words “Rubber /guides replacement” appear on the digital switch):**

- % replace the rubber stops and guides on the floor of the trolleys

**Every 1,000,000 cycles (the words “Belt replacement” appear on the digital switch):**

- % replace the glide belt.

**The words “Wheel replacement” appear on the digital switch:**

- % replace the carriage wheels

**Model K200**

*Single wing door up to 70kg – Double wing door up to 140kg: Every 1,000,000 cycles*

*Single wing door from 70 to 100kg - Double wing door up 200kg: Every 500.000 cycles*

*Single wing door from 100 to 140kg : Every 300.000 cycles*

**Model K280**

*Single wing door up to 120kg - Double wing door up 240kg: Every 1.000.000 cycles*

*Single wing door from 120 to 240kg - Double wing door up 280kg: Every 500.000 cycles*

*Single wing door from 240 to 280kg : Every 300.000 cycles*

**Every 500,000 cycles or 10 years (the words “gear motor/electr. ” appear on the digital switch):**

- % replace the gearmotor and electronics.

## 6.2 ACCESSORIES AND SPARE PARTS ON REQUEST

Do not use spare parts and accessories that are not original as this could affect the safety and efficiency of the automation. Original spare parts and accessories must be requested exclusively from the authorized retailer or directly from the factory, communicating the type, model, serial number and year of construction of the automation:

- % N.2 Infrared sensors (mod. IS1 and IS2);
- % N.2 Microwave sensors (mod. WS1);
- % N.1 Digital program selector (mod. Ds2);
- % N.1 Program selection knob (mod. MS1);
- % N.1 Program selection knob (mod. KC1);
- % N.1 Electromechanical door block;
- % N.2 Miniaturized photocells (mod. F1 and mod F2);
- % N.2 Ultra flat wall button;
- % Antipanic door opener (simple or complete);
- % System for glass door;
- % Lateral sensors.

Should arise the need to use accessories other than those mentioned, the installer can apply directly to our technical support service.

## 6.3 DISPOSAL

Disposal of the automation must be handled in respect of the legislation in force on the subject of environmental safeguards.

## 6.4 TROUBLESHOOTING

### PROBLEM

### REMEDY

When the green led DS1 lights up the electronic control board does not switch on

Check the mains voltage 230V, the contacts on the electronic control circuit, transformer voltage, fuse.

When the yellow led DS3 lights up the electronic control board blinks and the door does not move

Check the 24V supply voltage of the peripherals, photocell contacts and NO-NC logic, safety devices, antipanic device, door opening and lateral guards. After amending the input logic of the safety devices, perform a reset.

After opening, the door stays in the open position

Check the photocells and their contacts, the radars and their contacts, check for possible friction in the glide, battery discharged

During closure, the door reopens by itself repeatedly

Check the position or sensitivity of the radar, alignment of the photocells, possible friction in the glide

The door bangs against the stop when opening or closing, without slowing

Check the encoder connection.

During opening or closing the door is excessively noisy

Check that there are no scraps on the glide rail, check carriage alignment, glide wheels, runners on the floor.

With functions set by the switch the door does not open

Check the radar contacts, electromechanical block, switch contacts

The door does not function and the display of the control circuit shows symbols or letters

Check the malfunction signal consulting the list of messages and alarms

## EC DECLARATION OF INCORPORATION OF PARTLY COMPLETED MACHINERY

**ORIGINAL**

The undersigned, in the name of and behalf of  
the following company

**Topp S.r.l.**  
**Via Galvani, 59**  
**36066 Sandrigo (VI)**  
**Italia**



herewith declares that the person authorised to compile the technical file is

Name: Plaza Trinidad - Topp S.r.l.  
Address: via Galvani, 59 36066 Sandrigo (VI)  
and that to the partly completed machinery

**ELECTROMECHANICAL AUTOMATION FOR LINEAR SLIDING**  
pedestrial **DOORS WITH ONE, TWO AND FOUR LEAFS** with radio control unit

Type: **K**

Variants: **K140-K140E- K200-K200E-K280-K280E-K200T-K280T-DUEVILLE**

the following essential requisites of the

**2006/42/EC Machinery Directive** (including all applicable amendments)  
have been applied and fulfilled, in terms of their applicability, only for the above-described partly completed machinery:  
Enclosure I: 1.1.2 a)-b)-c)-e), 1.1.3, 1.1.5, 1.2.5, 1.2.6, 1.3.1, 1.3.2, 1.3.3, 1.3.4, 1.3.7, 1.5.1, 1.5.2, 1.5.4, 1.5.5, 1.5.6,  
1.5.8, 1.5.10, 1.5.11, 1.5.13, 1.6.1, 1.6.2, 1.6.3, 1.7.3, 1.7.4;

that the relevant technical documentation is compiled in accordance with part B of Annex VII of the above mentioned Machinery Directive.

The following harmonised standards have been applied:

**EN 16005:2012** (applicable parts)  
**EN 60335-2-103:2015** (applicable parts)

The undersigned also undertakes the obligation, in response to a duly reasoned request by the national market surveillance authorities, to transmit to the a.m. authorities, in electronic or paper format, the relevant technical documentation on the partly completed machinery.

The above identified partly completed machinery must not be put into service until the final machinery into which it is to be incorporated has been declared in conformity with the provisions of the above mentioned Machinery Directive.

This declaration of conformity is issued under the sole responsibility of the manufacturer.

Date: Sandrigo, 31/10/2018

Signature: Matteo Cavalcante  
Administrator

## EU DECLARATION OF CONFORMITY

**ORIGINAL**

The undersigned, in the name of and behalf of  
the following company

**Topp S.r.l.**  
**Via Galvani, 59**  
**36066 Sandrigo (VI)**  
**Italia**



**CE**

herewith declares that the product

**ELECTROMECHANICAL AUTOMATION FOR LINEAR SLIDING**  
pedestrial **DOORS WITH ONE, TWO AND FOUR LEAFS** with radio control unit

Type: **K**

Variants: **K140-K140E- K200-K200E-K280-K280E-K200T-K280T-DUEVILLE**

is in compliance with the following directives (including all applicable amendments):

**RED Directive 2014/53/EU**  
**RoHS II Directive 2011/65/EU**

and that the following harmonised standards have been applied:

**EN 300 220-2 V3.1.1**  
**EN 50581:2012**

and the following technical documents:

**EN 301 489-3 V1.6.1**  
**EN 62233:2008**

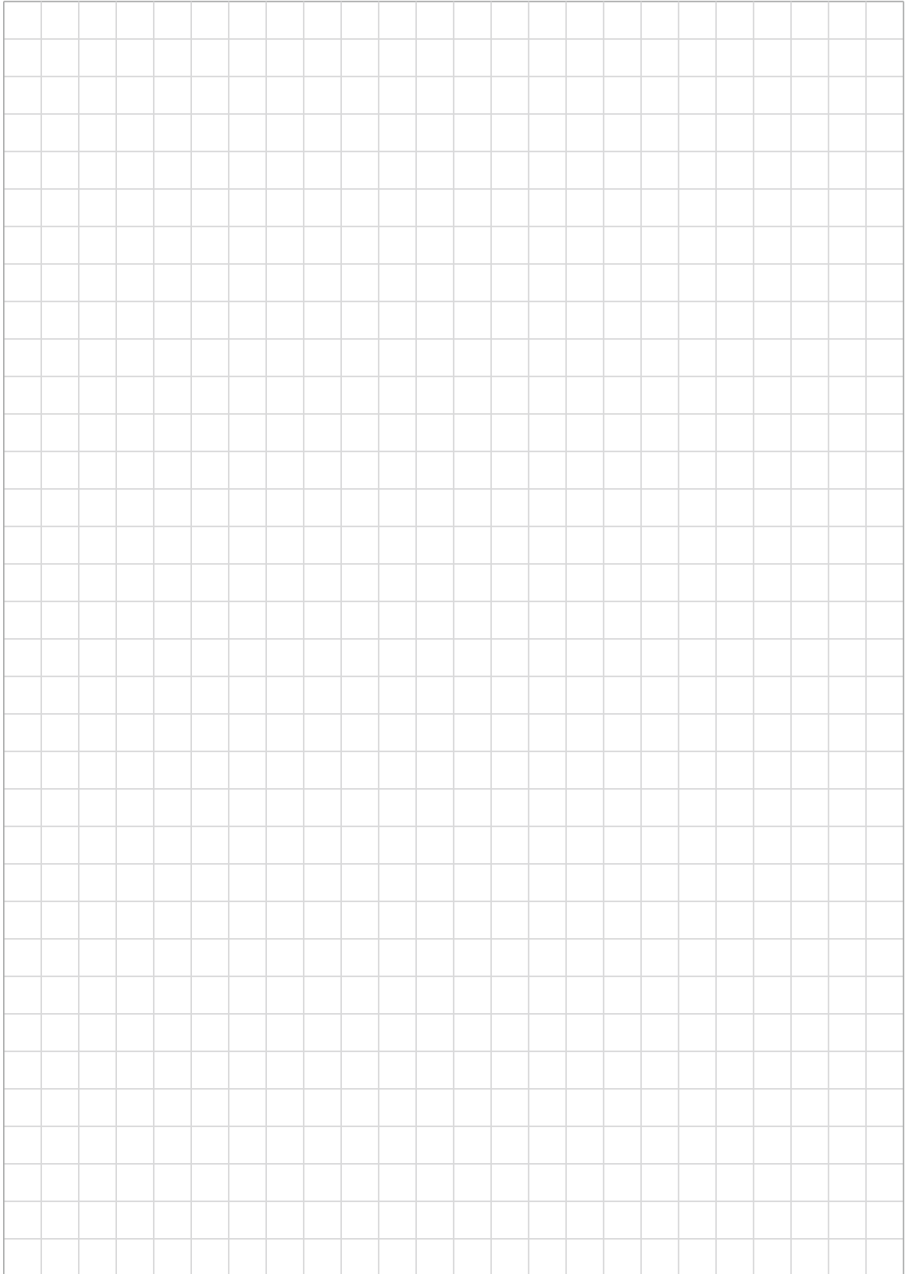
**EN 61000-6-2:2005**

**EN 61000-6-3:2007 + A1:2011 + AC:2012**

This declaration of conformity is issued under the sole responsibility of the manufacturer.

Date: Sandrigo, 31/10/2018

Signature: Matteo Cavalcante  
Administrator







TOPP S.r.l.

Società a Socio Unico soggetta a direzione e coordinamento di 2 Plus 3 Holding S.p.a.

Via Galvani, 59 - 36066 Sandrigo (VI) - Italia

Tel. +39 0444 656700 - Fax +39 0444 656701

Info@topp.it - www.topp.it