SL90x - SL91x

Automatic Gates

SL90x - SL91x models

(Translated from French)

Rev 14

Technical Manual SL90x-SL91x-MT-EN

Document revision

Rev.	Date	Written	Checked	Subject
Draft		MFy	OF + HG + JB	First edition
01	17 Jan. 2008	MFy	JB+OF+SL+BD +HG+DL+JMS	Adaptation to version 2 of the mechanism and the program.
02	2009-01-20	MFy		Installation plans update (distance between anchors).
03	2009-03-04	MFy		- Replace "logic" by "control board". - Addition of the "OPTION" ► "Maintenance" ► "Init software" parameter. - ch.4.16. : replace illustration and "circlip" by "bush". - Readability of wiring diagrams improved. - EC certificate update.
04	2009-08-28	MFy		- Warnings: replace text "children must be accompanied" by "children must be watched". - Technical specs: ambient t° modified.
05	2010-01-05	MFy		- EC certificate update.
06	2010-02-23	MFy		- Passage to version V01R03 of the Master control board program (no modification in this manual). This program version has to be used only with gates equipped with ATV31xxxIE46 variable speed controller, i.e. from serial n° 10-SL9xx-B0001. - Ch.1. : note for technical defect added. - Ch.5.7. add 3 types of infringements. - Ch.5.8.4. : OPERATION ► Status: 3 VSC defects added. - Ch.5.8.8. OPTION ► Remote control: operation detailed. - Ch.1. : points 4-6-7-8 detailed. - Ch.7: impact norms references detailed + necessity of silicone profile option. - Ch.8. diagram 2SL04.004 to rev C. - Ch.8.3. AO1 Mst corrected according to Modbus table.
07	2010-07-06	MFy		- Electrical connections: warnings added.
08	2010-07-19	MFy		- Technical specs: storage t° modified.
09	2010-12-23	MFy		- Wiring diagrams: 1SL04.001 -> rev B (W61 cable) 1SL04A.002 -> rev B (buzzer + AS1300 marks)
10	2011-01-06	MFy		- Ch.3.2.2: Download Chg Lvx parameters description modified.
11	2011-02-08	MFy		- Ch.1: warnings added. - Ch.2.2.3: "children" removed. - Ch.2.2.5 + 5.5 + 9 + 10: Passage to ATV312 variable frequency drive (no functional change).
12	2012-06-25	MFy		- Adaptation to SmartLane v3 => ch. 2.2. + 3.3. + 4.2. + 4.3. + 4.15. + 4.17. + 4.18. + 5.5. + 8. modified. - Chapters order reorganized.
13	2012-10-04	MFy		- Wiring diagrams: R1+R2 displaced + "remote control" replaced by "card reader".
14	2012-10-09	MFy		- Troubleshooting: add paragraph regarding Opening/Closing problems.

Table of contents

1. SAFETY WARNINGS 4

2. DESCRIPTION 5
- 2.1. Location of the components 5
- 2.2. Electric console 6

3. INSTALLATION 8
- 3.1. Preparatory work on site 8
- 3.2. Storing the equipment before installation 8
- 3.3. Positioning the equipment 9
- 3.4. Electrical connections 11
- 3.5. First start-up 15

4. MAINTENANCE 16
- 4.1. Turning off the power 16
- 4.2. Removing a panel 17
- 4.3. Maintenance 18
- 4.4. Troubleshooting 19
- 4.5. Tightening torque 21
- 4.6. Removing the cover plate 21
- 4.7. Removing the extension and its components (options) 22
- 4.8. Removing the orientation pictogram on the housing 24
- 4.9. Removing the operating pictogram from the housing (option) 24
- 4.10. Removing the validator from the housing (option) 25
- 4.11. Removing the validator from the extension (option) 25
- 4.12. Adjusting the clearance space for the passage of moving obstacles 26
- 4.13. Setting the parameters of the variable speed controller 26
- 4.14. Replacing and adjusting the detection photocells 27
- 4.15. Replacing and adjusting the balancing spring 29
- 4.16. Replacing a moving obstacle 30
- 4.17. Replacing a fixed obstacle 31
- 4.18. Removing the shutter 32
- 4.19. Replacing the release spring 33
- 4.20. Replacing the inductive sensor 33
- 4.21. Removing the gear motor 34
- 4.22. Prolonged stop/Destruction 34

5. USE 35
- 5.1. Description of the series and definitions 35
- 5.2. Fixed and moving obstacles 36
- 5.3. Pictograms 37
- 5.4. Detection cells 38
- 5.5. Mechanical assembly 40
- 5.6. Operating principle 41
- 5.7. Infringements 42
- 5.8. AS1300 CONTROL BOARD 44

6. TECHNICAL SPECIFICATIONS 65

7. INSTALLATION PLAN AND DIMENSIONS 66

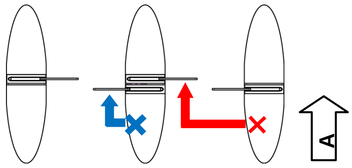
8. WIRING DIAGRAMS 72
- 8.1. Specific pages to Right housing alone 80
- 8.2. Specific pages to Twin gates 83
- 8.3. Assignment of the control board terminal blocks (Input/Output) 86

9. CERTIFICATE OF COMPLIANCE 88

1. SAFETY WARNINGS

Installing an access control obstacle exposes the user to responsibilities with regards to the safety of people:

- The obstacle must be completely visible to the user as well as to any operators before being actuated.
- For security reasons, children (user smaller than 1 m tall) must be supervised by an adult at all times when in the vicinity of the unit and during passage through the lane
- A child must absolutely precede the accompanying adult when lane passage is required
- If habitual use by children is anticipated, Automatic Systems recommends the addition of all options required to optimize the level of protection.
- All operations performed on the equipment must be undertaken by qualified personnel. All operations that are not authorised or that are carried out on this product by an unqualified technician shall automatically and *ipso jure* lead to the denial of the manufacturer's warrantee.
- The access keys to the mechanism must only be used by personnel informed about the electrical and mechanical risks incurred by negligent handling. This person is required to lock the mechanism's access panel after finishing the work.
- For all operations that do not require the motor or control board to be on, turn off the power supply using the circuit breaker (12, 2.2. ch.).
  WARNING: when working on an intermediate gate, the circuit breakers of both lanes must be turned OFF, in order to prevent both obstacles from moving!

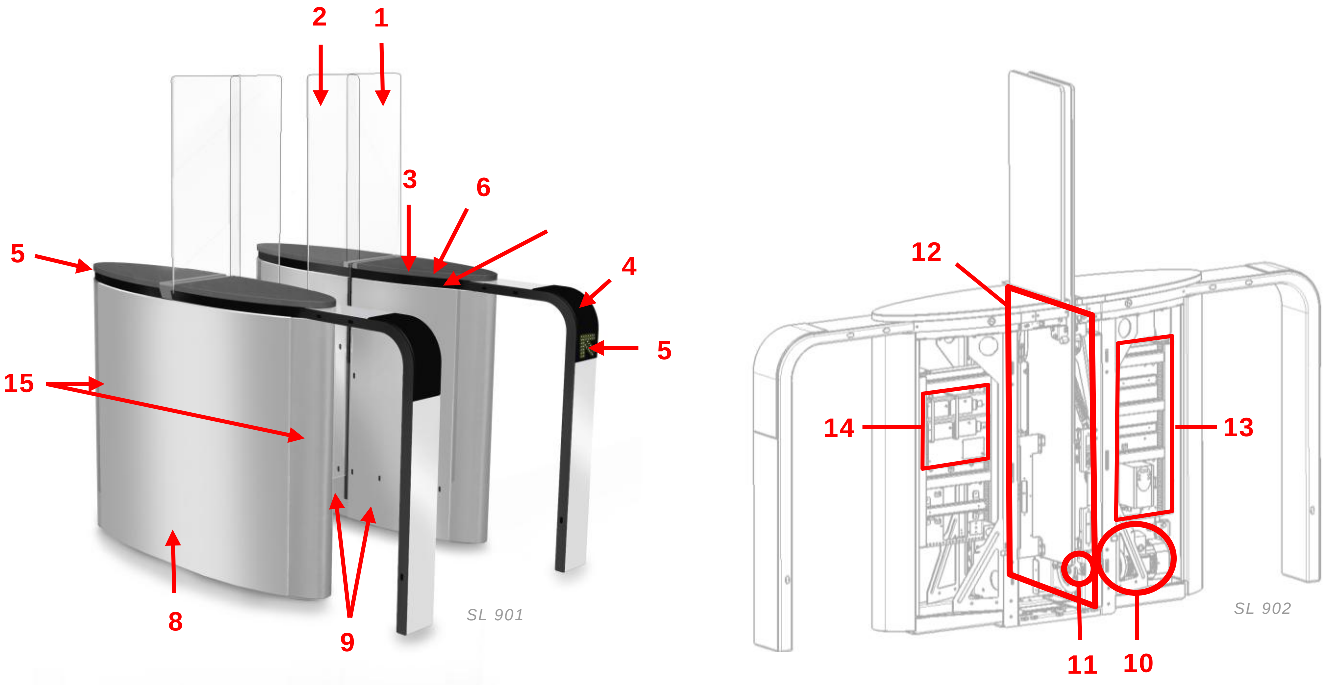


- The obstacles are automatically open by means of the balancing spring in case of a lack of power > 150 ms.
  => Check that obstacles are open before working with the mechanism.
- All internal elements that could receive power or move must be handled with care.
- The piece of equipment is configured in "minimal risk" mode for its users. All modifications of the parameters must be undertaken by experienced and qualified personnel and in no way entail the responsibility of *Automatic Systems*.
- If the equipment is to be resold, it is the reseller's responsibility to ensure, both at time of offer and order submittal as well as during installation of the equipment, that its environment and expected use conform to the technical specifications of the equipment, and reflect these directions.

The reseller agrees to indemnify and hold harmless Automatic Systems of all claims arising from the reseller's failure to respect the preceding conditions.

2. DESCRIPTION

2.1. Location of the components

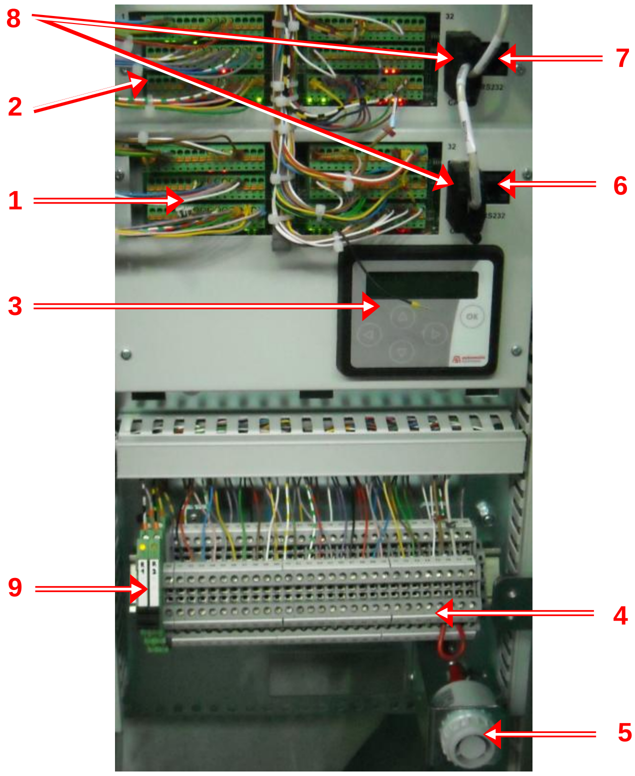


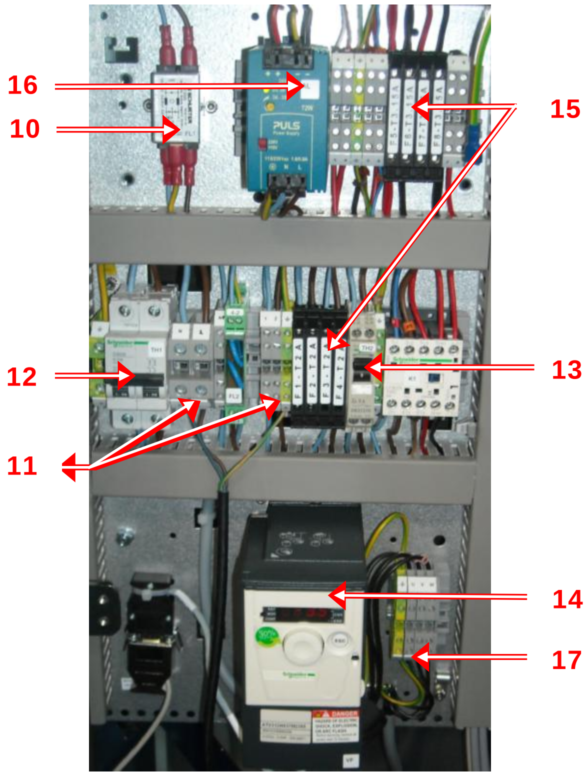
1. Fixed obstacle (only with some equipment).
2. Moving obstacle.
3. Cover plate.
4. Extension cover with lock no. 004
   1st location for a validator (optional): system that requests authorisation for passage.
5. Orientation pictogram (on the housing or optional extension).
6. Placement of the operating pictogram (option).
   2nd location for a validator (optional): system that requests authorisation for passage.
7. Plate screening the detection cells (see ch.5.4. for their location).
8. Outer panel (outside of the passageway).
9. Right panel (+ left panel of the other side of the obstacle) with lock no. 004.
10. Gear motor (one per moving obstacle).
11. Inductive position sensor (one per moving obstacle).
12. Mechanical assembly (one per moving obstacle).
13. Electric console (see ch.2.2.).
14. Control boards (see 5.8.).
15. Front plate.

2.2. Electric console

Master gate (on the right in direction A):

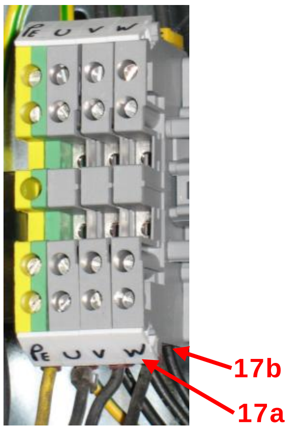
Left-hand panel | **Right-hand panel**



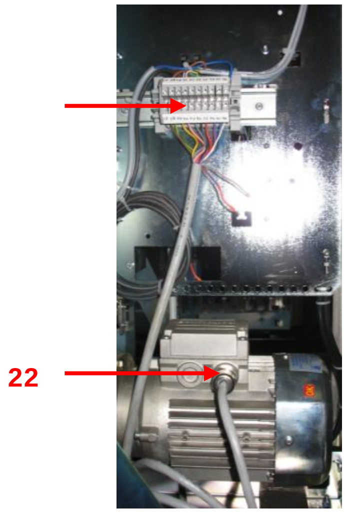


1. Connecting terminal block for the Master control board.
2. Connecting terminal block for the Slave control board.
3. Display
4. Terminal block for external communication (including for the connection of remote controls and card readers: see the wiring diagrams).
5. Buzzer
6. RJ45 connector for programming the Master control board and Modbus communication.
7. RJ45 connector for programming the Slave control board.
8. Connection between the Master and Slave control boards and the variable speed controller.
9. Dry contacts for Open & Closed obstacles status.

10. Filter.
11. General electrical power supply
12. General circuit breaker
13. Variable speed controller circuit breaker
14. Variable speed controller
15. Fuses
16. Stabilised power supply
17. Motor connection (see ch.3.4.):
    a. Connectors in the front for the Master motor
    b. Connectors in the back for the Slave motor



Slave gate (on the left in direction A), right panel:



21. Intermediate terminal block
22. Connection of the Slave motor to terminal block 17b in the Master gate.

3. INSTALLATION

The operations described in this chapter must be undertaken in accordance with the safety warnings, ch.1. .

Note: The SL9xx range gates are only designed to be installed inside buildings.

3.1. Preparatory work on site

Work prior to the installation of the equipment must be executed in accordance with the installation plan (ch.7.).

The ground on which the gate will rest must be perfectly flat.

3.2. Storing the equipment before installation

Ensure that the equipment does not receive any hits, leave it in its original packaging, and place it in a dry area protected from dust, heat and the weather.

3.3. Positioning the equipment

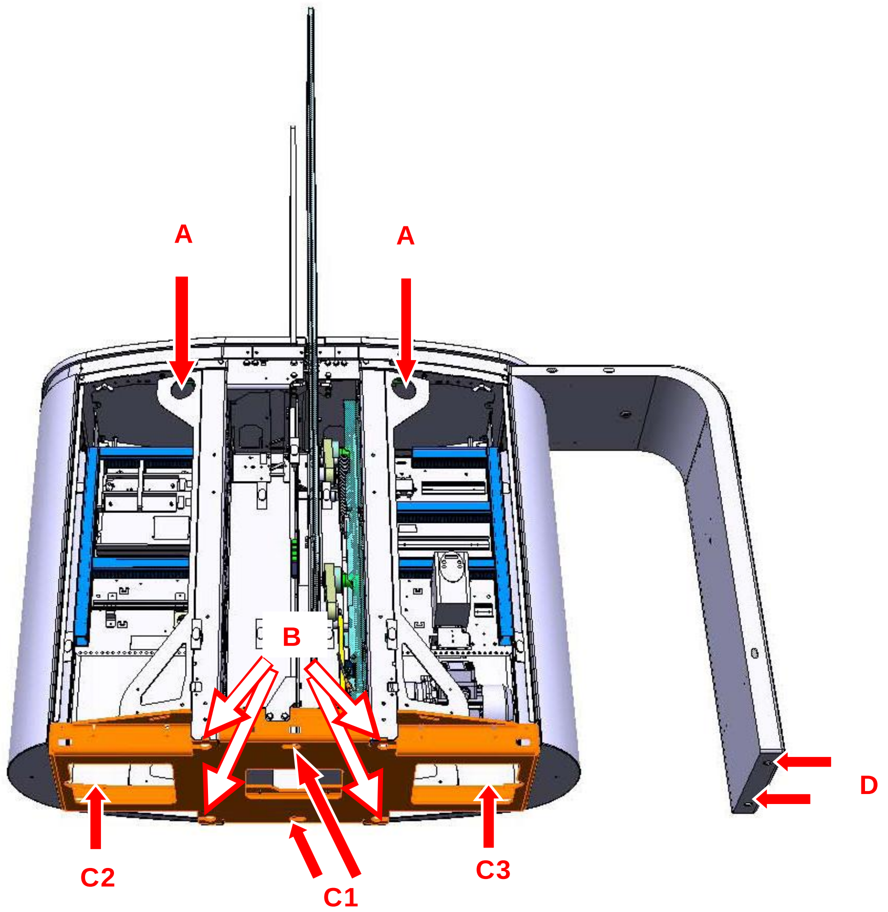
The equipment can be handled using bars or slings passed through the openings (A) provided for this purpose in the frame.

The housing may be fastened to the ground in one of the following two manners:

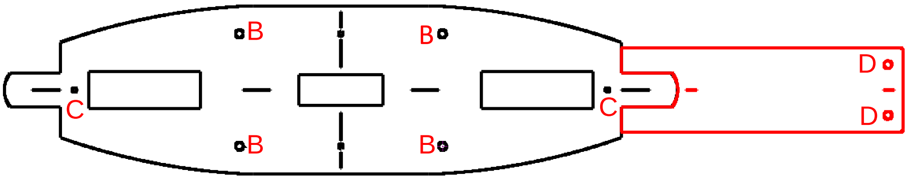
- With 4 anchor bolts + washers (placed in B).
- **Or** with 2 anchor bolts + washers (placed in C1)
  and 2 anchor bolts + washers + clamps (placed in C2+C3).

All extensions added must be fastened to the ground with 2 anchor bolts + washers (placed in D).

Warning: *Automatic Systems* supplies the clams, washers and anchor bolts (Liebig B15/95, *Automatic Systems* ref. 0/7420/300) for fastening the equipment to the concrete. Nevertheless, the installer is responsible for adapting the means of fastening if the nature of the ground requires it.



1. Drill the holes for the anchor bolts (Ø 15 mm and 95 mm long), using the drill templates provided:
   - GAB-E06215 for the SL 90x housings
   - GAB-E06216 for the SL 91x housings
   - GAB-E06217 for any SL 90x extensions
   - GAB-E06218 for any SL 91x extensions



Housing template *Extension template*

2. To access the anchoring points:
   - Remove the housing's panels (see ch.4.2.) (the keys are attached to the packaging of the fixed glass pane or to the equipment)
   - Remove the front plate of any extensions present (ch.4.7.)
3. If necessary, adjust the level of the gate by putting shims under the frame.
4. If necessary, adjust the clearance space for the passage of the moving obstacles (ch.4.12.).
5. If the extension has not been fastened to the housing before delivery:
   - Remove the housing's cover plate (ch.4.6.)
   - Screw the extension to the housing using the 2 E1 screws (ch.4.7.)
   - Make the electrical connections (see the wiring diagram)
6. Tighten the anchoring bolts using 40 Nm torque.
7. If the fixed obstacles (1, ch.2.1.) are not fixed to the housing, refer to ch.4.17.

3.4. Electrical connections

The operations must be undertaken in accordance with the safety warnings, ch.1. .
In particular, the circuit breaker (12, ch.2.2.) must be cut before any of the work described below is begun.

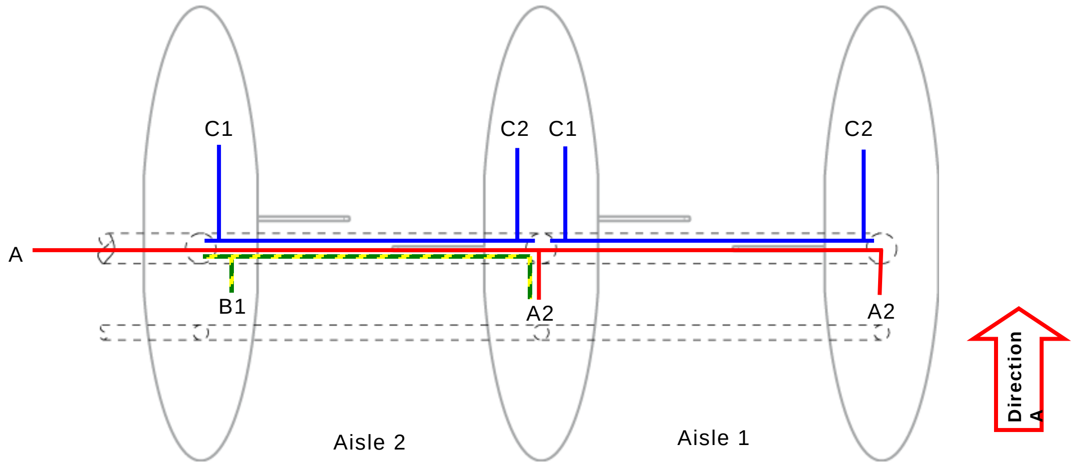
Connections must be executed in accordance with the wiring diagrams provided inside the equipment, which remain the reference.

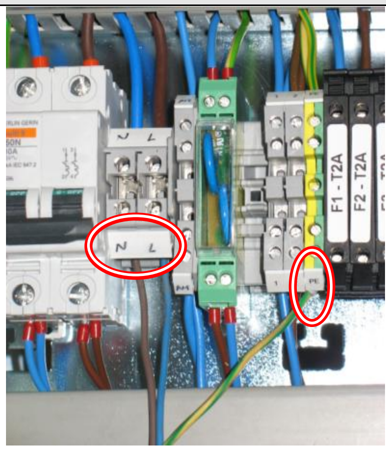
Some connection cables must be supplied by the user. They are specified on the layout plan.

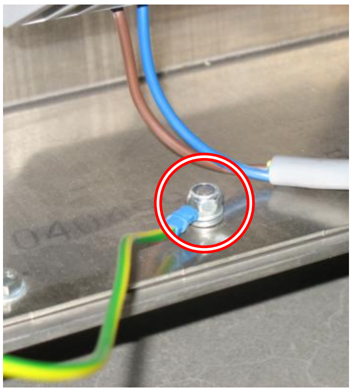
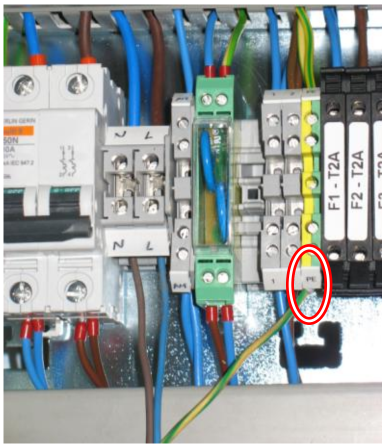
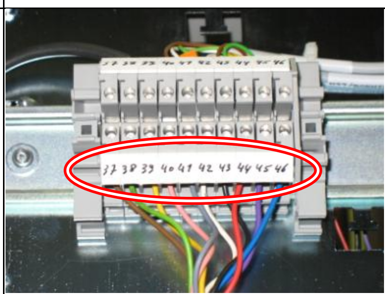
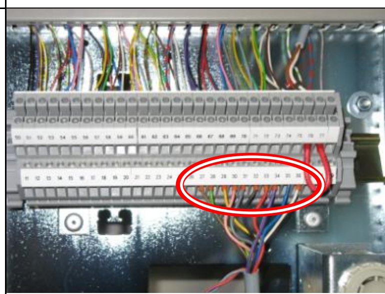
The direction of passage determines the right, intermediary and left housings.

In order to avoid interference, the various types of cables cannot all be next to each other. To this end, there must be 2 different sheaths separated by at least 10 cm.

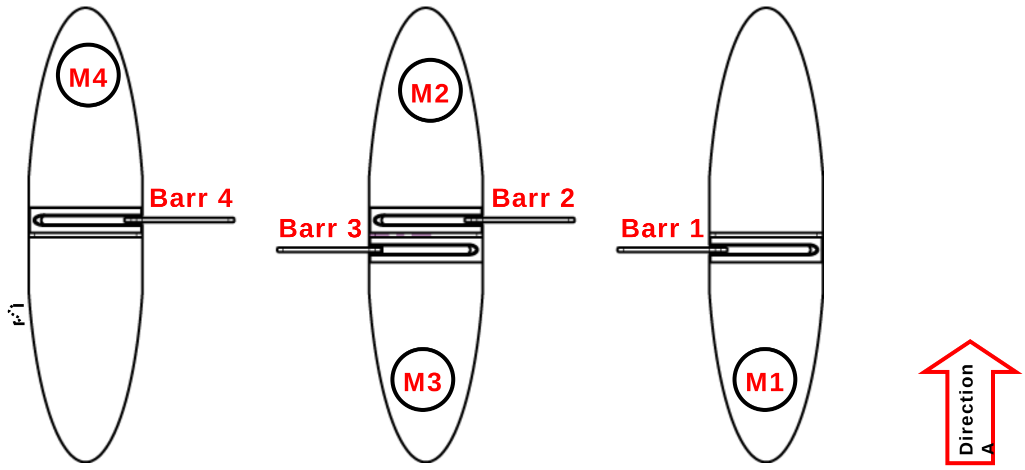
Ø 80-mm sheath:



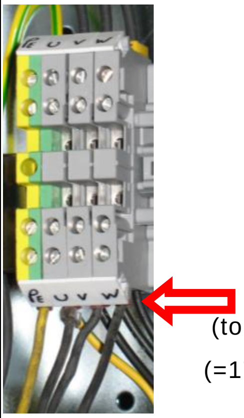
Ref.	Type of cable	Connections	**Left** gate of the aisle	**Right** gate of the aisle
A	3G2.5²	For the right and intermediary gates: Electrical power supply (230 V single phase + ground; at least 30 mA differential per apparatus): from the client's switchboard to terminal block A2. **WARNING**: do not connect to a floating network or to high impedance earthed industrial distribution network. **WARNING**: high leakage current. Imperatively connect to the ground with a 1-mm² cable minimum		 A2 (=11, ch.2.2.).

Ref.	Type of cable	Connections	**Left** gate of the aisle	**Right** gate of the aisle
		before connecting the mains. Do not connect several equipments to the same differential breaker. **<u>Note</u>**: Each apparatus is protected by a 10 A curve D circuit breaker (12, ch.2.2.).		
B	2.5²	<u>For the extreme left gate</u>: Connect a ground wire to any of the studs linked to the frame (see B1) of the extreme left gate and to terminal block A2 of the gate located to its right. Additionally, ensure that equipotentiality between gates forming a group is guaranteed.	 B1	 A2 (=11, ch.2.2.).
C	TPVF 12-pair 0.6² cable	<u>For 2 gates next to each other</u>: Connect connector C1 (terminals 37 to 46) of the left gate to connector C2 (terminals 27 to 36, respectively) of the gate located directly to its right.	 C1 (=21, ch.2.2.).	 C2 (=4, ch.2.2.).
		<u>For any options present (remote control, etc.)</u>: please refer to the wiring diagram.		

Ø 40-mm sheath:



Motor *Mx* controls moving obstacle *Obs x.*
Motor *Mx* is controlled by the same variable speed controller and the same control board as motor *M(x-1)* (only for the "*x*" pairs) (also, see p. 44).

Ref.	Type of cable	Connections	**Left** gate of the aisle	**Right** gate of the aisle
	4G1.5², supplied by *Automatic Systems*	For the left and intermediary gates: Connect connector D1 of motor M_x to connector D2 of the gate located immediately to its right (M_{x-1}) (only for the "*x*" pairs).	 D1 (= 22, ch.2.2.	 D2 (to the back) (=17b, ch.2.2.

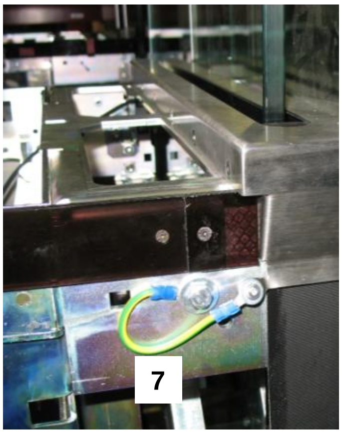
Options:

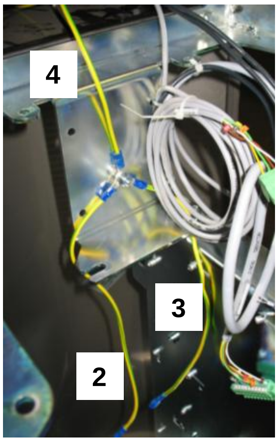
- Connect all options present (reader or another validator, remote control) to the terminal block (4, ch.2.2.) (see wiring diagram no. 1SL04B.002).

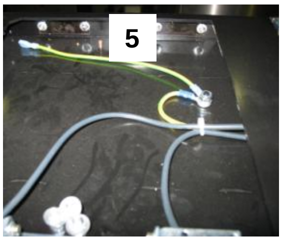
Ground cables

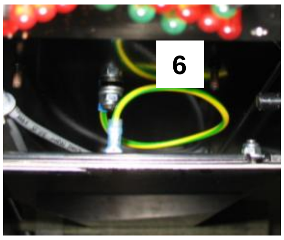
Check that the ground cables linking all the metal parts to each other are connected properly:

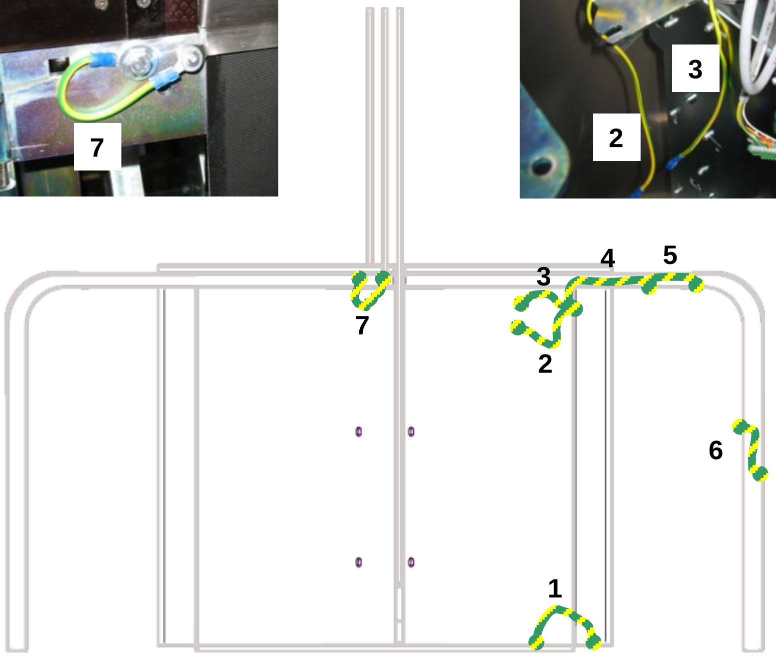
1. From the frame to the front plate.
2. From the frame to the right panel.
3. From the frame to the outermost panel.
4. From the frame to the extension.
5. From the extension to the upper plate of the extension.
6. From the extension to the front plate of the extension.
7. From the shutter guide to the bridge.

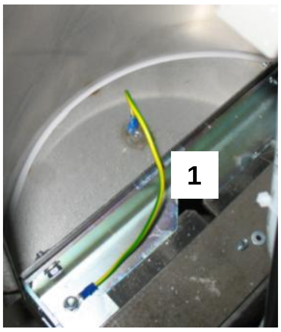












3.5. First start-up

1. Check the adjustments set out in Ch. 4. Although they were set in the factory, they may become distorted during transportation and installation (this is especially the case for cell alignment).
2. Switch on the circuit breakers (13 **then** 12, ch.2.2.).
3. On the control board:
    - Select the display language (“OPTION” menu ► “Language”).
    - Configure the date and time (“DATE & TIME” menu).
    - Check that the parameter values correspond to the configuration of the equipment and any options present.
    - Activate the position sensors ("LS INIT" menu ► "Obstacle Init.")
    - Save the changes made ("MEMORY" menu ► "Save"► "MEM1").
4. Switch off the power supply network, wait 10 s and turn it on again.
5. Execute several electric opening and closing tries using the available controls (push button, reader, remote control or other validator).
   Check that obstacle is correctly positioned in the open and closed position (reaches the limit switches).
6. Check that the variable speed controller (14, ch.2.2.) is within the range of positive values when the obstacle opens and the negative values when it closes. If this is not the case, the motor is running in reverse and you must reverse 2 phases of the motor (=invert cables U and V near the connector, 17, ch.2.2.).
7. Check that the obstacle opens completely in the event a power cut (proper operation of the "anti-panic" system)
8. Check that all the possible safeties and options are operating properly.

4. MAINTENANCE

The operations must be undertaken in accordance with the safety warnings, ch.1. .

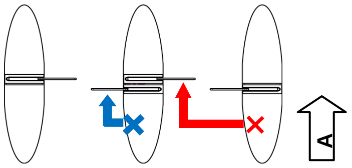
The various adjustments were set in the factory. Nevertheless, they must be checked before the equipment is put in service the first time and when there is a problem with the equipment's operation.

Ground cables connect all the metal parts to each other (ch.3.4.).
They must not be damaged at the time of disassembly and must be reconnected during reassembly.

4.1. Turning off the power

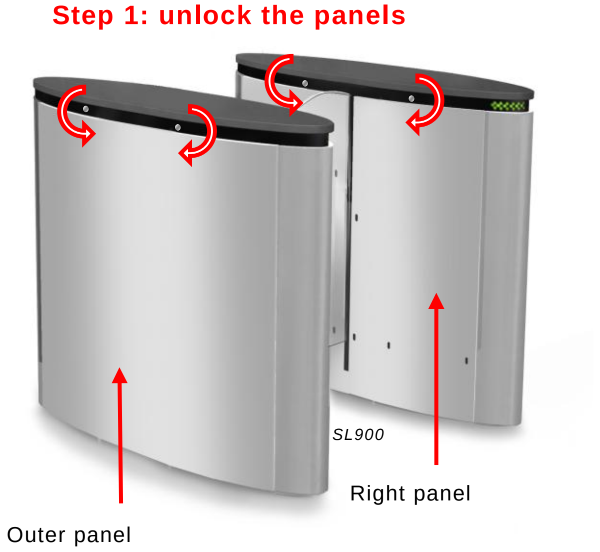
1. Switch off the circuit breakers (12 and 13, ch.2.2.).

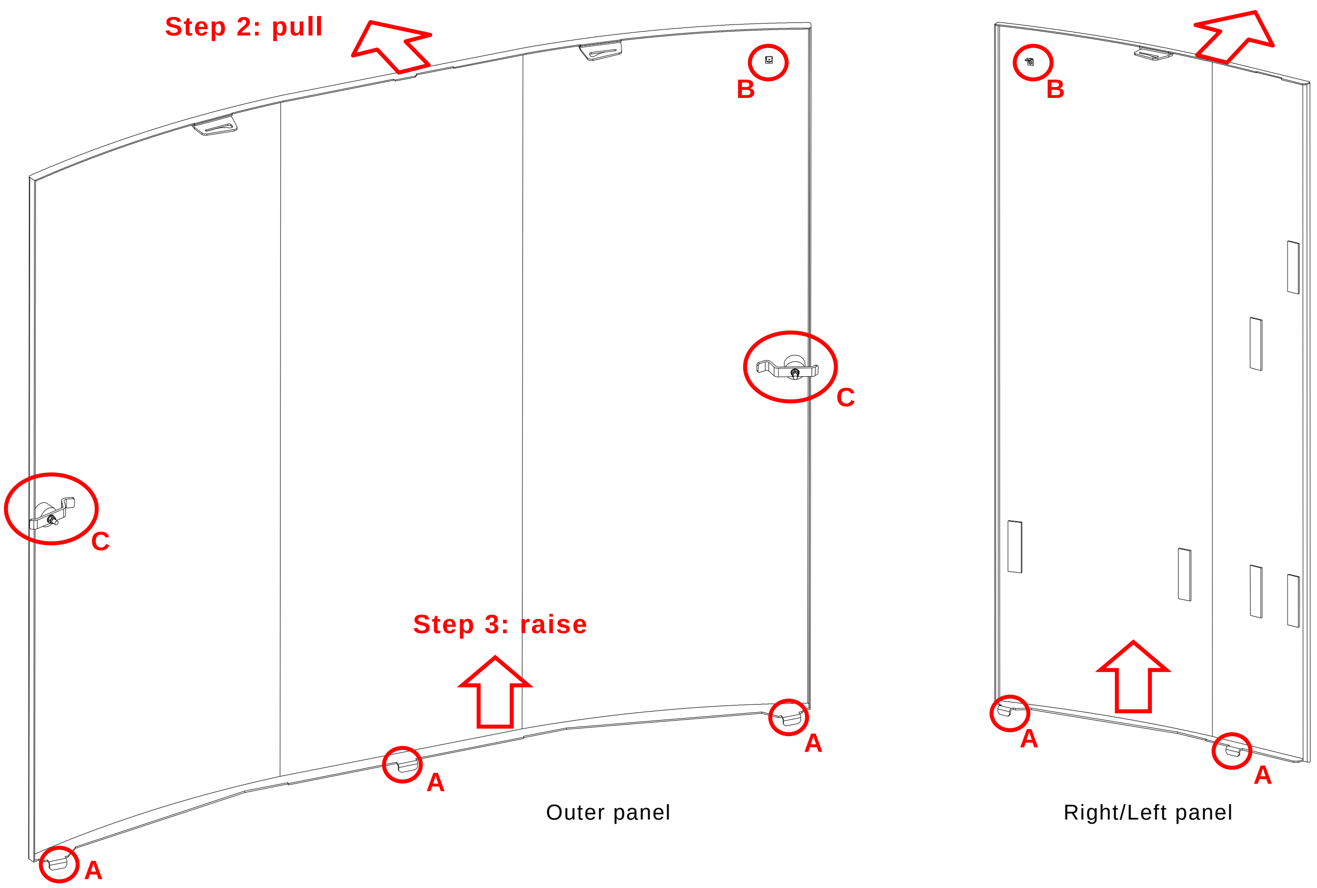
WARNING: when working on an intermediate gate, the circuit breakers of both lanes must be turned OFF, in order to prevent both obstacles from moving!



4.2. Removing a panel

1. Unlock the panel using key no. 004 (1 lock on the left and right panels located inside the aisle, 2 locks on the outer panels).
2. Pull the upper part of the panel towards yourself in order to tilt it.
3. Raise the panel in order to remove guides (A) from their notches. Take the ground cable out of its latch (B) to avoid damaging it.
4. Proceed the same way for the outer panel, taking care to unlock © from inside the housing.





4.3. Maintenance

The operations must be undertaken in accordance with the safety warnings, ch.1. .

<u>Every 3 months or 300,000 cycles, whichever comes first:</u>

1. Clean the housing using a product for stainless steel. *Automatic Systems* can supply an approved product, reference no. 0/6031/000.
   <u>Warning</u>: The frequency of maintenance must be adjusted to the conditions of use of the gate, in particular when it is located in an oxidising atmosphere: at the entry to a swimming pool (heated and chlorinated atmosphere), near the sea, in an industrial environment, etc.
2. Clean the obstacles using a product for cleaning windows.
3. Dust and clean the plate screening the cells and the lenses of the latter using a soft rag impregnated with an antistatic and mild cleaning product.
   Never use paint thinner or any other organic solvent.

<u>Every 6 months or 600,000 cycles, whichever comes first:</u>

4. Check that the obstacle opens completely when the power is cut.
5. Check the state of the electrical connections, especially those defined in ch.3.4. , as well as the tightness of the CAN connectors (8, ch.2.2.) between the Master and Slave control boards.
6. Check that the nuts and screws are properly tightened (cf. ch.1.).
7. Execute several electric opening and closing tries using the available controls (push button, reader, remote control or other validator).
   Check that obstacle is correctly positioned in the open and closed position (reaches the limit switches: cf. LS. INIT menu of the control board).
8. Check that the 2 diodes (1 and 2, p. 65) of every detection cell are lit up and that diode 2 turns off when the reflected beam is obscured.
   For the cells with uneasy access, check the state of the corresponding Input on the control board (cf. ch.8.3.): LED must be illuminated (= operational cell) and turns off when the cell is hidden.
9. Execute the trials under "OPTION" menu ► "Gate Config" ► "Maintenance".
10. Check the adjustments described in following chapters.
11. Check the cleanliness and the wear of the shutter (11, ch.4.18.) to ensure its correct sliding and replace if necessary.
12. Check the status of stops (6, ch.5.5.) and replace if necessary.
13. Check the tightness of the gear motor and the bearings (lifetime lubricated).
14. Lubricate using multipurpose, anticorrosive grease (Automatic Systems can provide appropriate product under ref 0/3565/000):
    - The moving parts in the mechanical assembly as well as the balancing spring (3, ch.5.5.).
    - The upper ball joint (13, ch.4.15.) of the balancing spring.
      <u>Note</u>: if the ball joint is worn, replace the spring assembly (ch.4.15.).
    - The shutter tie rod (12, ch.4.18.), .

4.4. Troubleshooting

Buzzer sounds continuously

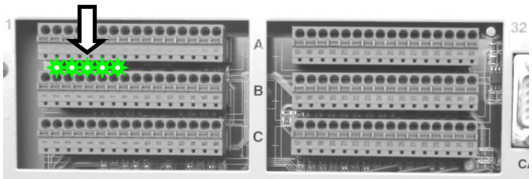
⇨ Intrusion in the aisle: something is detected in front of the obstacles that has not received passage authorisation

Buzzer sounds intermittently

⇨ Passage effected fraudulently.

The gate does not work properly

⇨ Liquid crystal display is not lit: Check whether the first 5 green LEDs (at the top left on the Master control board's terminal block 1, ch.2.2.) are lit.



- If not, check the mains supply, the state of the circuit breaker and the fuses (12+15, ch.2.2.) and the voltage supplied by the stabilised power supply (16, ch.2.2.).
- If so, check that the control board is not in programming mode (cable connected inn connector 6 or 7, ch.2.2.).

⇨ Liquid crystal display is lit: Check whether the red LEDs (others than the analogue outputs) are lit on control boards' terminal blocks (1+2, ch.2.2.).

- If not, switch off the mains supply and remove the control boards' terminal blocks 1+2, ch.2.2.). Switch on the voltage again and check whether the red LEDs are lit. If that is the case, there is a short circuit concerning these terminal blocks.
- If so, see the defects recorded ("OPERATION" menu ► "Status").
- Check that the rotation direction of the motor corresponds to the direction indicated on it by an arrow. If this is not the case, first turn off the circuit breaker (12, ch.2.2.) and then reverse the 2 phases on the terminal block (17, ch.2.2.).

Opening/Closing problems

⇨ Initialize the sensor by means of an *Obstacle Init*. Procedure (LS Init menu).

⇨ If the problem persists:

1. Turn off the power on the variable speed controller.
2. Open and close the obstacles manually and check that the sensors values are around 200 (open) and 800 (closed).
3. If not, adjust the sensors.
4. Turn the power on the variable speed controller.
5. Disconnect both sensors by removing cables connected to M-B32 and M-C32.
6. Start an *Obstacle Init*. procedure (this should return a error).
7. Turn off the power on the gate.
8. Remove the programming cable, if present.
9. Turn the power on after 15 seconds.
10. Connect both sensors to the control board (M-B32 and M-C32).
11. Start a new *Obstacle Init*. procedure.

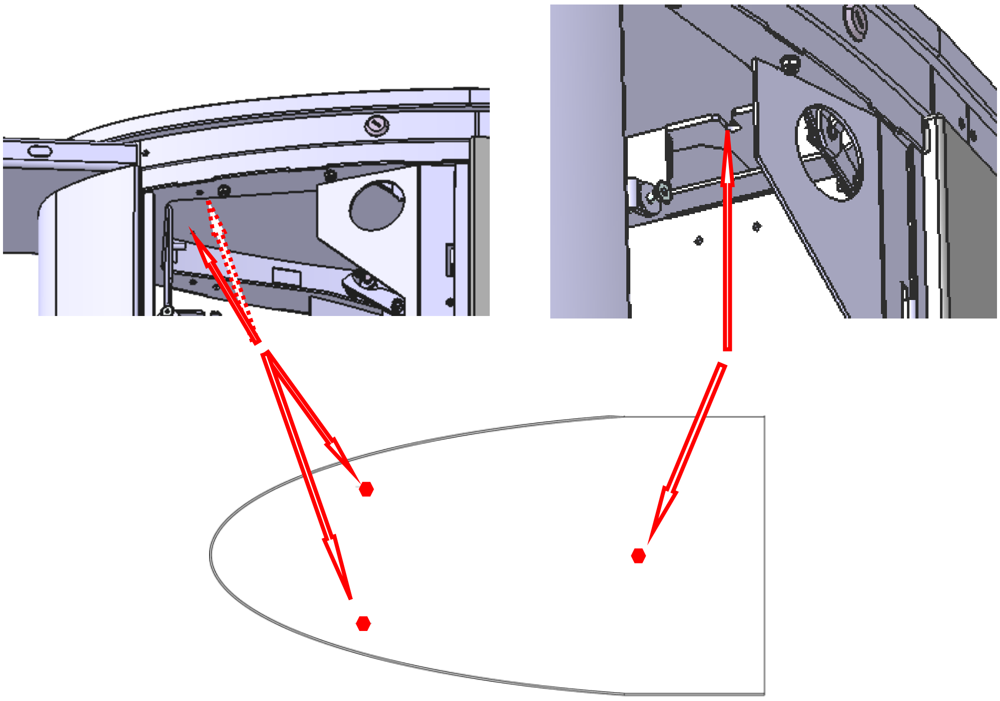
4.5. Tightening torque

Recommended torque for tightening the screws and nuts, unless otherwise specified:

Type of Screw	Torque (Nm)
M2	0.32
M3	1.15
M4	2.65
M5	5.2
M6	8.9
M7	14.5
M8	22

Type of Screw	Torque (Nm)
M10	43
M12	75
M14	119
M16	182
M18	250
M20	355
M22	480

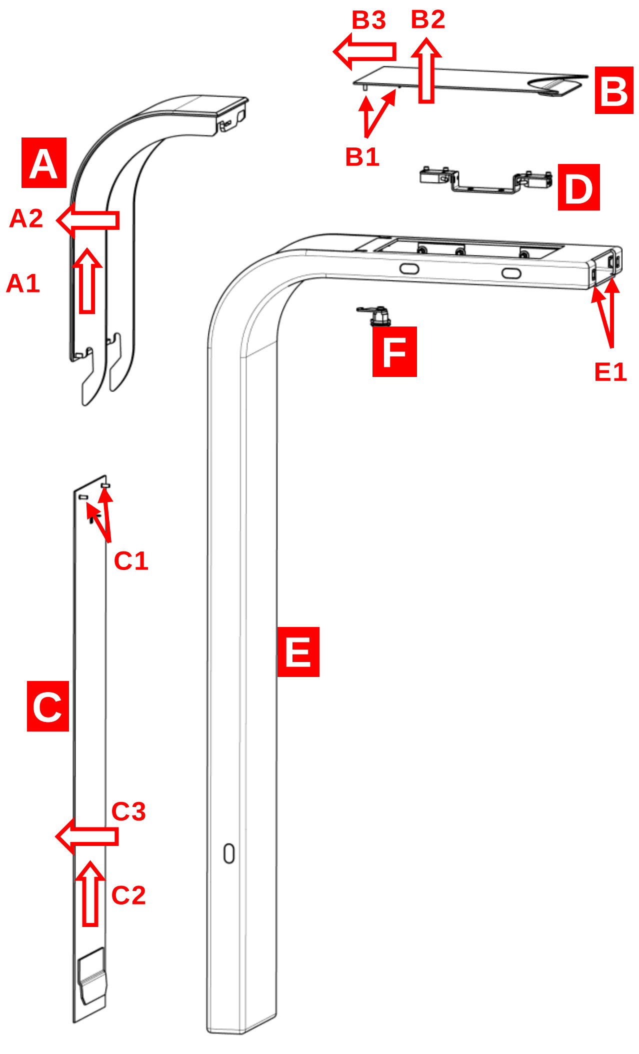
4.6. Removing the cover plate



1. Remove the corresponding panel (ch.4.2.).
2. Unscrew the 3 screws fastening the plate to the frame.

<u>Warning:</u> To avoid distorting the alignment of the cells, do not tighten the screws too much when putting the plate on again!

4.7. Removing the extension and its components (options)



4.7.1. Removing the cover (A)

1. Open the lock (F).
2. **Lift** the cover (A1) and pull it towards yourself (A2).

4.7.2. Removing the upper plate (B)

1. Remove the cover (ch.4.7.1.).
2. Unscrew the nuts (B1).
3. Raise the plate slightly (B2) and to pull it towards yourself (B3). It may be necessary to remove the cover plate beforehand (ch.4.6.). Remove the ground cable.

4.7.3. Removing the front plate (C)

1. Remove the cover (ch.4.7.1.).
2. Unscrew the nuts (C1).
3. Raise the plate slightly (C2) and to pull it towards yourself (C3). Remove the ground cable.

4.7.4. Removing the cells (D)

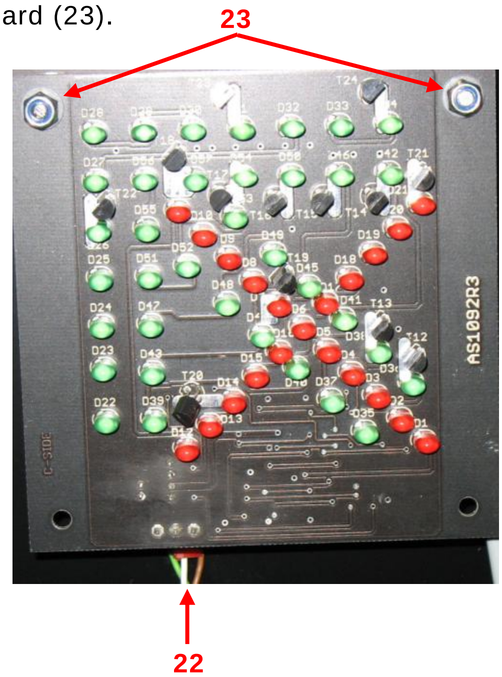
1. Remove the front or upper plate (see above), depending on the cell to be removed.
2. Unscrew the cell.
3. If you are fitting a new cell, check the adjustment (ch.4.14.).

4.7.5. Removing the extension (E) from the housing

1. Remove the housing's cover plate (ch.4.6.).
2. Unscrew the screws (E1), as well as the ground fastenings (D, ch.3.3.).
3. Pull the extension away from the housing.

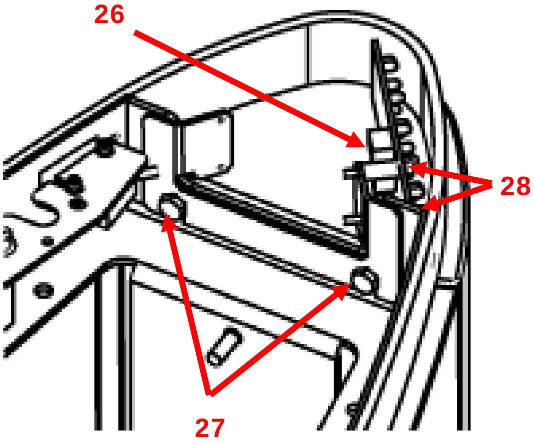
4.7.6. Removing the orientation pictogram on the extension (option)

1. Remove the cover (ch.4.7.1.).
2. Disconnect the connector from the board (22).
3. Unscrew the board (23).



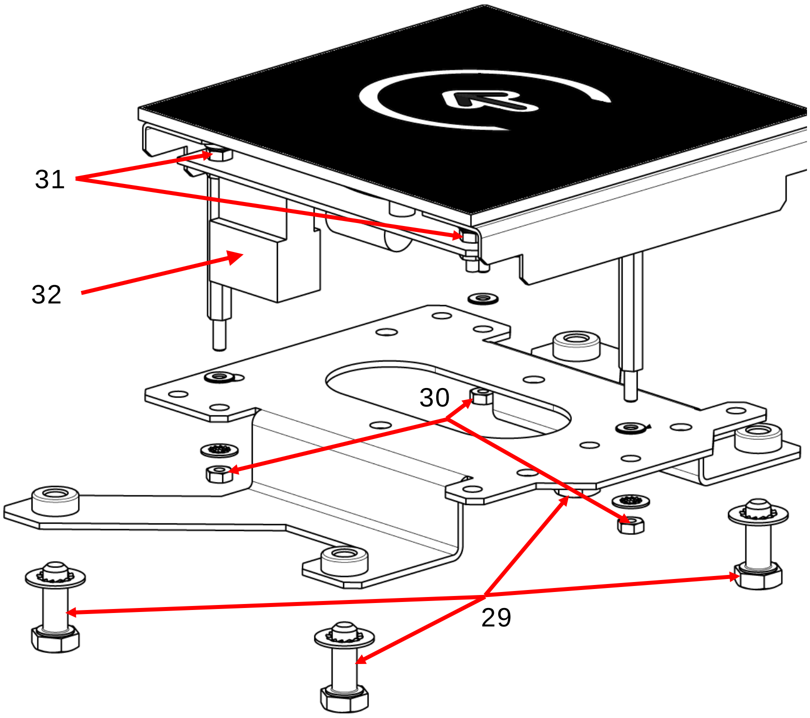
4.8. Removing the orientation pictogram on the housing

1. Take off the cover plate (ch.4.6.).
2. Disconnect the electrical connector (26) from the board.
3. Take the screws (27) out of the support and pull the assembly out of the frame.
4. Take out the screws (28) and take the board off its support.



4.9. Removing the operating pictogram from the housing (option)

1. Remove the corresponding panel (ch.4.2.).
2. Remove the cover plate (ch.4.6.).
3. Disconnect the electrical connector from the board (32).
4. Unscrew the nuts (29) fastening the assembly to the frame.
5. Unscrew the nuts (30) and take the pictogram off its support.
6. Unscrew the nuts (31) and remove the board.

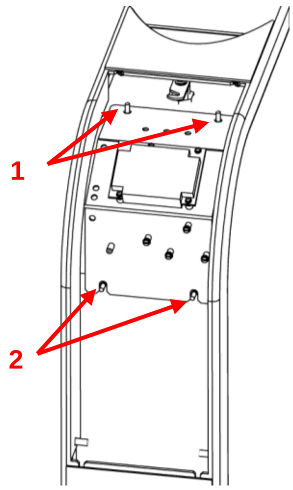


4.10. Removing the validator from the housing (option)

Follow steps 1 to 4 in Chapter 4.9. Then refer to the specific assembly of the validator on its support (not supplied by *Automatic Systems*).

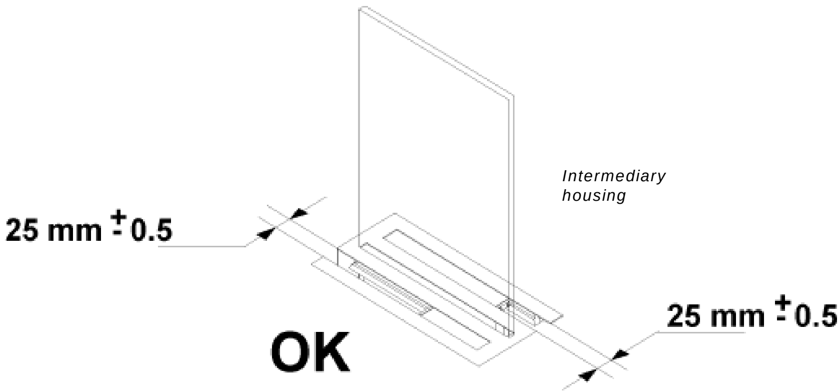
4.11. Removing the validator from the extension (option)

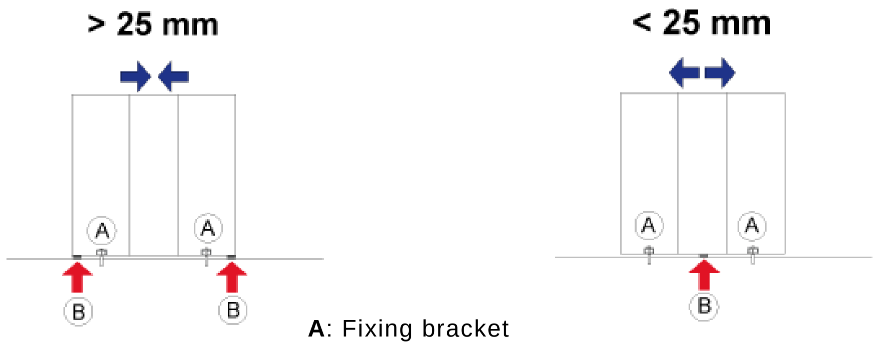
1. Remove the cover (ch.4.7.1.).
2. Completely unscrew the 2 upper nuts (1).
3. Unscrew the 2 lower nuts (2) fastening the orientation pictogram.
4. Disconnect the electrical connector.
5. Remove the validator.



4.12. Adjusting the clearance space for the passage of moving obstacles

If the frame is out of shape, the clearance space for the passage of moving obstacles in the upper part of the gate will not be 25 mm.
In this case, adjust the position of the shims (B) in relation to the fixing brackets (A) to adjust the gap.





A: Fixing bracket
B: Shim

4.13. Setting the parameters of the variable speed controller

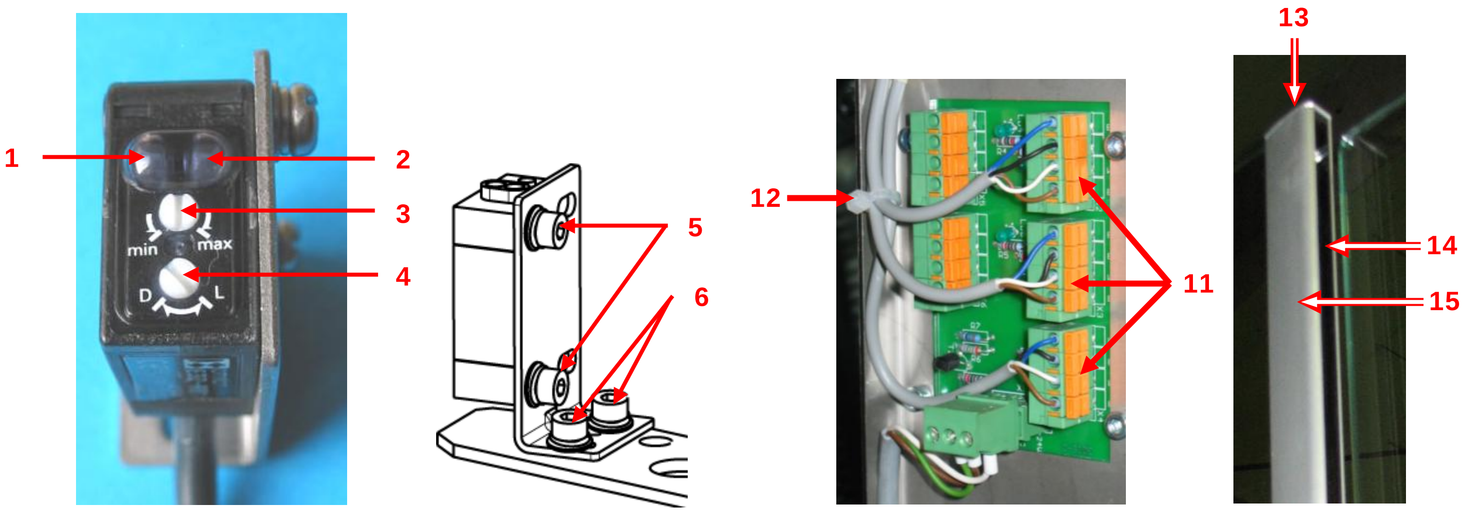
The Schneider ATV312 variable speed controller must be configured for the CAN bus to recognise it:

- Using the keys on the variable speed controller, configure the parameters

```
RDY – Enter
 Set
  ⇩COM – Enter
   ADC0 – Enter        (CAN address)
    ⇩ 1 – Enter
   ESC
   BDC0 – Enter
    ⇩ 500 – Enter      (baud rate)
FLt – Enter
 Atr – Enter
    ⇩ yES – Enter  Restart automatically
```

- Turn of the variable speed controller and wait for the display to turn off completely.
- Turn the variable speed controller back on. Configuration is complete.

4.14. Replacing and adjusting the detection photocells



Access to the cells

The location of the cells is given on ch.5.4. .
To access cells CH, CB, SM and SL, remove the corresponding panel (ch.4.2.).
To access cells SH3 to 10, remove the cover plate (4.6.).
To access cells SH1-2-11-12, remove the extension cover (ch.4.7.1.).
To access cells SL1 and 12 on the extension, remove the front plate of the extension (ch.4.7.3.).
To access cells GF:

- Unscrew the cap (13).
- Unplug the connector cables (11).
- Extract the screen (14) from the section (15) by pulling up.
- Take the cells out of the section.

Removing a cell:

- Unscrew the screws (5) fastening it to its support.
- Disconnect the connectors (11).
- Remove the clamping collars (12) holding the cables to the frame.

Adjusting the OMRON E3Z-R81 cells

The green stability indicator (1) is lit up when the cell is receiving power and in working order.

The orange status indicator (2) is lit up when the cell detects the reflected beam. It turns off when the cell is not properly aligned in relation to the reflector or when a gate user cuts off the beam.

Beam intensity may be adjusted using the scale switch (3).

The mode selector switch (4) must always be set to "L" (Light on) (= turned all the way going counter-clockwise).

Adjust the cells in accordance with the 4 steps described below.
In all cases:

- Use something that is not reflective (cardboard or a sheet of paper, for example) to interrupt the beam of the cell being adjusted.
- Use something that is not reflective to obscure the cells neighbouring the one being adjusted.
- Do not interrupt the beam of the cell being adjusted while handling it.
- The green stability indicator (1) of the cell being adjusted must be lit up.

Step 1: Aligning the cell with its reflector

1.1. Set the scale switch (3) to the middle of its range (between the min and the max).

1.2. Obscure the reflectors that are not directly across from the cell.

1.3. Align the cell with the corresponding reflector using the screws fastening the cell to its support (5) and the support to the frame (6), adjust it so that the orange status indicator (2) lights up.

Step 2: Adjusting the intensity of the beam

The aim of this is to limit the power of the signal emitted, if it is too high it could lead to a detection malfunction.

Set the scale switch (3) to the min (turned all the way going counter-clockwise).

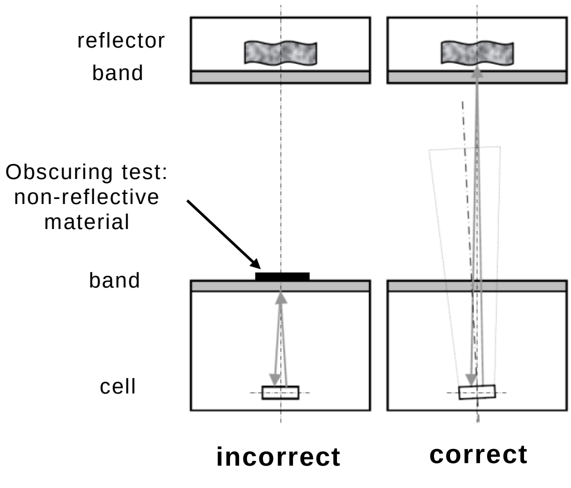
Then, slowly turn the switch clockwise to progressively increase the signal emitted, until the orange status indicator (2) lights up continuously.

Turn the switch an additional 30°.

Step 3: Adjusting the azimuth of the beam

Interrupt the beam being emitted from the external face of the band (7, ch.2.1.) on the side the cell is found.

The orange status indicator (2) must turn off.
This does not occur if the beam is perfectly perpendicular to the band, horizontally and vertically: in this case, the beam is reflected by the band which acts as a mirror and nothing can be detected.
To rectify this, very slightly, skew the cell horizontally using the screw (6) fastening the support to the frame and vertically using the screw (5) fastening the cell to its support.



Step 4: Final test

Interrupt the beam from the band on the **reflector** side and make sure that the orange indicator (2) turns off.

Interrupt the beam from the band on the **cell** side and make sure that the orange indicator (2) turns off.

Pass through the aisle normally and make sure that the orange indicator (2) turns off.

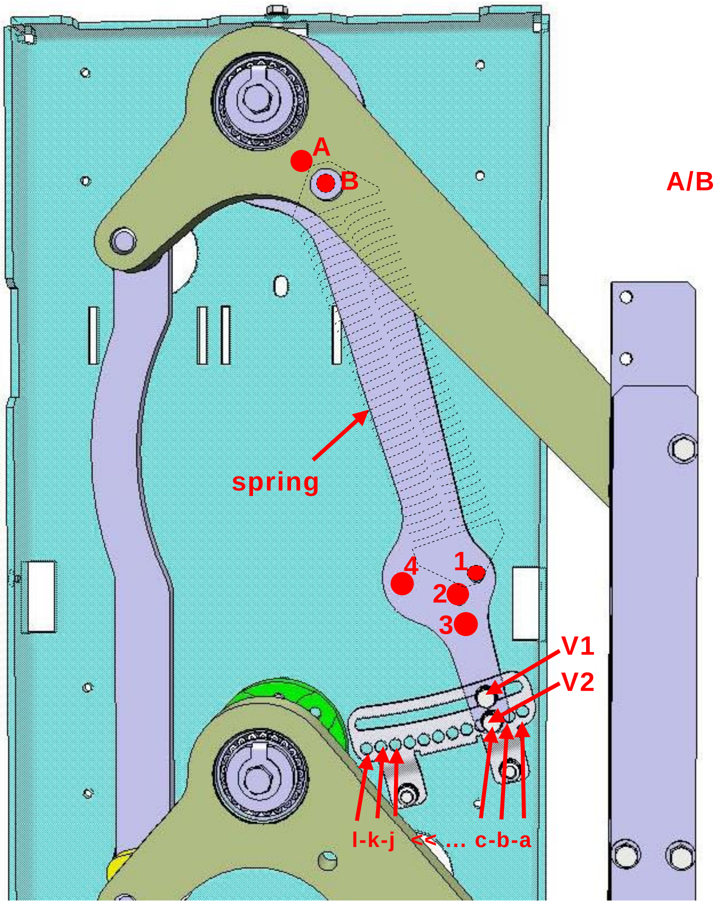
If one of these tests is not satisfactory, readjust the cell starting at Step 1.

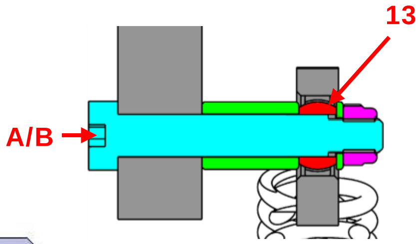
4.15. Replacing and adjusting the balancing spring

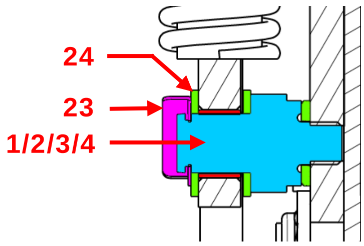
To remove the spring assembly:

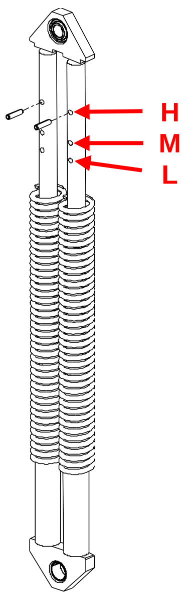
- We recommend you remove the moving obstacle (ch.4.16.) to facilitate access.
- Put the obstacle into the open position (retracted into the housing).
- Loosen V1 without unscrewing it, unscrew V2 and position the lever in position “a” (position in which the spring is compressed the least).
- Unscrew the upper spring attachment point (A or B).
- Remove the circlip and the washer (23 + 24) from the lower attachment point (1 to 4) and remove the spring assembly.

To fit the new spring assembly, proceed in the reverse order.
The following table shows the adjustments of the spring assembly corresponding to the various obstacle heights.









(**)
Double spring assembly (SL91x): The upper part must be pinned in one of the 3 positions H, M or L to compress the springs more or less.

Obstacle height (mm)	1000	1200	1300	1400	1500	1600	1700	1800	1900
SL 90x	A-1-h	B-2-d	B-2-e	B-2-e	B-2-e	B-2-f	B-2-g	B-2-g	B-2-g
SL 91x (*) (**)	B-3-k-L	B-3-f-L	B-3-i-L	B-2-j-M	B-2-k-M	B-2-k-M	B-4-j-H	B-4-j-H	B-4-j-H

(*) *Attachment point A for SL 90x only*

4.16. Replacing a moving obstacle

1. Remove the left and right panels (ch.4.2.).
2. Pull the plinth (7, ch.5.5.) manually to remove the obstacle and lock the crankshaft using a shim (*Fig. A*).
   For an intermediate gate consisting of 2 obstacles, lock the leaf not being moved in the exit position in the same way, to clear the access.
3. Loosen screws no. 4 without unscrewing them completely (*Fig. B*).
4. Remove screws no. 5 (*Fig. B*).
5. Remove the glass pane.
6. Keep the plastic bushes from the old pane (near screws no. 5) and to place them in the holes of the new one.
7. Stick crepe paper (“masking tape”) to the new pane at the location where it will be in contact with the plinth.
8. Position the new pane in the plinth and fit screws no. 5, without tightening them.
9. To raise the pane to the maximum position, align it with reference to the fixed obstacle and tighten screws no. 4 and 5.
   Set the moving obstacles so that they are 1000 mm height when they enter into the housing, a clearance space of 5 mm should be left between the upper part of the obstacle and the cover plate.
10. In order to prevent the pane from striking the shutter during normal operation, adjust the distance between the edge of the pane and the shutter so that it is 3 mm (*Fig. C*). Loosen the screws (14) and the tie-rod support (13).
11. Replace the panels and remove the shims.

Fig. A

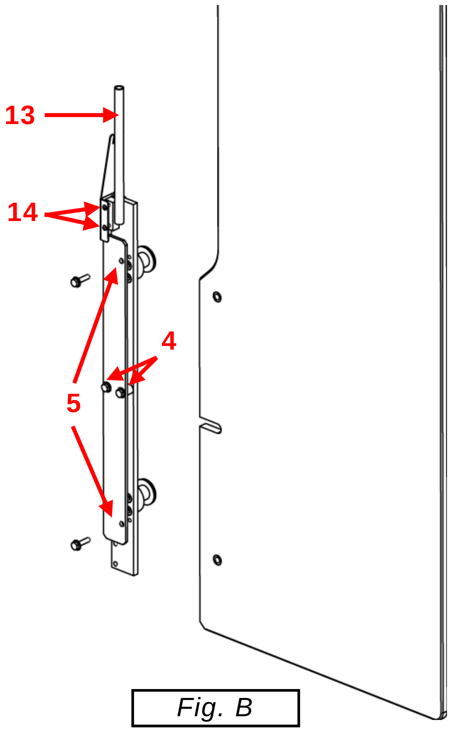


Fig. B

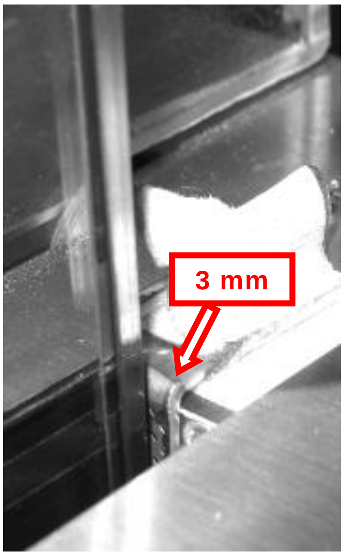
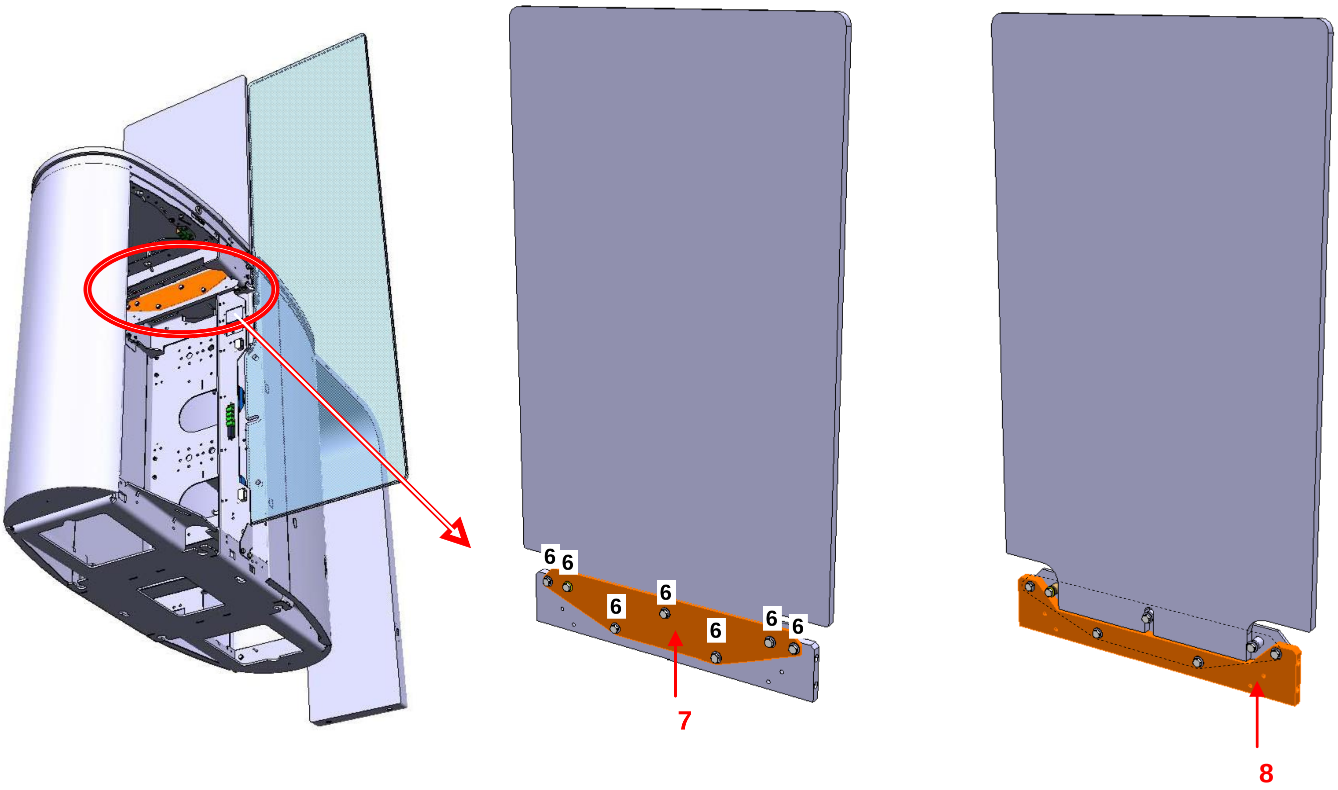


Fig. C

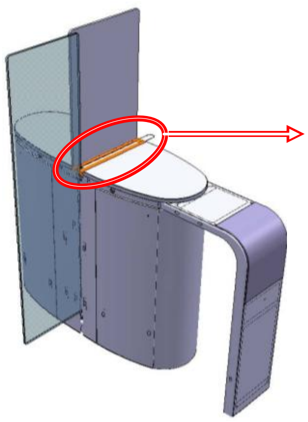
4.17. Replacing a fixed obstacle

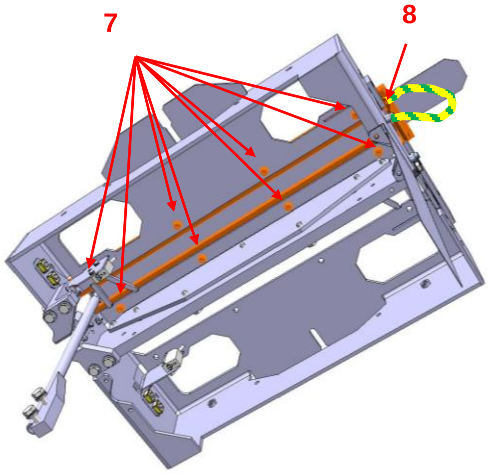
1. Find the side on which the obstacle mounting screws (6) are in the support (visible through the moving obstacle when it is retracted into the gate).
2. Remove the panel on the side of these screws (ch.4.2.).
3. Pull the moving obstacle out of the gate and lock the crankshaft using a shim (*Fig. A*, ch.4.16.).
4. Without unscrewing them, loosen the screws fastening (6) the obstacle into the pinch (7) (their quantity depend on the width of the obstacle).
5. Remove the pane pulling it upwards.
6. Fit the new pane in its support (8), put masking tape on the lower part of the pane in contact with the pinch (7) and tighten the pinch by means of screws (6).

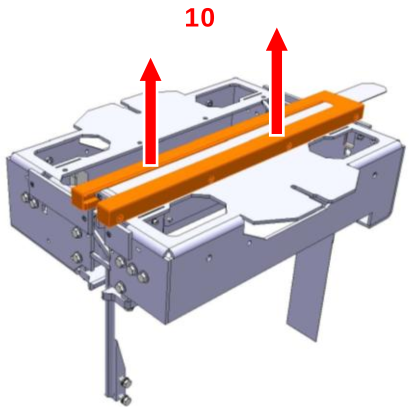


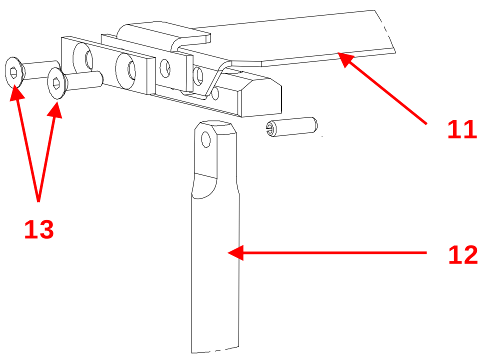
4.18. Removing the shutter

1. Remove the left and right panels (4.2.).
2. To clear access, pull the plinth (7, ch.2.1.) manually to remove the obstacle and lock the crankshaft using a shim (*Fig. A,* ch.4.16.).
   For an intermediate gate consisting of 2 obstacles, lock the leaf not being moved in the exit position in the same way.
3. Unscrew the ground cable (8).
4. Unscrew the screws (7) fastening the shutter guide to the frame (their number depend on the gate model).
5. Take the shutter assembly (10) out of the frame by pulling it upwards.
6. Remove the shutter (11) out from the guide (from the ground cable side).
7. Unscrew the screw (13) to separate the shutter (11) from the tie rod (12).
8. In case of shutter replacement:
   - Clean the shutter guide passage grooves (9)
   - Apply a fine layer of Vaseline to the outer edges of the new shutter and grease the new tie rod
   - Put the assembly back together, going in the opposite order
   - Check the clearance space between the obstacle and the shutter (see point 10 in ch.4.16.).



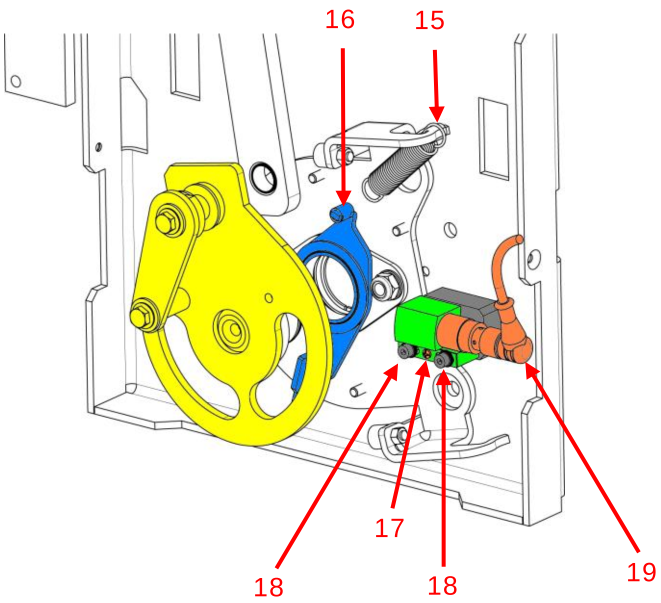






4.19. Replacing the release spring

1. Open the corresponding panel (ch.4.2.).
2. Put the obstacle into the gate (open position).
3. Place the spring between (15) and (16).

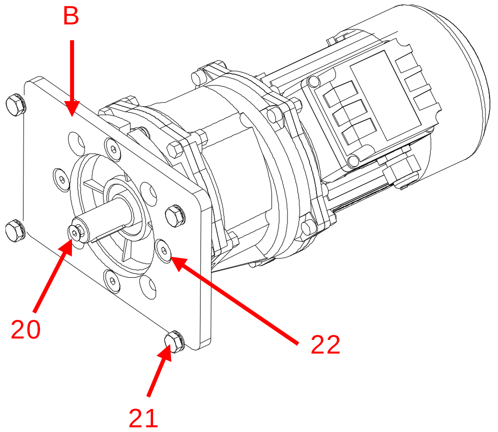


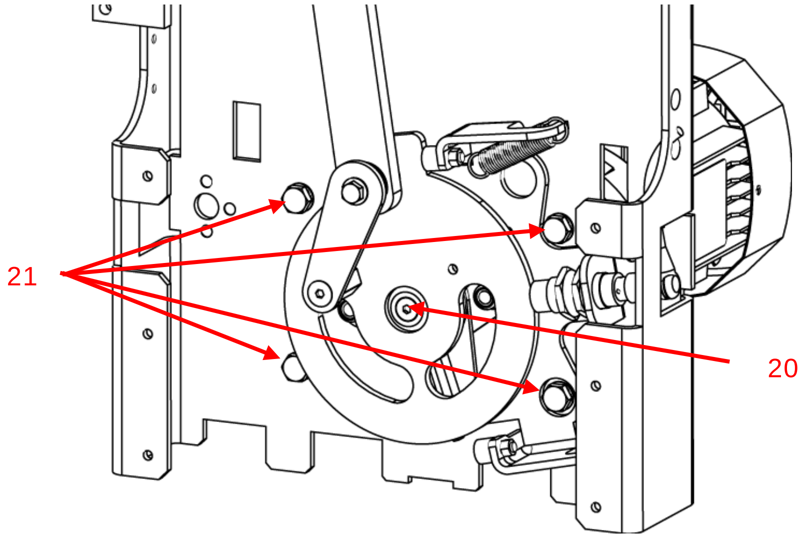
4.20. Replacing the inductive sensor

1. Open the corresponding panel (ch.4.2.).
2. Unscrew the screw (17) and take the sensor out of its support.
3. Unscrew the connector (19) and replace the sensor. Screw the connector back in (19).
4. Place the new sensor on its support and tighten the screw (17). Loosen the screw (18) to move the sensor closer to or farther away from the crank shaft support (see the activation procedure).
5. Activate the new sensor (“LS INIT." menu).

4.21. Removing the gear motor

1. Remove the left/right panel (ch.4.2.).
2. Remove the central screw (20).
3. Remove the 4 screws (21) fastening the support (B) to the frame.
4. Remove the motor.
5. Unscrew the 4 screws (22) to separate the motor from support (B).





4.22. Prolonged stop/Destruction

If the equipment is not going to be used for a long period, it is advised that it be:

- Kept under the same conditions as it was before installation (ch.3.2.).
- Left connected to the mains supply. The motor continually receives power, resulting in a certain temperature in the housing being sustained. This reduces condensation problems and prevents the oil of the speed-reduction gear from freezing - that would prevent the gate from reproducing its performance during the first operations executed after a long idle period.
- Broken in anew before being put in service by executing 3,000 obstacle opening and closing operations ("OPTION" menu ▶ "Maintenance" ▶ "No Secure VSC", then "OPTION" ▶ "Gate Config" ▶ "Maintenance").

When the equipment is withdrawn from service, scrap the various components of the machine through the appropriate channel (metal parts, electronic components, etc.) according to the legislation in force in the country concerned.

5. USE

5.1. Description of the series and definitions

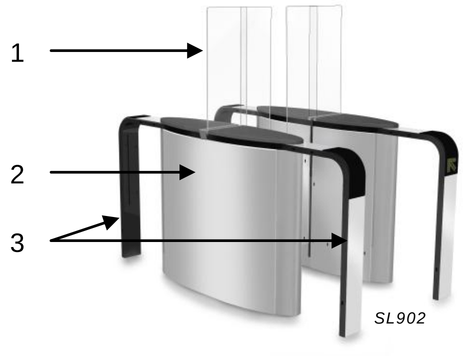
The *SmartLane*® gates control the access of pedestrians with or without luggage, in both directions, guaranteeing high levels of security and safety.

By definition:

- **Direction A**: passage direction for which the control board is in the right-hand gate.
- **Direction B**: passage direction for which the control board is in the left-hand gate.
- **Security**: ability of the equipment to prevent infringements.
- **Safety**: protection of the users while using the gate.

The **gate** is composed of:

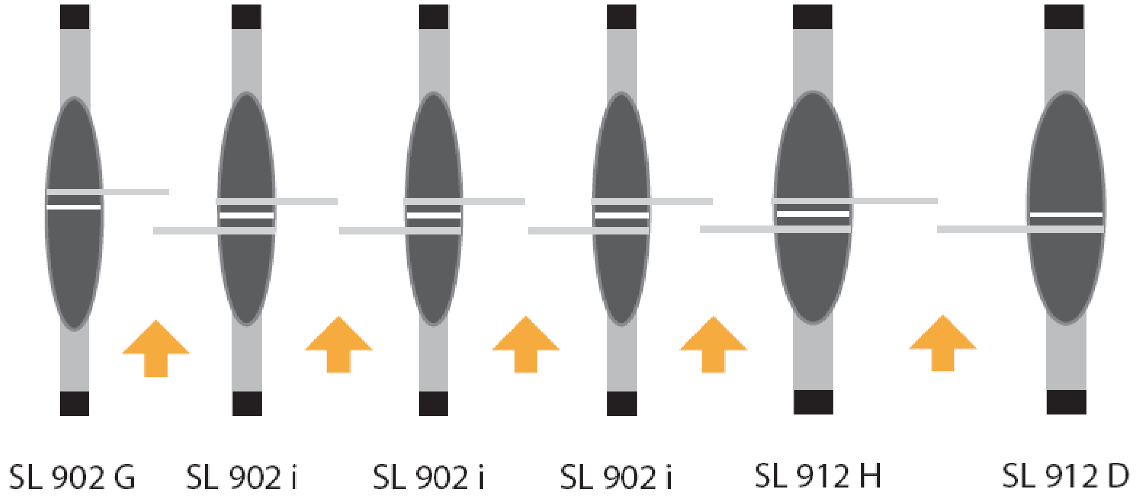
2. A retractable pane constituting **the obstacle** to passage.
3. A **housing** that houses the obstacle's movement mechanism, the detection cells ensuring security and safety, as well as the control board.
4. Potentially, **extensions** that allow for an increase in the number of detection cells in order to ensure antifraud monitoring and to integrate a badge reader or another validator.



The gates are available in two widths of passage (aisles), according to the width of the obstacle, as shown in the table below:

	Without extension (SL 9x0) *Deterrent control in both directions of passage*	**1 extension (SL 9x1)** *Deterrent control in one direction of passage, anti-fraud in the other*	**2 extension (SL 9x2)** *Anti-fraud control in both directions of passage*
Narrow obstacle, width of 600 mm (SL 90x) *Passage for users with normal mobility*	 **SL 900**	 **SL901**	 **SL902**
Wide obstacle, width of 900 mm (SL 91x) *Passage for users with reduced mobility*	 **SL 910**	 **SL911**	 **SL912**

Naturally, the gates may be installed singly or in a line. In the second case, if the conventional direction is direction A, a **left gate** (G), a **right gate** (D) and **intermediate gates** (i) will be defined. The latter may be **hybrids** (H), namely, make the connection between 2 aisles of different widths.



5.2. Fixed and moving obstacles

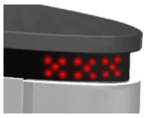
The pane constituting the passage obstacle is fixed to the plinth (7, 5.5.), part of the mechanical assembly.

If the moving obstacles are higher than the housings, a fixed obstacle (1, ch.2.1.) is envisioned on the housing, so that the entire passageway is closed off at the same height. Additionally, in this case a shutter (11, ch.4.18.) blocks off the cutting made in the upper part of the housing for the passage of the moving obstacles higher than this one. This shutter prevents fingers from being trapped and unwanted objects from entering the insides of gate.

5.3. Pictograms

The gate can be equipped with two types of pictograms:

The **orientation pictogram** indicates the state of the aisle to the user (in service or out of service). It is located either on the housing or on an extension, if there is one:

	aisle in service	aisle out of service
on the housing		
on the extension		

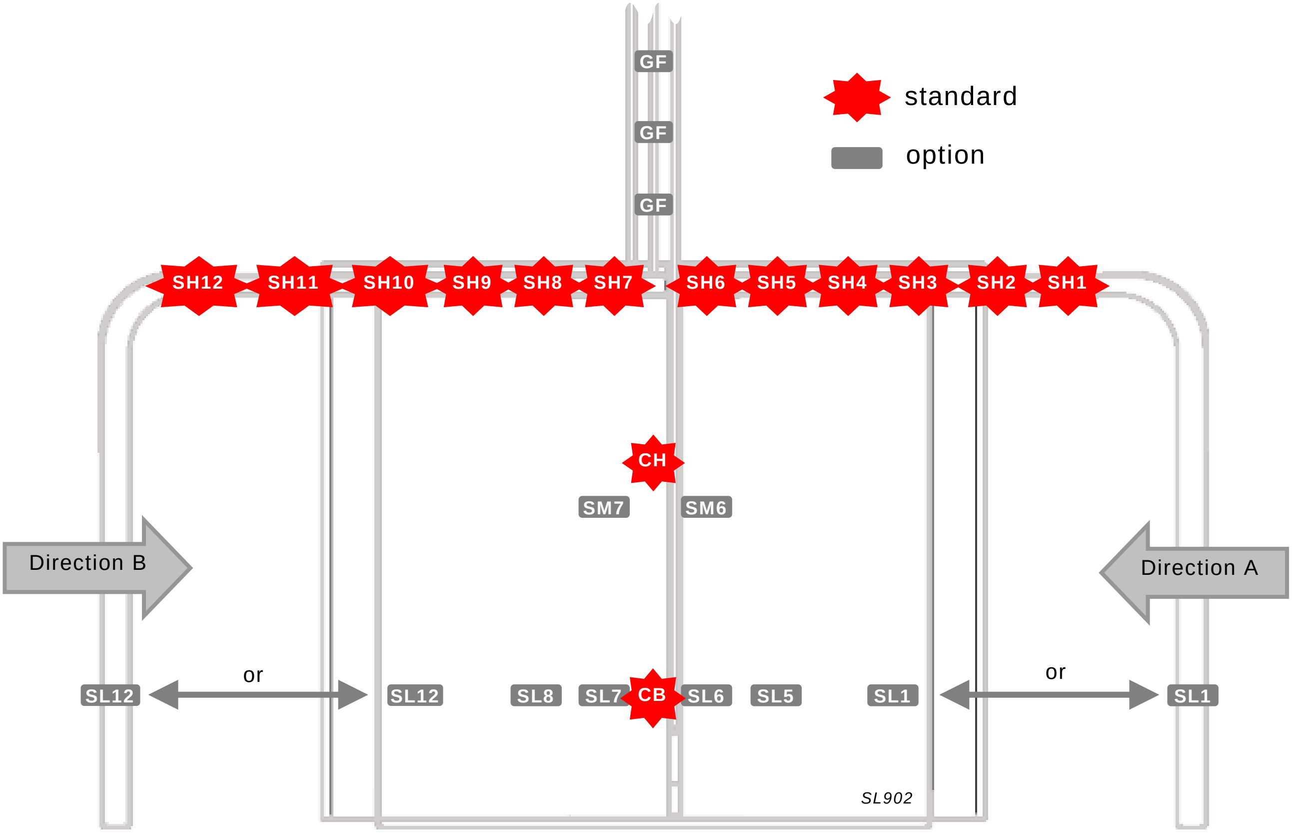
The **operating pictogram** (optional) indicates to the user what procedure to follow. It is located on the cover plate (reference 6, p. 5) and consists of an arrow illuminated in 3 different colours:

- White: gate waiting for a request for passage authorisation.
- Green: passage authorised, waiting completion.
- Red: passage prohibited.

The two types of pictograms are complementary and may be used together.

5.4. Detection cells



Cells SH, CH and CB are supplied as standard (SH1-2-11-12 are only for models with extensions). The others are available as options.

Except for cells GF, all the cells are of the reflex type; the signal emitted by the transmitter/receiver cell (in the right gate, in direction A) is returned by the reflector fixed to the left gate.
Cells GF are of the Transmitter/Receiver type. The signal emitted by the transmitter cell (left gate, in direction A) is received by the receiver cell on the right gate.
The cell beams are laid out in horizontal groups.

- **Cells SH:** manage passage and control infringements (ch.5.7.).
  Using the Modbus configurator (optional), SH6 and 7 may be set as safety cells and prohibit the opening and closing of the obstacles when something is present in this area (no distinction between an authorised and an unauthorised user).
  SH4 to 9 count the number of passages in each direction.
- **Cells CH + CB:** guarantee user safety by preventing the obstacles from opening and closing when something is present in this area (no distinction between an authorised and an unauthorised user).
- **Cells SM** (enhanced protection): lower the detection area to increase safety, by preventing the obstacles from opening and closing when something is present in this area (no distinction between an authorised and an unauthorised user).
- **Cells SL5 to 8** (trolley protection in direction A/direction B): prevent the obstacles from opening and closing on luggage being pulled by a user, when one of the SL5-6 (direction A)/SL7-8 (direction B) cells is obscured <u>**and**</u> no presence is detected by SH1 to 5 (direction A)/SH12 to 7 (direction B).
  Using the Modbus configurator (optional), SH5 and 6 may be set as safety cells and

prohibit the opening and closing of the obstacles when something is present in this area (no distinction between an authorised and an unauthorised user).

- **Cells SL1 + 12** (free exit in direction A/direction B): open the obstacles in the direction of free-flow passage (for example, to detect people in wheelchairs before their feet hit the obstacles).
  On gates without extensions (SL9x0), these cells are mounted on the housing.
- **Cells GF:** are installed on fixed obstacles belonging to equipment with high obstacles, to better protect users' heads, as well as bags being carried on their backs.

5.5. Mechanical assembly

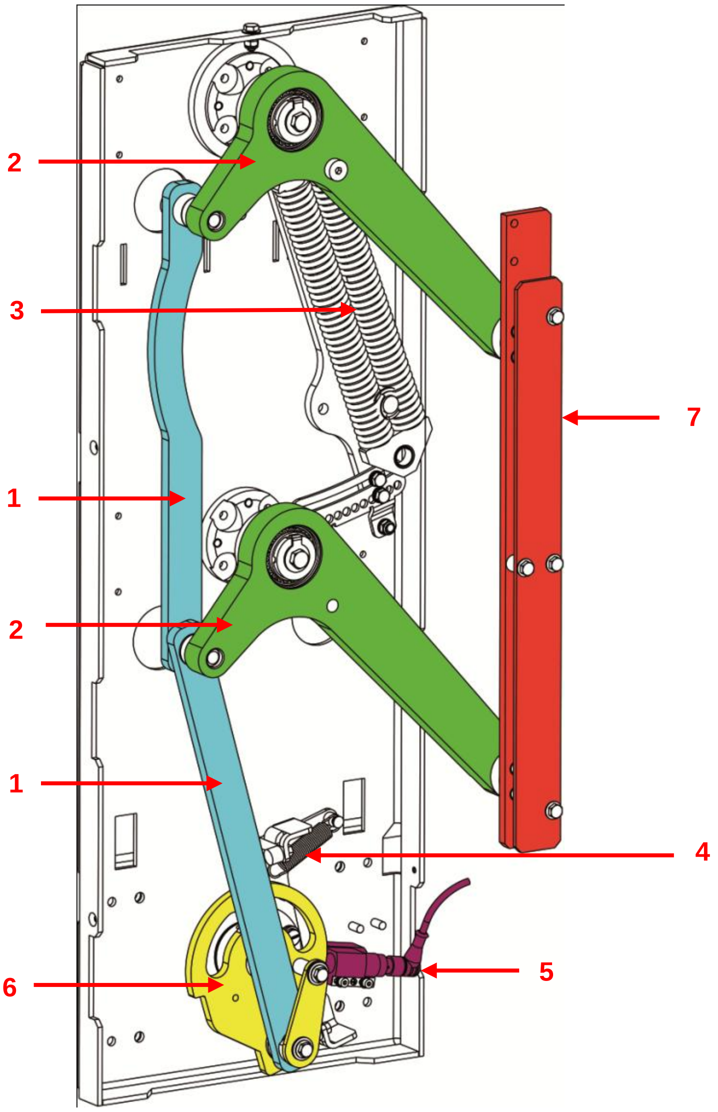
Each obstacle is actuated by its gear motor. Thus, the intermediary gates have two gear motors controlled by two different control boards (one per aisle, see ch.5.8.).

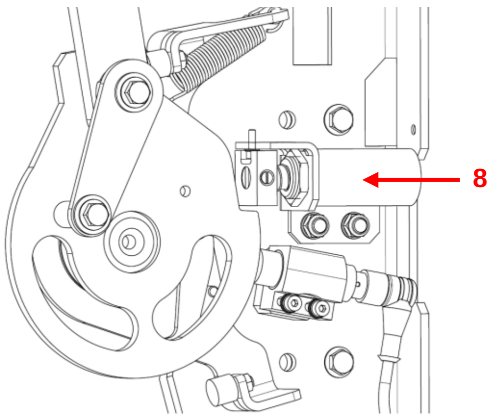
The movement of the motor is transmitted to the obstacle fixed to the **plinth (7)**, by means of the assembly of the **crankshaft (6)**, **rods (1)** and **cranks (2)**.
This assembly also ensures the mechanical locking of the obstacle in the closed position through the alignment of the crankshaft with the lower rod: it is then impossible to open the obstacle manually, except by pushing the lower rod inside the housing (1).

The angular position of the unit (and therefore of the obstacle) is transmitted to the control board by an **inductive sensor (5)** that measures the distance separating it from the crankshaft (6) (which has a spiral shape).

A preloaded **balancing spring (3)** helps the motor open and close the obstacle.
This spring also ensures that the obstacle opens or closes in the event of a power failure, once the pressure has been applied by **release spring (4)** (“anti-panic” system).

In option, an **electro-magnet (8)** locks the obstacle in open position in case of power failure.





5.6. Operating principle

The control board managing the gate receives a request for passage (caused by one of the first cells being obscured, a push button, a validator, a remote control, etc.) and opens the obstacles if the conditions for passage authorisation are met (see “infringement”, ch.5.7.).

As soon as the passage is authorised, the operating pictogram changes to green, the obstacles open and a timer is set off, corresponding to the time for which passage is authorised. At the end of which

- Either passage has not been started. The authorisation is then cancelled and the gate returns to standby status (obstacles closed or open, depending on the configuration of the "Gate Config" and "Obtacle Cfg" parameters in the "OPTION" menu).
- Or passage is underway and the program then monitors that there is no infringement during passage (ch.5.7.) and that the user leaves the aisle.
  Before closing the obstacles, the program makes sure that no one is in front of the obstacles.

The obstacles are automatically and immediately reopened, if there is a loss of mains supply or an evacuation order (signal coming from an external switch, if present, see wiring diagram).

When a technical defect is noticed, the equipment does not ensure the passage management anymore (among others, the counters are not incremented).

It describes the operation of the automatic control mode. Other modes are available (see the “OPTION” menu, ch.5.8.8.) and are independently available in each direction of passage.

5.7. Infringements

Fraud is abnormal (unauthorised) movement in an aisle.
It is only generated in automatic mode ("OPTION" menu ► "Gate Config") and is divided into two categories:

- **Intrusion**: infringement without crossing of the obstacle.
- **Fraud**: infringement with crossing of the obstacle.

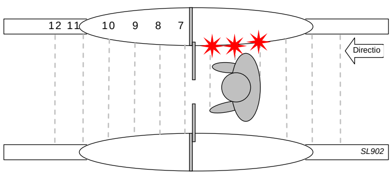
For each direction of passage, the following infringements are defined in detail below.
When an infringement is detected:

- The obstacle closes, in so far as there is no one in front of the safety cells (xx6 and xx7),
- The buzzer sounds as long as it is being activated (continuously for an intrusion and intermittently for a fraud).
- The operating pictograms change to red.
- The information is recoverable from the Master control board terminal blocks (1, ch.2.2.): See ch.8.3. .
- After the cause of the infringement has been removed, the latter is maintained for approximately 1 s (parameter may be set with the Modbus configurator), so that quick infringement is also pointed out.
  The gate then returns to the state it was in before the infringement (in particular the saved requests for passage remain).

Note: The ranges of cells mentioned for the kinds of infringement below are those defined for a standard gate. However, the parameters may be adjusted differently using the Modbus configurator (optional).
In the examples below, the kinds of infringement are defined in terms of passage direction A, yet they are also valid for direction B.

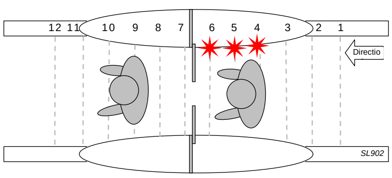
5.7.1. "Standby" infringement

When the gate is on standby, infringement is detected as soon as there is an obstruction of cells SH4, SH5, or SH6 (adjustable).
The “pre-alarm” timer (ch.5.8.5.) is set off to give the user time to request authorisation for passage. At the end of this time, the buzzer sounds.



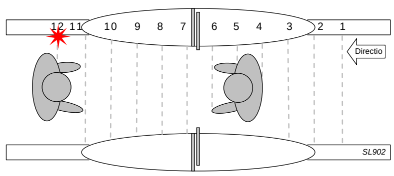
5.7.2. "Tailgate after authorised passage" infringement

After an authorised person passes through the obstacles, detection by cells SH4, SH5 or SH6 (adjustable) of another person following in the same direction and without authorisation leads to infringement.



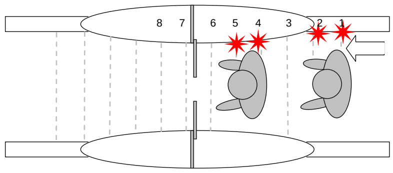
5.7.3. "Wrong direction" infringement

Infringement is declared when a person is detected in one direction when a passage in the other direction is in progress, except in the special case of operating in a controlled mode in one direction and free mode in the other, in which, by default, a passage in the free direction does not generate infringement when a passage in the controlled direction is in progress.



5.7.4. "Slipping ahead of an authorised passage" infringement

This kind of infringement is declared when, among cells SH1 to SH6, two groups of two cells are activated and separated by at least one free cell.
Considering the number of cells involved, only gate with an extension can execute this detection.

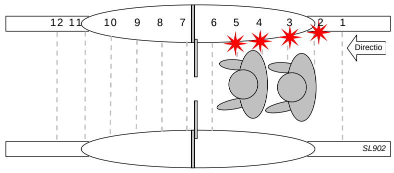


Note: Users carrying luggage must consequently hold it against them, in order not to obscure two different groups of cells at the same time and avoid being declared fraudulent.

5.7.5. "Joining before an authorised passage" infringement

This kind of infringement is declared when four consecutive cells among SH1 to SH6 are activated.

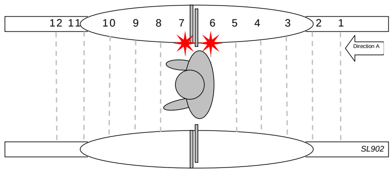
Note: This kind of infringement could be declared when users are holding large luggage against themselves.



5.7.6. "Safety area" infringement

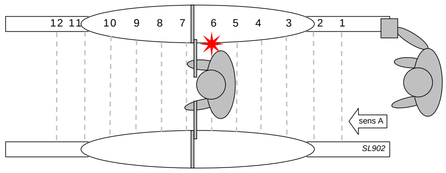
Detection in the opening safety area (adjustable via Modbus register 1002) prevents the obstacles from opening if they are closed.

Detection in the closing safety area (adjustable via Modbus register 1003) prevents the obstacles from closing if they are open.



5.7.7. Infraction "Stolen Ticket"

Infringement declared when a presence is detected in front of cell SH6 (adjustable) when a passage authorisation is requested.



5.7.8. Infraction "Closing obstruction"

Infringement declared when the obstacle does not reach its closing limit switch (LSC) after 5 attempts (adjustable via Modbus register 1005), and this during 2 successive closing sequences (adjustable via Modbus register 1007).

5.7.9. Infraction "Opening obstruction"

Infringement declared when the obstacle does not reach its opening limit switch (LSO) during 2 successive opening sequences (adjustable via Modbus register 1008).

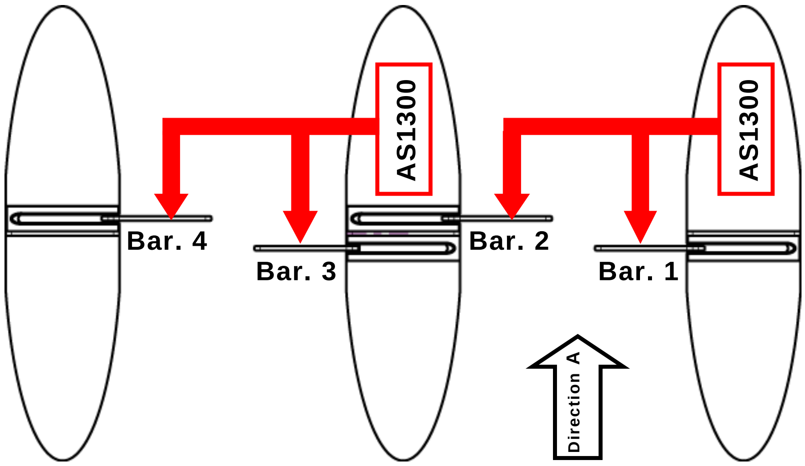
5.8. AS1300 CONTROL BOARD

The control board is the interface between the user and the gate. It manages all of the latter's actions, including any potential options.

The role of the control board is to:

- Detect all users who try to cross the aisle
- Make a distinction between authorised users and the others
- Let authorised users pass through
- Follow the progress of all users throughout the entire the aisle
- Recognise/record or cancel the passage of authorised users
- Prevent unauthorised users from passing through
- Manage the opening and the closing of the obstacles
- Manage indications and the alarm
- Manage external communication.

To synchronise the movements of the two gates that constitute an aisle, a Master gate (MST, from MaSTer) and a slave gate (SLV, from SLaVe) are defined.
The control boards for the master and slave gates are both located in the Master gate.
Viewed in direction A, the Master gate is that on the right-hand side, the Slave is on the left.
Therefore, an intermediate gate is the Master for the aisle located on its left, and a Slave for the aisle on its right.



5.8.1. Modbus configurator

The gate was configured at the factory. The control board display allows for navigation of the parameters useful in the daily operation of the equipment.

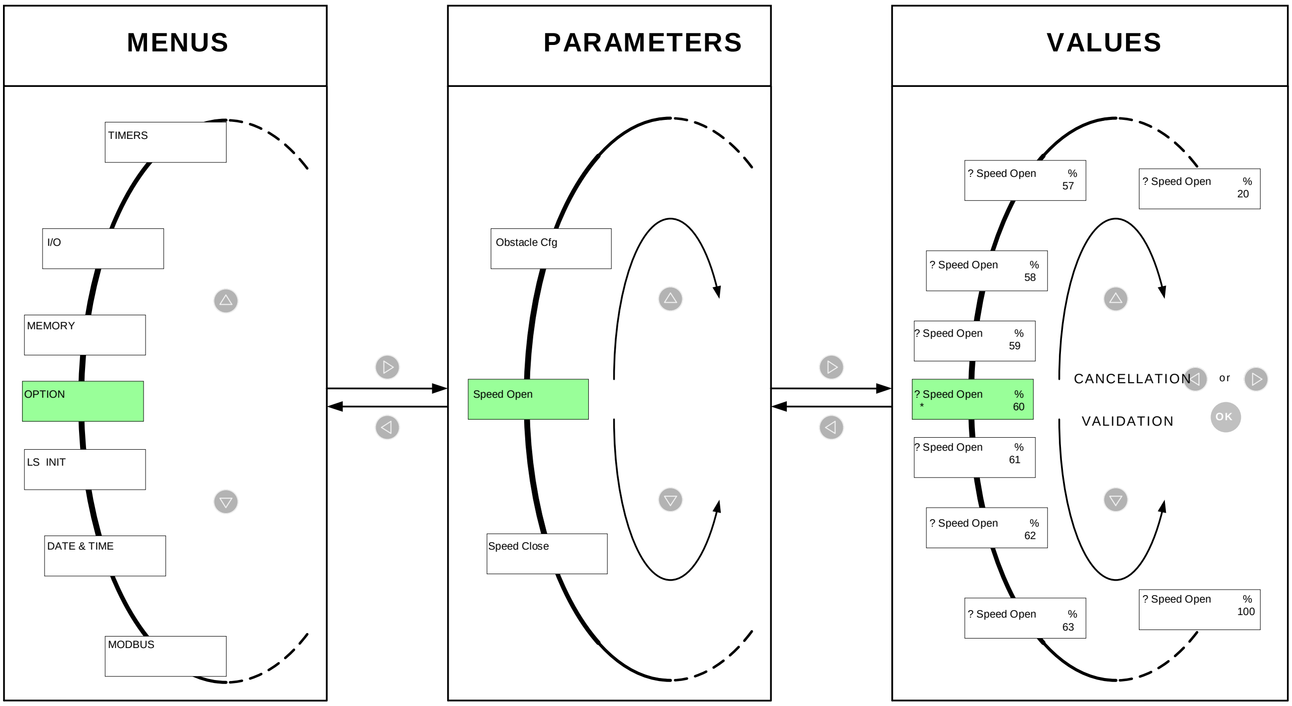
Nevertheless, the optional Modbus configurator enables you to completely configure the gate: download software, define the assignment of each cell as detection or safety, access all the time delays, etc.

► **see separate manual.**

5.8.2. Structure of the menus

The navigation of the display menus is based on an architecture using drop-down menus with three levels: MENUS ↔ PARAMETERS ↔ VALUES.
Use the ◄► keys to move from one level to another and use the ▲▼ keys to navigate within the levels themselves.

NB: All of the parameters are also accessible via the Modbus, except for "Pass A Config" and "Pass B Config" when a remote control is present.



Menus are displayed in capital letters on the top line.

Only the first letter of each word in the parameters is a capital; they are followed by the parameter unit if there is one.

A question mark (?) preceding the parameter indicates that it is ready to be modified.

The actual value of the parameter appears on the second line.

A star (*) below a parameter indicates that it is the factory setting (value set in the factory). Nevertheless, as each piece of equipment has been specifically adjusted in our workshops, the values actually present on the control board may differ slightly.

To validate a modification, press the OK key.

⚠ **Save the modifications to avoid their being lost in the event of a power outage *("MEMORY" ► "Save" ► "MEM1" or "MEM2").***

5.8.3. PRDSTD-90x91x menu

Idle screen.

After the other menus are inactive for a few seconds, the system returns to this screen.

Parameter	Values	DESCRIPTION
		Left key (◄): Change the menu display language with each touch. EN = English FR = French ES = Spanish
Master	00-00-01-03-00	Indicates the number of the software version being used by the Master control board.
Slave	00-00-01-04-00	Indicates the number of the software version being used by the Slave control board.

5.8.4. OPERATION menu

Parameter	Values	DESCRIPTION
Status		In English, display of the last 512 events (operations executed or errors that have arisen). The event code and the time it occurred (year-month-day and hours-minutes-seconds) are displayed alternately. The last event appears first. View previous events by using the ► key and then ▲. **Note**: If no error message is displayed when the machine fails, refer to Chapter 4.4.
	No Diag	No diagnostic log.
	Power Up	Turning the power to the equipment on.
	Power Down	Turning the power to the equipment off. A power line disturbance longer than 140 ms turns the equipment off. It is then turned back on again automatically.
	Short Circuit	Short circuit of the Master control board outputs (terminal blocks 1, ch.2.2.). The short circuit is only declared and the equipment put Out of Service after 3 unsuccessful reactivation tries within the 2.5 seconds following a voltage drop in the 24V power supply (this is to avoid putting it out of service at inopportune moments, for example, during a network change over to an emergency generator). If one of the outputs short circuits, all of them become inactive and the circuit breaker (12, ch.2.2.) must be reset for the outputs to be reactivated.
	Save Mem1	Save the current values of the parameters in memory MEM1.
	Save Mem2	Save the current values of the parameters in memory MEM2.
	Load Default	Load the default parameters.
	Load Mem1	Load the parameters saved in memory MEM1.
	Load Mem2	Load the parameters saved in memory MEM2.
	Time Adjust	Update the date and time.
	Access Level Chg	Change the access level (User - Technician): see "OPTION" ► "Code".
	Download Chg Lv1	Downloading a version of the control board program that differs from the one previously installed. As the difference is of level 1 (minor index modification or revision), the parameters continue operate with their value saved in MEM1.

Parameter	Values	DESCRIPTION
	Download Chg Lv2	Downloading a version of the control board program that differs from the one previously installed. As the difference is of level 2 (modification of the version or the evolution), all of the parameters are returned to their default values. **WARNING**: it is then necessary to set the parameters to the actual configuration of the equipment and to save them in MEM1. **Note**: it would be wise to keep the parameters values (through configurator) before changing the program version.
	Download Chg Lv3	Downloading a version of the control board program that differs from the one previously installed. As the difference is of level 3 (modification of the type), all of the parameters are returned to their default values and the counters are reset to 0. **WARNING**: it is then necessary to set the parameters to the actual configuration of the equipment and to save them in MEM1. **Note**: it would be wise to keep the parameters values (through configurator) before changing the program version.
	Reset Counters	Counters may be reset to zero via the "OPTION" menu ► "Maintenance" ► "Reset Counters".
	Automatic	Setting of the apparatus' operation to Automatic mode ("OPTION" ► "Gate Config").
	Locked Close	Setting of the apparatus' operation to Blocked Close mode ("OPTION" ► "Gate Config").
	Locked Open	Setting of the apparatus' operation to Blocked Open mode ("OPTION" ► "Gate Config").
	Maintenance	Setting of the apparatus' operation to Maintenance mode ("OPTION" ► "Gate Config").
	Emergency	Apparatus goes into Evacuation mode (opening of the obstacles). The order comes from an external signal (terminal block (4, ch.2.2.): see the wiring diagram.
	VSC CAN	Problem in the communication between the Master control board and the variable speed controller, leading to the equipment being put out of service. Check the cable connecting them and the controller power supply.
	VSC Running Def	Problem with the operation of the variable speed controller, leading to the equipment being put out of service. Check the wiring of the position sensors (5, ch.5.5.). When limit switch sensors are being used instead of analogue sensors, the problem also appears if the opening and closing sensors are activated simultaneously.

Parameter	Values	DESCRIPTION
	Closing Def	Problem closing, leading to the equipment being put out of service. The obstacles did not reach their closing limit switch (i.e., did not close completely) after several consecutive tries. Find out why they are blocked, the reason could be mechanical or manual (an intruder outside the aisle is holding the obstacle).
	Opening Def	Problem opening, leading to the equipment being put out of service. The obstacles did not reach their opening limit switch (i.e., did not open completely) after several consecutive tries. Find out why they are blocked, the reason could be mechanical or manual.
	Cell Def	Problem with a cell, leading to the equipment being put out of service. This problem appears in the following cases: - When a cell is obscured for too long. - When the status of a cell does not change during a passage. In that case, check the cell connections.
	Mdb Watchdog	Problem with the Modbus Watchdog, leading to the equipment being put out of service. No communication between the Master control board and the client's external PC.
	Init Def	Problem activating the position sensors, leading to the equipment being put out of service. The position sensors (5, p. 6) are not activated. This problem leads to the apparatus being put out of service and is removed once they have been activated (see the "LS INIT." menu). **<u>Note</u>**: The absence of this problem in no way guarantees the validity of the activation. In other words, it does not guarantee that the values saved in the AS1300 at the time of activation are still valid.
	Slv CAN	Problem with the Slave CAN, leading to the equipment being put out of service. Communication between the Master and Slave has not been established. Check the connection between the two control boards (8, ch.2.2.). The problem puts the apparatus out of service and is removed once communication has been re-established.

Parameter	Values	DESCRIPTION
	Slv Short Circ.	Short circuit of the Slave control board outputs (terminal blocks 2, ch.2.2.). The short circuit is only declared and the equipment put Out of Service after 3 unsuccessful reactivation tries within the 2.5 seconds following a voltage drop in the 24V power supply (this is to avoid putting it out of service at inopportune moments, for example, during a network change over to an emergency generator). If one of the outputs short circuits, all of them become inactive and the circuit breaker (12, ch.2.2.) must be reset for the outputs to be reactivated.
	Rst VSC CAN	"VSC CAN" problem removed.
	Rst VSC Running	"VSC Running" problem removed.
	Rst Closing Def	"Closing Def." problem removed.
	Rst Opening Def	"Opening Def." problem removed.
	Rst Cell Def	"Cell Def." problem removed.
	Rst Mdb Watchdog	"Mdb Watchdog" problem removed.
	Rst Init Def	"Init Def." problem removed.
	Rst Slv CAN	"Slv CAN" problem removed.
	Rst Slv Short-c	"Slv Short Circ." problem removed.
	Rst SensorInit	"SensorInit" problem removed.
	Solut. Type Chg	Motorisation: Changing the configuration of the position sensor (5, ch.5.5.): see the optional Modbus configurator.
	Sensor Type Chg	Change in the position sensor type (5, ch.5.5.): limit switches or analogue sensors.
	HS Restore	Equipment is put back in service after it had been out of service.
	LS Fault	Limit switch error: the position sensor (5, ch.5.5.) is defective, poorly connected or did not reach its opening and/or closing limit switch. In the last case, activating the sensor ("LS INIT." menu) solves the problem.
	Reset LS Fault	"LS Fault" problem removed.
	VSC Low Supply	The supply voltage to the variable speed controller is too low.
	VSC: CAN defect	Communication defect with the Variable Speed Controller.
	VSC: opening timeout	The obstacle did not reach its opening limit switch within the delay.
	VSC: closing timeout	The obstacle did not reach its closing limit switch within the delay.
	Specific Err	Error concerning non-standard equipment. Please refer to the optional Modbus configurator.
	Rst Specific Err	"Specific Err" problem removed.

Parameter	Values	DESCRIPTION
	Init VSC	Variable speed controller (automatic upon power up) activated properly.
	Init Slv	Slave control board (automatic upon power up) activated properly.
	GATE READY	Apparatus is ready.
Temperature	- 50 to +100°C	Display of the temperature measured by a probe integrated into the control board.
Pass A State		Display of the actual processing mode in direction A during automatic operation. Use the "OPTION" menu to select the mode. Remember: in automatic mode, the sensors are active and infringement is recognised and processed.
	Controlled	Passage is only granted upon receipt of passage authorisation.
	Free (factory setting)	The passage opens automatically when something is present in the aisle. Nevertheless, infringement is detected and reported.
	Locked	Passage is forbidden (the obstacles are closed), however infringement is detected and reported.
Pass B State		Display of the actual processing mode in direction B during automatic operation. Use the "OPTION" menu to select the mode. Remember: in automatic mode, the sensors are active and infringement is recognised and processed.
	Controlled	Passage is only granted upon receipt of passage authorisation.
	Free (factory setting)	The passage opens automatically when something is present in the aisle. Nevertheless, infringement is detected and reported.
	Locked	Passage is forbidden and infringement is detected.
Pass A Cnt	0 to 999 999 999	Number of passes executed in direction A (= entries). The counter increases incrementally only in automatic mode and only when the three cells located in front of the obstacle are successively obscured and then released. The counter may be reset to zero via the "OPTION" menu ► "Maintenance" ► "Reset Counters".
Pass B Cnt	0 to 999 999 999	Number of passes executed in direction B (= exists). The counter increases incrementally only in automatic mode and only when the three cells located in front of the obstacle are successively obscured and then released. The counter may be reset to zero via the "OPTION" menu ► "Maintenance" ► "Reset Counters".
Intrusion Cnt	0 to 999 999 999	Number of intrusions (ch.5.7.) detected (may be reset to zero via the "OPTION" menu ► "Maintenance" ► "Reset Counters").

Parameter	Values	DESCRIPTION
Fraud Cnt	0 to 999 999 999	Number of frauds (ch.5.7.) detected (may be reset to zero via the "OPTION" menu ► "Maintenance" ► "Reset Counters"). **Note**: An intrusion followed by a fraud will first be counted as an intrusion and then as a fraud. Therefore, both counters will increase by one.
Tech Def Cnt	0 to 999 999 999	The number of technical defects (described in the “Log” parameter or register 54 of the Modbus protocol) since the equipment was first put in service (cannot be reset to zero).
Opening Cnt	0 to 2^{32}	The total number of times the obstacle has opened since the equipment was first put in service (cannot be reset to zero). The counter increases incrementally when the opening limit switch is reached.
Closing Cnt	0 to 2^{32}	The total number of times the obstacle has closed since the equipment was first put in service (cannot be reset to zero). The counter increases incrementally when the closing limit switch is reached.

5.8.5. TIMER menu

Parameter	Values	DESCRIPTION
Prealarm	0 to 9999 tenths of a second (100 factory setting)	In controlled mode, time delay before the sound alarm is activated when something is present in the forbidden infringement area “when idle”.
Passage	0 to 9999 tenths of a second (100 factory setting)	In controlled mode, the time allocated for passage (=crossing of the **counting area:** successive obscuring and releasing of the three cells located in front of the obstacle) before the given passage authorisation is cancelled (and the obstacles are closed).
Exit	0 to 9999 tenths of a second (100 factory setting)	Time granted to leave the aisle, before the obstacles are closed. **In controlled mode**, this time delay corresponds to the time granted for the cells to be released, **after** the **counting area** has been crossed (i.e., after the three cells located in front of the obstacle have successively been obscured and released). **In free mode**, this time delay corresponds to the time granted for the release of the cells located in front of the obstacles.

5.8.6. I/O menu

This menu provides the status or value of the control board's inputs/outputs.
The assignment of the inputs/outputs is given on ch.8.3. .

Parameter	Values	DESCRIPTION
Input 1 MST	0: Inactive 1: Active	Series of eight digits (0/1) reflecting the status of the digital inputs of the Master board following this sequence: DI8-DI7-DI6-DI5-DI4-DI3-DI2-DI1.
Input 2 MST	0: Inactive 1: Active	Series of eight digits (0/1) reflecting the status of the digital inputs of the Master board following this sequence: DI16-DI15-DI14-DI13-DI12-DI11-DI10-DI9.
Input 3 MST	0: Inactive 1: Active	Series of eight digits (0/1) reflecting the status of the digital inputs of the Master board following this sequence: 0-0-0-0-0-0-DI18-DI17.
Input 1 SLV	0: Inactive 1: Active	Series of eight digits (0/1) reflecting the status of the digital inputs of the Slave board following this sequence: DI8-DI7-DI6-DI5-DI4-DI3-DI2-DI1.
Input 2 SLV	0: Inactive 1: Active	Series of eight digits (0/1) reflecting the status of the digital inputs of the Slave board following this sequence: DI16-DI15-DI14-DI13-DI12-DI11-DI10-DI9.
Input 3 SLV	0: Inactive 1: Active	Series of eight digits (0/1) reflecting the status of the digital inputs of the Slave board following this sequence: 0-0-0-0-0-0-DI18-DI17.
Output 1 MST	0: Inactive 1: Active	Series of eight digits (0/1) reflecting the status of the digital outputs of the Master board following the sequence: DO8-DO7-DO6-DO5-DO4-DO3-DO2-DO1.
Output 2 MST	0: Inactive 1: Active	Series of eight digits (0/1) reflecting the status of the digital outputs of the Master board following the sequence: 0-DO15-DO14-DO13-DO12-DO11-DO10-DO9.
Output 1 SLV	0: Inactive 1: Active	Series of eight digits (0/1) reflecting the status of the digital outputs of the Slave board following this sequence: DO8-DO7-DO6-DO5-DO4-DO3-DO2-DO1.
Output 2 SLV	0: Inactive 1: Active	Series of eight digits (0/1) reflecting the status of the digital outputs of the Slave board following this sequence: 0-DO15-DO14-DO13-DO12-DO11-DO10-DO9.
AnalogIn 1 MST	0 to 1023 (unit: 0.01 V DC)	Value of the AI1 analogue input of the Master board.
AnalogIn 2 MST	0 to 1023 (unit: 0.01 V DC)	Value of the AI2 analogue input of the Master board.
AnalogIn 1 SLV	0 to 1023 (unit: 0.01 V DC)	Value of the AI1 analogue input of the Slave board.
AnalogIn 2 SLV	0 to 1023 (unit: 0.01 V DC)	Value of the AI2 analogue input of the Slave board.
AnalogOut 1 MST	0 to 1023 (unit: 0.01 V DC)	Value of the AO1 analogue output of the Master board.
AnalogOut 2 MST	0 to 1023 (unit: 0.01 V DC)	Value of the AO2 analogue output of the Master board.
AnalogOut 1 SLV	0 to 1023 (unit: 0.01 V DC)	Value of the AO1 analogue output of the Slave board.
AnalogOut 2 SLV	0 to 1023 (unit: 0.01 V DC)	Value of the AO2 analogue output of the Slave board.

5.8.7. MEMORY menu

All of the parameter values included in the menus may be saved in the two different memory areas (MEM1 and MEM2). This allows values to be retained before and after a modification, for example.

During power up(*), the program automatically loads the set of parameters from MEM1, or the default values if MEM1 is empty.
You can force the parameters found in MEM2 to be used by activating the "Load MEM2" function.

(*)When the piece of equipment is turned on after a new version of the program has been downloaded, and according to the level of difference between the new and the old version, the program may load the default values: see the "*Download Chg Lv…*" messages in the "*Error Status*" parameter of the "*OPERATION*" menu.

Saving modifications to parameter values is essential ("MEMORY" ► "Save" ► "MEM1" or "MEM2").
If they are not saved, they will be lost during a power outage.

Parameter	Values	DESCRIPTION
Load	None *(factory setting)*	Idle state.
	Mem 1	Recall the parameters saved in the first memory area.
	Mem 2	Recall the parameters saved in the second memory area.
Save	None *(factory setting)*	Idle state.
	Mem 1	Manually save the values in memory 1.
	Mem 2	Manually save the values in memory 2.

5.8.8. OPTION menu

Parameter	Values	DESCRIPTION
Code	-32768 to +32767	Entry of the code that provides access to the Technician level (one can be requested from an *Automatic Systems* representative). Only the menus and parameters accessible in the selected level are displayed. By default, turning on the control board is carried out at the user level. The codes of higher levels remain operational until the control board is turned off or the date changes (at midnight).
Language		Choice of menu language.
	English (factory setting)	English
	Français	French
	Español	Spanish
Remote Control		This function sets how to take into account the information transmittedd by an external remote control (not supplied by *Automatic Systems*). The commands issued by the remote control must be connected to the AS1300 Slave terminal block (ch.8.3.).
	Absent (factory setting)	The operating mode is defined via: ▪ AS1300 control board (see "Pass A Config" and "Pass B Config" parameters below). ▪ The remote control board, as long as it is activated. When the remote control board is deactivated, the program switches to the last values saved in AS1300 board. ▪ Modbus configurator, provided the remote control board is deactivated.
	Present	The operating mode is defined via: ▪ The remote control board. When the remote control board is deactivated, AS1300 board continues operating according to the remote board configuration. **Note**: remote board configuration is not saved in the AS1300 and does not modify the values of this late. ▪ **Warning**: the values entered via AS1300 or Modbus configurator are not taken into account.
Gate Config		Configure the gate's operating mode.

Parameter	Values	DESCRIPTION
	Automatic (factory setting)	This is the only operating mode that takes into account the processing mode (see the "Pass A Config" and "Pass B Config" parameters below) in which the presence sensors are active and infringement is recognised and processed. Passage authorisation, opening and closing of the obstacles are managed by the control board in accordance with: - The status of the sensors (detecting or not) - The selected operating mode (see the "Pass A Config" and "Pass B Config" parameters below).
	Blocked Close	All the obstacles are unconditionally closed, except if there is a cut in the power supply or an external evacuation order. As the presence sensors are not active, surveillance of the gate is not ensured. All of the pictograms are red, prohibiting passage in both directions.
	Blocked Open	All the obstacles are unconditionally open. There is free passage through the gate (as the presence sensors are not active, surveillance of the gate is not ensured). All of the pictograms are green.
	Maintenance	In this operating mode, various elements may be tested (defined in the following parameter: "Maintenance"). All the pictograms turn red.
Maintenance		Tests may be executed in the "Maintenance" operating mode (preceding parameter: "Gate Config" ► "Maintenance").
	None (factory setting)	No test selected.

Parameter	Values	DESCRIPTION
	Picto	Pictogram activation: *Orientation pictogram* The sequence runs cyclically with a 1-second period between each step, in the following manner: • Pictogram off • Arrow on • Cross on *Operating pictogram* The sequence runs cyclically with a 1-second period between each step, in the following manner: • Pictogram off • White arrow on • Green arrow on • Red arrow on When the test is deactivated, all the pictograms become red again.
	Buzzer	Activation of the buzzer.
	Sensor	The buzzer rings when a cell is obscured (only due to the transition from not obscured status to obscured status).
	Secure VSC	Succession of opening and closing of the obstacle, the safety area remains active (the obstacle does not close if something is detected in the safety area): • The obstacles close • Once the LSC is reached, the buzzer is activated for 100 ms • Wait (3 s) • The obstacles are opened • Once the LSO is reached, the buzzer is activated for 100 ms • Wait.
	No secure VSC	Unconditional opening and closing of the obstacles (there is no safety with regard to closing). Function used when the detection cells are not correctly adjusted for example.
	Reset Counters	The "Entry", "Exit", "Intrusion" and "Fraud" counters are reset to zero and the control board is restarted.
	Init software	Initialization of the application: resets counters ("Entry", "Exit", "Intrusion", "Fraud"), all grafcets and the state of detection cells.

Parameter	Values	DESCRIPTION
Pass A Config		Using this parameter you may configure the processing mode of the gate in direction A during operation in **automatic mode** if there is no active external remote control ("OPTION" ► "Remote Control" ► "Absent") - were it present, it would take precedent. Remember: in automatic mode ("Gate Config" parameter, above), the sensors are active and infringement is recognised and processed. Remember: The "Pass A State" parameter of the "OPERATION" menu displays the **actual** processing mode of the equipment and may differ from the mode configured here (if a remote control sends a different order, if there is an evacuation or technical failure, for example).
	Controlled	Passage is only granted upon receipt of passage authorisation.
	Free (factory setting)	The passage opens automatically when something is present in the aisle. Nevertheless, infringement is detected and reported.
	Locked	Passage is forbidden (operating pictogram becomes a red cross), however, infringement is detected and reported.
Pass B Config		Using this parameter you may configure the processing mode of the gate in direction B during operation in **automatic mode** if there is no active external remote control ("OPTION" ► "Remote Control" ► "Absent") - were it present, it would take precedent. Remember: in automatic mode, the sensors are active and infringement is recognised and processed. Remember: The "Pass B State" parameter of the "OPERATION" menu displays the **actual** processing mode of the equipment and may differ from the mode configured here (if a remote control sends a different order, if there is an evacuation or technical failure, for example).
	Controlled	Passage is only granted upon receipt of passage authorisation.
	Free (factory setting)	The passage opens automatically when something is present in the aisle. Nevertheless, infringement is detected and reported.
	Locked	Passage is forbidden and infringement is detected and indicated.
Obstacle Cfg		Configuration of obstacles in standby, in **automatic** operating mode.
	NC (factory setting)	The obstacle is Normally Closed and opens when passage is authorised.
	NO	The obstacle is Normally Open and closes when infringement is detected.

Parameter	Values	DESCRIPTION
	CAL	(Free access controller) The obstacles are continually open. Notably, this configuration is used for gates without obstacles.
Speed Open	20 to 100% (60 factory setting)	Choice of the obstacle's opening speed.
Speed Close	40 to 100% (70 factory setting)	Choice of the obstacle's closing speed, the 100% value correspondents to the upper limit that satisfies the impact standards. **Note**: Since the maximum speed is limited in order to respect the impact standard, decreasing this parameter too much may severely reduce the obstacle's closing speed and even prevent it from closing completely. The motor torque (proportional to the speed) must overcome the obstacle's weight and the call back spring.
Reader		Management of the saving of passages. The obstacle does not close as long as all the users that have received authorisation to pass have not passed, except if the no passage ("Passage") time delay has elapsed and the reader authorisations still have not been acted on. In that case, they will be cancelled and the obstacle will close. **Note**: If several authorisations are saved in each passage direction, all the users in one direction will be allowed to pass and then those going in the other direction will be allowed to pass.
	Activated	Saving of passages is taken into account.
	Desactivated (factory setting)	Saving of passages is not taken into account. The passage underway must be executed completely (= the counting area must be crossed: successive obscuring and releasing of the three cells located in front of the obstacle) before authorisation for another passage can be given.

5.8.9. LS INIT. menu

<table>
<tr><th>Parameter</th><th>Values</th><th colspan="2">DESCRIPTION</th></tr>
<tr><td>Lsc Sensor1 Lso</td><td></td><td colspan="2">Display of the current measurement of the "Sensor 1" analogue sensor (5, ch.5.5.) of the Master gate (represents the angular position of the obstacle) within its measurement range ("Lsc" and "Lso" are the values of the sensor when the obstacle is at its limits: completely closed and open, respectively).</td></tr>
<tr><td>Lsc Sensor2 Lso</td><td></td><td colspan="2">Display of the current measurement of the "Sensor 2" analogue sensor (5, ch.5.5.) of the Slave gate (represents the angular position of the obstacle) within its measurement range ("Lsc" and "Lso" are the values of the sensor when the obstacle is at its limits: completely closed and open, respectively).</td></tr>
<tr><td>Obstacle Init.</td><td></td><td colspan="2">! This parameter is only accessible in technician mode (enter the correct code in the "OPTION" menu ► "Code").

Activation of the analogue Master and Slave sensors (5, ch.5.5.).</td></tr>
<tr><td></td><td>Desactivated (factory setting)</td><td colspan="2">Idle state.</td></tr>
<tr><td rowspan="6"></td><td rowspan="6">Activated</td><td colspan="2">Launch the activation procedure for the analogue sensors (see below).</td></tr>
<tr><td>Obstacle Init.
Solution 1-2

Obstacle Init.
Solution 3-4</td><td>Parameter used for other configurations, not applicable to this case.

=> No matter what appears on the screen at this level, confirm it by pressing the OK key.</td></tr>
<tr><td>Obstacle Init.
Activate Motor</td><td>Request for confirmation of the motor start up. Confirm by pressing the "OK" key. The obstacle will then open and close in order to detect the position of the two stops (and thus of the limit switches).
The AS1300 does not have to be turned off during the procedure.
If the function is not activated within 5 seconds, there is an automatic return to “Desactivated”.</td></tr>
<tr><td>Obstacle Init.
Search LSO. . .</td><td>Appears when the obstacle is opening, signalling the search for the opening limit switch.</td></tr>
<tr><td>Obstacle Init.
Search LSC. . .</td><td>Appears while the obstacle is closing, signalling the search for the closing limit switch.</td></tr>
<tr><td></td><td>Display of the result of the procedure or an error message (see below):</td></tr>
</table>

		Obstacle Init. Obstacle Passed	Displayed when the activation of the limit switches has successfully been completed and disappears automatically after 3 seconds. **IMPORTANT**: Save the values in MEM1 or MEM2 (“MEMORY” menu).
		Obstacle Init. Bad Zone Sens Obstacle Init. Bad Zone Sens2	Appears when the sensor is working outside its measurement range (value = 0 or >1000). "Sens." = analogue sensor in the Master housing. "Sens2" = analogue sensor in the Slave housing. → Check whether the sensor is properly connected (ch.4.20.). →Loosen the screw (18, ch.4.19.) to bring the sensor closer to the crankshaft or move it farther away, so that all of the obstacle's movements (from the Opening Limit Switch to the Closing Limit Switch) remain within its measurement range. This message automatically disappears after 3 seconds.
		Obstacle Init. Min < Sens< Max Obstacle Init. Min< Sens2< Max	When the obstacles are closed, the sensor measurement must be included in a tolerance range determined by the program (Min and Max). These messages appear when this is not the case, so that the position of the sensor may be adjusted to fall within the tolerance (between the Min and Max). (use ▼ to display the values). "Sens." = analogue sensor in the Master housing. "Sens2" = analogue sensor in the Slave housing. → Turn of the power supply to the variable speed controller (circuit breaker 13, ch.2.2.), → Close the obstacle and lock it in this position using a shim (ch.4.16.). →Loosen the screw (18, ch.4.19.) to bring the sensor closer to the crankshaft or move it farther away, so that it is positioned within the measurement range (=between the Min and Max).
		Obstacle Init. Sens Inversed Obstacle Init. Sens2 Inversed	Inversion of the sensor's power and ground cables (check the wiring diagram). "Sens." = analogue sensor in the Master housing. "Sens2" = analogue sensor in the Slave housing. If the OK key has not been pressed to deactivate it within 5 seconds, activation is cancelled.
		Obstacle Init. OutOfService	The AS1300 is out of service, rendering activation impossible. Begin activation again after the problem has been resolved.

5.8.10. DATE & TIME menu

Parameter	Values	DESCRIPTION
Year	0 to 99	Setting the year
Month	1 to 12	Setting the month
Day	1 to 31	Setting the day
Hour	0 to 23	Setting the hour
Minute	0 to 59	Setting the minute
Second	0 to 59	Setting the second

5.8.11. MODBUS menu

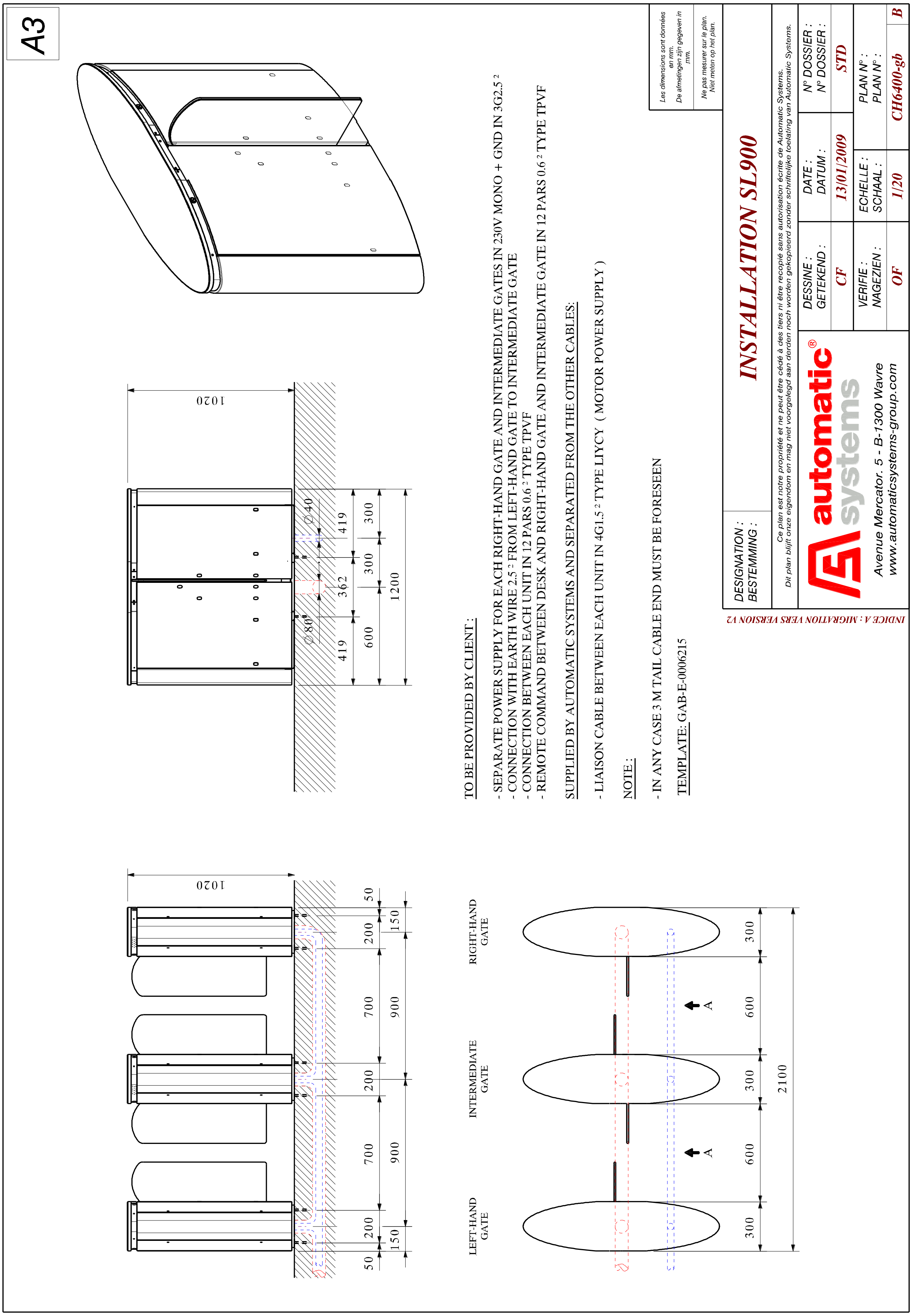
Parameter	Values	DESCRIPTION
Address	1 to 16 (1 factory setting)	Local address of the node in the Modbus network.
Topology		
	Network	Different gates are linked to a single, external computer by the same Modbus link. In this case, a different address has to be defined for each gate (previous parameter).
	Point to point (factory setting)	The Modbus link connects the managing computer to a single gate.

► **see separate manual.**

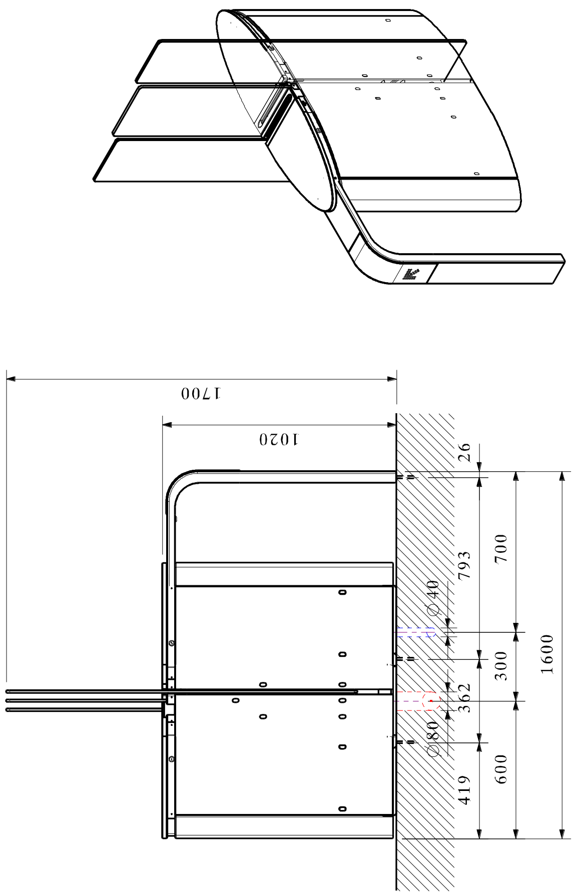
6. TECHNICAL SPECIFICATIONS

- Guaranteed detection of users taller than 1 m (nevertheless, the safety of people and objects shorter than this height is guaranteed against the untimely closure of the obstacles).
- The housing, plates and panels are in 2-mm thick 304 stainless steel.
  The internal mechanical parts (frame, connecting rod, crank, etc.) are metal treated against corrosion by RoHS electrogalvanising.
- Electrical power supply: 230 V AC (± 10%), single-phase, 50 Hz + ground, + differential of 30 mA for each piece of equipment.
- Three-phase asynchronous motor of 120 W.
- Consumption per aisle (idle/moving): 120/250 W.
- Authorised ambient temperature: 0 and +50°C.
- Store between: -30 and +80°C.
- Maximum relative humidity: 95% without condensation.
- Provided the mobile obstacles are fitted with the silicone profile option, the equipment complies with norms PR-EN-12650.1 11/2006 & DIN 18650-1 2003-09, related to retractable obstacles operation and safety.
- Minimum opening time of the obstacle ("Speed Open" parameter under the "OPTION" menu is at 100%); measured from the open command and not including the action time of the access control system: 0.5 to 0.7 s depending on the configuration of the gate.
  Minimum closing time(*) of the obstacle ("Speed Close" parameter under the "OPTION" menu is at 100%); measured from the close command and not including the action time of the access control system: 0.6 to 1 s depending on the configuration of the gate.
  (*) minimum to guarantee the compliance with impact force norms.
- MCBF (Mean Cycle Between Failure), with respect for the recommended maintenance: 2,500,000.
- IP40.
- Communication via CAN bus between the various modules composing an aisle.
- Compliant with CE standards, provided that the *silicon protection strip on mobile leaf* is present to comply with the norms related to impact forces.
- Net weight of a standard furnishing, according to its configuration (left, right, intermediary):
  - from 150 to 230 kg (SL900)
  - from 160 to 250 kg (SL901)
  - from 180 to 260 kg (SL902)
  - from 180 to 250 kg (SL910)
  - from 200 to 270 kg (SL911)
  - from 220 to 290 kg (SL911)

7. INSTALLATION PLAN AND DIMENSIONS



A3



TO BE PROVIDED BY CLIENT :

- SEPARATE POWER SUPPLY FOR EACH RIGHT-HAND GATE AND INTERMEDIATE GATES IN 230V MONO + GND IN 3G2.5 ²
- CONNECTION WITH EARTH WIRE 2.5 ² FROM LEFT-HAND GATE TO INTERMEDIATE GATE
- CONNECTION BETWEEN EACH UNIT IN 12 PARS 0.6 ² TYPE TPVF
- REMOTE COMMAND BETWEEN DESK AND RIGHT-HAND GATE AND INTERMEDIATE GATE IN 12 PARS 0.6 ² TYPE TPVF

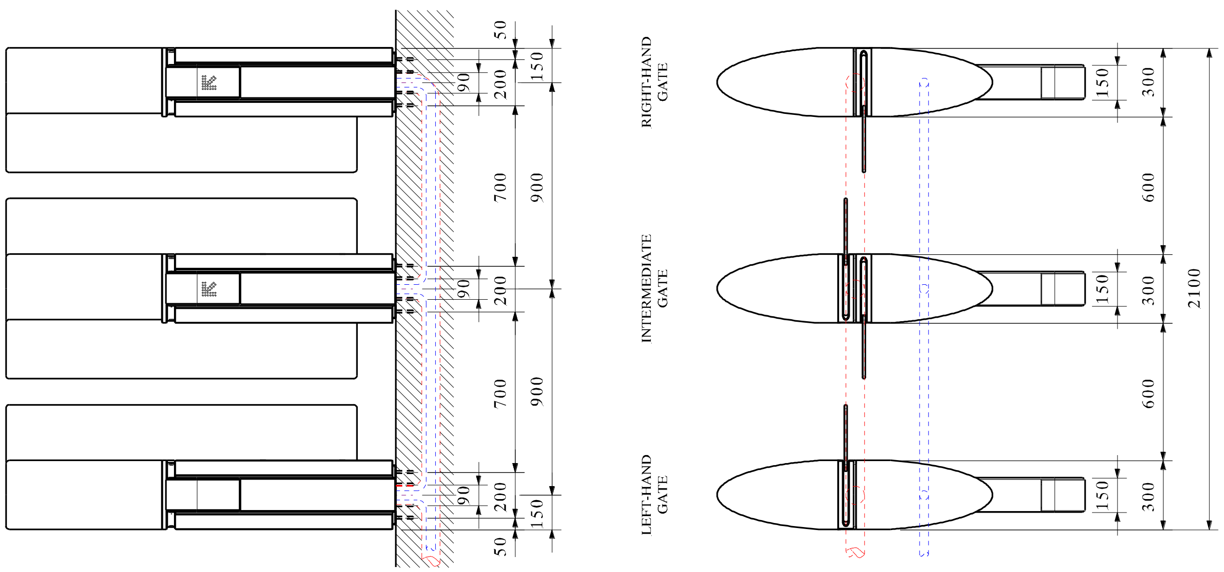
SUPPLIED BY AUTOMATIC SYSTEMS AND SEPARATED FROM THE OTHER CABLES:

- LIAISON CABLE BETWEEN EACH UNIT IN 4G1.5 ² TYPE LIYCY (MOTOR POWER SUPPLY)

NOTE :

- IN ANY CASE 3 M TAIL CABLE END MUST BE FORESEEN

TEMPLATE: GAB-E-0006215 & GAB-E-0006217



Les dimensions sont données en mm.
De afmetingen zijn gegeven in mm.

Ne pas mesurer sur le plan.
Niet meten op het plan.

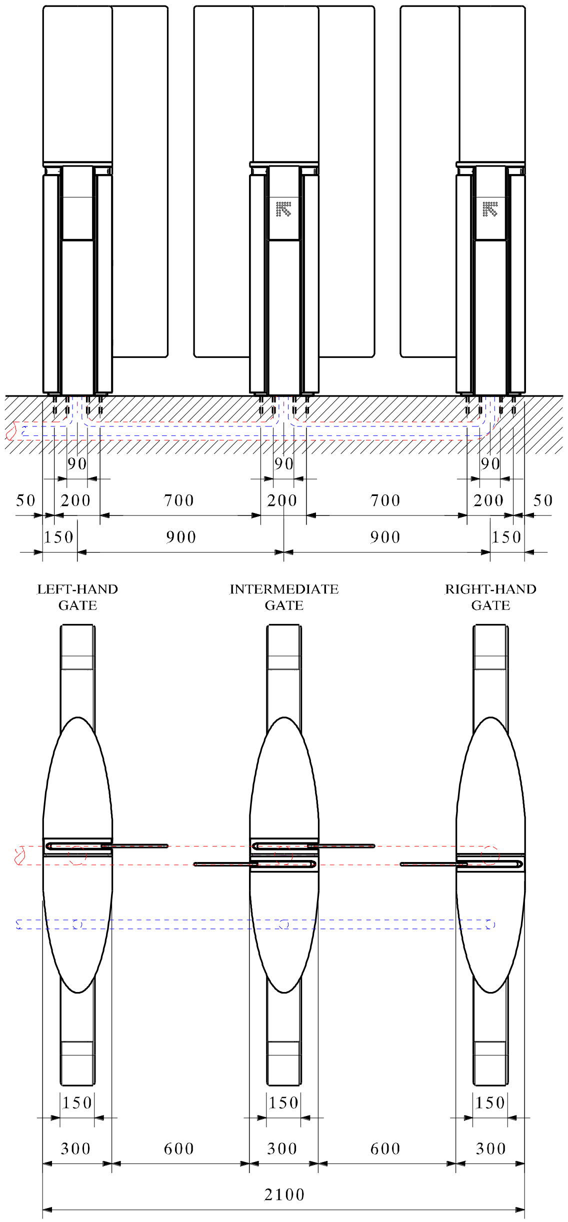
DESIGNATION : / BESTEMMING : **INSTALLATION SL901**

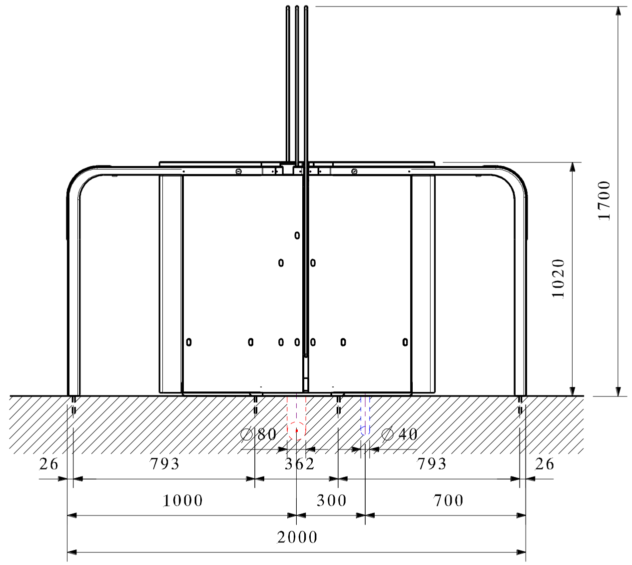
automatic systems®
Avenue Mercator. 5 - B-1300 Wavre
www.automaticsystems-group.com

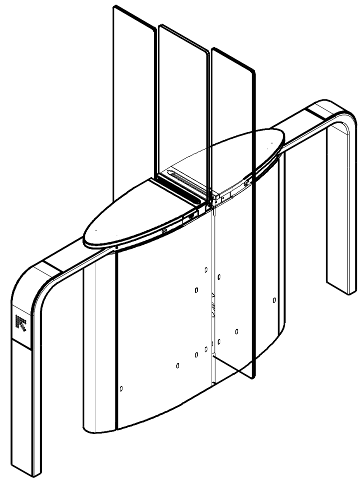
DESSINE : / GETEKEND :	DATE : / DATUM :	N° DOSSIER : / N° DOSSIER :
CF	13/01/2009	STD
VERIFIE : / NAGEZIEN :	ECHELLE : / SCHAAL :	PLAN N° : / PLAN N° :
OF	1/20	CH6251-gb C

INDICE B : MIGRATION VERS VERSION V2

A3







TO BE PROVIDED BY CLIENT :

- SEPARATE POWER SUPPLY FOR EACH RIGHT-HAND GATE AND INTERMEDIATE GATES IN 230V MONO + GND IN 3G2.5 ²
- CONNECTION WITH EARTH WIRE 2.5 ² FROM LEFT-HAND GATE TO INTERMEDIATE GATE
- CONNECTION BETWEEN EACH UNIT IN 12 PARS 0.6 ² TYPE TPVF
- REMOTE COMMAND BETWEEN DESK AND RIGHT-HAND GATE AND INTERMEDIATE GATE IN 12 PARS 0.6 ² TYPE TPVF

SUPPLIED BY AUTOMATIC SYSTEMS AND SEPARATED FROM THE OTHER CABLES:

- LIAISON CABLE BETWEEN EACH UNIT IN 4G1.5 ² TYPE LIYCY (MOTOR POWER SUPPLY)

NOTE :

- IN ANY CASE 3 M TAIL CABLE END MUST BE FORESEEN

TEMPLATE: GAB-E-0006215 & GAB-E-0006217

Les dimensions sont données en mm.
De afmetingen zijn gegeven in mm.

Ne pas mesurer sur le plan.
Niet meten op het plan.

INDICE B : MIGRATION VERS VERSION V2

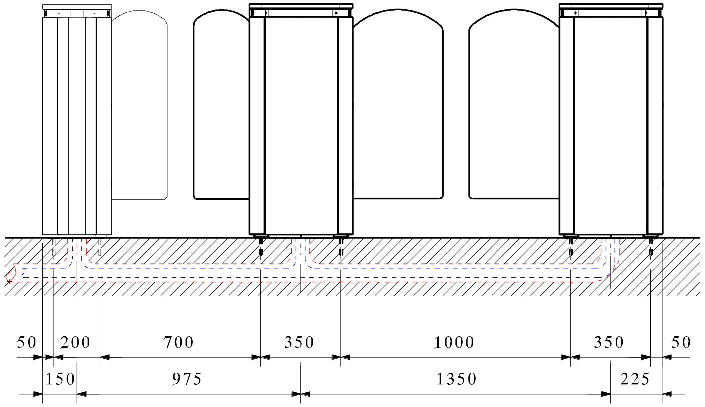
DESIGNATION :
BESTEMMING : **INSTALLATION SL902**

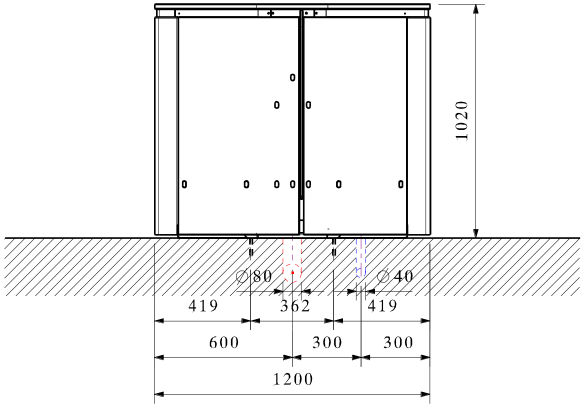
Ce plan est notre propriété et ne peut être cédé à des tiers ni être recopié sans autorisation écrite de Automatic Systems.
Dit plan blijft onze eigendom en mag niet voorgelegd aan derden noch worden gekopieerd zonder schriftelijke toelating van Automatic Systems.

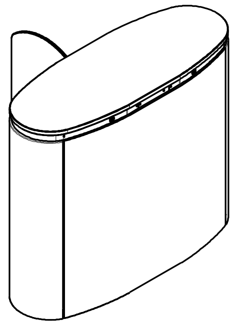
automatic systems®
Avenue Mercator. 5 - B-1300 Wavre
www.automaticsystems-group.com

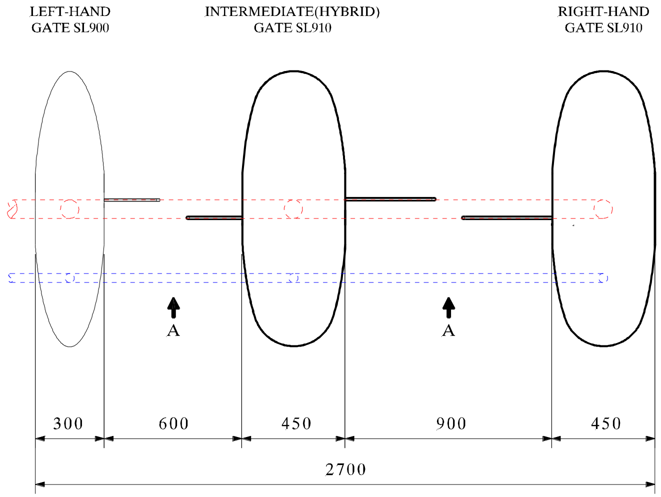
DESSINE : GETEKEND :	DATE : DATUM :	N° DOSSIER : N° DOSSIER :	
CF	13/01/2009	STD	
VERIFIE : NAGEZIEN :	ECHELLE : SCHAAL :	PLAN N° : PLAN N° :	
OF	1/20	CH6225-gb	C

A3









TO BE PROVIDED BY CLIENT :

- SEPARATE POWER SUPPLY FOR EACH RIGHT-HAND GATE AND INTERMEDIATE(HYBRID) GATE IN 230V SINGLE PHASE + GND IN 3G2.5 ²
- CONNECTION WITH EARTH WIRE 2.5 ² FROM LEFT-HAND GATE TO INTERMEDIATE(HYBRID) GATE
- CONNECTION BETWEEN EACH UNIT IN 12 PAIRS 0.6 ² TYPE TPVF
- CONNECTION BETWEEN DESK AND RIGHT-HAND GATE AND INTERMEDIATE GATE(HYBRID) IN 12 PAIRS 0.6 ² TYPE TPVF

SUPPLIED BY AUTOMATIC SYSTEMS AND SEPARATED FROM THE OTHER CABLES:

- LIAISON CABLE BETWEEN EACH UNIT IN 4G1.5 ² TYPE LIYCY (MOTOR POWER SUPPLY)

NOTE :

- IN ANY CASE 3m TAIL CABLE END MUST BE FORESEEN

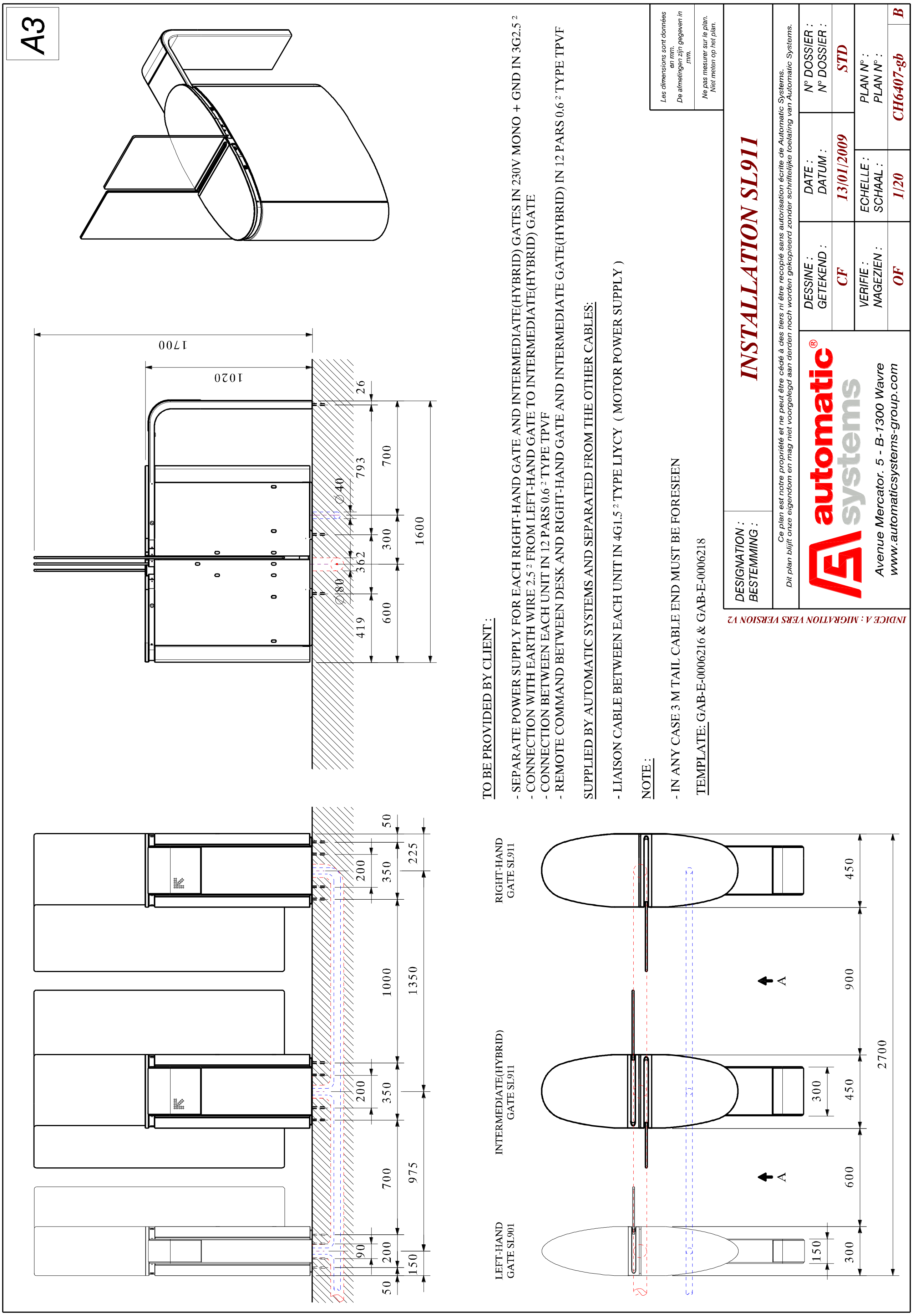
TEMPLATE: GAB-E-0006216

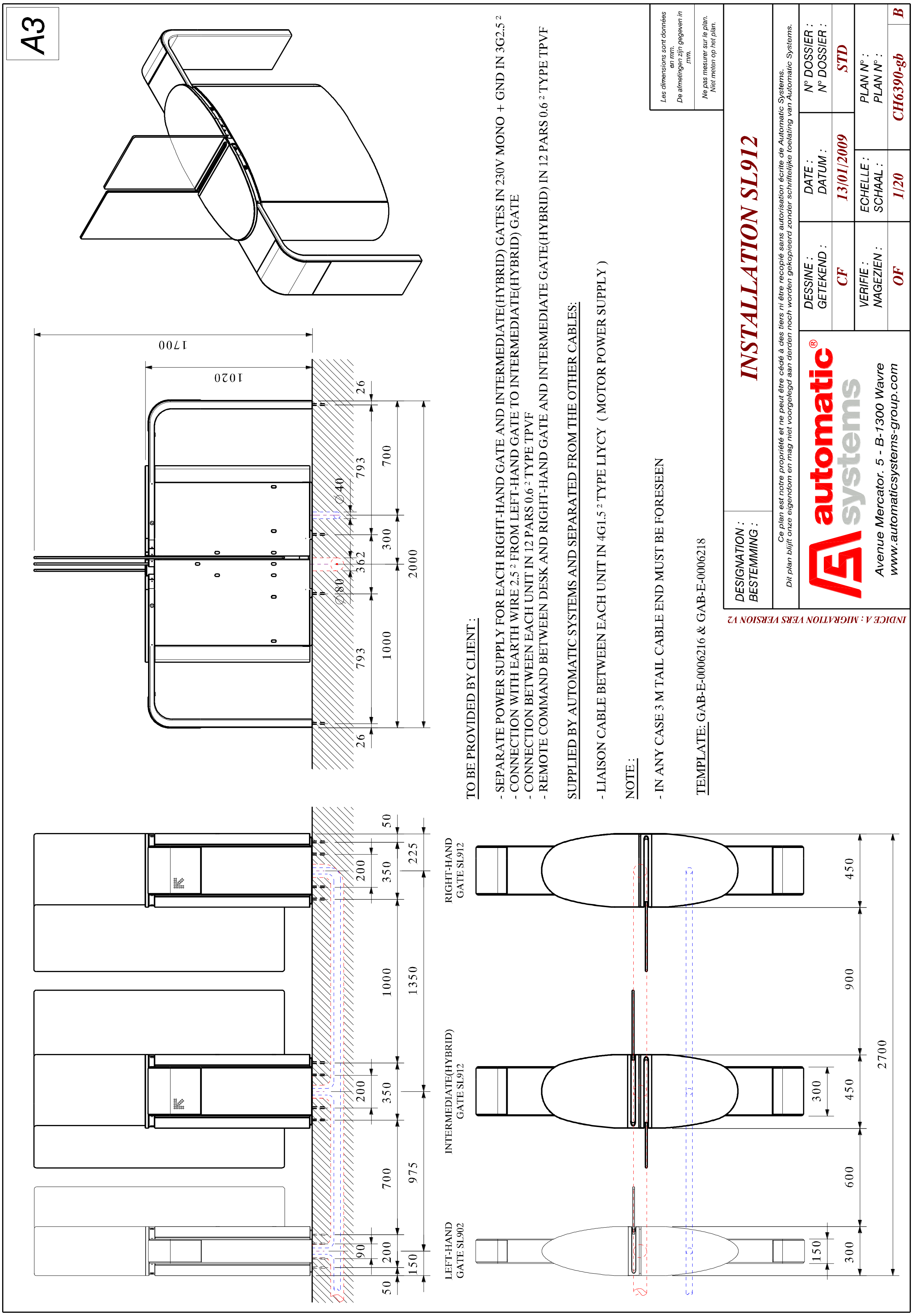
Les dimensions sont données en mm.
De afmetingen zijn gegeven in mm.

Ne pas mesurer sur le plan.
Niet meten op het plan.

INDICE A : MIGRATION VERS VERSION V2

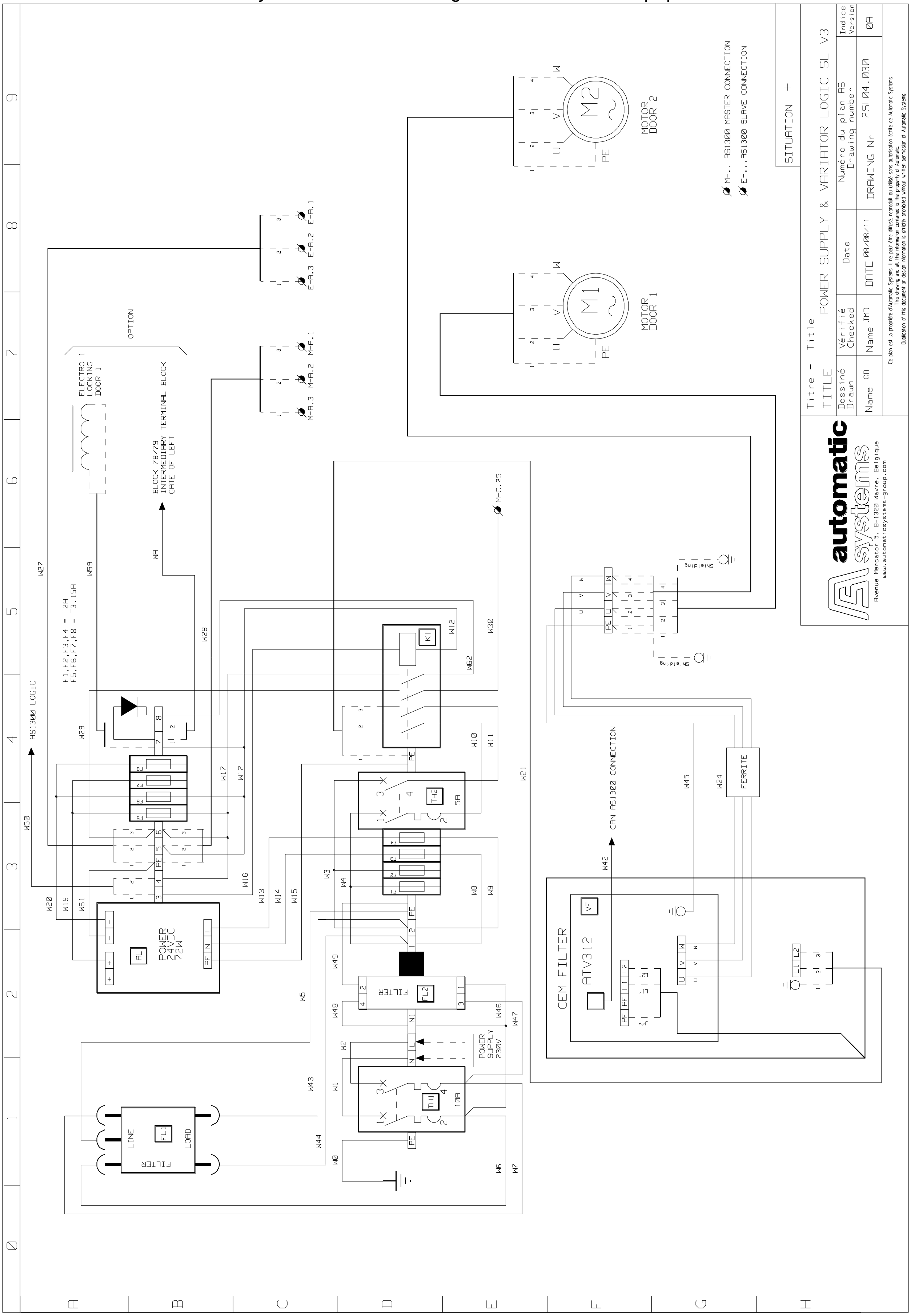
DESIGNATION : BESTEMMING :	INSTALLATION SL910		
Ce plan est notre propriété et ne peut être cédé à des tiers ni être recopié sans autorisation écrite de Automatic Systems. Dit plan blijft onze eigendom en mag niet voorgelegd aan derden noch worden gekopieerd zonder schriftelijke toelating van Automatic Systems.			
automatic systems® Avenue Mercator. 5 - B-1300 Wavre www.automaticsystems-group.com	DESSINE : GETEKEND : CF	DATE : DATUM : 15/01/2009	N° DOSSIER : N° DOSSIER : STD
	VERIFIE : NAGEZIEN : OF	ECHELLE : SCHAAL : 1/20	PLAN N° : PLAN N° : CH6409-gb B

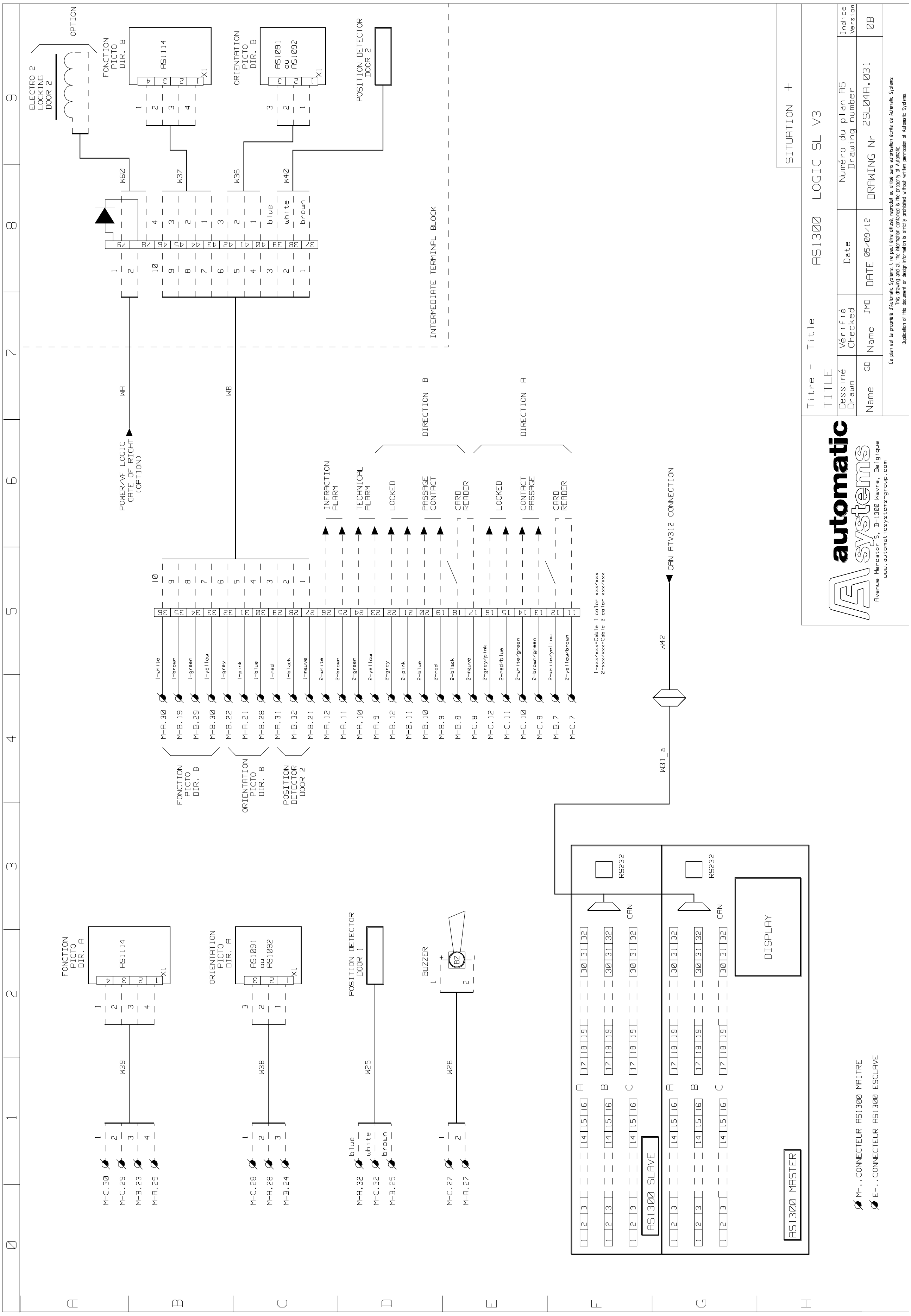

A3
1700
1020
TO BE PROVIDED BY CLIENT :
- SEPARATE POWER SUPPLY FOR EACH RIGHT-HAND GATE AND INTERMEDIATE(HYBRID) GATES IN 230V MONO + GND IN 3G2.5²
- CONNECTION WITH EARTH WIRE 2.5² FROM LEFT-HAND GATE TO INTERMEDIATE(HYBRID) GATE
- CONNECTION BETWEEN EACH UNIT IN 12 PARS 0.6² TYPE TPVF
- REMOTE COMMAND BETWEEN DESK AND RIGHT-HAND GATE AND INTERMEDIATE GATE(HYBRID) IN 12 PARS 0.6² TYPE TPVF
SUPPLIED BY AUTOMATIC SYSTEMS AND SEPARATED FROM THE OTHER CABLES:
- LIAISON CABLE BETWEEN EACH UNIT IN 4G1.5² TYPE LIYCY (MOTOR POWER SUPPLY)
NOTE:
- IN ANY CASE 3 M TAIL CABLE END MUST BE FORESEEN
TEMPLATE: GAB-E-0006216 & GAB-E-0006218
RIGHT-HAND GATE SL911
INTERMEDIATE(HYBRID) GATE SL911
LEFT-HAND GATE SL901
Les dimensions sont données en mm.
De afmetingen zijn gegeven in mm.
Ne pas mesurer sur le plan.
Niet meten op het plan.
DESIGNATION :
BESTEMMING :
INSTALLATION SL911
Ce plan est notre propriété et ne peut être cédé à des tiers ni être recopié sans autorisation écrite de Automatic Systems.
Dit plan blijft onze eigendom en mag niet voorgelegd aan derden noch worden gekopieerd zonder schriftelijke toelating van Automatic Systems.
automatic systems
Avenue Mercator, 5 - B-1300 Wavre
www.automaticsystems-group.com
DESSINE : GETEKEND : CF
DATE : DATUM : 13/01/2009
N° DOSSIER : N° DOSSIER : STD
VERIFIE : NAGEZIEN : OF
ECHELLE : SCHAAL : 1/20
PLAN N° : PLAN N° : CH6407-gb
B
INDICE A : MIGRATION VERS VERSION V2

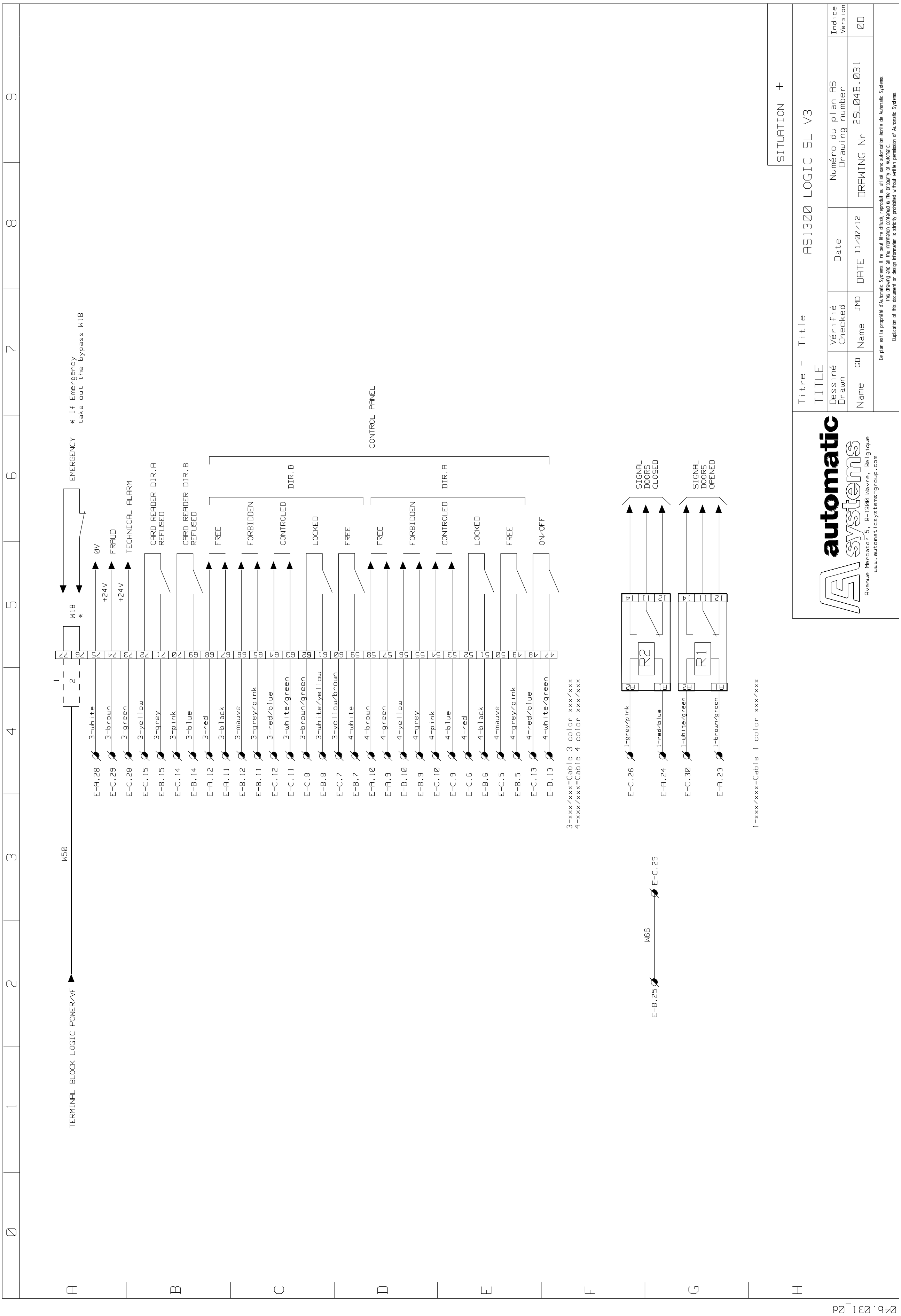

A3
1700
1020
26
793
700
Ø40
300
362
Ø80
2000
1000
793
26
TO BE PROVIDED BY CLIENT :
- SEPARATE POWER SUPPLY FOR EACH RIGHT-HAND GATE AND INTERMEDIATE(HYBRID) GATES IN 230V MONO + GND IN 3G2.5 ²
- CONNECTION WITH EARTH WIRE 2.5 ² FROM LEFT-HAND GATE TO INTERMEDIATE(HYBRID) GATE
- CONNECTION BETWEEN EACH UNIT IN 12 PARS 0.6 ² TYPE TPVF
- REMOTE COMMAND BETWEEN DESK AND RIGHT-HAND GATE AND INTERMEDIATE GATE(HYBRID) IN 12 PARS 0.6 ² TYPE TPVF
SUPPLIED BY AUTOMATIC SYSTEMS AND SEPARATED FROM THE OTHER CABLES:
- LIAISON CABLE BETWEEN EACH UNIT IN 4G1.5 ² TYPE LIYCY (MOTOR POWER SUPPLY)
NOTE :
- IN ANY CASE 3 M TAIL CABLE END MUST BE FORESEEN
TEMPLATE: GAB-E-0006216 & GAB-E-0006218
Les dimensions sont données en mm.
De afmetingen zijn gegeven in mm.
Ne pas mesurer sur le plan.
Niet meten op het plan.
INSTALLATION SL912
DESIGNATION :
BESTEMMING :
Ce plan est notre propriété et ne peut être cédé à des tiers ni être recopié sans autorisation écrite de Automatic Systems.
Dit plan blijft onze eigendom en mag niet voorgelegd aan derden noch worden gekopieerd zonder schriftelijke toelating van Automatic Systems.
automatic® systems
Avenue Mercator, 5 - B-1300 Wavre
www.automaticsystems-group.com
DESSINE :
GETEKEND :
CF
DATE :
DATUM :
13/01/2009
N° DOSSIER :
N° DOSSIER :
STD
VERIFIE :
NAGEZIEN :
OF
ECHELLE :
SCHAAL :
1/20
PLAN N° :
PLAN N° :
CH6390-gb
B
INDICE A : MIGRATION VERS VERSION V2
50
200
350
225
1000
1350
200
350
700
975
90
200
150
50
RIGHT-HAND GATE SL912
INTERMEDIATE(HYBRID) GATE SL912
LEFT-HAND GATE SL902
450
900
300
450
2700
600
150
300

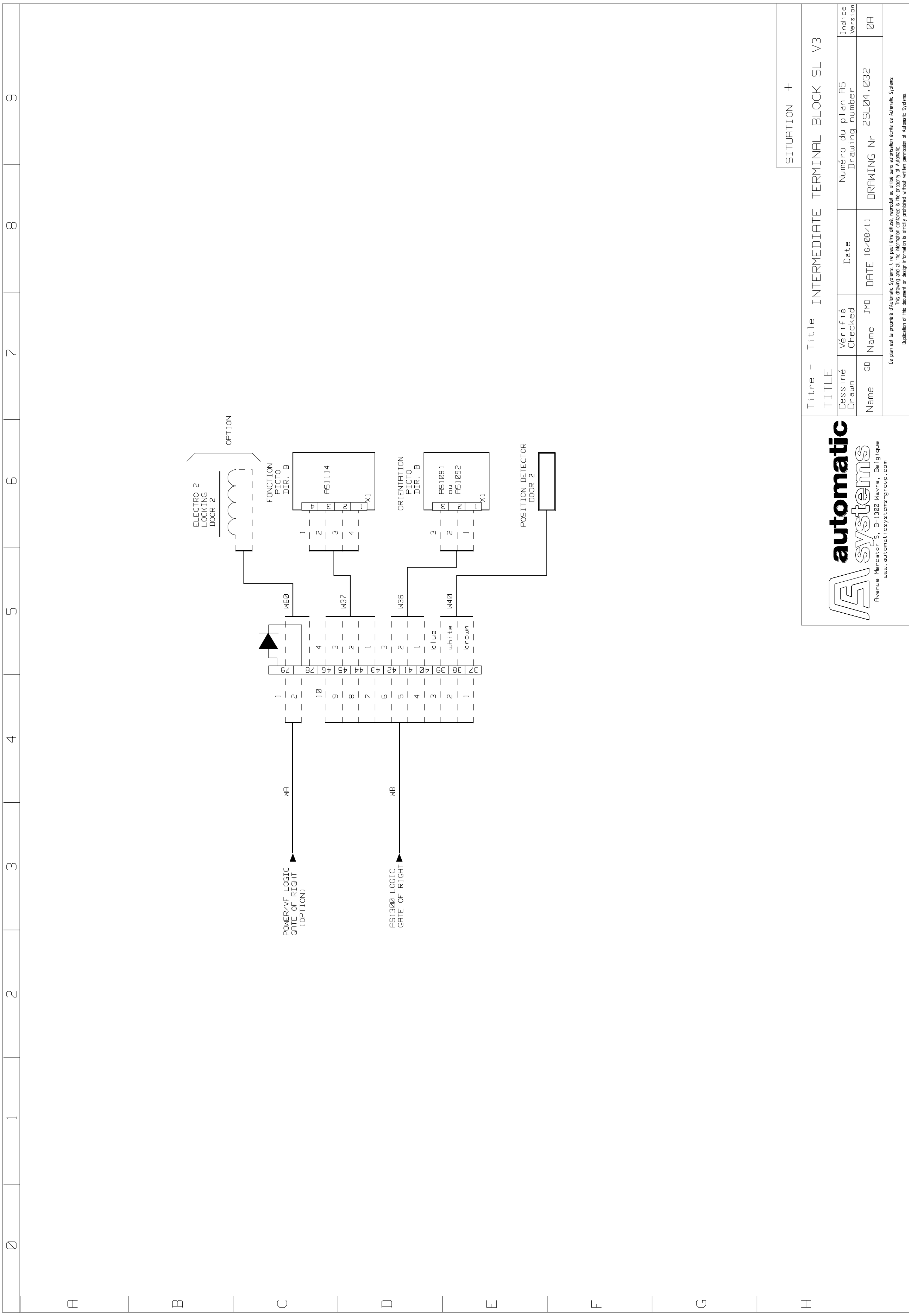
8. WIRING DIAGRAMS

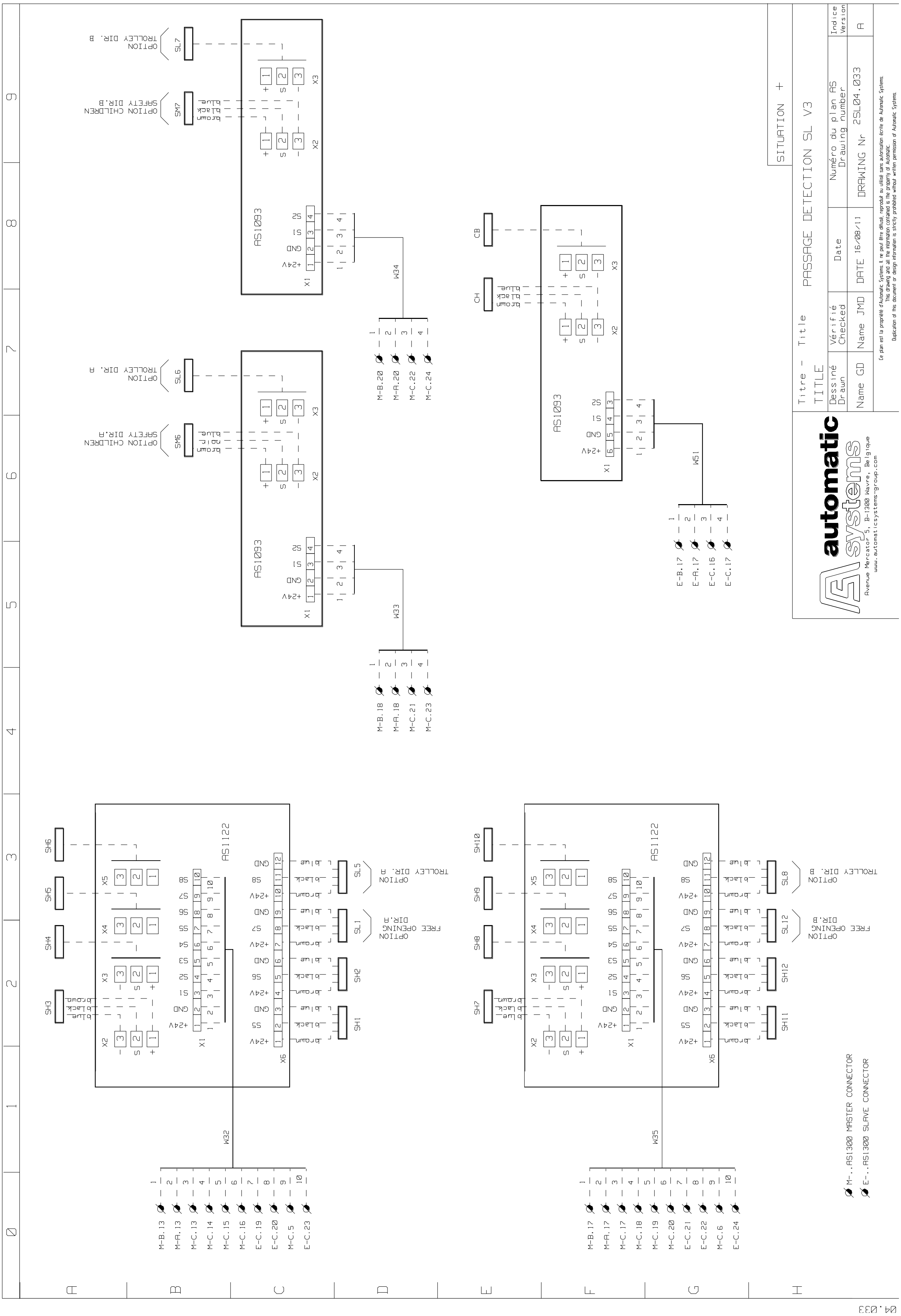
Note: for information only. The reference diagram is inside the equipment.

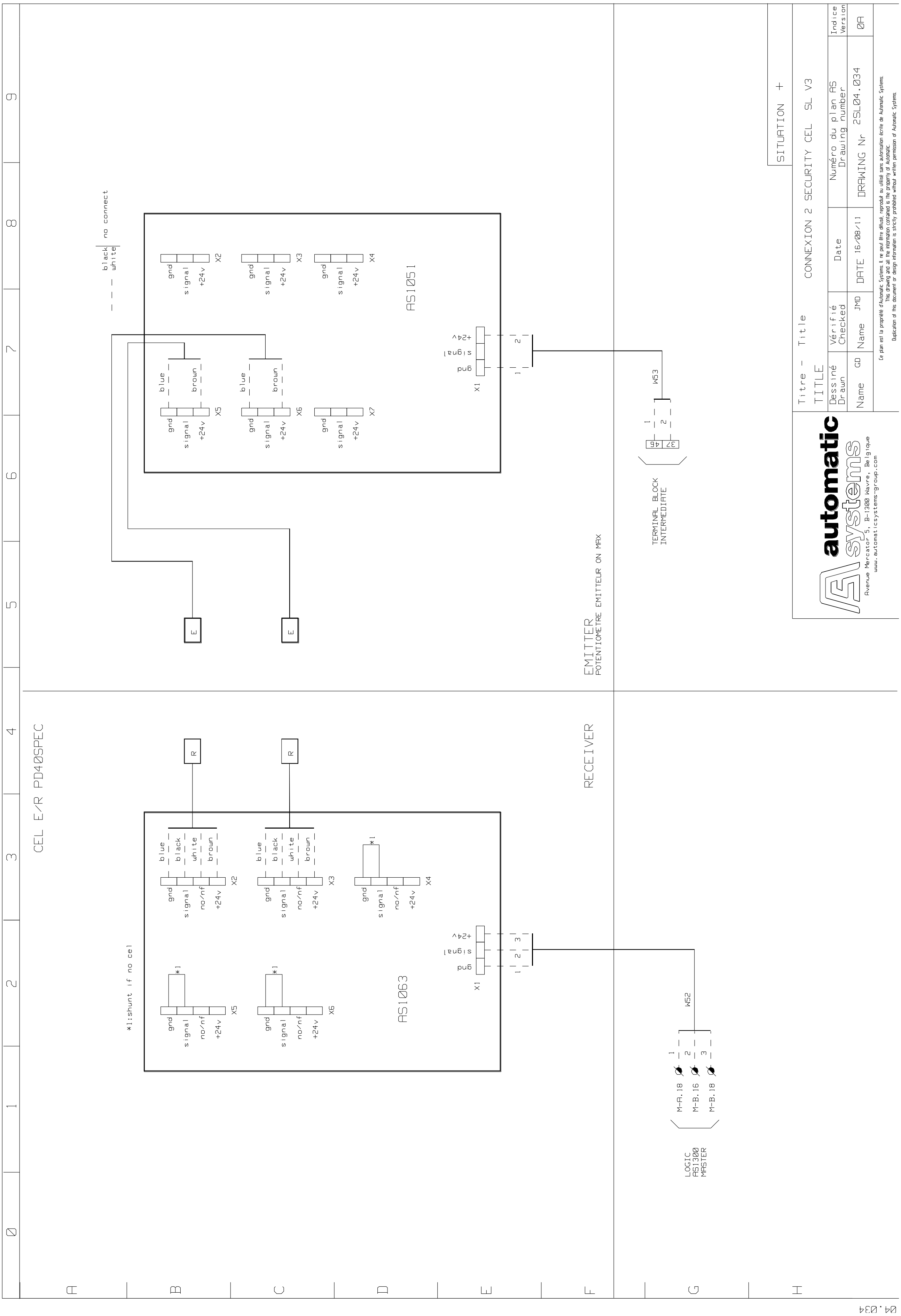


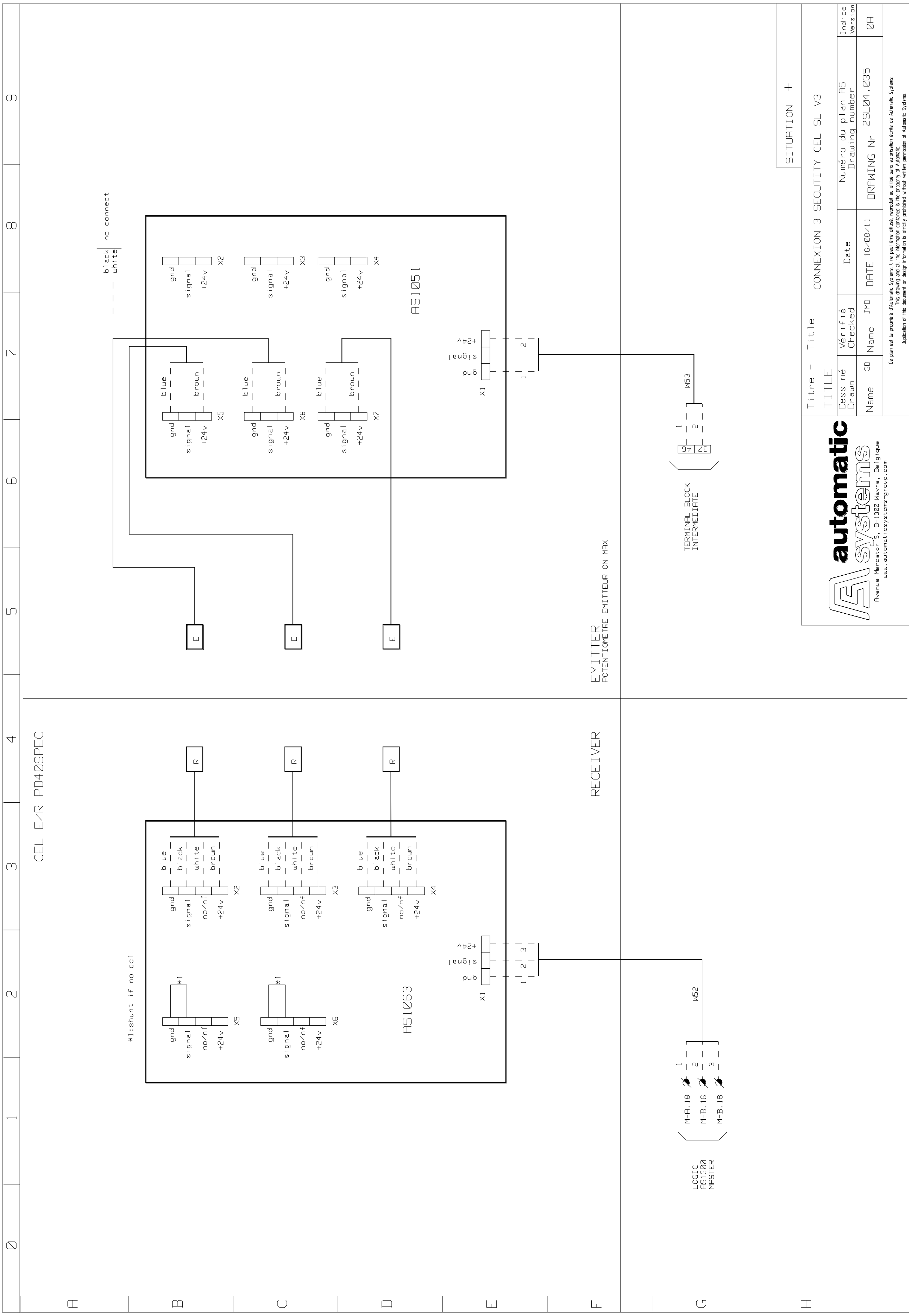

INTERMEDIATE TERMINAL BLOCK
ELECTRO 2 LOCKING DOOR 2
OPTION
FONCTION PICTO DIR. B
AS1114
ORIENTATION PICTO DIR. B
AS1091 ou AS1092
POSITION DETECTOR DOOR 2
W60
W37
W36
W40
WA
WB
POWER/VF LOGIC GATE OF RIGHT (OPTION)
INFRACTION ALARM
TECHNICAL ALARM
LOCKED
PASSAGE CONTACT
CARD READER
DIRECTION B
CONTACT PASSAGE
DIRECTION A
CAN ATV312 CONNECTION
W42
W31_a
FONCTION PICTO DIR. A
ORIENTATION PICTO DIR. A
POSITION DETECTOR DOOR 1
BUZZER
W39
W38
W25
W26
RS232
CAN
DISPLAY
AS1300 SLAVE
AS1300 MASTER
M-..CONNECTEUR AS1300 MAITRE
E-..CONNECTEUR AS1300 ESCLAVE
SITUATION +
Titre - Title
AS1300 LOGIC SL V3
Dessiné Drawn
Vérifié Checked
Date
Numéro du plan AS Drawing number
Indice Version
Name GD
Name JMD
DATE 05/09/12
DRAWING Nr 2SL04A.031
0B
automatic systems
Avenue Mercator 5, B-1300 Wavre, Belgique
www.automaticsystems-group.com
04a.031_0b

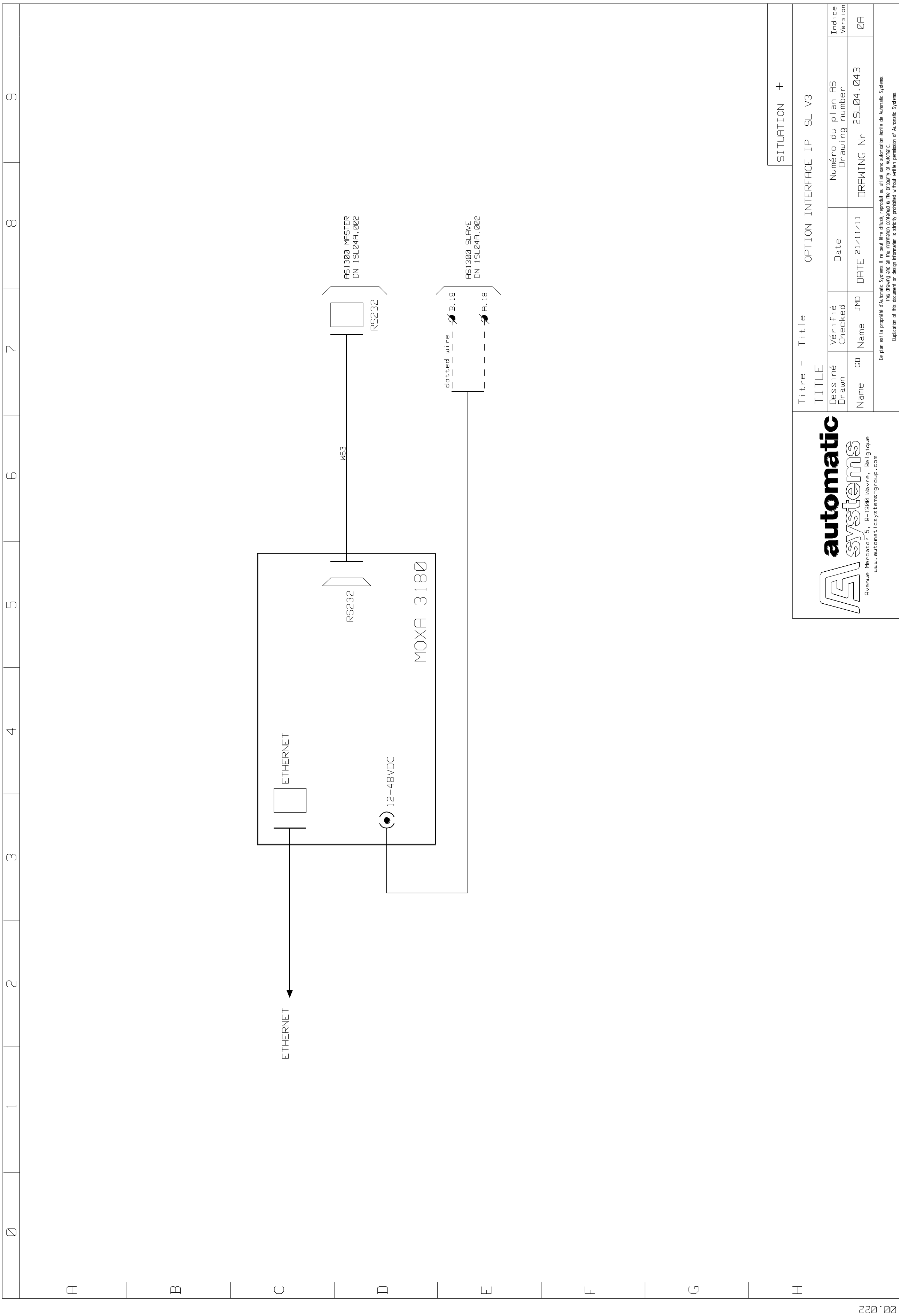

TERMINAL BLOCK LOGIC POWER/VF
W50
EMERGENCY
* If Emergency take out the bypass W18
CONTROL PANEL
DIR.B
DIR.A
FREE
FORBIDDEN
CONTROLED
LOCKED
ON/OFF
0V
FRAUD
TECHNICAL ALARM
CARD READER DIR.A REFUSED
CARD READER DIR.B REFUSED
+24V
SIGNAL DOORS CLOSED
SIGNAL DOORS OPENED
R1
R2
W66
E-C.25
E-B.25
3-xxx/xxx=Cable 3 color xxx/xxx
4-xxx/xxx=Cable 4 color xxx/xxx
1-xxx/xxx=Cable 1 color xxx/xxx
SITUATION +
Titre - Title
TITLE
AS1300 LOGIC SL V3
Dessiné Drawn
Vérifié Checked
Date
Numéro du plan AS Drawing number
Indice Version
Name GD
Name JMD
DATE 11/07/12
DRAWING Nr 2SL04B.031
0D
automatic systems
Avenue Mercator, 5, B-1300 Wavre, Belgique
www.automaticsystems-group.com
046.031_04


SITUATION +
Titre - Title INTERMEDIATE TERMINAL BLOCK SL V3
TITLE
Dessiné Drawn
Name GD
Vérifié Checked
Name JMD
Date
DATE 16/08/11
Numéro du plan AS Drawing number
DRAWING Nr 2SL04.032
Indice Version
0A
automatic systems
Avenue Mercator, 5, B-1300 Wavre, Belgique
www.automaticsystems-group.com
OPTION
ELECTRO 2 LOCKING DOOR 2
FONCTION PICTO DIR. B
AS1114
ORIENTATION PICTO DIR. B
AS1091 ou AS1092
POSITION DETECTOR DOOR 2
W60
W37
W36
W40
WA
WB
blue
white
brown
POWER/VF LOGIC GATE OF RIGHT (OPTION)
AS1300 LOGIC GATE OF RIGHT

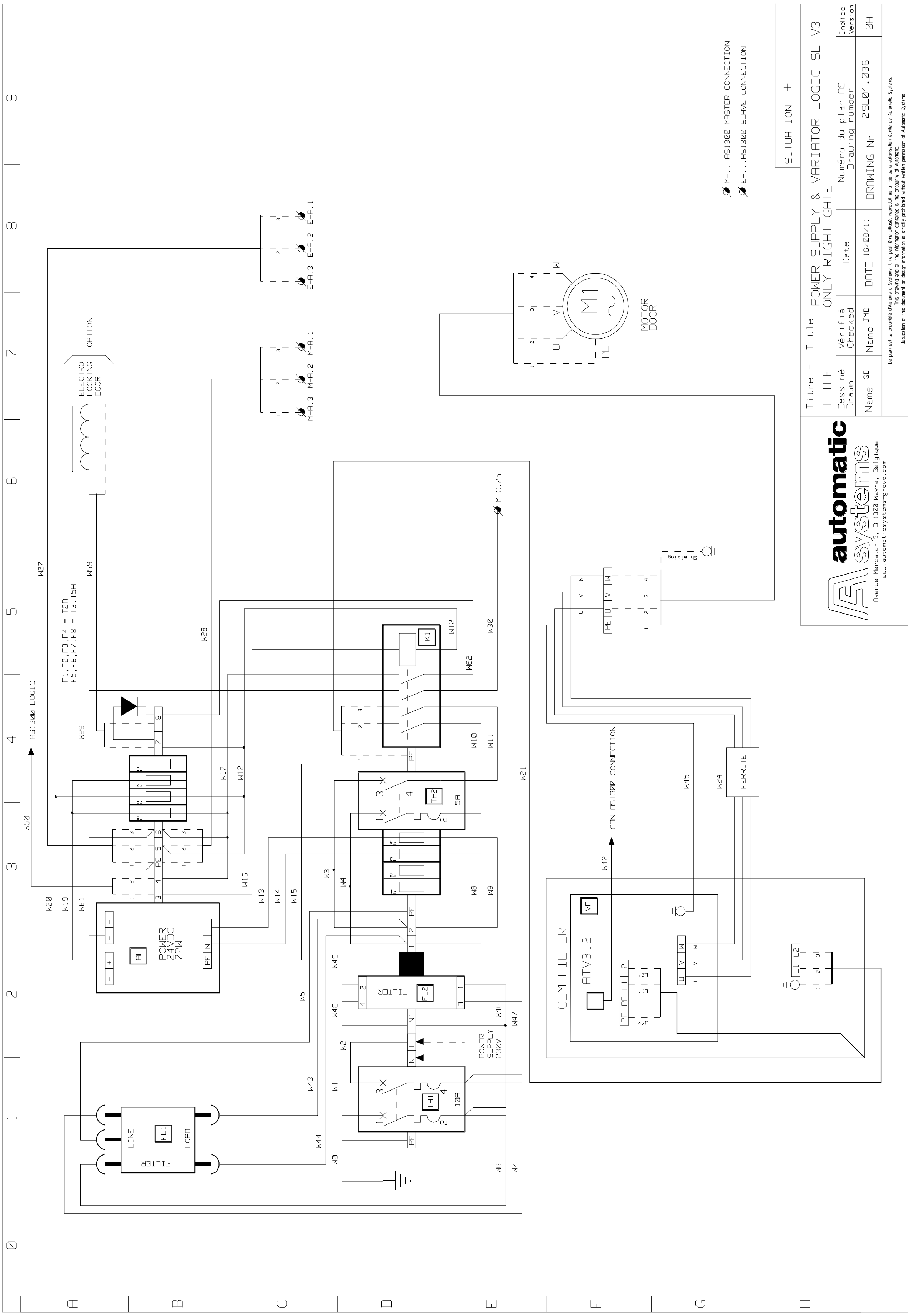

SITUATION +
Titre - Title
PASSAGE DETECTION SL V3
Numéro du plan A5
Drawing number
DRAWING Nr 2SL04.033
Indice Version
A
Dessiné Drawn
Name GD
Vérifié Checked
Name JMD
Date
DATE 16/08/11
automatic systems
Avenue Mercator 5, B-1300 Wavre, Belgique
www.automaticsystems-group.com
M-..AS1300 MASTER CONNECTOR
E-..AS1300 SLAVE CONNECTOR
AS1093
AS1122
04.033

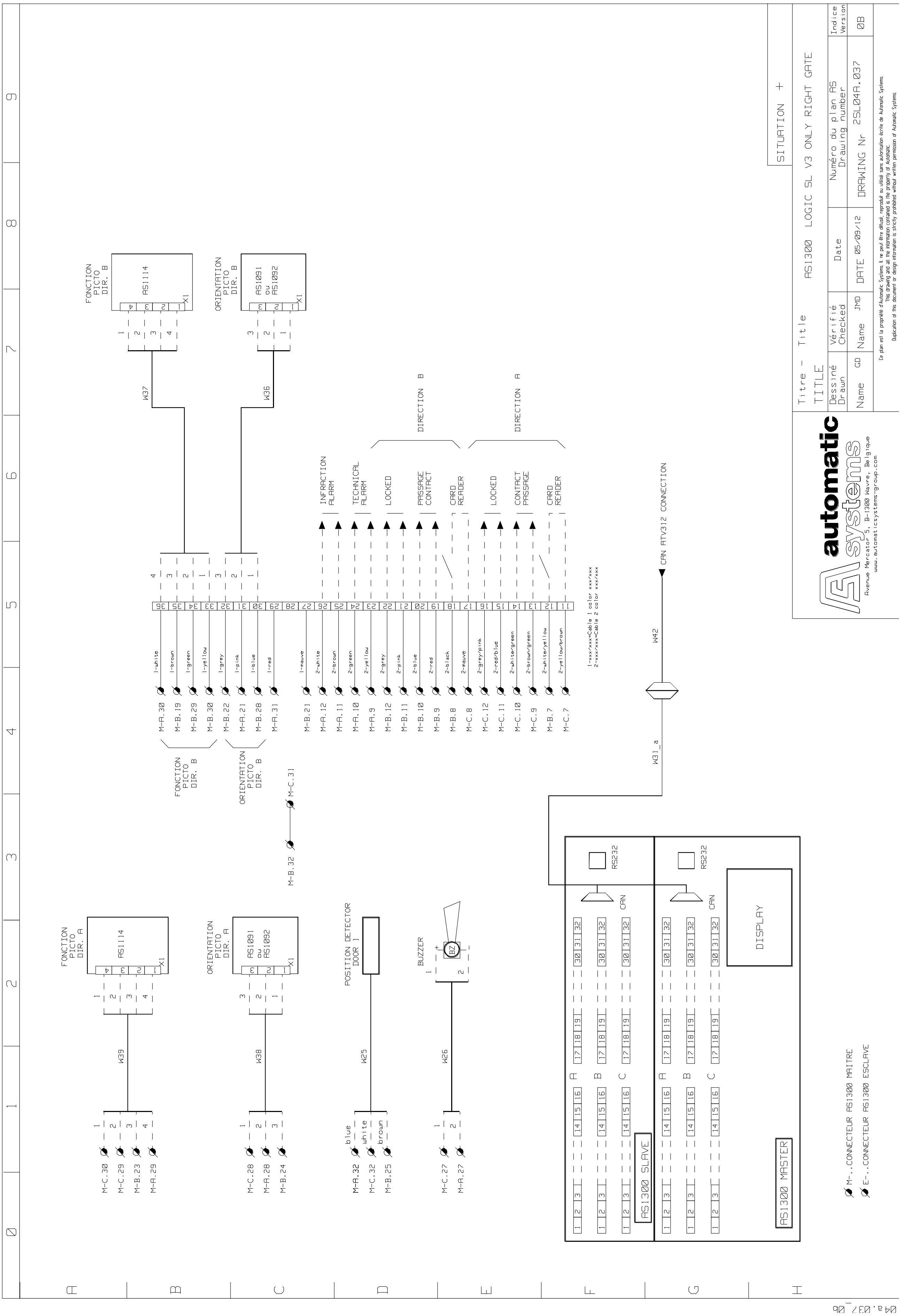

CEL E/R PD40SPEC
EMITTER
POTENTIOMETRE EMITTEUR ON MAX
RECEIVER
AS1051
AS1063
*1:shunt if no cel
black
white
no connect
blue
brown
black
white
gnd
signal
+24v
no/nf
W53
W52
TERMINAL BLOCK
INTERMEDIATE
LOGIC
AS1300
MASTER
M-A.18
M-B.16
M-B.18
SITUATION +
Titre - Title
TITLE
CONNEXION 2 SECURITY CEL SL V3
Dessiné
Drawn
Vérifié
Checked
Date
Numéro du plan AS
Drawing number
Indice
Version
Name GD
Name JMD
DATE 16/08/11
DRAWING Nr 2SL04.034
0A
automatic systems
Avenue Mercator, 5, B-1300 Wavre, Belgique
www.automaticsystems-group.com
04.034

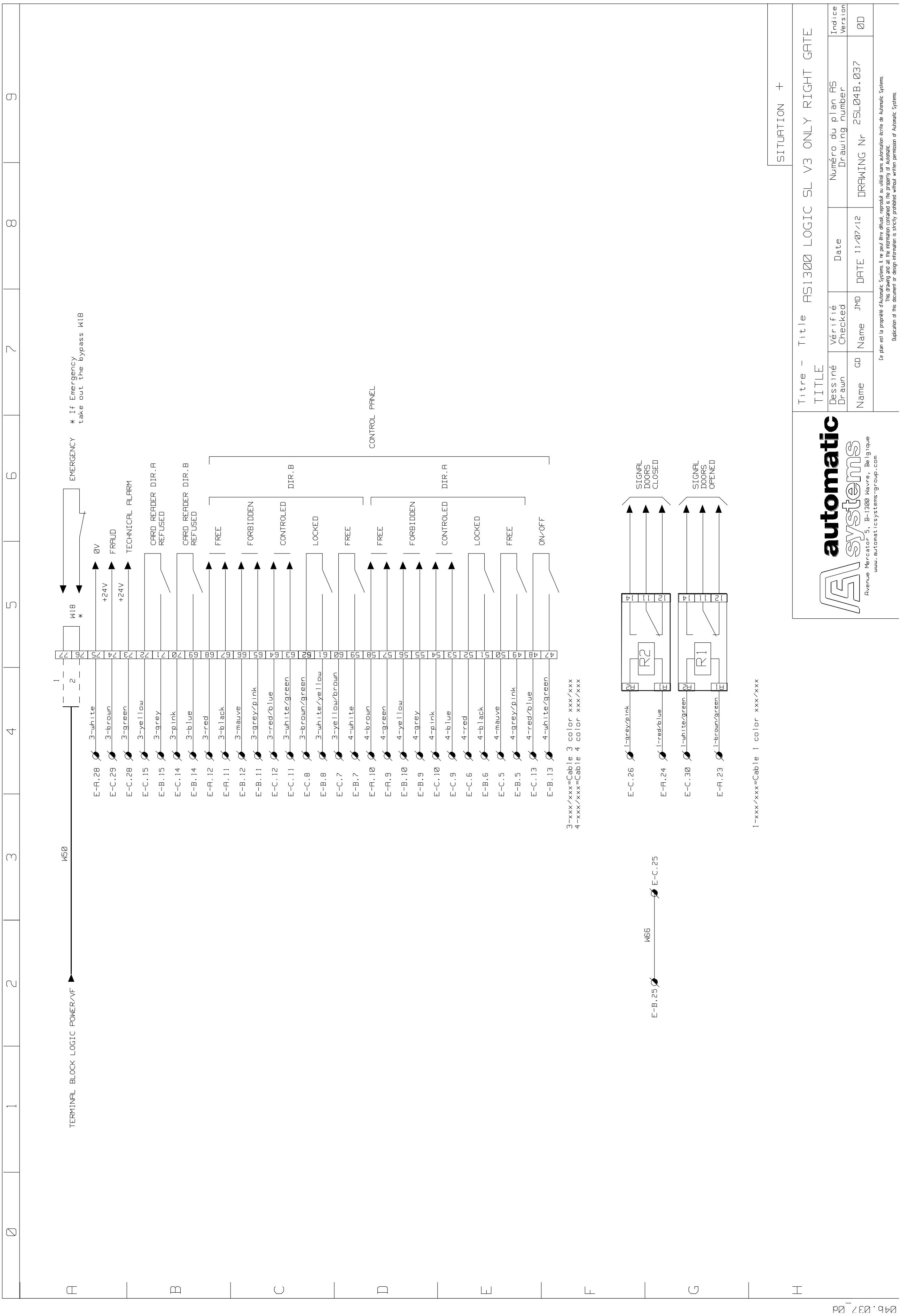

CEL E/R PD40SPEC
EMITTER
POTENTIOMETRE EMITTEUR ON MAX
RECEIVER
AS1051
AS1063
TERMINAL BLOCK
INTERMEDIATE
LOGIC
AS1300
MASTER
W53
W52
*1:shunt if no cel
SITUATION +
Titre - Title
TITLE
CONNEXION 3 SECUTITY CEL SL V3
Numéro du plan AS
Drawing number
DRAWING Nr 2SL04.035
Indice
Version
0A
DATE 16/08/11
automatic systems
Avenue Mercator, 5, B-1300 Wavre, Belgique
www.automaticsystems-group.com


MOXA 3180
RS232
RS232
W63
ETHERNET
ETHERNET
12-48VDC
AS1300 MASTER
DN 1SL04A.002
AS1300 SLAVE
DN 1SL04A.002
dotted wire
B.18
A.18
SITUATION +
Titre - Title
TITLE
OPTION INTERFACE IP SL V3
Dessiné
Drawn
Vérifié
Checked
Date
Numéro du plan AS
Drawing number
Indice
Version
Name GD
Name JMD
DATE 21/11/11
DRAWING Nr 2SL04.043
0A
automatic systems
Avenue Mercator, 5, B-1300 Wavre, Belgique
www.automaticsystems-group.com

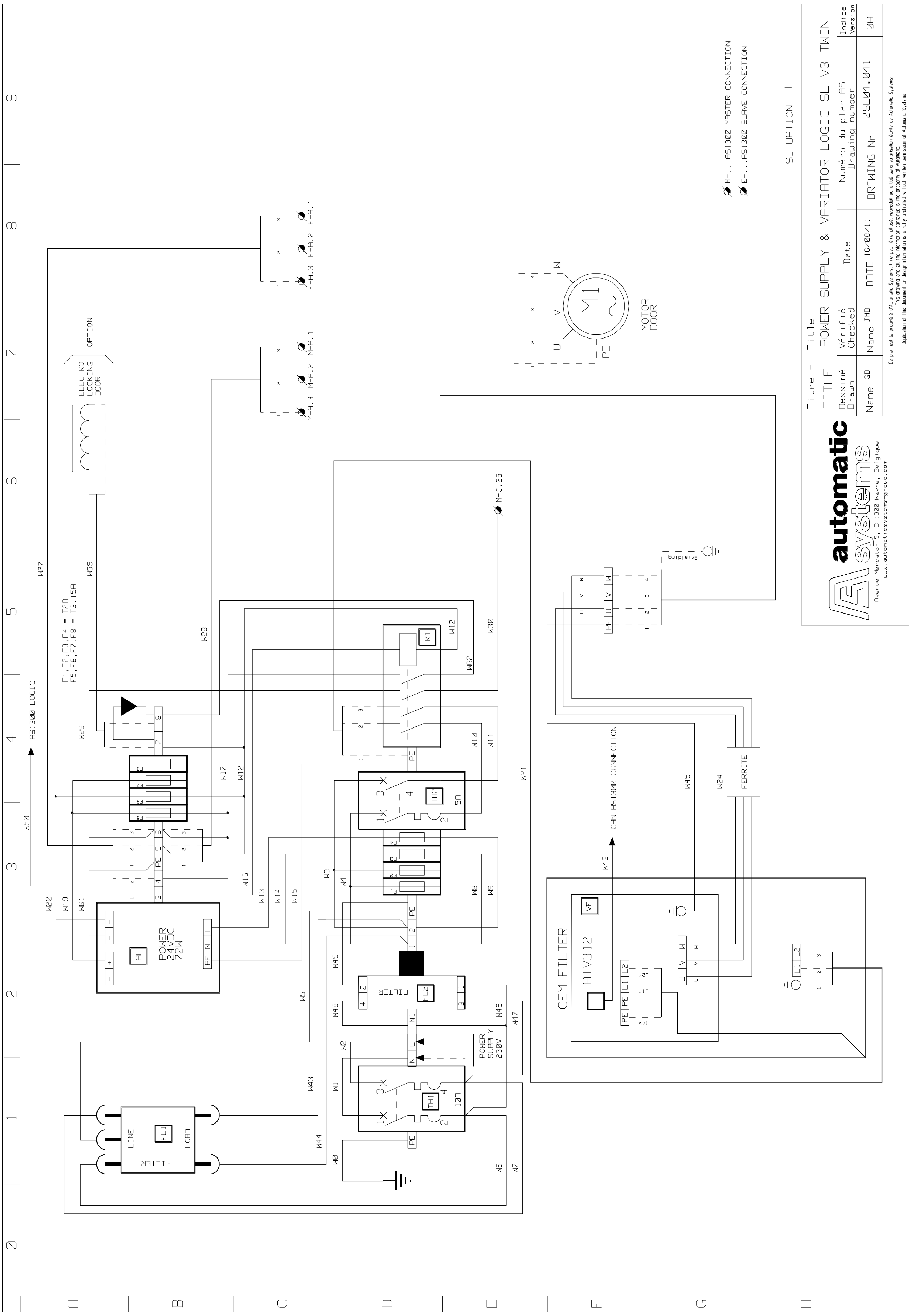
8.1. Specific pages to Right housing alone

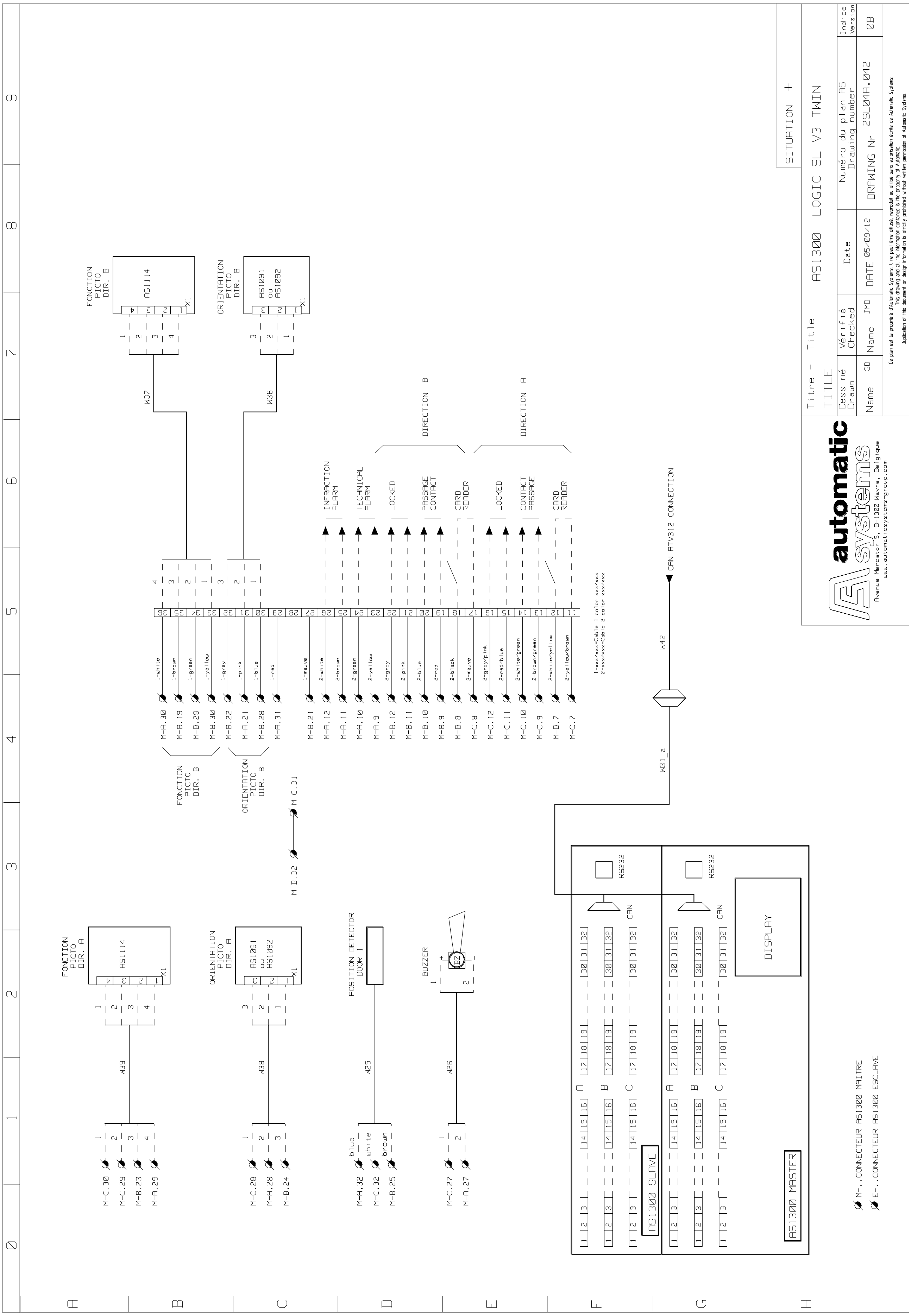


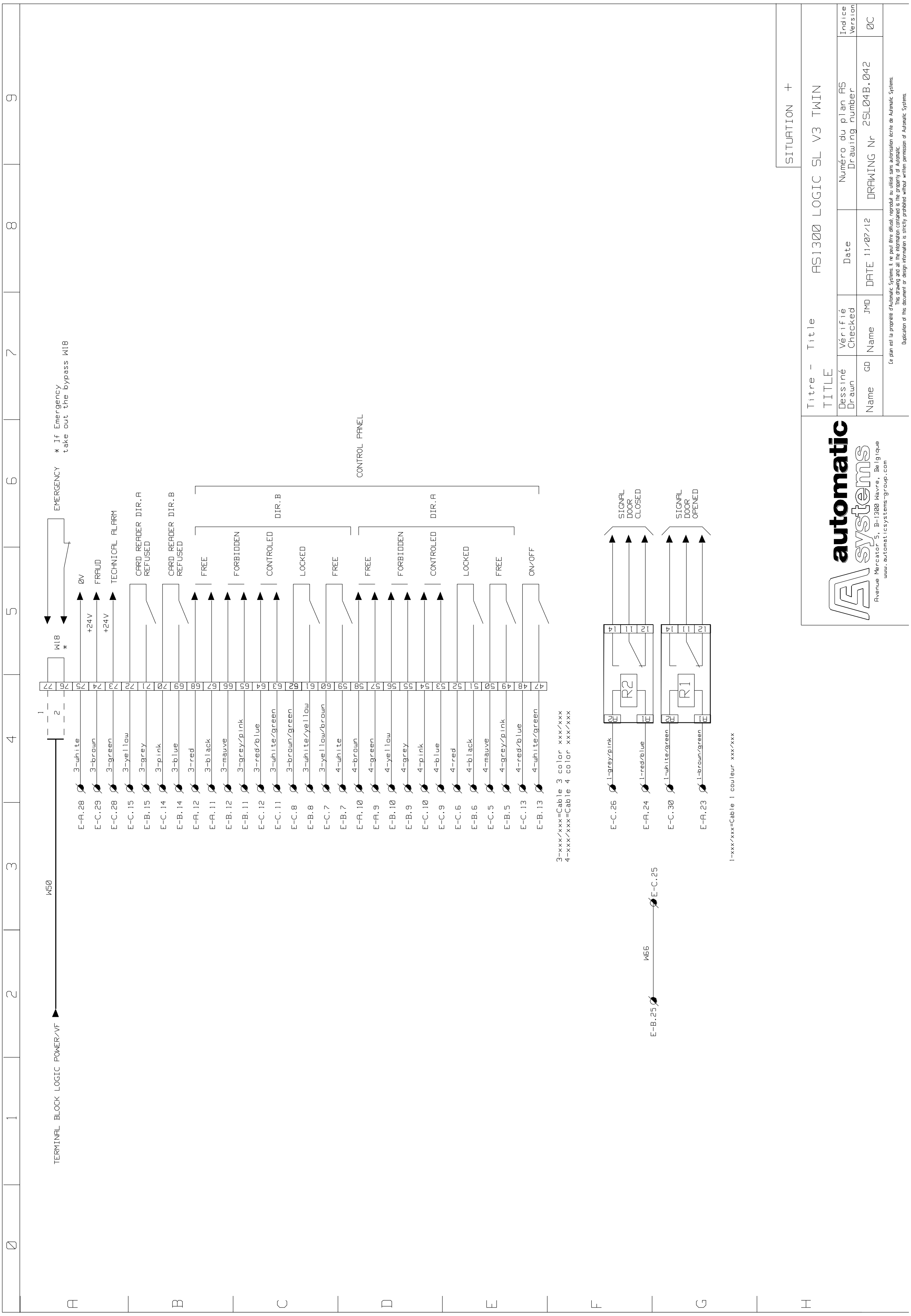

SITUATION +
Titre - Title
AS1300 LOGIC SL V3 ONLY RIGHT GATE
Numéro du plan AS
Drawing number
DRAWING Nr 2SL04A.037
Indice Version
0B
Dessiné Drawn
Name GD
Vérifié Checked
Name JMD
Date
DATE 05/09/12
automatic systems
Avenue Mercator 5, B-1300 Wavre, Belgique
www.automaticsystems-group.com
AS1300 MASTER
AS1300 SLAVE
DISPLAY
CAN ATV312 CONNECTION
DIRECTION A
DIRECTION B
04A.037_06


TERMINAL BLOCK LOGIC POWER/VF
EMERGENCY
CONTROL PANEL
SIGNAL DOORS CLOSED
SIGNAL DOORS OPENED
3-xxx/xxx=Cable 3 color xxx/xxx
4-xxx/xxx=Cable 4 color xxx/xxx
1-xxx/xxx=Cable 1 color xxx/xxx
SITUATION +
Titre - Title AS1300 LOGIC SL V3 ONLY RIGHT GATE
automatic systems
DATE 11/07/12
DRAWING Nr 2SL04B.037
0D
046.037_04

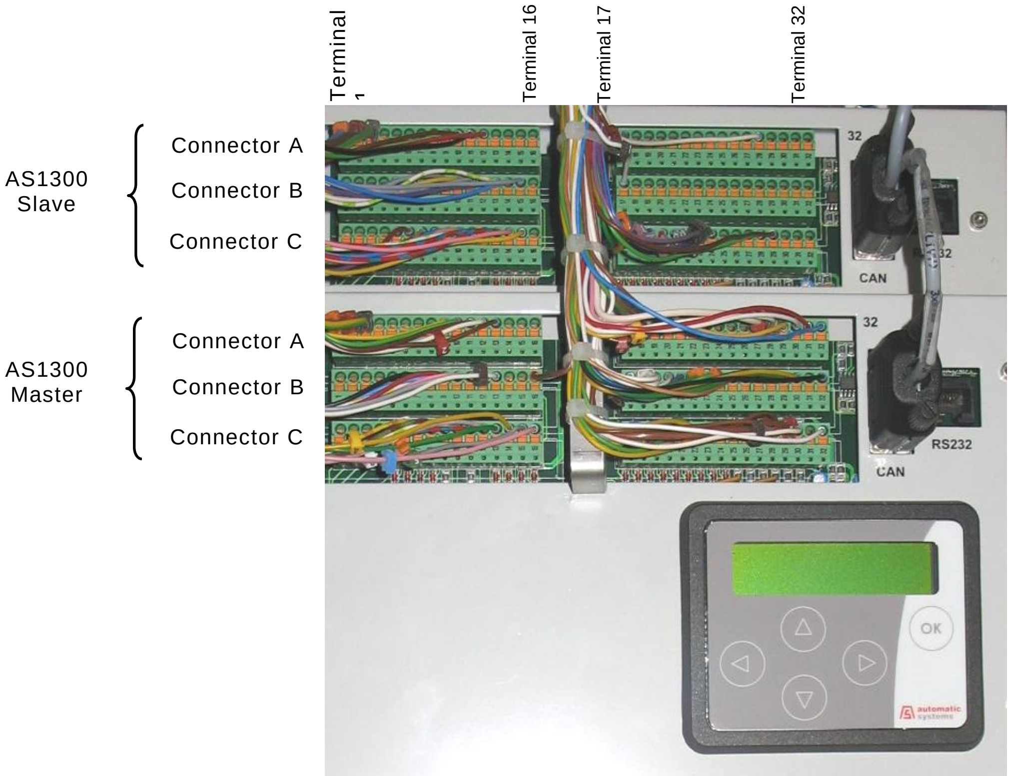
8.2. Specific pages to Twin gates




SITUATION
AS1300 LOGIC SL V3 TWIN
DRAWING Nr 2SL04A.042
DATE 05/09/12
AS1300 MASTER
AS1300 SLAVE
DISPLAY
CAN ATV312 CONNECTION
DIRECTION A
DIRECTION B
BUZZER
POSITION DETECTOR DOOR 1


TERMINAL BLOCK LOGIC POWER/VF
W50
EMERGENCY
* If Emergency take out the bypass W18
0V
FRAUD
TECHNICAL ALARM
CARD READER DIR.A REFUSED
CARD READER DIR.B REFUSED
CONTROL PANEL
DIR.B
DIR.A
FREE
FORBIDDEN
CONTROLED
LOCKED
ON/OFF
SIGNAL DOOR CLOSED
SIGNAL DOOR OPENED
W66
3-xxx/xxx=Cable 3 color xxx/xxx
4-xxx/xxx=Cable 4 color xxx/xxx
1-xxx/xxx=Cable 1 couleur xxx/xxx
SITUATION +
Titre - Title
AS1300 LOGIC SL V3 TWIN
Numéro du plan AS Drawing number
DRAWING Nr 2SL04B.042
Date
DATE 11/07/12
Indice Version
0C
Vérifié Checked
Dessiné Drawn
automatic systems
Avenue Mercator, 5, B-1300 Wavre, Belgique
www.automaticsystems-group.com
040.042_0C

8.3. Assignment of the control board terminal blocks (Input/Output)



In the following table, which represents the photo above turned 90°:

- DI: Digital Input
- AI: Analogue Input
- DO: Digital Output
- AO: Analogue Output
- Rel: output on relay (= dry contact)

AS1300 – MASTER						
Terminal no.	Connectors			Assignments		
	C	B	A	C	B	A
1			24V PWR	Reserved for DP	Reserved for DP	Incoming power supply +24V
2			0V PWR	Reserved for DP	Reserved for DP	Incoming power supply 0V
3			PE	Reserved for DP	Reserved for DP	Incoming ground cable
4			(PE)	Reserved for DP	Reserved for DP	Ground
5	DI1	+24V	0V	Cell SL1	+24V	0V
6	DI2	+24V	0V	Cell SL12	+24V	0V
7	DI3	+24V	0V	Reader A Authorisation	+24V	0V
8	DI4	+24V	0V	Reader B Authorisation	+24V	0V
9 10	DO1 Rel1	DO3 Rel3	DO5 Rel5	Reader A - Passage	Reader B - Passage	Technical failure
11 12	DO2 Rel2	DO4 Rel4	DO6 Rel6	Reader A - SL Ready	Reader B - SL Ready	Infringement
13	DI5	+24V	0V	Cell SH3	+24V	0V
14	DI6	+24V	0V	Cell SH4	+24V	0V
15	DI7	+24V	0V	Cell SH5	+24V	0V
16	DI8	DI18	0V	Cell SH6	Cells GF	0V
17	DI9	+24V	0V	Cell SH7	+24V	0V
18	DI10	+24V	0V	Cell SH8	+24V	0V
19	DI11	+24V	0V	Cell SH9	+24V	0V
20	DI12	+24V	0V	Cell SH10	+24V	0V
21	DI13	+24V	0V	Cell SM6	+24V	0V
22	DI14	+24V	0V	Cell SM7	+24V	0V
23	DI15	+24V	0V	Cell SL6	+24V	0V
24	DI16	+24V	0V	Cell SL7	+24V	0V
25	DI17*	+24V	0V	Evacuation	+24V	0V
26	DO7*	DO8*	0V	Presence in zone A	Presence in zone B	0V
27	DO9	24V SECUR	0V	Buzzer		0V
28	DO10 PWM	DO13	0V	Picto orientation A Arrow	Picto orientation B Arrow	0V
29	DO11 PWM	DO14	0V	Picto operation A.0 green	Picto operation B.0 green	0V
30	DO12 PWM	DO15	0V	Picto operation A.1 red	Picto operation B.1 red	0V
31	AO1	AO2	0V			0V
32	AI1	AI2	0V	Sensor position 1	Sensor position 2	0V

AS1300 – SLAVE						
1			24V PWR	Reserved for DP	Reserved for DP	Incoming power supply +24V
2			0V PWR	Reserved for DP	Reserved for DP	Incoming power supply 0V
3			PE	Reserved for DP	Reserved for DP	Incoming ground cable
4			(PE)	Reserved for DP	Reserved for DP	Ground
5	DI1	+24V	0V	Remote Control A.0 - Free	+24V	0V
6	DI2	+24V	0V	Remote Control A.1 - Locked	+24V	0V
7	DI3	+24V	0V	Remote Control B.0 - Free	+24V	0V
8	DI4	+24V	0V	Remote Control B.1 - Locked	+24V	0V
9 10	DO1 Rel1	DO3 Rel3	DO5 Rel5	Remote control A Controlled	Remote Control A Locked	Remote Control A Free
11 12	DO2 Rel2	DO4 Rel4	DO6 Rel6	Remote Control B Controlled	Remote Control B Locked	Remote Control B Free
13	DI5	+24V	0V	Remote Control On	+24V	0V
14	DI6	+24V	0V	Configurable input 1	+24V	0V
15	DI7	+24V	0V	Configurable input 2	+24V	0V
16	DI8	DI18	0V	Cell CH		0V
17	DI9	+24V	0V	Cell CB	+24V	0V
18	DI10	+24V	0V		+24V	0V
19	DI11	+24V	0V	Cell SH1	+24V	0V
20	DI12	+24V	0V	Cell SH2	+24V	0V
21	DI13	+24V	0V	Cell SH11	+24V	0V
22	DI14	+24V	0V	Cell SH12	+24V	0V
23	DI15	+24V	0V	Cell SL5	+24V	0V
24	DI16	+24V	0V	Cell SL8	+24V	0V
25	DI17*	+24V	0V	+24V for DO7 and DO8	+24V	0V
26	DO7*	DO8*	0V	Obstacles closed	Fraud	0V
27	DO9	24V SECUR	0V	Intrusion		0V
28	DO10 PWM	DO13	0V	Technical failure	Picto orientation A On	0V
29	DO11 PWM	DO14	0V	Infringement	Picto orientation B On	0V
30	DO12 PWM	DO15	0V	Obstacles open		0V
31	AO1	AO2	0V			0V
32	AI1	AI2	0V			0V

9. CERTIFICATE OF COMPLIANCE

Déclaration CE de conformité

Nous, soussignés,

AUTOMATIC SYSTEMS s.a.
Avenue Mercator, 5
B-1300 WAVRE
Belgique

Déclarons que la machine
Couloir sécurisé de passage
SL900
SL901
SL902
SL910
SL911
SL912
SL900 Twin
SL901 Twin
SL902 Twin

est conforme aux dispositions des Directives, normes et autres spécifications suivantes:

- Directive Sécurité des Machine 2006/42/CE.
- Directive Basse Tension 2006/95/CE.
- Directive Compatibilité électromagnétique 2004/108/CE.
- EN 12100-1: 2003 Sécurité des machines- Terminologie de base et méthodologie.
- EN 12100-2: 2003 Sécurité des machines- Principes techniques et spécifications.
- EN 60204-1: 2006 Sécurité des machines, Equipement des machines- Règles générales.
- EN 61000-6-3: 2001 Compatibilité électromagnétique- Norme générique émission- Résidentiel, commercial, industrie légère.
- EN 61000-6-2: 2001 Compatibilité électromagnétique- Norme générique immunité- Résidentiel, commercial, industrie lourde.

EC declaration of conformity

We, undersigned,

AUTOMATIC SYSTEMS s.a.
Avenue Mercator, 5
B-1300 WAVRE
Belgium

Herewith declare that the machinery
Security entrance lane
SL900
SL901
SL902
SL910
SL911
SL912
SL900 Twin
SL901 Twin
SL902 Twin

is in accordance with the conditions of the following Directives, standards and other specifications:

- Machinery Directive 2006/42/CE
- Low-voltage Directive 2006/95/CE
- Electromagnetic compatibility Directive 2004/108/EC
- EN 12100-1: 2003 Machinery – Basic terminology and methodology.
- EN 12100-2: 2003 Machinery – Technical principles and specifications.
- EN 60204-1: 2006 Safety of machinery. Electrical equipment of machines. General requirements.
- EN 61000-6-3: 2001 Electromagnetic compatibility (EMC). Generic standards. Emission standard for residential, commercial and light-industrial environments.
- EN 61000-6-2: 2001 Electromagnetic compatibility (EMC). Generic standards. Immunity standard for industrial environments.

Fait à WAVRE,
le : 2009-12-03
Nom du signataire : Denis VANMOL
Fonction : Directeur du développement
Signature :

Made in WAVRE
Date: 2009-12-03
Name : Denis VANMOL
Function : Director of Development
Signature :

AUTOMATIC SYSTEMS BELGIUM - HQ

Email: asmail@automatic-systems.com

Tel.: +32.10.23 02 11

Fax: +32.10.23 02 02