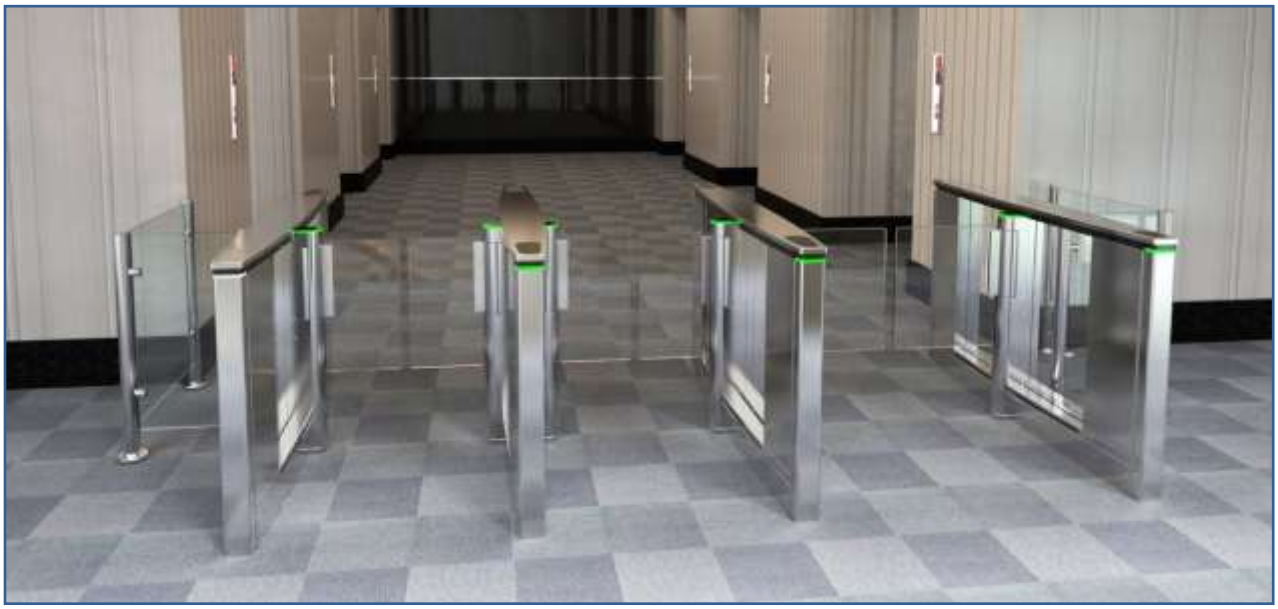
PG300 Handover Information



To ensure safe operation, long term reliability and working efficiency, EN 16005 recommends that powered gate installations MUST be maintained and inspected by a competent person.

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Contents

1. Safety, Prohibit and Legal Notices.

The guidance in this manual is without prejudice to the requirements, for means of escape in the case of fire. The specifier must consult other relevant authorities such as fire, building control and the owner/occupier, as each have a related responsibility in the installation and operation of an access-controlled gate system.

Resellers, integrators, installers, specifies and owner/occupiers of premises intending to use an access-controlled gate system are strongly advised to establish predicted user characteristics and precise operational requirements such as: -

- The volume of pedestrian traffic at different times of the day;
- The type of pedestrian traffic, such as the elderly, the infirm, disabled persons and young children;
- The level of security required;
- If users are wearing high visibility clothing.

1.0 Safety notes.

Resellers, integrators, installers, service providers, specifies and owner/occupiers of premises, MUST adhere to these safety notes.

	If regular use by children (users shorter than 1m) is anticipated, ESP recommends: - ○ That children are kept under the supervision of an adult whilst near the gates; ○ That when using the gates children MUST be accompanied by an adult. ○ That the child MUST proceed ahead of the adult and that valid open commands are given for both the child and the adult. ○ That all optional safety devices are installed to achieve the highest level of safety. ○ That the gates parameters are set to full safe mode ○ That the gates are set as controlled entry and exit. ○ That appropriate safety signage and notices are affixed/placed near the gates. ○ That where possible audio voice announcements are made to warn users of the dangers of playing near the gates and incorrect use.
	Persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge MUST not use access-controlled gates without supervision or instruction by a person responsible for their safety.
	Animals MUST be kept on their leads and under control by their owners.

	Anyone using the gates MUST be trained in their correct use. Failure to provide such training may result in serious accidents or injuries.
	Access-controlled gate systems MUST be installed, maintained and inspected by a competent person in accordance with BS EN 16005:2012, 4.2, BS7036 and manufacturer's specifications.
	The gates are supplied configured in "minimum risk" mode for users. Any modification of parameters must be done knowingly by manufacturer trained personnel.
	The gates are designed for indoor use only and must be protected from the outside elements.
	The installer MUST comply with local regulations when installing an access-controlled gate system.
	More detailed safety requirements are given in BS EN 16005:2012, 4.2, BS7036 and our manual of good practice (MOGP).
	The gates MUST not be used for any other purpose other than which they have been designed.
	Access to the mechanism must be reserved for manufacturer trained personnel that are fully aware of the electrical and mechanical risks involved whilst working on the equipment.
	Any operation that does not require the equipment to be powered, isolate at the distribution panel or local isolation switch.
	Internal item's likely to be energised or move MUST be handled with care.
	The gates MUST be fastened to the floor before putting into use.
	For safety reasons it should NOT be assumed the gates are working safely. The owner/occupier MUST carry out weekly checks on all safety devices.
	There should be no notice boards. Literature racks, merchandise displays or other distractions or obstructions in the vicinity of the gates which may congest or inhibit traffic flow.
	Lack of maintenance can lead to unsafe operation.
	ESP cannot be held responsible for any damage or injury resulting from the improper use of the gates.
	Do not install this equipment in an explosive area.
	To avoid the risk of voiding the warranty use antistatic gloves or bracelets when handling electronic components.
	Do not add unapproved accessories.

1.1 Prohibit notices.

Resellers, integrators, installers, service providers, specifies and owner/occupiers of premises, MUST adhere to these prohibit notes.

	Do not tailgate.
	Do not travel in the wrong direction.
	Do not rush the gates.
	Do not loiter in the gates.
	Do not play in the gates.
	Do not allow children to use the gates unaccompanied.

1.2 Legal notes.

Resellers, integrators, installers, service providers, specifies and owner/occupiers of premises, MUST adhere to these legal notes.

	In the event of resale of the equipment, it is the responsibility of the seller to ensure ○ That a copy of the safety notices are provided to the purchaser. ○ That a copy of the handover manual is provided to the purchaser. ○ That the equipment's foreseeable environment, user and technical characteristics of the site are meet by the equipment.
	The re-seller shall defend and indemnify ESP from any claims which may be raised against ESP due to the seller's failure to comply with the legal and safety notices.

2.3 Purpose

BS EN16005:2012 states that proper operating instructions including routine maintenance instructions shall be provided to the final user after installation. The instruction must at least include: -

a. Correct method of operating the gates.
b. Operating conditions: e.g. operating hours per day, automatic/manual operation, indication of the operating mode(s).
c. Explanation of the warning signs of the gate.
d. Information about the safe use of the manual emergency and/or manual release.
e. Range of intended environmental conditions (e.g. temperature, relative humidity, electromagnetic fields and when applicable warning against use in windy conditions).

f. Restrictions on use.
g. Details of safety functions, list, and location of protective devices.
h. Information on prohibited use such as dashing though an open gate.

Routine maintenance instructions must: -

a. Highlight that to ensure safe operation, long term reliability and working efficiency, a powered gate must be regularly maintained according to BS EN16005:2012 and manufacturer specification.
b. Detail frequency of maintenance to be carried out.
c. Give simple instruction that can be undertaken by the owner without specific competence
d. Inform the owner about the importance of recording and keeping maintenance records.

	The owner/occupier is deemed to be the person responsible for the day-to-day use of the powered gates.

2.1 Regulations that may apply.

The following act(s), regulation(s) and law(s) are not intended to be a comprehensive guide, but a guide to some important legal requirements. These act(s), regulation(s) and law(s) are provided on a without ‘‘prejudice” basis to aid ESP in fulfilling its obligations under the legislation. For more detailed information on the following act(s), regulation(s) and law(s) please refer to our MOGP.

- Regulatory Reform (Fire safety) Order 2005.
- Approved document B, Fire Safety.
- Approved document M, Access to and the use of buildings.
- BS EN16005:2012 Code of practice for safety at powered doors
- BS 6180:2011 Code of practice for barriers in and about buildings.

3. General Design.

The PG300 paddle leafed gate provides safe, high speed, bi-directional pedestrian throughput, with an elegant, sophisticated look, essential for today’s corporate environment.

The PG300 range is designed for use in corporate reception areas, metro stations, railway stations, bus stations, airports, factories, hotels, scenic spots, museums, libraries, exhibition centers, stadiums, education facilities and cinemas, etc.

The cabinet is curved which provides an elegant, sophisticated look, essential for today’s corporate environment. The PG300 has a strong mounting base for fixing the gates to the floor and for providing level adjustments. All the control cables enter the gates through holes in the mounting base.

The transparent plexiglass obstacles look identical to glass but provide better protection for the accidental collision with solid objects.

The PG300 is made up of: -

- A robust internal steel structure;
- A stainless-steel outer frame;
- Glass side walls;
- Two central columns house the drive motors, encodes, status LED, and brakes.
- Removable access doors housing the main controller, isolation switch, power supply;
- Removable top cover housing the high lever detection photocells, photocell I/O controllers and functional pictograms;
- Removable bottom cover housing the low lever detection photocells, main fixing points and cable entry points.

The detection sensors provide safety in the opening and closing cycles of the gates obstacles.

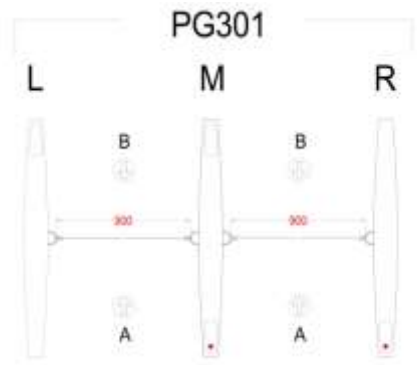
- In the opening cycle, if an obstruction is detected on the opposite side of the gates (wrong direction) the gate will not open until the obstruction has cleared.
- In the closing cycle if an obstruction is detected in the control zone when the gate is open than it will not close until the obstruction has cleared.

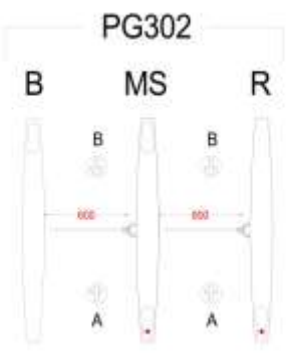
Throughput speed is approximately 25~30 persons/min, but dependent on the access control system and the speed of the users. When installed in conjunction with any access control system paddle gates provide a medium level of entrance security.

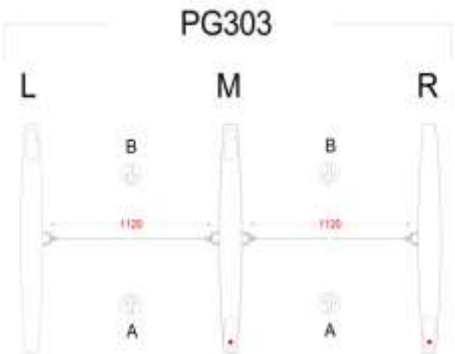
3.0 Lane types and recommended users.

As standard the PG300 range comes in 600, 900 and 1120mm clear passage widths, 600mm lanes can be either single or double leafed and all are supplied with: -

- 900mm high plexi-glass;
- 8 high level detection/safety photocells;
- 8 low level detection/safety photocells;







The normal direction of passage is ‘A’ = entry and ‘B’ = exit.

The left-hand cabinet (L) of a single lane is generally the slave unit and the right-hand cabinet (R) the master. Intermediate cabinets (M or MS) provide both a master and slave function and can be used to create a group of two or more lanes.

NOTE(s)

- Double leafed lanes provide slightly higher security than single leafed lanes because they open and close more quickly.

3.2.1 PG300 user types.

The PG300 W600 is a double leafed lane with 600mm clear passage walkway, suitable for: -

				
Safe	Caution	Caution	Danger	Danger

3.2.2 PG301 user types.

The PG301 W900 is a double leafed lane with 900mm clear passage walkway suitable for: -

					
Caution	Caution	Danger	Danger	Danger	Danger

3.2.3 PG302 user types.

The PG302 W600 is a single leafed lane with 600mm clear passage walkway suitable for: -

				
Safe	Caution	Caution	Danger	Danger

3.2.3 PG303 user types.

The PG303 W1120 is a double leafed lane with 1120mm clear passage walkway suitable for much large bulky items and most types of sports wheelchairs.

						
Caution	Caution	Danger	Danger	Danger	Danger	Danger

3.1 Security and Safety

The quick opening and closing speed of the gate means it can meet the demand of large pedestrian flow whilst effectively monitoring unauthorised users and providing safety of passage. For more information please see detection sensors.

3.1.1 Adjustable safety and security level

The control system allows the safety and security level of the lane to be adjusted. The low-security mode gives priority to safety and the high-security mode gives priority to security.

	The gates are normally supplied configured in "minimum risk" mode for users. Any modification of parameters must be done knowingly by manufactures trained personnel.

3.1.2 Safety in the opening and closing cycle

The closing and closing cycle of a paddle gate is usually regarded as one of the major hazards. Therefore, the PG300 is fitted with SIXTEEN pairs of sensors as standard to help prevent the gate hitting user and obstacles during the closing cycle.

	Anyone using the gates MUST be trained in their correct use. Failure to provide such training may result in serious accidents or injuries.

3.2 Main Features

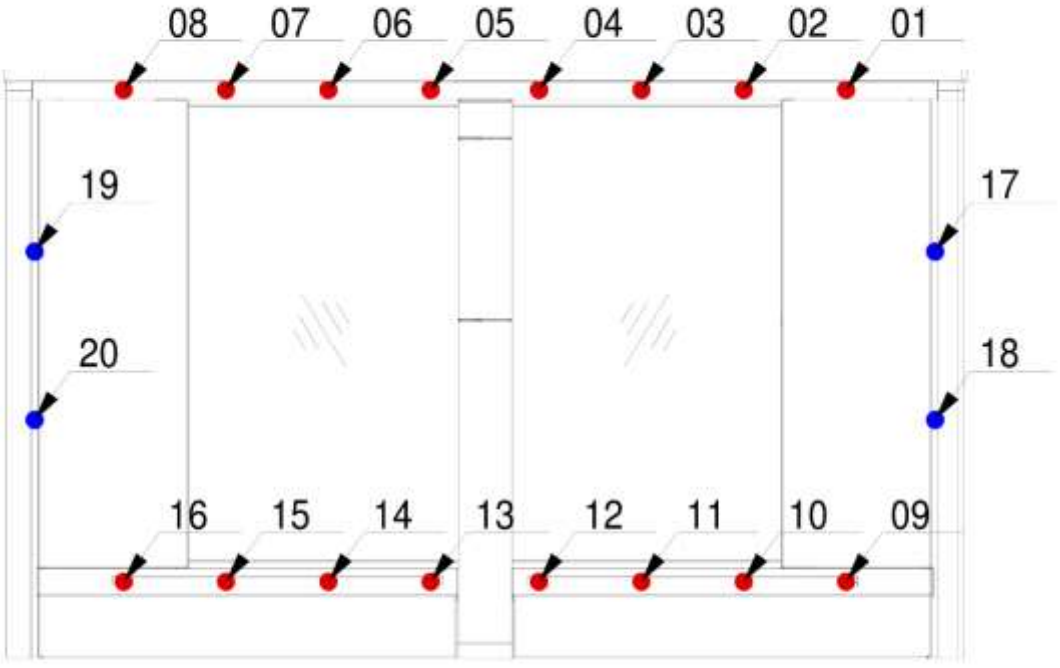
Safety Devices	• Emergency input – Obstacles opens freely on activation of the fire alarm input. • Power failure - Obstacles manually push open on power failure. • Detection sensors - 16 detection sensors provide safety during the opening and closing cycles. • Low impact force.
Working mode	Lanes can be set to operate with the obstacle in normally open or normally closed position.
Control mode	Lanes can be set to operate as, single direction, bi-direction, free pass and controlled, there are 9 control modes in total.
No passage timer	Adjustable no passage timer to close the gates if no passage is detected.
Fraud Detection	First stage is to alarm when unusual pedestrian movement is detected by the sensors.

	Second stage is to control the obstacles to either brake or attempt to close to stop unauthorised passage.
Stacking	Adjustable stacking count to store number of valid open commands, counts down as each passage is completed;
User guide	Status and functional LED indictors show users if the lane is operational and how to proceed through the lane.
TD controller	The TD controller is used to set all of the gates working parameters. Simple screen and buttons with mobile phone type menu to set parameter and fault find the gates.
Detection Sensors	Top 8 sensors monitor user passage and provide safety through the lane. 8 low level sensors provide safety through the lane. 4 more optional sensors provide a larger control zone increase safety and security.
Sounder/Buzzer	Fraud and intrusion detections are indicated via the sounder;
Test mode	Gates can be set into test mode to check for faults;
Interfaces	I/O,RS232/485,CAN and other control interface;

3.3 Detection Sensors

Due to the demands of security and safety the PG300 is fitted as standard with SIXTEEN pairs of sensors, 8 at high level and 8 at low level. The sensors are used to monitor and detect: -

- Unauthorised entry;
- Infringements, and
- Provide safety in the opening and closing cycles.



Cells 01 to 16 are supplied as standard, all cells are transmit and receive. 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 a horizontal group.

The 01 to 08 cells manage the passage, safety and control infringements. Using the TD controller, cells 01, 08, 17 and 19 can be removed from the detection group which prohibit the opening of the obstacles when something is present in this area.

The 09 to 16 cells manage the safety and control infringements. Using the TD controller, cells 09 to 16 can be removed from the detection group.

Cells 17 to 20 are optional extra and recommended for use with wheelchair or pushchairs

4 OPERATION

The PG300 contains a TD controller with trapezoid menu design, which can set up various parameters, including the opening and closing speed, alarm modes, working status, sounders and sensors.

For more detailed information on setting up the gates please refer to the TD and JX programming manuals.

It is important that the building owner/occupier provide staff and any users with safety information, instruction and training on how to use the gates correctly.

	The gates are normally supplied configured in "minimum risk" mode for users. Any modification of parameters must be done knowingly by manufacturer trained personnel.
	Anyone using the gates MUST be trained in their correct use. Failure to provide such training may result in serious accidents or injuries.

4.0 Hazards.

PADDLE gates have potential hazards in the following five areas:

	During the opening cycle – users can be struck, drawn in, trapped or walk into the leaves.
	During the closing cycle – users can be struck, drawn in, trapped or walk into the leaves.
	Tripping hazards.
	Congestion.

⚠	Lack of supervision.
⚠	Lack of training.

Attention is drawn to the increased risk when paddle gates are specified for two-way traffic operation, due to the gate leaves opening towards the user. When any contact with the user is unacceptable (high risk) because a significant proportion of the users are elderly, infirm, disabled or young children, additional protective devices are needed.

4.0.0 Hazards during the opening cycle.

Detection sensors are provided to protect users when they are stood in the swept area of the gates leaves. If a risk remains, appropriate signage should be fitted to draw the user's attention to the risk, e.g. "Automatic door", "Keep clear", "No entry", "Direction of travel".

❗	Anyone using the gates MUST be trained in their correct use. Failure to provide such training may result in serious accidents or injuries.

4.0.1 Hazards during the closing cycle.

Detection sensors are provided to protect users from being hit by the gate leaves during the closing.

❗	Anyone using the gates MUST be trained in their correct use. Failure to provide such training may result in serious accidents or injuries.

4.1 Status and functional LEDs

Understanding the gates status reduces the risk of personal injury and increases the throughput speed. It is therefore important to train users on how the status and functional LED's work.

The PG300 has two different types of LED indictors, status and functional.

- Status – Indicates whether the lane is in use or not, and
- Functional - Tells users whether they can pass or not.

The status LEDs are fitted in the end panel to clearly show the user approaching the lane whether it is in use or not. GREEN indicates that the lane is in use and RED indicates that it is NOT in use.

The functional LEDs are a green arrow and red cross fitted on the top cover at either end of the lane. When a valid open command is received the green arrow will light showing it is safe to pass, and the opposite end of the lane the red cross will illuminate showing it is not safe to pass.



In addition, the center column is also fitted with LEDs that work the same as the functional LEDs



	Anyone using the gates MUST be trained in their correct use. Failure to provide such training may result in serious accidents or injuries.

4.2 Intrusion and Fraud

- **Intrusion** is when a user stands in the control zone.
- **Fraud** is an unauthorised passage through the gate.

For each direction of passage, when an intrusion or fraud is detected: -

- The buzzer sounds.
- The obstacle can be set to stay open or attempt to close.
- The orientation and function pictograms change to red.

4.2.0 "Intrusion"

An intrusion is someone detected in the control zone of the lane when it is at rest. It is declared after a time delay allowing a user in the lane to present a passage authorisation.

	Depending on the safety setting when “Intrusion” is detected the gates may attempt to open which can cause serious injury.
	The gates are normally supplied configured in "minimum risk" mode for users. Any modification of parameters must be done knowingly by manufacturer trained personnel.
	Anyone using the gates MUST be trained in their correct use. Failure to provide such training may result in serious accidents or injuries.

4.2.1 "Tailgating" fraud

Tailgating is declared when an unauthorised person follows an authorised user during their passage.

	Depending on the safety setting when “tailgating” is detected the gates may attempt to close which can cause serious injury.
	The gates are normally supplied configured in "minimum risk" mode for users. Any modification of parameters must be done knowingly by manufacturer trained personnel.
	Anyone using the gates MUST be trained in their correct use. Failure to provide such training may result in serious accidents or injuries.

4.2.2 "Wrong way" fraud

Wrong way is declared when an unauthorised person is detected in one direction while an authorised passage is underway in the other direction.

	Depending on the safety setting when “wrong way” is detected the gates may attempt to close which can cause serious injury.
	The gates are normally supplied configured in "minimum risk" mode for users. Any modification of parameters must be done knowingly by manufacturer trained personnel.
	Anyone using the gates MUST be trained in their correct use. Failure to provide such training may result in serious accidents or injuries.

4.2.3 "Loitering" fraud

Loitering is declared when an unauthorised person is detected in the control zone once a passage has taken place.

	The gates are normally supplied configured in "minimum risk" mode for users. Any modification of parameters must be done knowingly by manufacturer trained personnel.
	Anyone using the gates MUST be trained in their correct use. Failure to provide such training may result in serious accidents or injuries.

4.3 Sounder/Buzzer

The sounder/buzzer is activated if an intrusion or fraud is detected during the passage sequence.

4.4 Open Commands

The open commands are connected to the TD controller. When an authorisation signal is received, a configurable timer starts, corresponding to the time allowed for the user to pass through the lane, after which the obstacles automatically close.

Successive passage authorisations can be stored for each direction and give the right to each passage. The number of stored passages can be set in the TD controller.

Passage authorisation signal must be as short as possible, ideally 100ms. It must be a volt free, normally open contact. A separate open command is required for each direction of travel and for each user.

Open command input.

- If the open pulse is less than 2 seconds' gates will open and will remain open until either a valid passage or OPEN DELAY time out.
- If the open pulse is permanent and longer than the OPEN DELAY, the logic assumes a HOLD OPEN status and the gates will remain open until the open pulse is removed. Once the pulse is removed the gate will close without any safety.
- If the open pulse is more than 3 seconds, then the gates will close as soon as the pulse is removed.

	Anyone using the gates MUST be trained in their correct use. Failure to provide such training may result in serious accidents or injuries.
	If the desk top console is provided with a momentary push button than it must be pressed for LESS than 3 seconds. If the button is pressed for more than 3 seconds, it may close on the user.
	If the open pulse is permanent and longer than the OPEN DELAY, the logic assumes a HOLD OPEN status and the gates will remain open until the open pulse is removed. Once the pulse is removed the gate will close without any safety.

4.5 Hold Open Mode

When the gates are in hold open mode, the obstacles are opened and remain open, so that passage through the lane and take place freely, in both directions.

Hold open mode, can be triggered by either: -

1. A volt free normally open contact connected to the fire alarm input, or
2. A volt free normally open contact connected to any open command (i.e. direction ‘A’ or ‘B’).

Note(s)

1. After 2 seconds the GREEN ARROW and RED CROSS stop working FLASHING.

	Anyone using the gates MUST be trained in their correct use. Failure to provide such training may result in serious accidents or injuries.
	Make sure lane is clear of user before removing the hold open command.
	If the open pulse is permanent and longer than the OPEN DELAY, the logic assumes a HOLD OPEN status and the gates will remain open until the open pulse is removed. Once the pulse is removed the gate will close without any safety.

4.6 Power failure

On power failure the gate will remain in the position they were in when the power failed. The gates are unlocked and can be manually pushed in any direction providing safe passage.

	Make sure lane is clear of users before restoring the power.
	If the open pulse is permanent and longer than the OPEN DELAY, the logic assumes a HOLD OPEN status and the gates will remain open until the open pulse is removed. Once the pulse is removed the gate will close without any safety.

4.7 Fire alarm input

If a fire alarm interface is fitted the gates can be set to open in either direction depending on site requirements.

4.8 Emergency evacuation

There are sometimes other emergencies apart from fire and power failure that require the gates to be opened. In this situation via an optional desk top console an emergency push button, reset via a key can be used to open all lanes.

Alternatively, a break-glass mounted close to the gates can be use.

4.9 Signage

The installer, owner/occupier should ensure that appropriate signage is affixed to the gates.

As a minimum glass manifestation should be fitted at a height of 850mm to 1000mm, and between 1400mm to1600mm.

Provision should be made to deter people from occupying the swept area of the gates. If a risk remains after the appropriate safety measures have been selected, appropriate signage should be fitted at a height of between 1300mm and 1600mm, to draw the user's attention to the risk, e.g. "Automatic door", "Keep clear", "No entry", "Direction of travel".

No entry sign	-	This sign should be used to indicate to users that entry from the side of approach is prohibited.
Keep clear sign	-	This sign should be used to instruct and inform users to keep away from the space through which a powered gate swing
Direction of travel sign	-	This sign should be used to indicate to users the direction of travel through the gate.
Emergency breakout sign	-	This sign should be used on doors which have an emergency breakout facility.
Automatic door sign	-	This sign should be used to indicate that the gate is activated automatically and thus give users advance warning of operation.
Disabled person sign	-	This sign should be used on gates or gate activation switches that are specifically intended for use by disabled people.

	Responsibility for the continued display and maintenance of such signage lies with the building owner/occupier.
	Any signs attached to the obstacle leaves must be above or below the detection sensors.

4.10 Desk top console

See reception deck control manual.

4.11 Breakdown

In the unlikely event of a breakdown isolate the power supply. The gate leaves will remain in the position they were in when the power failed. The gates are unlocked and can be manually pushed in any direction providing safe passage.

5. TRANING

Where appropriate, staff should be trained in the use of power gates to enable them, to:

a) Advise parents and their children of the risks to ensure that children are not exposed to unnecessary risks;

b) To help and advise the elderly, infirm and disabled people;

c) Take appropriate action in an emergency.

6 PROGRAMMING

Programming MUST only be carried out by manufacturer trained personnel and in compliance with the safety notes in this manual. Please refer to the TD and JX programming manuals.

	The gates are normally supplied configured in "minimum risk" mode for users. Any modification of parameters must be done knowingly by manufacturer trained personnel.

7 INSPECTION and MAINTENANCE

The installation and bringing into use should be carried out by a competent person or professional installation technician. All safety functions and systems should be verified and recorded in the building log book in accordance with BS EN 16005.

7.0 Owner/Occupier Inspection

To ensure continued safe operation of a power operated door installation, the installation and its environment should be subjected to systematic operational checks as often as is appropriate to the type of installation and its traffic flow, as detailed in the log book.

The owner/occupier is responsible for undertaking weekly safety test of the gate, unless a different frequency has been identified in the hazard analysis and risk assessment

	The building owner/occupier is deemed to be the person responsible for the day-to-day use of the gates.
	The test results should be recorded and retained by the building owner/occupier for at least 1 year.

For safety reasons it should NOT be assumed the gate is working safely.

There should be no notice boards, literature racks, merchandise displays or other distractions or obstructions in the vicinity of the gates which may congest or inhibit traffic flow.

If a fault is found with a safety device, the gates MUST be switch off and made safe. Use of the gate should not be reinstated until repairs have been undertaken by a competent person.

	Only manufacturer trained personnel, should remove the access panels.
	If a fault is found with a safety device, the gates MUST be switch off and made safe. Use of the gate should not be reinstated until repairs have been undertaken by a competent person.
	All electrically operated gates contain a mechanism and various electrical components. Any negligence during an intervention in the gate drive may seriously endanger your safety.
	Be careful in handling any internal parts which might be under power or could be set in motion.
	Be careful internal components may be covered in grease which could end up on your hands, arm and clothing.

7.0.0 Test the safety devices

For safety reasons it should NOT be assumed the gate is working safely. If a fault is found with a safety device, the gates MUST be switch off and made safe. Use of the gate should not be reinstated until repairs have been undertaken by a competent person.

	The following tests assume the gate is set in full safety mode.

1. Intrusion direction A - Place the test box in A direction detection zone and give an open command from B direction, the gate should NOT open.
2. Intrusion direction B - Place the test box in B direction detection zone and give an open command from A direction, the gate should NOT open.

	TAILGATING - The following tests assume the gate is set in full safety mode. If the gate is set to a higher security the gate leaves may close on you.

3. Tailgating, direction A - Give an open command in direction A ask someone to pass slightly ahead of you, gate should remain open and sound the buzzer.
4. Tailgating, direction B - Give an open command in direction B ask someone to pass slightly ahead of you, gate should remain open and sound the buzzer.

	WRONG DIRECTION - The following tests assume the gate is set in full safety mode. If the gate is set to a higher security the gate leaves may close on you.

5. Wrong Direction, direction A - Give an open command in direction A but walk through from direction B, gate should remain open and sound the buzzer.

6. Wrong Direction, direction B - Give an open command in direction B but walk through from direction A, gate should remain open and sound the buzzer.
7. Loitering, direction A - Give an open command in direction A but walk through from direction B, gate should remain open and sound the buzzer.
8. Loitering, direction B - Give an open command in direction B but walk through from direction A, gate should remain open and sound the buzzer.
9. Fire Alarm – Check the gates during the building fire alarm test. They should open when the fire alarm is activated.
10. Check status LEDs
11. Check functional LEDs
12. Carry out a basic risk assessment to highlight any changes to the building and types of users, using the gates.
13. Visually inspect the gates for chipped/broken glass.
14. Visually check all signage is readable and in place.
15. Check reception activation devices, push buttons, hold open key switches etc.
16. Clean outside of the cabinet and glass.

7.1 Maintenance

Maintenance at least annually must be carried out by manufacturer trained personnel in compliance with BS EN 16005, BS7036 and the manufacturer recommendations.

The frequency of maintenance must be adapted to conditions of use of the gates, especially when placed in an oxidizing atmosphere: at the entrance to a swimming pool (heated and chlorinated atmosphere), by the sea, in an industrial environment, etc.

8. BASIC RISK ASSESSMENT.

To ensure continued safe operation of the gates, the installation and its environment should be subjected to systematic operational checks as often as is appropriate to the type of installation and its traffic flow.

As many maintenance visits are schedule to be carried out at quiet times it is not always possible to establish the true user characteristics. Therefore, for the day-to-day use of the gates the owner/occupier is deemed to be the person responsible.

Carry out a basic risk assessment of the gate based on the hazards listed below and record all the user type that may use the gates. Assess the risk and decide if a full risk assessment is required. If you have any doubt recommend that a full risk assessment should be carried out.

Hazards.

Powered paddle gates have potential hazards in the following five areas:

- during the opening cycle – users can be struck, drawn in, trapped or walk into the door;
- during the closing cycle – users can be struck, drawn in, trapped or walk into the door;

- tripping hazards;
- congestion;
- Other hazards, for example: -
  - Lack of supervision;
  - Lack of training;
  - Installed on an emergency escape route;
  - Two-way traffic.

Attention is drawn to the increased risk when paddle gates are specified for two-way traffic, due to the gate leaf potentially opening towards the user. When a significant proportion of users are elderly, infirm, disabled or young children, additional protective devices may be needed.

Hazards during the opening cycle.

Provision should be made to deter people from occupying the swept area of the gates. If a risk remains after the appropriate safety measures have been selected, appropriate signage should be fitted to draw the user's attention to the risk, e.g. "Automatic door", "Keep clear", "No entry", "Direction of travel".

Hazards during the closing cycle.

Provision should be made using one of the following means to prevent gate leaves from closing on users during the closing cycle:

- Speed limitation;
- Protective devices i.e. High and low detection sensors;
- Low energy movement;

See BS7036-0-2014 for:

- Risk Assessment Flow Chart
- Risk reduction process
- Risk assessment check sheet for powered paddle leafed gates.

Additional recommendations

If powered gates are installed on an escape route and are intended as means of escape doors, then where practicable the gates should either be capable of manual breakout in the direction of escape or be arranged to fail safely in the open position in the event of mains power failure.

If neither of these recommendations can be achieved, or if they conflict with the advice of the relevant fire and building control authorities, then powered gates might not be appropriate for means of escape.

NOTE(s)

1. Attention is drawn to the Building Regulations 2010 [2], the Building (Scotland) Regulations 2004 [3], the Building Regulations (Northern Ireland) 2012 [4] and the Building Regulations

(Isle of Man) Order 2003 [5], in respect of requirements for means of escape. In particular, Scotland has additional requirements for automatic and revolving doorsets considered for use on escape routes and fire exits. Current technical guidance is given in Scottish Building Standards Technical Handbook, Section 2 (non-domestic edition) [6].

9 Warranty

The PG300 is covered by a twelve-month manufacturer's warranty against factory defective parts, on a back to base basis, excluding any vandalism and physical damage. During the first year all manufacturers faulty components will be replaced FREE OF CHARGE excluding normal wear and tear and physical abuse items etc.

Your PG300 gates are an important part of your building security and staff safety. That's why we want to make sure you'll be happy long after your initial purchase of the equipment.

Our Extended PARTS warranties allow you to benefit from continuing peace of mind that any faulty parts will be replaced free of charge even after your initial one-year manufacturer's warranty expires.

The Extended PARTS warranties are designed to provide expert protection for your investment and reduce your cost of ownership. The warranty is intended to be taken out when you first purchase the equipment. However, if you own a PG300 gate that's still within the one-year manufacturer's warranty and would like to maintain the reassurance and protection against unexpected parts failure, then please contact your supplier for more details.

10 AFTER-SALES SERVICE

Please contact your local supplier/installer.

Original Equipment Manufacturer	**European Service Centre**
Evolve Autogate Products HK Limited. Flat C, 3rd floor, Lladro Building, No.72 Hoi Yuen Road, Kwun Tong, Kowlong Hong Kong	Willings Services Limited Unit 5, Kenyons Yard Weyhill Road Andover Hampshire SP10 3NP

11 SPARE PARTS

Please refer to the spare parts manual available from EVOLVE.

11.0 Recommend Spare Parts

To enable a speedy repair, we recommend that the following items are held on site. Quantity is based on 1 – 5 cabinets.

DESCRIPTION	PART No.	QTY
Coupling (Large)	PG-CPG-001	1
Top bearing	PG-BAR-001	2
Electromagnetic brake/Clutch	PG-CTH-001	1
Encoder disc	PG-ECD-002	2
Functional Pictogram PCB	PG-FPCB-001	1
Motor controller JX3.25	PG-JX	2
Cabinet Lock and keys	PG-LK-001	1
Motor and gearbox, 2wire, 35watt	PG-MOT-001	1
Power Supply NES-100-24	PG-NES-100-24	1
Orientation LED and cable (LONG)	PG-ORIEN-LED	1
Photocell transmitter and receiver	PG-PHOT-001	1
Photocell I/O controller	PG-PIO-001	1
Photocell PSU interface	PG-PPSU-001	1
Sounder	PG-SOUND-001	1
TD Controller for paddle gate	PG-TD	1

12 TECHNICAL SPECIFICATIONS

- Size: H1020*W150*L1600mm
- Obstacle Width: 300-520mm
- Obstacle Material: 10mm think Plexi-glass
- Lane width: 600, 900 and 1120mm standard
- Noise: Static≤40db, Dynamic≤52db
- Flow rate: ＞30 passengers/min (depending on access control system reactivity and user speed).
- AISI 304L 220g brushed stainless steel housing, 1.5 mm thick.
- Steel frame with RoHS zinc electroplated corrosion resistance.
- Side walls: 10mm tempered safety glass.
- Weight:
  - 62 kg per left;
  - 64 kg per right;
  - 93 kg per middle;
- Electrical power supply: single phase 110 to 230Vac (+/-10%) - 5A - 50/60Hz + Ground.
- Electric power supply shall be protected by a 5A circuit breaker with 30 mA differential protection.
- Consumed power per lane:
  - Standby: 50 W
  - Cycle: 110 W

- Maximum: 180 W

- Motor (2 motors per lane): 24 Vdc.
- Min. obstacle opening / closing time (depending on access control system reactivity and user speed):
  - 0.65 s (PG300)
  - 0.85 s (PG301)
- Ambient temperature in use: 0 to +80°C.
- Ambient relative humidity in use: <95%, non-condensing.
- Conforms to CE standards.
- Conforms to UL 2593 and ANSI 156.10 standards (certification in progress).

12. References

12.0 ESP documents

Document No.	Title
Paddle Gate MOGP	MOGP
TD116a-133	TD Programming manual
JX3.25-126	JX Programming manual
PG300 Tech	Technical manual
PG300 Install	Installation manual
PG300 Maint	Maintenance manual
PG300 CheckSheets	Check sheets

12.1 Statutory documents

Document No.	Title
BS7036-0-2014	Power operated pedestrian doorsets - safety in use
BS EN 16005	Power operated pedestrian doorsets - safety in use – Requirements and test methods.
BS 8300:2009+A1:2010	Design of buildings and their approaches to meet the needs of disabled people – code of practice.

12.2 Abbreviations

The following abbreviations are created:

a. within this document;

b. from published sources.

Abbreviation	Description	Source

ESP	Evolve Security Products Limited	a
MOGP	manual of good practice	a

12.3 Definitions

The following topic specific definitions are created:

a. within this document;

b. from published sources.

Term	Definition	Source
	Mandatory symbol is used to identify something that MUST be followed.	a
	Danger symbol is used to identity a hazardous situation which, if not avoided, will result in serious personal injury.	a
	Caution symbol is used to identity a hazardous situation which, if not avoided, could result in minor or moderate injury.	a
Direction A	Direction of travel, generally from the outside to the inside.	a
Direction B	Direction of travel, generally from the inside to the outside	a
Security	Ability for the lane to detect fraud movements	a
Safety	Ability to protect users while using the lane	a
Competent person	ESP deems a competent person as someone who has been training by the equipment manufacturer.	a

12.4 Requirements owner

Paragraph Number	Owner
All	Andy Brown

12.5 History

Editions	Date	Changes	Author
00	18/02/2017	First draft	AB

APPENDIX A – CE Certificate

Shenzhen BCTC Technology Co.,Ltd.
No.101, Yousong Road, Longhua New District,
Shenzhen, Guangdong, P.R.China

Certificate of Compliance

Certificate Number: BCTC-FY161206325C

Applicant	:	**Evolve (ShenZhen) Autogate Products Co., Ltd.** 2/F, Building B, Tong Fu Yu Industrial Zone, Xi Xiang Town, Bao'an District, Shen Zhen, China
Manufacturer	:	**Evolve (ShenZhen) Autogate Products Co., Ltd.** 2/F, Building B, Tong Fu Yu Industrial Zone, Xi Xiang Town, Bao'an District, Shen Zhen, China
Product	:	**Paddle gate**
M/N	:	**PG200** **PG100, PG300, PG400, PG500.**
Test Report TCF	:	**BCTC-FY161206325S**

The EUT described above has been found in compliance with the requirements of the EC MD Directive 2006/42/EC and LVD Directive 2014/35/EU with amendments.

Test Standard	:	**EN ISO 12100: 2010** **EN 60204-1: 2006+AC: 2010**

Remarks:
The statement is based on a single evaluation of one sample of above mentioned products. It does not imply an assessment of the whole production. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in the report.

CE

Manager
Dec. 19, 2016

This certificate of conformity is based on a single evaluation of the submitted sample(s) of the above mentioned product. It does not imply an assessment of the whole product and relevant. Directives have to be observed.

Tel: 400-788-9558 0755-33019988
Http://www.bctc-lab.com Http://www.bctc-lab.com.cn

APPENDIX B - Owner/occupier safety check sheet

Owner/occupier CHECK SHEET	Rev. 01
PG300 Paddle Gate	Pages 1 of 2

Site:-	Location

ACTION / VERIFICATIONS

Physical inspection	-	Equipment damage/scratched.		**Other emergency devices**	-	Power failure	
	-	Obstacle damage/scratched.			-	Break-glass	
	-	Obstacle alignment.			-	Glass to BS6262	
	-	Side panels and brackets.			-	Fire Alarm input	
Safety devices	-	Intrusion direction A		**Other checks**	-	Desk top console/remote buttons.	
	-	Intrusion direction B					
	-	Wrong Direction - direction A			-	Status pictograms	
	-	Wrong Direction - direction B			-	Functional pictograms	
	-	Tailgating direction A			-	Sensor covers.	
	-	Tailgating direction B		**Clean**	-	Inside cabinet.	
		Loitering direction A			-	External cabinet.	
		Loitering direction B			-	Obstacle	

BASIC RISK ASSESSMENT

USER TYPES

If any RED user types use the gates than a FULL RISK ASSESMENT MUST BE RECOMMENDED

BASIC HAZARDS

HAZARDS	Impact	Crushing	Walk into the gate	Two-way traffic	Tripping	Congestion	Lack of supervision	Escape route

SAFETY MEASURES Fitted/used

BS7036 Signage	Glass manifestation	Low level sensors	Extra sensors position 1 + 8	

RISK Category (based on day of visit)	LOW		MEDIUM		HIGH		

If any RED user types use the gates than a FULL RISK ASSESMENT MUST BE RECOMMENDED

Full risk assessment required	YES		NO	

FINDINGS / ACTIONS / TAKEN / RECOMMENDATIONS

Date	
Name of checker	
Signature of checker	