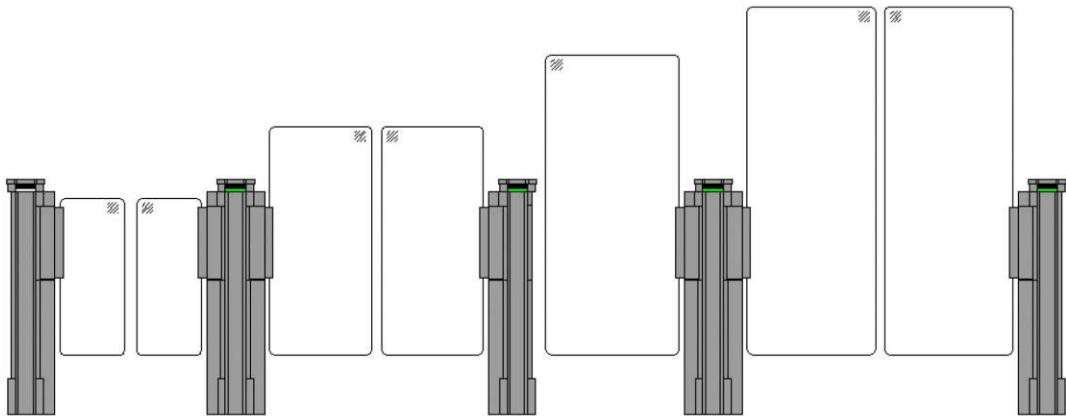


PG300

Intelligent Entrance Gate



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The manual is subject to revision without prior notice.

Contents

1.	SAFETY NOTES.	4
2.	OVERVIEW	4
3.	SPARE PARTS	4
3.1	GENERAL EQUIPMENT DESIGN	4
3.2	COMPONENT PARTS	5
3.3	LOCATION OF COMPONENTS	5
4.	RECOMMENDED SPARE PARTS LIST	6
5.	REFERANCES	15
5.1	REQUIREMENTS OWNER	15
5.2	HISTORY	15

1. SAFETY NOTES.

- The service and maintenance technicians MUST adhere to these safety notes when replacing any spare part.
- The service and maintenance technicians MUST adhere to BS7036, BS EN16005 and manufactures instructions when replacing any spare part.
- Any repair or maintenance work on the gates MUST be performed by manufacturer trained technicians.
- Any unauthorised intervention performed by a non-trained technician will automatically void the manufacturer's warranty.
- Access to the mechanism must only be carried out by manufacturer trained technicians that are fully aware of the electrical and mechanical risks involved with these gates.
- For any operation that does not require the gates to be powered, isolate the power at the distribution panel or at the local isolation switch.
- Any internal item likely to be energised or move must be handled with great care.
- Do not add unapproved parts or accessories.
- Use of antistatic gloves or bracelets (Electrostatic Discharge) is essential when handling electronic printed circuit boards.
- When sold the gates are configured in "minimum risk" mode for users. Any modification of parameters must be done knowingly by manufacturer trained technicians as any change greatly increase the risk of personal injury to users.
- 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 above obligations.

2. OVERVIEW

This spare parts manual should only be used by manufacturer trained technicians and in conjunction with the installation, field, and programming manuals.

3. SPARE PARTS

Spare parts MUST only be fitted by manufacturer trained technicians and in compliance with the safety notes in this manual and all other safety notes relating to ESP paddle gates.

3.1 General Equipment Design

The PG300 range can be installed as a single lane or multiple lane group. A single lane consists of one left-hand (L) and a right-hand (R) cabinet with either a single or double leaf obstacle.

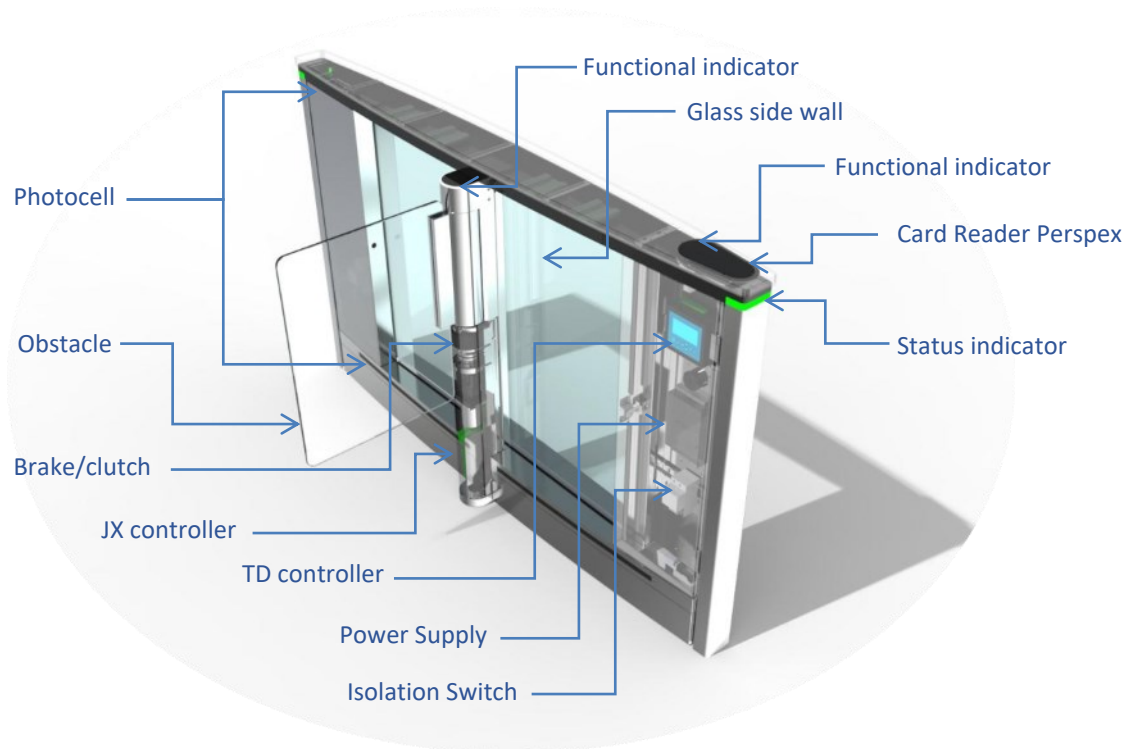
To create a multiple lane group, all that is needed is to place one or more middle cabinets (M) between the L and R cabinets. When different lane widths are required, hybrid M cabinets can be used.

In a single lane, the L cabinet is the slave unit and the R cabinet the master. In a multiple lane group, the far L cabinet is the slave and the far R cabinet the master with all the M cabinets being both master and slave cabinets.

The normal direction of travel through a lane is direction 'A' ENTRY and direction 'B' EXIT.

3.2 Component Parts

Location of parts in a master cabinet.



3.3 Location of components

A PG300 cabinet is made up of: -

- A painted steel frame clad in ASI304 220g stainless-steel with 8 mm toughened glass side wall,
- A head mechanism consisting of drive motor and gearbox, JX motor controller, centre status LED, encoder, coupling, top and bottom bearing, physical stop/cam and toothed electromechanically brake.
- Cabinet access panels house the TD controller, sounder, isolation switch, power supply and input/output termination points.
- The cabinets top cross members house the 8 upper transmit/receive detection photocells and the upper and lower photocell I/O controllers.
- The cabinets bottom cross members house the 8 lower transmit/receive detection photocells.
- The cabinets end section houses the status LED, 4 optional extra detection photocells (two at each end).

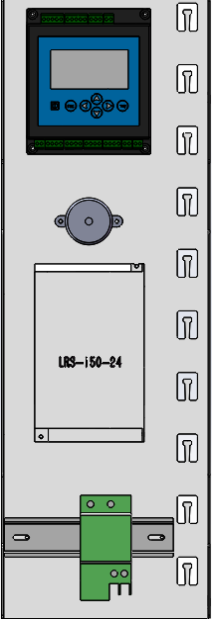




4. Recommended Spare Parts List

The following is a list of recommended spares parts for 1 year, based 5,000 operation per day / per lane with recommended maintenance.

Part No.	Description	No. of Lanes	
		1 to 5	10 to 20
C-000-0001-07	TD116b Main Controller	1	2
C-000-0002-02	PSU LSR-150-24	1	2
C-000-0007-07	JX3.25 Motor Controller	1*	2*
C-000-0007-08	JX4.02B Motor Controller JX3.25 BZ0 for lanes manufacture after 1 st March 2022.	1*	2*
P-300-0001-00	24v DC motor with 60 RPM planetary gearbox.	1*	2*
P-300-0002-00	24v DC motor with 100 RPM planetary gearbox.	1*	2*
P-300-0002-01	24V DC gear motor 3300rpm i=60.9:1 for lanes manufacture after 1 st March 2022.	1*	2*
P-000-0004-00	Encoder body and disc	1	2
P-300-0003-00	Toothed electromagnetic brake	1	2
P-000-0010-00	Set of photocells transmit and receive (Pubang), for lanes manufacture before 1 st Jan 2019.	5	10
P-000-0010-01	Set of photocells transmit and receive (Omron), for lanes manufacture after 1 st Jan 2019.	2	4
C-000-0009-02	Photocell I/O controller V1.32	1*	2*
C-000-0009-03	Photocell I/O controller V1.33 for lanes manufacture after 1 st March 2022.	1*	2*
C-000-0024-00	Single output relay	1*	2*
C-000-0025-00	Dual output relay	1*	2*

* Depending on the version fitted.

4.1 SPARES LIST

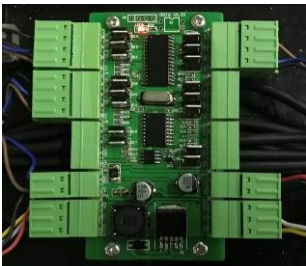
Picture	Description	Part Number
 <p>The image shows a vertical assembly of components. At the top is a control panel with a screen and buttons. Below it is a circular component, likely a speaker. The main part is a large rectangular panel labeled 'LRS-150-24'. At the bottom is a green component, possibly a power supply or isolation switch. To the right of the main panel are several small icons representing screws or mounting points.</p>	<p style="text-align: center;"><u>Main Control Panel</u></p> <ul style="list-style-type: none"> • Mounting Plate • TD Controller • Sounder • Power supply • Isolation switch 	
 <p>A close-up of a TD116 controller unit with a blue screen and a control panel with several buttons.</p>	<p>TD116 Controller with latest firmware version BZ134</p>	<p>TD116 will be supplied until stock are exhausted</p>
 <p>A close-up of a TD116b controller unit. The screen displays 'HMI961' and 'TD116B BZ132'. The control panel has several buttons.</p>	<p>TD116b Controller with latest firmware version BZ134</p>	<p>C-000-0001-07</p>
 <p>An image of a laptop with a blue screen displaying the word 'UPDATE' in white capital letters. A green progress bar is visible below the text.</p>	<p>Latest TD firmware TD116 - 130 TD116a - 133 TD116B - 134</p> <p>Specify version with order</p>	<p>P-000-0002-00</p>
 <p>An image of a power supply unit (PSU) with a yellow label and a metal casing.</p>	<p>PSU NES-150-24</p>	<p>C-000-0002-02</p>

	<p>Isolation switch</p>	<p>C-000-0004-00</p>
	<p>Sounder</p>	<p>C-000-0005-00</p>
	<p>Terminal block</p>	<p>C-000-0026-00</p>
	<p>Head Mech</p> <ul style="list-style-type: none"> • Motor and Gearbox • JX Motor Controller • Coupling • Centre status LED • Encoder • Physical stop cam • Top Bearing • Bottom Bearing • Toothed electromagnet brake • Plexiglass Obstacle 	
	<p>24v DC motor with 60 RPM planetary gearbox</p>	<p>P-300-0001-00</p>
	<p>24v DC motor with 100 RPM planetary gearbox</p>	<p>P-300-0002-00</p>
	<p>24V DC gear motor 3300rpm i=60.9:1</p>	<p>P-300-0002-01</p>

	<p>JX3.25c Motor Controller</p>	<p>OBSOLETE see C-000-0007-07</p>
	<p>JX3.25d Motor Controller with 128 firmware</p>	<p>C-000-0007-07</p>
	<p>JX4.02B Motor Controller JX3.25 BZ0</p>	<p>C-000-0007-08</p>
	<p>Latest JX firmware JX325d – 128 Specify version with order</p>	<p>P-000-0009-00</p>
	<p>Coupling (16-16)</p>	<p>P-000-0007-01</p>
	<p>Coupling (16-15)</p>	<p>P-000-0007-02</p>
	<p>Centre Status LED</p>	<p>C-000-0011-00</p>
	<p>Encoder body and disc</p>	<p>P-000-0004-00</p>

	Physical stop cam	P-300-0004-00	
	Toothed electromagnetic brake	P-300-0003-00	
10mm Plexiglass Obstacle	Width	Height	
 <p>Example picture only</p>	W600 Double Leaf Lane	H900mm	P-300-0004-00
		H1200mm	P-300-0005-00
		H1500mm	P-300-0006-00
	W900 Double Leaf Lane	H900mm	P-301-0004-00
		H1200mm	P-301-0005-00
		H1500mm	P-301-0006-00
	W600 Single Leaf Lane	H900mm	P-302-0004-00
		H1200mm	P-302-0005-00
		H1500mm	P-302-0006-00
	W1120 Double Leaf Lane	H900mm	P-303-0004-00
		H1200mm	P-303-0005-00
		H1500mm	P-303-0006-00
8mm Toughened Glass Obstacle	Width	Height	
 <p>Example picture only</p>	W600 Double Leaf Lane	H900mm	P-300-0007-00
		H1200mm	P-300-0008-00
		H1500mm	P-300-0009-00
		H1700mm	P-300-0010-00
	W900 Double Leaf Lane	H900mm	P-301-0007-00
		H1200mm	P-301-0008-00
		H1500mm	P-301-0009-00
	W600 Single Leaf Lane	H900mm	P-302-0007-00
		H1200mm	P-302-0008-00
		H1500mm	P-302-0009-00
	W1120 Double Leaf Lane	H900mm	P-303-0007-00
		H1200mm	P-303-0008-00
		H1500mm	P-303-0009-00
		H1700mm	P-303-0010-00

	<p>Glass side wall</p>	<p>P-300-0010-00</p>
	<p>Photocells, set transmit and receive (Puban)</p> <p>Note(s)</p> <ul style="list-style-type: none"> Lanes manufactured before 1st Jan 2019. Normally Open Contact 	<p>P-000-0010-00</p>
	<p>Photocells set transmit and receive (Omron).</p> <p>Note(s)</p> <ul style="list-style-type: none"> Lanes manufactured after 1st Jan 2019. Normally Close Contact. Will only work with I/O controller EV-PIO-001b 	<p>P-000-0010-01</p>
	<p>Photocell Upgrade Kit 1.</p> <p>16 Omron photocells. 2 sensor i/o cards V1.32</p>	<p>C-000-0021-00</p>
	<p>Photocell Upgrade Kit 2.</p> <p>20 Omron photocells. 2 sensor i/o cards V1.32.</p>	<p>C-000-0022-00</p>
	<p>Photocell Upgrade Kit 2.</p> <p>20 Omron photocells. 2 sensor i/o cards V1.33. Available from March 2022</p>	<p>C-000-0022-01</p>

	<p>End Status LED Pictogram</p>	<p>P-300-0005-00</p>
	<p>Functional Pictogram PCB</p>	<p>C-000-0008-00</p>
	<p>Photocell I/O controller with dip switch V1.32</p>	<p>C-000-0009-02</p>
	<p>Photocell I/O controller with link V1.33</p>	<p>C-000-0009-03</p>
	<p>Photocell PSU PCB Master/Slave</p>	<p>C-000-0010-00</p>
	<p>Photocell PSU PCB Slave</p>	<p>C-000-0010-02</p>
	<p>LED I/O controller</p>	<p>C-000-0012-00</p>

	<p>LED I/O controller (Add download port and reserve RS-485 port) Available from March 2022</p>	<p>C-000-0012-01</p>
	<p>Card Reader Perspex Cover</p>	<p>P-300-0006-00</p>
	<p>Lock and 2 Keys</p>	<p>P-300-0007-00</p>
	<p>Set of 2 keys</p>	<p>P-300-0008-00</p>
	<p>Single output relay 24v</p>	<p>C-000-0024-00</p>
	<p>Dual output relay 24v</p>	<p>C-000-0025-00</p>
<p>Sample Layouts</p>	<p>Safety sign to fit obstacle leaf W600 double leaf lane. Sign size w210 x h180 Material white vinyl Symbols to be specified with order</p>	<p>P-000-0011-00</p>
	<p>Safety sign to fit obstacle leaf W900 double leaf lane.</p>	<p>P-000-0012-00</p>

	<p>Sign size w345 x h130 Material white vinyl Symbols to be specified with order</p>	
<p>Sample Symbols</p> 	<p>Safety sign to fit obstacle leaf W540 single leaf lane. Sign size w425 x h160 Material white vinyl Symbols to be specified with order</p>	<p>P-000-0013-00</p>
	<p>Safety sign to fit obstacle leaf W1200 double leaf lane. Sign size w510 x h195 Material white vinyl Symbols to be specified with order</p>	<p>P-000-0014-00</p>
	<p>Glass, Manifestation dots 50mm dia, 100mm spacing, 1m length.</p>	<p>C-000-0015-00</p>
	<p>Touch Screen Controller 1 Lane</p>	<p>C-000-0016-00</p>
	<p>Touch Screen Controller up to 3 Lanes</p>	<p>C-000-0017-00</p>
	<p>Touch Screen Controller up to 15 Lanes</p>	<p>C-000-0018-00</p>
	<p>Push Button Console</p>	<p>C-000-0019-00</p>
	<p>Each additional group of controls</p>	<p>C-000-0020-00</p>
	<p>Photocell test attenuator 10 and 70 %</p>	<p>C-000-0023-00</p>

	PG300 Cabinet lid 1/2 length with C/Reader Perspex	PG3/LID/001
	PG300 Cabinet lid 1/2 length blank.	PG3/LID/001a
	PG300 Cabinet lid 1/2 length with Double C/Reader Perspex	P-300-0013-00
	PG300 Cabinet lid 1/2 length with Single C/Reader Perspex	P-300-0012-00
	PG300 Cabinet lid 1/2 length Blank	P-300-0011-00

5. REFERENCES

5.1 Requirement's owner

Paragraph Number	Owner
All	Andy Brown

5.2 History

Editions	Date	Changes	Author
Draft	25/08/2018	Start draft document	AB
01	13/01/2019	Complete update for start of 2019	AB

02	25/06/2019	Add photocell update kits + BS7036 sign + Desktop consoles.	AB
03	19/02/2021	Convert remaining part numbers to WSL	AB
04	09/03/2022	New Motor, JX, I/O cards	AB
05	20/04/2023	Add Lids	AB