



The Intelligent Automation Specialists

Your Guide To Gate Automation





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Introduction

The Electro Automation Group are leaders in security and automation services with over 25 years experience. Based in Dublin, Lisburn, Glasgow and Surrey we offer a full Nationwide service. Our surveyors and engineers are all trained experts who are able to deal with virtually every problem that you may encounter. We work hard at promoting long-term customer loyalty and freely provide as much continuous help and advice as you need. This guide is just one example of our willingness to go further to help our clients understand what is required with gate automation. All our surveyors are trained to identify safety and operational issues, and to ensure that you are supplied with the best system to suit your requirements.

Why Automate Your Gates?

Gate automation is now commonly accepted as one of the best options to secure your property. Automatic Gates offer convenience, security, and also add value to any property. Most people report that once they have installed automatic gates they feel more secure (especially at nights), that they are delighted with the ease of operation, and also that their property feels more exclusive.

In effect you move your front door to beside the roadway. This deters unwanted callers and potential burglars who will not want to park visibly on the road while they enter your premises. A benefit is that the property does not look especially security conscious as normal gates are simply closed. The gates also keep your dogs in (or out as the case may be!) and stop you worrying where your offspring are playing.

Numerous other benefits come with the package including added value to your property (some say that a house sells quicker as automatic gates impress prospective buyers), increasing the style of your house, and stopping stray animals entering your gardens. We haven't even mentioned going out to close the gates on a cold, rainy winter's night!

What Is The ‘Normal System’?

In common with most electronic items automatic gate systems can be tailored to suit your needs. It is common for us to react to each person's requirements and we can offer systems that allow free entry or exit, intercoms, timed openings and even specialised systems that allow your intercom to dial your mobile telephone when you are out.

Gates can be automated with visible above ground systems or concealed below ground systems. Both work equally well, and you can decide your preference by using this guide or talking to one of our surveyors. Take into account the expected opening times per hour or day, whether it is commercial or residential, is it just family members you want to use the gates, the physical size and design of the gates, the number of dwellings served by the gates, is the area particularly windy etc. Probably one of the easiest ways to decide is to talk to one of our surveyors. This is a free service for potential clients and without obligation.

A typical workable system is two operators are controlled by radio transmitters and with an intercom or numeric sequence keypad. This will normally be operated in “fully automatic” mode i.e. when you arrive you point the transmitter towards the gates and press once. The gates open, you proceed, and after a preset delay the gates will automatically close. Visitors will contact the house using the intercom which will offer remote opening from the internal handset.

Common Options

I require new gates plus automation

We can provide you with a one-stop service for the complete installation, from manual gates to automation through to after-sales service and maintenance. Simply check the guidelines in this booklet and we can price accordingly. We offer a wide range of gates which come in a range of styles and colours. Gates can be painted, galvanised, powder coated or a combination.

New gates are my priority, but I haven't yet decided on automation

You do not have to have the complete package from us. We can simply survey and/or quote for manual gates only but construct them with possible future automation in mind. We can even supply in-ground foundation boxes to allow you to hang your gates and install the ductwork. At a later stage our engineers can simply arrive and install the automation without disturbing the gates or ground fabric. It is always best to complete any disruptive works early in the process.

I do not want new gates, just automation to my existing gates

We offer a wide range of systems to complete this. Manual gates tend to simply be left open for long periods to facilitate comings and goings of your own and your visitors vehicles in order to avoid the effort of physically pulling them to and fro. Automated gates obviously work far more frequently through the closed-to-open-to-closed cycle. Our surveyor will appraise your gates and pillars to ensure they are suitable and give any recommendations if required.

Gate Modification Or Repair To Existing Gates

You may not want to replace your existing gates, perhaps because you are fond of them or do not want to bear the cost of new gates. We will therefore need to inspect them to establish whether they can be automated in their current state or be modified to do so. Meanwhile, here are the most obvious indications that your gates might require repair or modification:

- Any cracks at the base of the brick piers - often indicating ground or structural movement of the foundations
- Piers are not upright and/or parallel to each other - again, possible ground movement
- Any structural deterioration - e.g. soft/crumbling bricks and mortar
- Any past impact to gates/piers - e.g. if a vehicle has ever crashed into them

In most instances, your existing gates will be suitable for automation



New Gates

What material should I choose for my gates - wooden, wrought iron or aluminium?

Wooden: With the exception of the 5-bar 'farm type' gates, wooden gates tend to be solid, thus partially/totally blocking one's view to your premises. The downside is that natural warping, expansion, and twisting of the frame may occur. As for a new gate, one solution is to construct a metal frame which is then clad with timber. Hardwood is most expensive but can be best in the long term. Fully sheeted gates do not allow wind to "spill" through them. This means that we must use much stronger operators and increase the safety devices that are required. Wooden gates tend to be higher maintenance.

Wrought Iron: Wrought iron are visually more elegant and sturdy with a long lifespan. They are suitable for both swing and sliding gates of all sizes and also tend to require less maintenance. Our normal gate designs are pre finished hot dipped galvanised or powder coated for low maintenance and an attractive look.

Can I have matching railings and/or pedestrian side gate?

Yes, we can produce any form of metalwork that you require - tell our surveyor what you want and it will be included within your quotation. Note that a pedestrian gate, whether part of or separate from the main entrance gate, can also be automated (or simply given an electronic lock for automatic release on command).

Should I have a pedestrian gate?

Most people don't have one and this is fine. If your entrance allows it a pedestrian gate is an ideal way to allow children etc in and out from the property without opening the gates each time. An additional pedestrian gate is recommended for multi-use properties.

What if my entrance isn't wide enough to include a vehicular and pedestrian gate, but I don't want to have to keep opening the former for pedestrian entry?

Certain automation systems can solve this problem beautifully. Any single device can be allocated to provide pedestrian opening of one gate leaf. This allows pedestrians to enter but still inhibits a vehicle.

Can my gates and railings be in any colour I want, and will they be weather resistant?

Yes. Gates can be delivered Shot Blasted, Zinc sprayed and/or Etch-primed or Hot Dip Galvanised, then finally finished in any paint colour of your choice. This process will provide anti-rust protection and weather resilience. Our standard finish is hot dipped galvanised for wrought iron gates. Powder coating is a popular, durable and attractive paint finish.

What type of gate is best - Swing or Sliding, inward or outward opening - and which would suit my entrance?

Our surveyor will gauge this from the inspection of your entrance and his discussions with you. The main factor which will influence this will be the ground levels surrounding the entrance, and the available room around the entrance area. Try to avoid outward opening gates as this presents numerous difficulties. Sliding gates are very secure and robust, and are also useful in areas where high winds are common. Swing gates are the most commonplace choice.





Swing Gates

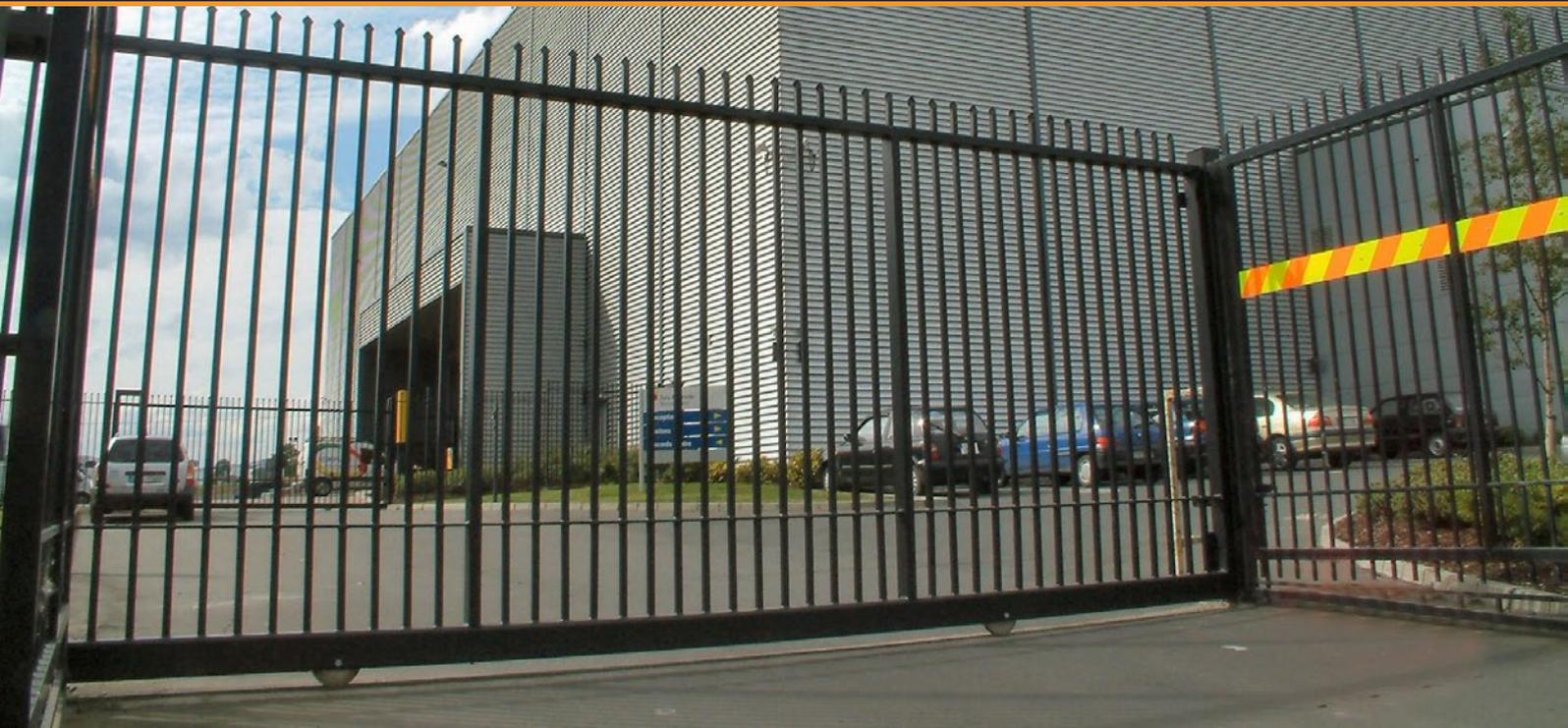
Most Gates that Swing TOWARDS the Property are Suitable:

- on Residential and Commercial sites which require/desire decorative design
- where there is enough room between the entrance and the property to accommodate the fully-open gate leaf(s)
- where there is enough room to clear the fully-open leaf(s) whilst negotiating a sharp curve in the drive
- where the ground over which the gates will swing is sufficiently level to avoid contact with the bottom of the gates (or drops lower as the gates open)

Gates that Swing AWAY from the Property are Suitable:

- on Residential and Commercial sites which require decorative design
- where the ground over which the gates will swing is sufficiently level to avoid contact with the bottom of the gates (or drops lower)
- where there is ample room for the gates to swing outwards without encroaching onto a main road/ pavement.
- Where you have no option to use inward swinging gates

IMPORTANT: People expect gates on entry approach to open away from them (i.e. towards your property), as that is the norm. Therefore, you will have to provide clear signage or road markings to warn them of reversed gate swing. Outward opening gates are not recommended if another option exists.



Sliding Gates

Sliding gates are suitable for both domestic and commercial installations. They are very popular for commercial work as they are very secure, extremely reliable, and need little maintenance. The operators can move a wide range of gates weighing up to 3500Kgs. In domestic situations they again are very suitable, but care has to be taken to design the gate so that it doesn't look commercial. That is generally the only restriction and a properly designed sliding domestic gate is ideal. Controlled by the same devices as swing gates, we can offer a system designed to suit you. The gate runs on a base rail which must be level across the opening and therefore sliding gates tend to involve more civil works. The operator can be smart enough to recognise pedestrian commands and open the gate partially. It is possible to create a cantilever gate that does not require a ground rail across the entrance.

SINGLE LEAF SLIDING GATES ARE SUITABLE :

- mainly on Commercial and Industrial sites
- where the ground over which swing gates will move is not suitable and will make contact with the bottom of the gates as they open.
- where the internal and external areas are restricted in size.
- where security takes precedence over aesthetics (as single sliding gates are much harder to force open with a heavy vehicle than swing gates).

DOUBLE LEAF SLIDING GATES ARE SUITABLE :

- mainly on Commercial and Industrial sites
- where the ground over which the gates will swing is not suitable and will make contact with the bottom of the gates while opening.
- where the internal and external areas are restricted in size.
- where you require separate lane control - e.g. Entry Leaf and Exit leaf and where a traffic island or post exists in the middle of the entrance.



Automatic Operators

What are the available types of automatic operators, and which manufacturers are regarded as the best?

You will find that most installation companies supply equipment from Italy, whose manufacturers are world leaders in electro-hydraulic and electro-mechanical technology and from where, naturally, gate automation was born.

Electro Automation are Approved Suppliers and Installers of automation and have over 30 years manufacturing expertise. Our residential, commercial and industrial operators are seen as the premier choice by many specifiers and professionals. We distribute a vast range of automation equipment, from which we tailor-make your system (including a wide choice of control and safety devices). We are viewed as the key company in the field of gate automation with wide experience in both domestic and commercial automation. Our experience allows us to design a system that will exactly match your needs, fully supported with a full range of spares and accessories in stock at all times. Our engineers are fully trained and are available 24/7 for our maintenance contract holders.

Do I want Above or Below Ground operators?

Above Ground: Surface operators (rams) come in many variations and show that your gates are automated and therefore indicate to a would-be intruder that you are security conscious and may also be security alarmed, etc. They can be less expensive than a Below Ground system as they require less ground works to your drive. The operators are designed with neat anodised aluminium covers and are suitable for a wide range of gates up to 5M per leaf.

Below Ground: The obvious choice where you have a decorative set of gates and aesthetics are important. The operators are installed under the gate post area. Underground ops will normally support swing gates up to a maximum of 500kg per leaf and up to 3 Metres wide per leaf. Soak away drainage should be provided from the in ground support boxes.



My entrance isn't big enough to include a pedestrian gate. Would I have to keep opening the vehicular gates for people on foot and risk entry by opportunist drivers?

We can produce a special control panel which whilst providing normal options, will also open only one of the gate leaves (or partially open a single-leaf sliding gate) when a specific device is activated, such as when a pedestrian presses an exit Push-Button mounted internally on the gate pier. This Semi-Opening ensures that only a pedestrian can pass through a dual-leaf swing gate. Some sliding gate operators come with this feature already built in.

Some Features Available With Most Electro Gate Automation Systems

- Gate leaf opening or closing time - from 15 to 20 seconds dependant on gate size, weight, etc.
- Speed variation, such as automatic slow-down just before the leaves make contact with the Slam Plate (to ensure less disturbance to the gate fabric and less noise, etc).
- Semi or Fully-Automatic Operation which means, respectively, that either the gate stays in the open position until a second command closes it, or it automatically re-closes after waiting for an adjustable pre-set period in accordance with the time it takes for a vehicle to pass through. Safety devices ensure that the operation is safe.

What if my gates are normally set to provide easy, unescorted entry/exit to all but at certain times I wish to restrict this for everyone but a select few?

Let's say that you wish to allow easy access through the automated gate at your premises from 9am to 5pm, or 8am to 9am:

- Certain control devices can be installed to provide 'free entry' and/or 'free exit' during this period to all drivers and pedestrians. Examples (as outlined on page 7) are Underground Vehicle Induction Loops to activate opening of the gate when driven over on entry and exit approach, and pier-mounted Push-Button activation for pedestrians. We can even install a time control system that automatically open and closes the gates for set periods each day.

Outside of this period, however, you want the gate to open for recognised users only:

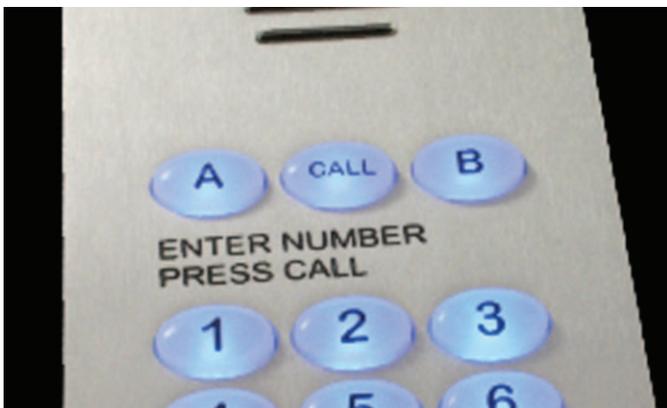
- This can easily be achieved by a 'Key isolation' option - a special key which, when turned in a keyhole situated locally, will immediately inhibit commands sent from the Loops and Push-Buttons, but will still allow the gate to be opened by other control devices, such as hand-held remote transmitters, numeric sequence keypads or several other devices, of which only staff possess.



Control and Convenience

Now I have an idea of what type of gate and/or operator I require, what equipment will control them and make them ultra safe and secure?

Safety is paramount with our installations. It is essential that a risk assessment is carried out with every system, and all risks that are identified are properly dealt with. We comply with the guidance provided by the Health and Safety Executive. Most operators include anti-crush features, and most systems will include safety photocells as standard. In some cases these are not sufficient, and additional safety devices are required.



The following items of control and safety equipment are those most commonly preferred on residential, commercial and industrial applications and which we...

*.....strongly recommend for Safety

**.....highly recommend for optimum Residential or Business Convenience

TRADE & LAY NAME	FUNCTION
Induction Loops Safety Loop detectors **	Magnetic, underground detection loops which when placed in the roadway allow a vehicle to “signal” the gate controller and can be used to open, close or keep open operators. They look for a metallic mass and therefore ignore pedestrians and animals.
Fotoswitch Safety/Infrared beams/ Photocells *	Infrared Photocell safety devices which, when beam is broken, set off the opening cycle or prevent gate closing if a vehicle is passing through. Not as vandal-resistant as underground Induction Loops but with up to 30m range. All our photocell devices are transmitter and receiver type and not the inferior reflector type.
Minibeam Photocells	As above - compact sized for restricted spaces and are less visible. Up to 10M range.
Lamp	Distinctive flashing warning light. (Many versions available, including mini) warning people that the gate is about to move or is moving.
Gate Lock (a) Electromechanical (b) Magnetic (Maglock) (c) Hydraulic/Mechanical	(a) Like a normal Yale lock but mechanisms are physically operated by electrical current. (b) Locking parts are held together/released by strong magnetic field. (c) The actual operator is mobilised/immobilised by oil pressure or the operator gearing. The quietest method. Can be inbuilt into some operators.

What equipment can I and others use to open/close the gates?

TRADE & LAY NAME	FUNCTION
Vehicle Induction Loops** 'Free Entry or Exit', Detectors, Magnetic Loops, Safety Loops	Magnetic, underground detection loops which are cut into tarmac or concrete drives and when placed in the front of the internal/ external side of gate, sense the approach of a vehicle and thus set off the opening or closing cycle without need for remote control transmitter. These can be timed to be inhibited or enabled at set times per day. As they react to a magnetic mass, they will ignore pedestrians and animals.
Remote Radio Controls** Remote Controller, Transmitter, Zapper	As with a TV remote, you point this hand-held/keyring-held/ dashboard mounted device in the general direction of your entrance and press the button which commands the gate into its opening or closing cycle.
Key Lock Keyswitch Or Push Button	A cheaper alternative to the above, or an additional method for pedestrian access or as a fallback for your remote. Ideal for known tradesmen's access - e.g. gardener, who can be issued with a key.
Metal Digikey ** Keypad, Digipad, Numeric Sequence Keypad.	Burglar proof numeric keypad for punching in personal digital entry codes. Again an alternative to remote transmitter, which can be mounted on a post at a height convenient for car drivers. Some can have two inbuilt codes, allowing the safekeeping of your main code while giving out the secondary code. This code can easily be changed on site if required. Keypads are very user friendly but have reduced security as you do not know who has the code. Change the code on a regular basis!
Card Access Control Card Proximity, Prox Cards, Access Control.	Normally used in commercial applications whereby residents/staff have individually coded, credit-sized cards (or tokens, keyring fobs, etc.) These are held near to a reader and if authorised the user can proceed. For entering and/or exiting site. Site owners/management can program/ de-program cards, and restrict certain access points to certain cards, as and when required on site. Reports on history and usage are available when connected to a PC or laptop.

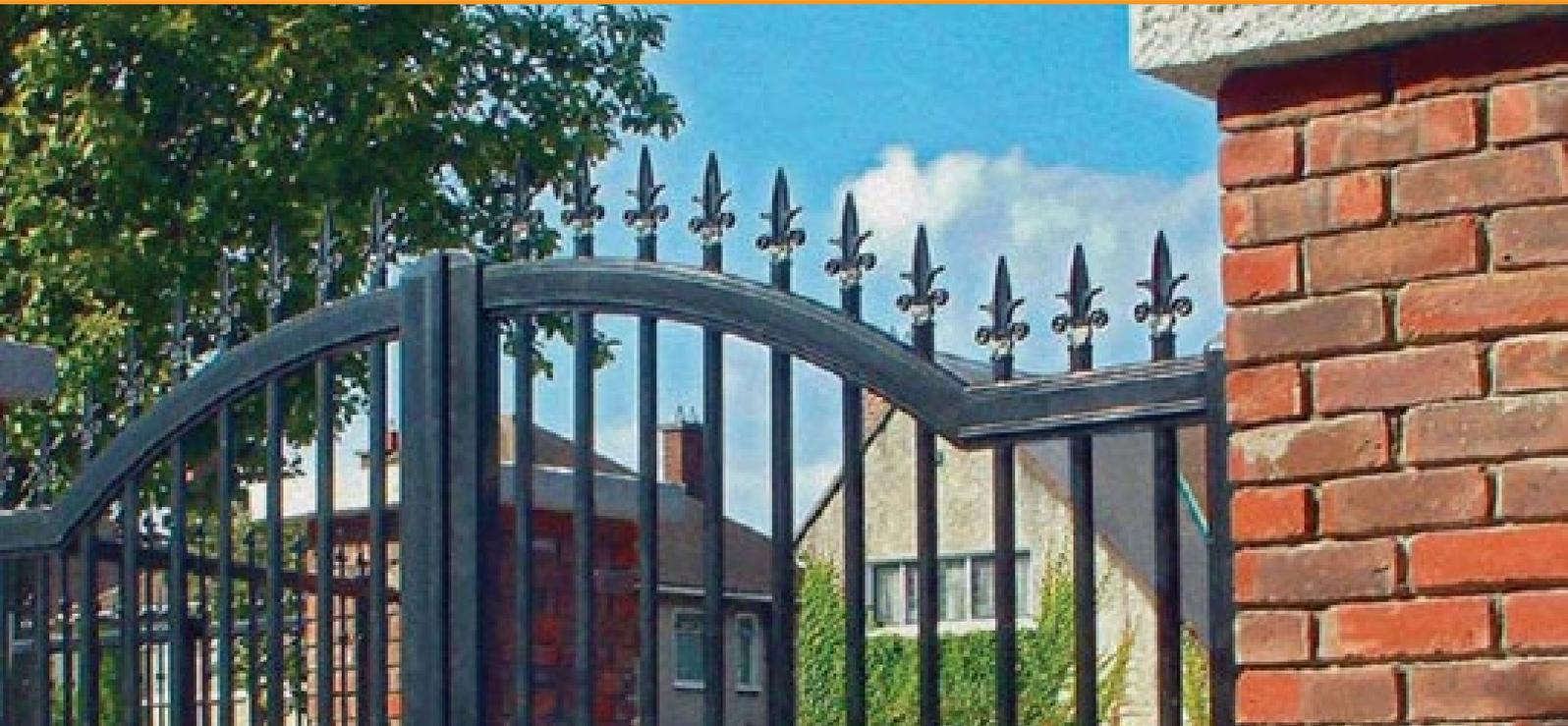
TRADE & LAY NAME	FUNCTION
Audio or Video Entry Panel** Entry / Video Phone, Intercom, Gate Station	A control panel wired from the gate to a handset(s) within the building. Your visitor presses a button/digit which causes the handset to buzz. You answer audibly, and visually screen your visitor then press a button on your handset which activates the gate's opening cycle. There are various types on the market – please ask which would suit you. These can even be wireless using the GSM network and can be diverted to landlines or mobiles. Intercoms and video intercoms can have multiple call and answer points.
TelGuard or GSM Intercoms	Similar to the above but which operates through normal telecom handsets on existing telephone lines or PABX. Diversion (including to mobile phone) so you can let visitors into your premises (or carry out up to 4 other functions such as opening or holding open the gates and turning on lights) no matter where you are in the world! Amazingly simple & speedy installation. Note: More cost-effective in multi-residency sites and/or where there is a large distance from entrance to buildings(s) which would mean re-decoration and/or excessive expense for hard wiring.

..and how will I let visitors out again?

Drivers need do nothing if you opt for 'free exit' vehicle loops (explained on previous page).

If you don't want loops, the following will take care of both drivers and pedestrians.

TRADE & LAY NAME	FUNCTION
Transmitter	Simply point the transmitter towards the gates from the house. 30M range.
Intercom	Use the intercom to open the gates remotely from the house/ building
Token Acceptor Token/Coin Entry (Commercial Use)	The acceptor box is pier mounted on the inside of the gate at a height convenient for pedestrians and/or drivers. Before they leave you would hand them a token that they simply drop into the acceptor which causes the gate to open. From time to time you would have to open the box to collect tokens for re-use. Note: minimum token order quantity 100.
Push Button/Keyswitch Digikey Pad, Photocells	As described and priced on the previous page.



Typical Complete Systems & Installation Examples

Please note that every system design is individual and, therefore, so are their prices. A definitive price can only be determined following a discussion with one of our experienced surveyors. Power supply, cable trenching, drive ducts, builders and civil works are excluded.

A. Comprehensive Below Ground Automation System for Plain Iron/Wooden Gates up to 2.5m per leaf and each leaf weighing up to 500kgs.

- 2 No. Electro Below Ground Operators with Mechanical Locking open and closed
- 2 No. Leaf Supporting Foundation Boxes
- 1 No. Electronic Controller (housed in weatherproof, lockable cabinet)
- 1 No. Radio Control System complete with decoder
- 2 No. Handheld Remote Transmitters
- 1 No. Set of Safety Photocells
- Installation

B. Comprehensive Above Ground Automation System for Plain Iron/Wooden Gates up to 1.8m per leaf

- 2 No. Electro Electro Mechanical Above ground Operators with Mechanical Locking
- 1 No. Electronic Controller (housed in weatherproof, lockable cabinet)
- 1 No. Radio Control System complete with decoder
- 2 No. Handheld Remote Transmitters
- 1 No. Set of safety Photocells
- Installation

C. Comprehensive Automatic System for Single Leaf Sliding Gate up to 1800kgs and 12m opening

1 No.	Electro Sliding Above Ground Gate Operator, including gate wheels, rack & fittings
1 No.	Microprocessor Control Board
1 No.	Radio Control System complete with decoder
2 No.	Handheld Remote Transmitters
1 No.	Set of Safety Photocells
	Installation

The Electro Automation Group provides a full back up service for all our products. The reliability of our gate operators is unquestioned and we are proud of our customer service record. Our engineers are all on call 24 hours per day, 365 days per year. We believe that we offer a service unparalleled at rates which reflect our manufacturing status.

Remove the risk...choose Electro.

Other Solutions

If you decide that neither gate nor barrier are viable, other measures are available. These include Auto Parking Posts or Automatic Bollards which can prevent entry and/or exit by vehicles: Electro Detection whereby a buzzer/flashing light or your intruder alarm system is activated when people approach your building: and/or CCTV. Traffic Control Barriers can be used when fast passage is required, and Speed Gates provide a very secure yet fast control of your perimeter. Please ring and ask for further details.

Traffic Control Barriers

A traffic control barrier may be an option if your commercial/industrial entrance is unsuitable for either swing or sliding gates. It is also more appropriate where there will be such a high frequency of incoming/outgoing traffic that slower-opening gates would cause a queue if vehicles - e.g. large car parks or public parking areas. A barrier will not, however, deter pedestrians and cyclists unless a 'skirt' is added.

Note that we manufacture a full range of constant-duty rated traffic barriers, called UNIBAR. Although their standard colour is traffic red, we can provide special finishes on request.

Please contact us for details of prices.

Why Choose Electro Automation?

- Automatic gate systems, if correctly installed and maintained, will provide years of trouble free convenience and additional security for your property.
- We would ask you to note that when choosing a supplier for your new gate system you should be purchasing more than just the equipment. You will hope to have a relationship with your supplier for years to come.
- It is in this respect that it is important to choose a supplier who is technically competent, financially sound, and who will be able to provide comfort and support to you during the life of your gate system.
- We feel that we meet all the requirements, plus more.
- We are specialists in automation offering unparalleled service and maintenance back up with 24 hour cover provided 365 days per year by our own fully trained engineers. We also hold a full stock of spare parts for all the equipment we install.
- Prospective customers can arrange a **free and non-obligatory site survey** with one of our fully-qualified, highly experienced surveyors. They will explain all the options open to you whilst investigating the suitability of your entrance or existing gate structure. Following this you will be sent a detailed quotation containing suitable system/price alternatives.

Choose Wisely...Choose Electro.

Your Guide To Gate Automation



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