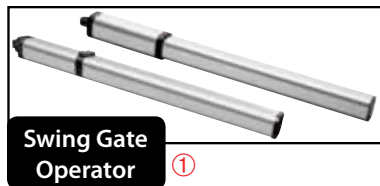


# Architectural Iron Designs, Inc.

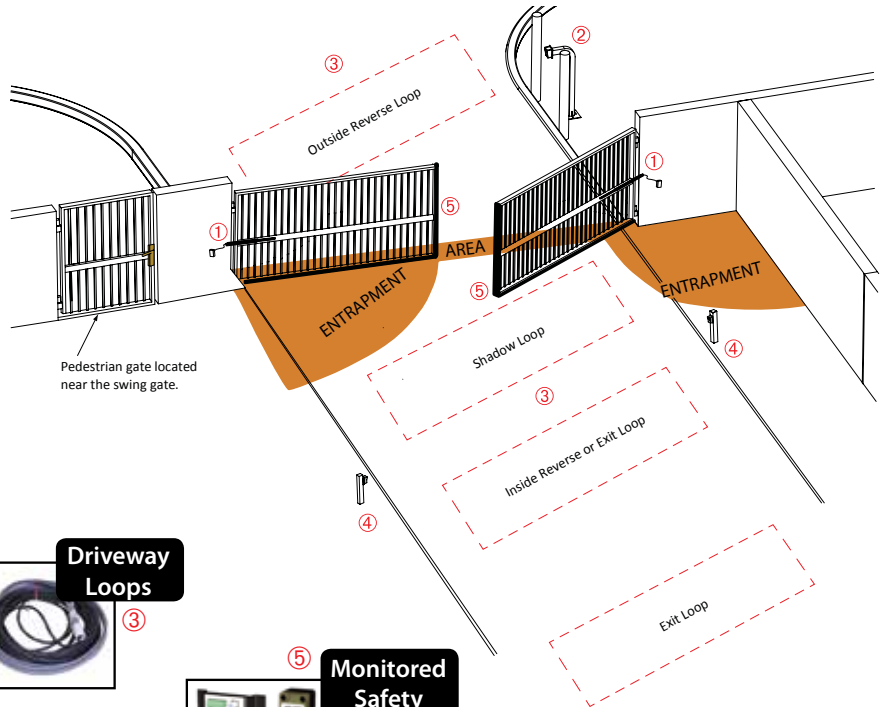
## GATE OPERATORS AND ACCESSORIES

### Example of Swing Gate System

- ① Gate Operator
- ② Digital Keypad or Remote Control
- ③ Driveway Loops/Detectors
- ④ Photocells
- ⑤ Monitored Safety Edges

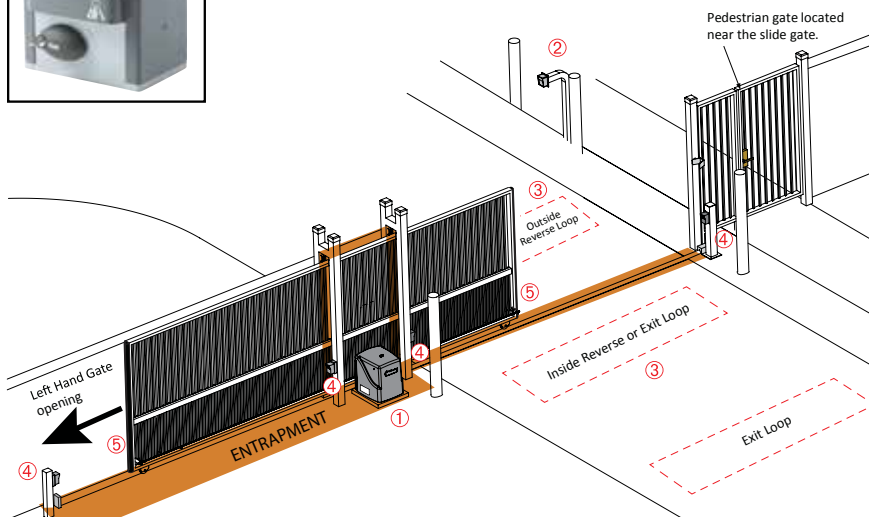


Visit **DASMA.com**  
to view gate  
safety information.



### Example of Slide Gate System

- ① Gate Operator
- ② Digital Keypad or Remote Control
- ③ Driveway Loops/Detectors
- ④ Photocells
- ⑤ Monitored Safety Edges



## GATE SYSTEM SAFETY – An Automatic Decision

**NOTICE:** Beginning January 2016, all external entrapment protection devices must be monitored for presence and correct operation. If a fault occurs, the gate operator will not function unless a continuous pressure activation device is being used.

This brochure, created and supplied by DASMA, will be included with your Automated Vehicular Gate System and provides an overview of safety and general design considerations that should be implemented at your site.

Its purpose is to provide guidance and help familiarize you with gate and gate operator safety standards and requirements. Review this brochure carefully and keep it for reference. If you have any questions, talk to your qualified installer.

### BE SAFE

Automated vehicular gate systems provide user convenience and security. However, because these machines can produce high levels of force, it is imperative that you understand how proper site design, installation and maintenance reduce potential hazards associated with gates and automatic gate operators. This brochure highlights industry safety standards and identifies entrapment protection devices that need to be in place to avoid serious injury or death. Before the installer leaves the site, take a few minutes to inspect and test your gate system.

- Make sure your gate operator is grounded.
- Ask the installer where the Emergency Stop Switch is located and cycle the gate once or twice to test it.
- Learn how to turn power ON and OFF and manually open and close the gate.
- Inspect the entrapment protection devices. Ask your installer to perform tests and show you that they are working properly.

### A MOVING GATE CAN CAUSE SERIOUS INJURY OR DEATH!

It is the owner's and user's responsibility to be aware of potential hazards associated with an automated vehicular gate system and take appropriate steps to reduce the risk of injury.

Be sure to read the Important Safety Information found in your gate operator's manual as it provides more details and safety considerations than can be supplied in this brochure.

**NOTE:** The design and construction of automated gates for vehicular traffic must comply with certain safety standards and local codes. The illustrations and callouts in this brochure show the basics for gate system compliance. For reference, UL 325 and ASTM F2200 requirements are called out where applicable.



### INSTALLATION & MAINTENANCE

Follow the manufacturer's recommended maintenance schedule and ask your qualified installer about a service agreement.

On a regular basis:

- ☐ Check all entrapment protection devices in accordance with the manufacturer's recommended maintenance schedule.
- ☐ Check that the gate is level. Manually open and close the gate to make sure it travels smoothly. (Refer to the gate operator's manual to learn how to turn off power and move the gate by hand.)
- ☐ Check the gate hardware on a regular basis. Tighten any loose fasteners and replace any worn or damaged parts. A smooth running gate prolongs the life of your gate operator.
- ☐ Before the qualified installer leaves the site, test all features (entrapment protection devices, obstruction sensing features) to make sure the gate stops and reverses upon striking an object.
- ☐ Make sure you receive instructions on all operational functions of the gate operator. Learn how to reset the gate operator, turn off/on power, and manually operate the gate.

### MORE INFORMATION

#### Websites:

**DASMA:** [www.dasma.com](http://www.dasma.com)

**Underwriters Laboratories:** [www.ul.com](http://www.ul.com)

**Automated Vehicular Gate Standards, ASTM F2200:** [www.astm.org](http://www.astm.org)

**Disclaimer:** This brochure cannot cover all possible site situations or compliance issues. Be sure to read your gate operator's manual, follow manufacturer's requirements, and consult with your qualified installer for additional information.

©2015 DASMA  
November 24, 2015



# DASMA SAFETY GUIDE

## BE AWARE

Make sure your gate system is installed and maintained according to the manufacturer's installation instructions. Make sure your installer adheres to UL 325 and ASTM F2200 standards discussed in this brochure and in the Important Safety Instructions found in the operator's manual.

## DO

Review the illustrations found in this brochure for more information and safety requirements. Operate your gate system only when all necessary entrapment protection devices are connected and working properly. Examples of these devices include:

- Sensing edges
- Photoelectric sensors (e.g. photo eyes)

Follow ASTM F2200 standard for automated gates. Where applicable, these include the following:

### Slide Gates:

- Covers for all exposed weight bearing rollers and pinch points that exist less than 8 feet (2.5 m) above grade.
- Fallover protection to prevent the gate from falling when gate is detached from supporting hardware.
- Physical gate stops to avoid over-travel in both directions.
- Proper adjustment of the inherent sensing system.
- No protrusions along the bottom of the gate.
- Protective screen mesh to guard openings from the gate's base support to a minimum height of 6 feet (1.8 m) above the ground. This must prevent a sphere of 2¼ inches (57 mm) from passing under or through any opening in the gate or adjacent fence (the portion covered in the gate's open position.) Refer to the illustrations.

### Swing Gates:

- No protrusions along the bottom of the gate.
- Fallover protection to prevent the gate from falling when gate is detached from supporting hardware.

## PRECAUTIONS FOR GATE SYSTEMS

### ENTRAPMENT ZONE HAZARDS

Body parts may become entrapped between a gate and a stationary object when the gate begins to move, which can result in serious injury or death. **Make sure pedestrians stay clear of the gate path and areas where gate motion is close to stationary objects.**

### PINCH POINT HAZARDS

- In open roller slide gates, severe injury can occur when hands and fingers get caught in the slide gate rollers. Feet can be injured between the bottom of the gate and bottom rollers. **Make sure roller guards are installed to cover these pinch points.**
- A swing gate's opening mechanism may have arms that can overlap with a scissoring effect, which can result in serious injury. **Make sure pedestrians stay clear of the gate path and the opening mechanism, especially when the gate is in motion.**

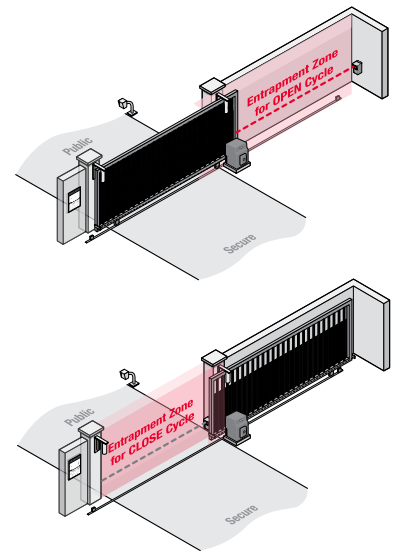
### CRUSH HAZARDS

In picket gates, body parts positioned between the bars can become seriously mutilated when the gate begins to move, which can result in serious injury or death. **Make sure openings are covered or screened and gaps are filled to prevent persons from reaching through, and/or passing through, the gate.**

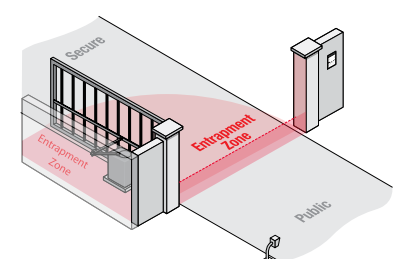
## SAFETY CHECKLIST

- Automated gates are for vehicular use only; provide and maintain walkways and signs to direct pedestrians to a separate walk-through entrance.
- Clearly display WARNING SIGNS on both sides of the gate in clear view of vehicles.
- Never let children operate or play with gate controls. Keep all remote controls, especially radio transmitters, away from children. DO NOT allow children to play on or around the gate or gate operator.
- Make sure all access control devices are mounted at least 6 feet (1.8 m) away from any moving parts. Create a safe design where a person need NOT reach over, under, through or around the gate to operate the access controls.

### HORIZONTAL SLIDE GATE SYSTEM



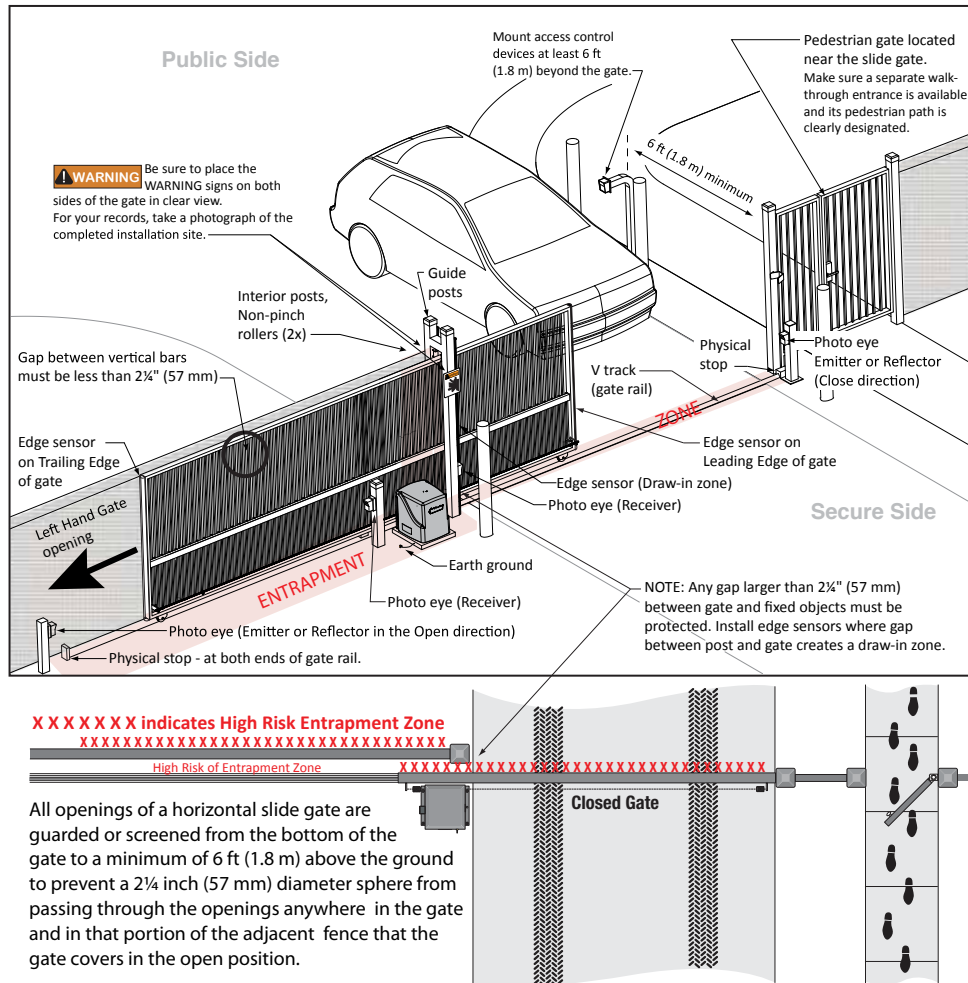
### SWING GATE SYSTEM



# DASMA SAFETY GUIDE

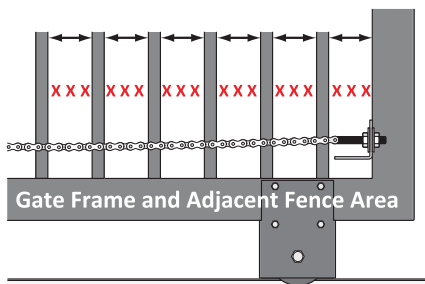
## SLIDE GATE REQUIREMENTS

**Only install the operator on gates used for vehicular traffic. Be sure to direct pedestrians to a separate entry and exit.** Refer to the illustrations. The gate site must be designed so that persons do not come in contact with the vehicular gate while it is moving. Signs must be posted to warn pedestrians to stay clear of the gate's entire travel path. A separate pedestrian entry/exit must be clearly visible and promote pedestrian usage.



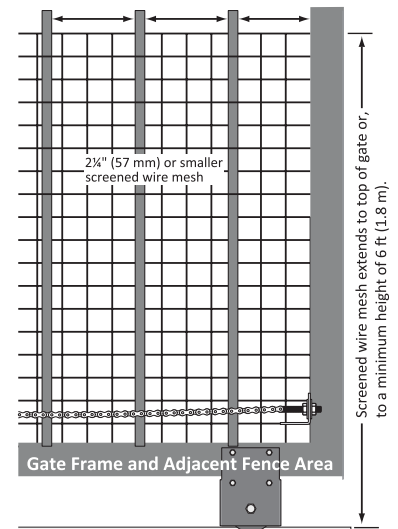
## COMPLIANT OPENINGS

Gap (X X X) between vertical bars must be less than 2 1/4 inches (57 mm) up to a height of 6 ft (1.8 m) above grade.



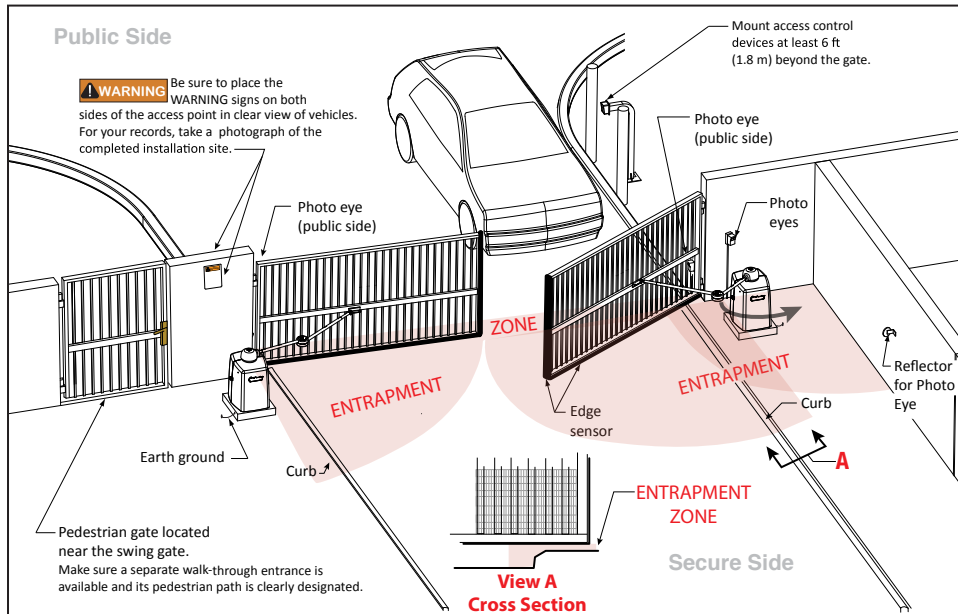
## SCREENED WIRE MESH

In the illustration to the right, the gap between vertical bars is non-compliant. It poses a safety hazard if it is wider than 2 1/4 inches (57 mm). A screened wire mesh has been added to comply with ASTM F2200 gate standards.

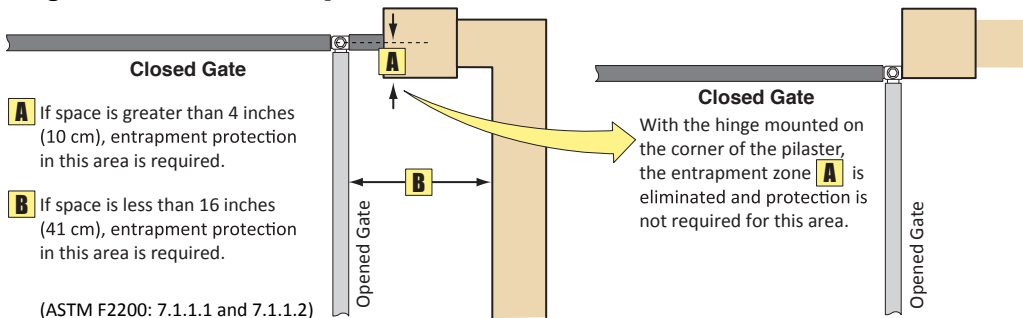


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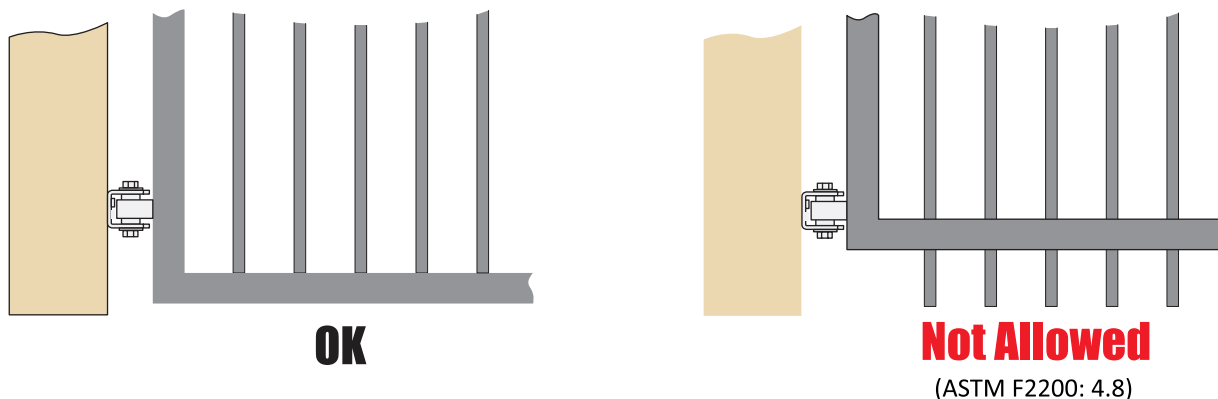


### Hinge Mount Location: Entrapment Considerations



## BASE OF SWING & SLIDE GATES

Gates must have smooth bottom edges, no protrusions should exist. If gate hardware or sensors protrude, they must have smooth surfaces free of any sharp cutting edges that do not exceed ½ inch (13 mm) beyond the base of the gate.





# SLIDE GATE OPERATOR



## DEIMOS ULTRA BT A600 UL

ELECTROMECHANICAL AUTOMATION FOR RACK SLIDING GATES



### • SMART TECHNOLOGY.

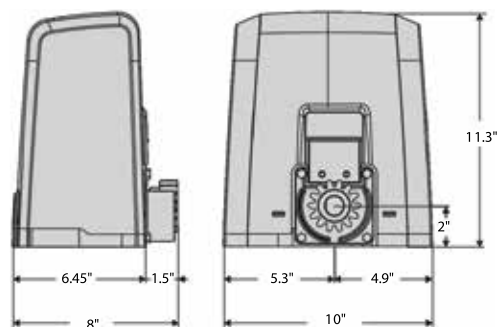
- > Magnetic limit switch control at the end cycle.
- > Incorporated two-channel rolling code radio receiver.
- > Self contained control panel unit with self-learning and self-diagnostic functions.
- > Control unit compatible with the EELink protocol and Solor compatible with "Ecosol" solar kit.

### • SIMPLER INSTALLATION.

- > Incorporated control unit positioned frontally for easier accessibility.
- > Control unit programming by LCD display (optional).
- > Optional battery back-up can be fitted within the operator casing.

### • SAFE USE.

- > This version powered at 24V has been specifically designed for simpler and faster installation in compliance with the latest UL 325-2016 safety standards.
- > The 24 V electrical motor guarantees maximum accuracy in torque and speed control on the one hand, and on the other makes it suitable for intensive gate use, even in industrial installations. Optional battery back-up can be fitted within the operator casing. These operators are all "Ecosol" solar compatible.
- > Contains obstruction sensing device, the operator reverses motion and prevents damage to people and vehicles in the event of contact.



REFERENCE	DESCRIPTION	VOLTAGE	LEAF WEIGHT
KR925228 00003	DEIMOS ULTRA BT A600 UL (1 MITTO + REFLECTIVE PHOTO EYE)	24 V	up to 1300 lbs (~580 kg)

### TECHNICAL FEATURES

Control panel	Merak UL
Reversible/irreversible operator	irreversible
Power supply	120 V 60 Hz single-phase
Absorbed power	0.1 hp (70 W)
Thermal protection	integrated in the control unit
Leaf speed	7.9 ips (12 m/min)
Output rotational speed	79 rpm
Pinion pitch	4 mm (14 teeth)
Impact reaction	electronic torque limiter magnetic
Limit switches	lever-operated with personal key intensive use
Manual release	from -4F(-20C) to 122F (50C) IP44
Operating cycle	17.3 lbs
Environmental conditions	see drawing above
Degree of protection	
Operator weight	
Dimensions	



### DEIMOS ULTRA BT A600 UL KR925228 00003

The Deimos BT Kit UL/CSA is used to automate sliding gates weighing up to 1300 lbs (~580 kg) for residential use.

Deimos Kit contains:

- 1 DEIMOS BT, operator with incorporated control board and rolling-code receiver
- 1 set of FL 130B photocells
- 1 MITTO 2 12V two-channel rolling code remote controls

# SLIDE GATE OPERATOR

## GEAR RACK



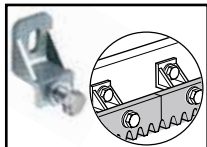
### D571053 - CVZ

30mm x 12mm, 4mm-pitch galvanized adjustable steel rack 3' 3" length.



### D221073-CP

22mm x 22mm, 4mm-pitch plastic coated rack with adjustment slots. 3' 3" length.



266

Threaded gear rack connection.

## DRIVEWAY LOOPS AND DETECTORS



### DIRECT BURIAL LOOPS

#### Reverse Loops

**EL24-60** – 24 foot Loop 4' x 8' loop, 60ft lead wire

**RL36-40** – 36 foot Loop 6' x 12' loop, 40ft lead wire

**EL44-60** – 44 foot Loop 6' x 16' loop, 60ft lead wire

#### Free Exit Loops

**EL36-100** – 36 foot Loop 6' x 12' loop, 100ft lead wire

**EL44-100** – 44 foot Loop 6' x 16' loop, 100ft lead wire



### KEXITPROBE

Mini Probe with vehicle sensor



### SAW CUT LOOPS

#### Reverse Loops

**SC24-50** – 24 foot Loop 4' x 8' loop, 50ft lead wire

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### LOOP DETECTOR DSP-7LP

Automatically adjusts its sensitivity level when used on different sized loops.



**CP31005W** - 100' of wire  
**CP32005W** - 200' of wire  
Free-exit self contained system.

## SAFETY BEAMS



### KIRPOLAPHOT001

Polarized reflective photocell. Provided with reflector and hood.



### P111043 00001

Flat photocell receiver/transmitter set for external applications. This set has a range up to 100 ft (30m) and runs on a 24V power supply.

## ACCESS CONTROL



### P121024-Q-BOX

Digital keypad with 10 channels and 100 combinations. Backlit.



### CEO-42/9c

Pad mount for gooseneck post

### CEO-64/9

Inground gooseneck post



### BFTCELL-PRIME

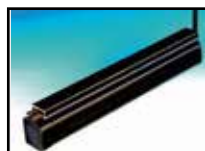
BFT Cellular Call Box with keypad open gates from your phone when using the app.



### WIFI-BFT-KPAD

Connect to the systems video directly through your phone or tablet's wifi.

## SAFETY EDGES



### Monitored Safety Edge

Sensor to eliminate pinch points and entrapment.

**ME120-2E-04-T2** (4ft length)

**ME120-2E-05-T2** (5ft length)

**ME120-2E-06-T2** (6ft length)

### Aluminum Channel

Mounting channel for monitored safety edge.

**ME120-C-4FT**

**ME120-C-5FT**

**ME120-C-6FT**



### RBand Monitored Gate Kit – RB-G-K10

A wireless monitored transmitter/receiver kit for automated gate systems. It monitors the presence and function of sensing edges and transmits a wireless monitored signal to the operator controls. The receiver is compatible with up to six wireless transmitters; for leading and trailing edges.

### Transmitter – RB-TX10

Wireless transmitter compatible with monitored gate receiver.

### Receiver – RB-G-RX10

Wireless receiver compatible with monitored gate transmitter.

## ACCESSORIES



### D111904 - MITTO 2 12V

12V Two channel 433Mhz rolling code remote control.



### P125035- SL BAT2

24VDC battery backup system for DEIMOS ULTRA BT A it includes a charger board that activates the batteries when the power is off and charges the batteries when the power is on..



### KED113731 - ECOSOL KIT

Interface, solar panel and 15' of panel cable for running BFT control panels off 24V solar power.

# SLIDE GATE OPERATOR



## ARES 1500

ELECTROMECHANICAL AUTOMATION FOR RACK SLIDING GATES

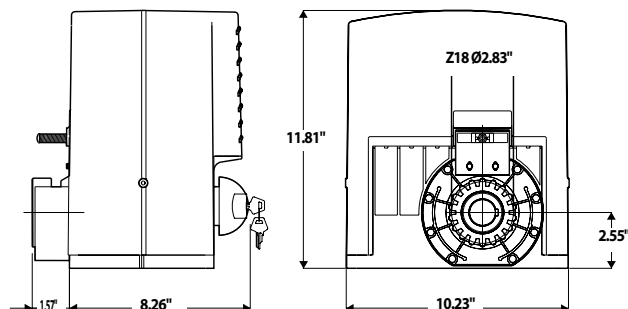


### • THE SLIDING GATE OPERATOR OFFER IS NOW EVEN WIDER:

> ARES1500 operator widens the BFT range of sliding gate operators. Classed amongst the "medium-heavy" weight range, they integrate with existing products to obtain an operator that is perfectly suited to the gate every time.

### • LOW VOLTAGE MOTOR:

> The 24 V electrical motor guarantees maximum accuracy in torque and speed control on the one hand, and on the other makes it suitable for intensive gate use, even in industrial installations.  
> Optional battery back-up can be fitted within the operator casing.



REFERENCE	DESCRIPTION	VOLTAGE	LEAF WEIGHT
P926182 00001	ARES 1500	24 V	up to 3,300 lbs (~1,500 kg)

### TECHNICAL FEATURES

Control panel	HQSC-D (incorporated)
REVERSIBLE/IRREVERSIBLE OPERATOR	irreversible
Power supply	120V 60Hz single-phase
ABSORBED POWER	250W
Thermal protection	integrated in the control unit
LEAF SPEED	5.9 ips (9m/min)
Output rotational speed	39rpm
PINION PITCH	4 mm (18 teeth)
Impact reaction	electronic torque limiter
LIMIT SWITCHES	electromechanical
Manual release	mechanical release with knob
OPERATING CYCLE	intensive use
Environmental conditions	from 5°F (-15°C) to 140°F (+60°C)
DEGREE OF PROTECTION	IP24
Operator weight	44 lbs (~20 kg)
DIMENSIONS	above
Fuse value (H-qsc board transformer)	0.63A T
FUSE VALUE (H-QSC BOARD LOGIC UNIT)	2AT



# SLIDE GATE OPERATOR

## GEAR RACK



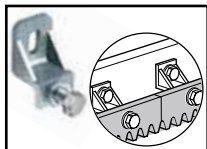
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266

Threaded gear rack connection.

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Mini Probe with vehicle sensor



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### LOOP DETECTOR

#### DSP-7LP

Automatically adjusts its sensitivity level when used on different sized loops.



### CP31005W

~ 100' of wire

### CP32005W

~ 200' of wire

Free-exit self contained system.

## SAFETY BEAMS



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Polarized reflective photocell. Provided with reflector and hood.



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Flat photocell receiver/transmitter set for external applications. This set has a range up to 100 ft (30m) and runs on a 24V power supply.

## ACCESS CONTROL



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Digital keypad with 10 channels and 100 combinations. Backlit.



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Pad mount for gooseneck post

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Inground gooseneck post



### BFTCELL-PRIME

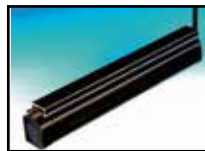
BFT Cellular Call Box with keypad open gates from your phone when using the app.



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### Receiver – RB-G-RX10

Wireless receiver compatible with monitored gate transmitter.

## ACCESSORIES



### D111904 - MITTO 2 12V

12V Two channel 433Mhz rolling code remote control.



### P125009 - BT-BAT 2

24 Vdc battery backup system for ARES, it includes a charger board that activates the batteries when power is off and charges the batteries when power is on.



### D730298 - 25 TEETH PINION

Larger pinion for increased speed (7.9ips, 12rpm). Max gate weight Ares 1500 1650lb (750Kg).



### KED113731 - ECOSOL KIT

Interface, solar panel and 15' of panel cable for running BFT control panels off 24V solar power.

# SLIDE GATE OPERATOR



## ICARO FAST

ELECTROMECHANICAL AUTOMATION FOR RACK SLIDING GATES



### • SMART TECHNOLOGY.

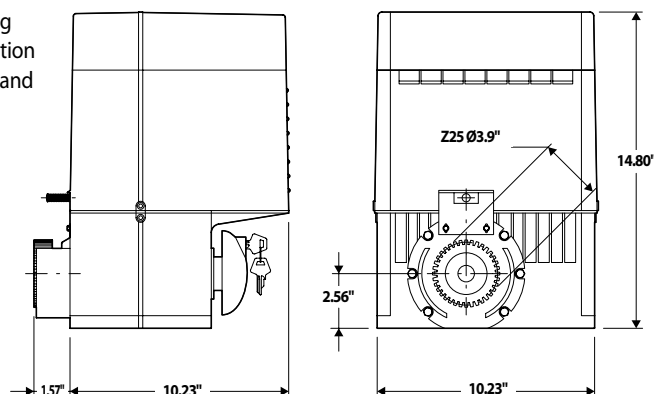
- > Incorporated two-channel rolling code radio receiver, plug-in connector for connection of a second receiver.
- > Control unit with self-learning and self-diagnostic functions of the parameters: brake, torque, obstruction detection.
- > Control unit compatible with the EElink protocol.

### • SAFE USE.

- > Thanks to the obstruction sensing device, the operator reverses motion and prevents damage to people and vehicles in the event of contact.

### • SIMPLER INSTALLATION.

- > Incorporated control unit positioned frontally for easier accessibility.
- > Control unit programming by LCD display.



REFERENCE	DESCRIPTION	VOLTAGE	LEAF WEIGHT
P925226 00001	ICARO FAST	120 V	up to 2200 lbs (~1000 Kg)

### TECHNICAL FEATURES

Control panel	LEO D (incorporated)
REVERSIBLE/IRREVERSIBLE OPERATOR	irreversible
Power supply	120 V, 60 Hz single-phase
ABSORBED POWER	1 hp (750 W)
Thermal protection	integrated
LEAF SPEED	7.9 ips (12 m/min)
Output rotational speed	37 rpm
PINION PITCH	4 mm (25 teeth)
Impact reaction	electronic clutch with encoder
LIMIT SWITCHES	electromechanical
Manual release	mechanical release with knob
OPERATING CYCLE	intensive use
Environmental conditions	from 5°F (-15°C) to 140°F (+60°C)
DEGREE OF PROTECTION	IP24
Operator weight	56 lbs (~25 kg)
DIMENSIONS	above
Fuse value (H-qsc board transformer)	2A T
FUSE VALUE (H-QSC BOARD LOGIC UNIT)	2A T

# SLIDE GATE OPERATOR

## GEAR RACK



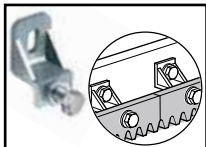
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266

Threaded gear rack connection.

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### KEXITPROBE

Mini Probe with vehicle sensor



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Free-exit self contained system.

## SAFETY BEAMS



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Polarized reflective photocell. Provided with reflector and hood.



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## ACCESS CONTROL



### P121024-Q-BOX

Digital keypad with 10 channels and 100 combinations. Backlit.



### CEO-42/9c

Pad mount for gooseneck post

### CEO-64/9

Inground gooseneck post



### BFTCELL-PRIME

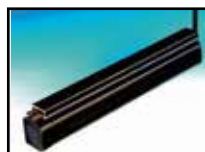
BFT Cellular Call Box with keypad open gates from your phone when using the app.



### WIFI-BFT-KPAD

Connect to the systems video directly through your phone or tablet's wifi.

## SAFETY EDGES



### Monitored Safety Edge

Sensor to eliminate pinch points and entrapment.

**ME120-2E-04-T2** (4ft length)

**ME120-2E-05-T2** (5ft length)

**ME120-2E-06-T2** (6ft length)

### Aluminum Channel

Mounting channel for monitored safety edge.

**ME120-C-4FT**

**ME120-C-5FT**

**ME120-C-6FT**



### RBand Monitored Gate Kit – RB-G-K10

A wireless monitored transmitter/receiver kit for automated gate systems. It monitors the presence and function of sensing edges and transmits a wireless monitored signal to the operator controls. The receiver is compatible with up to six wireless transmitters; for leading and trailing edges.

### Transmitter – RB-TX10

Wireless transmitter compatible with monitored gate receiver.

### Receiver – RB-G-RX10

Wireless receiver compatible with monitored gate transmitter.

## ACCESSORIES



### D111904 - MITTO 2 12V

12V Two channel 433Mhz rolling code remote control.



### I096727 - 18 TEETH PINION

Larger pinion for increased capacity (4400Lbs - 2000Kg).



# SLIDE GATE OPERATOR

## FAAC

### Model 844ER

SLIDE GATE OPERATOR FOR USE WITH RACK OR CHAIN FOR CONDOMINIUM OR INDUSTRIAL



#### • FEATURES:

- > Ideal for commercial and industrial applications
- > Maximum anti-crushing safety with a twin-disk oil-bath clutch and electronic board with encoder for reverse on obstacle
- > Non reversing operator, no electric locks needed
- > Key protected manual release device.
- > Inductive or magnetic limit switch (according to model).
- > Adjustable mounting bracket for flexible positioning.
- > Simplified programming via display and pushbuttons
- > Compliant with UL325 for Class I,II,III and IV applications

REFERENCE	DESCRIPTION	VOLTAGE	LEAF WEIGHT
1098371	844ER Z16 PINION	115 V	4000 lbs (~1814kg)
1098951.5	844ER CHAIN	115 V	4000 lbs (~1814kg)

#### TECHNICAL FEATURES

	Z16		Z20
Input voltage		115 VAC (+10% -6%)	
Power		650 W	
Current		7 A	
Electric motor		0.65 KW (0.87 hp)	
Capacitor		70 uF	
Traction and thrust force	247 lbf (1100 N)		198 lbf (880 N)
Motor rotation speed		1700 r.p.m.	
Reduction ratio		1:30	
Gate max weight	4000 lb (1814 Kg)		2200 lb (998 Kg)
Gate speed	38 ft/min (11.6 m/min)		47 ft/min (14.3 m/min)
Gate max length	131 ft (40 m)		164 ft (50 m)
Use frequency		70%	
Thermal protection on motor winding		120°C	
Clutch		Twin-disk in oil-bath	
Operating ambient temperature		-4°F - 131°F (-20°C - +55°C)	
Operator weight		32 lb (14.5 Kg)	
Dimensions (L x D x H)		10.8 x 7.5 x 15.3 in (275x191x336 mm)	
Protection class		IP 44	

**The package 844 ER Z16 pinion, designed for on-rack applications includes:** the operator with Z16 pinion and control board 780D, limit switch magnets, manual release key. **NOTE: rack is not included.**

**The package 844 ER Chain, designed for chain applications, includes:** the operator with idle transmissions, Z16 sprocket and control board 780D, limit plates, chain mounting hardware with nickel plated master links, manual release key. **NOTE: chain is not included.**

# SLIDE GATE OPERATOR

## DRIVEWAY LOOPS AND DETECTORS



### DIRECT BURIAL LOOPS

#### Reverse Loops

**EL24-60** – 24 foot Loop  
4' x 8' loop, 60ft lead wire

**RL36-40** – 36 foot Loop  
6' x 12' loop, 40ft lead wire

**EL44-60** – 44 foot Loop  
6' x 16' loop, 60ft lead wire

#### Free Exit Loops

**EL36-100** – 36 foot Loop  
6' x 12' loop, 100ft lead wire

**EL44-100** – 44 foot Loop  
6' x 16' loop, 100ft lead wire



### KEXITPROBE

Mini Probe with vehicle sensor



### SAW CUT LOOPS

#### Reverse Loops

**SC24-50** – 24 foot Loop  
4' x 8' loop, 50ft lead wire

**SC36-50** – 36 foot Loop  
6' x 12' loop, 50ft lead wire

**SC44-50** – 44 foot Loop  
6' x 16' loop, 50ft lead wire

#### Free Exit Loops

**SC36-100** – 36 foot Loop  
6' x 12' loop, 100ft lead wire

**SC44-100** – 44 foot Loop  
6' x 16' loop, 100ft lead wire



### LOOP DETECTOR

#### DSP-7LP

Automatically adjusts its sensitivity level when used on different sized loops.

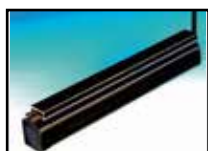


**CP31005W** - 100' of wire

**CP32005W** - 200' of wire

Free-exit self contained system.

## SAFETY EDGES



### Monitored Safety Edge

Sensor to eliminate pinch points and entrapment.

**ME120-2E-04-T2** (4ft length)

**ME120-2E-05-T2** (5ft length)

**ME120-2E-06-T2** (6ft length)

### Aluminum Channel

Mounting channel for monitored safety edge.

**ME120-C-4FT**

**ME120-C-5FT**

**ME120-C-6FT**



### RBand Monitored Gate Kit – RB-G-K10

A wireless monitored transmitter/receiver kit for automated gate systems. It monitors the presence and function of sensing edges and transmits a wireless monitored signal to the operator controls. The receiver is compatible with up to six wireless transmitters; for leading and trailing edges.

### Transmitter – RB-TX10

Wireless transmitter compatible with monitored gate receiver.

### Receiver – RB-G-RX10

Wireless receiver compatible with monitored gate transmitter.

## ACCESS CONTROL



### P121024-Q-BOX

Digital keypad with 10 channels and 100 combinations. Backlit.



### CEO-42/9c

Pad mount for gooseneck post

### CEO-64/9

Inground gooseneck post



### BFTCELL-PRIME

BFT Cellular Call Box with keypad open gates from your phone when using the app.



### WIFI-BFT-KPAD

Connect to the systems video directly through your phone or tablet's wifi.

## SAFETY BEAMS



**785163** - Wired directional photocell with alignment. Mounted on wall or column.

## ACCESSORIES



**787453** - Rolling code transmitter



**2000** - Nickel plated chain in 10 ft lengths with master links



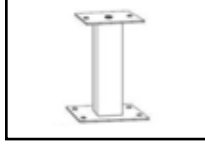
**2002** - Stainless steel chain in 10 ft lengths with master links



**490122** - Galvanized rack plus fittings. 4 sections of 3.3 ft (1m) each



**737816** - Foundation plate with side and height adjustments



**2411** - Mounting pedestal. Galvanized, 18 in.

# SWING GATE OPERATOR



## KUSTOS ULTRA BT UL A40

ELECTROMECHANICAL OPERATOR FOR SWING GATES

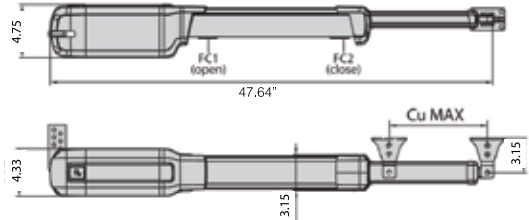


### • SMART TECHNOLOGY.

> Control unit compatible with the EELink protocol.

### • SAFE USE.

> The advantage of the system is the completely covered screw drive with magnetic stops in the same enclosed housing. This ensures maximum protection against external agents (water, dust, dirt, etc.) as well as a total protection for people, preventing any type of access to the moving parts..



REFERENCE	DESCRIPTION	VOLTAGE	LEAF WEIGHT	LEAF LENGTH
KR935317 00004	SE KUSTOS THALIA UL SE - SINGLE KIT	24V	up to 550 lbs (~250 kg)	up to 16' (5m)
KLEBR93531704	LEB KUSTOS THALIA UL LARGE ENCLOSURE- BATTERY BACK UP - SINGLE KIT	24V	up to 550 lbs (~250 kg)	up to 16' (5m)
KR935317 00005	SE KUSTOS THALIA UL SE- DUAL KIT	24V	up to 550 lbs (~250 kg)	up to 16' (5m)
KLEBR93531705	LEB KUSTOS THALIA UL LARGE ENCLOSURE- BATTERY BACK UP - DUAL KIT	24V	up to 550 lbs (~250 kg)	up to 16' (5m)

### KUSTOS UL KITS - STANDARD 10" x 12" ENCLOSURE

#### KR935317 00004

INCLUDES: KUSTOS BT L Kit Single UL/CSA (UL Thalia board w/ 10" X 12" enclosure, 2 Mittos, FL130B Photocells, install cable)

#### KR935317 00005

INCLUDES: KUSTOS BT L Kit Dual UL/CSA (UL Thalia board w/10" X 12" enclosure, 2 Mittos, FL130B Photocells, 35' install cable)

### KUSTOS UL KITS - BATTERY BACKUP w/115V Outlet, 12" x 14" Enclosure

#### KLEBR93531704

INCLUDES: KUSTOS BT L Kit Single UL/CSA (UL Thalia board w/ 12" X 14" enclosure, 2 Mittos, FL130B Photocells, install cable)

#### KLEBR93531705

INCLUDES: KUSTOS BT L Kit Dual UL/CSA (UL Thalia board w/ 12" X 14" enclosure, 2 Mittos, FL130B Photocells, 35' install cable)

### TECHNICAL FEATURES

Control unit	Thalia
Board power supply	115V
Operator type	electromechanically operated swing gates
Power supply	24 V
Power input	40 W
Useful rod stroke	14"
Maximum angle	126°
Cycle time	17 sec
Type of limit switch	magnetic
Locking	mechanical
Release	yes
Frequency of use	intensive
Environmental conditions	from -4 °F to 131 °F
Protection rating	IP44
Battery Back-up	Optional

### Thalia UL SE

- 10" x 12" Hinged fiberglass enclosure
- UL 2016 compliant
- UL Alarm and Reset



### Thalia UL LEB

- Large 12" x 14" Hinged fiberglass enclosure
- UL 2016 compliant
- Includes: Battery backup with (2) 12V, 9 AH batteries, 15V outlet for accessories





# SWING GATE OPERATOR

## DRIVEWAY LOOPS AND DETECTORS



### DIRECT BURIAL LOOPS

#### Reverse/Shadow Loops

**EL24-60** – 24 foot Loop  
4' x 8' loop, 60ft lead wire

**RL36-40** – 36 foot Loop  
6' x 12' loop, 40ft lead wire

**EL44-60** – 44 foot Loop  
6' x 16' loop, 60ft lead wire

#### Free Exit Loops

**EL36-100** – 36 foot Loop  
6' x 12' loop, 100ft lead wire

**EL44-100** – 44 foot Loop  
6' x 16' loop, 100ft lead wire



### KEXITPROBE

Mini Probe with vehicle sensor



### SAW CUT LOOPS

#### Reverse/Shadow Loops

**SC24-50** – 24 foot Loop  
4' x 8' loop, 50ft lead wire

**SC36-50** – 36 foot Loop  
6' x 12' loop, 50ft lead wire

**SC44-50** – 44 foot Loop  
6' x 16' loop, 50ft lead wire

#### Free Exit Loops

**SC36-100** – 36 foot Loop  
6' x 12' loop, 100ft lead wire

**SC44-100** – 44 foot Loop  
6' x 16' loop, 100ft lead wire



### LOOP DETECTOR

#### DSP-7LP

Automatically adjusts its sensitivity level when used on different sized loops.

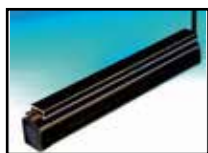


**CP31005W** - 100' of wire

**CP32005W** - 200' of wire

Free-exit self contained system.

## SAFETY EDGES



### Monitored Safety Edge

Sensor to eliminate pinch points and entrapment.

**ME120-2E-04-T2** (4ft length)

**ME120-2E-05-T2** (5ft length)

**ME120-2E-06-T2** (6ft length)

### Aluminum Channel

Mounting channel for monitored safety edge.

**ME120-C-4FT**

**ME120-C-5FT**

**ME120-C-6FT**



### RBand Monitored Gate Kit – RB-G-K10

A wireless monitored transmitter/receiver kit for automated gate systems. It monitors the presence and function of sensing edges and transmits a wireless monitored signal to the operator controls. The receiver is compatible with up to six wireless transmitters; for leading and trailing edges.

### Transmitter – RB-TX10

Wireless transmitter compatible with monitored gate receiver.

### Receiver – RB-G-RX10

Wireless receiver compatible with monitored gate transmitter.

## ACCESS CONTROL



### P121024-Q-BOX

Digital keypad with 10 channels and 100 combinations. Backlit.



### CEO-42/9c

Pad mount for gooseneck post

### CEO-64/9

Inground gooseneck post



### BFTCELL-PRIME

BFT Cellular Call Box with keypad open gates from your phone when using the app.



### WIFI-BFT-KPAD

Connect to the systems video directly through your phone or tablet's wifi.

## SAFETY BEAMS



### KIRPOLAPHOT001

Polarized reflective photocell. Provided with reflector and hood.



### P111043 00001

Flat photocell receiver/transmitter set for external applications. This set has a range up to 100 ft (30m) and runs on a 24V power supply.

## ACCESSORIES



### D111904 - MITTO 2 12V

12V Two channel 433Mhz rolling code remote control.



### P125005 - BT BAT

24V dc battery backup system for KUSTOS BT it includes a charger board that activates the batteries when power is off and charges the batteries when power is on.



### KELIBRC005U - ECOSOL LIBRA PRE-WIRED ENCLOSURE KIT

Libra UL/CSA 24V control board with ECOSOL interface, 2 - 9Amp/H batteries and radio receiver inside a pre-wired 12" x 14" box. Kit contains 10W solar panel and 15' of panel cable.

# SWING GATE OPERATOR



tuned to you

## LUX

HYDRAULIC OPERATOR FOR SWING GATES



UL 325  
COMPLIANT

### • A MODEL FOR EVERY NEED.

> Several versions available: with slowdown, internal positive stops, longer stroke. All of them are irreversible.

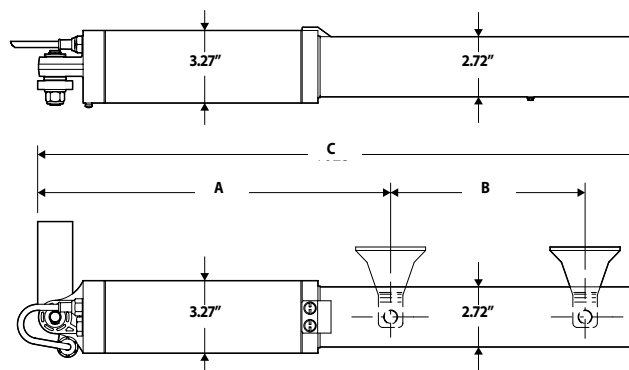
### • SAFE USE.

> Crushing prevention guaranteed by two adjustable bypass valves.

REFERENCE	DESCRIPTION	VOLTAGE	LEAF WEIGHT	LEAF LENGTH
P935014 00010	LUX GV2B UL/CSA	120 V	up to 700 lbs (~320 kg)	up to 15' (4,5 m)

### TECHNICAL FEATURES

Control panel	RIGEL 4 UL/CSA (suggested)
REVERSIBLE/IRREVERSIBLE OPERATOR	irreversible
Power supply	120 V, 60 Hz single-phase
ABSORBED POWER	0.33 hp (250 W)
Thermal protection	integrated
ROD WORKING STROKE	15.35" (390 mm)
Rod speed	0.55 ips (14 mm/s)
OPENING AND CLOSING TIME	27 s
Slowdown	-
IMPACT REACTION	hydraulic clutch
lock	hydraulic opening/closing
MANUAL RELEASE	release key
Operating cycle	intensive use
ENVIRONMENTAL CONDITIONS	from 14°F (-10°C) to 140°F (+60°C)
Degree of protection	IP57
OPERATOR WEIGHT	19 lbs (~8,7 kg)
Dimensions	below



	A	B	C
LUX GV 2B UL/CSA	33.46"	15.35"	51.18"

# SWING GATE OPERATOR

## DRIVEWAY LOOPS AND DETECTORS



### DIRECT BURIAL LOOPS

#### Reverse/Shadow Loops

**EL24-60** – 24 foot Loop  
4' x 8' loop, 60ft lead wire

**RL36-40** – 36 foot Loop  
6' x 12' loop, 40ft lead wire

**EL44-60** – 44 foot Loop  
6' x 16' loop, 60ft lead wire

#### Free Exit Loops

**EL36-100** – 36 foot Loop  
6' x 12' loop, 100ft lead wire

**EL44-100** – 44 foot Loop  
6' x 16' loop, 100ft lead wire



### KEXITPROBE

Mini Probe with vehicle sensor



### SAW CUT LOOPS

#### Reverse/Shadow Loops

**SC24-50** – 24 foot Loop  
4' x 8' loop, 50ft lead wire

**SC36-50** – 36 foot Loop  
6' x 12' loop, 50ft lead wire

**SC44-50** – 44 foot Loop  
6' x 16' loop, 50ft lead wire

#### Free Exit Loops

**SC36-100** – 36 foot Loop  
6' x 12' loop, 100ft lead wire

**SC44-100** – 44 foot Loop  
6' x 16' loop, 100ft lead wire



### LOOP DETECTOR

#### DSP-7LP

Automatically adjusts its sensitivity level when used on different sized loops.

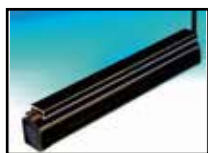


**CP31005W** - 100' of wire

**CP32005W** - 200' of wire

Free-exit self contained system.

## SAFETY EDGES



### Monitored Safety Edge

Sensor to eliminate pinch points and entrapment.

**ME120-2E-04-T2** (4ft length)

**ME120-2E-05-T2** (5ft length)

**ME120-2E-06-T2** (6ft length)

### Aluminum Channel

Mounting channel for monitored safety edge.

**ME120-C-4FT**

**ME120-C-5FT**

**ME120-C-6FT**



### RBand Monitored Gate Kit – RB-G-K10

A wireless monitored transmitter/receiver kit for automated gate systems. It monitors the presence and function of sensing edges and transmits a wireless monitored signal to the operator controls. The receiver is compatible with up to six wireless transmitters; for leading and trailing edges.

### Transmitter – RB-TX10

Wireless transmitter compatible with monitored gate receiver.

### Receiver – RB-G-RX10

Wireless receiver compatible with monitored gate transmitter.

## ACCESS CONTROL



### P121024-Q-BOX

Digital keypad with 10 channels and 100 combinations. Backlit.



### CEO-42/9c

Pad mount for gooseneck post

### CEO-64/9

Inground gooseneck post



### BFTCELL-PRIME

BFT Cellular Call Box with keypad open gates from your phone when using the app.



### WIFI-BFT-KPAD

Connect to the systems video directly through your phone or tablet's wifi.

## SAFETY BEAMS



### KIRPOLAPHOT001

Polarized reflective photocell. Provided with reflector and hood.



### P111043 00001

Flat photocell receiver/transmitter set for external applications. This set has a range up to 100 ft (30m) and runs on a 24V power supply.

## ACCESSORIES



### D111904 - MITTO 2 12V

12V Two channel 433Mhz rolling code remote control.



### KD113693 00001 - RIGEL 5 WITH CAPACITORS

Fuse value: transformer 2A T, logic 1A T.



# SWING GATE OPERATOR

## FAAC

### Model S418

ELECTROMECHANICAL OPERATOR FOR SWING GATES FOR RESIDENTIAL



#### • FEATURES:

- > Sleek design
- > Opening and closing mechanical stops built-in
- > Effective stroke of 13.8" (350mm)
- > New "multi-position" bracket for non-welded installation
- > Maximum safety thanks to the E024U control board reverse on contact feature
- > Built-in battery backup to ensure operation in case of power outage
- > Compliant with UL325 for Class I,II,III and IV applications

REFERENCE	DESCRIPTION	VOLTAGE	LEAF WEIGHT	LEAF LENGTH
104301.5	S418 - BASIC SINGLE KIT	24 V	up to 500 lbs (~227 kg)	up to 12'
10430115	S418 - OPERATOR ONLY	24 V	up to 500 lbs (~227 kg)	up to 12'

#### TECHNICAL FEATURES

Input Voltage	24 Vdc
Power	35 W
Current	1.5 A
Max thrust	404 lbf (180 daN)
Rod stroke	13.8 in (350 mm)
Rod stroke without mechanical stops	15.3 in (390 mm)
Rod extension speed	0.7 in/s (1.8 cm/s)
Max. leaf width	12 ft (3.7 m)
Max. leaf weight	500 lb (227 Kg)
Operating ambient temperature	-4°F - 131°F (-20°C - +55°C)
Use frequency	continuous
Operator Weight	13.2 lb (6 kg)
Dimensions (L x D x H)	32.5 x 4 x 4.9 in (825x104x125mm)
Protection class	IP 54

#### 104301.5 - S418 Basic Single Kit

Kit contains:

- 1 Operator S418
- 1 E024U Enclosure Kit
- 2 Batteries 12V 8 Ah
- 1 Receiver 433 RC Plug In
- 2 4-channel transmitter XT4 433 RC
- 1 Pair of photobeams

#### 10430115 - S418 Operator only

# SWING GATE OPERATOR

## DRIVEWAY LOOPS AND DETECTORS



### DIRECT BURIAL LOOPS

#### Reverse/Shadow Loops

**EL24-60** – 24 foot Loop  
4' x 8' loop, 60ft lead wire

**RL36-40** – 36 foot Loop  
6' x 12' loop, 40ft lead wire

**EL44-60** – 44 foot Loop  
6' x 16' loop, 60ft lead wire

#### Free Exit Loops

**EL36-100** – 36 foot Loop  
6' x 12' loop, 100ft lead wire

**EL44-100** – 44 foot Loop  
6' x 16' loop, 100ft lead wire



### SAW CUT LOOPS

#### Reverse/Shadow Loops

**SC24-50** – 24 foot Loop  
4' x 8' loop, 50ft lead wire

**SC36-50** – 36 foot Loop  
6' x 12' loop, 50ft lead wire

**SC44-50** – 44 foot Loop  
6' x 16' loop, 50ft lead wire

#### Free Exit Loops

**SC36-100** – 36 foot Loop  
6' x 12' loop, 100ft lead wire

**SC44-100** – 44 foot Loop  
6' x 16' loop, 100ft lead wire



### LOOP DETECTOR\* DSP-7LP

Automatically adjusts its sensitivity level when used on different sized loops.

\*If shadow loop needed, items **2670.1** (Loop Detector Interface) and **2681** (10 Pin Plug-in Loop Detector) must be used in place of DSP-7LP.



### KEXITPROBE

Mini Probe with vehicle sensor



**CP31005W** - 100' of wire

**CP32005W** - 200' of wire

Free-exit self contained system.

## ACCESSORIES



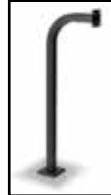
**787453** - Rolling code transmitter

## ACCESS CONTROL



### P121024-Q-BOX

Digital keypad with 10 channels and 100 combinations. Backlit.



### CEO-42/9c

Pad mount for gooseneck post

### CEO-64/9

Inground gooseneck post



### BFTCELL-PRIME

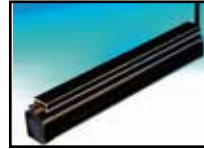
BFT Cellular Call Box with keypad open gates from your phone when using the app.



### WIFI-BFT-KPAD

Connect to the systems video directly through your phone or tablet's wifi.

## SAFETY EDGES



### Monitored Safety Edge

Sensor to eliminate pinch points and entrapment.

**ME120-2E-04-T2** (4ft length)

**ME120-2E-05-T2** (5ft length)

**ME120-2E-06-T2** (6ft length)

### Aluminum Channel

Mounting channel for monitored safety edge.

**ME120-C-4FT**

**ME120-C-5FT**

**ME120-C-6FT**



### RBand Monitored Gate Kit – RB-G-K10

A wireless monitored transmitter/receiver kit for automated gate systems. It monitors the presence and function of sensing edges and transmits a wireless monitored signal to the operator controls. The receiver is compatible with up to six wireless transmitters; for leading and trailing edges.

### Transmitter – RB-TX10

Wireless transmitter compatible with monitored gate receiver.

### Receiver – RB-G-RX10

Wireless receiver compatible with monitored gate transmitter.

## SAFETY BEAMS



**785163** - Wired directional photocell with alignment. Mounted on wall or column.

# SWING GATE OPERATOR

**FAAC**

## Model 400

HYDRAULIC OPERATOR FOR SWING GATES FOR CONDOMINIUM OR INDUSTRIAL



### • FEATURES:

- > Wide and versatile range from residential to heavy industrial gates
- > Hydraulic lock of the gate in open and/or closed positions
- > Quiet operation
- > Self lubricating for long life
- > Keyprotected manual release
- > Compliant with UL325 for Class I,II, III, and IV applications

REFERENCE	DESCRIPTION	VOLTAGE	LEAF WEIGHT	LEAF LENGTH
10420112.5	400 CBAC STANDARD BASIC SINGLE KIT	115 V	up to 1300 lbs (~589 kg)	up to 16'
104201125	400 CBAC STANDARD OPERATOR ONLY	115 V	up to 1300 lbs (~589 kg)	up to 16'
10420712.5	400 CBACR RAPID BASIC SINGLE KIT	115 V	up to 900 lbs (~408 kg)	up to 12'
10420712	400 CBACR RAPID OPERATOR ONLY	115 V	up to 900 lbs (~408 kg)	up to 12'

### TECHNICAL FEATURES

	400 CBAC	400 CBACR
Input voltage	115 VAC (+10% -6%) or 230 VAC (+6% -10%)	
Power	220 W	
Current	2A (115V) - 1 A (230V)	
Motor rotation speed	1400 r.p.m.	
Thrust capacitor	25uF (115V) - 8uF (230V)	
Operating ambient temperature	4°F - 131°F (-20°C to +55°C)	
Thermal protection on motor	248°F (120°C)	
Weight	29 lb (13.2 kg)	
Protection class	IP 55	
Dimensions (L x D x H)	40.5 x 4.4 x 3.3 in (1,031x113x85 mm)	
Hydraulic Locking	Opening and Closing	
Minimum leaf length	9.5 ft (2.9m)	
Maximum leaf length	16 ft (4.9m)	12 ft (3.6m)
Maximum leaf weight	1300 lb (589 kg)	900 lb (408 kg)
Thrust force	1390 lbf (620 daN)	1045 lbf (465 daN)
Pump flow rate (l/min)	1 l/m	1.5 l/m
Rod extension speed	0.4 in/sec (1cm/sec)	0.6 in/sec (1.5cm/sec)
Effective rod stroke	10.25 in (260mm)	10.25 in (260mm)
Use frequency (cycles/hour)	70	80

### 400 - Basic Single Kits 115V contains

Kit contains:

- 1 Operator 400 CBAC or CBACR
- 1 Prewired fiberglass enclosure 115V 14x16 in
- 1 455D control panel 115V
- 1 Receiver 433 RC Plug In
- 2 4-channel transmitter XT4 433 RC
- 1 Pair of photobeams

### 400 - Single Operator Only

- 104201125** - 400 CBAC standard operator only
- 10420712** - 400 CBACR rapid operator only



# SWING GATE OPERATOR

## DRIVEWAY LOOPS AND DETECTORS



### DIRECT BURIAL LOOPS

#### Reverse/Shadow Loops

**EL24-60** – 24 foot Loop  
4' x 8' loop, 60ft lead wire

**RL36-40** – 36 foot Loop  
6' x 12' loop, 40ft lead wire

**EL44-60** – 44 foot Loop  
6' x 16' loop, 60ft lead wire

#### Free Exit Loops

**EL36-100** – 36 foot Loop  
6' x 12' loop, 100ft lead wire

**EL44-100** – 44 foot Loop  
6' x 16' loop, 100ft lead wire



### SAW CUT LOOPS

#### Reverse/Shadow Loops

**SC24-50** – 24 foot Loop  
4' x 8' loop, 50ft lead wire

**SC36-50** – 36 foot Loop  
6' x 12' loop, 50ft lead wire

**SC44-50** – 44 foot Loop  
6' x 16' loop, 50ft lead wire

#### Free Exit Loops

**SC36-100** – 36 foot Loop  
6' x 12' loop, 100ft lead wire

**SC44-100** – 44 foot Loop  
6' x 16' loop, 100ft lead wire



### KEXITPROBE

Mini Probe with vehicle sensor



### LOOP DETECTOR

#### DSP-7LP

Automatically adjusts its sensitivity level when used on different sized loops.



**CP31005W** - 100' of wire  
**CP32005W** - 200' of wire  
Free-exit self contained system.

## ACCESSORIES



**787453** - Rolling code transmitter



**490109** - Positive stop

## ACCESS CONTROL



### P121024-Q-BOX

Digital keypad with 10 channels and 100 combinations. Backlit.



### CEO-42/9c

Pad mount for gooseneck post

### CEO-64/9

Inground gooseneck post



### BFTCELL-PRIME

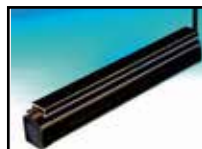
BFT Cellular Call Box with keypad open gates from your phone when using the app.



### WIFI-BFT-KPAD

Connect to the systems video directly through your phone or tablet's wifi.

## SAFETY EDGES



### Monitored Safety Edge

Sensor to eliminate pinch points and entrapment.

**ME120-2E-04-T2** (4ft length)

**ME120-2E-05-T2** (5ft length)

**ME120-2E-06-T2** (6ft length)

### Aluminum Channel

Mounting channel for monitored safety edge.

**ME120-C-4FT**

**ME120-C-5FT**

**ME120-C-6FT**



### RBand Monitored Gate Kit – RB-G-K10

A wireless monitored transmitter/receiver kit for automated gate systems. It monitors the presence and function of sensing edges and transmits a wireless monitored signal to the operator controls. The receiver is compatible with up to six wireless transmitters; for leading and trailing edges.

### Transmitter – RB-TX10

Wireless transmitter compatible with monitored gate receiver.

### Receiver – RB-G-RX10

Wireless receiver compatible with monitored gate transmitter.

## SAFETY BEAMS



**785163** - Wired directional photocell with alignment. Mounted on wall or column.

# UNDERGROUND SWING GATE OPERATOR



## SUB UL/CSA

UNDERGROUND HYDRAULIC OPERATOR FOR SWING GATES



**UL 325  
COMPLIANT**



### • A MODEL FOR EVERY NEED.

- > Two versions available, for 125° and 180° opening angles.

### • SAFE USE.

- > Crushing protection guaranteed by two adjustable bypass valves.

### • SIMPLER INSTALLATION.

- > Maintenance is carried out without any need to raise or disassemble the gate.
- > The special foundation case makes it possible to remove the operator without taking off the gate leaf.

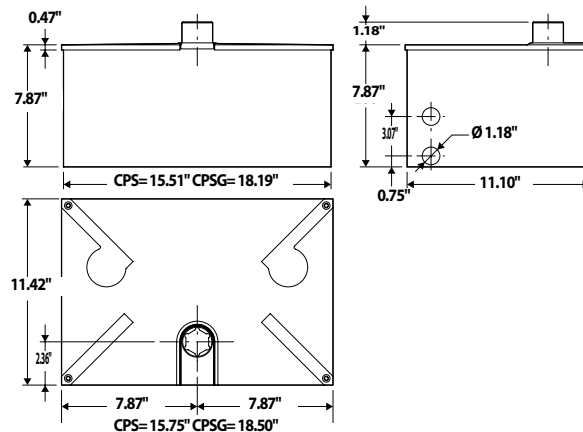
REFERENCE	DESCRIPTION	VOLTAGE	LEAF WEIGHT	LEAF LENGTH
P930012 00007	SUB R UL/CSA DX	120 V	up to 1750 lbs (~800 kg)	up to 11'6" (3.5 m)
P930012 00008	SUB R UL/CSA SX	120 V	up to 1750 lbs (~800 kg)	up to 11'6" (3.5 m)

**DX = Motor on right hand side of driveway from inside the property.**

**SX = Motor on left hand side of driveway from inside the property.**

### TECHNICAL FEATURES

Control panel	RIGEL 4 UL/CSA (suggested)
REVERSIBLE/IRREVERSIBLE OPERATOR	irreversible
Power supply	120 V, 60 Hz single-phase
ABSORBED POWER	0.33 hp (250 W)
Thermal protection	integrated
OPENING ANGLE	125°
Opening or closing time	14 s
SLOWDOWN	opening/closing
Impact reaction	hydraulic clutch
LOCK	hydraulic opening/closing
Manual release	release key
OPERATING CYCLE	intensive use
Environmental conditions	from 14°F (-10°C) to 140°F (+60°C)
DEGREE OF PROTECTION	IP67
Operator weight	48 lbs (~22 kg)
DIMENSIONS	below
fuse value Rigel 5 board Transformer	2A T
FUSE VALUE RIGEL 5 BOARD LOGIC BOARD	1A T
fuse value Rigel 4 board Transformer	2A T
FUSE VALUE RIGEL 4 BOARD LOGIC BOARD	1A T



# UNDERGROUND SWING GATE OPERATOR

## DRIVEWAY LOOPS AND DETECTORS



### DIRECT BURIAL LOOPS

#### Reverse/Shadow Loops

**EL24-60** – 24 foot Loop  
4' x 8' loop, 60ft lead wire

**RL36-40** – 36 foot Loop  
6' x 12' loop, 40ft lead wire

**EL44-60** – 44 foot Loop  
6' x 16' loop, 60ft lead wire

#### Free Exit Loops

**EL36-100** – 36 foot Loop  
6' x 12' loop, 100ft lead wire

**EL44-100** – 44 foot Loop  
6' x 16' loop, 100ft lead wire



### KEXITPROBE

Mini Probe with vehicle sensor



### SAW CUT LOOPS

#### Reverse/Shadow Loops

**SC24-50** – 24 foot Loop  
4' x 8' loop, 50ft lead wire

**SC36-50** – 36 foot Loop  
6' x 12' loop, 50ft lead wire

**SC44-50** – 44 foot Loop  
6' x 16' loop, 50ft lead wire

#### Free Exit Loops

**SC36-100** – 36 foot Loop  
6' x 12' loop, 100ft lead wire

**SC44-100** – 44 foot Loop  
6' x 16' loop, 100ft lead wire



### LOOP DETECTOR

#### DSP-7LP

Automatically adjusts its sensitivity level when used on different sized loops.

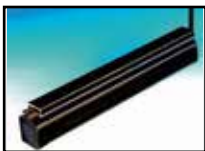


**CP31005W** - 100' of wire

**CP32005W** - 200' of wire

Free-exit self contained system.

## SAFETY EDGES



### Monitored Safety Edge

Sensor to eliminate pinch points and entrapment.

**ME120-2E-04-T2** (4ft length)

**ME120-2E-05-T2** (5ft length)

**ME120-2E-06-T2** (6ft length)

### Aluminum Channel

Mounting channel for monitored safety edge.

**ME120-C-4FT**

**ME120-C-5FT**

**ME120-C-6FT**



### RBand Monitored Gate Kit – RB-G-K10

A wireless monitored transmitter/receiver kit for automated gate systems. It monitors the presence and function of sensing edges and transmits a wireless monitored signal to the operator controls. The receiver is compatible with up to six wireless transmitters; for leading and trailing edges.

### Transmitter – RB-TX10

Wireless transmitter compatible with monitored gate receiver.

### Receiver – RB-G-RX10

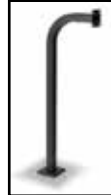
Wireless receiver compatible with monitored gate transmitter.

## ACCESS CONTROL



### P121024-Q-BOX

Digital keypad with 10 channels and 100 combinations. Backlit.



### CEO-42/9c

Pad mount for gooseneck post

### CEO-64/9

Inground gooseneck post



### BFTCELL-PRIME

BFT Cellular Call Box with keypad open gates from your phone when using the app.



### WIFI-BFT-KPAD

Connect to the systems video directly through your phone or tablet's wifi.

## ACCESSORIES



### D111904-MITTO 2 12V

12V Two channel 433Mhz rolling code remote control.



### N733066 00001 - CPS DX

Bearing foundation case for SUB operator (right hand). Maintenance can be carried out without disassembling the gate.



### N733066 00002 - CPS SX

Bearing foundation case for SUB operator (left hand). Maintenance can be carried out without disassembling the gate.



### KERIG5C020U

12" x 14" Lockable Fiberglass Enclosure Box  
Steel Back Panel  
Rigel 5 Control Board with built in receiver  
110 Volt Outlet for accessories  
Test Button

## SAFETY BEAMS



### KIRPOLAPHOT001

Polarized reflective photocell. Provided with reflector and hood.



### P111043 00001

Flat photocell receiver/transmitter set for external applications. This set has a range up to 100 ft (30m) and runs on a 24V power supply.



# UNDERGROUND SWING GATE OPERATOR



## Model S800H

UNDERGROUND HYDRAULIC OPERATOR FOR SWING GATES FOR RESIDENTIAL  
OR CONDOMINIUM



### • FEATURES:

- > Hybrid technology
- > Integrated encoder to control operator position
- > 100° and 180° opening angle versions
- > Opening/Closing mechanical stops integrated
- > Easy handling and installation thanks to the integrated handles
- > Maximum safety thanks to the E024U control board reverse on contact feature
- > Built in battery backup to ensure operation in case of power outage
- > Compliant with UL325 for Class I,II,III and IV applications

REFERENCE	DESCRIPTION	VOLTAGE	LEAF WEIGHT	LEAF LENGTH	OPENING ANGLE
108710.5	S800H CBAC SINGLE KIT	24 V	up to 1760 lbs (~800 kg)	up to 13'	100°
10871015.5	S800H CBAC OPERATOR ONLY	24 V	up to 1760 lbs (~800 kg)	up to 13'	100°

### TECHNICAL FEATURES

	S800H CBAC
Input voltage	24 Vdc
Power	60 W
Current	7 A
Max. torque	442 lbf.ft (600 Nm)
Angle speed	8.2°/s
Max. opening angle	113° (S800H 100°) - 187° (S800H 180°)
Max. leaf width	13 ft (4 m)
Max. leaf weight	1760 lb (800kg)
Operating ambient temperature	-4°F - 131°F (-20°C to +55°C)
Use frequency	continuous
Operator weight	29 lb S800H 100° (13.2Kg) - 37 lb S800H 180° (17.0 kg)
Protection class	IP 67
Hydraulic locks	included

### S800H - Single Kit

Kit contains:

- 1 Operator S800H CBAC with accessories
- 1 Hydraulic manual release
- 1 Splined shaft collar with mounting bolts
- 1 Support Box (item 490112)
- 1 E024U Enclosure Kit
- 2 Batteries 12V 8 Ah
- 1 Receiver 433 RC Plug In
- 2 4-channel transmitter XT4 433 RC
- 1 Pair of photobeams

### S800H - Single Operator Only

**10871015.5** - S800H CBAC operator only with  
100° opening angle

# SWING GATE OPERATOR

## DRIVEWAY LOOPS AND DETECTORS



### DIRECT BURIAL LOOPS

#### Reverse/Shadow Loops

**EL24-60** – 24 foot Loop  
4' x 8' loop, 60ft lead wire

**RL36-40** – 36 foot Loop  
6' x 12' loop, 40ft lead wire

**EL44-60** – 44 foot Loop  
6' x 16' loop, 60ft lead wire

#### Free Exit Loops

**EL36-100** – 36 foot Loop  
6' x 12' loop, 100ft lead wire

**EL44-100** – 44 foot Loop  
6' x 16' loop, 100ft lead wire



### SAW CUT LOOPS

#### Reverse/Shadow Loops

**SC24-50** – 24 foot Loop  
4' x 8' loop, 50ft lead wire

**SC36-50** – 36 foot Loop  
6' x 12' loop, 50ft lead wire

**SC44-50** – 44 foot Loop  
6' x 16' loop, 50ft lead wire

#### Free Exit Loops

**SC36-100** – 36 foot Loop  
6' x 12' loop, 100ft lead wire

**SC44-100** – 44 foot Loop  
6' x 16' loop, 100ft lead wire



### KEXITPROBE

Mini Probe with vehicle sensor



### LOOP DETECTOR

#### DSP-7LP

Automatically adjusts its sensitivity level when used on different sized loops.



**CP31005W** - 100' of wire  
**CP32005W** - 200' of wire  
Free-exit self contained system.

## ACCESSORIES



**787453** - Rolling code transmitter



**490112** - Support Box



**490113** - Stainless steel support box

## ACCESS CONTROL



### P121024-Q-BOX

Digital keypad with 10 channels and 100 combinations. Backlit.



### CEO-42/9c

Pad mount for gooseneck post

### CEO-64/9

Inground gooseneck post



### BFTCELL-PRIME

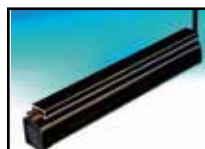
BFT Cellular Call Box with keypad open gates from your phone when using the app.



### WIFI-BFT-KPAD

Connect to the systems video directly through your phone or tablet's wifi.

## SAFETY EDGES



### Monitored Safety Edge

Sensor to eliminate pinch points and entrapment.

**ME120-2E-04-T2** (4ft length)

**ME120-2E-05-T2** (5ft length)

**ME120-2E-06-T2** (6ft length)

### Aluminum Channel

Mounting channel for monitored safety edge.

**ME120-C-4FT**

**ME120-C-5FT**

**ME120-C-6FT**



### RBand Monitored Gate Kit – RB-G-K10

A wireless monitored transmitter/receiver kit for automated gate systems. It monitors the presence and function of sensing edges and transmits a wireless monitored signal to the operator controls. The receiver is compatible with up to six wireless transmitters; for leading and trailing edges.

### Transmitter – RB-TX10

Wireless transmitter compatible with monitored gate receiver.

### Receiver – RB-G-RX10

Wireless receiver compatible with monitored gate transmitter.

## SAFETY BEAMS



**785163** - Wired directional photocell with alignment. Mounted on wall or column.

# ECOSOL SOLAR-POWERED SYSTEM



## ECOSOL

SOLAR-POWERED SYSTEM

FOR USE WITH DEIMOS, ARES AND PHOBOS SERIES OPERATORS

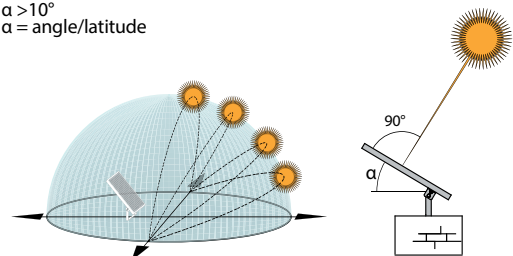


### KELIBRC005U - ECOSOL LIBRA PRE-WIRED ENCLOSURE KIT

Libra UL/CSA 24V control board with ECOSOL interface, 2 - 9Amp/H batteries and radio receiver inside a pre-wired 12" x 14" box. Kit contains 10W solar panel and 15' of panel cable.

Cities	$\alpha$
Seattle (WA)	47°
New York (NY)	41°
San Francisco (CA)	38°
Atlanta (GA)	34°
Los Angeles (CA)	34°
Phoenix (AZ)	33°
Dallas (TX)	33°
Houston (TX)	30°
Miami (FL)	26°
San Juan (PR)	18°

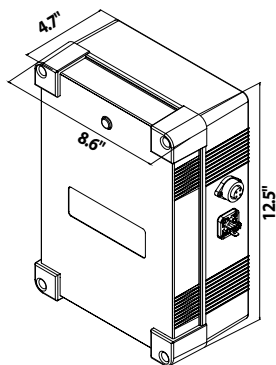
$\alpha > 10^\circ$   
 $\alpha$  = angle/latitude



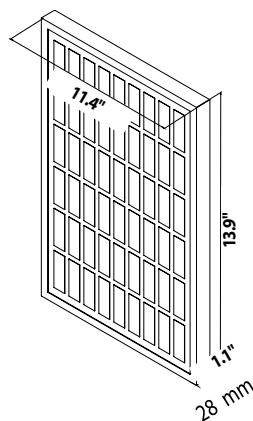
### TECHNICAL FEATURES

	ECOSOL BOX	ECOSOL LIBRA UL/CSA ENCLOSURE	ECOSOL PANEL
ABSORBED POWER	10 A	10 A	-
BATTERY NOMINAL CAPACITY	7.2 Ah	9.0 Ah	-
DEGREE OF PROTECTION	IP 55	IP 66	-
ENVIROMENTAL CONDITIONS	from 24° F to 122° F	from -4° F to 122° F	from 24° F to 122° F
POWER	35 W max from panels	35 W max from panels	10 W
STAND BY ABSORBED POWER	0.15 W	0.15 W	-
WEIGHT	13.2 lbs	23 lbs	4.4 lbs
FUSE VALUE	-	1A T	-

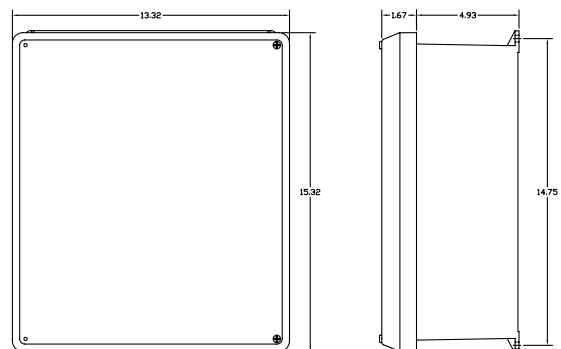
### DIMENSIONS ECOSOL BOX



### DIMENSIONS ECOSOL PANEL



### ECOSOL LIBRA UL/CSA ENCLOSURE





# ECOSOL SOLAR-POWERED SYSTEM



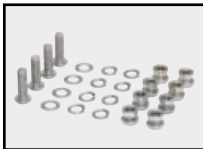
ECOSOL PANEL

ECOSOL BOX

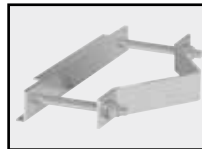
## ACCESSORIES



**D113732 - ECOSOL DOUBLE**  
Battery capacity expansion for ECOSOL BOX. Includes two 12V 7.2Ah batteries.



**N999475 - ECOSOL SECURITY**  
Anti-tamper stainless steel screws Kit for ECOSOL PANEL and ECOSOL POST BR.



**N999473 - ECOSOL POST BR**  
Stainless steel bracket and screws Kit for mounting ECOSOL solar panel on round post 2" to 4" diameter or square post 3" side.



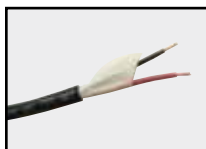
**N999476 - ECOSOL CABLE**  
65' extension cable for ECOSOL CHARGER.



**KBAT12V9AH - BATTERY**  
9 Amp/h 12 V battery



**N999477 - ECOSOL CHARGER**  
Battery charger 100/230V - 24V for rapid charging of ECOSOL Interface Box and ECOSOL Double from a standard electrical output.



**KCAB2BR - CABLE**  
Solar panel 2 core red & black cable (per foot)



**KRELAY24V - Relay**  
Relay board 24V for loop detector



**N999471 - ECOSOL PANEL**  
10W, 24V solar panel for connection to ECOSOL BOX. Can be installed in parallel for improved recharge capacity. Complete with stainless steel screws and brackets for mounting on wall or horizontal surface.



**D113731 - ECOSOL BOX**  
Interface for running BFT control panels off 24V solar power. Includes two 12V 7.2Ah batteries and circuit board for management of commands to control panel and battery charge management, with built-in Rolling Code 433.92 MHz receiver with 63 stored positions. Features carry handle for possible quick-charging of batteries from electrical power outlet through ECOSOL CHARGER accessory.

# ACCESS CONTROL



## WIFI-BFT-KPAD

PREDATOR WIFI Video Intercom

Simple setup by mobile phone. Connect to the system video directly through your phone's or tablet's wifi, enter the pass code for the home hub wifi and your devices are connected.

View the gate/door any time with monitoring mode!

Open gates with your phone / tablet.

Built in RJ45 Ethernet socket for CAT5 cabled installs.

Can work with most open market Ethernet-over-mains adaptors for longer range applications

- Speak to, and see visitors from your smart-phone or tablet
- Easy wireless connection to existing home wifi
- Long range directional patch antenna at gate (up to 30-150 yards dependent on router and environmental conditions)
- Can call up to 4 devices at the same time
- Get a video call from your gate / door even when you're away
- No SIM card, no call charges (data charges may apply when phone not connected to wifi)
- No home phone line needed
- Less susceptible to lightning strikes - no wire in the ground
- Get the BFT Predator Pro APP at itunes and Google Store



### **RX489WB** - YAGI Antenna

- 1 Wide Band Yagi Antenna for BFT Predator

### **J195SN20** - Cable

- Cable for YAGI Antenna



## BFTCELL-PRIME

BFT Cellular Call Box with Keypad

- Built in time clock control
- Remotely program your keypad codes by app
- Automatic 7 day open/close control by app
- Activity log (see who opened your gates and when)
- Access your property by telephone, caller ID (known number), SMS, or PIN Code
- 15V D.C. Power supply adaptor included
- Built-in illuminated keypad with 200 codes, 20 time zone codes, 30 temporary codes
- 100 registered caller ID users
- Get a call from your cellbox anywhere in the world
- Three year limited warranty





# ACCESS CONTROL



## BFTCELL-PRIME-NK

BFT Cellular Call Box

- Built in time clock control
- Automatic 7 day open/close control by app
- Activity log (see who opened your gates and when)
- Access your property by telephone, caller ID (known number), SMS
- 15V D.C. Power supply adaptor included
- 100 registered caller ID users
- Get a call from your cellbox anywhere in the world
- Three year limited warranty



## GSM-PLUS-10B

BFT Cellular Call Box with Keypad

- 10 Station/ Family Cellular Access System
- Call up to 10 families from a single SIM card.
- Calls 4 cell or land line phone numbers sequentially
- 10 call buttons and ID name tags with blue backlighting
- 1000 memory back lit key pad
- Individual ring time settings for up to 4 numbers
- SMS notification to home owners when access system triggered by intercom or keypad
- Call log system to check last 20 caller ID numbers used
- 2 Relay outputs on system
- Easy Install power connector
- Marine grade stainless steel finish
- Dual locking system
- Standard goose neck mount configuration
- Enhanced surge protection built in.





# ACCESS CONTROL



## BFT-CELL-MULTI

BFT Cellular Intercom

- Cellular intercom for up to 500 apartments.
- LCD display with directory scroll and direct dialing of apartment.
- Speak to your visitor from anywhere in the world.
- Grant access from your mobile phone.
- Can call up to 3 numbers in sequence.
- Calls fixed line telephones as well as mobile cell phones.
- Keypad for coded access.
- Stainless steel construction.
- 3 year manufacturers warranty.
- Programmable with built in keypad and screen, PC, or by SMS remotely.
- Quad band modem plus 3G capability.
- On screen reception indicator for easier diagnostics.
- Compatible with At&T and T-Mobile networks.



## BFT-CELL-SWITCH

Cellular Access Control Relay Switch

- Open gates or doors from a phone using caller ID number recognition.
- Stores up to 100 authorized numbers.
- Easy to program by SMS text.
- FREE iphone and android apps for easy control of gates.
- 1 status input for checking gate status.
- Activity log to check which phone users called your gate and when with time and date log.
- 7 day time clock feature built in, for automatic opening and closing at pre-set times and days of the week (up to 40 events).
- Three year limited warranty



## P121024-Q-BOX

Digital Keypad

- 10 channels
- 100 combinations
- Backlit



A wireless digital keypad with 10 channels and can store 100 4-7 digit entry codes. A built in sensor detects low lighting conditions and activates the keypads built-in backlight.

# ACCESS CONTROL



## 1812-Access Plus Surface Mount Stainless (1812-090)

Telephone Entry System



The 1812 Access Plus is a control and communication system for residential applications. The 1812 Access Plus is PC Programmable and IP Addressable. Each Access Plus Series unit allows Voice and Data connection over either Cellular, VoIP, Wireless, or POTS. DKS offers easy ways to connect fast using the DKS IM Server and DKS Cellular services. With the easy to use Access Plus Account Manager programming software, you can customize the system immediately. The 1812 Access Plus controls a main door or gate and can easily be expanded to control up to six additional access points. The 1812 Access Plus features an upgraded processor, a new high fidelity digital voice circuit, better volume control, a lighted push-button and additional call out telephone

numbers (up to 27). Discerning homeowners will appreciate the additional programming, reporting and advanced features found in the 1812 Access Plus system.

DoorKing's Access Plus Account Manager Software is a powerful, flexible and easy to use computer program that allows you to manage access control in a variety of controlled access applications.

### Features:

- IP addressable – program from your PC via LAN/WAN or an internet connection or via built-in modem
- Access Plus Account Manager programming software included
- Add up to six (6) card readers, keypads or RF receivers (RS-485)
- 100 card / transmitter / keypad codes (50 with phone numbers; 50 access codes only)
- Up to 30 holidays can be added to access and hold open time zones
- Control access points from your PC. Schedule lock and unlock times, lock or unlock an access point with the click of your mouse
- 10 temporary access codes with start and end dates
- 500 event transaction buffer
- Email notification of events of your choice. Internet connection required
- Call waiting
- Call forwarding with time zone restrictions
- Unique double ring
- Built-in clock / calendar
- Do-not-disturb feature
- Four "hold open" time zones
- Answer machine bypass feature
- 50 5-digit entry codes with time zone restrictions on some codes
- 10 Temporary entry codes with start and end dates
- Intercom mode for use with PBX and KSU phone systems
- Camera ready

### Specifications:

- Hands free, full duplex digital audio circuit.
- Interfaces with a single phone line
- 27 dial-out phone numbers
- Two relays for door or gate control
- Ability to control an additional six (6) access points with card readers, keypads or RF controls
- Programming Method: System keypad, touch-tone telephone, or from PC
- 16 VAC, 20 VA (250 ma) power transformer provided
- FCC (US): DUF6VT-12874-OT-0
- DOC (CAN): 1736 4507 A
- Complies with UL 294; ETL Listed
- Surface mount dimensions: 6.13"H x 10"W x 5.25"D

# ACCESS CONTROL



## 1812-Classic Surface Mount Stainless (1812-081)

Telephone Entry System



The model 1812 is a unique telephone intercom system that allows homeowners to use their telephone as an intercom to speak to a guest at a front door or gate without the necessity to pay for an additional telephone line at their home. With its "intercom mode" programming feature, the 1812 can also be connected to a PBX or KSU type system, making it ideal for small businesses to control access through a single door or gate. Visitors are easily identified by voice communication and can be granted or denied access directly from a touch-tone telephone.

### Features:

- Distinctive double ring identifies visitor calls from regular calls
- Call waiting
- Call forwarding
- 3 preprogrammed call out telephone numbers
- "Do Not Disturb" time zone
- Hold open time zones
- Built-in time clock
- Entry code time zone
- "Flash" entry code
- LED lighted faceplate
- 2 relays for door/gate control

### Specifications:

- Hands free, full duplex digital audio circuit
- Connects in series with the residential phone line. By-pass switch provided.
- EEPROM Memory Chip
- Stores up to 3 call forwarding numbers
- Full duplex communication
- 50, 4-digit entry codes
- 24 VAC, 20 VA (250 ma) power transformer provided
- FCC (US): DUF6VT-12874-OT-0
- DOC (CAN): 1736 4507 A
- Complies with UL 294; ETL Listed
- Surface mount dimensions: 6.13"H x 10"W x 5.25"D



## 1802-EPD Surface Mount (1802-090)

Telephone Entry System



The 1802-EPD (Electronic Programmable Directory) model are ideal telephone entry systems that are loaded with features and are suited for applications that have limited space and can be used in residential as well as commercial applications. The 1802-EPD includes a built-in electronic directory. Visitors are easily identified by voice communication and can be granted or denied access directly from a touch-tone telephone.

### Features:

- Programmable directory codes (1-4 digits)
- 16-digit dialing
- Two relays to control two entry points
- 5-digit entry codes for special needs
- LED lighting illuminates keypad
- Built-in time clock
- Hold open time zones
- Entry code time zones
- "Flash" entry codes
- Built-in postal lock provision
- 1802-EPD includes directory display.

### Specifications:

- Stores up to 100 telephone numbers and names
- EEPROM Memory Chip
- Full duplex communication
- 4-digit entry codes - max. of 100
- Six, 5-digit entry codes
- 16 VAC, 20 VA (250 ma) power transformer provided
- Ringer equivalence: 0.0 A
- Jack type: RJ11C or W
- FCC (US): DUF6VT-12874-OT-0
- DOC (CAN): 1736 4507 A
- Complies with UL 294; ETL Listed
- Surface mount dimensions: 12"H x 6.5"W x 5"D



# ACCESS CONTROL



## 1810 Surface Mount (1810-080)

Telephone Entry System



With its built-in lighted directory, Model 1810 is a completely self-contained telephone entry system that is ideal for small to medium sized apartment buildings, gated communities, condominiums, office buildings, factories and industrial sites. Managers can easily create and change the directory as needed with a word processing program (templates are available from DoorKing). Visitors are identified by voice communication via the telephone. Access is granted by pressing "9" on your touch tone telephone, or access can be denied by simply hanging up.

### Features:

- Programmable directory codes (1-4 digits)
- 16-digit dialing
- Two special inputs can be programmed for relay activation or to dial out a preprogrammed phone number
- 5-digit entry codes for special needs
- Built-in LED lighted directory
- LED lighting illuminates directory
- Built-in time clock
- Hold open time zones
- Entry code time zones
- "Flash" entry codes
- Built-in postal lock provision
- Programming display

### Specifications:

- Stores up to 600 telephone numbers
- EEPROM Memory Chip
- Full duplex communication
- 4-digit entry codes; 1000
- Six, 5-digit entry codes
- 16 VAC, 20 VA (250 ma) power transformer provided
- Ringer equivalence: 0.0 A
- Jack type: RJ11C or W
- FCC (US): DUF6VT-12874-OT-0
- DOC (CAN): 1736 4507 A
- Complies with UL 294; ETL Listed
- Surface mount dimensions: 13"H x 11.25"W x 4.75"D



## 1520 Stand Alone Card Reader (1520-080)

Telephone Entry System



Model 1520 provides users with a full feature single door stand-alone access control system. The 1520 is available with a built-in proximity card reader (DK Prox, AWID or HID) or can be ordered as a single door controller allowing the user to add their own 26-bit access control device.

### Features:

- Built-in proximity card reader (available with DK Prox, AWID or HID reader)
- Available as a controller only (add your own 26-bit wiegand device)
- Built-in programming keypad
- Indoor or outdoor use

### Specifications:

- Stores up to 1000 card codes
- Transaction buffer stores last 3600 events
- Timed anti-pass back (1-59 minutes)
- Four time zones
- Clock and transaction buffer maintain data for up to 3 days in the event of a power outage
- Print Menu
- Real time print mode
- Form "C" dry contact relay
- 16 VAC, 20 VA power transformer supplied

### 1508-020 - AWID Prox Cards

These cards are randomly pre-coded. Card numbers may, or may not be, in numerical sequence.

# DRIVEWAY LOOPS AND VEHICLE DETECTORS



## PREFORMED DIRECT BURIAL LOOPS

BD Loops direct burial loops are designed for quick and easy installation and can be installed in concrete or under asphalt, pavers or gravel roads.

- 16 AWG loop wire designed for superior performance.
- Installation kit includes: cable ties, ground stakes, and loop lead-in labels.
- Easy to follow installation instructions.
- Loop wire is durable and rated for direct burial.
- Pre-phased (phasing direction marked) at the factory, allowing installers to easily take advantage of loop phasing.

### Reverse/Shadow Loops

**EL24-60** – 24 foot Loop  
4' x 8' loop, 60ft lead wire

**RL36-40** – 36 foot Loop  
6' x 12' loop, 40ft lead wire

**EL44-60** – 44 foot Loop  
6' x 16' loop, 60ft lead wire

### Free Exit Loops

**EL36-100** – 36 foot Loop  
6' x 12' loop, 100ft lead wire

**EL44-100** – 44 foot Loop  
6' x 16' loop, 100ft lead wire

## LOOP SEALANT

Polyurethane sealant has many advantages when compared to other commonly used sealants.

- Does not shrink or crack—it does not have an evaporation cure like most other sealants.
- Does not conduct electricity—water based sealants can facilitate shorts to ground.
- Has a low viscosity (flows easily) is easier on your hand, and is self leveling.
- Can be cleaned up with rubbing alcohol.



**BDLG-BLACKTUBE**  
**BDLG-GRAYTUBE**  
30 fl. oz. tube

**BDLG-BLACKCASE**  
**BDLG-GRAYCASE**  
Case of 12

## CARTELL - GATEMATE™ FREE EXIT SYSTEM

**CP31005W** - 100' of wire

**CP32005W** - 200' of wire



The Cartell-GateMate™ free exit system is a self-contained unit. All the electronics are contained in the sensor probe housing. There is no external output board to install.

Bury the Cartell-GateMate™ 6-10 inches underground, 100 feet from the automatic gate operator (toward the house), beside and parallel to the driveway. It should be hooked up directly to the free exit terminals on the gate operator. Universal voltage (AC and DC) makes it compatible with any gate operator, solar or powered.

### FEATURES:

- Based on magnetometer technology
- Buried beside driveway, hidden and vandal-proof
- Covers 12 foot wide driveway
- Self-contained with no output board to install
- Lowest stand-by current on market (85-90% lower than its closest competition)
- Low power consumption
- Excellent for solar gates
- Universal voltage AC and DC
- Electronics full encased in polyurethane
- Spliceable cable for easy field repairs
- Two models: 3 wire and 5 wire
- Five wire model has N.O., N.C. contacts
- Works with any and all gate operators
- RFI/EMF protection
- Made and supported in the U.S.



## PREFORMED SAW-CUT LOOPS

Used for saw-cut installations where a 3/16" groove is cut into the concrete or asphalt and the wire is stuffed and sealed (using loop sealant) into the groove. Custom polyethylene outer jacket protects a micro-dusted nylon coated inner jacketed 16AWG stranded wire. The saw-cut loop has a built in backer-rod securely fitting a 3/16" saw-cut groove eliminating the need to apply backer-rod to hold the loop to the bottom of the saw-cut groove and requires 30-40% less loop sealant to seal the groove. Both the loop and the lead-in fit within a 3/16" saw-cut groove preventing wasted time spent double saw-cutting or doubling blades to cut the home run lead-in.

### Reverse/Shadow Loops

**SC24-50** – 24 foot Loop  
4' x 8' loop, 50ft lead wire

**SC36-50** – 36 foot Loop  
6' x 12' loop, 50ft lead wire

**SC44-50** – 44 foot Loop  
6' x 16' loop, 50ft lead wire

### Free Exit Loops

**SC36-100** – 36 foot Loop  
6' x 12' loop, 100ft lead wire

**SC44-100** – 44 foot Loop  
6' x 16' loop, 100ft lead wire

## VEHICLE DETECTOR

### DSP-7LP

Detector operates on any voltage from 10 to 30 volts AC or DC and draws about 1 milliamp of current with no vehicle on the loop. This micro-sized detector will automatically adjust its sensitivity level when used on different sized loops. The detector loop inductance should be between 20 and 2000 microhenries.



- Designed for solar powered applications
- Designed to be cross talk free between other loops
- Automatically compensates for loop and lead-in sizes
- Switchless, self-adapting to most common installations
- Plug and play; Connect it up and watch it work
- Small profile, perfect for many installations
- Fail safe operation
- Wide low-voltage operation

## VEHICLE DETECTOR KIT

### KEXITPROBE

The Diablo "Mini-Loop" is intended to be buried beneath the roadway surface and connected, via lead-in cable, to the Diablo DML-9LP Detector. Installation costs may be significantly less than those for conventional loops, because only single, straight 1/4" saw cuts need to be made and a 1" diameter hole drilled about 20" deep. Also resulting is the opportunity for greatly increased service life due to the reduced exposure to hazards such as road traffic, pavement movement, pavement deterioration, and roadwork.



## HOW LOOPS WORK

By Brian Dickson, BD Loops

It can be hard to explain to a customer how inductance loops work or why they are needed for gate systems. Inductance loops offer customers both convenience and peace of mind. If a customer is purchasing a brand new gate system having a reliable means of vehicle detection can help them enjoy the system even more. Educating your customers about the advantages of installing loops on their system will help you sell more loops and accessories.

### How do Loops work?

Loops work off of inductance, this is why they are sometimes referred to as inductance loops. Any material that is a good conductor of electricity (metal) can be detected by inductance loops. Detectors require a percentage of change to trigger a detection, which means that enough metal needs to enter the detection field to trigger a detection. Depending on how sensitive the system is an object as small as a metal trash can lid can trigger a detection.

Many installers and customers believe that loops work off of magnetism or pressure. Most magnetic materials contain iron and can be detected. Non magnetic materials such as aluminum and copper are excellent conductors of electricity and are also detectable objects.

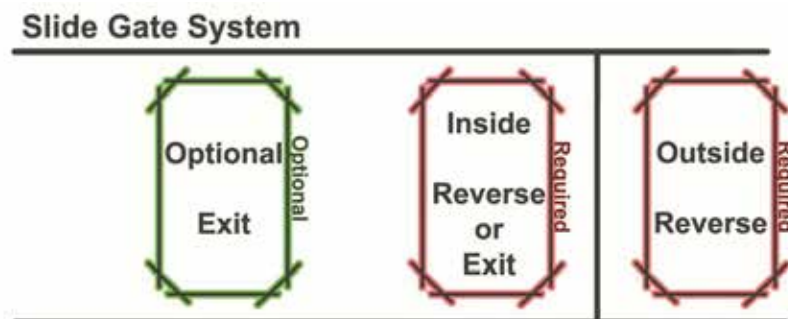
As for pressure, customers who think that loops are air hoses or pressure plates that respond to weight will be confused when their horses or other heavy objects are not detected by the loops. It is important to give your customers a simple explanation of what loops detect, I often tell home owners that loops detect large metal objects such as cars and motorcycles.

### How many loops does my system need?

This is one of the questions we are asked the most, the answer depends on the type of gate:

**Slide Gate/Cantilever Gate/Vertical Lift/Vertical Pivot Gate:** 2 Loops are required.

- Inside Reverse or Exit Loop
- Outside Reverse Loop



If space permits you may want to install an additional Exit Loop further down the driveway so that the gate will be open by the time the vehicle reaches the gate.

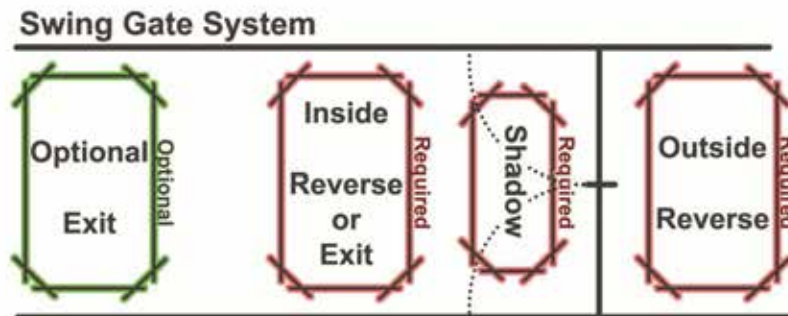


## HOW LOOPS WORK (continued)

By Brian Dickson, BD Loops

**Swing Gate:** 3 Loops are required.

- Inside Reverse or Exit Loop
- Shadow Loop underneath the gate swing path
- Outside Reverse Loop



If space permits you may want to install an additional Exit Loop further down the driveway so that the gate will be open by the time the vehicle reaches the gate.

### What is the difference between a Reverse Loop and an Exit Loop?

**Exit Loops** automatically open the gate when a vehicle drives over them, they also will hold a gate open and reverse a closing gate which means they can be used in place of an inside reverse loop.

**A Reverse Loop** will reverse a closing gate if a vehicle is detected. A reverse loop will also hold a gate open if a vehicle stops over the loop. If a gate is fully closed and a vehicle drives over a reverse loop nothing will happen, the gate will not open.

### Features and Benefits of preformed loops:

#### Exit/Free Exit/Automatic Open Loops:

“Do you want to wait 15-30 seconds to leave your property every day?”

“We can install a loop that will automatically open the gate for you as you are exiting, no remotes required.”

“With an exit loop guests on your property will be able to leave without you having to follow them out to open the gate.”

For added convenience exit loops can be placed up the driveway 40-200', so that the gate will be fully open by the time the car reaches the gate.

## HOW LOOPS WORK (continued)

By Brian Dickson, BD Loops

### **Shadow/Phantom/Center Loop:**

Many installers don't fully understand the function of this loop, which can make it hard to understand why it is so important on swing gates.

The Shadow Loop is placed under the swing path of a swing gate. This loop will check before the gate closes and/or opens to see if a vehicle is within the swing path, if a vehicle is within the swing path the gate will not move.

The shadow loop is very important, on a 12ft single swing gate there is 20ft of undetectable area between the inside and outside reverse loop that a car can easily fit into.

Not everyone looks at a gate to determine how it opens, guests and visitors can easily stop in a gates swing path while waiting to exit and without a shadow loop their car could be hit by the gate.

### **Reverse Loops:**

Reverse loops hold the gate open or reverse a closing gate if a vehicle is detected. Reverse Loops offer customers peace of mind, and prevent panic and risky actions when a gate is closing.

These are common scenarios where reverse loops are important:

Vehicle tailgating/follow-through, without a reverse loop the gate could close on vehicles following another car through an open gate.

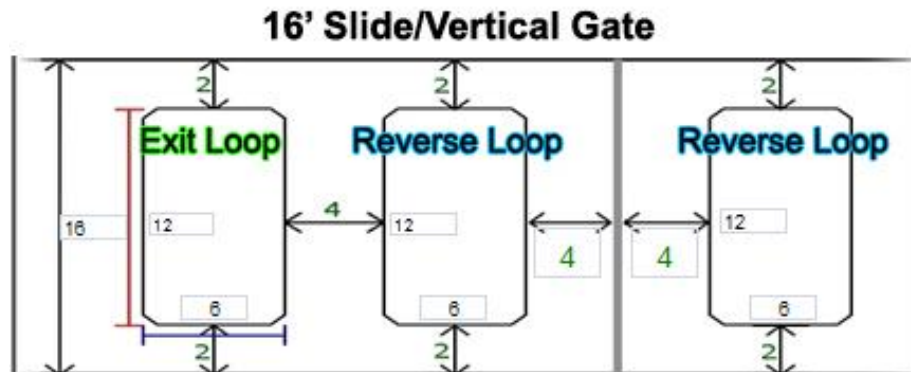
You're exiting and find a child's bike/skateboard/toy blocking your driveway exit, you get out of the car to move the bike and the gate starts closing on the vehicle.

A guest leaving their property inches up to the street waiting for an opening to pull out of the driveway, if they live on a street with high traffic, or where children play in the street you are not always able to exit quickly.

## LOOP PLACEMENT AND SIZE

By Brian Dickson, BD Loops

### How Many Loops and What Size Should they be?

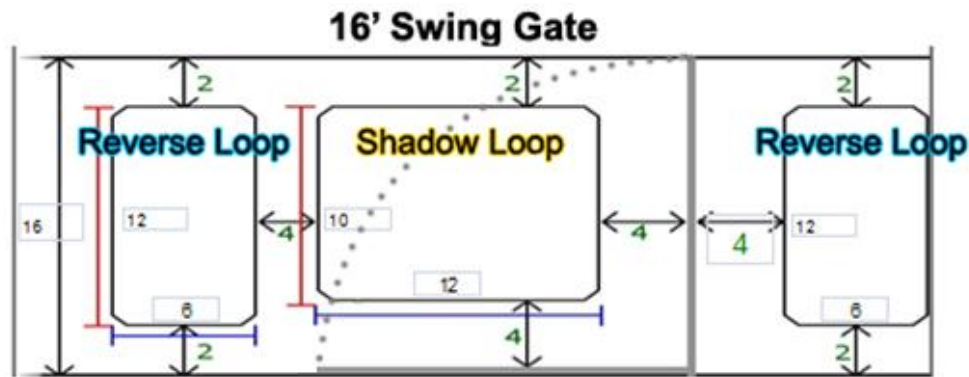


**Slide gates** require two reverse loops, one on each side of the gate — two feet from each curb and four feet away from the gate — to completely cover the gate path. You can come as close as two feet from the gate if the loops are properly phased. By using the proper layout and knowing the driveway width, you can determine the size of the loops needed. The two dimensions you need to find are the short and long leg of the loop. To find the long leg of the loop ( $z$ ), subtract the driveway width ( $x$ ) by four feet, represented by this formula:  $x - 4 = z$ . The short leg is determined by which types of vehicles are going through the gate. This is important because the short leg of the loops determines the detection height. If residential vehicles (low to the ground) are the only vehicles passing through, four feet is recommended. If commercial vehicles (UPS trucks for example) will be passing through, higher detection is required and 6 feet is recommended. An exit loop in this gate system is optional and follows the same formulas as the reverse loops. Exit loops can be located up to 1,000 feet from the gate. The advantage of a longer lead-in on the exit loop is to minimize the wait time for the gate to open.

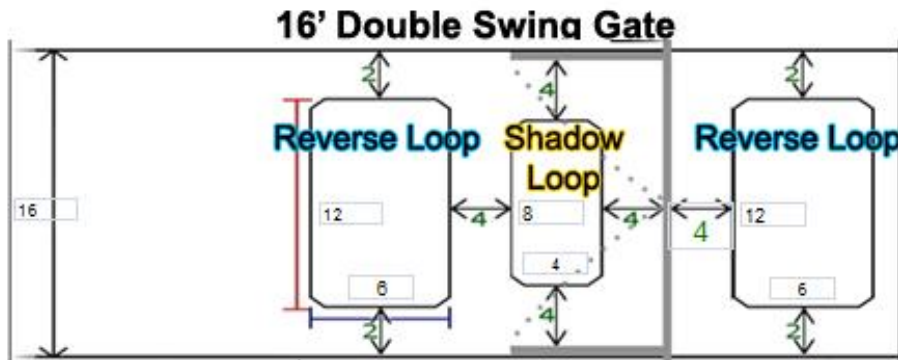


## LOOP PLACEMENT AND SIZE (continued)

By Brian Dickson, BD Loops



**Swing gates** require a total of three loops: two reverse loops on each side of the gate and a shadow loop. Reverse loops being installed on a swing gate need to be placed on each side of the gate, two feet from each curb and four feet away from the gate in its open position. Finding their size follows the same formula as slide gates:  $x - 4 = z$ . What is different in this gate system is the addition of a shadow loop. This loop is placed under the opening path of the gate, two feet away from the curb and four feet away from the gate in its closed position and four feet away from the gate in its open position. To determine the leg of the loop that is parallel to the gate in its closed position (y) subtract the driveway width (x) by 6 feet, represented by this formula:  $x - 6 = y$ . To find the leg of the loop that is parallel to the curb (a) subtract the driveway width (x) by four feet, represented by this formula:  $x - 4 = a$ . An exit loop in this gate system is optional and can be the reverse loops on the inside of the property (which will require a separate detector) or another loop can be positioned a minimum of four feet away from reverse loop on the inside of the property.



**Double swing gates** require a total of three loops: two reverse loops on each side of the gate and a shadow loop. The reverse loops follow the same method of installation as swing gates; two feet from each curb and four feet away from the gate in its open position. Finding their size follows the same formula as slide gates and swing gates ( $x - 4 = z$ ). To find the shadow loop leg that is parallel to the gate in its closed position (b), you need to subtract the driveway width (x) by eight; represented by this formula:  $x - 8 = b$ . To find the shadow loop leg that is parallel to the gate in its open position (c), you need to divide the driveway width (x) by two, then subtract that amount by four feet represented by this formula:  $(x / 2) - 4 = c$ . An exit loop in this gate system is optional and can be the reverse loops on the inside of the property (which will require a separate detector) or another loop can be positioned a minimum of four feet away from reverse loop on the inside of the property.

## LOOP PLACEMENT AND SIZE (continued)

By Brian Dickson, BD Loops

Whenever possible the installation of direct burial loops should be used instead of saw-cuts. Direct Burial loops will last longer and will allow the installer to avoid saw-cutting in new loops and leaving an unsightly tattoo in the driveway.

### **Materials Matter:**

Now that you understand the proper placement and size of loops we will go into a detail about the material you are using. The best quality wire you should be using should be close to or around 14AWG, as higher-gauge wire has less resistance (which means higher detection). Loops should never have an air pocket within the loop because ground vibrations can cause false detections which results in repeat service calls. This means loops should never be inside a conduit. The lead-in part of the loop should be inside plastic/PVC conduit.

### **BD Loops Loopalator:**

The Loopalator is a free to download loop layout calculator. The computer program has the ability to calculate where your loops should be placed and what size just by knowing the driveway width. The program will even generate a detailed picture of where your loops should be placed and what size. This picture can be detailed instructions you can hand to your installation crew, or can be included with bids as recommendations directly from the manufacturer. Download the BD Loops Loopalator from their website at: [www.BDLoops.com](http://www.BDLoops.com).

## GATE SAFETY MATTERS

### Safety Compliance Guidelines for Automatic Driveway Gates

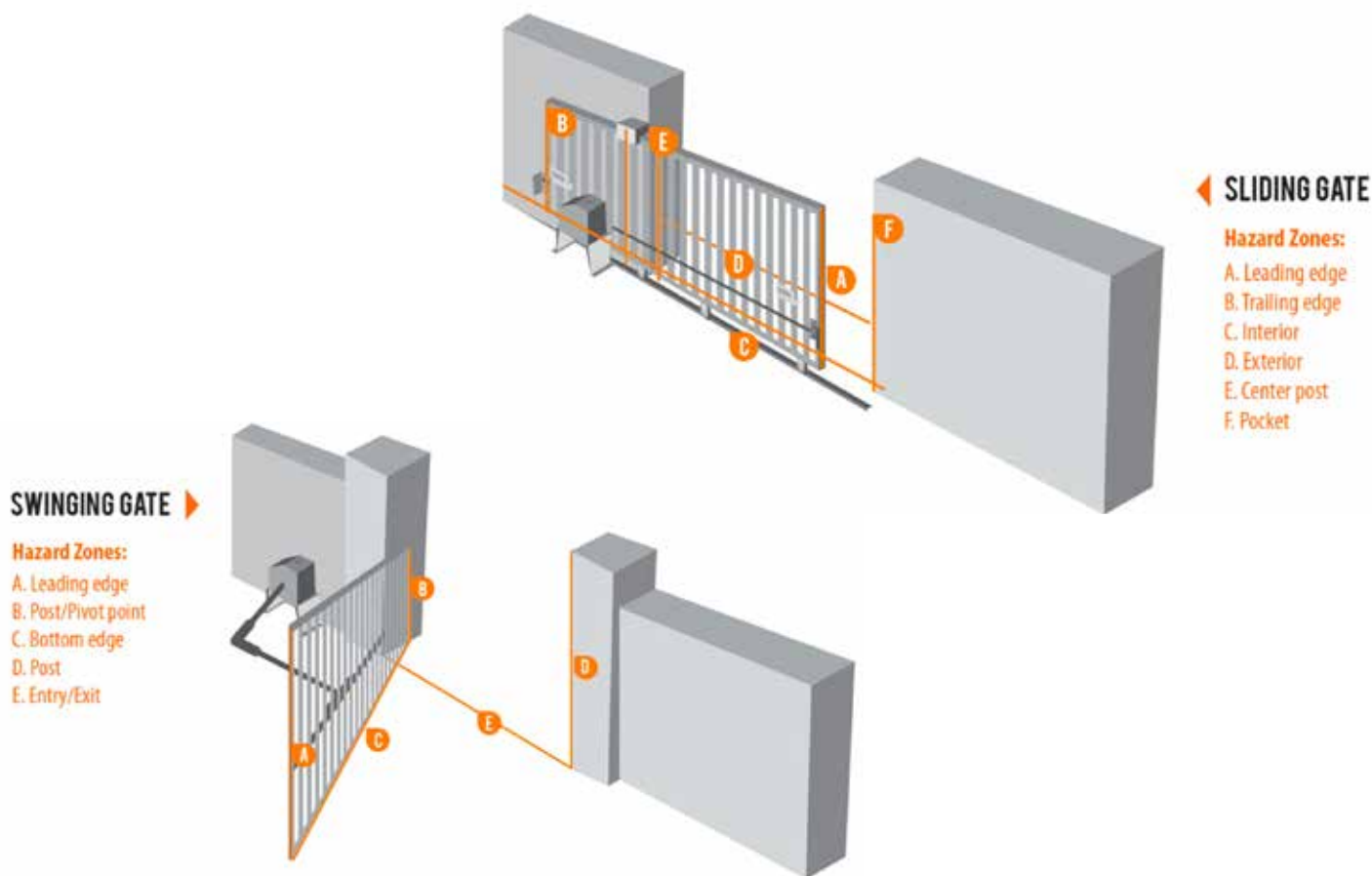
#### UL 325 Gate Safety Standard for Manufacturers

UL Listed automatic gate operators manufactured after January 12, 2016 require 2 independent monitored protection devices at each potential entrapment point in any given gate systems.

Examples of external devices include gate edge sensors and photo-optic sensors. When used for entrapment protection, these external sensors are monitored for presence and function at least once during each operation cycle. If the device is not present or not functioning correctly, operation will revert to constant pressure and remotes will not work.

If you sell, install or service automatic gates, you'll want to be sure to follow some basic safety guidelines:

- Understand the UL 325 standard and how it applies to the specific gate system.
- Be sure the gate is designed and fabricated to comply with ASTM F2200.
- Identify all locations that pose a risk of entrapment and be certain to provide 2 different means of monitored entrapment protection at each location.
- Identify hazard zones and provide guards to protect these areas. For example: a barrier gate arm might not pose an entrapment risk but can cause damage or injury to objects it may contact.





## HOW SENSING EDGES WORK

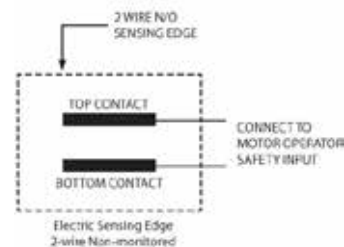
Miller Edge sensors are available in a variety of models to easily adapt to any motorized door or gate. All electrically activated edges operate on the same basic principle referred to as a Normally Open (N.O.) electrical configuration.

- The outer covering houses 2 electrically conductive flexible contact elements.
- The contact elements are separated by a soft perforated foam cushion.
- When touched, the edge compresses causing the contacts to touch.
- An immediate electrical signal is sent to the motor control unit to stop and/or reverse motion.

### Sensing Edges for Automated Gates:

#### Electrical Configuration / Wiring Diagram

A 2-conductor electrical configuration complies with UL-325 and the 2009 International Building Code for gates.



## RBAND MONITORED WIRELESS GATE KIT

### RB-G-K10

Gate edges are a common method of guarding entrapment and hazard zones. Now, with the RBand Monitored Wireless Gate Kit transmitter/receiver, there's no need to hard-wire, which saves valuable installation time and creates a clean appearance.

The Miller Edge RBand is a wireless monitored transmitter/receiver kit for automated gate systems. It monitors the presence and function of T2 (10k) sensing edges and transmits a wireless monitored signal to the operator controls. The RBand Receiver can be paired with up to 6 Transmitters on 2 channels. The Transmitter is built to endure rugged, outdoor environments.

The Miller Edge RBand eliminates the need to hard wire sensing edges and meets 2016 UL 325 standards for commercial gate operators.

#### FEATURES:

- Two-channel receiver compatible with up to 6 total wireless transmitters
- On-board diagnostics for easy setup/troubleshooting
- Bi-directional link improves immunity to RF interference
- Transmitter built to endure rugged outdoor environments
- 2016 UL 325 Recognized Component
- 2 year warranty



#### RB-G-RX10 RBand Receiver

Wireless receiver compatible with monitored gate transmitter.

#### RB-TX10 RBand Transmitter

Wireless transmitter compatible with monitored gate receiver.

## SAFETY SENSING EDGE

**ME120-2E-04-T2** (4ft length)

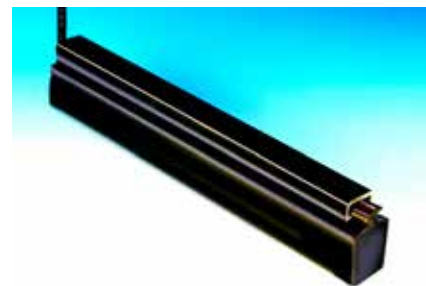
**ME120-2E-05-T2** (5ft length)

**ME120-2E-06-T2** (6ft length)

The small profile of these edge sensors allows for versatility to suit a wide variety of applications from motorized doors and gates to industrial safeguarding on plant equipment.

#### FEATURES:

- Touch Sensitive signalling
- Small profile
- Easy to Install
- Optional Safety Yellow color provides visual recognition of hazardous area
- Mounts vertically or horizontally
- ANSI/UL325 Recognized Component



## ALUMINUM CHANNEL

Mounting channel for monitored safety edge.

**ME120-C-4FT**

**ME120-C-5FT**

**ME120-C-6FT**

# GATE OPERATOR ACCESSORIES

## SEVEN DAY TIMER

### DTM9-24

The DTM-9 Seven Day Timer allows you to program your overhead doors, gates, and parking barriers for heavy traffic flow and lock-out times.

The DTM-9 will keep your overhead doors, gates and parking barriers continuously open during rush hours. This will increase comfort and save on entry and exit times for your employees and customers.

The DTM-9 will allow you to program the lock out times for your doors with magnetic locks and electric strikes.

#### FEATURES:

- Large display and control push-buttons.
- Back-up rechargeable battery for power outages or brown outs. The power input is protected by MOV and fuse.
- Program up to six different events per week. The timer can also program each day individually or a block of days.
- Has wide power supply options and can be ordered in 12V DC, 24V AC or DC, 120V AC and 240V AC.
- Manual override for ON or OFF operation.



## SIREN OPERATED SENSOR

### SAGM

New and improved siren operated sensor. Allows entry of emergency vehicles through gates, the siren activates gate opener while all other sounds are rejected.

#### FEATURES:

- New and improved siren operated sensor
- Easy and effective emergency access
- Makes all gates 911 accessible
- No codes or keys required
- Compatible with all gate/door operators
- Comes with a 4x5 inch reflective sign
- 12-24VAC/DC; 2-wire
- 6.5" (h) X 4.125" (w) X 2.25" (d)



## LOCK BOX

**1401-080** Knox Type

**1401-081** Padlock Style

Fire Department lock boxes provide a convenient method to allow Fire Department personnel access into a property through an automated gate system.



- Designed to accept the Knox 3501 key switch used by Fire Departments throughout the country
- Ample room inside for additional access control devices or keys
- 14-gauge steel
- Faceplate is painted bright red, enclosure is painted black
- 5.375" (h) x 4.5" (w) x 5.375" (d)



## POLARIZED REFLECTIVE PHOTOCELL

### KIRPOLAPHOT001

This polarized reflective photocell from BFT will work well with any gate system. The beam is not affected by rain, fog, sun or reflections from water.

#### FEATURES:

- Polarized sensor
- Sensing range of 32 ft
- Led indicator for beam alignment
- IP-66 water proof/cable gland
- PMMA upper casing, anti fog/dew/rain
- Input voltage: AC/DC 12-250V non polarity



## FLAT PHOTOCELL RECEIVER/TRANSMITTER

### P111043 00001

A wired flat photocell receiver/transmitter set for external applications. This set has a range up to 100 ft (30m) and runs on a 24V power supply.

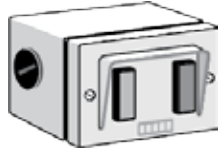


# GATE OPERATOR ACCESSORIES

## TWO-BUTTON SWITCH

### 2512

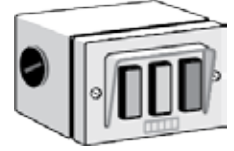
- Actuate button is N.O
- Stop Button is N.C.
- Switch rating 10 A / 250 VAC
- Dimensions:  
4 in. wide x 2.87 in. high x 2.25 in. deep  
(102 x 73 x 57 mm)



## THREE-BUTTON SWITCH

### 2510

- Open button is N.O
- Close button is N.O
- Stop Button is N.C.
- Switch rating 10 A / 250 VAC
- Dimensions:  
4 in. wide x 2.87 in. high x 2.25 in. deep  
(102 x 73 x 57 mm)



## EXIT BUTTON

### 1211-080

- Provides a release device for doors secured with a magnetic lock or electric strike
- Lighted Exit push buttons
- 12-volt DC power (for light)
- 1211-081 designed for mullion mounting
- 4-1/2" H x 2-13/16"W (114.3mm H x 71.4mm W)



## ELECTRO MAGNETIC LOCK WITH OR WITHOUT HANDLE

Magnetic lock with or without handle. Available in 2 versions.

MAGMAG-2500 with 600 lb. and MAGMAG-5000 with 1200 lb. of pulling force. The aluminium powdercoated housing equipped with the unique Quick-Fix fixings ensures a fast and nicely finished mounting. Eliminate time-consuming welding; drilling 5 holes is enough to fix the lock. A two layer, protective coating guarantees that our electro-magnetic locks are ready for years of worry free use outside.

- High holding force! Up to 1200 lb/500 kg
- 500h salt spray resistant!
- Special two-layer protective coating developed for outdoor use
- SGS Certified
- Powdercoated aluminium casing
- Anti-residual magnetism kick-off system
- New anti-pry system: Raised edge on the magnet housing makes it impossible to put a crowbar between the magnet and the armature plate
- No-handle version
- Fast and easy fixing by means of 5 holes with Quick-Fix
- Same center-distance as the standard Locinox keeps
- Fail open
- MAG2500/MAGMAG2500: Minimal pulling force: 2500N (600 lb)
- MAG5000/MAGMAG5000: Minimal pulling force: 5000N (1200 lb)
- Voltage: 12V/24V DC
- Current MAG2500/MAGMAG2500: 460 mA / 12 V or 230 mA / 24 V
- Current MAG5000/MAGMAG5000: 460 mA / 12 V or 230 mA / 24 V



**MAGMAG2500SL** - Silver without Handle

**MAGMAG2500BL** - Black without Handle

For mounting on square posts and gate profiles of 1-1/2" to 3-1/8", 600 lbs. pulling force

**MAGMAG5000SL** - Silver without Handle

**MAGMAG5000BL** - Black without Handle

For mounting on square posts and gate profiles of 1-1/2" to 3-1/8", 1200 lbs. pulling force

**MAG2500SL** - Silver with Handle

**MAG2500BL** - Black with Handle

For mounting on square posts and gate profiles of 1-1/2" to 3-1/8", 600 lbs. pulling force

**MAG5000SL** - Silver with Handle

**MAG5000BL** - Black with Handle

For mounting on square posts and gate profiles of 1-1/2" to 3-1/8", 1200 lbs. pulling force