
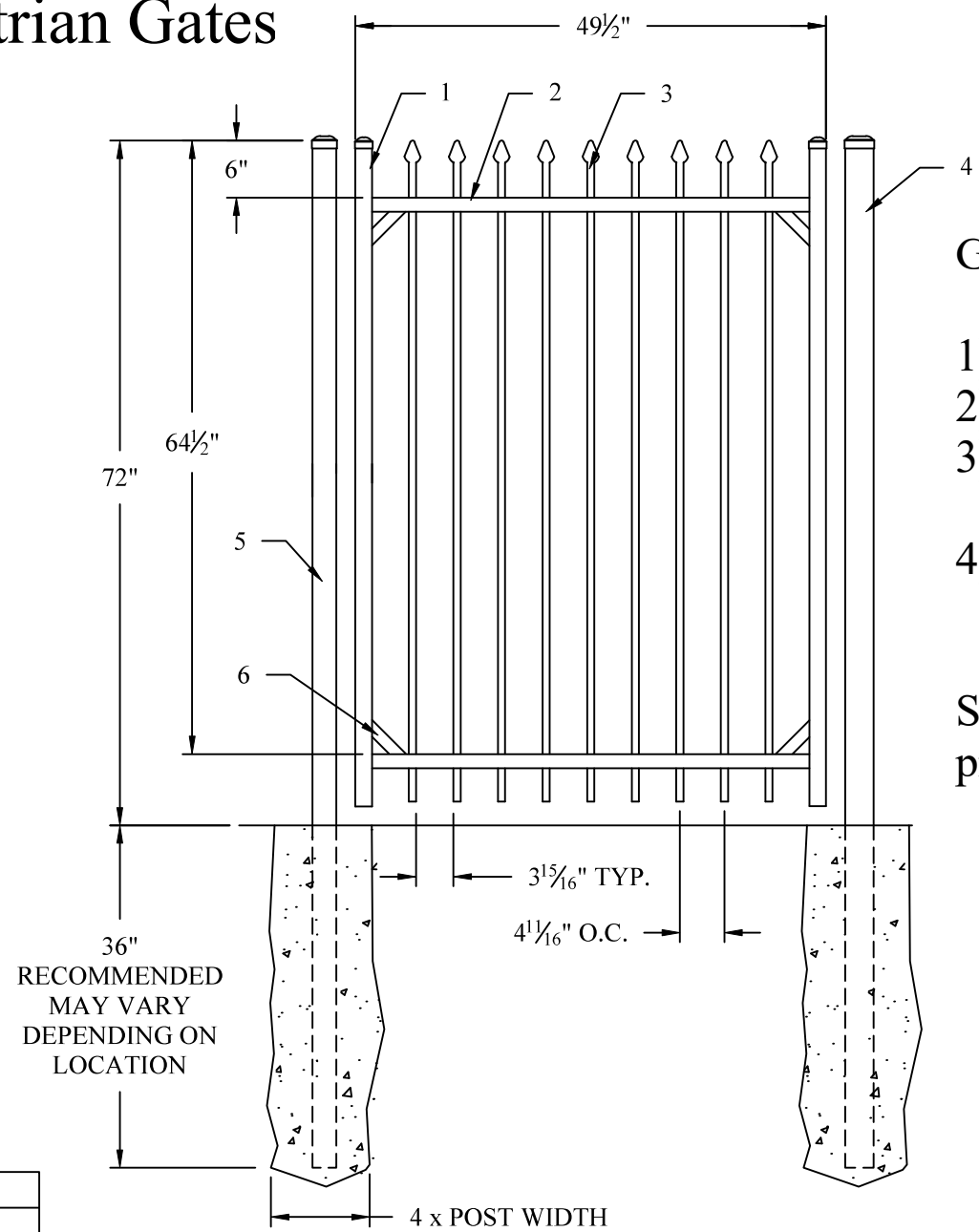


#	QTY.	DESCRIPTION
1	2	2½" Sq. POST
2	2	1½" x 1⅞" RIBBED CHANNEL RAIL
3	19	¾" Sq. PICKET
4	4	BRACKETS

<div>PROPRIETARY INFORMATION</div> <div>This drawing is the proprietary property of AMERISTAR, Tulsa, OK and must not be duplicated or used in whole or in part for the making of drawings, prints or parts to the detriment of, or harm to, the owner.</div> <div>In accepting this drawing, the recipient agrees to keep the information contained confidential.</div>					<div></div> <div>AMERISTAR®</div>		<div>1555 N. Mingo</div> <div>Tulsa, OK 74116</div> <div>1-888-333-3422</div> <div>www.ameristarfence.com</div>	
TITLE: MONTAGE PLUS CLASSIC 2R EXT 6'T 8' PANEL								
REV		BY	CK'D	DATE	DESCRIPTION			
c		JAS	CI	12-16-10	OC Spacing was 95/8" ± 1/8"			
DATE: 11/07/07			SCALE: DNS			SHEET: 1/1		
DRN BY: FGS			CHK BY: RTM			REV: b		
DRAWING NO: 1RCX270								

48" Wide Pedestrian Gates



Gates will have the following:


- 1) Self Closing hinges
- 2) Panic Egress Hardware
- 3) Keyed Levers and Fob Controlled Access readers
- 4) Expanded Metal to prevent unwanted access.

See additional pages for product information.

#	DESCRIPTION
1	1 3/4"sq x 14ga GATE END
2	1 1/16" x 1 1/2" x 14ga CHANNEL RAIL
3	3/4"sq x 18ga PICKET
4	3"sq POST
5	2 1/2"sq POST
6	GS5 GUSSET STRAP

SPECIAL INSTALL
Posts & Hardware

PROPRIETARY INFORMATION				
This drawing is the proprietary property of AMERISTAR, Tulsa, OK and must not be duplicated or used in whole or in part for the making of drawings, prints or parts to the detriment of, or harm to, the owner. In accepting this drawing, the recipient agrees to keep the information contained confidential.				
REV	BY	CK'D	DATE	DESCRIPTION
B	DLM	1112-02	7-02-13	added x 18ga

 AMERISTAR®		1555 N. Mingo Tulsa, OK 74116 1-888-333-3422 www.ameristarfence.com	
TITLE: MONTAGE PLUS CLS 2R EXT 6'H 49-1/2"OTO SGL GATE			
DATE: 07/02/13	SCALE: DNS	SHEET: 1/1	
DRN BY: DLM	CHK BY: AC	REV: B	
DRAWING NO: 1WCX270-48			



1. Product Name

■ 6045 Superior Exit Bar Kit

2. Manufacturer

DAC Industries, Inc.
600 11th St NW.
Grand Rapids, MI 49504
Phone: 616-235-0140
800-888-9768
Fax: 616-235-2901
Email: info@dacindustries.com
Web: www.dacindustries.com

3. Product Description

Basic Use

Used on gates where emergency egress is needed. Typically used on outdoor storage areas, schools, outdoor seating areas and dangerous work environments.

The 6045 Superior Exit Bar Kit consists of:

- DETEX® exit bar*
- Adjustable receiver bracket
- Lock box
- Mounting plate
- Keyed cylinder w/two keys
- All required fasteners/screws

*DETEX is a registered trademark of the Detex Corporation.

Composition and Materials

Detex exit bar: anodized aluminum, has an acrylonitrile butadiene styrene (ABS) housing with a stainless steel latching bolt. ABS is a thermoplastic polymer.

Lock box: fabricated from 16 gauge steel. Black or silver.

Guard: fabricated from 16 gauge steel. Black or silver.

Adjustable receiver bracket: fabricated from A36 1/4 inch hot rolled, pickled and oiled (HRPO) steel. Black or silver.

Mounting plate: fabricated from electro-galvanized, 16 gauge hot-dipped, cold rolled A40 steel. Black or silver.

Benefits

Eliminates day-long fabrication. Provides a more finished appearance, and is both faster and simpler to install than a custom exit bar system fabrication.



Product Limitations

Check with local building codes before installation on swimming pool enclosures. Recommended for secondary emergency exit gates in pool fencing. Can be used in double gate installation with use of a lockable drop rod or removable center post, but works best on single gate application.





Grades

Detex panic bar Grade 1, Type 1.

Dimensions (W × H × D)

Detex exit bar: 36 or 48 × 8³/₈ × 3¹/₄ inches.

Lock box: 2 × 2 × 2 inches; (will accept rim type cylinder): also, IC housings available.

Guard: 24 × 4 inch plate; closes gap between gate post and gate frame.

Adjustable receiver bracket: one-inch optimal; adjustable for gate gaps from ³/₄–2 inches.

Mounting plates: 16 gauge 32–54 × 12 or 24 inches (W × H) (extension plates for up to 72 inches available).



Finishes

Silver or black powdercoat finish.

Special Features

Provides an easy way for contractors to install exit devices on multiple types of gates.

Accessories/Options

Additional guards, IC cylinder housing and keyed alike options available. Lever handles, mechanical combination locks and also electrified control trim lever handles available.

4. Technical Data

Applicable Standards

Americans with Disabilities Act (ADA)

- ADA 309.4 Operation

American National Standards Institute/Builders Hardware Manufacturers Association (ANSI/BHMA)

- ANSI 156.3 Grade 1 Type 1

ASTM International (ASTM)

- ASTM A653 Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process

National Fire Protection Association (NFPA)

- NFPA 80 Standard for Fire Doors and Other Opening Protectives
- NFPA 101 Life Safety Code®

Society of Automotive Engineers (SAE)

- AISI/SAE J403 1008/1010

Underwriters Laboratories International (UL)

- UL 305
- UL Listed Panic Hardware
- UL Listed Fire Exit Hardware for 3 hours, maximum 4 × 10 foot single doors and pairs of 4 × 8 feet with F90KR keyed removable Mullion



DAC Industries, Inc.

Approvals

- California State Fire Marshall 4140-0127:105 and 3725-0127:108
- State of Florida Approval FL90

5. Installation

DAC Industries, Inc. provides complete installation instructions upon request.

6. Availability and Cost**Availability**

Contact DAC Industries, Inc.: www.dacindustries.com.

Cost

Contact DAC Industries, Inc. for pricing.

7. Warranty

DAC Industries Inc. provides a one year warranty against any defects in material or workmanship for all kit components. Detex Corporation provides a limited ten year mechanical warranty on the exit device.

8. Maintenance

Periodically inspect and lubricate the unit to extend its life. Also, inspect to insure latch bolt is engaged properly.

9. Technical Services

DAC Industries, Inc. provides phone support: 800-888-9768.

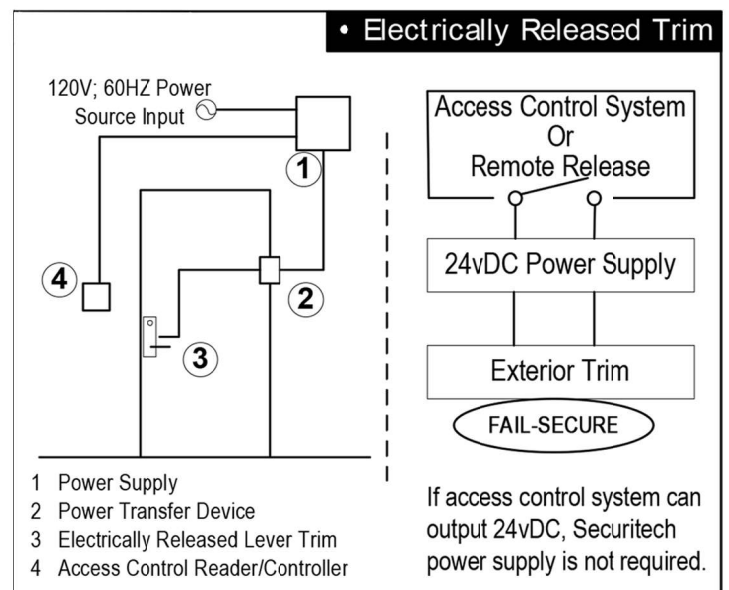
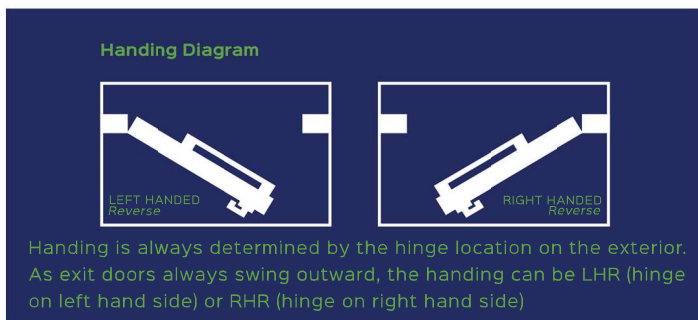
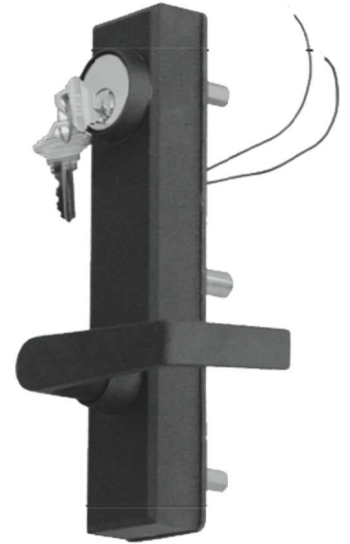
10. Filing Systems

- CMD
- Additional product information is available from the manufacturer upon request ↪



The 6200 Electrified Control Trim is an effective way of interfacing electric release with mechanical locking. The trim can be key activated or electrically-released by any access control system or remote release. Standard electric release for access control systems is 24v DC.

- **Easy Installation**
Does not require cutting into frame for electric strike.
- **Easy “No Special Knowledge” Operation**
Unlock the lever by key, card access, keypad, intercom, push-button or other release.
- **Durable**
One-piece construction with black powder coat finish.
- **Offers Fail Secure System Unlike Electromagnetic Locks**
In the event of an emergency, lock remains secure.
- **ADA compliant**
- **Mechanical Key Override**
- **Electric Release Within Lever, Not Electric Strike or Electric Lock**
- **Left or Right Handed - Must Specify (Not Field Reversible)**
- **24v DC Power Supply Needed**





The Self-closing BadAss Hinge Set by SHUT IT™ Gate Hardware

Capacity:

Load Capacity: Up to 2,000lbs (at the hinge). **NOTE:** Load capacity does not equal gate weight.

Maximum Self-Closing Weight Capacity: Up to 300lbs (Will vary depending on installation characteristics)

Restrictions:

- Disassembling hinge will void warranty (Warranty not voided if yoke and body of hinge are separated for welding.)
- Hinge is not designed to be powder coated.

Installation Guide:

Contents:

- 1 – Self Closing BadAss Hinge
- 1 – Original BadAss Hinge
- 1 – 7/64" Hex L-Key (hex socket wrench)

Proper Orientation of Hinge

The Self Closing BadAss Hinge uses a one-direction spring system (can only open one way) so it may be necessary to rotate the body of the hinge for your particular gate installation. For all installations, the yoke of the hinge (the outer "C" Channel) should always be welded to the gate post or door frame, and the body (the center piece) to the gate or door. Additionally, the bolt should always be installed with the head on the top and the locking nut on the bottom. The hinge is shipped in a left side, inward opening/right side, outward opening orientation. To change the orientation to a left side, outward opening/right side, inward opening orientation rotate the hinge 180 degrees so that the tension adjustment screw is now on the top of the hinge. When you rotate the hinge you will notice that the bolt head is now on the bottom so you will also need to remove the locking nut and bolt and reinstall so the bolt head is on the top.

Installing the Hinges

The following are the recommended steps for welding the Self Closing BadAss Hinge set to your gate/door and end post/door frame.

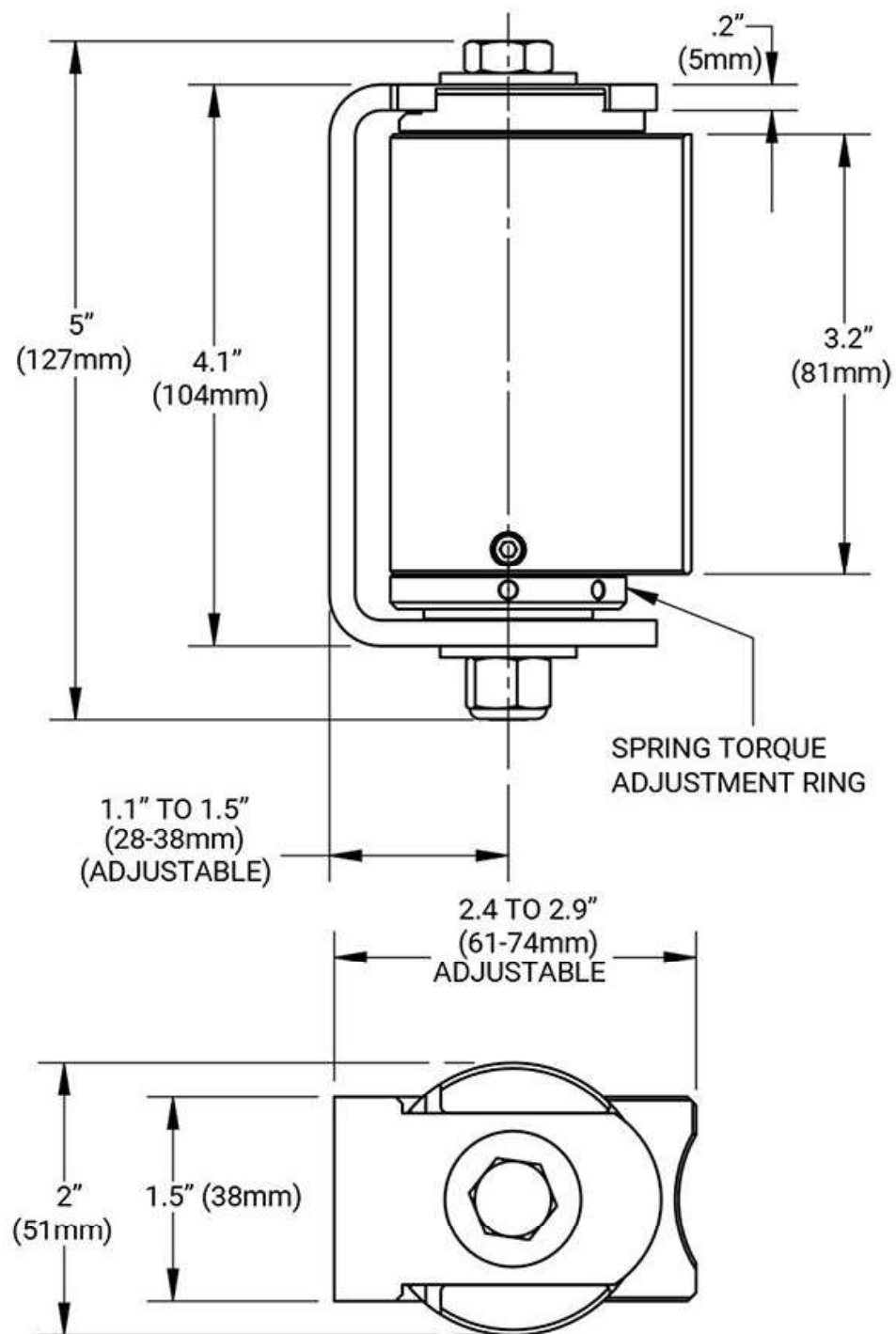
1. Weld both hinge bodies to the gate/door at your welding shop. **IMPORTANT.** It is very important that the hinges are lined up and welded so that they are level with each other on the gate frame. If the hinges are welded un-level, this may cause binding in the system, which will increase the torsion strength needed to shut the gate/door. Too much binding may cause the self closing mechanism to not function.
2. With the hinge bodies welded in your shop, the yokes can then be welded to the end post/door frame on the job site. **IMPORTANT,** we recommend tack welding the yokes and adjusting the hinge tension prior to fully welding the yokes. To make sure the yokes are welded in proper alignment it is best to weld them to the end post/door frame while they are attached to the hinge bodies on the gate/door. It is useful to have a jake to hold the gate in place while welding the yokes to the end post/door frame
3. Once the yokes are welded, make sure the lock nuts are loosened and level the gate as necessary. Once the gate is level, tighten the lock nuts until fully secured to avoid slippage.
4. **NOTE,** It is possible that the hinge will require more tension to self close when the welds are still hot, so it is recommended that tension is re-tested and possibly adjusted after the welds have fully cooled.

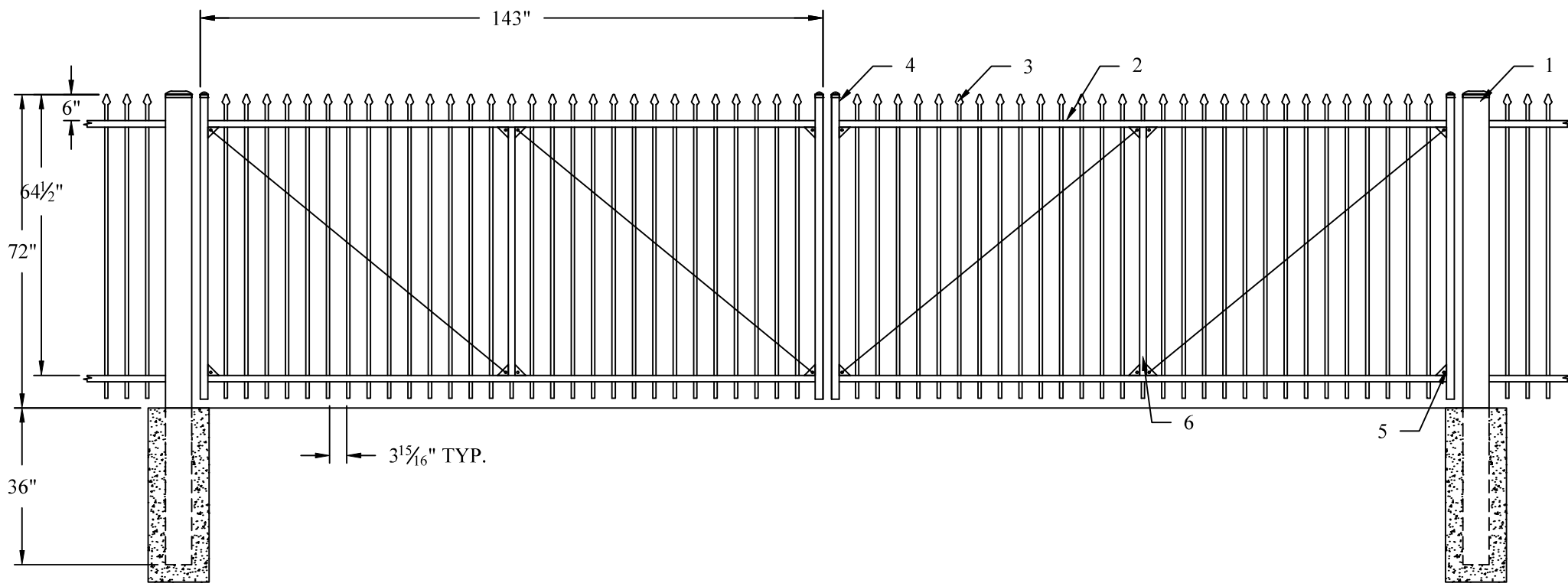
Setting/Adjusting the Spring Tension

The Self Closing BadAss Hinge is shipped at the lowest tension setting. This setting will be the most common setting for installations so we recommend that you install the hinge and test at this setting and then make adjustments if needed. Once installed, if additional tension is needed to fully close and latch your gate, use the following steps:

1. Using the provided hex socket wrench, remove the Tension Locking Screw located on the body of the Self-closing BadAss Hinge.
2. Once the screw is removed, insert the hex wrench into one of the three tension adjustment guide holes on the round spacer near the Tension Locking Screw and rotate toward the hinge yoke until the desired threaded hole is inline with the opening on the hinge body. (we recommend moving to the third threaded hole for our initial adjustment, which is the mid point of the tension span)
3. **NOTE,** it may be necessary to loosen the lock nut on the Self-closing Hinge to rotate the spacer. The hinge is designed to compress when the lock nut is tight, and this may make adjusting the spacer more difficult.
4. Once the threaded hole is lined up with the hole in the hinge body, re-insert the Tension Locking Screw and screw with fingers until it is seated in the threaded hole.
5. Using the hex wrench, tighten the Tension Locking Screw fully.
6. Retest the closing of the gate and repeat adjustments as needed.
7. If lock nut was loosened during adjustment, make sure it is tightened after final adjustments are made.







#	DESCRIPTION
1	6" SQ POST
2	1½" SQ FORERUNNER RAIL
3	¾" SQ X 17ga PICKET
4	1¼" SQ GATE END
5	GUSSET PLATE
6	1½" SQ MIDDLE UPRIGHT



PROPRIETARY INFORMATION				
This drawing is the proprietary property of AMERISTAR, Tulsa, OK and must not be duplicated or used in whole or in part for the making of drawings, prints or parts to the detriment of, or harm to, the owner. In accepting this drawing, the recipient agrees to keep the information contained confidential.				
REV	BY	CK'D	DATE	DESCRIPTION
B	DLM	1112-02	7-02-13	added x 17ga



AMERISTAR®

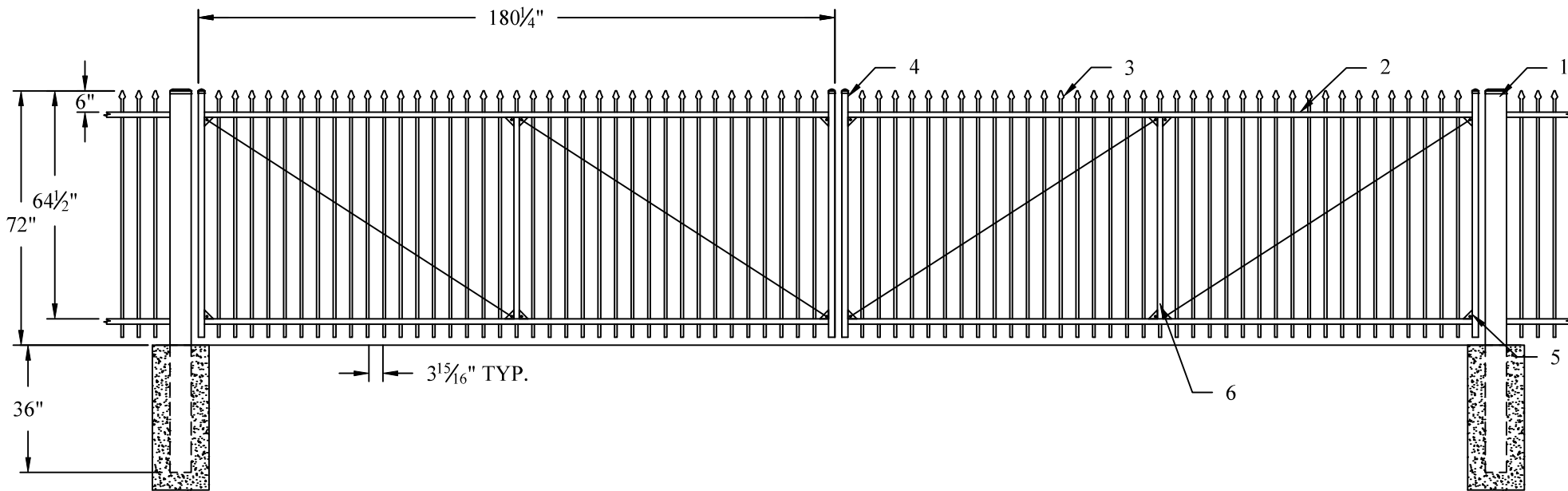
1555 N. Mingo
Tulsa, OK 74116
1-888-333-3422
www.ameristarfence.com

TITLE: MONT- PLUS CLASSIC 2R EXT 6'H 143" DBL GATE

DATE: 07/02/13 SCALE: DNS SHEET: 1/1


DRN BY: DLM CHK BY: CI REV: C

DRAWING NO: 1WCX270-144



#	DESCRIPTION
1	6" SQ POST
2	1½" SQ FORERUNNER RAIL
3	¾" SQ X 17ga PICKET
4	1¾" SQ GATE END
5	GUSSET PLATE
6	1½" SQ MIDDLE UPRIGHT

PROPRIETARY INFORMATION				
This drawing is the proprietary property of AMERISTAR, Tulsa, OK and must not be duplicated or used in whole or in part for the making of drawings, prints or parts to the detriment of, or harm to, the owner. In accepting this drawing, the recipient agrees to keep the information contained confidential.				
REV	BY	CK'D	DATE	DESCRIPTION
B	DLM	1112-02	7-02-13	added x 17ga

		AMERISTAR®		1555 N. Mingo Tulsa, OK 74116 1-888-333-3422 www.ameristarfence.com	
TITLE: MONT- PLUS CLASSIC 2R EXT 6'H 180-1/4" DBL GATE					
DATE: 07/02/13		SCALE: DNS		SHEET: 1/1	
DRN BY: DLM		CHK BY: CI		REV: C	
DRAWING NO: 1WCX270-180					

CSW24UL

24VDC HIGH-TRAFFIC COMMERCIAL SWING GATE OPERATOR



PRODUCT HIGHLIGHT

BATTERY BACKUP

The first choice for heavy-traffic swing gate applications.

RELIABLE

BATTERY BACKUP PROVIDES SEAMLESS ACCESS BY PROVIDING STANDBY POWER WHEN THE POWER IS DOWN.

SMOOTH START/STOP OPERATION AND MID-TRAVEL REVERSAL EXTEND OPERATOR HARDWARE LIFE.

SURGE SUPPRESSION PROVIDES INDUSTRIAL SURGE AND LIGHTNING PROTECTION AGAINST STRIKES UP TO 50 FEET AWAY.

HEAVY-DUTY COMMERCIAL GEAR-DRIVEN TRANSMISSION PROVIDES UNSURPASSED RELIABILITY.

WARRANTY 5 YEARS COMMERCIAL, 7 YEARS RESIDENTIAL.

SMART

myQ® TECHNOLOGY ENABLES YOU TO SECURELY CONTROL AND MONITOR YOUR GATE OPERATOR FROM ANYWHERE.*

WIRELESS DUAL-GATE COMMUNICATION SYNCHRONIZES GATE OPENING/CLOSING AND ELIMINATES EXPENSIVE DRIVEWAY TRENCHING COSTS.

SYNCHRONIZED CLOSE SIMULTANEOUSLY CLOSES GATES.

SAFE AND SECURE

SECURITY+ 2.0® SAFEGUARDS FACILITY ACCESS WITH ROLLING CODE TECHNOLOGY, OPENING FOR REGISTERED DEVICES ONLY.

EMERGENCY DISCONNECT: SIMPLE-TO-USE RELEASE HANDLE ALLOWS GATE TO BE OPERATED MANUALLY AND MAINTAIN LIMIT POSITION ONCE REENGAGED.

FIRE DEPARTMENT COMPLIANCE ALLOWS GATE TO AUTO-OPEN UPON LOSS OF AC POWER OR BATTERY DEPLETION.

QUICK CLOSE AND ANTI-TAILGATE QUICKLY SECURE PROPERTY, PREVENTING UNAUTHORIZED ACCESS.

UL® LISTED GATE OPERATORS WITH MONITORED SAFETY ENTRAPMENT PROTECTION DEVICES.

*Cellular data or Wi-Fi® connection required. Test equipment regularly and follow safety instructions.

INCLUDED ACCESSORIES:

MONITORED RETRO-REFLECTIVE PHOTO EYE

Enhanced retro-reflective photo eye now with heater and wider beam, engineered to stay aligned; max. range: 50 ft.



LMRRUL

SAFETY ADD-ONS:

MONITORED THROUGH-BEAM PHOTO EYES

Enhanced through-beam now with wider beam and heater for high performance in most environments; max. range: 90 ft.



LMTBUL

MONITORED WIRELESS EDGE KIT

Low-energy Bluetooth® connection between a LiftMaster Monitored Resistive Edge and the gate operator; max. range: 130 ft.**



LMWEKITU

MONITORED SAFETY ENTRAPMENT EDGES

Full line of Small, Large and Wraparound Profile Edges that sense obstructions.



EDGES

TOTAL SOLUTION ACCESSORIES:

CONNECTED ACCESS PORTAL, HIGH CAPACITY

Cloud-based access control for residential communities.



CAPXL

SOLAR KIT

210W: (2) 10W 12V solar panels; 40W33A: (2) 20W 12V panels, (2) 33Ah batteries and solar harness.



210W/40W33A

WIRELESS COMMERCIAL KEYPAD

Provides constant pressure override to control gate operator if safety devices fault yet are free of obstructions. Hold Open/Party Pass enabled with gate operator firmware 4.2 or higher.



KPW250

**Wireless kit for up to 4 transmitters and 2 resistive edges per transmitter.

PRODUCT GUIDE CSW24UL
24VDC HIGH-TRAFFIC COMMERCIAL
SWING GATE OPERATOR

LiftMaster
ELITE SERIES®

MASTERFUL ENGINEERING.

MECHANICS



- **24VDC** Continuous-Duty Motor
- **Operator Duty Rating:** High-Cycle, High-Temperature Continuous Duty
- **Wormgear Reduction:** 2 Commercial Oil-Bath Gearboxes Providing 900:1 Wormgear Reduction

POWER



- **120/230VAC** Single-Phase
- **Optional Kit (3PHCONV)** to Convert an Input Voltage of 208/230/460/575VAC to an Output Voltage of 120VAC
- **Accessory Power:** 24VDC 500mA Max.
- **Solar-Ready, Ultra-Reliable System** Delivers Power When and Where You Need It (LMRRUL/LMTBUL Heater Option Not Recommended for Solar Applications)

COMMERCIAL-GRADE DESIGN



- **Chassis:** Constructed with 1/4 in. black powder coated steel for rust prevention
- **Cover:** High-Density, UV-Resistant Polycarbonate 2-Piece for Heat and Corrosion Resistance
- **UL® Usage Classification:** I, II, III and IV
- **Operator Weight:** 206 lbs.

27.99"

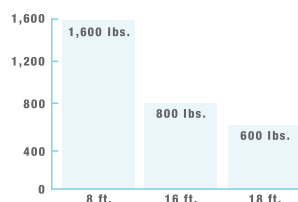
19.63" 15.55"



TEMPERATURE SPECIFICATIONS

- WITHOUT HEATER**
-4°F (-20°C) to 140°F (60°C)
- WITH OPTIONAL HEATER (HTR)**
-40°F (-40°C) to 140°F (60°C)

CAPACITIES



GATE TRAVEL SPEED
Opens 90° in 13–15 Seconds

STANDARD FEATURES.

PRE-MOTION WARNING ALARM

- Activates On-Board Alarm 3 Seconds Prior to Gate Motion

INHERENT REVERSING SENSOR

- Detects Obstructions and Reverses Gate When Closing or Stops/Reverses Gate When Opening

BI-PART DELAY

- Monitors and Adjusts Speed and Position of Each Wing to Ensure Primary Gate Closes Last

MONITORED SAFETY INPUTS

- 3 Main Board, 3 Expansion Board

SECURITY+ 2.0® ON-BOARD RADIO RECEIVER

- Up to 50 Remote Controls (Unlimited with 811LMX/813LMX)

LED DIAGNOSTIC DISPLAY

- Simplifies Installation and Troubleshooting

PROGRAMMABLE AUXILIARY RELAYS

- Make Adding Additional Features Easy

HOMELINK® COMPATIBLE

- Version 4.0 or Higher*

SUPPORT.



For Support Tools and Training Videos, Visit LiftMasterTraining.com

For More Information on Gate Operators, Visit LiftMaster.com/UL325Gates

To Find the Right Perimeter Access Solution for You, Visit LiftMaster.com/Solution-Generator



Sales Support: **800.282.6225**
Technical Support Center: **800.528.2806**
To Order: **800.323.2276**



*May require an external adapter depending on the model and year of your vehicle. Visit HomeLink.com for additional information.

© 2021 The Chamberlain Group LLC. All Rights Reserved. LiftMaster, the LiftMaster logo, myQ and the myQ logo are registered trademarks of The Chamberlain Group, LLC.

300 Windsor Drive, Oak Brook, IL 60523

LiftMaster.com

UL® and the UL logo are trademarks of UL LLC © 2021 All Rights Reserved.

Wi-Fi® is a registered trademark of Wi-Fi Alliance

© 2021 Bluetooth SIG, Inc. All rights reserved.

HomeLink® and the HomeLink House® logo are registered trademarks of Gentex Corporation

LMPAENPGCSW24MC21 12/21

LiftMaster
ELITE SERIES®

LiftMaster®

Plug-in Loop Detector MODEL LOOPDETLM

OVERVIEW

The fail safe plug-in loop detector allows the gate to stay open when vehicles are obstructing the gate path. The loop can be set to function as a Shadow Loop, an Interrupt Loop, or an Exit Loop. For use with CSW24V and CSL24V gate operators ONLY.

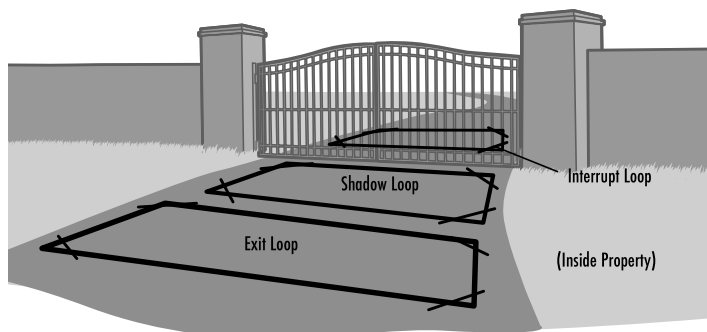
SHADOW LOOP: Positioned in the path of a swing gate and is active ONLY when the gate is in the open position. Only used in swing gate applications.

INTERRUPT LOOP: Positioned outside the property and when activated will open a closing gate.

EXIT LOOP: Positioned inside the property and when activated will open a closed gate.

CAUTION

To prevent DAMAGE to circuit board, loop detectors and/or the gate operator, installation MUST be performed by a trained gate systems technician.



INSTALLATION

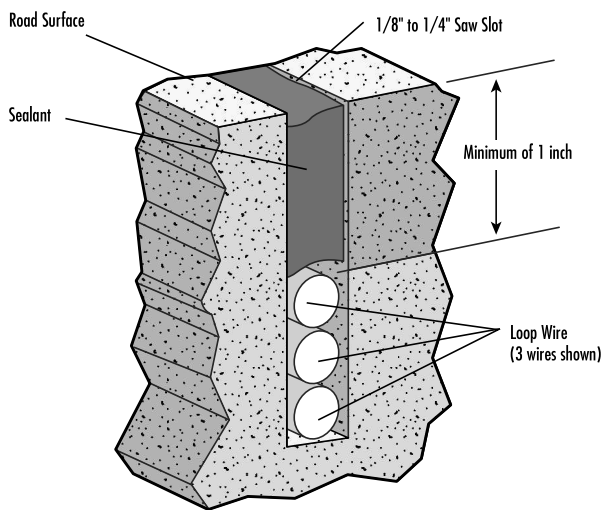
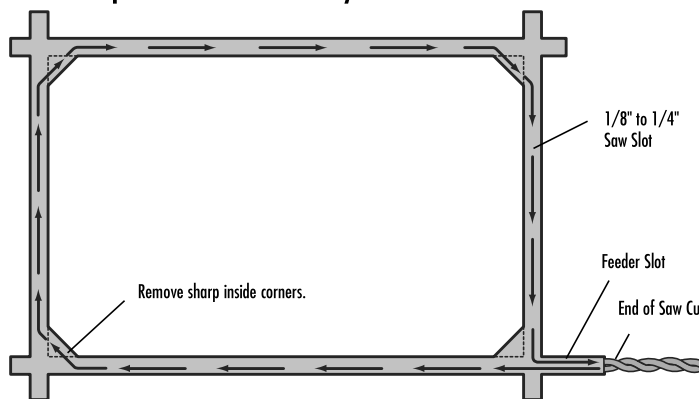
The loop itself must be a continuous length of wire without any breaks or splices. The loop wire can be 14, 16, or 18 gauge stranded wire with either a cross-linked polyethylene (XLPE) or polyester insulation.

- 1 Mark the loop layout on the pavement. Remove sharp inside corners that can damage the loop wire insulation.
- 2 Determine the thickness of the pavement to ensure that the depth of the cut will not exceed the thickness of the pavement before attempting to cut the loop slots. Set the saw to cut a depth (typically 2-2.5 inches) that will ensure a minimum of 1 inch from the top of the loop wires to the pavement surface. The saw width must be larger than the diameter of the loop wire to avoid damage to the wire insulation when placed in the saw cut. Cut the loop, corner angles, and feeder slots. Remove all debris from the saw slot with compressed air. Check that the bottom of the cut is smooth and did not break through the thickness of the pavement.
- 3 Wrap the loop wire in the loop slot using a wooden stick or roller to insert the wire to the bottom of the saw slot until the desired number of turns are reached (Caution: do not use a sharp object). Each turn of wire must lay flat on top of the previous turn.

LOOP PERIMETER	NUMBER OF TURNS
10-13 feet	4
14-26 feet	3
27-80 feet	2
81 feet and up	1

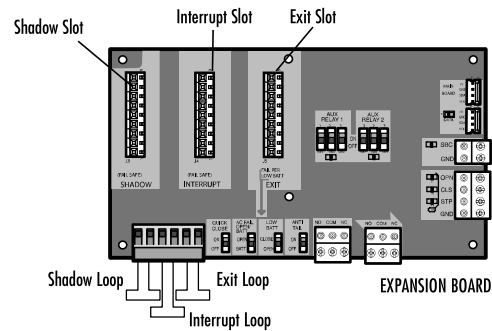
- 4 The wire must be twisted a minimum of 6 turns per foot from the end of the feeder slot to the expansion board to minimize noise or interference. If a splice is required in the feeder cable, solder each splice and protect with a moisture proof seal.
- 5 Apply the sealant. The sealant selected should have good adhering properties with similar contraction and expansion characteristics as the pavement material.

Loops MUST BE 4 feet away from each other.



WIRING

- 1 Plug the loop detector into the desired slot (Shadow, Interrupt, or Exit) on the expansion board of the operator. **NOTE:** If only LOOPDETLM loop detectors are used, manual frequency adjustments are not required and crosstalk is eliminated. If a LOOPDETLM is used in combination with other alternate loop detectors, then manual frequency adjustments may be required.
- 2 Insert the twisted wires from the loop into the corresponding terminal (Shadow, Interrupt, or Exit) on the expansion board of the operator. Polarity does not matter.



OPERATION

BLUE LED	WHITE LED	EXPLANATION
1 Blink (every 10 seconds)	OFF	Normal Operation
2 Blinks	Rapid Blinks (active fault) or OFF	Open Loop (see TROUBLESHOOTING)
3 Blinks	Rapid Blinks (active fault) or OFF	Shorted Loop (see TROUBLESHOOTING)
4 Blinks	Rapid Blinks (active fault)	Failed Authentication (see TROUBLESHOOTING)
OFF	2 Blinks	Successful Reset
OFF	Slow Blinks	Loop detector is in TEST or PROG mode
Solid	Solid	Active Loop

DIAL SETTINGS	EXPLANATION
TEST Mode	Used to test the loop detector
1-8	Determines the sensitivity setting for the loop detector: 1 is the lowest sensitivity (large vehicle) setting and 8 is the highest sensitivity (small vehicle). Default setting is 4.
PROG Mode	Used to change the frequency of the loop detector

FREQUENCY

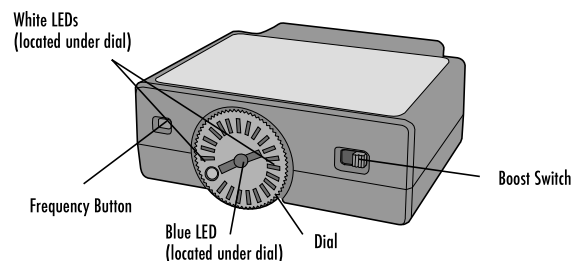
To change the frequency of the loop detector:

- 1 Turn the dial to PROG.
- 2 Press the frequency button to cycle through the 4 frequency settings. **NOTE:** The blue LED will blink to indicate the current frequency setting.

To reset frequency to factory default, hold the frequency button for 5 seconds.

BOOST SWITCH

The boost switch will increase the sensitivity of the loop detector to detect high profile vehicles (such as semi trucks).



TROUBLESHOOTING

Open or Shorted Loop (2 and 3 Blink errors):

Test the loop detector (refer to TEST THE LOOP DETECTOR section). If the loop detector passes the test, this indicates the loop detector is working properly and there is an issue with the loop wiring.

Failed Authentication (4 Blink error):

- Check the wire connecting the expansion board to the main board or
- Unplug the loop detector then plug it back into the same slot (clears all faults and keeps the current frequency settings, authenticates) or
- Unplug the loop detector. Then unplug the J15 plug on the operator's control board and plug it back in after 2-3 seconds. This allows the loop detector to be plugged into a different slot (clears all faults and keeps the current frequency settings, authenticates).

To clear a fault:

- Press the reset button on the operator (clears all faults) or
- Unplug the loop detector then plug it back into the same slot.

The loop is making false detections:

- There is crosstalk between the LOOPDETLM and the alternate loop detector or
- Change the frequency or lower the sensitivity setting of the loop detector.

The loop will not activate when a vehicle passes over it:

- Turn the boost switch ON or increase the sensitivity of the loop detector or
- If the blue and white LEDs are solid, indicating an Active Loop, and the operator does not activate, there could be a fault. Once the loop is inactive, check the LED codes for a fault (refer to LED table above).

TEST THE LOOP DETECTOR

- 1 Turn the dial to TEST. The loop detector will send a signal to the main board simulating a vehicle over the loop.
 - Exit:** If the gate is closed, it will open or if the gate is already open it will remain open.
 - Shadow:** Active ONLY when the gate is in the open position. If the gate is open, it will remain open.
 - Interrupt:** If the gate is closing, it will open.
- 2 Turn the dial back to the desired sensitivity setting.

WARRANTY

ONE YEAR LIMITED WARRANTY

The Chamberlain Group, Inc. warrants to the first retail purchaser of this product that is free from defect in materials and/or workmanship for a period of 1 year from the date of purchase.

THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES. OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS: (1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE, AND (2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED, INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRABLE OPERATION.

This Class B digital apparatus complies with Canadian ICES-003.
Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

BD Loops

We're on the Installer's Side



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.

We have the perfect sized loop for every gate:

Standard size loops ship same day as long as the order is received by 3:30 PM PST.

Driveway width		Recommended loop size		BD Loops part #		
Residential	Commercial	Residential	Commercial	20ft lead-in	50ft lead-in	100ft lead-in
8-10ft	-	3x3	-	SC 12-20	SC 12-50	-
8-10ft	-	3x4	-	SC 14-20	SC 14-50	-
8-10ft	-	3x5 or 4x4	-	SC 16-20	SC 16-50	-
9ft	-	4x5 or 3x6	-	SC 18-20	SC 18-50	-
10ft	-	4x6 or 3x7	-	SC 20-20	SC 20-50	-
12ft	10ft	4x8	6x6	SC 24-20	SC 24-50	SC 24-100
14ft	12ft	4x10	6x8	-	SC 28-50	SC 28-100
16ft	14ft	4x12	6x10	SC 32-20	SC 32-50	SC 32-100
-	16ft	-	6x12	SC 36-20	SC 36-50	SC 36-100
-	18ft	-	6x14	-	SC 40-50	SC 40-100
-	20ft	-	6x16	SC 44-20	SC 44-50	SC 44-100
-	24ft	-	6x20	SC 52-20	SC 52-50	SC 52-100

Custom sizes also available - call local distributor for pricing and delivery

Blade width and Groove Depth

How much of a difference can they make?

32' Loop with 15' of Lead-in



1/4" Groove Width
2 1/2" Groove Depth
Loop wrapped by hand
Takes: 5.3 liters of sealant to fill.

(6) 30oz Tubes of Sealant to fill the groove.



3/16" Groove Width
1 1/4" Groove Depth
With a BD Loop
Takes: 1.4 liters of sealant to fill.

(2) 30oz Tubes of Sealant to fill the groove.



Cutting at the proper depth and width can yield significant savings in loop sealant. In this example cutting 1 1/4" depth vs. 2 1/2" results in 66% Savings in Loop Sealant!

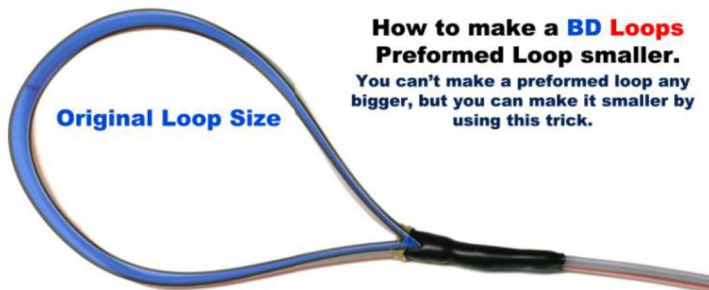
At \$21 per tube this would be a \$84 savings for **One Loop** alone!



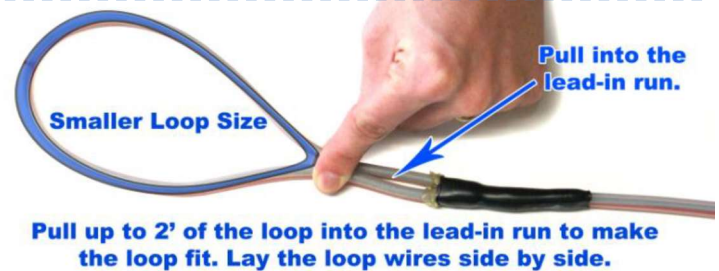
Polyurethane Saw-Cut Loop Sealant with Flat 3/16" Sealant Tip

Polyurethane has many advantages:

- 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.
- 30oz Tubes—most rubber and water based products come in 28oz tubes. **BD-LG** has 7% more sealant.



How to make a BD Loop Preformed Loop smaller.
You can't make a preformed loop any bigger, but you can make it smaller by using this trick.



Pull up to 2' of the loop into the lead-in run to make the loop fit. Lay the loop wires side by side.

V-Cut Yoke – The best way to install the yoke area.

Example of a V-Cut Yoke



V-Cut Yoke

V-Cut Yoke

A wider groove is needed for the yoke (area where the loop meets the lead-in). Drop the blade twice to make a "V" cut, the V cut should be 1 1/2" wide at its widest point and 8"-10" in length. When sealing the yoke, place a layer of sealant below the yoke, lay the yoke into the "V" Cut groove and then cover the yoke with sealant. **Sealing the yoke this way will**

fully encapsulate the yoke in sealant and provides an additional layer of protection for your saw-cut loop. Do not bend or crush the yoke area, this could damage the water tight seal.

BD Loops.com

We're on the Installer's Side

8161 Monroe Ave | Stanton, CA 90680
P: 714-723-0946 | Alt P: 714-890-1604 | F: 714-890-1603

The logo for Linear ACCESS, featuring the word "Linear" in a blue sans-serif font and "ACCESS" in a stylized, outlined blue font, with a registered trademark symbol (®) to the right.

Linear ACCESS®

Mounting Posts Models GNC-1, GNB-1



CURB MOUNT AND BURIAL MOUNT CONFIGURATION

**RUGGED, WEATHER RESISTANT, POWDER COATED
ROLLED STEEL CONSTRUCTION**

**UNIVERSAL BOLT PATTERN ON BASE PLATE &
FACEPLATE FITS ALL MANUFACTURERS' PRODUCTS**

For the easy installation of keypads, telephone entry systems, and other access control products and for the convenient use of these devices from a vehicle, Linear offers two types of well-built mounting posts. The GNC-1 is a curb mount model that includes a base plate with extra large 5/8-inch holes to accommodate lag bolts to anchor the post directly and securely to concrete.

As an alternative, the GNB-1 is a burial mount for installations where a curb mount is not practical or desired. The material for both mounting posts is 2-inch by 2-inch, 1/8-inch thick, cold rolled steel. A powder coated finish and mounting flange gasket makes these posts extremely weather resistant.



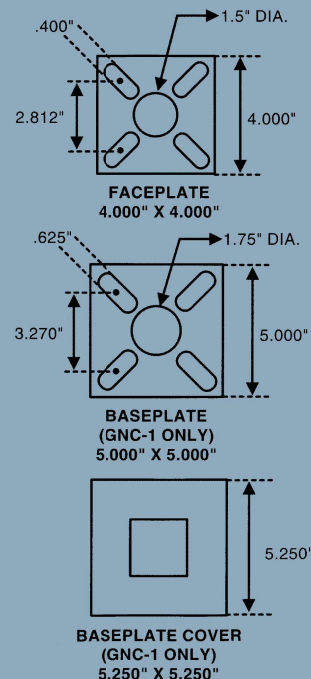
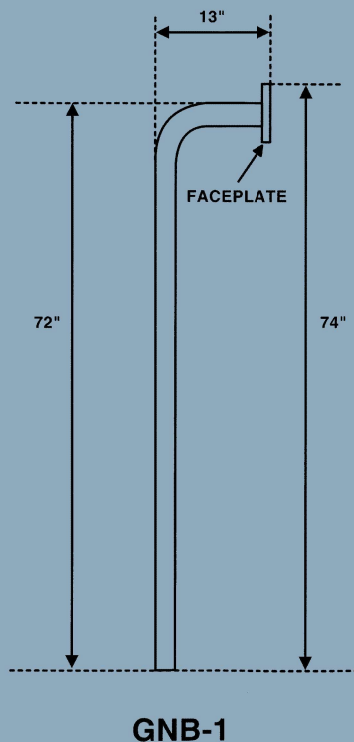
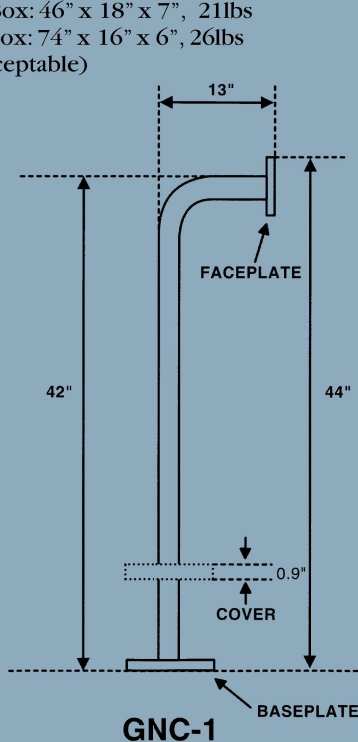
Mounting Flange for both Models



SHIPPING DETAILS:

GNC-1 Box: 46" x 18" x 7", 21lbs

GNB-1 Box: 74" x 16" x 6", 26lbs
(UPS acceptable)



Linear®

2055 Corte Del Nogal, Carlsbad, CA 92009
(760) 438-7000 (800) 421-1587 Fax (800) 468-1340
www.linearcorp.com



Product Manual

- Installation Instructions
- Wiring Instructions

MOUNTING THE SYSTEM:

The system can be mounted on a standard pedestal or directly to a wall or flat surface. A 3/4" knockout is located on the back and bottom of the box for conduit connections. Rear mounting holes are available for mounting screws and anchors. Follow all safety warnings and precautions when mounting the system.

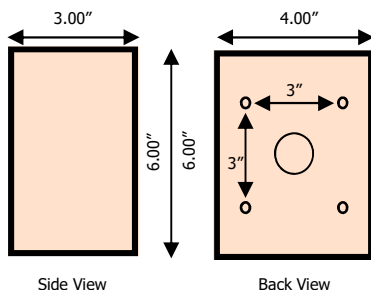
Pedestal Mounting:

1. Use security screws and lock nuts to securely attach the back box to a gooseneck post.
2. If the mounting holes are not used, fill the holes with a plug or sealant to prevent water from entering the box.

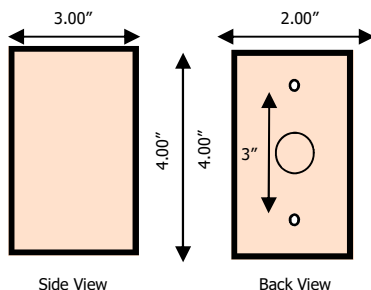
Wall Mounting:



1. Mount the system to a wall or flat surface. Use appropriate mounting screws or anchors to securely attach the system.
2. Never mount the system to a moving gate, gate panel, or next to a gate that causes vibration to the mounting point. Continuous vibration from moving or slamming gates can cause damage to the unit and is not covered under warranty.

FAB100



FAB100-Mini



-  **DO NOT** mount operating devices accessible through the gate or in between gate and wall.
-  **Mount the system at least 10 feet away from a vehicular gate and its travel.**

INSTALLING KNOX & PADLOCK:

The system may utilize a Knox Lock key switch, padlock or both for fire access. When a Knox Lock is used, the Fire Dept will use their key to activate the lock switch. When a padlock is used, the Fire Dept will use bolt cutters to remove the padlock, open the door and activate the built-in switch.

To install a Knox Lock key switch:

1. Using a hammer and screwdriver, remove the center knockout in the front door.



2. Unlock the box and install the Knox key switch.
3. Wire the key switch to the device to be activated.
4. Close and lock the box.

To install a padlock:

1. Unlock the box.
2. Wire the built-in switch to the device to be activated.
3. Close the box, **DO NOT LOCK THE TOP LOCK**
4. Install the padlock through the top hole on the roof and door..

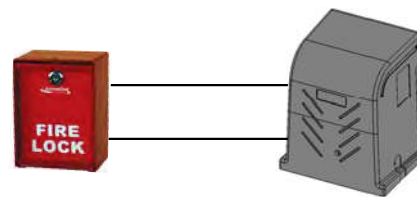
To install a Knox Lock and padlock:

1. Using a hammer and screwdriver, remove the center knockout in the front door.
2. Unlock the box and install the Knox key switch.
3. Wire the key switch to the device to be activated.
4. Wire the built-in switch to the device to be activated.
5. Close the box, **DO NOT LOCK THE TOP LOCK** and install the padlock.

GATE OPERATOR WIRE CONNECTIONS:

The system may be connected to an electric gate operator for gate access control. When connecting to a gate operator, always follow the safety guidelines and precautions supplied with the gate operator. To connect a gate operator:

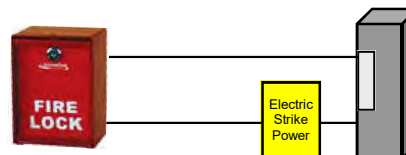
1. Connect NC to Gate Open/Fire Input.
2. Connect COM to Gate Common.
3. Use at least 18AWG or larger wire.



ELECTRIC STRIKE WIRE CONNECTIONS:

The system may be connected to an electric strike for pedestrian door or pedestrian gate control. To connect an electric strike:

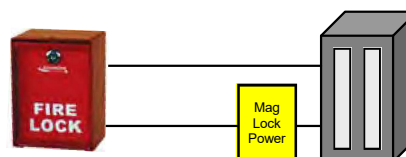
1. Connect NC to the Strike power source.
2. Connect Strike power source to the Electric Strike.
3. Connect COM1 directly to the Strike.
4. Use at least 18AWG or larger wire.



MAGNETIC LOCK WIRE CONNECTIONS:

The system may be connected to a magnetic lock for pedestrian door or pedestrian gate control. To connect a magnetic lock:

1. Connect NO to the MagLock power source.
2. Connect MagLock power source to Magnetic Lock.
3. Connect COM1 directly to the MagLock.
4. Use at least 18AWG or larger wire.



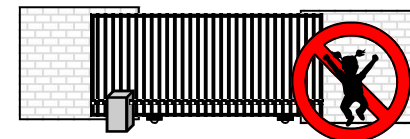
IMPORTANT USER INSTRUCTIONS:

Automatic gate systems provide user convenience and limit vehicular traffic. Because these systems can produce high levels of force, it is important that you are aware of the potential hazards associated with the system. Potential hazards may include pinch points, entrapment positions, lack of proper pedestrian access, blind spots for traffic visibility.

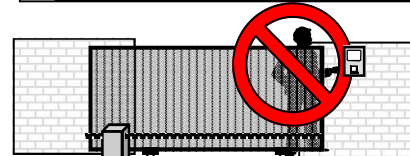
It is the joint responsibility of the designer, purchaser, installer and end user to verify the system is properly configured for its intended use. Be sure that the installer has instructed you on the proper operation of the gate and gate system before use. Be sure the installer trains you about the basic functions of the required reversing devices associated with the gate system and how to properly test them. Reversing devices may include reverse loops, sensing edges, photoelectric cells, inherent reverse detection, and/or other external devices.


RESTRICTIONS & WARNINGS:

1. A moving gate can cause serious injury or death. Read and follow all installation manuals, reference manuals, and warning label instructions.
2. Vehicular gates are for vehicles only. Pedestrians must use a separate entrance. Keep all pedestrian traffic away from any vehicular gate. No one should cross the path of a moving gate.
3. Never allow children to operate or play with gate controls or to play in the area of a gate system.
4. Access control devices must be placed far enough from moving gates to prevent the user from coming in contact with the gate while operating the controls.
5. All activating devices must be installed in a clear line-of-sight with the gate and its travel.
6. Activating devices must be installed a minimum of 10 feet away from the gate.
7. Outdoor or easily accessible controls shall have a security feature to prevent unauthorized use.
8. Be sure to mount all operating devices clearly out of reach of through gates.
9. **DO NOT** install this device unless all potential hazards and pinch points have been eliminated.

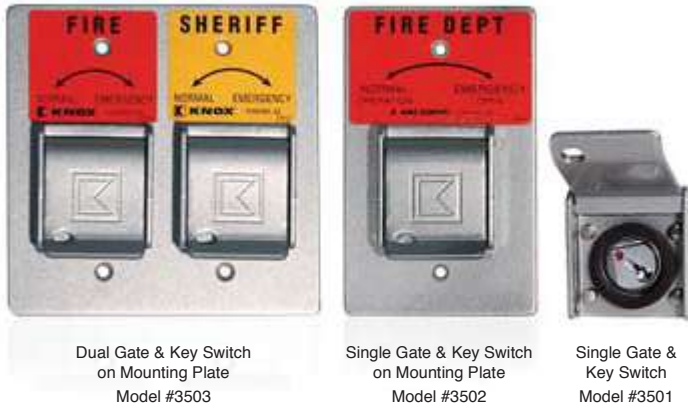


 **DO NOT** allow children to play near, on or with the gate, gate operator, or any of its controls.



 **DO NOT** mount operating devices accessible through the gate or in between gate and wall.

Eliminate perimeter barriers that delay emergency response with the Knox Gate & Key Switch. Override electronic gates and lower voltage equipment to allow emergency access into communities, apartment complexes, parking garages, pedestrian gates, industrial receiving areas and much more.



FEATURES

- ✓ One position, two position or momentary switch
- ✓ Face plate and lock cover ensure weather resistant operation
- ✓ Dual locks enable shared access with other agencies

BENEFITS

- ✓ Gain rapid access through electronic gates without forced entry
- ✓ Overrides electronic gates, motorized doors, electrical switches
- ✓ Can share access with multiple agencies
- ✓ Utilizes Knox Master Key solution

OPTIONS

- ✓ Single or dual key switch
- ✓ Fire, EMS, security or law enforcement identification labels

ELECTRICAL DATA

- ✓ Switch: SPDT or DPDT
- ✓ 7 A resistive, 4 A inductive, (sea level), 28 VDC
- ✓ 7 A resistive, 2.5 A inductive, (50,000 ft.), 28 VDC
- ✓ 7 A resistive or inductive, 115 VAC, 60 Hz
- ✓ UL® and CSA listed: 7 A, 250 VAC
- ✓ Temperature tolerance up to +180° F

ORDERING SPECIFICATIONS

To insure procurement and delivery of the Knox Gate & Key Switch, it is suggested that the following specification paragraph be used:

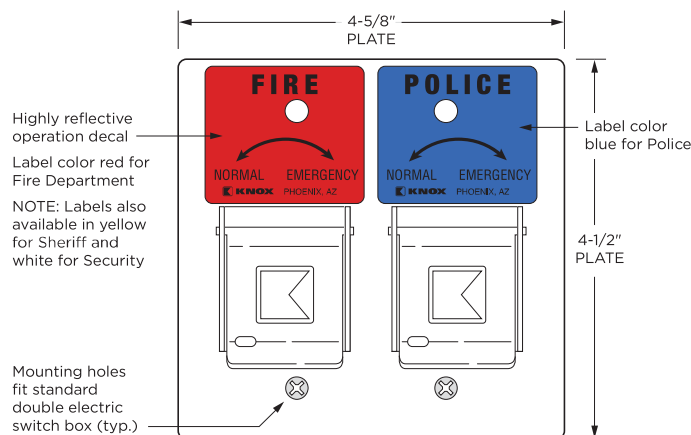
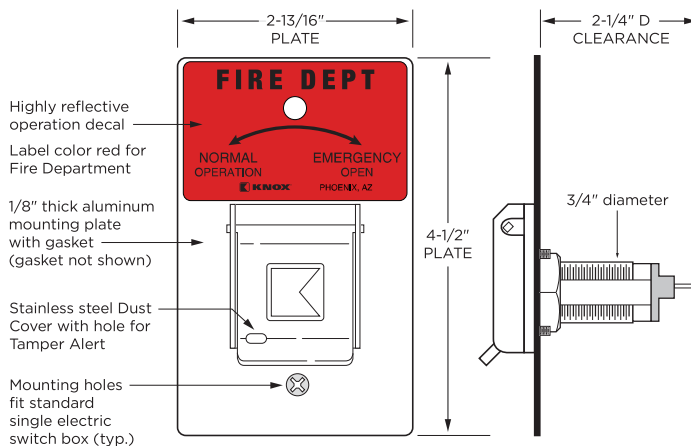
Dimensions: Requires 2 1/4" recessed depth x 3/4" diameter

Switch: SPDT or DPDT; 7 A resistive, 4 A inductive, key removable two position

Mounting: Key switch is designed to be recess mounted

P/N: 3500 Series Knox Gate & Key Switch (mfr's cat. ID)

Mfr's Name: KNOX COMPANY



ABOUT KNOX COMPANY

Over forty years ago, a unique concept in rapid access for emergency response was born. The KnoxBox®, a high-security key lock box, was designed to provide rapid access for emergency responders to reduce response times, minimize injuries and protect property from forced entry.

Today, one revolutionary lock box has grown into a complete system providing rapid access for public safety agencies, industries, military, and property owners across the world. The Knox Company is trusted by over 14,000 fire departments, law enforcement agencies, and governmental entities.