



**BYAN SYSTEM, INC.**

413 LINDEN  
LUSK, WY 82225  
(800) 223-2926

**MODEL 500A/500B SERIES  
VEHICULAR SWING  
GATE OPERATOR**

**INSTALLATION AND TECHNICAL MANUAL**

BYAN SYSTEMS, INC. OF LUSK, WYOMING, DEMANDS THAT YOU AS AN INSTALLER INFORM YOUR CUSTOMER OF ALL SAFETY EQUIPMENT THAT SHOULD BE INSTALLED ON EACH JOB SITE. THIS IS IN ACCORDANCE WITH YOUR LEGAL LIABILITY TO YOUR CUSTOMER. ENSURE THAT THE PROTECTION AND WARNING SIGNALING DEVICES ARE OPERATIONAL AND VISIBLE. THESE STEPS WILL AID IN YOUR DEFENSE SHOULD YOU BECOME INVOLVED IN LITIGATION REGARDING INJURY OR DAMAGE.

**ATTENTION: ALL INSTALLERS EXPERIENCED OR NOT PLEASE REVIEW  
PAGES 4 AND 9 BEFORE YOU INSTALL THIS ACTUATOR.**

**P.O. BOX 1384**

**FAX (307) 334-2028**

**BYAN SYSTEMS, INC.**  
Automatic Gate and Access Control Products

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## **USAGE CLASSES FOR VEHICULAR GATES**

### **CLASS I – RESIDENTIAL VEHICULAR GATE OPERATOR**

A VEHICULAR GATE OPERATOR (OR SYSTEM) INTENDED FOR USE IN A HOME OF ONE TO FOUR SINGLE FAMILY DWELLING, OR A GARAGE OR PARKING AREA ASSOCIATE THEREWITH.

### **CLASS II – COMMERCIAL/GENERAL ACCESS VEHICULAR GATE OPERATOR**

A VEHICULAR GATE OPERATOR (OR SYSTEM) INTENDED FOR USE IN A COMMERCIAL LOCATION OR BUILDING SUCH AS A MULTI-FAMILY HOUSING UNIT (FIVE OR MORE SINGLE FAMILY UNITS), HOTEL, GARAGES, RETAIL STORES, OR OTHER BUILDING SERVICING THE GENERAL PUBLIC.

### **CLASS III – INDUSTRIAL/LIMITED ACCESS VEHICULAR GATE OPERATOR**

A VEHICULAR GATE OPERATOR (OR SYSTEM) INTENDED FOR USE IN AN INDUSTRIAL LOCATION OR BUILDING SUCH AS A FACTORY OR LOADING DOCK AREA OR OTHER LOCATION NOT INTENDED TO SERVICE THE GENERAL PUBLIC.

### **CLASS IV – RESTRICTED ACCESS VEHICULAR GATE OPERATOR**

A VEHICULAR GATE OPERATOR (OR SYSTEM) INTENDED FOR USE IN A GUARDED INDUSTRIAL LOCATION OR BUILDING SUCH AS AN AIRPORT SECURITY AREA OR OTHER RESTRICTED ACCESS LOCATION NOT SERVICING THE GENERAL PUBLIC, IN WHICH UNAUTHORIZED ACCESS IS PREVENTED VIA SUPERVISION BY SECURITY PERSONNEL.

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**500 SERIES TECHNICAL DATA**

MODEL 500: ELIMINATOR SERIES	115 VAC SINGLE PHASE BUILT-IN THERMAL OVERLOAD
CAPACITOR RATING:	40UF / 10UF
STANDARD WORKING PRESSURE:	1350 PSI
MAXIMUM WORKING PRESSURE:	1750 PSI
PUMP:	SPUR GEAR .50 LTR/MIN.
MOTOR:	1/6 HORSE POWER
AMPERAGE DRAW:	4.0 AMPS
OPERATOR LENGTH WITH PISTON RETRACTED AND REAR BRACKET AND SWIVEL JOINT INSTALLED	27.72 INCHES
OPERATOR LENGTH EXTENDED WITH REAR BRACKET AND SWIVEL JOINT INSTALLED	35.59 INCHES
OPERATOR WIDTH:	3.39 INCHES
OPERATOR HEIGHT:	4.33 INCHES
OPERATOR SPEED TO 90 DEGREES:	12 SEC. APP.
PISTON STROKE:	200 MM / 7.87 INCHES
AMBIENT OPERATOR TEMPERATURE RANGE:	-60 TO 220 DEGREES F
HYDRAULIC FLUID:	SHELL TELLUS T-15

THIS PATENTED NEW CONCEPT IN LINEAR ACTUATOR DESIGN ELIMINATES THE NEED FOR PHYSICAL STOPS. THE VALVE DESIGN CUSHIONS THE LAST HALF INCH OR ABOUT THE LAST 5 TO 10 DEGREES OF PISTON TRAVEL ALLOWING THE PISTON TO REACH END OF STROKE IN BOTH DIRECTIONS AND PREVENT INTERNAL DAMAGES.

- OPERATOR BODY FABRICATED IN ANODIZED ALUMINUM
- FRONT AND REAR FLANGES ARE CAST ALUMINUM
- ALL INTERNAL COMPONENTS ARE CAST AND MACHINED
- INTERNAL COMPONENTS ARE BATHED IN OIL SO VIRTUALLY NO MAINTENANCE REQUIRED.

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**BEFORE INSTALLATION**

1. VERIFY THE GATE POST IS PLUM AND GATE LEAF SWINGS FREELY.
2. PERFORM ANY REQUIRED MAINTENANCE BEFORE CONTINUING.
3. VERIFY THE COMMERCIAL POWER CIRCUIT BREAKERS ARE ISOLATED AND RATED FOR THE SPECIFIC LOAD. VISUALLY ENSURE THE CIRCUIT BREAKERS ARE IN THE “OFF” POSITION AND MARK THE BREAKER USED.
4. IF ANY PRE-CONSTRUCTION WIRING HAS BEEN INSTALLED, VISUALLY INSPECT AND CONFIRM PROPER SIZING AND COMPLIANCE TO CODE.
5. AUTOMATIC VEHICULAR GATES ARE NOT APPROVED FOR PEDESTRIAN TRAFFIC; HOWEVER, THEY CAN CREATE HAZARDS TO UNSUSPECTING PEDESTRIANS AND DOMESTIC ANIMALS. ANY GATE, CONSTRUCTED WITH REACHABLE PINCH POINTS, OR HAS A SURFACE AREA THAT ALLOWS ARMS OR LEGS TO PASS THROUGH, IS A POTENTIAL HAZARD. RECOMMEND AND PROVIDE SAFE GUARDS AGAINST THESE HAZARDS.
6. REMOVE THE “END USER SAFETY ADVISORY HANDOUT” FROM THIS MANUAL. REQUEST THE END USER REVIEW THE MATERIAL AND SIGN IT. COLLECT THE HANDOUT WHEN THE JOB IS COMPLETE.

**DURING INSTALLATION**

1. LOCATE THE ELECTRONIC CONTROLS FAR ENOUGH FROM THE GATE SO THE END USER CAN OBSERVE, BUT NOT TOUCH, THE GATE WHILE OPERATING THE CONTROLS.
2. WHEN CONNECTING THE WIRING FROM THE COMMERCIAL POWER SOURCE TO THE CONTROL PANEL, MAKE SURE YOU HAVE PROVIDED A PROPER EARTH GROUND. IF USING A METAL ENCLOSURE, CONNECT THE GROUND TO THE ENCLOSURE BEFORE CONNECTING TO THE GATE OPERATORS. NO GROUND IS TO CONNECTING TO THE GATE OPERATORS. NO GROUND IS TO CONNECT DIRECTLY TO THE MICROPROCESSOR CONTROL.
3. OBSERVE ALL WIRING REQUIREMENTS ESTABLISHED BY THE NATIONAL ELECTRICAL CODE AND/OR THE AUTHORITY HAVING JURISDICTION.
4. MOUNT THE LINEAR ACTUATOR AS CLOSE TO THE CENTER OF THE GATE LEAF AS POSSIBLE. THIS WILL HELP BALANCE THE WHIPPING MOTION OF THE GATE WHEN THE OPERATOR REACHES END OF THE PISTON STROKE.
5. ISOLATE THE LINEAR ACTUATOR WHEN WELDING TO PREVENT ANY CURRENT FROM PASSING THROUGH THE OPERATOR AND DAMAGING THE MOTOR OR OTHER COMPONENTS.

## **INSTALLATION COMPLETION**

1. “REMOVE” ALL DEBRIS AND OBSTRUCTIONS FROM THE TRAVEL PATH OF THE GATE LEAF(S).
2. TURN ON AND LABEL THE COMMERCIAL POWER CIRCUIT BREAKER AND REMOVE THE “USED” TAG YOU INSTALLED AT THE BEGINNING OF THE PROJECT.
3. USING THE MANUAL BYPASS, POSITION THE GATE LEAF AT 45 DEGREES. PRESS THE TEST BUTTON ON THE CM2-T CONTROL BOARD. THE FIRST SIGNAL WILL ALWAYS BE TO OPEN. IF THE OPERATOR RUNS TO THE CLOSED POSITION, TURN OFF THE COMMERCIAL POWER AND REVERSE THE MOTOR CONNECTIONS ON PINS 1 AND 3.
4. OPERATE THE ACTUATOR SEVERAL TIMES UNTIL YOU CAN DETECT A RISE IN THE FLUID TEMPERATURE. THIS CAN BE DONE BY PLACING YOUR HAND ON THE TOP OF THE OPERATOR AT THE REAR.
5. PURGE AND ADJUST THE OPERATOR AS DESCRIBED IN THE PURGING AND ADJUSTMENT SECTION.
6. INSTRUCT THE END USER HOW TO MANUALLY RELEASE THE GATE IN THE EVENT OF A POWER FAILURE.
7. INSTRUCT THE END USER HOW TO PROPERLY OPERATE THE GATE AUTOMATION AND SAFETY FEATURES THEREOF.
8. COLLECT THE “SIGNED” END USER SAFETY HAND OUT. BY THEIR SIGNATURE, THE END USER ACKNOWLEDGES THEIR UNDERSTANDING OF THEIR RESPONSIBILITIES OF OWNING, OPERATING, AND MAINTAINING A VEHICULAR AUTOMATIC GATE OPERATING SYSTEM.

## **INSTALLING THE OPERATOR**

### **! ADVISORIES!**

- A. THIS LINEAR ACTUATOR MUST BE MOUNTED SO THE PISTON **FULLY EXTENDS AND FULLY RETRACTS**. WHEN FULLY RETRACTED THERE SHOULD BE ¼ INCH PISTON LEFT OUT OF THE FRONT.
  - B. THIS LINEAR ACTUATOR HAS AN OFFSET BETWEEN THE FRONT AND REAR MOUNTING BRACKET. THE FRONT BRACKET IS ABOUT 3/16" OF AN INCH LOWER THAN THE REAR BRACKET, REVIEW THE BRACKET ALIGNMENT DETAIL FOR THE OFFSET DIMENSION.
1. SCRIBE THE CENTERLINE OF THE GATE LEAF ONTO THE GATEPOST.
  2. MEASURE FOR THE OFFSET DESCRIBED IN THE ADVISORY #B AND SCRIBE ANOTHER LINE.
  3. CUT THE REAR MOUNTING BRACKET IN ACCORDANCE WITH THE DIMENSIONS SPECIFIED ON THE MOUNTING GEOMETRY DETAIL.
  4. WELD THE REAR MOUNTING BRACKET TO THE GATE POST.
  5. DETERMINE THE "C" DIMENSION AND CUT THE FRONT MOUNTING BRACKET TO THE PROPER LENGTH.
  6. EXTEND THE PISTON TO FULLY EXTENDED POSITION. THIS CAN BE ACHIEVED BY TEMPORARILY CONNECTING THE CONTROL PANEL TO THE OPERATOR AND USING THE MOTOR TO EXTEND THE PISTON, PRODUCING 9 7/8" OF PISTON. IT IS VERY IMPORTANT WITH THE "600A" THAT THE PISTON **"BOTTOMS OUT IN BOTH DIRECTIONS"**.
  7. SCREW THE "I" BOLT INTO THE END OF THE PISTON ½ TO ¾ OF THE LENGTH OF THE THREADS.
  8. ATTACH THE OPERATOR TO THE FRONT MOUNTING BRACKET.
  9. WITH THE GATE IN THE FULL CLOSED POSITION, LEVEL THE OPERATOR AND SCRIBE THE LOCATION FOR THE FRONT MOUNTING BRACKET.
  10. REMOVE THE FRONT MOUNTING BRACKET FROM THE FRONT OF THE GATE OPERATOR AND WELD IT TO THE GATE LEAF AT THE SCRIBED LOCATION.
  11. ATTACH THE OPERATOR TO THE FRONT MOUNTING BRACKET.
  12. WITH THE OPERATOR IN MANUAL BYPASS, OIL FILLER CAP, SCREW ON, SWING THE GATE OPEN AND CLOSED ABOUT 6 TIMES SLOWLY, TO PURGE THE AIR FROM THE VALVE SYSTEM. SLOWLY OPEN THE FILLER CAP TO EXPEL ANY AIR IN THE OPERATOR.

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13. ATTACH AN 18/4 STRANDED S.O. CORD APPROVED FOR OUTDOOR USE AS PER THE STRAIN RELIEF ASSEMBLY TO THE OPERATOR PER THE ELECTRICAL CONNECTION DETAILS.

**NOTE:** IT IS HELPFUL TO INSTALL A SINGLE GANG WEATHER PROOF BELL BOX ON THE GATE POST ACROSS FROM THE OPERATOR. THEN WIRE FROM THE CONTROL BOX CAN BE PULLED TO THIS POINT AND CONNECTED TO THE S.O. CORD INSIDE THE BELL BOX.

### **PURGING THE OPERATOR**

#### **THIS IS NOT REQUIRED UNLESS THE OPERATOR RUNS ERRATIC**

SOMETIMES DURING SHIPPING THE “500” SERIES OPERATOR GETS TURNED UPSIDE DOWN AND REQUIRES THE VALVE SYSTEM TO BE PURGED AFTER YOU HAVE COMPLETED THE INSTALLATION. THIS CAN BE NOTICED IF THE OPERATOR IS JERKING OR RUNS UNEVEN. WITH THE ALLEN WRENCH PROVIDED UNDER THE LOCKING CAP, TURN THE MANUAL BYPASS VALVE COUNTER CLOCKWISE UNTIL THE OPERATOR RELEASES. SLOWLY SWING THE OPERATOR FULLY OPEN AND CLOSED 6 TO 7 COMPLETE CYCLES. THEN, SLOWLY REMOVE THE FILL CAP ON THE REAR FLANGE OF THE OPERATOR TO EXPEL THE AIR. REPLACE THE FILL CAP.

TIGHTEN THE BYPASS VALVE WITH THE ALLEN WRENCH AND GIVE THE OPERATOR A SIGNAL TO RUN. WHILE THE MOTOR IS RUNNING, OPEN AND CLOSE THE BYPASS VALVE PAUSING BETWEEN OPEN AND CLOSE. DO THIS 10 TO 12 TIMES. THEN REMOVE THE FILL CAP TO EXPEL ANY AIR IN THE OPERATOR. REPLACE THE OIL FILLER CAP SCREW AND TIGHTEN ONLY SNUG.

### **ADJUSTING THE OPERATOR**

THE PRESSURE ADJUSTMENT SCREW IS FOUND UNDER THE LOCKING CAP ON THE TOP OF THE OPERATOR. LOOKING FROM THE REAR TO THE FRONT OF THE OPERATOR, THE LEFT VALVE IS FOR RETRACTING PRESSURE AND THE RIGHT VALVE IS FOR EXTENDING PRESSURE. CLOCKWISE INCREASES PRESSURE AND COUNTER CLOCKWISE DECREASES PRESSURE. WITH THE MOTOR RUNNING DECREASE THE PRESSURES EQUALLY UNTIL THE OPERATOR STOPS MOVING IN BOTH DIRECTIONS. BEGIN INCREASING PRESSURE ON BOTH VALVES WITH THE MOTOR RUNNING. ADJUST THE PRESSURE TO WHERE YOU HAVE TO PHYSICALLY STOP THE GATE. AT THIS POINT, EITHER INCREASE THE RETRACTING PRESSURE OR DECREASE THE EXTENDING PRESSURE A ½ TO ¾ OF A TURN. THE RETRACTING PRESSURE MUST BE HIGHER.

### **HYDRAULIC FLUID**

413 Linden • Lusk, WY 82225 • (800) 223-2926



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BYAN SYSTEMS OPERATORS USE A “SHELL OIL PRODUCTS” TELLUS T-15. THIS FLUID HAS A RELATIVELY LOW VISCOSITY SO IT WILL START TO FLOW QUICKLY ON COLD DAYS. WHEN THE FLUID RISES TO OPERATING TEMPERATURE, THERE IS NO RUSH OF THIN FLUID CAUSING POOR HYDRAULIC PERFORMANCE, OR WORSE YET, EXCESSIVE PUMP WEAR, FAILURE AND EXPENSIVE DOWNTIME.

TELLUS FLUIDS MINIMIZE THE EFFECT TEMPERATURE HAS ON VISCOSITY, AND RESISTS THE SHEARING ACTION OF HIGH SPEED PUMPS BY MAINTAINING THEIR STABLE VISCOSITY LONGER.

THERE IS A ZINC TYPE ADDITIVE IN THE FLUID TO HELP IMPEDE WEAR AND PREMATURE REPLACEMENT. IT HELPS PREVENT CORROSION TO METALS AND IS DESIGNED TO BE COMPATIBLE WITH HOSES, SEALS AND OTHER ELASTOMER PRODUCTS.

TELLUS T-15 READILY SEPARATES AIR AND WATER TO PREVENT FOAMING, KEEPING THE FLUID FIT AND DIELECTRIC STRENGTH HIGH.

## **WHERE TO BUY SHELL TELLUS FLUIDS**

AT YOUR NEAREST SHELL DISTRIBUTOR, BYAN SYSTEMS DISTRIBUTOR, OR AT BYAN SYSTEMS WAREHOUSE.

## **FLUID AND YOUR OPERATOR**

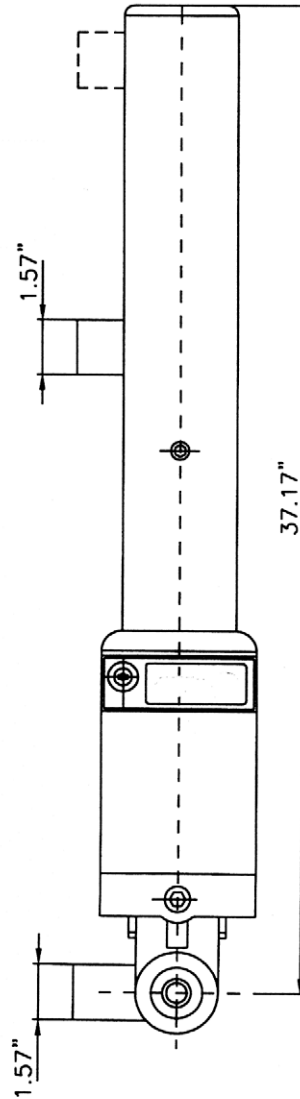
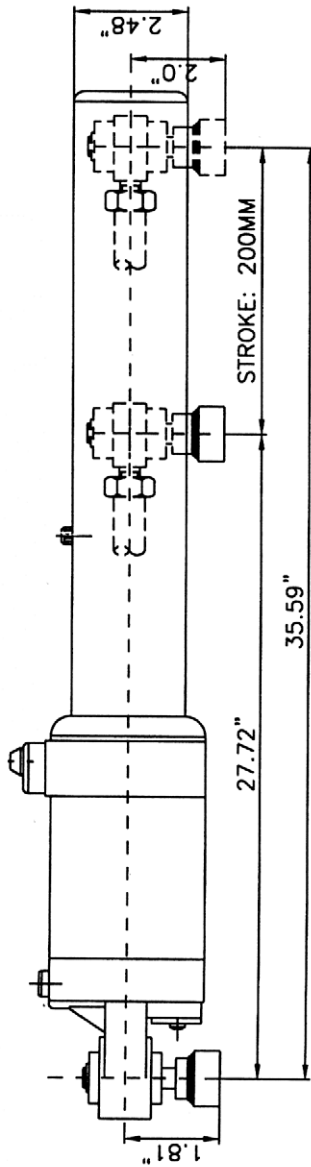
THE OPERATOR HOLDS APPROXIMATELY 1 QUART OF FLUID. THE PROPER LEVEL CAN BE OBSERVED THROUGH THE OIL FILLER TUBE, LOCATED ON THE TOP OF THE REAR FLANGE OF THE OPERATOR, WITH THE PISTON IN THE RETRACTION POSITION, THE FLUID SHOULD BE VISIBLE AT THE BOTTOM OF THE TUBE, LEVEL WITH THE CURVED SECTION OF THE TUBE. THE 500 SERIES OPERATOR HAS A PRESSURED CHAMBER SO DO NOT OVERFILL. THE PUMP WILL INTERMITTENTLY FAIL TO DRAW FLUID AND WILL FAIL TO RUN IN ONE DIRECTION OR THE OTHER.

## **MANUAL BYPASS**

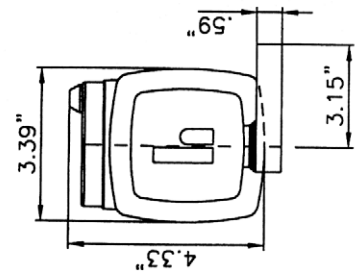
THE MANUAL BYPASS VALVE IS FOR THE ABILITY TO RELEASE THE OPERATOR IN THE EVENT OF A POWER FAILURE OR MALFUNCTION. IT IS LOCATED UNDER THE KEYED CAP ON TOP OF THE OPERATOR. A METRIC ALLEN WRENCH IS SUPPLIED IN THE CAP TO RELEASE THE BYPASS VALVE. TURN THE VALVE COUNTER CLOCKWISE UNTIL THE OPERATOR RELEASES. WHEN TIGHTENING THE BYPASS VALVE IT MUST BE TIGHT IN ORDER TO PREVENT FLUID OR PRESSURE ESCAPING BACK INTO THE CHAMBER.

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VEHICULAR SWING GATE OPERATOR  
MODEL 500 RESIDENTAL



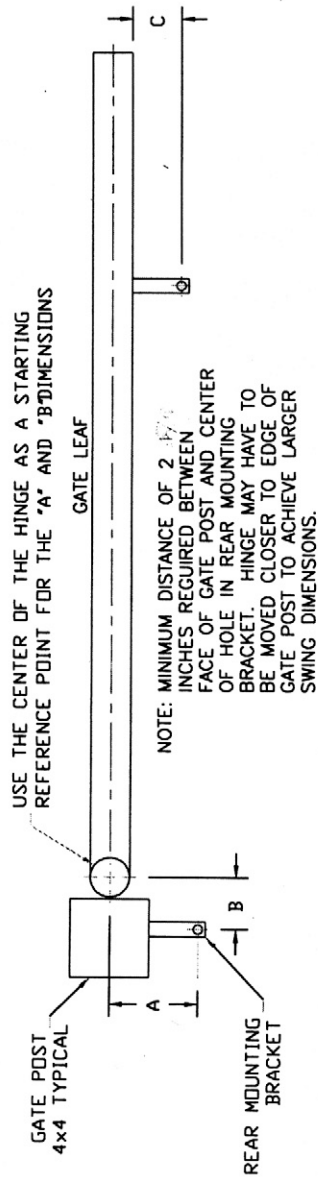
NOTE: WHEN THE OPERATOR IS CORRECTLY INSTALLED THE FRONT MOUNTING BRACKET WILL BE 3/16" LOWER THAN THE REAR MOUNTING BRACKET.



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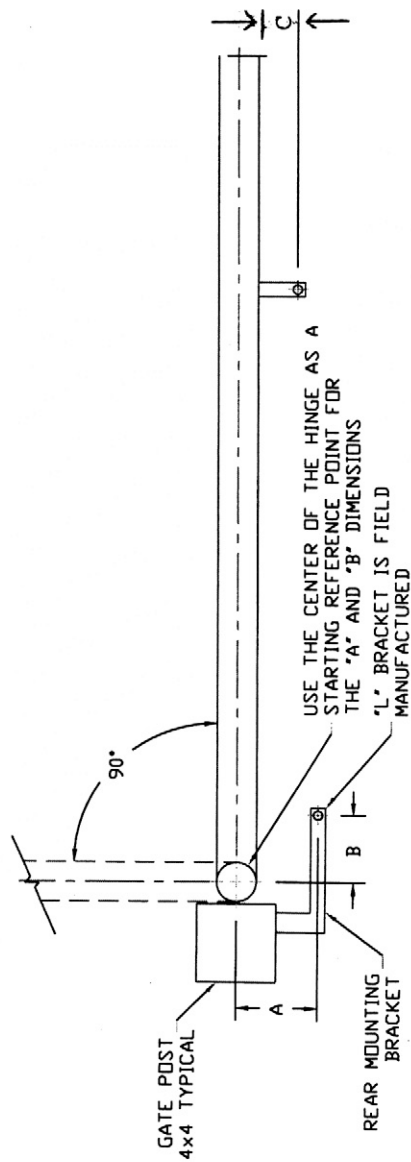
# INWARD SWING MOUNTING DIMENSIONS

## 200 MM STROKE 500 RESIDENTIAL OPERATOR



# OUTWARD SWING MOUNTING DIMENSIONS

## 200 MM STROKE 500 RESIDENTIAL OPERATOR



For More Information and/or R12 DWG Files Contact:



**BYAN SYSTEMS, Inc.**  
Automatic Gate and Access Control Products  
119 W. Third Street  
Lusk, WY 82225  
Phone: 1-800-223-2926 FAX: (307)334-2028  
Internet Address - [HTTP://WWW.BYAN.COM](http://www.byan.com)



Computer Graphics By:  
**Liberty CAD**  
5113 Ridge Road, Suite 7  
Chester, WY 82009-5358  
(307)635-6135

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**MOUNTING DIMENSIONS**  
**500A I/O SERIES GATE OPERATOR**

**USING A 2" GATE LEAF**

**INWARD SWING**

<b>DEGREE</b>	<b>A</b>	<b>B</b>	<b>C</b>
70	6	3	3
75	5-1/2	3-1/4	3
80	5	3-1/2	2-3/4
85	4-3/8	3-3/4	2-3/4
90	4	3-3/4	2-1/2
95*	3-3/4	3-5/8	2-1/4
100*	3-1/8	3-7/8	2-1/2

(\*) THAT AN INSERT WILL HAVE TO BE USED IF THE HINGE POINT IS ON THE CENTERLINE OF THE GATE POST. A MINIMUM OF 2" IS REQUIRED FROM THE PROPERTY SIDE FACE OF THE GATE POST TO THE CENTER POINT OF THE REAR-MOUNTING BRACKET.

**OUTWARD SWING**

<b>DEGREE</b>	<b>A</b>	<b>B</b>	<b>C</b>
70	6	3-1/4	2-3/4
75	5-5/8	3-1/4	2-3/4
80	5-1/4	3-1/4	2-3/4
85	4-3/4	3-1/2	2-1/2
90	4-1/2	3-1/2	2-1/2
95	3-3/8	4	2-1/2
100	3-1/4	3-7/8	2-1/2
105	3	3-7/8	2-1/2

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## **RECOMMENDED WIRE SIZES**

### **HIGH VOLTAGE A.C.**

14 AWG TO 400 FEET  
12 AWG TO 650 FEET  
10 AWG TO 1000 FEET  
8 AWG TO 1650 FEET  
6 AWG TO 2650 FEET

### **LOW VOLTAGE A.C.**

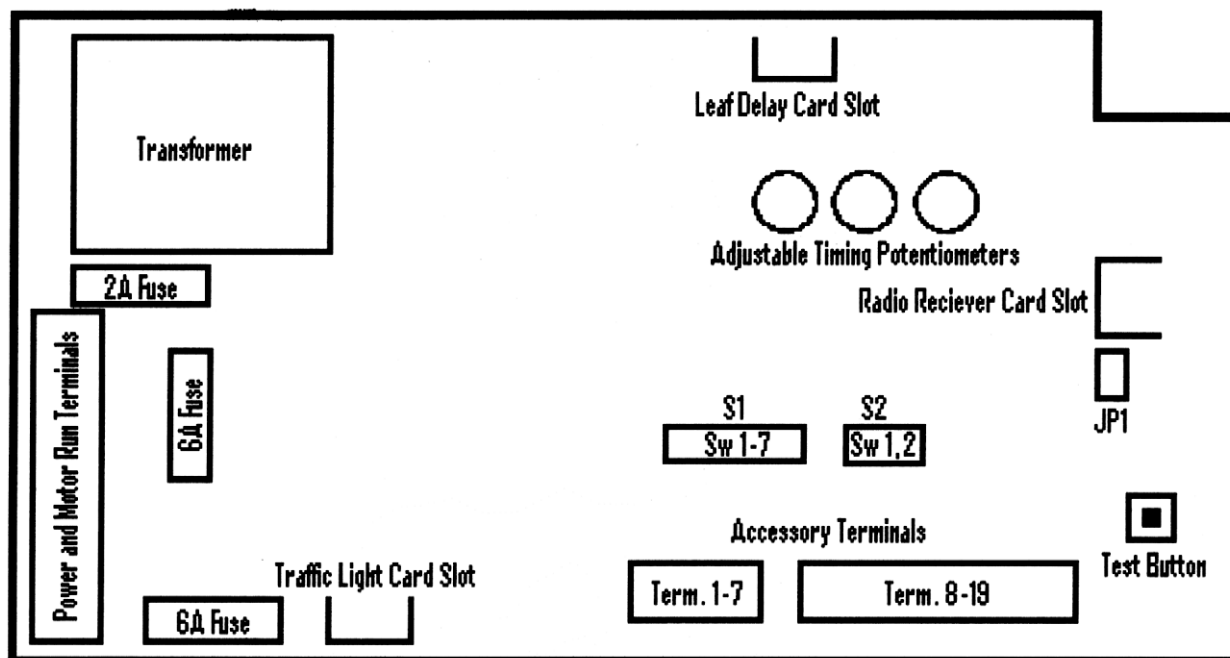
18 AWG TO 100 FEET  
16 AWG TO 170 FEET  
14 AWG TO 270 FEET  
12 AWG TO 430 FEET  
10 AWG TO 690 FEET  
8 AWG TO 1100 FEET

### **LOW VOLTAGE D.C.**

20 AWG TO 400 FEET  
18 AWG TO 700 FEET  
16 AWG TO 1100 FEET  
14 AWG TO 1700 FEET  
12 AWG TO 2800 FEET  
10 AWG TO 4500 FEET

**NOTE:** THESE WIRE SIZES ARE ONLY GENERAL RECOMMENDATIONS. FEDERAL, STATE AND LOCAL CODES ALWAYS TAKE PRECEDENCE. CONSULT THE N.E.C. OR LOCAL AUTHORITY HAVING JURISDICTION IF YOU HAVE WIRING CONCERNS.

## G2M CONTROL BOARD DESCRIPTION



## G2M-115V/220V SINGLE PHASE MICRO CONTROLLED BOARD

THIS ELECTRONIC CONTROL UNIT IS SUITABLE FOR SINGLE-PHASE MOTORS, AND CAN DRIVE UP TO TWO DIFFERENT MOTORS. THERE IS LEAF DELAY INCORPORATED WITH THE USE OF A PLUG IN CARD. 9 DIP SWITCHES CAN SELECT SOME DIFFERENT OPTIONS OF THE CONTROL UNIT.

THERE ARE THREE POSSIBLE TIMING POTENTIOMETERS: OPENING TIME, AUTOMATIC CLOSING TIME, AND THE CLOSING TIME. A DIP SWITCH CAN DOUBLE THE OPENING AND CLOSING TIME.

### CHARACTERISTICS:

### BUTTONS:

#### **REVERSING BUTTON:**

THE FIRST ACTIVATION WILL MAKE THE GATE OPERATE. THE SECOND ACTIVATION WILL MAKE THE GATE STOP. THE THIRD ACTIVATION WILL REVERSE THE GATES DIRECTION WHILE DIP SWITCH 2 IS ON. WITH DIP SWITCH 2 OFF ON THE CLOSE CYCLE, THE GATE WILL AUTO REVERSE TO OPEN.

#### **OPENING BUTTON:**

USED ONLY TO OPEN AND HOLD OPEN THE GATE.

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## **CLOSING BUTTON:**

USED ONLY TO CLOSE THE GATE.

## **STOP BUTTON:**

(NORMALLY CLOSE CONTACT), STOPS THE GATE IN OPENING/CLOSING.

## **THREE ADJUSTABLE TIMES**

### **BLUE TIMER:**

OPENING TIMER ONLY CONTROLS THE OPENING TIME BETWEEN 3 TO 30 SECONDS.

### **RED TIMER:**

CLOSING TIMER ONLY CONTROLS THE CLOSE TIME BETWEEN 3 TO 30 SECONDS.

### **GREEN TIMER:**

AUTOMATIC CLOSE TIMER WHEN THE GATE IS COMPLETELY OPEN THE TIMER IS ACTIVATED AND WILL AUTOMATICALLY CLOSE AFTER THE PROGRAMMED TIME.

**NOTE:** BUILT IN 2 SEC. TIMER TO STOP GATE BEFORE REVERSING OPERATION OCCURS.

### **OPEN/CLOSE LIMIT SWITCHES;**

THEY STOP THE OPENING AND/OR CLOSING OPERATION. MUST REMOVE THE TWO JUMPER WIRES FROM TERMINAL 11 TO 12 AND 13 IF USED.

### **ENTRAPMENT SAFETY CONTACT:**

IF ACTIVATED, THE RESULT IS REVERSING THE MOVEMENT IN BOTH OPENING AND CLOSING FOR 2 SECONDS. THEN STOPS, IF THE SAFETY CONTACT IS STILL ACTIVE THE ALARM WILL SOUND.

### **SAFETY REVERSING CONTACT:**

THE RESULT IS REVERSING BACK TO OPEN WHILE THE GATE IS CLOSING, NOT ACTIVE WHEN OPENING.

### **POWER OUTPUT:**

YOU CAN CONNECT MOTORS UP TO  $\frac{3}{4}$  HP

## **TIMER TABLE:**

COLOR	DESCRIPTION	MINIMUM	MAXIMUM
GREEN	AUTOMATIC CLOSING TIME	1 SECOND	2 MINUTES
BLUE	OPENING TIME	3 SECONDS	30 SECONDS
RED	CLOSING TIME	3 SECONDS	30 SECONDS

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### DIP SWITCH ASSEMBLY OPERATION MODE SELECTION;

No.	OPTION	ON	OFF
1	REVERSING STROKE FUNCTION (OPERATOR FIRST WILL CLOSE FOR 1 SECOND)	ACTIVE	INACTIVE
2	STEP-BY-STEP FUNCTION*	ACTIVE	INACTIVE
3	AUTOMATIC CLOSING FUNCTION	ACTIVE	INACTIVE
4	REVERSING BUTTON IS NOT OPERATIVE DURING OPENING	ACTIVE	INACTIVE
5	CLOSING ORDER BY CARS SAFETY CONTACT	ACTIVE	INACTIVE
6	SEE NOTE BELOW REF JP1	-----	-----
7	CARS SAFETY CONTACT IS OPERATIVE DURING OPENING	ACTIVE	INACTIVE

\*STEP-BY-STEP IS THAT EACH ACTIVATION OF THE REVERSE BUTTON WILL STOP THE GATE BEFORE CHANGING DIRECTION.

NOTE: THERE IS A JUMPER JP1 (BELOW THE REMOTE CONTROL CARD CONNECTOR) THAT CAUSES THE SELECTABLE OPTION No. 6 IN THE FOLLOWING MANNER:

JP1 OPEN:

- No. 6 **ON** IN THE POWER ON STATE, UNIT WILL DO A CLOSING FUNCTION.
- OFF** IN THE POWER ON STATE, UNIT WILL DO AN OPENING FUNCTION.

JP1 CLOSED:

- IN THE POWER ON STATE, THE DOOR REMAINS PAUSED. IN THIS CASE, THE SWITCH No. 6 CONTROLS THE FUNCTION OF THE TRAFFIC LIGHTS.
- ON** THE TRAFFIC LIGHTS CARD WILL ACT AS A FLASHING LIGHT CARD (UPPER RELAY) AND A GARAGE LIGHT CARD (LOWER RELAY).
- OFF** THE TRAFFIC LIGHTS CARD WILL ACT AS GREEN AND RED LIGHTS.



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### SELECTABLE OPTIONS SWITCH S3

No.	OPTION	ON	OFF
1	EXTENDS RUN TIME	OPENING AND CLOSING TIME (30 SECONDS TO 1 MINUTE)	OPENING AND CLOSING TIME (3 SECONDS TO 30 SECONDS)
2	REPOSITIONING THE DOOR *	ACTIVE	INACTIVE

\* WITH THIS OPTION ACTIVE AND THE DOOR CLOSED THE DOOR IS CLOSED FOR 2 SECONDS EVERY HOUR, AND IF THE DOOR IS OPENED THE DOOR IS OPENED FOR 2 SECONDS EVERY HOUR.

### TERMINAL BOARD

#### POWER TERMINALS (FROM TOP TO BOTTOM)

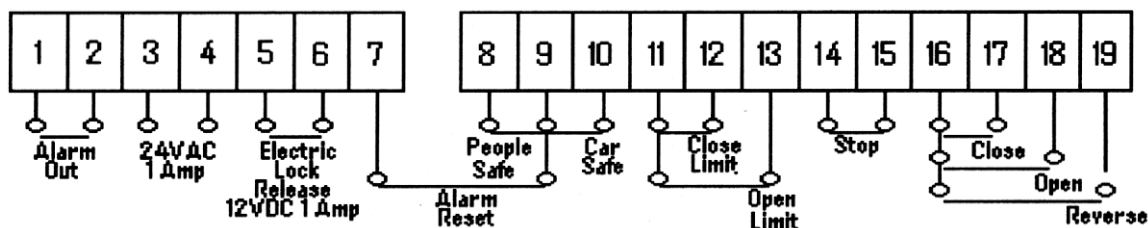
1. POWER SUPPLY
2. POWER SUPPLY
3. OPEN MOTOR 1
4. CLOSE MOTOR 1
5. COMMON MOTOR 1
6. OPEN MOTOR 2
7. CLOSE MOTOR 2
8. COMMON MOTOR 2

#### ACCESSORY TERMINALS FROM LEFT TO RIGHT ARE AS FOLLOWS:

1. OUTPUT PEOPLE OR ANIMALS ALARM CONTACT (N/O)
2. OUTPUT PEOPLE OR ANIMALS ALARM CONTACT (N/O)
3. 24V AC @ 1 AMP MAX. (COMMON)
4. 24V AC @ 1 AMP MAX. (POWER)
5. OUTPUT ELECTRIC LOCK 12VDC @ 1 AMP MAX.
6. OUTPUT ELECTRIC LOCK 12VDC @ 1 AMP MAX.
7. INPUT RESET ALARM (N/O)
8. INPUT SAFETY PEOPLE OR ANIMALS (N/C)
9. COMMON FOR SAFETY
10. INPUT SAFETY CAR (N/C)
11. COMMON LIMIT SWITCH
12. INPUT OPEN LIMIT SWITCH (N/C)
13. INPUT CLOSE LIMIT SWITCH (N/C)
14. INPUT STOP BUTTON (N/C)
15. COMMON FOR STOP BUTTON
16. COMMON TO COMMAND BUTTONS
17. INPUT CLOSE BUTTON
18. INPUT OPEN BUTTON
19. INPUT REVERSING BUTTON

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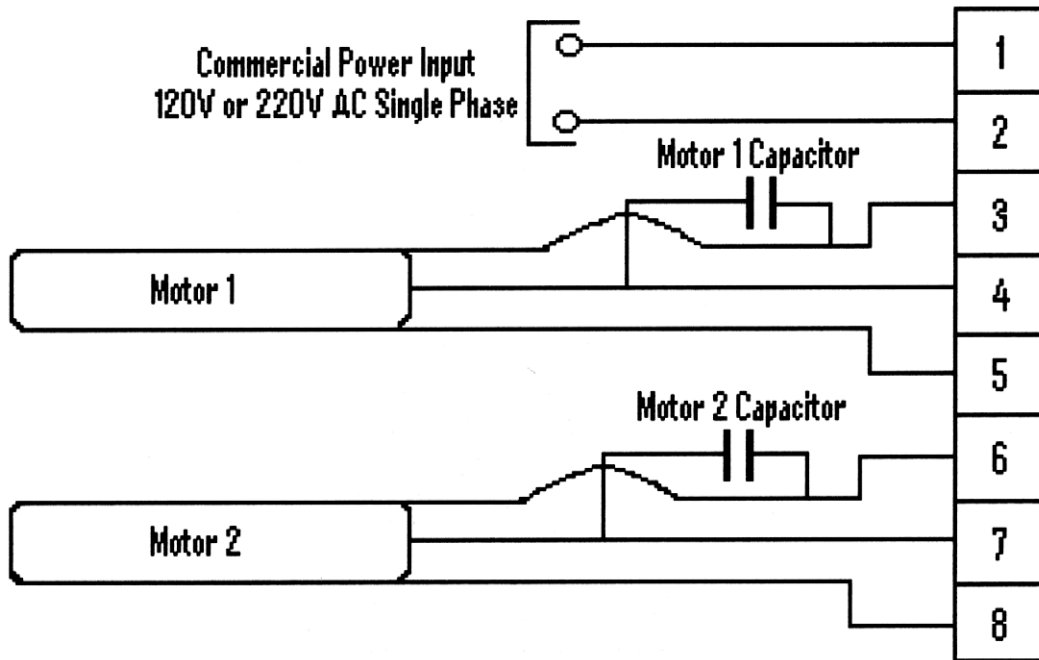


## CONTROL CONTACT

TERMINAL	DESCRIPTION
1	ENTRAPMENT ALARM OUTPUT
2	ENTRAPMENT ALARM OUTPUT
3	24VAC OUTPUT @ 1 AMP MAX.
4	24VAC OUTPUT @ 1 AMP MAX.
5	ELECTRIC LOCK RELEASE 12VDC
6	ELECTRIC LOCK RELEASE 12VDC
7	ENTRAPMENT ALARM RESET
8	ENTRAPMENT SAFETY CONTACT
9	COMMON TO SAFETY CONTACT
10	REVERSING SAFETY CONTACT
11	COMMON TO LIMIT SWITCH
12	CLOSE LIMIT SWITCH
13	OPEN LIMIT SWITCH
14	STOP BUTTON
15	COMMON TO STOP BUTTON
16	COMMON TO CONTROL CONTACT
17	CLOSE COMMAND
18	OPEN COMMAND
19	REVERSE COMMAND

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## POWER & MOTOR CONNECTION

TERMINAL	DESCRIPTION
1	COMMERCIAL POWER SUPPLY 115V NEUTRAL (WHITE) [220V LINE (BLACK)]
2	COMMERCIAL POWER SUPPLY 115V LINE (BLACK) [220V LINE (RED)]
3	MOTOR # 1 CLOSE DIRECTIONAL (BLACK)
4	MOTOR #1 OPEN DIRECTIONAL (BLACK)
5	MOTOR #1 COMMON (WHITE)
6	MOTOR #2 CLOSE DIRECTIONAL (BLACK)
7	MOTOR #2 OPEN DIRECTIONAL (RED)
8	MOTOR #2 COMMON (WHITE)

## **SECOND MOTOR CARD T2M**

### **CHARACTERISTICS:**

THIS CARD IS SUITABLE FOR DRIVING A SECOND MOTOR THROUGH THE CONTROL UNIT, SELECTING THE OPENING DELAY TIME AND THE CLOSING DELAY TIME BETWEEN THE TWO MOTORS.

THE LIMIT SWITCHES OF THE SECOND MOTOR SHOULD BE CONNECTED TO THIS CARD. THESE SIGNAL INPUTS ARE OPT-COUPLED TO PREVENT MALFUNCTION DUE TO INTERFERENCE OR ATMOSPHERIC DISTURBANCES.

THE CONTROL UNIT POWERS THE CARD. THE CARD HAS TO BE INSERTED IN THE CONNECTOR MARKED AS "T.2 MOTOR" ON THE MAIN BOARD OF THE CONTROL UNIT.

**IN THE OPENING OPERATION, MOTOR 1 ACTS FIRST AND IN THE CLOSING OPERATION, MOTOR 2 ACTS FIRST.**

### **ADJUSTABLE TIMERS:**

DESCRIPTION	MINIMUM	MAXIMUM
LEFT (MOTOR 1)	0 SECONDS	15 SECONDS
RIGHT (MOTOR 2)	0 SECONDS	15 SECONDS

### **TERMINAL BOARD:**

OPERATION TERMINALS: (FROM TOP TO BOTTOM).

- 3 OPEN LIMIT SWITCH MOTOR 2 (NORMALLY CLOSED).
- 2 CLOSE LIMIT SWITCH MOTOR 2 (NORMALLY CLOSED).
- 1 COMMON LIMIT SWITCH MOTOR 2.

## **LOOP DETECTOR CONNECTIONS**

THE MOLLEX CONNECTOR HAS 11 WIRE LEADS 12 INCHES LONG. THE PIN OUT IS AS FOLLOWS:

RED	- POWER B+
BLACK	- POWER B-
BLUE	- RELAY A COMMON (PULSE OR PRESENCE)
ORANGE	- RELAY A NORMALLY CLOSED (PULSE OR PRESENCE)
YELLOW	- RELAY A NORMALLY OPEN (PULSE OR PRESENCE)
GREEN	- RELAY B COMMON (PULSE ONLY)
PURPLE	- RELAY B NORMALLY OPEN (PULSE ONLY)
BROWN	- LOOP WIRE
GRAY	- LOOP WIRE
WHITE	- NOT USED

**NOTE:** LEADER WIRE FROM THE LOOP, WHETHER IT IS PREFORMED OR MANUFACTURED ON THE JOB SITE, MUST BE TWISTED A MINIMUM OF FIVE TURNS A FOOT.

## **THE PROPER LOOP WIRE**

**WHY IS THE LOOP WIRE SO IMPORTANT?** ONE OF THE MAIN CAUSES OF VEHICLE LOOP DETECTOR FAILURES IS THE USE OF INFERIOR WIRE TYPES WHEN CONSTRUCTING THE LOOP. SINCE MOISTURE CAN CAUSE A SIGNIFICANT CHANGE IN THE DIELECTRIC CONSTANT OF THE INSULATION, WHICH RESULTS IN EXCESSIVE LOOP (FREQUENCY) DRIFT, YOU MUST CHOOSE A WIRE WITH AN INSULATION THAT IS MOST IMPERVIOUS TO MOISTURE. IT IS ALSO IMPORTANT TO CHOOSE A WIRE WITH A RUGGED, ABRASION RESISTANT INSULATION. REMEMBER THAT ALL PAVEMENTS ARE POROUS AND CONTAIN TRAPPED MOISTURE. WATER OR OTHER CHEMICALS WILL EVENTUALLY REACH THE INSULATION AND EITHER ATTACK THE INSULATION, BE ABSORBED BY IT, OR MIGRATE THROUGH TINY CRACKS IN THE INSULATION AND CHANGE THE DIELECTRIC OR BREAK DOWN THE INSULATION AND CAUSE SHORTS TO GROUND.

**WHAT ABOUT THE WIRE?** POLYVINYL CHLORIDE (PVC) INSULATION (TFFN, THHN, AND THHN-THWN) SHOULD BE AVOIDED SINCE IT TENDS TO ABSORB MOISTURE AND CRACKS VERY EASILY. THE INSULATION IS THIN AND VERY SOFT, LEAVING IT VULNERABLE TO DAMAGE DURING INSTALLATION AND RAPID AGE CRACKING AFTER SEALING. ANY ONE OF THE ABOVE MENTIONED WIRE TYPES HAS ONLY 0.015" OF INSULATION FROM 12 GA. TO 18 GA. IF THERE IS ANY DOUBT ABOUT IT'S VULNERABILITY, CRIMP THE INSULATION WITH A PAIR OF PLIERS AND SEE HOW IT CRACKS. SEE HOW EASY IT STRIPS WITH A POCKETKNIFE. WHAT WOULD AN UNNOTICED PIECE OF WIRE OR A SHARD OF GLASS BURIED IN THE PAVEMENT SLOT DO

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TO THE INSULATION? THE OUTER DIAMETER IS 0.115" FOR 14 GA. WIRE AND 0.013" FOR 16 GA. WIRE. WHEN INSTALLED IN A ¼" (0.250) SLOT, AS IS OFTEN DONE, THE TURNS OF WIRE CAN LAY SIDE BY SIDE IN THE SLOT AND THE TURNS TWIST UNDER THE PRECEDING TURNS AND NOT STACK SNUGLY IN A SINGLE LAYER, AS THEY SHOULD BE. THIS WILL CAUSE REDUCED LOOP EFFICIENCY.

**WHAT TYPE OF WIRE SHOULD I USE?** CROSS LINKED POLYETHYLENE (XLPE) OR POLYESTER INSULATION PROVIDES EXCELLENT PROTECTION FOR WIRE USED IN SAW CUT LOOP INSTALLATIONS. BOTH TYPES ARE ABRASION RESISTANT, MUCH HARDER (NOT IMPOSSIBLE) TO STRIP, AND VERY MOISTURE RESISTANT.

**SUMMARY:** THE USE OF THE CORRECT TYPE OF WIRE FOR THE JOB, AS WELL AS THE PROPER INSTALLATION TECHNIQUES, WILL AVOID FREQUENT SERVICE CALLS BEGINNING SOON AFTER INSTALLATION AND RESULT IN YEARS OF TROUBLE FREE SERVICE AND IN SATISFIED CUSTOMERS.

### COMPARISON CHART

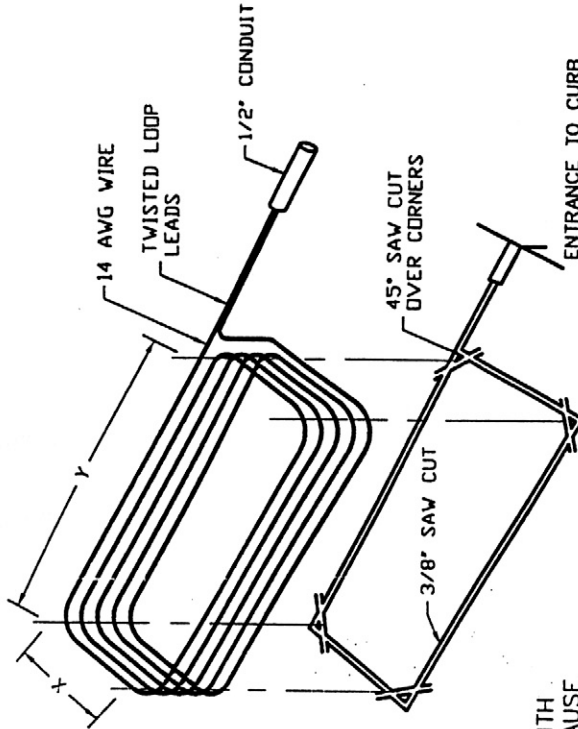
<u>INSULATION TYPE</u>		
<u>RESISTANCE TO CHEMICALS</u>	<u>XLPE</u>	<u>THHN</u>
<u>ETHYL ALCOHOL</u>	<u>HIGH</u>	<u>GOOD</u>
<u>ACETONE</u>	<u>HIGH</u>	<u>GOOD</u>
<u>GASOLINE</u>	<u>HIGH</u>	<u>FAIR</u>
<u>PHYSICAL CONDITIONS</u>		
<u>ABRASION RESISTANCE</u>	<u>E</u>	<u>F-G</u>
<u>RESISTANCE TO DEGREASER SOLVENT</u>	<u>E</u>	<u>P-F</u>
<u>LOW TEMPERATURE FLEXIBILITY</u>	<u>E</u>	<u>P-F</u>
<u>ELECTRICAL</u>	<u>F-O</u>	<u>F-G</u>
<u>WATER ABSORBENCY (% IN 24 HOURS)</u>	<u>0.01</u>	<u>0.75</u>
<u>SERVICE TEMPERATURE RANGE (CELSIUS)</u>	<u>-65 TO +150</u>	<u>-55 TO +105</u>
<u>P=POOR</u>	<u>F=FAIR</u>	<u>G=GOOD</u>
	<u>E=EXCELLENT</u>	<u>O=OUTSTANDING</u>

## LOOP CONFIGURATION

THE FOLLOWING RELATIONSHIP BETWEEN LOOP AREA (LOOP WIDTH MULTIPLIED BY LOOP LENGTH) AND THE NUMBER OF TURNS FOR A SINGLE LOOP INSTALLATION SHOULD BE SATISFIED AS FOLLOWS:

LOOP AREA (SQ. FT.)	NO. OF TURNS
6 - 10	6
10 - 18	5
18 - 60	4
60 - 240	3
240 & UP	2

1. THE SAW SLOTS MUST BE THE PROPER DEPTH (1-1/2 TO 3 INCHES). CLEAN, AND WITH NO SHARP CORNERS WHICH COULD DAMAGE THE INSULATION DURING INSTALLATION. THE GREATER DEPTH SHOULD BE USED IN SOFTER PAVEMENT MATERIALS TO PROTECT THE LOOP INSTALLATION FOR A LONGER PERIOD OF TIME.
2. THE WIRE USED IN THE LOOP SHOULD BE 14 AWG STRANDED WITH INSULATION RATED FOR DIRECT BURIAL. SINCE MOISTURE CAN CAUSE SIGNIFICANT CHANGES IN THE DIELECTRIC CONSTANT OF THE INSULATION, WHICH RESULTS IN EXCESSIVE LOOP (FREQUENCY) DRIFT. CHOOSE AN INSULATION WHICH IS MOST IMPERVIOUS TO MOISTURE. THE LOOP MUST BE WOUND WITH ONE CONTINUOUS LENGTH OF WIRE. NO SPLICES ARE ALLOWED!
3. WHERE THE LOOP WIRES LEAVE THE SAW CUT (AT THE CURB OR PAVEMENT) THEY SHALL BE TIGHTLY TWISTED WITH THE MINIMUM OF FIVE TURNS PER FOOT. USE TAPE ON THE TWISTED PORTION TO HOLD WIRES TIGHTLY TOGETHER. THIS WILL PREVENT FALSE SIGNALS FROM THE MOVEMENT BETWEEN WIRES.
4. CHOOSE A SEALANT CAREFULLY TO MATCH THE APPLICATION AND THE PAVEMENT. HARD SETTING EPOXIES SHOULD NOT BE USED WITH ASPHALT. CAUTION SHOULD BE OBSERVED WHEN USING HOT SEALANTS. AS HIGH TEMPERATURE CAN DAMAGE OR DESTROY WIRE INSULATION.



### WARNING

1. DO NOT INSTALL LOOP WITHIN 12" OF ALL POWER CONDUITS OR CABLE.
2. STEEL REINFORCING MUST BE KEPT A MINIMUM OF 2" FROM LOOP LOCATION.

## LOOP DETAILS

For More Information and/or R12 DWG Files Contact:



**BYAN SYSTEMS, Inc.**

Automatic Gate and Access Control Products  
11401 1st Street  
Lusk, WY 82225

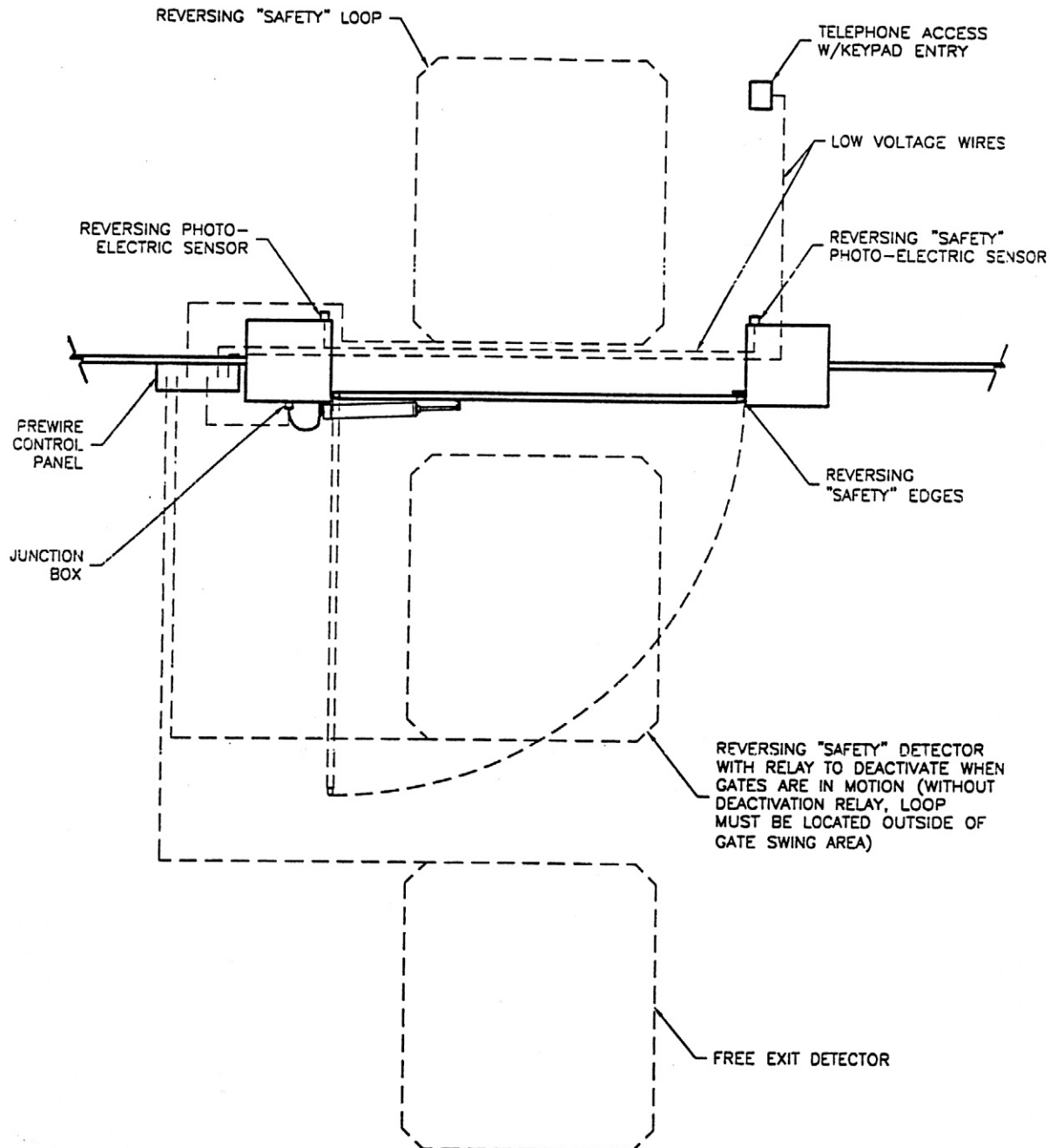
Phone: 1-800-223-2926 FAX: (307)334-2131



Computer Graphics By:  
**Liberty CAD**  
5113 Ridge Road, Suite 7  
Cheyenne, WY 82009-5358  
(307)635-6131

**BYAN SYSTEMS, INC.**  
Automatic Gate and Access Control Products

## TYPICAL SYSTEM OVERVIEW SINGLE SWING GATE



For More Information and/or R12 DWG Files Contact:



**BYAN SYSTEMS, Inc.**

Automatic Gate and Access Control Products  
119 W. Third Street  
Lusk WY 82225 Internet Address - [HTTP://WWW.BYAN.COM](http://WWW.BYAN.COM)  
Phone: 1-800-223-2926 FAX: (307)334-2028



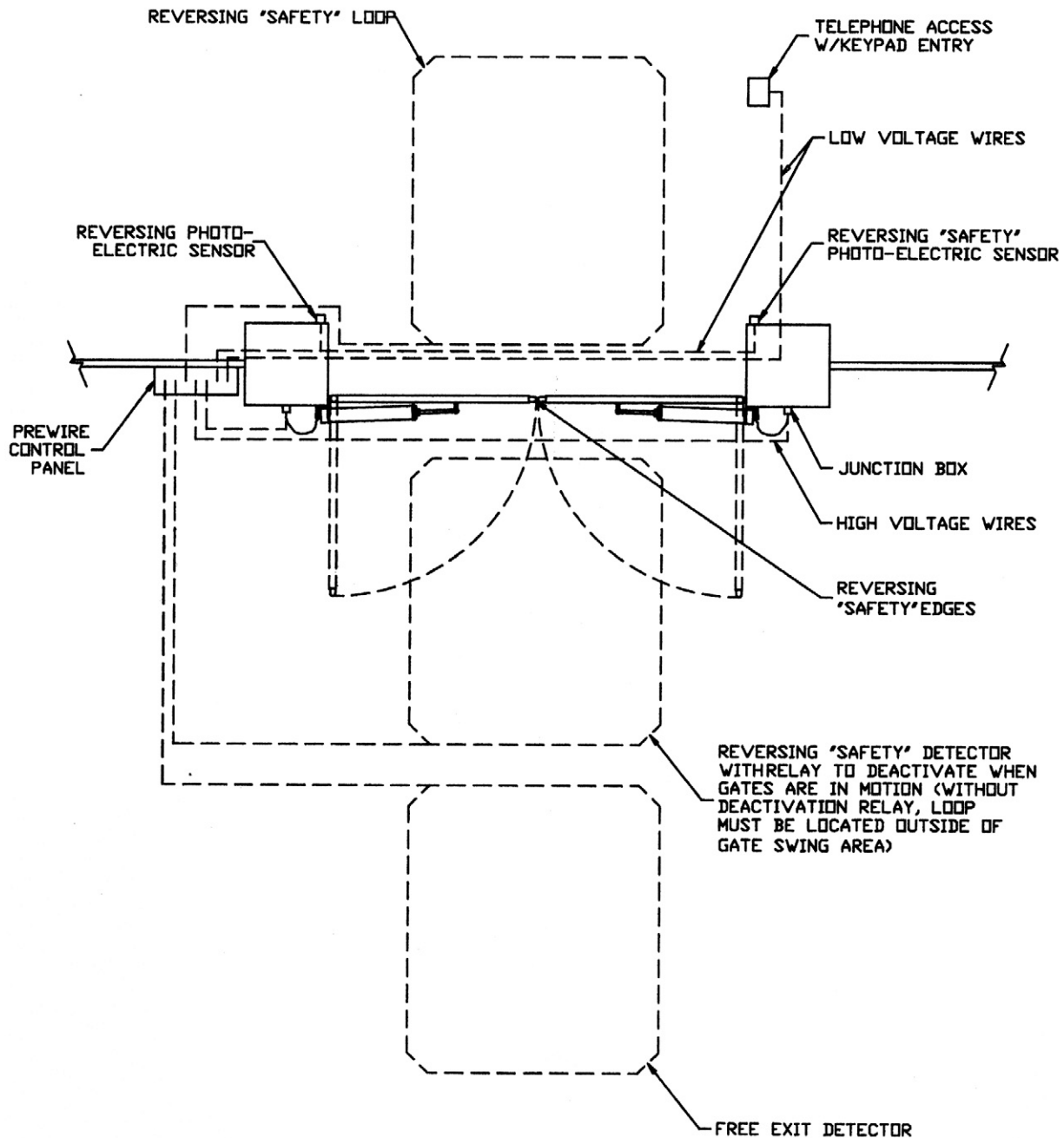
Computer Graphics By:  
**Liberty CAD**

5113 Ridge Road, Suite 7  
Cheyenne, WY 82009-5358  
(307)635-6135



**BYAN SYSTEMS, INC.**  
Automatic Gate and Access Control Products

# TYPICAL SYSTEM OVERVIEW DOUBLE SWING GATES



For More Information and/or R12 DWG Files Contact:



**BYAN SYSTEMS, Inc.**

Automatic Gate and Access Control Products  
119 W. Third Street  
Lusk WY 82225  
Phone: 1-800-223-2926 FAX: (307)334-2028  
Internet Address - [HTTP://WWW.BYAN.COM](http://www.byan.com)



Computer Graphics By  
**Liberty CAD**

5113 Ridge Road, Suite 7  
Cheyenne, WY 82009-3358  
(307)633-6133

# **BYAN SYSTEMS, INC.**

Automatic Gate and Access Control Products

## **FOUR-YEAR LIMITED WARRANTY**

This warranty pertains only to products manufactured for/or by **Byan Systems, Inc.** for gate operating systems, accessories, and equipment. These products are warranted against all defective material for forty-eight months from the date of sale.

Defective material returned must be prepaid and accompanied by a **Byan Systems, Inc.** return authorization number within the warranty period for repair or replacement at **Byan Systems, Inc.** option. **Byan Systems, Inc.** will return warranted item freight prepaid ground service via **U.P.S.**

The warranty extends only to wholesale customers who buy direct from **Byan Systems, Inc.** through normal distributor channels. **Byan Systems, Inc.** does not warranty its products to the end user/consumer. Consumer should inquire from their selling dealer as to the nature and extent of the dealer's warranty, if any. There are no obligations or liabilities on the part of **Byan Systems, Inc.** for consequential damages arising out of or in connection with the use or performance of these products or other indirect damages with respect to loss of property, revenue or profit, cost of removal, original installation or reinstallation.

Warranty will be considered void if damage or malfunction was due to improper, inadequate or negligent installation or use of improper power source, or damage was caused by fire, flood, lightning, electrical power surge, explosion, windstorm or hail, aircraft or vehicles, vandalism, riot or civil commotion, or acts of god. All implied warranties for fitness are limited in duration to forty-eight months from date of sale. Some states do not allow how long an implied warranty lasts, so this limitation may not apply to you. This warranty by **Byan Systems, Inc.** is in lieu of all warranties expressed or implied.

Product delivery time is subject to availability. **Byan Systems, Inc.** is not responsible for any damages caused by delays in shipping or product availability.

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Automatic Gate and Access Control Products

**END USER SAFETY**

“THE GATE AUTOMATION AND ACCESS CONTROL MANUFACTURER” HAS NO CONTROL OVER THE GATE SYSTEM YOU HAVE AUTOMATED. THE WORD “SYSTEM” HEREIN REFERS TO THE GATE POST, GATE LEAF, HINGING, ALL AUTOMATION EQUIPMENT, ACCESSORY DEVICES, THE CONSTRUCTION AND INSTALLATION THEREOF.

VEHICULAR GATE OPERATING SYSTEMS PROVIDE CONVENIENCE AND SECURITY TO THEIR USERS. BECAUSE THESE MACHINES PRODUCE SUCH HIGH LEVELS OF FORCE, ALL GATE SYSTEM DESIGNERS, INSTALLERS AND END USERS MUST BE AWARE OF THE POTENTIAL HAZARDS ASSOCIATED WITH IMPROPERLY DESIGNED, INSTALLED OR MAINTAINED SYSTEMS.

EACH COMPONENT MUST WORK IN UNISON TO PROVIDE THE END USER, VISITORS AND SUBSEQUENT OWNERS WITH PROPER OPERATION OF ALL AUTOMATION, SAFETY AND ACCESS CONTROL EQUIPMENT.

IT IS THE RESPONSIBILITY OF THE DESIGNER, INSTALLER AND PURCHASER, THAT THE TOTAL SYSTEM IS SAFE FOR THE PARTICULAR APPLICATION.

THE END USERS RESPONSIBILITY IS ALWAYS PRESENT. ASSURANCE OF SAFETY RESTS WITH THE USER OF THE GATE SYSTEM, AT ANY PARTICULAR TIME.

GATE SYSTEMS SHOULD BE PROTECTED AS MAY BE NECESSARY FROM CHILDREN AND PETS BY WHATEVER MEANS NECESSARY. MOVING DEVICES ALWAYS PRESENT PEOPLE, PETS AND PROPERTY WITH CERTAIN RISKS AND HAVE POTENTIAL FOR HARM.

THE FOLLOWING LIST OF PRECAUTIONS HAS BEEN PREPARED FOR YOUR REVIEW. THIS LIST IS NOT ALL-INCLUSIVE NOR IS IT REPRESENTED AS SUCH. PLEASE ASK YOU INSTALLER ANY QUESTIONS YOU HAVE NOW, OR LATER, ABOUT THE INSTALLATION, OPERATION, OR SAFETY FEATURES OF YOUR GATE SYSTEM.

1. BE SURE THE OPERATING AND SAFETY INSTRUCTIONS ARE AVAILABLE TO ALL PERSON THAT WILL OPERATE THE GATE SYSTEM.
2. KEEP GATE SYSTEM OPERATING AREA CLEAR OF ALL OBSTRUCTIONS. STAY CLEAR OF THE OPERATING AREA WHEN THE GATE SYSTEM IS IN USE.
3. DO NOT ALLOW CHILDREN OR PETS NEAR THE GATE SYSTEM. IN A RESIDENTIAL OR MULTIFAMILY DWELLING, IT MAY BE NECESSARY TO FENCE OFF PORTIONS OF THE SYSTEM. IT MAY BE NECESSARY TO MOUNT PROTECTION DEVICES IN THE AREA, ON THE GATE, OR THE EQUIPMENT ITSELF.
4. **“CAUTION!!!”** NEVER ALLOW CHILDREN TO RIDE ON THE GATE(S) OR PLAY AROUND THE ELECTRICAL ENCLOSURES
5. NEVER OPERATE A GATE SYSTEM WITHOUT VISUAL CONTACT SO IT CAN BE SUSPENDED IF NECESSARY.

## **BYAN SYSTEMS, INC.**

Automatic Gate and Access Control Products

6. SECURE AND LABEL POWER CABINETS OR EQUIPMENT COVERS.
7. IF THE GATE HAS AN OPEN ROLLER, EACH MUST HAVE A GUARD SUITABLE TO PROTECT PERSONS, PETS AND CLOTHING, WHICH COULD BE ENTRAPPED, NO MATTER HOW UNLIKELY IT MAY APPEAR AT FIRST GLANCE.
8. ENSURE ALL SAFETY DEVICES ARE TESTED REGULARLY.
9. DO NOT TIGHTEN CLUTCHES OR INCREASE PRESSURES TO COMPENSATE FOR A POOR GATE SYSTEM DESIGN AND/OR THE GATE LEAF.
10. INSTALL WARNING SIGNS ON BOTH SIDES OF THE GATE LEAF.
11. HAVE PROPER LIGHTING INSTALLED FOR NIGHT TIME USE.
12. NEVER BECOME COMPLACENT WITH THE OPERATION OF A GATE SYSTEM. SCHEDULE PERIODIC INSPECTION AND/OR MAINTENANCE.

**BYAN SYSTEMS, INC.**  
Automatic Gate and Access Control Products

**CUSTOMER ACKNOWLEDGEMENT**

DEAR \_\_\_\_\_  
(CUSTOMER/COMPANY NAME)

VEHICULAR GATE OPERATING SYSTEMS PROVIDE CONVENIENCE AND SECURITY TO THEIR USERS. BECAUSE THESE MACHINES PRODUCE SUCH HIGH LEVELS OF FORCE, ALL GATE OPERATING SYSTEM DESIGNERS, INSTALLER AND END USERS NEED TO BE AWARE OF THE POTENTIAL HAZARDS ASSOCIATED WITH IMPROPERLY DESIGNED, INSTALLED OR MAINTAINED SYSTEMS.

EACH COMPONENT MUST WORK IN UNISON TO PROVIDE THEIR END USER, VISITORS AND SUBSEQUENT OWNER WITH CONVENIENCE, SECURITY AND SAFETY.

“BYAN SYSTEMS” ROQUET HYDRAULIC GATE OPERATORS AND ACCESSORY EQUIPMENT ARE INTENDED TO BE PART OF A TOTAL OPERATING SYSTEM. WE HIGHLY ENDORSE AND RECOMMEND THE USE OF SAFETY ACCESSORIES AND VISUAL WARNING INDICATORS IN THE FORM OF LIGHTS, SOUNDERS AND PLACARDS PROPERLY PLACED.

IT IS THE RESPONSIBILITY OF THE PURCHASER, DESIGNER AND INSTALLER, THAT THE TOTAL SYSTEM IS SAFE FOR THE PARTICULAR APPLICATION.

WE ARE PLEASED YOU HAVE SELECTED “BYAN SYSTEMS” ROQUET OPERATORS FOR YOUR VEHICULAR GATE AUTOMATION. ON BEHALF OF OUR DISTRIBUTION AND DEALER NETWORK, MAY I EXTEND TO YOU OUR GRATITUDE AND COMMITMENT TO FUTURE SUPPORT.

THANK YOU FOR REVIEWING THIS INFORMATION. VERIFY WITH YOUR INSTALLER THAT YOU UNDERSTAND ALL THE OPERATING EQUIPMENT AND THE FUNCTIONS OF THE SAFETY ACCESSORIES.

PLEASE SIGN AND DATE THIS FORM ACKNOWLEDGING YOU HAVE READ, UNDERSTAND AND RATIFY THE INFORMATION HEREIN.

X\_\_\_\_\_ DATE: \_\_\_\_/\_\_\_\_/\_\_\_\_