

Matrix III General Swing / Slide

SETTINGS Overview



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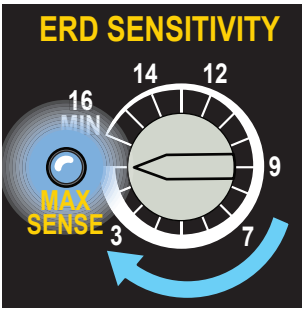
DIP-Switches

				DUAL GATE APPLICATION PRIM ONLY SETTING
MODE B Switches	1	Open Relay Pulsed	OFF ON	Open Relay ON when gate open Open Relay Pulsed when gate open
	2	Solenoid Control Relay	OFF ON	For Maglock: Mag lock relay will trigger BEFORE closed limit is reached For Solenoid: Mag lock relay will trigger AFTER closed limit is reached
	3	Slider Gate Speed Select MAX 1700FS ONLY	OFF ON	12 in per sec 18 in per sec fast gate speed
	4	No freeze on limit (SLIDER ONLY)	OFF ON	Freeze motor on limit Don't freeze motor on limit, unless back-drive slider
	5	MAX RHINO OR All other operators	OFF ON	OFF MAX RHINO ONLY ON for ALL operators except for MAX RHINO
	6		OFF ON	OFF for MAX RHINO ONLY ON for ALL operators except for MAX RHINO
MODE A Switches	1	Battery Beep Mode	OFF ON	No beeping when ONLY battery power and gate is in motion. Beeping when ONLY battery power and gate is in motion.
	2	Gate in Motion Alert	OFF ON	No alarm while gate in motion Alarm while gate in motion
	3	Strobe Light Control	OFF ON	No strobe light control Strobe light control using Tamper relay N.O./Com
	4	Anti-Tailgate	OFF ON	No Anti-Tailgate Anti-Tailgate ON-closing gate will pause if tailgate attempted
	5	Close Tamper Detect	OFF ON	No Close Tamper Detect Trigger Tamper Relay (alarm for slider only)
	6	Stop Input Polarity	OFF ON	Stop Input NO-connect to GND to activate Stop Input NC-disconnect from GND to activate
	7	Open Relay Polarity	OFF ON	Open Relay CLOSED when gate is open Open relay OPEN when gate is open
	8	Wireless Pri/Sec Link	OFF ON	Wired Pri/Sec link Wireless Pri/Sec link
	9	UL Closing Photo Anti-tailgate (PHOTO CLS NC input)	OFF ON	UL Closing Photo Normal operation UL Closing Photo Anti-tailgate wired to PHOTO CLS NC input ONLY
	10	Reserved	OFF ON	MUST be OFF DO NOT turn ON

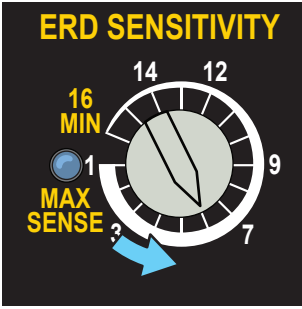
ERD Sensitivity Setting

IMPORTANT: Adjust the ERD to avoid injury as well as to minimize vehicle damage.

- 16 sensitivity setting positions for EACH direction.
- NO mechanical hard stops for knobs.

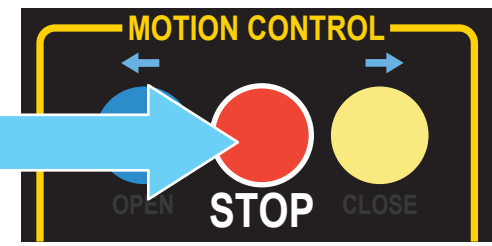


A. Turn knob until blue LED lights up. Maximum sensitivity reached, Position 1 - Too sensitive for most gates.



B. Turn knob counter-clockwise to reduce gate sensitivity while testing ERD until desired results is attained. (LED remains OFF for all but position 1)

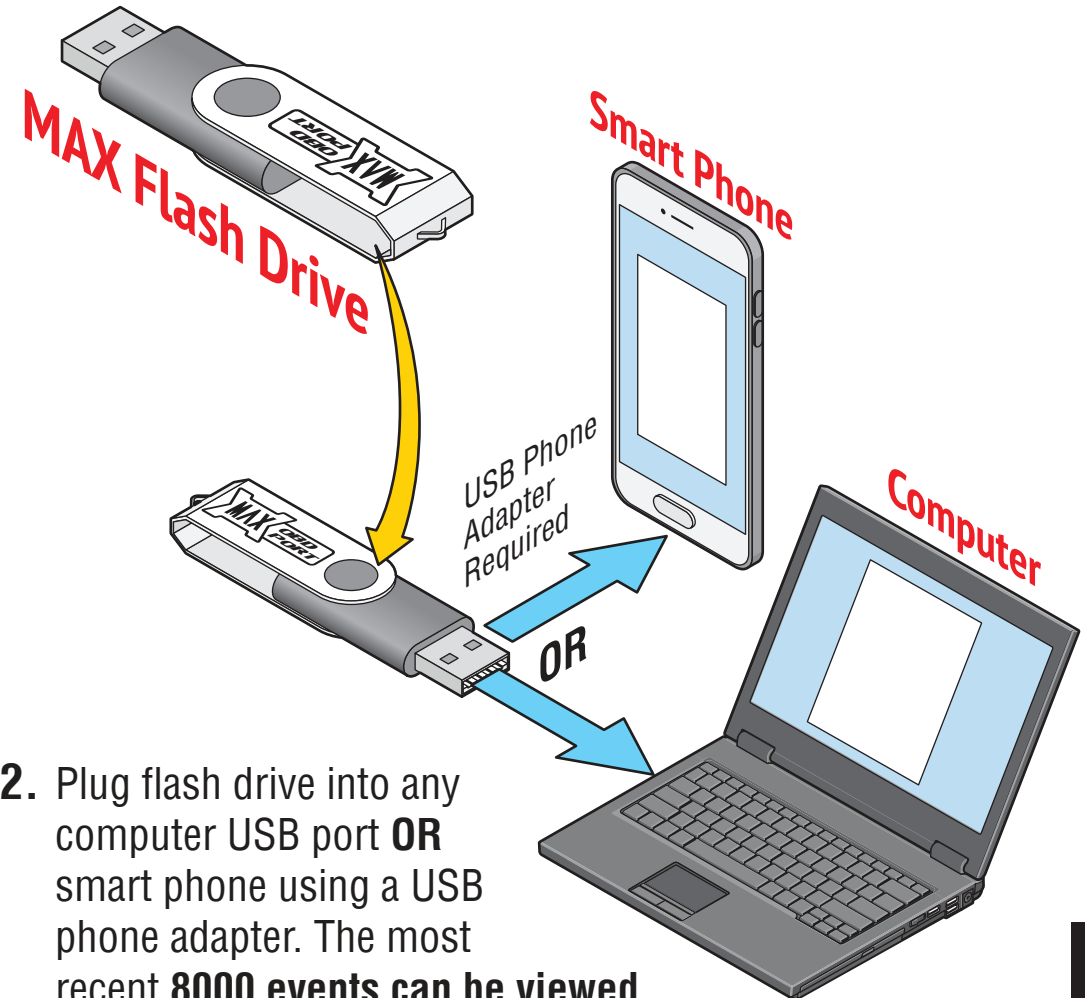
If alarm sounds while adjusting ERD, press STOP BUTTON to shut-off alarm.



NOTE: Cycle the gate 3 or 4 times to make sure that the ERD sensor does not falsely trigger.

ODB Port Black Box

- Plug MAX USB flash drive into OBD port on circuit board. OBD LED will flash while file is downloading. Remove flash drive after LED stops flashing (up to 5 minutes to download).



- Plug flash drive into any computer USB port OR smart phone using a USB phone adapter. The most recent 8000 events can be viewed. No special software required.

Quick Close

Turned OFF - Close timer will close the gate at its selected time.
Turned ON - (In-ground loops required) OPENING gate will stop and close after vehicle clears safety loop, preventing UNAUTHORIZED entry.

Solar Mode

Turned OFF - AC input Power ONLY.
Turned ON - Solar panels installed. Unit draws minimum power to extend battery life.

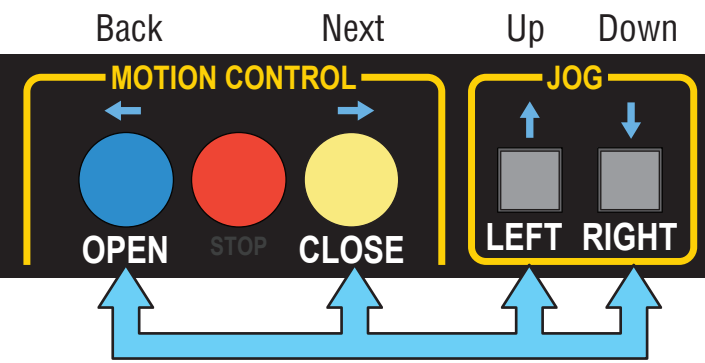
Program Button

To enter PROGRAM mode, press and hold PROGRAM button for 5 seconds. Follow instructions on-screen using the 4 buttons shown at left to program with. Press ONLY PROGRAM button again to end programming when finished.

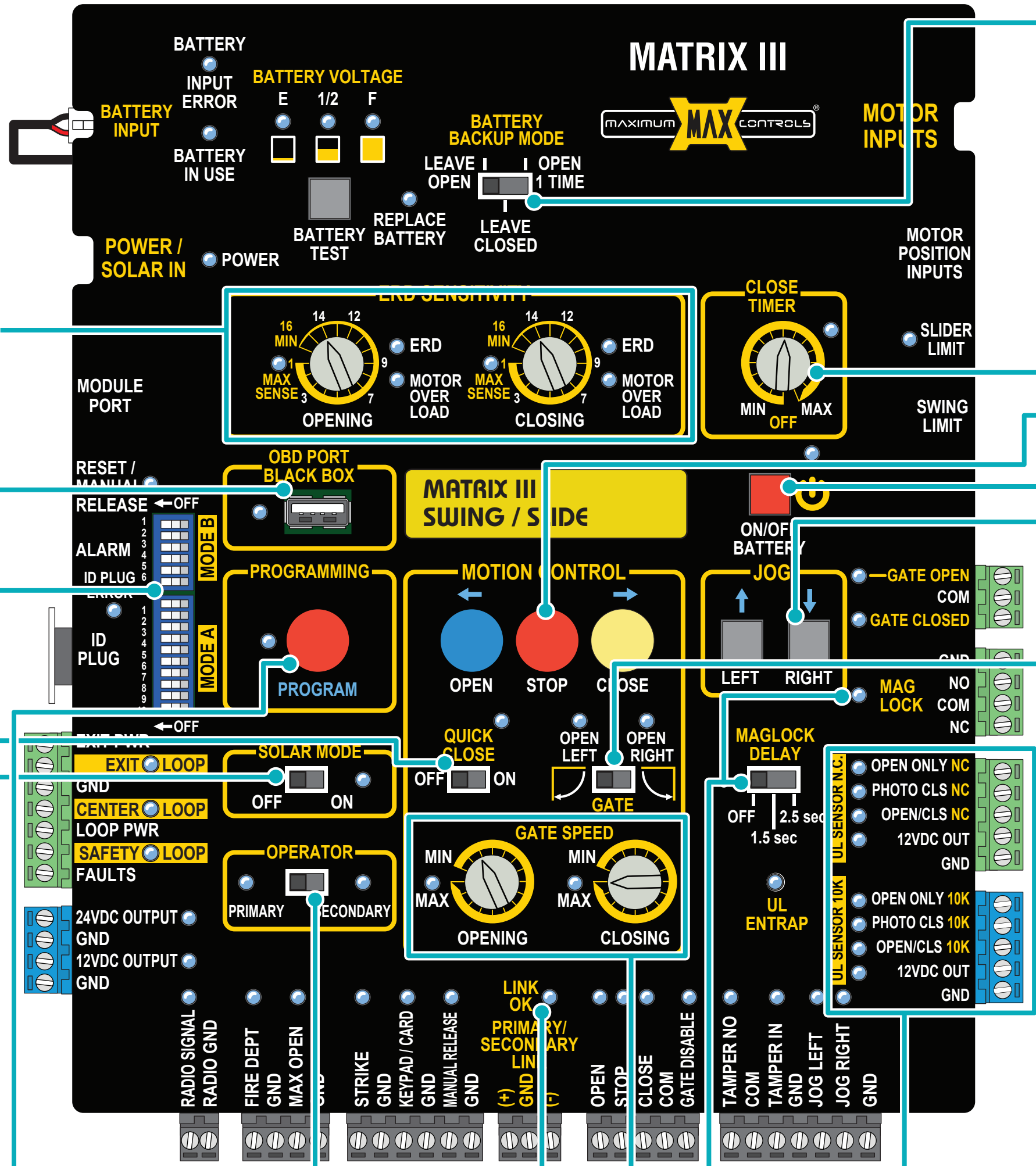
PROGRAM INSTRUCTIONS ARE ON SCREEN

In PROGRAM mode, you can do the following:

- Scroll through most recent errors.
- View input voltage (DC voltage).
- View average current gate consumption.
- View cycle count.
- Program date and time.
- Turn on/off other advanced features.



Programming Assistant Buttons



Battery Back-Up Mode

LEAVE OPEN - After a power failure, gate will continue to operate until battery power is drained. At this point, the next open command, gate will remain OPEN. Gate will automatically close after AC power is restored if close timer is ON.
LEAVE CLOSED - After a power failure, gate will continue to operate until battery power is drained. At this point, gate will remain CLOSED.
OPEN 1 TIME - After a power failure, gate automatically OPENS and REMAINS OPEN. When power is restored, gate will automatically close.

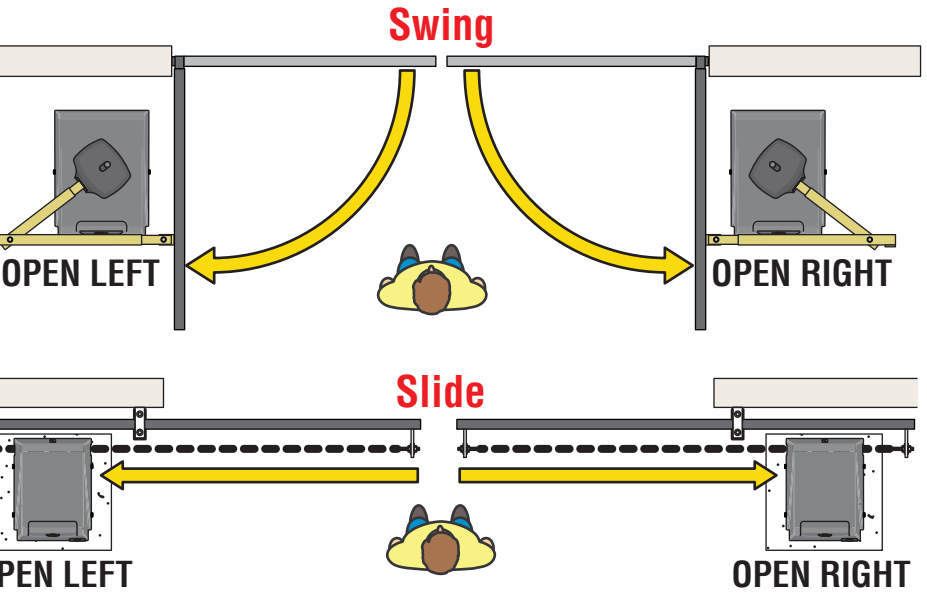
Alarm Reset for Swing Operator

Press STOP Button to shut-off alarm

Jog Buttons

Push and HOLD to Open or Close (release button to stop gate). Helps when "Fine tuning" gate limit positions.

Gate Opening Direction



Operator Switch

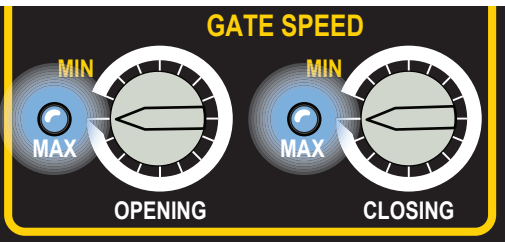
PRIMARY - Single operator installed.
SECONDARY - Dual operators installed.
NOTE: PRIMARY board settings will override secondary board settings if a conflict occurs when dual operators are installed.

Link OK LED

Dual Gate Operators ONLY
ON - Good communication between operators.
OFF - NO communication between operators.

Gate Speed

After gate positions have been "Learned", the gate will cycle at the speed set on "GATE SPEED" settings.



Typically set to MAX, LEDs ON.

Maglock Delay

Turned OFF - NO Maglock installed.
Set to 1.5 sec or 2.5 sec - You MUST select a time delay when using a maglock. Maglock power disengages 1.5 sec or 2.5 sec before gate starts opening.
Dual Gate Operators using Maglock: Primary gate opens FIRST. Install maglock accordingly to account for this.
MAGLOCK LED (Monitors Maglock):
ON - Locked
OFF - Unlocked
Flashing - Problem with Maglock Power.

UL 325 2018 Standard

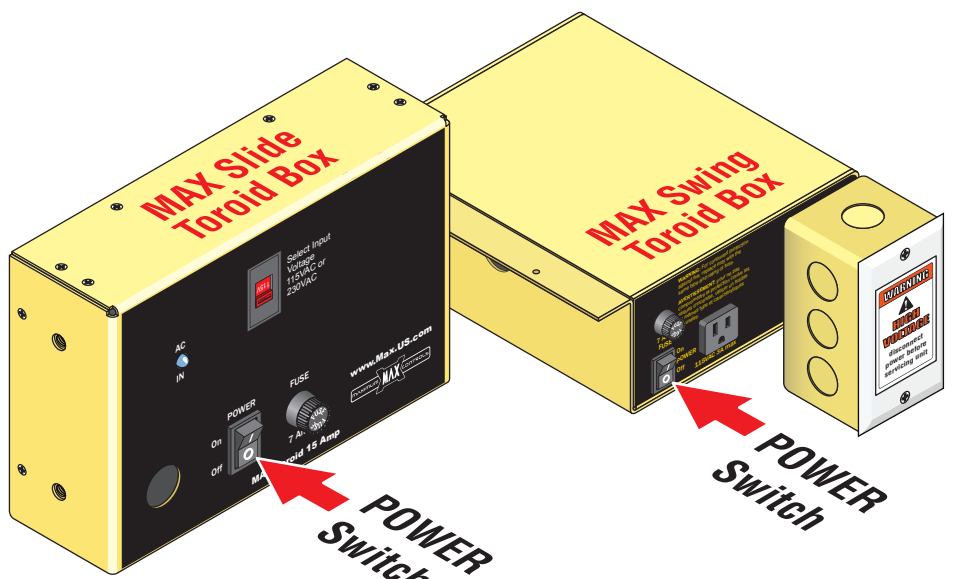
SWING: A minimum of ONE Entrapment protection sensor MUST be installed or operator will NOT function.
SLIDE: A minimum of TWO Entrapment protection sensors MUST be installed, ONE in EACH direction of gate travel or operator will NOT function.
They MUST be MONITORED and NORMALLY CLOSED (N.C.)/10K. All entrapment zones should be protected by MONITORED sensors.

Close Timer

1st click clockwise - Knob at MIN: 1/2 sec...
2nd click clockwise: 1 sec...
3rd click: 4 sec...
4th click: 8 sec... etc up to 60 sec. MAX. LED turns ON for MAX setting ONLY

Turn off ALL Power

IMPORTANT: This procedure must be followed whenever ALL power must be turned OFF on operator.



- Turn OFF POWER Switch on MAX Toroid Box. Battery power will remain ON.
- Press and HOLD the RED ON/OFF BATTERY button until beep is heard, then release button.

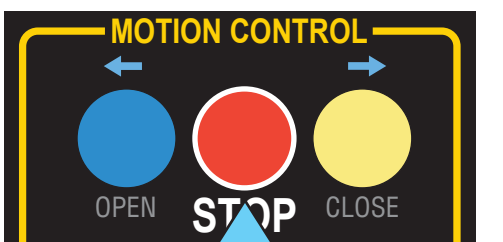
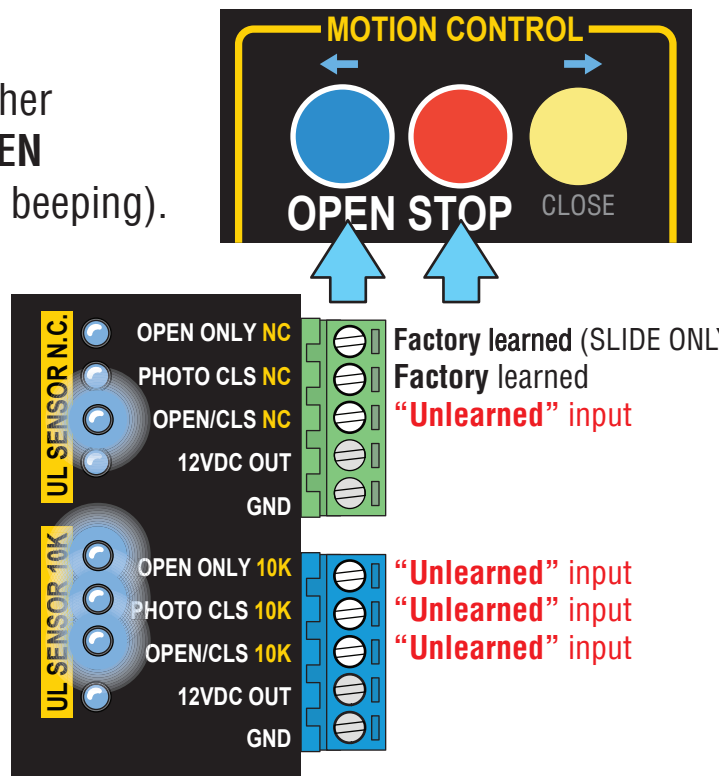


MONITORED UL sensors Input

SWING: Sensors wired to the PHOTO CLS NC ONLY will "AUTOMATICALLY be MONITORED" (Factory default).
SLIDE: Sensors wired to the PHOTO CLS NC AND OPEN ONLY NC will "AUTOMATICALLY be MONITORED" (Factory default).
All other inputs MUST be learned before they will be monitored.

Sensor Learn Mode:

- Press and HOLD the STOP button & then the OPEN button together until beeping is heard, learn mode begins. DO NOT press the OPEN button before the STOP button or learn mode will NOT begin (no beeping).
- LEDs WILL turn ON for each detected "UNLEARNED" sensor that has been wired to the inputs. If a sensor's LED is NOT on, that sensor has a problem and it MUST be corrected before continuing.
Possible problems:
 - Photocells are out of alignment
 - Photocells are wired wrong - N.C. or N.O. depending on which photocells are used.
 - Sensor is badWhen all LEDs are ON that should be ON, proceed to next step.
- Press STOP button again within 5 min. to learn sensors and end learn mode, beeping stops. Wired "Unlearned" Inputs will now be MONITORED.
NOTE: If STOP button is not pressed within 5 min., learn mode terminates. If no "UNLEARNED" sensors are detected then factory default setting is restored (Inputs will NOT be Monitored).



Matrix III Overview-Rev 4

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CAUTION:
If input AC power selector switch is set to 115V but input power is actually 230 V, 7 Amp Fuse will blow.

AC Power Input
Line (Black) Neutral (White) Chassis (Green)
Line (Black) Neutral (White) Chassis (Green)
Power Terminal
DANGER HIGH VOLTAGE!

Proper Ground
Proper grounding of gate operator is required for LIGHTNING PROTECTION in lightning prone areas.

Min 12 AWG, 600 volt insulated wire
within 3 ft of the gate operator

Loop Detector Rack
EXIT CENTER SAFETY
(Swing ONLY)
Safety loops wired in series.

Plug-In Loop Detectors
EDI Loop Detector
EDI Loop Detector Low Current Draw

NOTES:
DO NOT select the PULSED output option for Loop Detectors.
DO NOT set Loop Detectors to HIGH sensitivity to avoid false trigger.

External Loop Detectors
Wire directly to 7-PIN terminal

12 VDC OR 24 VDC Radio Power
250 mA Max.

Stand-Alone Keypad
less than 200 mA

Radio Signal
Radio Gnd

Emergency OPEN
(Overrides gate disable switch Slide ONLY)

MAX OPEN
(Overrides gate disable switch Slide ONLY)

Telephone Entry

Separate power for devices if required.

Dry Contact NO
Gnd

Dry Contact NO
Gnd

Key Switch
Card Reader
Keypad

Manual Release
Gnd

Manually Releases Gate
(Slide ONLY)

RS-485 Communication

Gate Disable
Com

Com
Close
Stop
Open

3-Button Control Station
Dry Contact

Com
Stop
Reset

External Alarm Reset Button
Dry Contact

Warning Light
Power

Siren
Power

Existing Building Alarm System

Secondary Gate Operator
Swing
Slide

12 VDC OUT Monitored
Power

12VDC OUT
GND

24VDC OUTPUT
GND

12VDC OUTPUT
GND

10K Sensing Edges
Opening Direction
Closing Direction

Normally Closed Photocells
IMPORTANT: Photocells MUST be in alignment or fault will occur.

Opening Direction
Closing Direction

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Electronic Gate Open/Close
(Slide ONLY - Factory Wired)
(Swing terminal available for device connection)

Gate Status Monitoring Device

Solenoid Lock
Gnd
Power
NO

Maglock
Power
Gnd

Bi-parting gates using locks: Primary gate opens FIRST. Install lock accordingly to account for this.

Matrix III SWING / SLIDE

BATTERY
INPUT ERROR
BATTERY IN USE
BATTERY VOLTAGE
E 1/2 F
BATTERY BACKUP MODE
LEAVE OPEN 1 TIME
REPLACE BATTERY
LEAVE CLOSED

POWER / SOLAR IN
POWER

MODULE PORT

RESET / MANUAL RELEASE
OFF

ALARM
ID PLUG ERROR
ID PLUG

EXIT PWR
EXIT LOOP
GND
CENTER LOOP
LOOP PWR
SAFETY LOOP
FAULTS

24VDC OUTPUT
GND

12VDC OUTPUT
GND

12V Power

Radio Signal
Radio Gnd

Stand-Alone Keypad
less than 200 mA

Radio Signal
Radio Gnd

Emergency OPEN
(Overrides gate disable switch Slide ONLY)

MAX OPEN
(Overrides gate disable switch Slide ONLY)

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Separate power for devices if required.

Dry Contact NO
Gnd

Dry Contact NO
Gnd

Key Switch
Card Reader
Keypad

Manual Release
Gnd

Manually Releases Gate
(Slide ONLY)

RS-485 Communication

Gate Disable
Com

Com
Close
Stop
Open

3-Button Control Station
Dry Contact

Com
Stop
Reset

External Alarm Reset Button
Dry Contact

Warning Light
Power

Siren
Power

Existing Building Alarm System

Secondary Gate Operator
Swing
Slide

12 VDC OUT Monitored
Power

12VDC OUT
GND

24VDC OUTPUT
GND

12VDC OUTPUT
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