UL 325

Use of Approved External Entrapment Protection Sensors is REQUIRED

Gate operator will not automatically cycle the gate unless an indication that the appropriate number of external entrapment protection sensors are connected and operational.
The normally closed (NC) entrapment protection sensors wired to the Controller's SENSOR inputs are monitored using HySecurity software. Prompts appear on the display requesting specific configurations based on the gate operator type.

The following sensors have been tested with HySecurity gate operators by an independent laboratory and certified to comply with UL 325 7th Edition. Select sensors from this list for UL compliant gate automation solutions. Contact the sensor manufacturer for specific recommendations for use.

CAUTION **All external entrapment protection sensors must have NC sensor outputs and be wired to the SENSOR COM terminal for monitoring and powering purposes. Depending on software version, the sensor becomes powered when the gate operator's motor runs or is always powered when the operator is connected to AC power.**

HySecurity Recommended Sensors				
	Mfg. Part #	**Mfg.**	**Details**	**Hysecurity Part #**
Photo Eyes (Retroreflective)	E3K-R10K4-NR	Omron	40 ft max range limit	MX000999
	NIR-50-325	EMX	45 ft max range limit	
	IRB-RET	EMX	53 ft max range limit	
	E-931-S50RRGQ	Seco-Larm	46 ft max range limit	
Photo Eyes (Thru-Beam)	IRB-MON*	EMX	65 ft max range limit	MX3990
	E-960-D90GQ	Seco-Larm	90 ft max range limit	
Edge Sensors	Sentir Series**	ASO Safety	Channel mount, high profile Channel mount, low profile Round, wraparound Square, wraparound	AS1502-0440-05 AS1502-0430-05 AS1501-0760 AS1501-0790
	CPT210-2U-#-T2	Miller Edge	10k resistor termination (replace # with length requirement in feet)	
Edge Sensor, Converters (10K to NC Contact)	Hy2NC	HySecurity	2-channel edge converter	MX4018
Edge, Wireless Kits	iGAZE RE Kit	Transmitter Solutions	50 ft line of sight max range limit	
	WEL-200 (kit with receiver and transmitter)	EMX	200 ft line of sight max range limit	
Multi-Input Module	The Solution – MIM-62	Miller Edge	6 inputs to 2 outputs	MX3987

*IRB-MON photo eyes are pre-bundled with HySecurity SwingSmart DC, SlideSmart DC and SlideDriver operators.
**Sentir Series ASO edge sensors are pre-bundled with HySecurity SlideSmart DC and SlideDriver operators.

Effective August 1st, 2018, the UL 325 Standard has changed:

- The operator shall monitor for the presence of every device at least once during each open and close cycle (32.1.8)
- It shall not be possible to make simple modifications in the field by adding, suppressing or changing, either on the operator or external entrapment protection device(s), to bypass, interfere with, or otherwise defeat the monitoring function. (32.1.10)
- Entrapment zones are now defined for each gate type (4.23, 4.24, 4.29, 4.34)

SLIDE GATES: To enable fully automatic operation, all SLIDE gate operators will require a minimum of TWO monitored external entrapment protection sensors (one for each direction) to protect entrapment zones in both the open and close direction of travel.

Preferred solution for slide gates: A photo eye for the close direction and a hard-wired edge sensor for the open direction that is mounted to the face of the leading post of the fence behind the gate. (Reach through injuries are the most common hazard associated with automatic sliding gates)

SWING GATES: To enable fully automatic operation, all SWING gate operators will require a minimum of ONE monitored external entrapment protection sensor to protect entrapment zones in either the open or close direction of travel. However, an additional monitored sensor is required if there is a risk of entrapment in both directions of gate travel.

Preferred solution for swing gates: A photo eye for the close direction and/or a hard-wired wraparound edge sensor on the leading edge of the gate, which protects for both directions of gate travel.

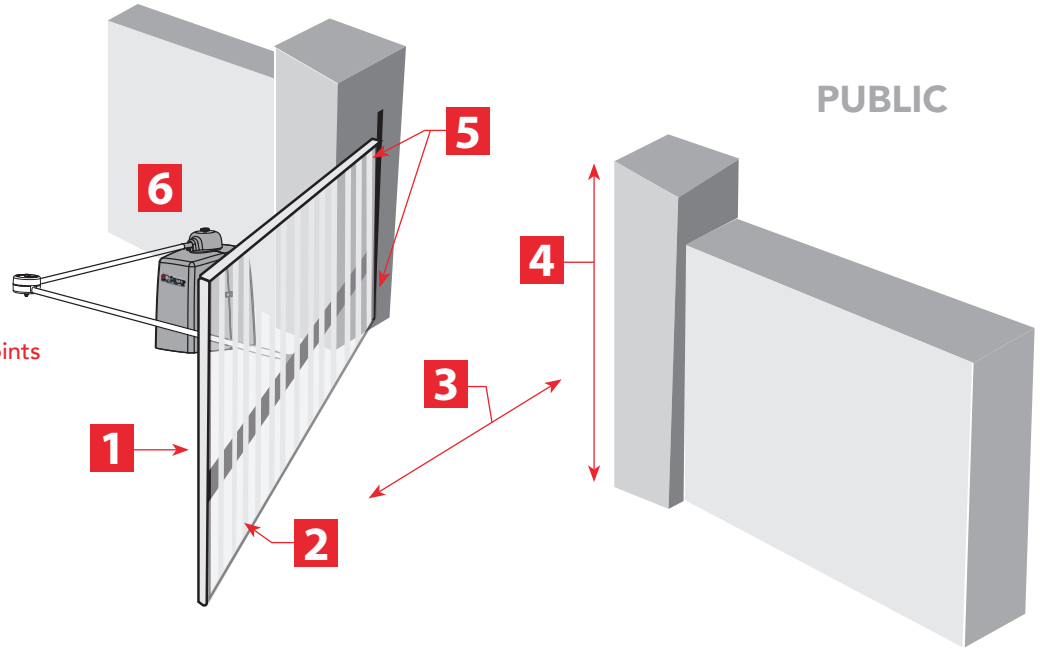
For more information and latest updates, visit www.hysecurity.com/gatesafety

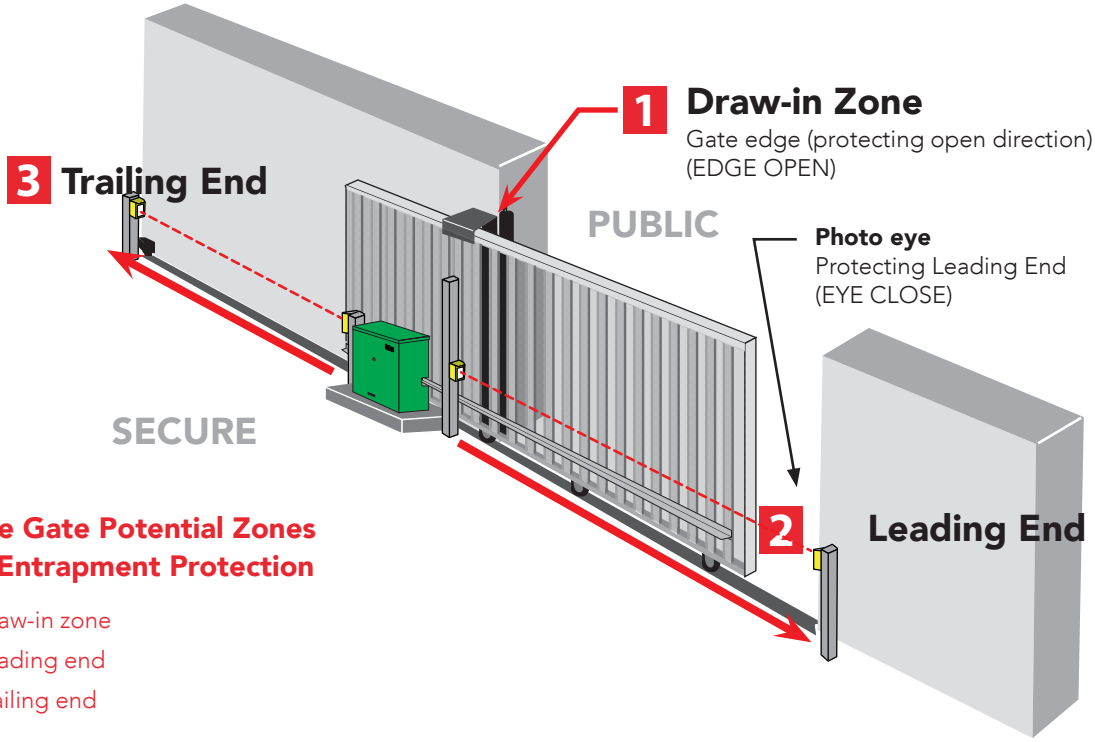
Installers must assess each specific site and install sensors that protect all potential entrapment zones

For more information visit Gate Safety at www.hysecurity.com/gatesafety or
see latest operator manual at www.hysecurity.com/contact-us/technical-support/installation-manuals

Swing Gate Potential Zones for Entrapment Protection

1. Leading Edge
2. Bottom Edge
3. Entry / Exit
4. Posts
5. Post Pivot / Pinch Points
6. Arm Movement





Slide Gate Potential Zones for Entrapment Protection

1. Draw-in zone
2. Leading end
3. Trailing end

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