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EDKO

Understanding the New UL 325 Standard

The new UL 325 standard is a safety standard for door, drapery, gate, louver, and window operators and systems. Specifically, it applies to electric operators for doors, draperies, gates, louvers, windows and other opening and closing appliances rated 600 volts or less.

This new standard is the result of industry leaders working with Underwriters Laboratories (UL), with the common objective of providing products that are safe for the general public, as well as for preventing fire and electrical hazards.

The UL 325 standard allows all applicable products to be tested at a nationally recognized testing laboratory. The new standard also:

1. Contains the basic qualifying factors with which products must comply in order to be documented (listed) and marked (labeled) under the requirements of the UL 325 voluntary listing and labeling program.
2. Pertains to methods for testing products for safety.
3. Cover installation of products under the requirements of the National Electrical Code.
4. Address fire and electrical safety, as well as safety of the public.

The new UL 325 standard went into effect March of 2000. This web site will begin to explain UL325 and how this standard will affect you.

Why UL 325 Should Concern You

All parties in the door, drapery, gate, louver, and window operator and systems industries should be aware of the new UL 325 standard in order to provide the highest safety and liability prevention available for these systems. These parties include the manufacturer, designer, specifier, dealer, installer, technician, and end user—all of whom are responsible for the safety of these systems. The new standards affect how the systems are specified, installed, serviced, and used. Compliance by all parties will provide maximum safety.

New System Classifications

One of the highlights to emerge from the new UL 325 standard has been the introduction of new classifications, or groupings of various types of systems. An example of these new classifications can be seen in gate operators:

Class I - Residential Vehicular Gate Operator

A vehicular gate operator (or system) intended for use in a home of one to four single family dwellings, or garage or parking area associated 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 store 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 locations 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 supervisions by security personnel.



Required Primary Device Type		Required Secondary Device Type	
Class I	Type A	And one of the	Type B1
Residential Vehicular Gate Operator:	Inherent Entrapment Sensing -Current Sensing, Zero Speed or Equivalent. See 30A.1.2 Below	following Secondary Device Types	Provision for connection of, or supplied with, a non-contact (photoelectric sensor or equivalent) See 30A.1.4, 1.5, 1.6, 1.7 and 1.8 Below
One to four single-family dwellings, or garage or parking associated therewith.			Type B2 Provision for connection of, or supplied with, a contact sensor (edge device or equivalent)
			Type D Provision for connection of, or supplied with, an actuating device requiring continuous pressure to maintain opening or closing motion of the gate. See 30A.1.14 and 1.15.

Required Primary Device Type		Required Secondary Device Type	
Class II	Type A	And one of the	Type B1
Commercial / General Access Vehicular Gate Operator:	Inherent Entrapment Sensing -Current Sensing, Zero Speed or Equivalent. See 30A.1.2 Below	following Secondary Device Types	Provision for connection of, or supplied with, a non-contact (photoelectric sensor or equivalent) See 30A.1.4, 1.5, 1.6, 1.7 and 1.8 Below
Commercial location or building such as a multi-family housing unit (five or more single family units, hotel, garages, retail store or building servicing the			Type B2 Provision for connection of, or supplied with, a contact sensor (edge device or equivalent)
General Public			Type D Provision for connection of, or supplied with, an actuating device requiring continuous pressure to maintain opening or closing motion of the gate. See 30A.1.14 and 1.15.

Required Primary Device Type		Required Secondary Device Type	
▲ Class III	Type A	And one of the	Type A
Industrial / Limited Access Vehicular Gate Operator:	Inherent Entrapment Sensing -Current Sensing, Zero Speed or Equivalent. See 30A.1.2 Below	following Secondary Device Types	Inherent Entrapment Sensing -Current Sensing, Zero Speed or Equivalent. See 30A.1.2 Below
Industrial location or building such as a			

factory or loading dock area or other locations **NOT** intended to service the **General Public**

Type B1

Provision for connection of, or supplied with, a non-contact (photoelectric sensor or equivalent)
See 30A.1.4, 1.5, 1.6, 1.7 and 1.8 Below

Type B2

Provision for connection of, or supplied with, a contact sensor (edge device or equivalent)

Type B1

Provision for connection of, or supplied with, a non-contact (photoelectric sensor or equivalent)
See 30A.1.4, 1.5, 1.6, 1.7 and 1.8 Below

Type B2

Provision for connection of, or supplied with, a contact sensor (edge device or equivalent)

Type D

Provision for connection of, or supplied with, an actuating device requiring continuous pressure to maintain opening or closing motion of the gate. See 30A.1.14 and 1.15.

Type E

An inherent audio alarm. See 30A.1.16, 1.17, 1.18

Vehicular System Classification

Type of Gate

- Horizontal Slide Gate
- Vertical Lift Gate
- Vertical Pivot Gate



Required Primary Device Type Required Secondary Device Type

⚠ Class IV

Type A

And one of the following Secondary Device Types

Type A

Restricted Access Vehicular Gate Operator:

Inherent Entrapment Sensing -Current Sensing, Zero Speed or Equivalent.
See 30A.1.2 Below

Inherent Entrapment Sensing -Current Sensing, Zero Speed or Equivalent. See 30A.1.2 Below

Industrial location or building such as a factory or loading dock area or other locations **NOT** intended to service the **General Public**

Type B1

Provision for connection of, or supplied with, a non-contact (photoelectric sensor or equivalent)
See 30A.1.4, 1.5, 1.6, 1.7 and 1.8 Below

Type B1

Provision for connection of, or supplied with, a non-contact (photoelectric sensor or equivalent)
See 30A.1.4, 1.5, 1.6, 1.7 and 1.8 Below

Type B2

Type B2

Provision for connection of, or supplied with, a contact sensor (edge device or equivalent)

Type D

Provision for connection of, or supplied with, an actuating device requiring continuous pressure to maintain opening or closing motion of the gate. See 30A.1.14 and 1.15.

Provision for connection of, or supplied with, a contact sensor (edge device or equivalent)

Type D


Provision for connection of, or supplied with, an actuating device requiring continuous pressure to maintain opening or closing motion of the gate. See 30A.1.14 and 1.15.

Type E

An inherent audio alarm. See 30A.1.16, 1.17, 1.18



NOTE – The same type of device shall not be utilized for both the primary and secondary entrapment protection means. Use of a single device to cover both the opening and closing directions is in accordance with the requirement; however, a single device is not required to cover both directions. A combination of one Type B1 for one direction and one Type B2 for the other direction is the equivalent of one device for the purpose of complying with the requirements of either the primary or secondary entrapment protection means.

Vehicular System Classification	Type of Gate		
	Swing Gate	Vertical Barrier (Arm)	
Required Primary Device Type		Required Secondary Device Type	
Class I	Type A	Type A	Type A
Residential Vehicular Gate Operator:	Inherent Entrapment Sensing - Current Sensing, Zero Speed or Equivalent. See 30A.1.2 Below	And one of the following Secondary Device Types	Inherent Entrapment Sensing -Current Sensing, Zero Speed or Equivalent. See 30A.1.2 Below
One to four single-family dwellings, or garage or parking associated therewith.	Type C Inherent adjustable clutch or pressure relief device. See 30A.1.15		Type B1 Provision for connection of, or supplied with, a non-contact (photoelectric sensor or equivalent) See 30A.1.4, 1.5, 1.6, 1.7 and 1.8 Below
			Type C Inherent adjustable clutch or pressure relief device. See 30A.1.15

Type D

Provision for connection of, or supplied with, an actuating device requiring continuous pressure to maintain opening or closing motion of the gate. See 30A.1.14 and 1.15.

Required Primary Device Type		Required Secondary Device Type
Class II	Type A	Type A
	Commercial / General Access Vehicular Gate Operator:	Inherent Entrapment Sensing - Current Sensing, Zero Speed or Equivalent. See 30A.1.2 Below
		Type B1
		Type C
Commercial location or building such as a multi-family housing unit (five or more single family units, hotel, garages, retail store or building servicing the General Public	Inherent adjustable clutch or pressure relief device. See 30A.1.15	Provision for connection of, or supplied with, a non-contact (photoelectric sensor or equivalent) See 30A.1.4, 1.5, 1.6, 1.7 and 1.8 Below
		Type D
		Provision for connection of, or supplied with, an actuating device requiring continuous pressure to maintain opening or closing motion of the gate. See 30A.1.14 and 1.15.

Vehicular System Classification

Type of Gate

Swing Gate
Vertical Barrier (Arm)



Required Primary Device Type		Required Secondary Device Type
Class III	Type A	Type A
	Industrial / Limited Access Vehicular Gate Operator:	Inherent Entrapment Sensing - Current Sensing, Zero Speed or Equivalent. See 30A.1.2 Below
		Type B1
		Type B1
Industrial location or building such as a factory or loading dock area or other	Inherent adjustable clutch or pressure relief device. See 30A.1.15	Provision for connection of, or supplied with, a non-contact (photoelectric sensor or equivalent) See 30A.1.4, 1.5, 1.6, 1.7 and 1.8 Below
		Type D
		Provision for connection of, or supplied with, an actuating device requiring continuous pressure to maintain opening or closing motion of the gate. See 30A.1.14 and 1.15.

locations **NOT** intended to service the **General Public**

Provision for connection of, or supplied with, a non-contact (photoelectric sensor or equivalent)
See 30A.1.4, 1.5, 1.6, 1.7 and 1.8 Below

Type C

Inherent adjustable clutch or pressure relief device. See 30A.1.15

Provision for connection of, or supplied with, a non-contact (photoelectric sensor or equivalent)
See 30A.1.4, 1.5, 1.6, 1.7 and 1.8 Below

Type C

Inherent adjustable clutch or pressure relief device. See 30A.1.15

Type D

Provision for connection of, or supplied with, an actuating device requiring continuous pressure to maintain opening or closing motion of the gate. See 30A.1.14 and 1.15.

Type E

An inherent audio alarm. See 30A.1.16, 1.17, 1.18

Required Primary Device Type		Required Secondary Device Type	
<p>▲ Class IV</p> <p>Restricted Access Vehicular Gate Operator:</p>	<p>Type A</p> <p>Inherent Entrapment Sensing - Current Sensing, Zero Speed or Equivalent. See 30A.1.2 Below</p>	<p>Type A</p> <p>Inherent Entrapment Sensing -Current Sensing, Zero Speed or Equivalent. See 30A.1.2 Below</p>	
	<p>Type B1</p> <p>Provision for connection of, or supplied with, a non-contact (photoelectric sensor or equivalent) See 30A.1.4, 1.5, 1.6, 1.7 and 1.8 Below</p>		<p>Type B1</p> <p>Provision for connection of, or supplied with, a non-contact (photoelectric sensor or equivalent) See 30A.1.4, 1.5, 1.6, 1.7 and 1.8 Below</p>
<p>Industrial location or building such as a factory or loading dock area or other locations NOT intended to service the General Public</p>	<p>Type C</p> <p>Inherent adjustable clutch or pressure relief device. See 30A.1.15</p>	<p>Type C</p> <p>Inherent adjustable clutch or pressure relief device. See 30A.1.15</p>	
	<p>Type D</p> <p>Provision for connection of, or supplied with, an actuating device requiring continuous pressure to maintain opening or closing motion of the gate. See 30A.1.14 and 1.15.</p>		<p>Type D</p> <p>Provision for connection of, or supplied with, an actuating device requiring continuous pressure to maintain opening or closing motion of the gate. See 30A.1.14 and 1.15.</p>
	<p>Type E</p>		<p>Type E</p>



NOTE – The same type of device shall not be utilized for both the primary and secondary entrapment protection means. Use of a single device to cover both the opening and closing directions is in accordance with the requirement; however, a single device is not required to cover both directions. A combination of one Type B1 for one direction and one Type B2 for the other direction is the equivalent of one device for the purpose of complying with the requirements of either the primary or secondary entrapment protection means.



The following are excerpts from UL325 for the purpose of clarification of the above Rules. Please note that this information is NOT complete. Should you require more specific information please contact us at info@ul325.com or contact Underwriters Laboratories directly through www.ul.com.

30A1.2

A gate operator installed in accordance with the manufacturer's instructions utilizing entrapment protection designated Type A in Table 30A.1 to comply with 30A.1.1 shall upon sensing an obstruction in any direction:

- a) Stop and initiate the reversal of the gate within a maximum of 2 seconds. The gate operator shall reverse the gate a minimum of 2 inches (50.8 mm). The gate operator shall require a renewed, intended input (via wired or wireless control or integral control, a loop sensor, a card reader, or similar device) prior to enabling any automatic actuation devices such as a timer or any other maintained input that was present when the reversing function occurred.
- b) Stop the gate upon sensing a second sequential obstruction. The gate operator shall require a renewed, intended input (via an integral control or a wired remote intended to be in the line of sight of the gate) prior to enabling any automatic actuation devices such as a timer or any other maintained input that was present when the reversing function occurred. An alarm shall comply with paragraph 30A.1.1A.

30A.1.4

A gate operator utilizing entrapment protection designated Type B1 in Table 30A.1 by having provision for connection of, or providing with the operator, a non-contact sensor (photoelectric sensor or equivalent) to comply with 30A.1.1 shall, when the sensor is actuated:

- a) Stop or reverse the gate within a maximum of 2 seconds of sensing an obstruction in both the opening and closing directions.
- b) Stop the gate upon sensing a second sequential obstruction in the opposite direction while in the process of reversal as described in (a).
- c) Result in a gate at rest remaining at rest unless a Type D device is actuated, and
- d) Return to normal operation when the sensor is no longer actuated.

30A.1.5

With reference to 30A.1.4, a non-contact sensor is required to function only to protect obstructions in the gate's direction of travel.

30A.1.6

A gate operator installed in accordance with the manufacturer's instructions utilizing entrapment protection designated Types B1 and B2 in Table 30A.1 as the primary device to comply with 30A.1.1 by having provision

for connection of such device, or providing such device with the operator, shall monitor for the presence and correct operation of the device, including the wiring to it, at least once during each open and close cycle. The operator shall function as required by 30A.1.15 in the event the device is not present or a fault condition occurs which precludes the sensing of an obstruction. A fault condition includes an open or short circuit in the wiring that connects the external entrapment protection device to the operator and the device's supply source.

30A.1.7

A gate operator utilizing a non-contact sensor for entrapment protection in accordance with 30A.1.1 shall be supplied with instructions in compliance with 51.8.4.

30A.1.8

A non-contact sensor (photoelectric sensor or equivalent) supplied with, or separately supplied for, a gate operator that is intended to reduce the risk of entrapment or obstruction shall comply with the applicable requirements in All Devices, Section 32, and Photoelectric Sensors, Section 33. A separately supplied sensor shall comply with 53.3.3, 53.3.4 and 53.3.5.

- a) Stop and initiate the reversal of the gate within a maximum of 2 seconds of sensing an obstruction in any direction. The gate operator shall reverse the gate a minimum of 2 inches (50.8 mm).
- b) Stop the gate upon sensing a second sequential obstruction in the opposite direction, while in the process of reversal as described in (a).
- c) Result in a gate at rest, unless a Type D device is actuated, and
- d) After the sensor is actuated no more than 2 times during a single closing cycle, or once in a single opening cycle, require a renewed intended input (via wired or wireless control or integral control, a loop sensor, a card reader, or a similar device) prior to enabling any automatic activation devices such as a timer or any other maintained input that was present when the reversing function occurred.

30A.1.9A

With reference to 30A.1.9, a contact sensor is only required to sense obstructions in the gate's direction of travel.

30A.1.10

A gate operator utilizing a contact sensor for entrapment protection to comply with 30A.1.1 shall be supplied with instructions on the placement of the sensors for each Type of application in compliance with 51.8.4.

30A.1.11

A contact sensor (edge sensor or equivalent) supplied with, or separately supplied for, a gate operator that is intended to reduce the risk of entrapment or obstruction shall comply with the applicable requirements in All Devices, Section 32, and Edge Sensors, Section 34. A separately supplied sensor shall comply with 53.3.3, 53.3.4, and 53.3.5.

30A.1.12

A swing-gate operator utilizing entrapment protection designated Type C in Table 30A.1 to comply with 30A.1.1 shall, upon sensing an obstruction in any direction, stop the gate and:

- a) Not result in a force after 100,000 cycles of operation under rated load of more than 10 percent higher than the initial setting to stop the gate. When adjustable, the initial setting is to be at the setting for maximum force, and

- b) Be readily accessible for inspection and repair and not readily rendered inoperative.

30A.1.14

A gate operator utilizing entrapment protection designated Type D in Table 30A.1 by having a provision for connection of, or providing with the operator, a continuous pressure actuation device to comply with 30A.1.1 shall be constructed so that a wireless control shall not operate the gate. Also see paragraph 51.8.4 (e), 52A.1.5, and 52A.1.6.

30A.1.15

A gate operator installed in accordance with the manufacturer's instructions utilizing entrapment protection designated Type D in Table 30A.1 to comply with 30A.1.1 shall require constant pressure or actuation to initiate and continue movement of the gate in either the opening or closing direction. Upon removal of pressure, movement of the gate shall cease. Unless supplied with separate Open and Close buttons, each subsequent pressing of the control button shall reverse direction of the gate.

30A.1.16

A gate operator utilizing entrapment protection designated Type E in Table 30A.1 by having a provision for, or providing with the operator, audio alarms to comply with 30A.1.1 shall:

- a) Initiate actuation of the alarm(s) a minimum of two seconds prior to movement of the gate, and
- b) Continue actuation of the alarm(s) throughout the entire opening and closing cycle of the gate.

30A.1.17

An audio alarm for a Type E device shall comply with 30A.1.18 and the applicable requirements in All Devices, Section 32, and Audio Alarms, Section 34A.

30A.1.18

The audio alarm signal for a Type E device shall be generated by devices such as bells, horns, sirens, or buzzers. The signal shall have a frequency range of 700 to 2800 Hz, a cycle of the sound level pulsations of 1 to 2 per second, a sound level at least 100 dB 1 foot (305 mm) in front of the device, and not vary more than ± 8 dB over the voltage range of operation. When the audio alarm is not supplied with the operator, instructions specifying the signal criteria shall be supplied with the operator.

A Class I or Class II horizontal slide-gate or vertical lift-gate operator (or system) shall not result in a gate movement of greater than one foot per second with the operator exerting a pull force of 74 pounds (333.6N) and when connected to a supply circuit of maximum rated voltage and rated frequency.

30A.1.20

A vehicular gate operator shall have a means for manual operation so that the gate is capable of being moved independently of the operator. For a Class I, II, or III vehicular gate operator, the means for operation shall be supplied as an integral part of the operator and the operator shall be marked with instructions for manual operation. For a Class IV vehicular gate operator, the use of a nearby keyed release or a remotely located non-keyed release to release the operator from the gate meets the intent of this requirement.

51.8.4

Instructions regarding intended installation of the gate operator shall be supplied as part of the installation instructions or as a separate document. The following instructions or the equivalent shall be supplied where applicable:



- a) Install the gate operator only when:
 - 1) The operator is appropriate for the construction of the gate and the usage Class of the gate,
 - 2) All openings of a horizontal slide gate are guarded or screened from the bottom of the gate to a minimum of 4 feet (1.2 m) above the ground to prevent a 2-1/4 inch (57.15 mm) diameter sphere from passing through the openings anywhere in the gate, and in that portion of the adjacent fence that the gate covers in the open position,
 - 3) All exposed pinch points are eliminated or guarded, and
 - 4) Guarding is supplied for exposed rollers, could be UL approved.
- b) The operator is intended for installation only on gates used for vehicles. Pedestrians must be supplied with a separate access opening.
- c) The gate must be installed in a location so that enough clearance is supplied between the gate and adjacent structures when opening and closing to reduce the risk of entrapment. Swinging gates shall not open into public access areas.
- d) The gate must be properly installed and work freely in both directions prior to the installation of the gate operator. Do not over-tighten the operator clutch or pressure relief valve to compensate for a damaged gate.
- e) For gate operators utilizing Type d protection:
 - 1) The gate operator controls must be placed so that the user has full view of the gate area when the gate is moving,
 - 2) The placard as required by 52.1.1.6 shall be placed adjacent to the controls,
 - 3) An automatic closing device (such as a timer, loop sensor, or similar device) shall not be employed, and
 - 4) No other activation device shall be connected.
- f) Controls must be far enough from the gate so that the user is prevented from coming in contact with the gate while operating the controls. Controls intended to be used to reset an operator after 2 sequential activations of the entrapment protection device or devices must be located in the line-of-sight of the gate. Outdoor or easily accessible controls shall have a security feature to prevent unauthorized use.
- g) All warning signs and placards must be installed where visible in the area of the gate.
- h) For gate operators utilizing a non-contact sensor in accordance with 30A.1.1:
 - 1) See instructions on the placement of non-contact sensors for each Type of application,
 - 2) Care shall be exercised to reduce the risk of nuisance tripping, such as when a vehicle, trips the sensor while the gate is still moving, and
 - 3) One or more non-contact sensors shall be located where the risk of entrapment or obstruction exists, such as the perimeter reachable by a moving gate or barrier.
- i) For a gate operator utilizing a contact sensor in accordance with 30A.1.1:
 - 1) One or more contact sensors shall be located at the leading edge, trailing edge, and post mounted both inside and outside of a vehicular horizontal slide gate.
 - 2) One or more contact sensors shall be located at the bottom edge of a vehicular vertical lift gate.
 - 3) One or more contact sensors shall be located at the pinch point of a vehicular vertical pivot gate.
 - 4) A hardwired contact sensor shall be located and it's wiring arranged so that the communication between the sensor and the gate operator is not subjected to mechanical damage.

5) A wireless contact sensor such as one that transmits radio frequency (RF) signals to the gate operator for entrapment protection functions shall be located where the transmission of the signals are not obstructed or impeded by building structures, natural landscaping or similar obstruction. A wireless contact sensor shall function under the intended end-use conditions.

*Revised 51.8.4 effective March 1, 2000

51.8.5

Instruction regarding intended operation of the gate operator shall be provided as part of the user instructions or as a separate document. The following instructions or the equivalent shall be provided:

IMPORTANT SAFETY INSTRUCTIONS



WARNING – To reduce the risk of injury or death:

1. READ AND FOLLOW ALL INSTRUCTIONS.
2. Never let children operate or play with gate controls. Keep the remote control away from children.
3. Always keep people and objects away from the gate. **NO ONE SHOULD CROSS THE PATH OF THE MOVING GATE.**
4. Test the gate operator monthly. The gate **MUST** reverse on contact with a rigid object or stop when an object activates the non-contact sensors. After adjusting the force or the limit of travel, retest the gate operator. Failure to adjust and retest the gate operator properly can increase the risk of injury or death.
5. Use the emergency release only when the gate is not moving.
6. **KEEP GATES PROPERLY MAINTAINED.** Read the owner's manual. Have a qualified service person make repairs to gate hardware.
7. The entrance is for vehicles only. Pedestrians must use separate entrance.
8. **SAVE THESE INSTRUCTIONS.**

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New UL 325 Standards Manual

The new UL 325 standards manual is available from UL. Manufacturers, designers, installers, and technicians will find the manual valuable in order to ensure their products comply and are properly installed and maintained. Specifiers, dealers, and users can request the manual to make sure that the products they sell or use carry UL 325 certification, as well as to specify the proper accessories under the new standard.

UL standards can be purchased through Underwriters Laboratories Inc. by visiting www.comm-2000.com.

Some excerpts on gate operators from the UL 325 standard include:

1. Class I and II operators must have an audio alarm which shall function if 2 sequential activations of the entrapment protection device occur.
2. Class I and II horizontal slide-gate or vertical lift-gate operator (or system) shall not result in a gate movement of greater than 1 foot per second with the operator exerting a pull force of 75 pounds (333.6N) and when connected to a supply circuit of maximum rated voltage and rated frequency.



3. When Types A, B2 or C entrapment protection devices are used as the primary or secondary entrapment protection provisions, a gate operator shall, upon contact with the obstruction specified:
 - a. For types A or B2 provisions, initiate reversal of the moving gate within 2 seconds. The gate operator shall reverse the gate a minimum of 2 inches (50.8 mm) unless a control is actuated or an entrapment circuit senses an obstruction to stop the gate during its reversal.
 - b. For type C provision, not open or close the gate with force greater than 40 pounds (177.9 N), at the maximum setting when adjustable, at the leading edge of the gate, except for the first 10 degrees of any initiation or a 2 second maximum.
4. A gate operator shall be tested in accordance with all the applicable requirements specified for all types of gates with which the gate operator is intended to be used. Each entrapment protection provision shall be tested separately and independently with the other entrapment protection provisions defeated.
5. When a Type B1 entrapment protection is used as the primary or secondary entrapment protection provision, a gate operator shall stop a moving gate within 2 seconds of activation of the sensor.

The Edko Solution: Make Sure it's UL 325 Approved

Edko, a leading manufacturer of commercial and industrial gate and access control solutions, is committed to UL 325. We have worked with an independent testing agency to test our products to the Standard that Underwriters Laboratories has written, to deliver the very highest standard of safety in gate operation and access control. We recognize that meeting the UL 325 standards requires building new products from the ground up, not modifying existing products. In support of these requirements, we are launching a full array of new, UL 325 certified products.



We are aware that some suppliers are making product modifications to existing products, which are marketed as "meeting" the new standard but which would not pass UL 325 if tested. By contrast, Edko has committed significant design, engineering and manufacturing efforts into building all new, fully UL 325 certified gate operation and access control products. Not doing so, we believe, would compromise safety and raise liability issues for our customers. We urge specifiers, dealers and users to make their buying decisions carefully in order to ensure that what they are buying is listed or labeled as UL 325 certified.



Look for the UL mark or that of an independent testing agency on your equipment.

The above information is an excerpt from UL325 specifications for the purpose of clarification of the above Rules. Please note that this information is NOT complete.

Underwriters Laboratories has allowed us to publish these *highlights* of the standard for help with your design plans and continued safety. We appreciate Underwriters Laboratories continued support and should you require more specific information please visit www.ul.com.

Edko's New UL 325 Series

Edko's new UL 325 Series of products include SafeGlide® Gate Systems, Gate Operators, and Access Control systems.

Edko's SafeGlide Gate Systems are a highly durable, safe, easy-to-operate perimeter security solution. They include:

- Bolt-on enclosed track and truck systems for cantilever gates



- Cantilever rollers of injection molded DuPont Delrin®/glass material with sealed bearings and protective covers
- Gate catch/latch assemblies with provisions for padlocking
- Hinges precision machined from cold steel with oil impregnated bronze bushings
- V-groove wheels precision machined from cold steel with sealed bearings

Edko's gate operators and access control systems provide long-lasting, dependable operation in industrial, institutional, commercial, and residential applications. All are full systems capable, allowing the connection of access control devices, presence detection and control equipment, and other accessories. Standard offerings include slide, swing, overhead, and barrier gate operators.

Edko provides full service capabilities including a complete product line, needs assessment and design assistance, manufacturing and engineering, systems integration, installation by qualified dealers, and nationwide customer service with regional support centers. To discuss your requirements, to request product specification sheets, or for answers to your UL 325 questions, call 1 (800) 800-EDKO or visit our web site at www.edko.com.

