SECTION 32 31 00

ELECTRIC GATE OPERATORS

Display hidden notes to specifier. (Don't know how? [Click Here](https://www.arcat.com/sd/display_hidden_notes.shtml))

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\*\* NOTE TO SPECIFIER \*\* LiftMaster; Electric Gate Operators.  
This section is based on the products of LiftMaster, which is located at:  
300 Windsor Dr.  
Oak Brook, IL 60523  
Toll Free Tel: 800-282-6225  
Fax: 630-516-8412  
Email: [request info (specs@liftmaster.com)](https://admin.arcat.com/users.pl?action=UserEmail&company=LiftMaster&coid=42485&rep=&fax=630-516-8412&message=RE:%20Spec%20Question%20(02829cha):%20%20&mf=)  
Web: <http://LiftMaster.com>   
  
[ [Click Here](http://www.arcat.com/arcatcos/cos42/arc42485.html) ] for additional information.  
  
LiftMaster's full commercial and residential garage door operator/gate operator/access control product lines meet the needs of Architects, Designers, Engineers, and Specifiers in any design or conceptual plan, while offering 100 percent compliance with UL 325 safety and construction codes. Our entire product line also contributes to energy-efficiency credits for LEED green building certification from the U.S. Green Building Council. LiftMaster is a registered presenter of the American Institute of Architects and is approved to present any of our AIA CEUs at your firm's location. For learning objectives and to schedule a Lunch and Learn for your firm, please send a request to specs@LiftMaster.com.  
To find a complete library of architectural specifications, shop drawings, CSI format 3-part specs, CAD, and BIM product renderings, visit LiftMaster.com.

1. GENERAL
   1. SECTION INCLUDES

\*\* NOTE TO SPECIFIER \*\* Delete items below not required for project.

* + 1. Electric Gate Operators:
       1. Residential/Light Commercial DC Linear Actuator (LA500DC).
       2. Residential DC Linear Actuator (LA400DC).
       3. Solar Residential DC Linear Actuator (LA412DC).
       4. Commercial High Traffic DC Swing Gate Operator (CSW24UL).
       5. Residential/Light Commercial DC Swing Gate Operator (RSW12UL).
       6. Commercial AC swing gate operators (CSW200 Series).
          1. High-traffic commercial swing gate operators (CSW200501UL).
          2. High-traffic commercial swing gate operators (CSW200101UL).
       7. Commercial High Traffic DC Slide Gate Operator (CSL24UL).
       8. Commercial Heavy Duty Brushless Variable Speed Slide Gate Operator (HDSL24UL).
       9. Commercial Extra Heavy-Duty Variable Speed Swing Gate Operator (HDSW24UL)
       10. Residential/Light Commercial DC Slide Gate Operator (RSL12UL).
       11. Commercial AC slide gate operators (SL3000 Series).
           1. High-traffic commercial slide gate operators (SL3000501UL).
           2. Dual-motor/high-temperature commercial slide gate operators (SL3000101UL).
       12. Heavy-duty, industrial, gear-driven slide gate operators (SL595).
       13. Heavy-duty, industrial, gear-driven slide gate operators (SL585).
       14. High-performance commercial DC barrier gate operators with built-in Battery Backup (MA Series).
       15. High-speed commercial DC barrier gate operators with built-in Battery Backup (MAS Series High Speed).
       16. Heavy-duty industrial barrier gate operators (BG790).
       17. Commercial overhead door and gate operators (HCT Series).
           1. Overhead door and gate operators (HCTDCPKGUL08).
           2. Overhead door and gate operators (HCTDCPKGUL10).
           3. Overhead door and gate operators (HCTDCPKGUL12).
           4. Overhead door and gate operators (HCTDCPKGUL14).
           5. Overhead door and gate operators (HCTDCPKGUL16).
    2. Monitored Photo Eyes

\*\* NOTE TO SPECIFIER \*\* Delete items below not required for project.

* + - 1. Monitored Retro-Reflective Photo Eyes (LMRRUL)
      2. Monitored Through-Beam Photo Eyes (LMTBUL)
  1. RELATED SECTIONS

\*\* NOTE TO SPECIFIER \*\* Delete any sections below not relevant to this project; add others as required.

* + 1. Section 32 31 23 - Plastic Fences and Gates.
    2. Section 03 30 00 - Cast-in-Place Concrete.
    3. Section 11 12 26.13 - Parking Fee Coin Collection Equipment.
    4. Division 16 - Requirements for electrical connections.
  1. REFERENCES

\*\* NOTE TO SPECIFIER \*\* Delete references from the list below that are not actually required by the text of the edited section.

* + 1. National Electrical Manufacturers Association (NEMA): NEMA ICS 6 - Industrial Control and Systems: Enclosures.
    2. Underwriters Laboratories (UL):
       1. UL 325 - Standard for Safety for Door, Drapery, Gate, Louver, and Window Operators and Systems.
       2. UL 991 - Standard for Tests for Safety-Related Controls Employing Solid-State Devices.
    3. International Organization for Standardization: ISO 9001 - Quality Management Systems.
  1. SUBMITTALS
     1. Submit under provisions of Section 01 30 00 - Administrative Requirements.
     2. Product Data: Equipment list, system description, electrical wiring diagrams for installation, and manufacturer's data sheets on each product to be used, including:
        1. Preparation instructions and recommendations.
        2. Storage and handling requirements and recommendations.
        3. Installation methods.
     3. Shop Drawings: Submit shop drawings showing layout, profiles, and product components, including anchorage, edge conditions, and accessories.
        1. Operation, installation, and maintenance manuals including wiring diagrams.
        2. Risers, layouts, and special wiring diagrams showing any changes to standard drawings.
  2. DELIVERY, STORAGE, AND HANDLING
     1. Deliver, store, and handle materials and products in strict compliance with manufacturer's instructions and industry standards.
     2. Store products indoors in manufacturer's original containers and packaging, with labels clearly identifying product name and manufacturer. Protect from damage.
  3. QUALITY ASSURANCE
     1. Manufacturer Qualifications: ISO 9001 Certified Manufacturer.
     2. Installer Qualifications: Installation performed by factory authorized contractor specifically trained in gate operation systems of the type found within this section.
        1. Documentation of maintenance and repair service availability for emergency conditions.
        2. Quarterly maintenance for one year following Substantial Completion of the Project.
  4. WARRANTY
     1. Manufacturer's Standard Limited Warranty:

\*\* NOTE TO SPECIFIER \*\* Applies to Models: LA500DC, LA400DC, LA412DC, BG790, SL585, SL595.

* + - 1. Warranty Period: 2 years.

\*\* NOTE TO SPECIFIER \*\* Applies to Models MA Series and MAS Series. Delete if not required.

* + - 1. Warranty Period: 2 years for operator, 10 years for operator frame.

\*\* NOTE TO SPECIFIER \*\* Applies to Models RSW12UL, RSL12UL. Delete if not required.

* + - 1. Warranty Period: 3 years for residential applications.

\*\* NOTE TO SPECIFIER \*\* Applies to Models HCTDCUL Series. Delete if not required.

* + - 1. Warranty Period: 5 years.

\*\* NOTE TO SPECIFIER \*\* Applies to Models HDSW24UL, CSW24UL, CSL24UL, CSW200 Series and SL3000 Series. Delete if not required.

* + - 1. Warranty Period: 5 years for commercial applications, 7 years for residential applications.

1. PRODUCTS
   1. MANUFACTURERS
      1. Acceptable Manufacturer: LiftMaster, which is located at: 300 Windsor Dr.; Oak Brook, IL 60523; ASD Toll Free Tel: 800-282-6225; Fax: 630-516-8412; Email: specs@liftmaster.com; Web: https://www.liftmaster.com/

\*\* NOTE TO SPECIFIER \*\* Delete one of the following two paragraphs; coordinate with requirements of Division 1 section on product options and substitutions.

* + 1. Substitutions: Not permitted.
    2. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00.
  1. GATE OPERATORS

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + 1. Gate Operators: LA500DC. Residential/Light Commercial DC Linear Actuator.
       1. LA500PKGUL. Single Actuator Arm package contains:
          1. LA500DC. Single Actuator Arm

Full length commercial housing corrosion resistant aluminum.

Molecular bonded self-lubricating drive screw.

* + - * 1. LA500CONTUL. Control Box for single or master/second application.
      1. LA500DCS. Second Actuator Arm with junction box and 40 ft (12.2 m) direct burial cable for primary/secondary applications.
      2. LA500CONTXLMUL. Alternate Control Box for single or master/second applications desiring more room for accessories or two 33 Ah batteries for solar applications.
      3. Compliance: UL Listed. UL 325, UL 991 and CSA C22.2 No. 247 standards.
         1. Intended for use in Class I, II, III and IV vehicular swing gate applications.
      4. Monitored Safety Inputs: 3 inputs per board, main board and expansion board totaling 6 inputs with any combination of up to:
         1. Main Board:

1 Monitored Close Photo Eye input.

1 Monitored Open Photo Eye input.

1 Monitored Open Safety Edge or Open Photo Eye input.

* + - * 1. Expansion Board:

2 Monitored Safety Edge or Photo Eye inputs, selectable for Open or Close.

1 Monitored Photo Eye input, selectable for Open or Close.

* + - * 1. 8 Monitored edges available when wireless edge kit Model LMWEKITU is added.
      1. Electrical Power Requirements:

\*\* NOTE TO SPECIFIER \*\* Delete power option not required.

* + - * 1. 115 VAC, single phase.
        2. 230 VAC, single phase.
      1. Motor: 24 VDC, with soft start/stop operation. Duty cycle: Continuous duty.
      2. Capacity: 12 ft (3658 mm) Gate: 1,200 lbs (554 kg). 18 ft (5486 mm) Gate: 600 lbs (272 kg).
      3. Recommended Cycles per Day: 300.
      4. Gate Travel Speed: 90 degree opening in 15 to 18 seconds.
      5. Warranty: 2 years.
      6. Wormgear Reduction: Precision metal gears in lubrication housing.
      7. Battery Backup: Power Management system draws 14.8 mA when gate is idle. 500 cycles with two 7 Ah batteries with remote controls programmed.
      8. Standby Time: 24 days of standby power, excluding accessories.
      9. Solar Capable: See daily solar cycle chart.
      10. Accessory Electrical Power Requirements: 24 VDC 500 mA output, switched and unswitched power.
      11. Chassis: Commercial-duty die cast aluminum housing.
      12. Internet Connectivity: MyQ Technology.
          1. 902 to 928 MHz.
          2. 50 channel FHSS, Frequency Hopping Spread Spectrum.
          3. 828LM Internet Gateway: Enables monitoring and control of gate operators via internet-enabled smartphone, tablet or computer.
          4. Two-way communication between gate operator and MyQ accessories to enable remote open, close and monitoring of gate.
      13. Receiver: Security+ 2.0, 3 channel on-board receiver, holds up to 50 remote controls, unlimited with use of 811LM/813LM, HomeLink compatible.
          1. Transmits 310 MHz, 315 MHz, 390 MHz.
      14. Inherent Reversing Sensor: Detects obstructions or increased loads. Reverses gate when closing or stops/reverses gate when opening.
      15. Electronic Limits: Maintains accurate limit position throughout travel, even after using the manual release handle.
      16. Dual-gate Operation Capabilities: Allow 2 gate operators to operate in unison at a single entrance. Control box compatible with single or dual gates with no extra parts.
      17. Wireless Dual Gate Operation: Built-in communication. Operates primary and secondary operator without running a communication wire.
          1. Supports Through-beam photo eye in wireless dual-gate setup. Attach emitter and receiver to operators, eliminating communication wire between them.
      18. Dual-Gate Applications:
          1. Bi-Part Delay: Monitors speed and position of gates. Adjusts speeds ensuring primary gate closes last, avoiding damage to gate.
          2. Synchronized Close: For curved driveways. Monitors speed and position of gates. Adjusts speeds ensuring gates close at same time. Only available if two control boxes are used.
      19. LED Diagnostic Display: Simplifies installation and troubleshooting.
      20. Colored Terminal Blocks: Easy identification of safety and fire department inputs.
      21. Programmable Auxiliary Relays: 2 programmable relays with 6 settings each
          1. Pre-warning or gate-in-motion sounder.
          2. Switch on/off devices at open or Close Limits or while gate is in motion.
          3. Tamper detection if gate is pushed off Close Limit.
          4. Cycle quantity feedback.
          5. Red/Green light to control gate traffic.
      22. Quick Close, Anti-Tailgate: Secures property, preventing unauthorized access.
      23. Sequenced Access Management: Controls operator in tandem with barrier gate.
      24. Plug-in Loop Detector Inputs: Programmed inputs for shadow, interrupt and exit.
      25. Alarm Reset Button: Instantly resets the built-in safety alarm siren.
      26. Fire Department Compliant: Gates auto open on power failure or battery depletion.
      27. Surge Suppression: Industrial strength on high and low voltage outputs. Protects against lightning strikes at a 50 ft (15240 mm) radius.
      28. Emergency Release: Simple-to-use keyed release handle allows gate to be operated manually and maintain limit position once re-engaged.
      29. Chassis: Commercial-duty die cast aluminum housing.
      30. Operating Temperature Range: Minus 4 - 140 degrees F (Minus 20 - 60 degrees C).
      31. Accessories:

\*\* NOTE TO SPECIFIER \*\* Unit comes with MyQ Enabled Technology. Delete accessories not required.

* + - * 1. MyQ Enabled Accessories:

828LM Internet Gateway: Allows remote monitoring from Internet-enabled computer or smartphone.

829LM Garage and Gate Monitor: Allows remote monitoring and operation.

823LM Remote Light Switch: Controls light remotely.

825LM Remote Light Control: Allows remote monitoring and operation.

* + - * 1. Safety Monitoring Devices:

Monitored Photo Eyes and Wireless Edge Kits.

LMRRUL Reflective Photo Eyes.

LMTBUL Thru-Beam Photo Eyes.

LMWEKITU Wireless Edge Kit with Transmitter and Receiver.

LMWETXU. Wireless Edge Transceiver.

Wired Monitored Edges, all require use of LMWEKITU.

S50, Small Profile Monitored Edge.

L50. Large Profile Monitored Edge.

* + - * 1. LOOPDETLM. Plug-in Loop Detector.
        2. KPW5. Wireless Commercial Keypad.
        3. KPW250. Wireless Commercial Keypad.
        4. SP10W12V. 10W Solar Panel Kit.
        5. MG1300. Maglock 1,300 pound (590 kg) holding force.
        6. 892LT. 2-button Security+ 2.0 Learning Remote Control.
        7. 894LT. 4-Button Security+ 2.0 Learning Remote Control.
        8. 811LM. 1-Button Encrypted DIP Remote Control.
        9. 813LM. 3-Button Encrypted DIP Remote Control.
        10. EL1SS. Stainless Steel Single/Multi-Tenant Telephone Entry System.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + 1. Gate Operators: LA400. Residential DC Linear Actuator.
       1. LA400PKGUL. Single Actuator Arm Package contains:
          1. LA400DC. Single Actuator Arm.
          2. Cast aluminum corrosion-resistant body, stainless steel piston.
          3. LA400CONTUL. Control Box for single or master/second application.
       2. LA400DCS Second Actuator Arm with junction box and 40 ft (12.2 m) direct burial cable for primary/secondary applications.
       3. Compliance: UL Listed. UL 325, UL 991 and CSA C22.2 No. 247 standards.
          1. Intended for use in Class I, II, III and IV vehicular swing gate applications.
       4. Monitored Safety Inputs: 3 inputs per board, main board and expansion board totaling 6 inputs with any combination of up to:
          1. Main Board:

1 Monitored Close Photo Eye input.

1 Monitored Open Photo Eye input.

1 Monitored Open Safety Edge or Open Photo Eye input.

* + - * 1. 8 Monitored edges available when wireless edge kit Model LMWEKITU is added. Electrical Power Requirements: 115 VAC, single phase.
      1. Motor: 24 VDC, with soft start/stop operation. Duty cycle: Continuous duty.
      2. Capacity: 16 ft (4877 mm) gate at 550 lbs (249 kg).
      3. Recommended Cycles per Day: 100.
      4. Gate Travel Speed: 90 degree opening in 15 to 18 seconds.
      5. Warranty: 2 years.
      6. Wormgear Reduction: Precision metal gears contained in lubrication housing.
      7. Battery Backup: Power Management system draws 3.7 mA when gate is idle with remote controls programmed. 400 cycles with two 7 Ah batteries.
      8. Standby Time: 97 days of standby power, excluding accessories.
      9. Solar Capable: See daily solar cycle chart.
      10. Accessory Electrical Power Requirements: 24 VDC 500 mA output, switched and unswitched power.
      11. Chassis: Commercial-duty die cast aluminum housing.
      12. Internet Connectivity: MyQ Technology.
          1. 902 to 928 MHz.
          2. 50-channel FHSS, Frequency Hopping Spread Spectrum.
          3. 828LM Internet Gateway enables monitoring and control of gate operators via internet-enabled smartphone, tablet or computer.
          4. Two-way communication between gate operator and MyQ accessories to enable remote open, close and monitoring of gate.
      13. Receiver: Security+ 2.0 3 channel on-board receiver, holds up to 50 remote controls, unlimited with use of 811LM/813LM, HomeLink compatible.
          1. Transmits 310 MHz, 315 MHz, 390 MHz.
      14. Inherent Reversing Sensor: Detects obstructions or increased loads. Reverses gate when closing or stops/reverses the gate when opening.
      15. Electronic Limits: Maintains accurate limit position throughout travel, even after using the manual release handle.
      16. Dual-gate operation: Allow 2 gate operators to operate in unison at a single entrance. Standard control box compatible with single or dual gates with no extra parts.
      17. Wireless Dual Gate Operation: Built-in wireless communication will operate primary and secondary operator without having to run a communication wire.
          1. Support Through-beam photo eye in wireless dual-gate setup. Attach emitter and receiver to operators, eliminating communication wire between them.
      18. Bi-Part Delay: Selectable feature for dual-gate applications. Firmware monitors speed and position of each gate and adjusts speed as necessary to ensure primary gate closes last, avoiding potential damage to the gate.
      19. Synchronized Close: Selectable feature for dual-gate applications with curved driveways. Monitors speed and position of each gate. Adjusts speed as necessary ensuring gates close at the same time. Only available if two control boxes are used.
      20. LED Diagnostic Display: Simplifies installation and troubleshooting.
      21. Colored Terminal Blocks: Easy identification of safety and fire department inputs.
      22. Alarm Reset Button: Instantly resets the built-in safety alarm siren.
      23. Fire Department Compliant: Selectable settings allow gate to auto open on power failure or battery depletion.
      24. Surge Suppression: Industrial strength on high and low voltage outputs. Protects against lightning strikes at a 50 ft (15240 mm) radius.
      25. Emergency Release: Simple-to-use keyed release handle allows gate to be operated manually and maintain limit position once re-engaged.
      26. Operating Temperature Range: Minus 4 - 140 degrees F (Minus 20 - 60 degrees C)
      27. Accessories:

\*\* NOTE TO SPECIFIER \*\* Unit comes with MyQ Enabled Technology. Delete accessories not required.

* + - * 1. MyQ Enabled Accessories:

828LM Internet Gateway: Allows remote monitoring from Internet-enabled computer or smartphone.

829LM Garage and Gate Monitor: Allows remote monitoring and operation.

823LM Remote Light Switch: Controls light remotely.

825LM Remote Light Control: Allows remote monitoring and operation.

* + - * 1. Safety Monitoring Devices:

Monitored Photo Eyes and Wireless Edge Kits.

LMRRUL Reflective Photo Eyes.

LMTBUL Thru-Beam Photo Eyes.

LMWEKITU Wireless Edge Kit with Transmitter and Receiver.

LMWETXU Wireless Edge Transceiver.

Wired Monitored Edges, all require use of LMWEKITU.

S50 Small Profile Monitored Edge.

L50 Large Profile Monitored Edge.

* + - * 1. KPW5 Wireless Commercial Keypad.
        2. KPW250 Wireless Commercial Keypad.
        3. SP10W12V: 10W Solar Panel Kit.
        4. MG1300 Maglock. 1,300 pound (590 kg) holding force.
        5. 892LT 2-Button Security+ 2.0 Learning Remote Control.
        6. 894LT 4-Button Security+ 2.0 Learning Remote Control.
        7. 811LM 1-Button Encrypted DIP Remote Control.
        8. 813LM 3-Button Encrypted DIP Remote Control.
        9. EL1SS Stainless Steel Single/Multi-Tenant Telephone Entry System.
        10. K1D8080-1CC Expansion Board.
        11. LOOPDETLM Plug-in Loop Detector; requires expansion board.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + 1. Gate Operators: LiftMaster LA412DC Solar Residential DC Linear Actuator.
       1. LiftMaster LA412PKGU Single Actuator Arm Solar Package contains:
          1. LA412DC Single Actuator Arm:

Cast aluminum corrosion-resistant body, stainless steel piston.

* + - * 1. LA412CONTU Control Box for single or master/second application.
        2. 10 Watt Solar Panel Kit:
      1. LiftMaster LA412DCS Second Actuator Arm with junction box and 40 ft (12.2 m) direct burial cable for primary/secondary applications.
      2. LiftMaster XLSOLARCONTU Alternate Control Box for single or master/second applications desiring more room for accessories or two 33 Ah batteries for solar applications.
      3. Compliance: UL Listed. UL 325, UL 991 and CSA C22.2 No. 247 standards.
         1. Intended for use in Class I, II, III and IV vehicular swing gate applications.
      4. Monitored Safety Inputs: 3 inputs per board, main board and expansion board totaling 6 inputs with any combination of up to:
         1. Main Board:

1 Monitored Close Photo Eye input.

1 Monitored Open Photo Eye input.

1 Monitored Open Safety Edge or Open Photo Eye input.

* + - * 1. 8 Monitored edges available when Model LMWEKITU is added.
      1. Electrical Power Requirements: 115 VAC, single phase.
      2. Motor: 12 VDC, with soft start/stop operation.
      3. Capacity: 16 ft (4877 mm) gate at 550 lbs (249 kg).
      4. Recommended Cycles per Day: 50.
      5. Gate Travel Speed: 90 degree opening in less than 23 seconds.
      6. Warranty: 2 years.
      7. Wormgear Reduction: Precision metal gears contained in lubrication housing.
      8. Solar Power Management system draws 5.7 mA when gate is idle. Provides 1160 cycles with two 7 Ah batteries.
      9. Standby Time: 126 days of standby power.
      10. Solar Capable: See daily solar cycle chart.
      11. Accessory Electrical Power Requirements: 24 VDC 500 mA output, switched and unswitched power.
      12. Chassis: Commercial-duty die cast aluminum housing.
      13. Internet Connectivity: MyQ Technology.
          1. 902 to 928 MHz.
          2. 50 channel FHSS, Frequency Hopping Spread Spectrum.
          3. 828LM Internet Gateway enables monitoring and control of gate operators via internet-enabled smartphone, tablet or computer.
          4. Two-way communication between gate operator and MyQ accessories to enable remote open, close and monitoring of gate.
      14. Receiver: Security+ 2.0, 3 channel on-board receiver, holds up to 50 remote controls, unlimited with use of 811LM/813LM, HomeLink compatible.
          1. Transmits 310 MHz, 315 MHz, 390 MHz.
      15. Inherent Reversing Sensor: Detects obstructions or increased loads. Reverses gate when closing or stops/reverses the gate when opening.
      16. Electronic Limits: Maintains accurate limit position throughout travel, even after using the manual release handle.
      17. Dual-gate operation capabilities to allow 2 separate gate operators to operate in unison at a single entrance. Standard control box compatible with single or dual gates with no extra parts.
      18. Wireless Dual Gate Operation: Built-in wireless communication will operate primary and secondary operator without having to run a communication wire.
          1. Support Through-beam photo eye in wireless dual-gate setup. Attach emitter and receiver to operators, eliminating communication wire between them.
      19. Bi-Part Delay: Selectable feature for dual-gate applications. Firmware monitors speed and position of each gate and adjusts speed as necessary to ensure primary gate closes last, avoiding potential damage to the gate.
      20. Synchronized Close: Selectable feature for dual-gate applications with curved driveways. Monitors speed and position of each gate. Adjusts speed as necessary ensuring gates close at the same time. Only available if two control boxes are used.
      21. LED Diagnostic Display: Simplifies installation and troubleshooting.
      22. Colored Terminal Blocks: Easy identification of safety and fire department inputs.
      23. Alarm Reset Button: Instantly resets the built-in safety alarm siren.
      24. Fire Department Compliant: Selectable settings allow gate to auto open on power failure or battery depletion.
      25. Surge Suppression: Industrial strength on high and low voltage outputs. Protects against lightning strikes at a 50 ft (15240 mm) radius.
      26. Emergency Release: Simple-to-use keyed release handle allows gate to be operated manually and maintain limit position once re-engaged.
      27. Operating Temperature Range: Minus 40 - 140 degrees F (Minus 40 - 60 degrees C).
      28. Accessories:

\*\* NOTE TO SPECIFIER \*\* Unit comes with MyQ Enabled Technology. Delete accessories not required.

* + - * 1. MyQ Enabled Accessories:

828LM Internet Gateway: Allows remote monitoring from Internet-enabled computer or smartphone.

829LM Garage and Gate Monitor: Allows remote monitoring and operation.

823LM Remote Light Switch: Controls light remotely.

825LM Remote Light Control: Allows remote monitoring and operation.

* + - * 1. Safety Monitoring Devices:

Monitored Photo Eyes and Wireless Edge Kits.

LMRRUL Reflective Photo Eyes.

LMTBUL Thru-Beam Photo Eyes.

LMWEKITU Wireless Edge Kit with Transmitter and Receiver.

LMWETXU Wireless Edge Transceiver.

Wired Monitored Edges, all require use of LMWEKITU.

S50 Small Profile Monitored Edge.

L50 Large Profile Monitored Edge.

* + - * 1. KPW5 Wireless Commercial Keypad.
        2. SGLOCK12V Solenoid Lock.
        3. SOLPNL10W12V 10 Watt Solar Panel.
        4. SOLPNL20W12V 20 Watt Solar Panel.
        5. 892LT 2-Button Security+ 2.0 Learning Remote Control.
        6. 894LT 4-Button Security+ 2.0 Learning Remote Control.
        7. 811LM 1-Button Encrypted DIP Remote Control.
        8. 813LM 3-Button Encrypted DIP Remote Control.
        9. K1D8080-1CC Expansion Board.
        10. LOOPDETLM Plug-in Loop Detector; requires Expansion Board.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + 1. Gate Operators: CSW24UL Commercial High Traffic DC Swing Gate Operator.
       1. CSW24UL Swing Gate Operator.
       2. Compliance: UL Listed. UL 325, UL 991 and CSA C22.2 No. 247 standards.
          1. Intended for use in Class I, II, III and IV vehicular swing gate applications.
       3. Monitored Safety Inputs: 3 inputs per board, main board and expansion board, totaling 6 inputs with any combination of up to:
          1. Main Board:

1 Monitored Close Photo Eye input.

1 Monitored Open Photo Eye input.

1 Monitored Open Safety Edge or Open Photo Eye input.

* + - * 1. Expansion Board:

2 Monitored Safety Edge or Photo Eye inputs; selectable for Open or Close.

1 Monitored Photo Eye input; selectable for Open or Close.

* + - * 1. 8 Monitored edges available when Model LMWEKITU is added.
      1. Electrical Power Requirements:

\*\* NOTE TO SPECIFIER \*\* Delete power option not required.

* + - * 1. 115 VAC, single phase.
        2. 230 VAC, single phase.
      1. Motor: 24 VDC, with soft start/stop operation. Duty cycle: Continuous duty.
      2. Capacity: 12 ft (3658 mm) gate at 1,200 lbs (554 kg) or 18 ft (5486 mm) gate at 600 lbs (272 kg).
      3. Recommended Cycles per Day: Continuous duty.
      4. Gate Travel Speed: 90-degree opening in 13 to 15 seconds.
      5. Warranty: 5 years for commercial applications, 7 years for single-home applications.
      6. Wormgear Reduction: 2 commercial synthetic oil bath gearboxes. 900:1 reduction. Hardened output shafts for high cycle applications with frequent loop reversals.
      7. Battery Backup: Power Management system draws 14.8 mA when gate is idle with remote controls programmed. 146 cycles with two 7 Ah batteries or 876 cycles with two 33 Ah batteries.
      8. Standby Time: 24 days of standby power in event of power loss with two 7 Ah batteries or 105 days with two 33 Ah batteries, excluding accessories.
      9. Solar Capable: See daily solar cycle chart.
      10. Accessory Electrical Power Requirements: 24 VDC 500 mA output, switched and unswitched power.
      11. Chassis: Constructed with 1/4 inch (6 mm) gold zinc-plated steel for rust prevention.
      12. Cover: High-density, UV-resistant polycarbonate two-piece cover.
      13. Internet Connectivity: MyQ Technology.
          1. 902 to 928 MHz.
          2. 50-channel FHSS, Frequency Hopping Spread Spectrum.
          3. 828LM Internet Gateway enables monitoring and control of gate operators via internet-enabled smartphone, tablet or computer.
          4. Two-way communication between gate operator and MyQ accessories to enable remote open, close and monitoring of gate.
      14. Receiver: Security+ 2.0 3 channel on-board receiver, holds up to 50 remote controls, unlimited with use of 811LM/813LM, HomeLink compatible.
          1. Transmits 310 MHz, 315 MHz, 390 MHz.
      15. Inherent Reversing Sensor: Detects obstructions or increased loads. Reverses gate when closing or stops/reverses the gate when opening.
      16. Electronic Limits: Maintains accurate limit position throughout travel, even after using the manual release handle.
      17. Dual-gate operation capabilities to allow 2 separate gate operators to operate in unison at a single entrance.
      18. Wireless Dual Gate Operation: Built-in wireless communication will operate primary and secondary operator without having to run a communication wire.
          1. Support Through-beam photo eye in wireless dual-gate setup. Attach emitter and receiver to operators, eliminating communication wire between them.
      19. Soft Stop and Start during mid-travel reversal extends operator life under high-cycle, heavy gate use.
      20. Bi-Part Delay: Selectable feature for dual-gate applications. Firmware monitors speed and position of each gate and adjusts speed as necessary to ensure primary gate closes last, avoiding potential damage to the gate.
      21. Synchronized Close: Selectable feature for dual-gate applications with curved driveways. Monitors speed and position of each gate. Adjusts speed as necessary ensuring gates close at the same time. Only available if two control boxes are used.
      22. LED Diagnostic Display: Simplifies installation and troubleshooting.
      23. Colored Terminal Blocks: Easy identification of safety and fire department inputs.
      24. Programmable Auxiliary Relays: 2 programmable relays with 6 settings each
          1. Pre-warning or gate-in-motion sounder.
          2. Switch on/off devices at open or Close Limits or while gate is in motion.
          3. Tamper detection if gate is pushed off Close Limit.
          4. Cycle quantity feedback.
          5. Red/Green light to control gate traffic.
      25. Quick Close, Anti-Tailgate: Secures property, preventing unauthorized access.
      26. Sequenced Access Management: Capable of sequentially controlling the operator in tandem with barrier gate.
      27. Plug-in Loop Detector Inputs: Programmed inputs for shadow, interrupt and exit.
      28. Alarm Reset Button: Instantly resets the built-in safety alarm siren.
      29. Fire Department Compliant: Selectable settings allow gate to auto open on power failure or battery depletion.
      30. Surge Suppression: Industrial strength on high and low voltage outputs. Protects against lightning strikes at a 50 ft (15240 mm) radius.
      31. Emergency Release: Simple-to-use release handle allows gate to be operated manually and maintain limit position once re-engaged.
      32. Operating Temperature Range:
          1. Without Heater: Minus 4 - 140 degrees F (Minus 20 - 60 degrees C).
          2. With Optional Heater: Minus 40 - 140 degrees F (Minus 40 - 60 degrees C).
      33. Accessories:

\*\* NOTE TO SPECIFIER \*\* Unit comes with MyQ Enabled Technology. Delete accessories not required.

* + - * 1. MyQ Enabled Accessories:

828LM Internet Gateway: Allows remote monitoring from Internet-enabled computer or smartphone.

829LM Garage and Gate Monitor: Allows remote monitoring and operation.

823LM Remote Light Switch: Controls light remotely.

825LM Remote Light Control: Allows remote monitoring and operation.

* + - * 1. Safety Monitoring Devices:

Monitored Photo Eyes and Wireless Edge Kits.

LMRRUL Reflective Photo Eyes.

LMTBUL Thru-Beam Photo Eyes.

LMWEKITU Wireless Edge Kit with Transmitter and Receiver.

LMWETXU Wireless Edge Transceiver

Wired Monitored Edges. All require use of LMWEKITU.

S50 Small Profile Monitored Edge.

L50 Large Profile Monitored Edge.

* + - * 1. LOOPDETLM Plug-in Loop Detector.
        2. KPW250 - Wireless Commercial Keypad.
        3. 892LT 2-Button Security+ 2.0 Learning Remote Control.
        4. 894LT 4-Button Security+ 2.0 Learning Remote Control.
        5. 811LM 1-Button Encrypted DIP Remote Control.
        6. 813LM 3-Button Encrypted DIP Remote Control.
        7. IPAC - Internet Protocol Access Control Entry System.
        8. EL2000SS Stainless Steel Commercial and Gated Community Telephone Entry System.
        9. Star1000 Commercial Access Control Receiver.
        10. PPWR Passport Receiver with Security+ 2.0 Technology.
        11. PPV1 Passport 1-Button Remote.
        12. PPK1 Passport 1-Button Mini Remote.
        13. KPR2000 Single Access Remote Control Keypad and Proximity Reader.
        14. MG1300 Maglock. 1,300 pound (590 kg) holding force.
        15. MPEL: Mounting plate for post mount.
        16. HTR Heater Kit.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + 1. Gate Operators: RSW12UL Residential/Light Commercial DC Swing Gate Operator.
       1. RSW12UL Swing Gate Operator.
       2. Compliance: UL Listed. UL 325, UL 991 and CSA C22.2 No. 247 standards.
          1. Intended for use in Class I, II, III and IV vehicular swing gate applications.
       3. Monitored Safety Inputs: 3 inputs per board, main board and expansion board totaling 6 inputs with any combination of up to:
          1. Main Board:

1 Monitored Close Photo Eye input.

1 Monitored Open Photo Eye input.

1 Monitored Open Safety Edge or Open Photo Eye input.

* + - * 1. 8 Monitored edges available when Model LMWEKITU is added.
      1. Electrical Power Requirements: 115 VAC, single phase.
      2. Motor: 12V DC, with soft start/stop operation.
      3. Capacity: 12 ft (3658 mm) gate at 600 lbs (272 kg) or 16 ft (4900 mm) gate at 400 lbs (181 kg).
      4. Recommended Cycles per Day: 250.
      5. Gate Travel Speed: 90 degree opening in 15 to 17 seconds.
      6. Warranty: 3 years.
      7. Wormgear Reduction: 2 commercial synthetic oil bath gearboxes. 30:1 reduction.
      8. Battery Backup: Power Management system draws 5.7 mA when gate is idle with remote controls programmed. 354 cycles with two 7 Ah batteries.
      9. Standby Time: 126 days of standby power in event of a power loss, excluding accessories.
      10. Solar Capable: See daily solar cycle chart.
      11. Accessory Electrical Power Requirements: 24 VDC 500 mA output, switched and unswitched power.
      12. Chassis: Constructed with 1/4 inch (6mm) gold zinc-plated steel for rust prevention.
      13. Cover: High-density, UV-resistant polycarbonate two-piece cover.
      14. Internet Connectivity: MyQ Technology.
          1. 902 to 928 MHz.
          2. 50-channel FHSS, Frequency Hopping Spread Spectrum.
          3. 828LM Internet Gateway enables monitoring and control of gate operators via internet-enabled smartphone, tablet or computer.
          4. Provides two-way communication between gate operator and MyQ accessories to enable remote open, close and monitoring of gate.
      15. Receiver: Security+ 2.0 3 channel on-board receiver, holds up to 50 remote controls, unlimited with use of 811LM/813LM, HomeLink compatible.
          1. Transmits 310 MHz, 315 MHz, 390 MHz.
      16. Inherent Reversing Sensor: Detects obstructions or increased loads. Reverses gate when closing or stops/reverses the gate when opening.
      17. Electronic Limits: Maintains accurate limit position throughout travel, even after using the manual release handle.
      18. Dual-gate operation capabilities to allow 2 separate gate operators to operate in unison at a single entrance.
      19. Wireless Dual Gate Operation: Built-in wireless communication will operate primary and secondary operator without having to run a communication wire.
          1. Support Through-beam photo eye in wireless dual-gate setup. Attach emitter and receiver to operators, eliminating communication wire between them.
      20. Soft Stop and Start during mid-travel reversal extends operator life under high-cycle, heavy gate use.
      21. Bi-Part Delay: Selectable feature for dual-gate applications. Firmware monitors speed and position of each gate and adjusts speed as necessary to ensure primary gate closes last, avoiding potential damage to the gate.
      22. Synchronized Close: Selectable feature for dual-gate applications with curved driveways. Monitors speed and position of each gate. Adjusts speed as necessary ensuring gates close at the same time.
      23. LED Diagnostic Display: Simplifies installation and troubleshooting.
      24. Colored Terminal Blocks: Easy identification of safety and fire department inputs.
      25. Alarm Reset Button: Instantly resets the built-in safety alarm siren.
      26. Fire Department Compliant: Selectable settings allow gate to auto open on power failure or battery depletion.
      27. Surge Suppression: Industrial strength on high and low voltage outputs. Protects against lightning strikes at a 50 ft (15240 mm) radius.
      28. Emergency Release: Simple-to-use keyed release handle allows gate to be operated manually and maintain limit position once re-engaged.
      29. Operating Temperature Range:
          1. Without Heater: Minus 4 - 140 degrees F (Minus 20 - 60 degrees C).
          2. With Optional Heater: Minus 40 - 140 degrees F (Minus 40 - 60 degrees C).
      30. Accessories:

\*\* NOTE TO SPECIFIER \*\* Unit comes with MyQ Enabled Technology. Delete accessories not required.

* + - * 1. MyQ enabled Accessories:

828LM Internet Gateway: Allows remote monitoring from internet-enabled computer or smartphone.

829LM Garage and Gate Monitor: Allows remote monitoring and operation.

823LM Remote Light Switch: Controls light remotely.

825LM Remote Light Control: Allows remote monitoring and operation.

* + - * 1. Safety Monitoring Devices:

Monitored Photo Eyes and Wireless Edge Kits.

LMRRUL Reflective Photo Eyes.

LMTBUL Thru-Beam Photo Eyes.

LMWEKITU Wireless Edge Kit with Transmitter and Receiver.

LMWETXU Wireless Edge Transceiver.

Wired Monitored Edges. All require use of LMWEKITU.

S50 Small Profile Monitored Edge.

L50 Large Profile Monitored Edge.

* + - * 1. KPW5 Wireless Commercial Keypad.
        2. KPW250 Wireless Commercial Keypad.
        3. SP10W12V: 10W Solar Panel Kit.
        4. MG1300 Maglock. 1,300 pound (590 kg) holding force.
        5. 892LT 2-Button Security+ 2.0 Learning Remote Control.
        6. 894LT 4-Button Security+ 2.0 Learning Remote Control.
        7. 811LM 1-button Encrypted DIP Remote Control.
        8. 813LM 3-Button Encrypted DIP Remote Control.
        9. EL1SS Stainless Steel Single/Multi-Tenant Telephone Entry System.
        10. K1D8080-1CC Expansion Board.
        11. LOOPDETLM Plug-in Loop Detector (requires expansion board).
        12. HTR Heater Kit.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + 1. Gate Operators: CSW200 Series Commercial Swing Gate Operators.

\*\* NOTE TO SPECIFIER \*\* Delete models not required.

* + - 1. CSW200501UL Commercial Swing Gate Operator for high-traffic applications.
         1. Description: High Cycle High Temperature 1/2 HP continuous duty motor with class H High Temperature Insulation.
         2. Capacity: 8 ft (2438 mm) gate at 1,600 lbs (726 kg) or 18 ft (5486 mm) gate at 600 lbs (272 kg).
         3. Recommended Cycles per Hour: Continuous.
      2. CSW200101UL Commercial Swing Gate Operator with 1 HP capacity for heavy-duty applications.
         1. Two High Cycle High Temperature 1/2 HP continuous duty motors with class H High Temperature Insulation, designed for large, heavy wrought-iron gates.
         2. 250 lbs (113.4 kg) of pulling torque.
         3. Capacity: 12 ft (3658 mm) gate at 2,000 lbs (907 kg) or 22 ft (6706 mm) gate at 1,000 lbs (454 kg).
         4. Recommended Cycles per Hour: Continuous duty.
      3. Warranty: 5 years for commercial applications, 7 years for residential applications.
      4. Compliance: UL Listed. UL 325, UL 991 and CSA C22.2 No. 247 standards.
         1. Intended for use in Class I, II, III and IV vehicular swing gate applications.
      5. Monitored Safety Inputs: 3 inputs per board, main board and expansion board totaling 6 inputs with any combination of up to:
         1. Main Board:

1 Monitored Close Photo Eye input.

1 Monitored Open Photo Eye input.

1 Monitored Open Safety Edge or Open Photo Eye input.

* + - * 1. Expansion Board:

2 Monitored Safety Edge or Photo Eye inputs; selectable for Open or Close.

1 Monitored Photo Eye input; selectable for Open or Close.

* + - * 1. 8 Monitored edges available when Model LMWEKITU is added.
      1. Electrical Power Requirements: 115V, single phase.
         1. Accessory Electrical Power Requirements: 24V DC 500 mA output, switched or unswitched power.
      2. Wormgear Reduction: 2 Commercial oil bath gearboxes, 900:1 reduction. Hardened output shafts for high cycle applications with frequent loop reversals.
      3. Gate Traveling Speed: 90 degree opening in 13 to 15 seconds.
      4. Chassis: 1/4 inch (6 mm) sanded, welded and gold zinc-plated sheet metal.
      5. Finishing: Metal parts are gold zinc-plated for rustproof protection.
      6. Cover: High-density UV-resistant polyethylene material.
      7. Internet Connectivity: MyQ Technology.
         1. 902 to 928 MHz.
         2. 50-channel FHSS; Frequency Hopping Spread Spectrum.
         3. 828LM Internet Gateway enables monitoring and control of gate operators via internet-enabled smartphone, tablet or computer.
         4. Provides two-way communication between gate operator and MyQ accessories to enable remote open, close and monitoring of gate.
      8. Receiver: Security+ 2.0, 3 channel on-board radio receiver, holds up to 50 remote controls, unlimited with use of 811LM/813LM, HomeLink compatible.
         1. Transmits 310 MHz, 315 MHz, 390 MHz.
      9. Inherent Reversing Sensor: Detects obstructions or increased loads. Reverses gate when closing or stops/reverses the gate when opening.
      10. Soft Stop extends operator life under high-cycle, heavy gate use.
      11. Emergency Release: Release handles allows gate to be operated manually and maintain limit position once re-engaged.
      12. Wireless Dual Gate Operation: Built-in wireless communication will operate primary and secondary operator without having to run a communication wire.
          1. Support Through-beam photo eye in wireless dual-gate setup. Attach emitter and receiver to operators, eliminating communication wire between them.
      13. Bi-Part Delay: Selectable feature for dual-gate applications. Dial provides manual adjustment to control delay as necessary to ensure primary gate closes last, avoiding potential damage to the gate.
      14. LED Diagnostic Display: Simplifies installation and troubleshooting.
      15. Colored Terminal Blocks: Easy identification of safety and fire department inputs.
      16. Programmable Auxiliary Relays: 2 programmable relays with 6 settings each.
          1. Pre-warning or gate-in motion sounder.
          2. Switch on/off devices at open or Close Limits or while gate is in motion.
          3. Tamper detection if gate is pushed off Close Limit.
          4. Cycle quantity feedback.
          5. Red/Green Light to control gate traffic.
      17. Quick Close, Anti-Tailgate: Secures property, preventing unauthorized access.
      18. Sequenced Access Management: Capable of sequentially controlling the operator in tandem with a barrier gate.
      19. Surge/Lightning Protection: Industrial surge protection on high and low voltage inputs. Protects against lightning strikes at a 50 ft (15.2 m) radius.
      20. Plug-in loop detector inputs: Programmed inputs for shadow, interrupt and exit.
      21. External Alarm Reset Button: Allows for quick reset of the gate operator when the alarm has been activated.
      22. Warning Device: UL 325 compliant entrapment warning alarm has ability to be set for pre-operation warning; provides 3-second warning prior to and during gate movement.
      23. Mechanical Limit System: Maintains accurate gate position throughout gate travel, even after using manual disconnect.
      24. Operating Temperature Range:
          1. Without Heater: Minus 4 - 140 degrees F (Minus 20 - 60 degrees C).
          2. With Optional Heater: Minus 40 - 140 degrees F (Minus 40 - 60 degrees C).
      25. Accessories:

\*\* NOTE TO SPECIFIER \*\* Unit comes with MyQ Enabled Technology. Delete accessories not required.

* + - * 1. MyQ Enabled Accessories:

828LM Internet Gateway: Allows remote monitoring from internet-enabled computer, tablet or smartphone.

829LM Garage and Gate Monitor: Allows remote monitoring and operation.

823LM Remote Light Switch: Controls light remotely.

825LM Remote Light Control: Allows remote monitoring and operation.

* + - * 1. Safety Monitoring Devices:

Monitored Photo Eyes and Wireless Edge Kits.

LMRRUL Reflective Photo Eyes.

LMTBUL Thru-Beam Photo Eyes.

LMWEKITU Wireless Edge Kit with Transmitter and Receiver.

LMWETXU Wireless Edge Transceiver.

Wired Monitored Edges, all require use of LMWEKITU.

S50 Small Profile Monitored Edge.

L50 Large Profile Monitored Edge.

* + - * 1. LOOPDETLM Plug-in Loop Detector.
        2. KPW250 - Wireless Commercial Keypad.
        3. 892LT 2-Button Security+ 2.0 Learning Remote Control.
        4. 894LT 4-Button Security+ 2.0 Learning Remote Control.
        5. 811LM 1-Button Encrypted DIP Remote Control.
        6. 813LM 3-Button Encrypted DIP Remote Control.
        7. IPAC - Internet Protocol Access Control Entry System.
        8. EL2000SS Stainless Steel Commercial and Gated Community Telephone Entry System.
        9. Star1000 Commercial Access Control Receiver.
        10. PPWR Passport Receiver with Security+ 2.0 Technology.
        11. PPV1 Passport 1-Button Remote.
        12. PPK1 Passport 1-Button Mini Remote.
        13. KPR2000 Single Access Remote Control Keypad and Proximity Reader.
        14. HTRNB Heater Kit.
        15. Advanced Traffic Management Quick-Close Option.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + 1. Gate Operators: CSL24UL Commercial High Traffic DC Slide Gate Operator.
       1. CSL24UL Slide Gate Operator.
       2. Compliance: UL Listed. UL 325, UL 991 and CSA C22.2 No. 247 standards.
          1. Intended for use in Class I, II, III and IV vehicular slide gate applications.
       3. Monitored Safety Inputs: 3 inputs per board, main board and expansion board, totaling 6 inputs with any combination of up to:
          1. Main Board:

1 Monitored Close Photo Eye input.

1 Monitored Open Photo Eye input.

1 Monitored Open Safety Edge or Open Photo Eye input.

* + - * 1. Expansion Board:

2 Monitored Safety Edge or Photo Eye inputs, selectable for Open or Close.

1 Monitored Photo Eye input, selectable for Open or Close.

* + - * 1. 8 Monitored edges available when Model LMWEKITU is added.
      1. Electrical Power Requirements:

\*\* NOTE TO SPECIFIER \*\* Delete power option not required.

* + - * 1. 115 VAC, single phase.
        2. 230V AC, single phase.
      1. Motor: 24V DC, with soft start/stop operation.
         1. Duty cycle: Continuous duty.
      2. Capacity: 50 ft (15200 mm) gate at 1,500 lbs (680 kg).
      3. Recommended Cycles per Day: Continuous duty.
      4. Gate Travel Speed: 12 inches (304 mm) per second.
      5. Warranty: 5 years for commercial applications, 7 years for single-home applications.
      6. Wormgear Reduction: Commercial synthetic oil bath gearbox. 10:1 reduction.
      7. Battery Backup: Power Management system draws 14.8 mA when gate is idle with remote controls programmed. 208 cycles with two 7 Ah batteries or 1179 cycles with two 33 Ah batteries.
      8. Standby Time: 24 days of standby power in event of a power loss with two 7 Ah batteries or 105 days with two 33 AH batteries, excluding accessories.
      9. Solar Capable: See daily solar cycle chart.
      10. Accessory Electrical Power Requirements: 24V DC 500 mA output, switched and unswitched power.
      11. Chassis: Constructed with 1/4 inch (6mm) gold zinc-plated steel for rust prevention.
      12. Cover: High-density, UV-resistant polycarbonate two-piece cover.
      13. Internet Connectivity: MyQ Technology.
          1. 902 to 928 MHz.
          2. 50 channel FHSS, Frequency Hopping Spread Spectrum.
          3. 828LM Internet Gateway enables monitoring and control of gate operators via internet-enabled smartphone, tablet or computer.
          4. Provides two-way communication between gate operator and MyQ accessories to enable remote open, close and monitoring of gate.
      14. Receiver: Security+ 2.0, 3 channel on-board receiver, holds up to 50 remote controls, unlimited with use of 811LM/813LM, HomeLink compatible.
          1. Transmits 310 MHz, 315 MHz, 390 MHz.
      15. Inherent Reversing Sensor: Detects obstructions or increased loads. Reverses gate when closing or stops/reverses the gate when opening.
      16. Electronic Limits: Maintains accurate limit position throughout travel, even after using the manual disconnect.
      17. Dual-gate operation capabilities to allow 2 separate gate operators to operate in unison at a single entrance.
      18. Wireless Dual Gate Operation: Built-in wireless communication will operate primary and secondary operator without having to run a communication wire.
          1. Support Through-beam photo eye in wireless dual-gate setup. Attach emitter and receiver to operators, eliminating communication wire between them.
      19. PosiLock: Automatically powers the operator and returns a gate to the closed position when gate is pushed off of its closed limits.
      20. Bi-Part Delay: Selectable feature for dual-gate applications. Firmware monitors speed and position of each gate and adjusts speed as necessary to ensure both the gates close at the same time.
      21. Synchronized Close: Selectable feature for dual-gate applications with curved driveways. Monitors speed and position of each gate. Adjusts speed as necessary ensuring gates close at the same time.
      22. LED Diagnostic Display: Simplifies installation and troubleshooting.
      23. Colored Terminal Blocks: Easy identification of safety and fire department inputs.
      24. Programmable Auxiliary Relays: 2 programmable relays with 6 settings each.
          1. Pre-warning or gate-in-motion sounder.
          2. Switch on/off devices at open or Close Limits or while gate is in motion.
          3. Tamper detection if gate is pushed off Close Limit.
          4. Cycle quantity feedback.
          5. Red/Green light to control gate traffic.
      25. Quick Close, Anti-Tailgate: Secures property, preventing unauthorized access.
      26. Sequenced Access Management: Capable of sequentially controlling the operator in tandem with barrier gate.
      27. Plug-in Loop Detector Inputs: Programmed inputs for shadow, interrupt and exit.
      28. Alarm Reset Button: Instantly resets the built-in safety alarm siren.
      29. Fire Department Compliant: Selectable settings allow gate to auto open on power failure or battery depletion.
      30. Surge Suppression: Industrial strength on high and low voltage outputs. Protects against lightning strikes at a 50 ft (15240 mm) radius.
      31. Keyed Manual Disconnect: Simple-to-use disconnect allows gate to be operated manually and maintain limit position once re-engaged.
      32. Operating Temperature Range:
          1. Without Heater: Minus 4 - 140 degrees F (Minus 20 - 60 degrees C).
          2. With Optional Heater: Minus 40 - 140 degrees F (Minus 40 - 60 degrees C).
      33. Accessories:

\*\* NOTE TO SPECIFIER \*\* Unit comes with MyQ Enabled Technology. Delete accessories not required.

* + - * 1. MyQ enabled Accessories:

828LM Internet Gateway: Allows remote monitoring from internet-enabled computer or smartphone.

829LM Garage and Gate Monitor: Allows remote monitoring and operation.

823LM Remote Light Switch: Controls light remotely.

825LM Remote Light Control: Allows remote monitoring and operation.

* + - * 1. Safety Monitoring Devices:

Monitored Photo Eyes and Wireless Edge Kits.

LMRRUL Reflective Photo Eyes.

LMTBUL Thru-Beam Photo Eyes.

LMWEKITU Wireless Edge Kit with Transmitter and Receiver.

LMWETXU Wireless Edge Transceiver.

Wired Monitored Edges. All require use of LMWEKITU.

S50 Small Profile Monitored Edge.

L50 Large Profile Monitored Edge.

* + - * 1. LOOPDETLM Plug-in Loop Detector.
        2. KPW250 - Wireless Commercial Keypad.
        3. 892LT 2-Button Security+ 2.0 Learning Remote Control.
        4. 894LT 4-Button Security+ 2.0 Learning Remote Control.
        5. 811LM 1-Button Encrypted DIP Remote Control.
        6. 813LM 3-Button Encrypted DIP Remote Control.
        7. IPAC - Internet Protocol Access Control Entry System.
        8. EL2000SS Stainless Steel Commercial and Gated Community Telephone Entry System.
        9. Star1000 Commercial Access Control Receiver.
        10. PPWR Passport Receiver with Security+ 2.0 Technology.
        11. PPV1 Passport 1-Button Remote.
        12. PPK1 Passport 1-Button Mini Remote.
        13. KPR2000 Single Access Remote Control Keypad and Proximity Reader.
        14. MG1300 Maglock. 1,300 pound (590 kg) holding force.
        15. MPEL: Mounting plate for post mount.
        16. HTR Heater Kit.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + 1. Gate Operators: HDSL24UL Heavy Duty Brushless 24 VDC Variable Speed Commercial Slide Gate Operator.
       1. HDSL24UL Slide Gate Operator.
       2. Compliance: UL Listed. UL 325, UL 991 and CSA C22.2 No. 247 standards.
          1. Intended for use in Class I, II, III and IV vehicular slide gate applications.
       3. Monitored Safety Inputs: 3 inputs per board, main board and expansion board totaling 6 inputs with any combination of up to:
          1. Main Board:

1 Monitored Close Photo Eye input.

1 Monitored Open Photo Eye input.

1 Monitored Open Safety Edge or Open Photo Eye input.

* + - * 1. Expansion Board:

2 Monitored Safety Edge or Photo Eye inputs, selectable for Open or Close.

1 Monitored Photo Eye input, selectable for Open or Close.

* + - * 1. 8 Monitored edges available when wireless edge kit Model LMWEKITU is added.
      1. Electrical Power Requirements:

\*\* NOTE TO SPECIFIER \*\* Delete power option not required.

* + - * 1. 115 VAC, single phase.
        2. 240 VAC, single phase.
      1. Motor: 24 VDC Brushless, with soft start/stop and variable speed operation.
         1. Duty cycle: Continuous duty.
      2. Capacity: 75 ft (22860 mm) gate at 3,000 lbs (1,360 kg).
      3. Recommended Cycles per Day: Continuous duty.
      4. Gate Travel Speed: Variable - 6 to 12 inches (152 mm-305 mm) per second.
      5. Warranty: 5 years for commercial applications, 7 years for single-home applications.
      6. Wormgear - Direct Drive: Commercial oil bath gearbox with 40:1 wormgear running in synthetic oil bath.
      7. Battery Backup: Power Management system draws 14.8 mA when gate is idle with remote controls programmed. 45 cycles with two 7 Ah batteries or 190 cycles with two 33 Ah batteries.
      8. Standby Time: Up to 120 days of standby power in event of a power loss with two 7 Ah batteries or 180 days with two 33 Ah batteries (excluding accessories).
      9. Solar Capable: See daily solar cycle chart.
      10. Accessory Electrical Power Requirements: 24V DC 1 Amp output, switched and unswitched power.
      11. Chassis: Constructed with 1/4 inch (6mm) black powder coated steel for rust prevention.
      12. Cover: High-density, UV-resistant polycarbonate one-piece cover.
      13. Internet Connectivity: MyQ Technology.
          1. 902 to 928 MHz.
          2. 50 channel FHSS, Frequency Hopping Spread Spectrum.
          3. 828LM Internet Gateway enables monitoring and control of gate operators via internet-enabled smartphone, tablet or computer.
          4. Provides two-way communication between gate operator and MyQ accessories to enable remote open, close and monitoring of gate.
      14. Receiver: Security+ 2.0, 3 channel on-board receiver, holds up to 50 remote controls, unlimited with use of 811LM/813LM, HomeLink compatible.
          1. Transmits 310 MHz, 315 MHz, 390 MHz.
      15. Inherent Reversing Sensor: Detects obstructions or increased loads. Reverses gate when closing or stops/reverses the gate when opening.
      16. Electronic Limits: Maintains accurate limit position throughout travel, even after using the manual disconnect.
      17. Dual-gate operation capabilities to allow 2 separate gate operators to operate in unison at a single entrance.
      18. Wireless Dual Gate Operation: Built-in wireless communication will operate primary and secondary operator without having to run a communication wire.
          1. Support Through-beam photo eye in wireless dual-gate setup. Attach emitter and receiver to operators, eliminating communication wire between them.
      19. PosiLock: Automatically powers the operator and returns a gate to the closed position when gate is pushed off of its closed limits.
      20. Bi-Part Delay: Selectable feature for dual-gate applications. Firmware monitors speed and position of each gate and adjusts speed as necessary to ensure both the gates close at the same time.
      21. Synchronized Close: Selectable feature for dual-gate applications with curved driveways. Monitors speed and position of each gate. Adjusts speed as necessary ensuring gates close at the same time.
      22. LED Diagnostic Display: Simplifies installation and troubleshooting.
      23. Colored Terminal Blocks: Easy identification of safety and fire department inputs.
      24. Programmable Auxiliary Relays: 4 programmable relays with 6 settings each.
          1. Pre-warning or gate-in-motion sounder.
          2. Switch on/off devices at open or Close Limits or while gate is in motion.
          3. Tamper detection if gate is pushed off Close Limit.
          4. Cycle quantity feedback.
          5. Red/Green light to control gate traffic.
      25. Quick Close, Anti-Tailgate: Secures property, preventing unauthorized access.
      26. Sequenced Access Management: Capable of sequentially controlling the operator in tandem with barrier gate.
      27. Plug-in Loop Detector Inputs: Programmed inputs for shadow, interrupt and exit.
      28. Alarm Reset Button: Instantly resets the built-in safety alarm siren.
      29. Fire Department Compliant: Selectable settings allow gate to auto open on power failure or battery depletion.
      30. Surge Suppression: Industrial strength on high and low voltage outputs. Protects against lightning strikes at a 50 ft (15240 mm) radius.
      31. Lockable External Manual Disconnect: Simple-to-use disconnect allows gate to be operated manually and maintain limit position once re-engaged.
      32. Operating Temperature Range:
          1. Without Heater: Minus 4 - 140 degrees F (Minus 20 - 60 degrees C).
          2. With Optional Heater: Minus 40 - 140 degrees F (Minus 40 - 60 degrees C).
      33. Accessories:

\*\* NOTE TO SPECIFIER \*\* Unit comes with MyQ Enabled Technology. Delete accessories not required.

* + - * 1. MyQ enabled Accessories:

828LM Internet Gateway: Allows remote monitoring from internet-enabled computer or smartphone.

829LM Garage and Gate Monitor: Allows remote monitoring and operation.

823LM Remote Light Switch: Controls light remotely.

825LM Remote Light Control: Allows remote monitoring and operation.

* + - * 1. Safety Monitoring Devices:

Monitored Photo Eyes and Wireless Edge Kits.

LMRRUL Reflective Photo Eyes.

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LMWEKITU Wireless Edge Kit with Transmitter and Receiver.

LMWETXU Wireless Edge Transceiver.

Wired Monitored Edges. All require use of LMWEKITU.

S50 Small Profile Monitored Edge.

L50 Large Profile Monitored Edge.

* + - * 1. LOOPDETLM Plug-in Loop Detector.
        2. KPW250 - Wireless Commercial Keypad.
        3. 892LT 2-Button Security+ 2.0 Learning Remote Control.
        4. 894LT 4-Button Security+ 2.0 Learning Remote Control.
        5. 811LM 1-Button Encrypted DIP Remote Control.
        6. 813LM 3-Button Encrypted DIP Remote Control.
        7. IPAC - Internet Protocol Access Control Entry System.
        8. EL2000SS Stainless Steel Commercial and Gated Community Telephone Entry System.
        9. Star1000 Commercial Access Control Receiver.
        10. PPWR Passport Receiver with Security+ 2.0 Technology.
        11. PPV1 Passport 1-Button Remote.
        12. PPK1 Passport 1-Button Mini Remote.
        13. KPR2000 Single Access Remote Control Keypad and Proximity Reader.
        14. MG1300 Maglock. 1,300 pound (590 kg) holding force.
        15. MPEL: Mounting plate for post mount.
        16. HTR Heater Kit.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + 1. Gate Operators: HDSW24UL Extra heavy duty variable speed Swing Gate Operator.
       1. HDSW24UL Swing Gate Operator.
       2. Compliance: UL Listed. UL 325, UL 991 and CSA C22.2 No. 247 standards.
          1. Intended for use in Class I, II, III and IV vehicular swing gate applications.
       3. Monitored Safety Inputs: 3 inputs per board; main board and expansion board totaling 6 inputs with any combination of up to:
          1. Main Board:

1 Monitored Close Photo Eye input.

1 Monitored Open Photo Eye input.

1 Monitored Open Safety Edge or Open Photo Eye input.

* + - * 1. Expansion Board:

2 Monitored Safety Edge or Photo Eye inputs, selectable for Open or Close.

1 Monitored Photo Eye input, selectable for Open or Close.

* + - * 1. 8 Monitored edges available when Model LMWEKITU is added.
      1. Electrical Power Requirements:

\*\* NOTE TO SPECIFIER \*\* Delete power option not required.

* + - * 1. 115 VAC, single phase.
        2. 240 VAC, single phase.
      1. Motor: Brushless 24V DC, 1.5 HP peak with soft start/stop operation. Duty cycle: Continuous duty.
      2. Capacity:
         1. Standard arm: 14 ft (4267 mm) gate at 2,800 lbs (1270 kg) or 22 ft (6706 mm) gate at 1,500 lbs (680 kg)
         2. Long arm: 16 ft (4877 mm) at 4,500 lbs (2041 kg) or 22 ft (6706 mm) at 2,500 lbs (1134 kg).
      3. Recommended Cycles per Day: Continuous duty.
      4. Gate Travel Speed: 90 degree opening in 12 to 25 seconds.
      5. Warranty: 5 years for commercial applications, 7 years for single-home applications.
      6. Wormgear reduction - Direct Drive: Direct drive commercial oil bath gearbox with 1600:1 wormgear reduction running in synthetic oil bath. Hardened output shafts designed for continuous duty applications with frequent loop reversals.
      7. Battery Backup: Power Management system draws 14.8 mA when gate is idle with remote controls programmed. 45 cycles with two 7 AH batteries or 307 cycles with two 33 AH batteries.
      8. Standby Time: Up to 120 days of standby power in the event of a power loss with two 7 AH batteries or 180 days with two 33 AH batteries, excluding accessories.
      9. Solar Capable: See daily solar cycle chart.
      10. Accessory Electrical Power Requirements: 24V DC 1 Amp output, switched and unswitched power.
      11. Chassis: Constructed with 1/4 inch (6mm) black powder coated steel for rust prevention.
      12. Cover: High-density, UV-resistant polycarbonate two-piece cover.
      13. Internet Connectivity: MyQ Technology.
          1. 902 to 928 MHz.
          2. 50-channel FHSS, Frequency Hopping Spread Spectrum.
          3. 828LM Internet Gateway enables monitoring and control of gate operators via internet-enabled smartphone, tablet or computer.
          4. Provides two-way communication between gate operator and MyQ accessories to enable remote open, close and monitoring of gate.
      14. Receiver: Security+ 2.0, 3 channel on-board receiver, holds up to 50 remote controls, unlimited with use of 811LM/813LM, HomeLink compatible.
          1. Transmits 310 MHz, 315 MHz, 390 MHz.
      15. Inherent Reversing Sensor: Detects obstructions or increased loads. Reverses gate when closing or stops/reverses the gate when opening.
      16. Electronic Limits: Maintains accurate limit position throughout travel, even after using the manual release handle.
      17. Dual-gate operation capabilities to allow 2 separate gate operators to operate in unison at a single entrance.
      18. Wireless Dual Gate Operation: Built-in wireless communication will operate primary and secondary operator without having to run a communication wire.
          1. Support Through-beam photo eye in wireless dual-gate setup. Attach emitter and receiver to operators, eliminating communication wire between them.
      19. Soft Stop and Start during mid-travel reversal extends operator life under high-cycle, heavy gate use.
      20. Bi-Part Delay: Selectable feature for dual-gate applications. Firmware monitors speed and position of each gate and adjusts speed as necessary to ensure primary gate closes last, avoiding potential damage to the gate.
      21. Synchronized Close: Selectable feature for dual-gate applications with curved driveways. Monitors speed and position of each gate. Adjusts speed as necessary ensuring gates close at the same time.
      22. LED Diagnostic Display: Simplifies installation and troubleshooting.
      23. Colored Terminal Blocks: Easy identification of safety and fire department inputs.
      24. Programmable Auxiliary Relays: 4 programmable relays with 6 settings each.
          1. Pre-warning or gate-in-motion sounder.
          2. Switch on/off devices at open or Close Limits or while gate is in motion.
          3. Tamper detection if gate is pushed off Close Limit.
          4. Cycle quantity feedback.
          5. Red/Green light to control gate traffic.
      25. Quick Close, Anti-Tailgate: Quickly secures property, preventing unauthorized access.
      26. Sequenced Access Management: Capable of sequentially controlling the operator in tandem with barrier gate.
      27. Plug-in Loop Detector Inputs: Programmed inputs for shadow, interrupt and exit.
      28. Alarm Reset Button: Instantly resets the built-in safety alarm siren.
      29. Fire Department Compliant: Selectable settings allow gate to auto open on power failure or battery depletion.
      30. Surge Suppression: Industrial strength on high and low voltage outputs. Protects against lightning strikes at a 50 ft (15240 mm) radius.
      31. Manual Release: Simple-to-use release handle allows gate to be operated manually and maintain limit position once re-engaged.
      32. Operating Temperature Range:
          1. Without Heater: Minus 4 - 140 degrees F (Minus 20 - 60 degrees C).
          2. With Optional Heater: Minus 40 - 140 degrees F (Minus 40 - 60 degrees C)
      33. Accessories:

\*\* NOTE TO SPECIFIER \*\* Unit comes with MyQ Enabled Technology. Delete accessories not required.

* + - * 1. MyQ Enabled Accessories:

828LM Internet Gateway: Allows remote monitoring from Internet-enabled computer or smartphone.

829LM Garage and Gate Monitor: Allows remote monitoring and operation.

823LM Remote Light Switch: Controls light remotely.

825LM Remote Light Control: Allows remote monitoring and operation.

\*\* NOTE TO SPECIFIER \*\* Delete optional accessories if not required.

* + - * 1. Safety Monitoring Devices:

Monitored Photo Eyes and Wireless Edge Kits.

LMRRUL Reflective Photo Eyes.

LMTBUL Thru-Beam Photo Eyes.

LMWEKITU Wireless Edge Kit with Transmitter and Receiver.

LMWETXU Wireless Edge Transceiver.

Wired Monitored Edges: All require use of LMWEKITU.

S50 Small Profile Monitored Edge.

L50 Large Profile Monitored Edge.

* + - * 1. LOOPDETLM Plug-in Loop Detector.
        2. KPW250 Wireless Commercial Keypad.
        3. 892LT 2-Button Security+ 2.0 Learning Remote Control.
        4. 894LT 4-Button Security+ 2.0 Learning Remote Control.
        5. 811LM 1-Button Encrypted DIP Remote Control.
        6. 813LM 3-Button Encrypted DIP Remote Control.
        7. IPAC Internet Protocol Access Control Entry System.
        8. EL2000SS Stainless Steel Commercial and Gated Community Telephone Entry System.
        9. Star1000 Commercial Access Control Receiver.
        10. PPWR Passport Receiver with Security+ 2.0 Technology.
        11. PPV1 Passport 1-Button Remote.
        12. PPK1 Passport 1-Button Mini Remote.
        13. KPR2000 Single Access Remote Control Keypad and Proximity Reader.
        14. MG1300 Maglock. 1,300 pound (590 kg) holding force.
        15. MPEL: Mounting plate for post mount.
        16. HTR Heater Kit.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + 1. Gate Operators: RSL12UL Residential/Light Commercial DC Slide Gate Operator.
       1. RSL12UL Slide Gate Operator.
       2. Compliance: UL Listed.UL 325, UL 991 and CSA C22.2 No. 247 standards.
          1. Intended for use in Class I, II, III and IV vehicular slide gate applications.
       3. Monitored Safety Inputs: 3 inputs per board, main board and expansion board totaling 6 inputs with any combination of up to:
          1. Main Board:

1 Monitored Close Photo Eye input.

1 Monitored Open Photo Eye input.

1 Monitored Open Safety Edge or Open Photo Eye input.

* + - * 1. 8 Monitored edges available when Model LMWEKITU is added.
      1. Electrical Power Requirements: 115 VAC, single phase.
      2. Motor: 12V DC, with soft start/stop operation.
      3. Capacity: 25 ft (7600 mm) gate at 800 lbs (363 kg).
      4. Recommended Cycles per Day: 120.
      5. Gate Travel Speed: 10 inches (254 mm) per second.
      6. Warranty: 3 years.
      7. Wormgear Reduction: 15:1 reduction. Running in synthetic oil bath.
      8. Battery Backup: Power Management system draws 5.7 mA when gate is idle with remote controls programmed. 281 cycles with two 7 AH batteries.
      9. Standby Time: Up to 126 days of standby power in the event of a power loss (excluding accessories).
      10. Solar Capable: See daily solar cycle chart.
      11. Accessory Electrical Power Requirements: 24V DC 500 mA output, switched and unswitched power.
      12. Chassis: Constructed with 1/4 inch (6mm) gold zinc-plated steel for rust prevention.
      13. Cover: High-density, UV-resistant polyethylene cover.
      14. Internet Connectivity: MyQ Technology.
          1. 902 to 928 MHz.
          2. 50-channel FHSS, Frequency Hopping Spread Spectrum.
          3. 828LM Internet Gateway enables monitoring and control of gate operators via internet-enabled smartphone, tablet or computer.
          4. Provides two-way communication between gate operator and MyQ accessories to enable remote open, close and monitoring of gate.
      15. Receiver: Security+ 2.0, 3 channel on-board receiver, holds up to 50 remote controls, unlimited with use of 811LM/813LM, HomeLink compatible.
          1. Transmits 310 MHz, 315 MHz, 390 MHz.
      16. Inherent Reversing Sensor: Detects obstructions or increased loads. Reverses gate when closing or stops/reverses the gate when opening.
      17. Electronic Limits: Maintains accurate limit position throughout travel, even after using the manual disconnect.
      18. Dual-gate operation capabilities to allow 2 separate gate operators to operate in unison at a single entrance.
      19. Wireless Dual Gate Operation: Built-in wireless communication will operate primary and secondary operator without having to run a communication wire.
          1. Support Through-beam photo eye in wireless dual-gate setup. Attach emitter and receiver to operators, eliminating communication wire between them.
      20. PosiLock: Automatically powers the operator and returns a gate to the closed position when gate is pushed off of its closed limit.
      21. Bi-Part Delay: Selectable feature for dual-gate applications. Firmware monitors speed and position of each gate and adjusts speed as necessary to ensure both the gates close at the same time.
      22. Synchronized Close: Selectable feature for dual-gate applications with curved driveways. Monitors speed and position of each gate. Adjusts speed as necessary ensuring gates close at the same time.
      23. LED Diagnostic Display: Simplifies installation and troubleshooting.
      24. Colored Terminal Blocks: Easy identification of safety and fire department inputs.
      25. Alarm Reset Button: Instantly resets the built-in safety alarm siren.
      26. Fire Department Compliant: Selectable settings allow gate to auto open on power failure or battery depletion.
      27. Surge Suppression: Industrial strength on high and low voltage outputs. Protects against lightning strikes at a 50 ft (15240 mm) radius.
      28. Keyed Manual Disconnect: Simple-to-use disconnect allows gate to be operated manually and maintain limit position once re-engaged.
      29. Operating Temperature Range:
          1. Without Heater: Minus 4 - 140 degrees F (Minus 20 - 60 degrees C).
          2. With Optional Heater: Minus 40 - 140 degrees F (Minus 40 - 60 degrees C).
      30. Accessories:

\*\* NOTE TO SPECIFIER \*\* Unit comes with MyQ Enabled Technology. Delete accessories not required.

* + - * 1. MyQ Enabled Accessories:

828LM Internet Gateway: Allows remote monitoring from Internet-enabled computer or smartphone.

829LM Garage and Gate Monitor: Allows remote monitoring and operation.

823LM Remote Light Switch: Controls light remotely.

825LM Remote Light Control: Allows remote monitoring and operation.

\*\* NOTE TO SPECIFIER \*\* Delete optional accessories if not required.

* + - * 1. Safety Monitoring Devices:

Monitored Photo Eyes and Wireless Edge Kits.

LMRRUL Reflective Photo Eyes.

LMTBUL Thru-Beam Photo Eyes.

LMWEKITU Wireless Edge Kit with Transmitter and Receiver.

LMWETXU Wireless Edge Transceiver.

Wired Monitored Edges. All require use of LMWEKITU.

S50 Small Profile Monitored Edge.

L50 Large Profile Monitored Edge.

* + - * 1. KPW5 Wireless Commercial Keypad.
        2. KPW250 Wireless Commercial Keypad.
        3. SP10W12V: 10W Solar Panel Kit.
        4. MG1300 Maglock. 1,300 pound (590 kg) holding force.
        5. 892LT 2-Button Security+ 2.0 Learning Remote Control.
        6. 894LT 4-Button Security+ 2.0 Learning Remote Control.
        7. 811LM 1-button Encrypted DIP Remote Control.
        8. 813LM 3-Button Encrypted DIP Remote Control.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + 1. Gate Operators: SL3000 Series Commercial Slide Gate Operators.

\*\* NOTE TO SPECIFIER \*\* Delete models not required.

* + - 1. SL3000501UL Commercial Slide Gate Operator for high-traffic applications.
         1. High Cycle High Temperature 1/2 HP Continuous Duty Motor with Class H High Temperature Insulation.
         2. Maximum Gate Weight: 1,000 lbs (454 kg.).
         3. Maximum Gate Length: 37 ft (11.2 m).
         4. Recommended Cycles/Hour: Continuous duty.
      2. SL3000101UL Commercial Slide Gate Operator with 1 HP capacity for heavy-duty applications.
         1. Two High Cycle High Temperature 1/2 HP motors with Class H Insulation and heavy-duty transmission. For large, heavy wrought-iron gates.
         2. Pulling Torque: 210 lbs (95.2 kg) of pulling torque.
         3. Maximum Gate Weight: 2,000 lbs (907.2 kg).
         4. Maximum Gate Length: 37 ft (11.3 m).
         5. Recommended Cycles/Hour: Continuous duty.
      3. Warranty: 5 years for commercial applications, 7 years for residential applications.
      4. Compliance: UL Listed. UL 325, UL 991 and CSA C22.2 No. 247 standards.
         1. Intended for use in Class I, II, III and IV vehicular slide gate applications.
      5. Monitored Safety Inputs: 3 inputs per board, main board and expansion board, totaling 6 inputs with any combination of up to:
         1. Main Board:

1 Monitored Close Photo Eye input.

1 Monitored Open Photo Eye input.

1 Monitored Open Safety Edge or Open Photo Eye input.

* + - * 1. Expansion Board:

2 Monitored Safety Edge or Photo Eye inputs, selectable for Open or Close.

1 Monitored Photo Eye input, selectable for Open or Close.

* + - * 1. 8 Monitored edges available when Model LMWEKITU is added.
      1. Electrical Power Requirements: 115V, single phase.
         1. Accessory Electrical Power Requirements: 24V DC 500 mA output, switched or unswitched power.
      2. Wormgear Reduction: Commercial oil bath gearboxes. 30:1 reduction.
      3. Gate Traveling Speed: 12 inches (305 mm) per second.
      4. Chassis: 1/4 inch (6 mm) sanded, welded and gold zinc-plated sheet metal.
      5. Finishing: Metal parts are gold zinc-plated for rustproof protection.
      6. Cover: High-density UV-resistant polyethylene material.
      7. Internet Connectivity: MyQ Technology.
         1. 902 to 928 MHz.
         2. 50-channel FHSS, Frequency Hopping Spread Spectrum.
         3. 828LM Internet Gateway enables monitoring and control of gate operators via internet-enabled smartphone, tablet or computer.
         4. Provides two-way communication between gate operator and MyQ accessories to enable remote open, close and monitoring of gate.
      8. Receiver: Security+ 2.0, 3 channel on-board radio receiver, holds up to 50 remote controls, unlimited with use of 811LM/813LM, HomeLink compatible.
         1. Transmits 310 MHz, 315MHz, 390 MHz.
      9. Inherent Reversing Sensor: Detects obstructions or increased loads. Reverses gate when closing or stops/reverses the gate when opening.
      10. Lockable External Manual Disconnect: Allows gate to be opened in the event of a power loss without removing the operator cover. Connect to optional Fire Department Box to meet local fire code.
      11. Wireless Dual Gate Operation: Built-in wireless communication will operate primary and secondary operator without having to run a communication wire.
          1. Support Through-beam photo eye in wireless dual-gate setup. Attach emitter and receiver to operators, eliminating communication wire between them.
      12. Bi-Part Delay: Selectable feature for dual-gate applications. Dial provides manual adjustment to control delay as necessary to ensure primary gate closes last, avoiding potential damage to the gate.
      13. LED Diagnostic Display: Simplifies installation and troubleshooting.
      14. Colored Terminal Blocks: Easy identification of safety and fire department inputs.
      15. Programmable Auxiliary Relays: 2 programmable relays with 6 settings each.
          1. Pre-warning or gate-in motion sounder.
          2. Switch on/off devices at open or Close Limits or while gate is in motion.
          3. Tamper detection if gate is pushed off Close Limit.
          4. Cycle quantity feedback.
          5. Red/Green Light to control gate traffic.
      16. Quick Close, Anti-Tailgate: Secures property, preventing unauthorized access.
      17. Sequenced Access Management: Capable of sequentially controlling the operator in tandem with a barrier gate.
      18. Surge/Lightning Protection: Industrial surge protection on high and low voltage inputs. Protects against lightning strikes at a 50 ft (15.2 m) radius.
      19. Plug-in loop detector inputs: Programmed inputs for shadow, interrupt and exit.
      20. External Alarm Reset Button: Allows for quick reset of the gate operator when the alarm has been activated.
      21. Warning Device: UL 325 compliant entrapment warning alarm has ability to be set for pre-operation warning; provides 3-second warning prior to and during gate movement.
      22. Mechanical Limit System: Maintains accurate gate position throughout gate travel, even after using manual disconnect.
      23. Operating Temperature Range:
          1. Without Heater: Minus 4 - 140 degrees F (Minus 20 - 60 degrees C).
          2. With Optional Heater: Minus 4 to 140 degrees F (Minus 40 - 60 degrees C)
      24. Accessories:

\*\* NOTE TO SPECIFIER \*\* Unit comes with MyQ Enabled Technology. Delete accessories not required.

* + - * 1. MyQ Enabled Accessories:

828LM Internet Gateway: Allows remote monitoring from internet-enabled computer, tablet or smartphone.

829LM Garage and Gate Monitor: Allows remote monitoring and operation.

823LM Remote Light Switch: Controls light remotely.

825LM Remote Light Control: Allows remote monitoring and operation.

* + - * 1. Safety Monitoring Devices:

Monitored Photo Eyes and Wireless Edge Kits.

LMRRUL Reflective Photo Eyes.

LMTBUL Thru-Beam Photo Eyes.

LMWEKITU Wireless Edge Kit with Transmitter and Receiver.

LMWETXU Wireless Edge Transceiver.

Wired Monitored Edges. All require use of LMWEKITU.

S50 Small Profile Monitored Edge.

L50 Large Profile Monitored Edge.

* + - * 1. LOOPDETLM Plug-in Loop Detector.
        2. KPW250 - Wireless Commercial Keypad.
        3. 892LT 2-Button Security+ 2.0 Learning Remote Control.
        4. 894LT 4-Button Security+ 2.0 Learning Remote Control.
        5. 811LM 1-Button Encrypted DIP Remote Control.
        6. 813LM 3-Button Encrypted DIP Remote Control.
        7. IPAC - Internet Protocol Access Control Entry System.
        8. EL2000SS Stainless Steel Commercial and Gated Community Telephone Entry System.
        9. Star1000 Commercial Access Control Receiver.
        10. PPWR Passport Receiver with Security+ 2.0 Technology.
        11. PPV1 Passport 1-Button Remote.
        12. PPK1 Passport 1-Button Mini Remote.
        13. KPR2000 Single Access Remote Control Keypad and Proximity Reader.
        14. HTRNB Heater Kit.
        15. Power Wheels, 4 inch (101 mm) or 6 inch (152 mm) heat treated wheels.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + 1. Gate Operators: SL595 Industrial Gear-Driven Slide Gate Operator.
       1. Compliance: UL Listed. UL 325, UL 991 and CSA C22.2 No. 247 standards.
          1. Intended for use in Class I, II, III and IV vehicular slide gate applications.
       2. Monitored Safety Inputs: 3 inputs per board, main board and expansion board, totaling 6 inputs with any combination of up to:
          1. Main Board:

1 Monitored Close Photo Eye input.

1 Monitored Open Photo Eye input.

1 Monitored Open Safety Edge or Open Photo Eye input.

* + - * 1. Expansion Board:

2 Monitored Safety Edge or Photo Eye inputs, selectable for Open or Close.

1 Monitored Photo Eye input, selectable for Open or Close.

* + - * 1. 8 Monitored edges available when Model LMWEKITU is added.
      1. Warranty: 2 years.
      2. Operator Speed: 12 inches (305 mm) per second.
      3. Electrical Power Requirements:
         1. 115/208/230V AC, single phase, 60 Hz.
         2. 208/230/460/575V AC, 3-phase, 60 Hz.
      4. Accessory Electrical Power Requirements: 24 VAC.
         1. Main Board: 12 VAC, maximum 500mA.
         2. Terminal Strip:

2.2 A maximum for 115/208-230 VAC, single phase.

2.2 A maximum for 208/230-460 VAC, three phase.

1.3 A maximum for 575 VAC, three phase

* + - 1. Gear Reduction: 20:1 wormgear reducer in synthetic oil bath.

\*\* NOTE TO SPECIFIER \*\* Delete motor options not required.

* + - 1. Motor: Switchless 1 HP, continuous duty.
         1. Capacity: Supports gate lengths up to 70 ft (21.5 m) and gate weights up to 1,700 lbs (71 kg).
         2. Recommended Cycles per Hour: 25.
      2. Motor: Switchless 1-1/2 HP, continuous duty; 115/230V, single phase only.
         1. Capacity: Supports gate lengths up to 80 ft (24.4 m) and gate weights up to 2,100 lbs (953 kg).
         2. Recommended Cycles per Hour: 25.
      3. Motor: Switchless 2 HP, continuous duty; 208/230/460/575 V, 3 phase only.
         1. Capacity: Supports gate lengths up to 80 ft (27.4 m) and gate weights up to 2,500 lbs (1134 kg).
         2. Recommended Cycles per Hour: 25.
      4. Metal Frame: 7 gauge pre-galvanized steel.
      5. Chassis: Powder-coated galvanized steel.
      6. Enclosure: NEMA 3R enclosure; oil-tight, weatherproof NEMA 3R cabinet, lockable.
      7. Chain: No. 50 nickel-plated, 25 ft (7620 mm) supplied with each unit.
      8. Gearbox: All-weather.
      9. Internet Connectivity: MyQ Technology.
         1. 902 to 928 MHz.
         2. 50 channel FHSS, Frequency Hopping Spread Spectrum.
         3. 828LM Internet Gateway enables monitoring and control of gate operators via internet-enabled smartphone, tablet or computer.
         4. Provides two-way communication between gate operator and MyQ accessories to enable remote open, close and monitoring of gate.
      10. Receiver: Security+ 2.0, 3 channel on-board radio receiver, holds up to 50 remote controls, unlimited with use of 811LM/813LM, HomeLink compatible.
          1. Transmits 310 MHz, 315 MHz, 390 MHz.
      11. Inherent Reversing Sensor: Utilizes Current Sense and RPM Sensor to detect obstructions or increased loads. Reverses gate when closing or stops/reverses the gate when opening.
      12. Lockout/Tagout: Prevents power from being switched on when servicing operator. Safeguards workers from high voltage power.
      13. Wireless Dual Gate Operation: Built-in wireless communication will operate primary and secondary operator without having to run a communication wire.
          1. Support Through-beam photo eye in wireless dual-gate setup. Attach emitter and receiver to operators, eliminating communication wire between them.
      14. LED Diagnostic Display: Simplifies installation and troubleshooting.
      15. Colored Terminal Blocks: Easy identification of safety and fire department inputs.
      16. Programmable Auxiliary Relays: 2 programmable relays with 6 settings each.
          1. Pre-warning or gate-in motion sounder.
          2. Switch on/off devices at open or Close Limits or while gate is in motion.
          3. Tamper detection if gate is pushed off Close Limit.
          4. Cycle quantity feedback.
          5. Red/Green Light to control gate traffic.
      17. Quick Close, Anti-Tailgate: Secures property, preventing unauthorized access.
      18. Sequenced Access Management: Capable of sequentially controlling the operator in tandem with a barrier gate.
      19. Surge/Lightning Protection: Industrial Surge Protection on high and low voltage inputs. Protects against lightning strikes at a 50 ft (15.2 m) radius.
      20. Plug-in Loop Detector Inputs: Programmed inputs for shadow, interrupt and exit.
      21. External Alarm Reset Button: Allows for quick reset of the gate operator when the alarm has been activated.
      22. Warning Device: UL 325 compliant entrapment warning alarm has ability to be set for pre-operation warning; provides a 3-second warning prior to and during gate movement.
      23. Maximum Run Timer: Protects against damage to the gate and operator by limiting the unit's runt time to 120 seconds.
      24. Lockable External Manual Disconnect: Allows gate to be opened in the event of a power loss without removing the operator cover.
      25. Mechanical Braking: the mechanical braking system adds substantial gate position control at all points in travel. The solenoid-actuated b rake system also prevents the gate from being back-driven.
      26. Friction Clutch: Adjustable friction clutch helps protect gate and operator from damage should the gate meet an obstruction.
      27. Limit Settings: Driven limit nut switches are fully adjustable to provide precision, accuracy and reliability.
      28. Operating Temperature Range:
          1. Without Heater: Minus 4 - 140 degrees F (Minus 20 - 60 degrees C).
          2. With Optional Heater: Minus 4 to 140 degrees F (Minus 40 - 60 degrees C)
      29. Accessories:

\*\* NOTE TO SPECIFIER \*\* Unit comes with MyQ Enabled Technology. Delete accessories not required.

* + - * 1. MyQ Enabled Accessories:

828LM Internet Gateway: Allows remote monitoring from internet-enabled computer, tablet or smartphone.

829LM Garage and Gate Monitor: Allows remote monitoring and operation.

823LM Remote Light Switch: Controls light remotely.

825LM Remote Light Control: Allows remote monitoring and operation.

* + - * 1. Safety Monitoring Devices:

Monitored Photo Eyes and Wireless Edge Kits.

LMRRUL Reflective Photo Eyes.

LMTBUL Thru-Beam Photo Eyes.

LMWEKITU Wireless Edge Kit with Transmitter and Receiver.

LMWETXU Wireless Edge Transceiver.

Wired Monitored Edges. All require use of LMWEKITU.

S50 Small Profile Monitored Edge.

L50 Large Profile Monitored Edge.

* + - * 1. LOOPDETLM Plug-in Loop Detector.
        2. KPW250 - Wireless Commercial Keypad.
        3. 892LT 2-Button Security+ 2.0 Learning Remote Control.
        4. 894LT 4-Button Security+ 2.0 Learning Remote Control.
        5. 811LM 1-Button Encrypted DIP Remote Control.
        6. 813LM 3-Button Encrypted DIP Remote Control.
        7. IPAC - Internet Protocol Access Control Entry System.
        8. EL2000SS Stainless Steel Commercial and Gated Community Telephone Entry System.
        9. Star1000 Commercial Access Control Receiver.
        10. PPWR Passport Receiver with Security+ 2.0 Technology.
        11. PPV1 Passport 1-Button Remote.
        12. PPK1 Passport 1-Button Mini Remote.
        13. KPR2000 Single Access Remote Control Keypad and Proximity Reader.
        14. HTRNB Heater Kit.
        15. Power Wheels, 4 inch (101 mm) or 6 inch (152 mm) heat-treated wheels.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + 1. Gate Operators: SL585 Industrial Gear-Driven Slide Gate Operator.
       1. Compliance: UL Listed. UL 325, UL 991 and CSA C22.2 No. 247 standards.
          1. Intended for use in Class I, II, III and IV vehicular slide gate applications.
       2. Monitored Safety Inputs: 3 inputs per board, main board and expansion board totaling 6 inputs with any combination of up to:
          1. Main Board:

1 Monitored Close Photo Eye input.

1 Monitored Open Photo Eye input.

1 Monitored Open Safety Edge or Open Photo Eye input.

* + - * 1. Expansion Board:

2 Monitored Safety Edge or Photo Eye inputs, selectable for Open or Close.

1 Monitored Photo Eye input, selectable for Open or Close.

* + - * 1. 8 Monitored edges available when Model LMWEKITU is added.
      1. Warranty: 2 years.
      2. Operator Speed: 11 inches (279.4 mm) per second.

\*\* NOTE TO SPECIFIER \*\* Delete power requirements not required.

* + - 1. Electrical Power Requirements:
         1. 115/208/230 VAC, single phase, 60 Hz.
         2. 208/230/460/575 VAC, 3-phase, 60 Hz.
      2. Accessory Electrical Power Requirements: 24V AC.
         1. Main Board: 12V AC, maximum 500mA.
         2. Terminal Strip:

2.2 A maximum for 115/208-230 VAC, single phase.

2.2 A maximum for 208/230-460 VAC, three phase.

1.3 A maximum for 575 VAC, three phase.

* + - 1. Gear Reduction: 20:1 wormgear reducer in synthetic oil bath.

\*\* NOTE TO SPECIFIER \*\* Delete motor options not required.

* + - 1. Motor: Switchless 1/2 HP, continuous duty.
         1. Capacity: Supports gate lengths up to 45 ft (13 m) and gate weights up to 1,000 lbs (454 kg).
         2. Recommended Cycles per Hour: 20.
      2. Motor: Switchless 1 HP, continuous duty.
         1. Capacity: Supports gate lengths up to 70 ft (21 m) and gate weights up to 1,600 lbs (725 kg).
         2. Recommended Cycles per Hour: 20.
      3. Motor: Switchless 1-1/2 HP, continuous duty; 115/230V, single phase only.
         1. Capacity: Supports gate lengths up to 75 ft (23 m) and gate weights up to 1,900 lbs (862 kg).
         2. Recommended Cycles per Hour: 20.
      4. Metal Frame: 7 gauge pre-galvanized steel.
      5. Chassis: Powder-coated galvanized steel.
      6. Enclosure: Weather-resistant, lockable, 16-gauge steel cover.
      7. Chain: No. 50 nickel-plated, 25 ft (7620 mm) supplied with each unit.
      8. Gearbox: All-weather.
      9. Internet Connectivity: MyQ Technology.
         1. 902 to 928 MHz.
         2. 50 channel FHSS, Frequency Hopping Spread Spectrum.
         3. 828LM Internet Gateway enables monitoring and control of gate operators via internet-enabled smartphone, tablet or computer.
         4. Provides two-way communication between gate operator and MyQ accessories to enable remote open, close and monitoring of gate.
      10. Receiver: Security+ 2.0, 3 channel on-board radio receiver, holds up to 50 remote controls, unlimited with use of 811LM/813LM, HomeLink compatible.
          1. Transmits 310 MHz, 315 MHz, 390 MHz.
      11. Inherent Reversing Sensor: Utilizes Current Sense and RPM Sensor to detect obstructions or increased loads. Reverses gate when closing or stops/reverses the gate when opening.
      12. Lockout/Tagout: Prevents power from being switched on when servicing operator. Safeguards workers from high voltage power.
      13. Wireless Dual Gate Operation: Built-in wireless communication will operate primary and secondary operator without having to run a communication wire.
          1. Support Through-beam photo eye in wireless dual-gate setup. Attach emitter and receiver to operators, eliminating communication wire between them.
      14. LED Diagnostic Display: Simplifies installation and troubleshooting.
      15. Colored Terminal Blocks: Easy identification of safety and fire department inputs.
      16. Programmable Auxiliary Relays: 2 programmable relays with 6 settings each.
          1. Pre-warning or gate-in motion sounder.
          2. Switch on/off devices at open or Close Limits or while gate is in motion.
          3. Tamper detection if gate is pushed off Close Limit.
          4. Cycle quantity feedback.
          5. Red/Green Light to control gate traffic.
      17. Quick Close, Anti-Tailgate: Secures property, preventing unauthorized access.
      18. Sequenced Access Management: Capable of sequentially controlling the operator in tandem with a barrier gate.
      19. Surge/Lightning Protection: Industrial Surge Protection on high and low voltage inputs. Protects against lightning strikes at a 50 ft (15.2 m) radius.
      20. Plug-in Loop Detector Inputs: Programmed inputs for shadow, interrupt and exit.
      21. External Alarm Reset Button: Allows for quick reset of the gate operator when the alarm has been activated.
      22. Warning Device: UL 325 compliant entrapment warning alarm has ability to be set for pre-operation warning; provides a 3 second warning prior to and during gate movement.
      23. Maximum Run Timer: Protects against damage to the gate and operator by limiting the unit's runt time to 120 seconds.
      24. Lockable External Manual Disconnect: Allows gate to be opened in the event of a power loss without removing the operator cover.
      25. Mechanical Braking: the mechanical braking system adds substantial gate position control at all points in travel. The solenoid-actuated brake system also prevents the gate from being back-driven.
      26. Friction Clutch: Adjustable friction clutch helps protect gate and operator from damage should the gate meet an obstruction.
      27. Limit Settings: Driven limit nut switches are fully adjustable to provide precision, accuracy and reliability.
      28. Universal Footprint: Easily adapts operator to common footprints. Simplifies retrofit applications by adapting to pre-existing pads for Link, Stanley or operators.
      29. Operating Temperature Range:
          1. Without heater: Minus 4 - 140 degrees F (Minus 20 - 60 degrees C).
          2. With optional heater: Minus 4 - 140 degrees F (Minus 20 - 60 degrees C).
      30. MyQ Enabled Accessories:
          1. 828LM Internet Gateway: Allows remote monitoring from internet-enabled computer, tablet or smartphone.
          2. 829LM Garage and Gate Monitor: Allows remote monitoring and operation.
          3. 823LM Remote Light Switch: Controls light remotely.
          4. 825LM Remote Light Control: Allows remote monitoring and operation.
      31. Accessories: Safety Monitoring Devices:
          1. Monitored Photo Eyes and Wireless Edge Kits.

LMRRUL Reflective Photo Eyes.

LMTBUL Thru-Beam Photo Eyes.

LMWEKITU Wireless Edge Kit with Transmitter and Receiver.

LMWETXU Wireless Edge Transceiver.

* + - * 1. Wired Monitored Edges. All require use of LMWEKITU.

S50 Small Profile Monitored Edge.

L50 Large Profile Monitored Edge.

* + - 1. Accessories: Provide the optional accessories listed below.
         1. LOOPDETLM Plug-in Loop Detector.
         2. KPW250 - Wireless Commercial Keypad.
         3. 892LT 2-Button Security+ 2.0 Learning Remote Control.
         4. 894LT 4-Button Security+ 2.0 Learning Remote Control.
         5. 811LM 1-Button Encrypted DIP Remote Control.
         6. 813LM 3-Button Encrypted DIP Remote Control.
         7. IPAC - Internet Protocol Access Control Entry System.
         8. EL2000SS Stainless Steel Commercial and Gated Community Telephone Entry System.
         9. Star1000 Commercial Access Control Receiver.
         10. PPWR Passport Receiver with Security+ 2.0 Technology.
         11. PPV1 Passport 1-Button Remote.
         12. PPK1 Passport 1-Button Mini Remote.
         13. KPR2000 Single Access Remote Control Keypad and Proximity Reader.
         14. HTRNB Heater Kit.
         15. Power Wheels, 4 inch (101 mm) or 6 inch (152 mm) heat-treated wheels.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + 1. Gate Operators: MA Series High-Performance Commercial Barrier Gate Operators with Built-in Battery Backup.

\*\* NOTE TO SPECIFIER \*\* Delete model not required.

* + - 1. MA Mega Arm Barrier Gate Operators with plastic cover.
      2. MAT Mega Arm Barrier Gate Operators with aluminum cover.
      3. Compliance: UL Listed. UL 325, UL 991 and CSA C22.2 No. 247 standards.
         1. Intended for use in Class I, II, III and IV vehicular barrier gate applications.
      4. Warranty: 2 years for operator, 10 years for operator frame.
      5. Operation:
         1. Soft start/stop.
         2. Universal Controller: 8 inputs right or left-handed operation safety-stop.
         3. Anti-tailgate, quick-close features.
         4. Selectable Auto Open: 15 seconds after power failure or upon battery depletion barrier arm can be set to automatically open. 15 second delay helps reduce nuisance callbacks due to short power interruptions or brownouts.
      6. Operator Speed: Open or close speed of 2.5 seconds.

\*\* NOTE TO SPECIFIER \*\* Delete gate arms not required.

* + - 1. Gate Arm: Breakaway arm; held in place with breakaway retaining nuts. If arm is hit, it will break away and can be re-installed; can be set up for right or left-hand mount.
      2. Gate Arm: Arm one, articulating arm for low headroom environments.
      3. Gate Arm: Arm two, yellow.
      4. Gate Arm: Arm three, red/white retro-reflectorized DOT tape.

\*\* NOTE TO SPECIFIER \*\* Confirm with manufacturer that arm length is available with arm type selected. Delete gate arms-length not required.

* + - * 1. Gate Arm Length: 12 ft (3658 mm).
        2. Gate Arm Length: 17 ft (5182 mm).
      1. Gate Arms: Arm four, yellow padded arm, 12 ft (3658 mm) and 14 ft (4267 mm) long.
      2. Motor: 1/2 HP, 24V DC, 800 RPM motor, 6,000 cycles per day.
      3. Electrical Power Requirements: 120/220V AC.
      4. Accessory Electrical Power Requirements: 24V DC 500 mA Battery Backup for accessory power.
      5. Gear Reduction: 60:1 reducer in synthetic oil bath.
      6. Chassis: Powder-coated 1/4 inch (6 mm) aluminum alloy.
      7. Drive System: No. 80 gearbox.
      8. Built-in Receiver: Single remote control solution for gate access and additional access points. Ability to add up to 50 remote control.
      9. Magnetic Limit Sensors: Designed for high-cycle applications, contain no moving parts to wear out, provide reliable operation.
      10. Surge Protection: Built-in at point of incoming line voltage from power spikes, surges.
      11. Auxiliary Outlet: Powers accessories devices.
      12. Battery Backup: Provides operation during power outages to maintain traffic flow.
      13. Automatically resets to normal operation when power is restored; provides up to 900 full cycles with a 12 ft (3658 mm) arm.

\*\* NOTE TO SPECIFIER \*\* Delete optional accessories if not required.

* + - 1. Accessories: Provide the optional accessories listed below.
         1. Clutch: Allows arm to be manually pushed open. Arm automatically resets to normal closed position upon receiving activation. Ideal for areas that are concerned with vandals damaging arm.
         2. EL2000 Commercial and Gated Community Telephone Entry System.
         3. STAR1000 Commercial Access Control Receiver.
         4. 811LM 1-Button Encrypted DIP Remote Control.
         5. 813LM 3-Button Encrypted DIP Remote Control.
         6. PPWR Passport Receiver with Security+ 2.0 Technology.

PPV1 Passport 1-Button Remote.

PPK1 Passport 1-Button Mini Remote.

* + - * 1. KPR2000 Single Access Control Keypad and Proximity Reader.
        2. LD7LP Low-Power Loop Detector.
        3. 361LM 1-Button Remote Control.
        4. 363LM 3-Button Remote Control.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + 1. Gate Operators: MAS Series High-Speed Commercial Barrier Gate Operators with Built-in Battery Backup.

\*\* NOTE TO SPECIFIER \*\* Delete model not required.

* + - 1. MAS Mega Arm Barrier Gate Operators with plastic cover.
      2. MAST Mega Arm Barrier Gate Operators with aluminum cover.
      3. Compliance: UL Listed. UL 325, UL 991 and CSA C22.2 No. 247 standards.
         1. Intended for use in Class I, II, III and IV vehicular barrier gate applications.
      4. Warranty: 2 years.
      5. Operation:
         1. Soft start/stop.
         2. Universal Controller: 8 inputs right or left-handed operation safety-stop.
         3. Anti-tailgate, quick-close features.
         4. Selectable Auto Open: 15 seconds after power failure or upon battery depletion barrier arm can be set to automatically open. 15-second delay helps reduce nuisance callbacks due to short power interruptions or brownouts.
      6. Operator Speed: Open or close speed of 0.9 second.

\*\* NOTE TO SPECIFIER \*\* Delete gate arms not required.

* + - 1. Gate Arm: Breakaway arm; held in place with breakaway retaining nuts. If arm is hit, it will break away and can be re-installed; can be set up for right or left-hand mount.
      2. Gate Arm: Length 8 ft (2438 mm) long, yellow padded arm.
      3. Motor: 1/2 HP, 24V DC, 800 RPM motor, 10,000 cycles per day.
      4. Electrical Power Requirements: 120/220V AC.
      5. Accessory Electrical Power Requirements: 24 VDC 500 mA Battery Backup for accessory power.
      6. Gear Reduction: 60:1 wormgear reduction in synthetic oil bath.
      7. Chassis: Powder-coated 1/4 inch (6.35 mm) T-6 aluminum alloy.
      8. Drive System: No. 80 gearbox.
      9. Built-in Receiver: Single remote control solution for gate access and additional access points. Ability to add up to 50 remote controls.
      10. Magnetic Limit Sensors: Designed for high-cycle applications, contain no moving parts to wear out, provide reliable operation.
      11. Surge Protection: Built-in at point of incoming line voltage from power spikes, surges.
      12. Auxiliary Outlet: Powers accessories devices.
      13. Battery Backup: Provides operation during power outages to maintain traffic flow. Automatically resets to normal operation when power is restored. Up to 900 full cycles with a 12 ft (3658 mm) arm.

\*\* NOTE TO SPECIFIER \*\* Delete optional accessories if not required.

* + - 1. Accessories: Provide the optional accessories listed below.
         1. Clutch: Allows arm to be manually pushed open. Arm automatically resets to normal closed position upon receiving activation. Ideal for areas that are concerned with vandals damaging arm.
         2. EL2000 Commercial and Gated Community Telephone Entry System.
         3. STAR1000 Commercial Access Control Receiver.
         4. 811LM 1-Button Encrypted DIP Remote Control.
         5. 813LM 3-Button Encrypted DIP Remote Control.
         6. PPWR Passport Receiver with Security+ 2.0 Technology.

PPV1 Passport 1-Button Remote.

PPK1 Passport 1-Button Mini Remote.

* + - * 1. KPR2000 Single Access Control Keypad and Proximity Reader.
        2. LD7LP Low-Power Loop Detector.
        3. 361LM 1-ButtonRemote Control.
        4. 363LM 3-Button Remote Control.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + 1. Gate Operators: BG790 Industrial Barrier Gate Operator.
       1. Compliance: ETL Listed. UL 325, UL 991 and CSA C22.2 No. 247 standards.
          1. Intended for use in Class I, II, III and IV vehicular barrier gate applications.
       2. Warranty: 2 years.
       3. Operator Speed: 11 seconds opening time.

\*\* NOTE TO SPECIFIER \*\* Delete power option not required.

* + - 1. Electrical Power Requirements: 115/208/230 VAC, single phase, 60 Hz.

\*\* NOTE TO SPECIFIER \*\* Delete accessory power option not required.

* + - * 1. Accessory Electrical Power Requirements: One, 115 VAC.
        2. Accessory Electrical Power Requirements: One, 24 VAC.
      1. Electrical Power Requirements: 208/230/460/575 VAC, 3-phase, 60 Hz.
         1. Accessory Electrical Power Requirements: One, 24 VAC.
      2. Gear Reduction: 60:1 wormgear reducer in oil bath.
      3. Motor: 1/2 HP, continuous duty.
      4. Metal Frame: 11 gauge pre-galvanized steel.
      5. Gate Arms: Includes 24 ft (7315 mm) wishbone arm with black and white stripes and 2 counterweights.
      6. Enclosure: Powder-coated weather-resistant steel enclosure.

\*\* NOTE TO SPECIFIER \*\* Delete configuration not required.

* + - 1. Configuration: Standard.
      2. Configuration: Reverse cabinet modification: In the event of an obstruction close by the barrier gate the cabinet can be reversed to allow access to cabinet door.
      3. Control Inputs: Allows connection of optional external devices like loop detectors, photo eyes, telephone entry systems, access control systems and radio receivers.
      4. Limit Settings: Driven limit cams are fully adjustable.

\*\* NOTE TO SPECIFIER \*\* Delete optional accessories if not required.

* + - 1. Accessories: Optional accessories listed below.
         1. Dual-Gate Capability: Supports operation of 2 gate operators in unison at a single entrance, assuring consistent, simultaneous open/close cycle for both operators and is bi-part capable.
         2. Timer-to-Close: Programmable module can be set from 1 second to 17 minutes. Unit automatically closes when programmed time expires.
         3. Plug-in Style Loop Detectors: Operator incorporates 2-harness support system that accepts up to 2 plug-in loop detectors for exit or hold-open functions.
         4. Long-Distance Wiring Module: Allows mounting accessories or controls beyond 100 ft (30 m) from the operator.
         5. Flex Red Light Strip: 10 ft (3048 mm) long.
         6. Thermostatically Controlled Heater: For extreme cold environments.
         7. Single-Button Radio Modification: Enables radio control to open and close the barrier arm.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + 1. Gate Operators: HCTDCUL Series Heavy-Duty, High-Cycle Trolley Overhead Door/Gate Operators.

\*\* NOTE TO SPECIFIER \*\* Delete models not required.

* + - 1. HCTDCPKGUL08: 8 ft (2438 mm) tall door/gate.
      2. HCTDCPKGUL10: 10 ft (3048 mm) tall door/gate.
      3. HCTDCPKGUL12: 12 ft (3658 mm) tall door/gate.
      4. HCTDCPKGUL14: 14 ft (4267 mm) tall door/gate.
      5. HCTDCPKGUL16: 16 ft (4877 mm) tall door/gate.
      6. Compliance: UL Listed. UL 325, UL 991 and CSA C22.2 No. 247 standards.
         1. Intended for use in Class II, III and IV vehicular gate applications.
         2. Intended for use in commercial and industrial door applications.
      7. Monitored Safety Inputs: 3 inputs per board, main board and expansion board, totaling 6 inputs with any combination of up to:
         1. Main Board:

1 Monitored Close Photo Eye input.

1 Monitored Open Photo Eye input.

1 Monitored Open Safety Edge or Open Photo Eye input.

* + - * 1. Expansion Board:

2 Monitored Safety Edge or Photo Eye inputs, selectable for Open or Close.

1 Monitored Photo Eye input, selectable for Open or Close.

* + - * 1. 8 Monitored edges available when, Model LMWEKITU is added.

\*\* NOTE TO SPECIFIER \*\* Delete power option not required.

* + - 1. Electrical Power Requirements: 115 VAC, single phase.
      2. Electrical Power Requirements: 230 VAC, single phase.
      3. Motor: 24 DC, with soft start/stop operation. Duty cycle: Continuous.
      4. Capacity:
         1. HCTDCPKGUL08: 8 ft (2438 mm) tall overhead door/gate. 700 lbs (318 kg).
         2. HCTDCPKGUL10: 10 ft (3048 mm) tall overhead door/gate. 700 lbs (318 kg).
         3. HCTDCPKGUL12: 12 ft (3658 mm) tall overhead door/gate. 700 lbs (318 kg).
         4. HCTDCPKGUL14: 14 ft (4267 mm) tall overhead door/gate. 700 lbs (318 kg).
         5. HCTDCPKGUL16: 16 ft (4877 mm) tall overhead door/gate. 700 lbs (318 kg).
      5. Recommended Cycles per Day: Continuous.
      6. Gate/Door Selectable Speed: Open: Up to 8 inches (305 mm) per second. Fast Open: Up to 11 inches (279 mm) per second. Fast Close: Up to 8 inches (305 mm) per second.
      7. Warranty: 5 years for commercial applications.
      8. Wormgear Reduction: Commercial synthetic oil bath gearbox. 28:1 reduction.
      9. Battery Backup: Power Management System draws 14.8 mA when gate or door is idle with remote controls programmed. 112 cycles with two 7 AH batteries.
      10. Standby Time: Up to 24 days of standby power in event of a power loss with two 7 AH batteries, excluding accessories.
      11. Accessory Electrical Power Requirements: 24 VDC 500 mA output, switched and unswitched power.
      12. Dynamic Braking System: Adds substantial gate position control at all points in travel. The brake system also prevents the gate or door from being back-driven.
      13. Chassis: 1/4 inch (6 mm) gold zinc-plated steel for rust prevention.
      14. Trolley Assembly: Heavy-duty 12-gauge steel track with 6 UHMW rollers.
      15. Noise Isolators: Designed for exceptionally quiet performance.
      16. Internet Connectivity: MyQ Technology.
          1. 902 to 928 MHz.
          2. 50-channel FHSS, Frequency Hopping Spread Spectrum.
          3. 828LM Internet Gateway enables monitoring and control of gate operators via internet-enabled smartphone, tablet or computer.
          4. Two-way communication between gate operator and MyQ accessories to enable remote open, close and monitoring of gate.
      17. Receiver: Security+ 2.0, 3 channel on-board receiver, holds up to 50 remote controls, HomeLink compatible.
          1. HomeLink compatible, version 4 and higher.
          2. Transmits 310 MHz, 315 MHz, 390 MHz.
      18. Electronic limits: Maintains accurate limit position throughout travel, even after using the manual release handle.
      19. Soft Stop and Start during mid-travel reversal extends operator life under high-cycle, heavy gate use.
      20. LED Diagnostic Display: Simplifies installation and troubleshooting.
      21. Colored Terminal Blocks: Easy identification of safety and fire department inputs.
      22. Programmable Auxiliary Relays: 2 programmable relays with 6 settings each.
          1. Pre-warning or gate-in-motion sounder.
          2. Switch on/off devices at open or Close Limits or while gate is in motion.
          3. Tamper detection if gate is pushed off Close Limit.
          4. Cycle quantity feedback.
          5. Red/Green light to control door and gate traffic.
      23. Quick Close, Anti-Tailgate: Closes door or gate immediately after vehicle pulls off of interrupt loop.
      24. Sequenced Access Management: Capable of sequentially controlling operator in tandem with barrier gate.
      25. Plug-in Loop Detector Inputs: Programmed inputs for shadow, interrupt and exit.
      26. Alarm Reset Button: Instantly resets the built-in safety alarm siren.
      27. Fire Department Compliant: Selectable settings allow gate or door to auto open and power failure or battery depletion.
      28. Surge Suppression: Industrial strength on high and low voltage outputs.
      29. Keyed Manual Disconnect: Allows gate or door to operate manually and maintain limit position once re-engaged.
      30. Operating Temperature Range: Minus 4 - 140 degrees F (Minus 20 - 60 degrees C).
      31. MyQ enabled Accessories:
          1. 828LM Internet Gateway: Allows remote monitoring from internet-enabled computer or smartphone.
          2. 829LM Door and Gate Monitor: Allows remote monitoring and operation.
          3. 823LM Remote Light Switch: Controls light remotely.
          4. 825LM Remote Light Control: Allows remote monitoring and operation.

\*\* NOTE TO SPECIFIER \*\* Delete optional accessories if not required.

* + - 1. Accessories: Safety Monitoring Devices:
         1. Monitored Photo Eyes and Wireless Edge Kits.

LMRRUL Reflective Photo Eyes.

CPSUN4G Thru-Beam Photo Eyes.

LMTBUL Thru-Beam Photo Eyes.

CPS-OPEN4 Monitored Dual Sided Photo Eye.

LMWEKITU Wireless Edge Kit with Transmitter and Receiver.

LMWETXU Wireless Edge Transceiver.

* + - * 1. Wired Monitored Edges. Can be used with LMWEKITU.

S50 Small Profile Monitored Edge.

S504AL Small Profile Edge, 4 ft (1219 mm) aluminum channel.

S505AL Small Profile Edge, 5 ft (1524 mm) aluminum channel.

S506AL Small Profile Edge, 6 ft (1829 mm) aluminum channel.

L50 Large Profile Monitored Edge.

L504AL Large Profile Edge, 4 ft (1219 mm) aluminum channel.

L505AL Large Profile Edge, 5 ft (1521 mm) aluminum channel.

L506AL Large Profile Edge, 6 ft (1829 mm) aluminum channel.

* + - * 1. Optical Edges for Overhead Doors.

OES-SD16; 16 ft Sectional Door Edge Kit.

OES-SD24; 24 ft Sectional Door Edge Kit.

OES-5104; 16 ft, 2 x 2 inch (51 x 51 mm) PVC Channel.

* + - 1. Accessories: Provide the optional accessories listed below.
         1. LOOPDETLM Plug-in Loop Detector.
         2. KPW250 Wireless Commercial Keypad.
         3. RGL24LY Red/Green Traffic Light.
         4. 892LT 2-Button Security+ 2.0 Learning Remote Control.
         5. 894LT 4-Button Security+ 2.0 Learning Remote Control.
         6. 811LM 1-button Encrypted DIP Remote Control.
         7. 813LM 3-Button Encrypted DIP Remote Control.
         8. CAPXL Connected Access Portal High Capacity Entry System.
         9. CAP2D Connected Access Portal - 2 door.
         10. EL2000SS Stainless Steel Commercial and Gated Community Telephone Entry System.
         11. Star1000 Commercial Access Control Receiver.
         12. PPWR Passport Receiver with Security+ 2.0 Technology.
         13. PPV1 Passport 1 Button Remote.
         14. PPK1 Passport 1 Button Mini Remote.
         15. KPR2000 Single Access Remote Control Keypad and Proximity Reader.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + 1. LMRRUL Monitored Retro-Reflective Photo Eye.

\*\* NOTE TO SPECIFIER \*\* LiftMaster LMRRU Compatibility: LiftMaster Models CSL24UL, CSW24UL, RSL12UL, RSW12UL, LA400DC, LA412DC, LA500DC, SL3000, CSW200, SL585, SL595, HCTDCUL. Delete model not required.

* + - 1. LMRRUL Monitored Retro Reflective Photo Eye Assembly: 6 ft (1829 mm) cable, bracket, hood, square reflector, reflector hood, reflector bracket, mounting hardware.
      2. Compliance: UL 325 requirements for gates as secondary entrapment protection.
         1. Enclosure: NEMA 4X waterproof and corrosion-resistant enclosure.
      3. Installation Design: Single-sided, does not require trenching.
         1. Alignment: LED indicator with visible feedback and adjustable photo eye.
      4. Photo Eye Beam: Polarized beam technology sends and receives beam through 2 polarized filters to avoid interference from shiny objects.
      5. Sensing Distance: 50 ft (15 m).
      6. Operating Temperature Range: Minus 40 - 149 degrees F (Minus 40 - 65 degrees C).
      7. Power: 2-wire photo eye interface.
      8. Operating Current: Greater than or equal to 40 mA.
      9. Output Versions: Monitored 2 wire.
      10. Response time: 35 milliseconds.
      11. Wake-up Delay: 500 milliseconds.
      12. Connection: 6 ft (1829 mm) cable, fine stranded with crimp terminals. 18 ga wire.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + 1. LMTBUL Monitored Through Beam Photo Eye.

\*\* NOTE TO SPECIFIER \*\* LiftMaster LMTBU Compatibility: LiftMaster Models CSL24UL, CSW24UL, RSL12UL, RSW12UL, LA400DC, LA412DC, LA500DC, SL3000, CSW200, SL585, SL595, HCTDCUL.

* + - 1. LMTBUL Monitored Through Beam Photo Eye: Photo eye emitter, photo eye receiver each with 6 ft (1829 mm) cable, 2X photo eye bracket, 2X photo eye hood, mounting hardware.
      2. Compliance: UL 325 requirements for gates as secondary entrapment protection.
         1. Enclosure: NEMA 4X waterproof and corrosion-resistant enclosure.
      3. Installation Design: Dual-sided, if used in dual gate applications. Operator wireless communication can be used to avoid trenching.
         1. Alignment: LED indicator with visible feedback and adjustable photo eye.
      4. Photo Eye Beam: Polarized beam technology sends and receives beam through 2 polarized filters to avoid interference from shiny objects.
      5. Sensing Distance: 90 ft (27 m).
      6. Operating Temperature Range: Minus 40 - 149 degrees F (Minus 40 - 65 degrees C).
      7. Power: 2-wire photo eye interface.
      8. Operating Current: Greater than or equal to 40 mA.
      9. Output Versions: Monitored 2 wire.
      10. Response time: 35 milliseconds.
      11. Wake-up Delay: 500 milliseconds.
      12. Connection: 6 ft (1829 mm) cable, fine stranded with crimp terminals. 18 ga. wire.

1. EXECUTION
   1. EXAMINATION AND PREPARATION
      1. Inspect and prepare substrates using the methods recommended by the manufacturer for achieving best result for the substrates under project conditions.
      2. Do not proceed with installation until substrates have been prepared using the methods recommended by the manufacturer and deviations from manufacturer's recommended tolerances are corrected. Commencement of installation constitutes acceptance of conditions.
      3. If preparation is the responsibility of another installer, notify Architect in writing of deviations from manufacturer's recommended installation tolerances and conditions.
   2. INSTALLATION
      1. Install in accordance with manufacturer's instructions. Test for proper operation and adjust until satisfactory results are obtained.
   3. PROTECTION
      1. Protect installed products until completion of project.
      2. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION