

SPECIFICATION FOR LINEAR INDUCTION SLIDE GATE OPERATOR

1.0 OVERVIEW

1.1 This specification defines a slide gate operator utilizing linear induction motors (hereafter referred to as the LIM operator) as the drive force. The LIM operator shall consist of a control unit, dual linear induction motors and reaction fin sections.

2.0 OPERATION

2.1 The LIM operator shall use linear induction technology as the operating force. The LIM operator shall not use gears, belts, hydraulics, chain, pinch wheels or any other mechanical means of transferring the drive force to the gate.

3.0 TESTING

3.1 The LIM operator design shall have been tested for endurance and reliability for a minimum 1,250,000 cycles over a period of more than 10 years at an actual security-controlled installation.

3.2 All LIM operators shall be inspected and functionally tested prior to shipment from the manufacturer.

4.0 MANUFACTURING

4.1 The LIM operator shall be assembled within the United States of America.

4.2 All aluminum and steel parts shall be formed or extruded, machined, and finished within the United States of America.

4.3 All electrical and electronic components shall conform to U.L. standards and be listed with a Nationally Recognized Testing Laboratory.

5.0 CONSTRUCTION

5.1 All metallic components shall be of stainless steel, powder coated, corrosion protected steel, or aluminum. All fasteners shall be produced out of stainless steel, aluminum or have zinc plating.

5.2 The reaction fins shall be extruded 6061-T6 aluminum.

5.3 The controller enclosure shall comply with NEMA Type 3R, 4, and 12.

5.4 An optional controller enclosure upgrade meeting NEMA 4X, with a marine grade 316-stainless steel finish, will be specified for coastal regions, other corrosive environments or when a premium finish is desired.

6.0 SYSTEM ADAPTATION

- 6.1 The LIM operator shall interface with all standard access control devices.
- 6.2 The LIM operator shall interface and operate with entrapment and safety devices in accordance to U.L. 325 - 2016
- 6.3 The LIM operator shall interface with all vehicular detection devices.
- 6.4 The slide gate which the LIM will be installed on shall be reasonably level and in acceptable operating condition. The gate and installation shall conform to ASTM-F1184-16 standards for use with ASTM-F2200-05, #6 Vehicular Horizontal Slide Gates, Class III & Class IV applications.

7.0 ELECTRICAL

- 7.1 The LIM operator electrical supply standard shall be 208-240VAC, single or 3 phase 60Hz or 440-480VAC single or 3 phase 60Hz.
- 7.2 A 20 amp service shall be available at the installation site. Additional options and configurations may require higher current service.
- 7.3 All electrical supply shall be installed in accordance with the National Electrical Code (N.E.C.). Additional local codes may exist.
- 7.4 The LIM motors shall be encapsulated in an epoxy potting compound and have internal thermal protection.
- 7.5 A 24VDC 2A fused supply shall be available for auxiliary device power.

8.0 MANUAL OPERATION

- 8.1 A pad lockable mechanical release shall be provided in the event of a power failure or malfunction. The standard LIM operator shall be FAIL SECURE. An optional version shall be available for FAIL SAFE requirements.

9.0 ENVIRONMENTAL

- 9.1 The LIM operator shall have a normal ambient operating temperature range of 0°F - +120°F
- 9.2 The LIM operator shall have provisions for employing heating or cooling elements required in geographical locations exceeding the normal ambient operating temperature range.
- 9.3 The LIM operator shall have provisions for employing an optional de-icing feature recommended in geographical locations prone to icing conditions.

10.0 INSTALLATION

- 10.1 The LIM operator shall be installed by a factory authorized and trained installer in accordance with the manufacturer's installation instructions and quality standards.

11.0 Warranty

- 11.1 The LIM operator shall be warranted against defects and workmanship from the manufacturer for a period of five years.