



Smarter Security

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Architectural & Engineering Specification

Fastlane® Intelligate / Dual Passgate System

PART I – GENERAL

1.01 CSI MASTER FORMAT SECTIONS

- A. Section 11 14 00 Pedestrian Control Equipment (Gates/Turnstiles)
- B. Section 28 10 00 Electronics Access Control and Intrusion Detection
- C. Section 28 16 00 Intrusion Detection

1.02 REFERENCES

- A. The Power supply unit (PSU) shall be certified under UL 60950-1, second edition and CSA C22.2 No. 60950-1-07, second edition, (supplied by manufacturer of turnstiles).
- B. The Intelligate System must be CE marked in accordance with following the European Directives.
 - 1. Electromagnetic Compatibility EU Directive 2004/108/EC
 - 2. Low Voltage EU Directive 2006/95/EC
 - 3. Machinery Directives EU Directive 2006/42/EC

1.03 QUALITY ASSURANCE

- A. Manufacturer must operate a Quality Management System that meets the ISO 9001:2008. International Standard for design, development, and manufacturing activities, including associated software products.
- B. Manufacturer shall be a global supplier specializing in the design and manufacture of automatic security turnstiles with a minimum of twenty (20) years experience.
- C. Installer shall have a minimum of three (3) years experience installing Fastlane turnstiles or similar equipment or shall supply a manufacturer-trained technician for Site Certification & Training following installation of the Fastlane Intelligate System.

1.04 SUBMITTALS

- A. Submit manufacturer's product literature including datasheet and drawing pack for specific model, including options.
- B. Provide high resolution photo.
- C. Provide, upon request, Fastlane Intelligate/Passgate Installation & Maintenance manual.
- D. Provide, upon request, site specific drawings detailing product placement, arrangement and wiring.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Deliver equipment and materials to specified location in manufacturer's packaging undamaged, complete with installation instructions.
- B. Store off ground, under cover, protected from weather and construction activities. For periods of extended storage the equipment will be kept in an environment that regulates temperature and humidity.

- C. Use forklift, pallet jack, or specified number of personnel for moving equipment, observing manufacturer's safety instructions at all times.

1.06 PROJECT/SITE CONDITIONS

- A. Install Fastlane Intelligate with Glass Panels on level, finished floor, and in strict accordance with manufacturer's installation chapter in the provided Installation & Maintenance manual.
- B. Install Fastlane Intelligate on manufacturer-supplied Floor Protector System to rest on a level finished floor.

1.07 WARRANTY:

- A. Manufacturer's standard form in which manufacturer agrees to repair or replace components of optical turnstile system that fails in materials or workmanship within specified warranty period. Failures include, but are not limited to, the following: faulty circuit boards (PCB), infrared beams, and mechanical components. Warranty Period: 3 years from date of shipment with Site Certification & Training, 1 year otherwise.

PART II - PRODUCTS

2.01 MANUFACTURER

- A. Integrated Design Ltd, United Kingdom
Smarter Security, Inc. is the exclusive distributor in North America and also distributes Fastlane products in Central and South America.
110 Wild Basin Road, #200, Austin, TX 78746, USA
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2.02 PRODUCT

- A. Fastlane Intelligate, NO SUBSTITUTIONS. Include the following options: Fastlane Desktop Remote Control Unit.

2.03 CONSTRUCTION

- A. Exterior:
 - 1. Encasement: stainless steel 304 grade 240 grit (satin #4) horizontal grain (standard)
- B. Interior Chassis:
 - 1. Chassis framework must be black satin, powder-coated mild steel
 - 2. 3/8" (10mm) fixings (qty. 4) with central cable containment access.
- C. Decorative Top:
 - 1. Stainless steel 304 brushed finish to grade 240 grit (satin #4).
- D. Glass Panels:
 - 1. 10mm Toughened safety glass to EN14179
 - 2. Optional Glass Barrier widths to provide a monitored passage from 21.7" (550mm) to 49.2" (1250mm).
- E. Status Display:
 - 1. Clear frosted acrylic ring located under the decorative top provides indication using tri-color LEDs.
- F. Enclosure:
 - 1. Dimensions
 - a. Diameter 6.4" (162mm), Height 38.2" (970mm)
 - 2. Pedestal weight
 - a. Receive or Transmit pedestal 44lbs (20Kg) excluding glass barriers

3. Unit enclosure shall provide an Ingress Protection rating of IP20.

2.04 EQUIPMENT

- A. General: Two adjacent small footprint pedestals providing a dual swinging barrier utilizing pulsed infrared beams to monitor the passageway. A range of glass barrier widths may be provided to facilitate lanes widths from 21.7" (550mm) to 49.2" (1250mm), the typical application is to provide a single monitored passgate as part of a turnstile system, providing the ADA/DDA access and goods trolley access. A breaking force is applied to the dual barriers to deter unauthorized access, whilst the infrared beams monitor the passageway to detect persons pushing through or persons following an authorized user. Access control or remote pushbutton control is required to operate the product either standalone or as part of a turnstile system. Card Readers are to be mounted on separate post accessories positioned at the extremities of the barrier open positions. The Optical System may be disabled for operation as a Dual Passgate for passageway widths up to 63" (1600mm). All calibrations, feature set selections and diagnostics are built in to the unit managed on board by the relevant processor cards. Must not require a Windows based PC to operate.
- B. Types of units: The system shall consist of a Transmit Pedestal (TX) and a Receive Pedestal (RX) to provide a single lane using dual swinging glass barriers.
- C. Capabilities:
 1. Detect and deter unauthorized persons from entering into the protected area.
 2. Detect unauthorized persons more than 3 inches (75 mm) at waist height, behind an authorized person, that is "tailgating" or "piggybacking."
 3. Detect direction of movement, that is, entry and exit.
 4. Provide alarm outputs on detection of a violation by means of:
 - a. Local sounders and indicators
 - b. Remote sounder output
 5. Operate in bi-directional, single direction modes.
 6. Process a high number of people without security guard intervention, unless access is rejected by the system or a system anomaly occurs.
 7. Buffering multiple inputs from an access control system to maximize throughput.
 8. Easy to use.
 9. Allow free movement for wheelchair users with ADA/DDA width lanes.
 10. Allow safe emergency egress through a fire alarm input to open the glass panels.
 11. Entry and exit with an authorized card, biometric, or other credential.
 12. Entry and exit that is unauthorized causing an alarm.
 13. Obstruction of an infrared beam path causing an alarm.
 14. Create an alarm for a person pushing/forcing the glass panels, that is, forced entry.
- D. Optical System
 1. Two infrared beams.
 2. Access request transaction speed: Time delay of no greater than 100ms in signaling passage through the beams and readying the turnstile for the next user except when a greater delay is caused by the attached access control system.
 - a. The optical system must be capable of throughput of up to 1 person per second.
 3. Visitor Management System: Allows an unlimited number of people to pass through the lane. Once the visitors have entered and the system no longer sees anyone entering or exiting for 3 seconds, the glass panels return to the closed position.
- E. Operating Modes
 1. Normally closed mode – where by the barriers are closed (centered within the lane) and open away from requested and authorized direction of travel.
 2. Visitor entry mode – where the turnstile opens upon visitor request and allows free travel through the turnstile without issuing an alarm. Once the visitors have entered and the

system no longer sees anyone entering or exiting for 3 seconds, the beam operations return to their original security setting.

3. Emergency – unit must have a dedicated input for integration with a fire control panel to receive fire alarm signals. When the emergency signal is activated, glass barriers will open in the exit direction and remain open to allow unobstructed passage. Once the emergency signal is deactivated, the unit must return to the operating mode immediately preceding the alarm.

F. Inputs:

1. Entry Request: Normally Open dry contract. Closing on request for <1 second
2. Exit Request: Normally Open dry contract. Closing on request for <1 second
3. Entry Visitor Request: Normally Open momentary closing switch contacts
4. Exit Visitor Request: Normally Open momentary closing switch contacts
5. Break Glass Unit /Fire Panel: 12V to 24Vdc Opto Isolated, 20mA max

G. Outputs:

1. Voltage-free relay contacts (NO, NC, C) rated 24Vdc @ 500mA for Alarm indication.
2. Audible Alarms: Provide for each lane triggered in an alarm condition.
 - a. Local alarm sounders.
3. Status Display: Provide for each lane a visual indication of the status of the lane.
 - a. Standby – Orange
 - b. Please Proceed – Green
 - c. Flashing Red - Alarm.

H. Power Requirements:

1. Pedestal: Low voltage 24Vdc supply current 1.5A per barrier
 - a. Hazardous voltage must not be present at pedestal to ensure user safety.
2. Power Supply Unit:
 - a. PSU to be remotely installed.
 - b. PSU Wall Mounted Metal Enclosure, approximately 13 inches (330mm) long by 8 inches (200mm) wide by 5 ½ inches (136mm) tall.
 - c. PSU input voltage 100Vac to 240Vac at 60/50Hz, connection by 5A fused spur.

I. Wiring Requirements:

1. Pedestal Wiring: Each Transmit and Receive Pedestal requires an independent 24Vdc supply using a minimum conductor cross sectional area of 16 AWG (1.5mm²) e.g. Belden 8620 or similar.
2. Fastlane System Interconnect: A CAT5 cable (provided) between the Transmit and Receive pedestals for each lane to facilitate power, synchronization of infrared beams, and motor driver communication.
3. Earth Cables: earth connection from each pedestal to ground, using a green/yellow sleeved cable with a minimum conductor cross sectional area of 18 AWG (1mm²).
4. Remote Control: 8-conductor cable with a minimum conductor cross sectional area of 22 gage (0.35mm²). Typically to reception desk or security room.
5. Access Control Lane Integration: as required by access control system manufacturer. (typically, 10-conductor cable with a minimum conductor cross sectional area of 0.35mm² (22 AWG)
6. Emergency Input: FP200 or similar from the Fire Panel Normally Closed relay contacts (or 24V signal) to each Interlane and Receive Pedestal.

2.05 FACTORY TESTING

- A. Fastlane Intelligate with Glass Panels shall be fully assembled and staged as a system at the factory to accommodate soak testing for a period of 48 hours at a minimum to ensure proper operation and electrical connectivity. System shall be inspected for mechanical, electrical and aesthetic condition prior to packaging and shipment.

2.06 SECURITY EQUIPMENT

A. Manufacturer-supplied Accessories

1. Remote Console: Optional

- a. Provide Visitor Buttons allowing an unlimited number of visitors to pass through the lane in the entry or exit direction
- b. Provide Alarm Indication
- c. Key switch

2. Reader Mount Posts designed to accommodate a range of proximity readers.

3. Floor Protectors: Optional. Modular system designed to support turnstile pedestals without need for drilling mounting bolts into floor or running a conduit under floor between pedestals for cables.

4. Fastlane Infill System: Optional. A series of decorative glass modular panels that guide users in a desired direction, while complimenting turnstile design.

B. Card Readers: Optional

System compatible with major access control technologies for owner-provided card readers may be mounted onto accessory Reader Mount Posts. Mounting readers to the Intelligate pedestal is not recommended.

2.07 ENVIRONMENTAL

A. Product use:

- 1. Energy consumption: 140kW h/a per lane
- 2. Maintenance: Annual Interval 12 month interval minimum.

2.08 SUSTAINABILITY

A. The product is recyclable at end of life. The following materials are to be distributed to appropriate recycling facilities resulting in a very low residual waste of non-recyclable material.

- 1. Stainless Steel (sheet material 1.2mm to 1.5mm thickness)
- 2. Mild Steel (sheet material 1.2 to 3mm thickness)
- 3. Plastics
- 4. Glass
- 5. Printed circuit boards
- 6. Special components e.g. gearboxes and motors, friction brakes, power supply modules

B. The product is supplied on reusable plastic pallets with recyclable carton packaging comprising of the following materials.

- 1. Corrugated fiber board
- 2. Foam
- 3. Polyethylene

PART III – EXECUTION

3.01 SITE EXAMINATION

A. Inspection: Installer / Integrator shall examine the installation and advise the contractor of any site conditions unacceptable for proper installation of product.

- 1. Finished floor substrate must be dead level within the footprint of the Pedestal.
- 2. Main supply service for power supply and low voltage power out & control wiring must be installed.

- B. Installation: Fastlane Intelligate shall be installed in accordance with manufacturer's Installation & Maintenance manual.
- C. Setup & Adjustment: Installer / Integrator shall perform initial equipment electronic adjustments to ensure proper performance after installation.
- D. Instruction: Installer / Integrator with a minimum of 3 years experience installing Fastlane Intelligate Systems shall furnish operator training for end user, or provide for Smarter Security Site Certification & Training services during installation.
- E. Cleaning: Clean metal, acrylic and glass surfaces carefully after installation to remove excess caulk, dirt, and labels.

[Smarter Security reserves the right to change this specification without notice.]

END OF SECTION