

# DETAIL TECHNICAL SPECIFICATION

## Part 6.16

Rev-02

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# 1 ACCESS CONTROL HARDWARE (ACH)

## 1.1 INTRODUCTION

1.1.1 Physical Security is the key component for most organizations to ensure the safety and security of their people, assets, data and IP.

1.1.2 The above is achievable by deploying the required level of current well established technologies, such as:

- 1.1.2.1 Security Systems
  - 1.1.2.1.1 Perimeter Intrusion Detection System (PIDS)
  - 1.1.2.1.2 Access Control
  - 1.1.2.1.3 CCTV Surveillance
  - 1.1.2.1.4 Intrusion Alarm
- 1.1.2.2 Life Safety Systems
  - 1.1.2.2.1 Fire Detection
  - 1.1.2.2.2 PA & Evacuation
  - 1.1.2.2.3 White Noise
- 1.1.2.3 Related and Other Systems
  - 1.1.2.3.1 Data Comms Systems, including IP Network
  - 1.1.2.3.2 Intercom
  - 1.1.2.3.3 Asset, vehicle, personnel, guard tracking and monitoring
  - 1.1.2.3.4 Scanning and Testing Systems
  - 1.1.2.3.5 Various Hardware, e.g. Safes, Displays, Power Backup Systems (UPS, etc), Booms, Turnstiles, etc, etc.
- 1.1.2.4 Software, Databases, Servers, Workstations, etc.
- 1.1.2.5 Central management, monitoring and control (CMMC)
  - 1.1.2.5.1 Integration
  - 1.1.2.5.2 PSIM (Physical Security Information/Integration Management)
  - 1.1.2.5.3 C<sup>4</sup> in defense market (Command, Control, Comms, Compute)

1.1.3 This TRANSNET GROUP SECURITY SPECIFICATION will focus on the Access Control Hardware (ACH) and will include the following:

Vehicle Control

Pedestrian Control

## 1.2 REFERENCES

1.2.1 The International and/or National standards and specifications entities which may have been referenced, as per the individual general and detail tender specification’s requirements, are listed in Part-1 of the GENERAL TENDER SPECIFICATION.

## 1.3 NATIONAL AND INTERNATIONAL STANDARDS

1.3.1 The International and/or National standards which constitute wholly or partial requirements of this tender specification, as per the individual general and detail tender specification’s requirements, are listed in Part-1 of the GENERAL TENDER SPECIFICATION.

**1.4 DEFINITIONS and ABBREVIATIONS**

1.4.1 Definitions

1.4.1.1	TG	TRANSNET GROUP
1.4.1.2	TGSS	TRANSNET GROUP Security Specification

1.4.2 Abbreviations

1.4.2.1	VBG	Vehicle Barrier Gate
1.4.2.2	VBB	Vehicle Barrier Boom
1.4.2.3	MB	Mantrap Booth
1.4.2.4	DC	Door Contact
1.4.2.5	ML	Magnetic Lock
1.4.2.6	SL	Strike Lock
1.4.2.7	BGU	Break Glass Unit
1.4.2.8	RES	Request to Exit Switch

**1.5 GENERAL REQUIREMENTS**

1.5.1 This specification covers the design, supply, installation, commissioning, configuration and integration of all equipment, software and databases for the ACH.

1.5.1.1 The specific preference of the ACH system technologies and components (listed below) that will satisfy all the general and detail specifications and requirements is manufactured by the listed manufacturer/s reflected below or in the Schedule of Proposed Manufacturers document, the latter which may be included in this tender, including their relevant software and utility suites, hardware and required devices, as well as the latest generation additional devices, equipment and/or systems, as listed below in 1.5.1.2.

- 1.5.1.1.1 Manual operation gates, speed gates, road blockers and bollards
- 1.5.1.1.2 Electric operational gates for domestic and light industrial application, sliding gate motor and swing gate motors
- 1.5.1.1.3 Vehicle barrier booms, low cost barrier and electric traffic barriers
- 1.5.1.1.4 Full height, half height, waist height and special needs turnstiles
- 1.5.1.1.5 Magnetic locks, strike locks, break glass units, sensors and exit switches

1.5.1.2 The specific preference of the additional technologies, components devices, equipment, and/or systems (listed below), that will satisfy all the general and detail specifications and requirements, is manufactured by the listed manufacturer/s below or as reflected in the Schedule of Proposed Manufacturers document, the latter which may be included in this tender.

NONE

1.5.1.3 If the Tenderer choose to offer, in either or both cases, an alternative manufacturer’s product, the detail technical data and specifications shall be presented to the Engineer and Client for approval seven (7) days prior to the due tender date.

1.5.1.4 Should specific preferred manufacturers be declared in this tender, then, if the Tenderer choose to offer, in either or all of the cases, an alternative

manufacturer/s product, the detail technical data and specifications shall be presented to the Engineer and Client for approval seven (7) days prior to the due tender date

- 1.5.2 The manufacturer will provide a certified STANDARD 3 year warrantee on all its equipment – an EXTENDED warrantee to 5 years, at extra cost, must be available if required, and must be priced if included in the BOQ.
- 1.5.3 The system implementing Contractor must be accredited and certified by the manufacturer as an EXPERT (or equivalent) integrator, whether as a direct or indirect contractor..
- 1.5.4 The Contractor will be required to link and integrate the STS systems into the PSIM (Physical Security Information Management) system, also known as a C<sup>4</sup> (command, control, communicate and compute [data]) system, if such a system is already in place or if such a system is part of this or a related project scope, as stipulated in the PSIM specification, as stipulated by the specific TRANSNET client, for either or both of:
  - 1.5.4.1 All required Data from the ACH systems
  - 1.5.4.2 All required Control to the ACH systems
- 1.5.5 If a PSIM system is not already in place or if such a system is not part of this or a related project scope, then the STS systems shall be DIRECTLY integrated with the following systems to allow for the response to and/or monitoring of all events, conditions, statuses and alarms and to exchange this and other relevant data with the indicated systems:

**1.6 GENERAL SPECIFICATION**

General specifications will include the following systems:

1.6.1.1 Vehicle Barrier Gates

- Manual Operation Gates - see 1.6.2
- Electric Operation Gates - see 1.6.2
- Speed Gates - see 1.6.2

1.6.1.2 Vehicle Barrier Booms

- Manual Operation Booms - see 1.6.2
- Electric Operation Gates - see 1.6.2
- Blockers - see 1.6.2

1.6.1.3 Pedestrian Control

- Gates - see 1.6.2
- Turnstiles - see 1.6.2
- Mantrap Booths - see 1.6.2
- Door Control - see 1.6.2

1.6.2 Detailed technical feature and specifications to follow for the items mentioned in 1.6.1

### 1.6.2.1 Manual Operation Gates

#### 1.6.2.1.1 Technical Features (Sliding Gates)

- The manually-operated gate can be supplied with an opening width up to 9m
- Ball bearing mounted, zero maintenance rollers
- Simple handling
- Reduced back up space
- Large opening widths
- Corrosion protected track
- Corrosion protection offered by galvanizing and coating using the tri-protect procedure
- Good price/performance ratio

#### 1.6.2.1.2 Technical Features (Swing Gates)

- Stable steel pipe frame profile
- Gate can be filled using steel sections, welded mesh or as requested by the customer, e.g. sheet metal, plastic etc.
- Pivot bearings between the posts and gate wing can be adjusted in all directions
- Stable pipe frame plug-in lock with profile actuator
- Gate end stop for open wing

### 1.6.2.2 Electric Operation Gates

#### 1.6.2.2.1 Hardware features (Sliding Gates)

- Fully sealed plastic housing for controller to prevent ingress of dirt and insects
- Easy setup of controller using LCD user interface
- Removable connectors on controller for easy maintenance
- Watchdog IC ensures full and safe operation of controlled
- Optional Backup Memory Module allows backing up of all the information that has been set up in the system

#### 1.6.2.2.2 Electronic Features (Sliding Gates)

- Opening and closing safety beam inputs with beam circuit functional test
- High security cleared-beam Auto close in conjunction with safety beams
- Break-in and Ambush Alarm (a world first) with configurable outputs via onboard buzzer, Pillar light relay, etc.
- Multiple Modes of Operation: Standard Mode, Condominium Mode (multi-user), Reversing Mode, PLC and Dead man Control Mode, Automatic closing with adjustable time, pushbutton override and selectable according to gate position
- Remote gate status indicator (gate position, power failure, low battery, multiple collision detection and pillar light status indication)
- Pedestrian opening (adjustable opening and Auto close time)
- Free-exit facility
- Holiday Lockout configurable as emergency stop
- Courtesy / Pillar-light timer with adjustable time
- Fully configurable pre-delays with multi-modal pre-flash
- Multiple Operating Profiles to suit region of installation - select between ZA, CE, etc.
- Full configuration of gate operating parameters, including independent gate opening and closing speeds, ramp-up and ramp-down distances and crawl speed
- Positive Close Mode (e.g. ensure activation of electric fence contact switch)
- Onboard multichannel code-hopping receiver with the ability to: learn transmitter buttons to specific functions (e.g. Gate trigger, pedestrian opening, Free-exit, Pillar light control, Holiday Lockout)

- Integrated ChronoGuard (a world first) with Real Time Clock and Calendar timer offering multichannel time-activated and time-barring functionality
- Auxiliary output can be configured via the ChronoGuard timer to provide timer functionality to external devices, such as security lights, entrance fountain, etc

1.6.2.2.3 Technical Specification (Sliding Gate)

Input Voltage	220 - 240VAC
Motor Voltage	12VDC
Motor Power Supply	Battery Driven
Battery Charger	CP84SM - 2A @13.8V
Current consumption (mains)	170mA
Current consumption (motor at rated load)	10A
Operator push force - starting	25.5kgf
Operator push force - rated	17kgf
Gate mass	500kg
Gate length	100m
Gate speed	18-22 m/min
Manual override	Thumbwheel behind locked door with key release
Operations p/day	150
Collision sensing	Electronic
Operating temperature	-15°C to +50°C
Onboard receiver	Centurion code hopping

1.6.2.2.3 Hardware features (Swing Gates)

- The sinusoidal motion of the rotary arm ensures that, without any fancy speed control, your gate smoothly accelerates — then gradually comes to a graceful stop.
- No cutting, drilling or welding necessary
- Mount the gate on a pedestal away from your gate for best locking of the system and optimum security. If you prefer the minimalist look, mount the operator to the gate pillar via a wall bracket so it's out of sight
- Sensitive anti-crushing control means that your car and your children's limbs are safe.
- An irreversible gear set makes sure that the gate is locked tight.
- Switches seamlessly between battery and mains and can even be solar powered. You can always get in - even if the power is off.

1.6.2.2.4 Technical Specifications (Swing Gate)

Input Voltage	220 - 240VAC
Motor Voltage	12VDC
Motor Power Supply	Battery Driven - 7Ah
Battery Charger	CP84SM - 2A @ 13.8V
Current consumption (mains)	6A
Current consumption (motor at rated load)	70A
Operator output torque - max	250Nm
Output shaft rotational speed	2.6rpm
Opening time	17 sec
Gate speed	18-22 m/min
Manual override	allen key under locked cover
Operations p/day	250
Collision sensing	Electronic
Operating temperature	-15°C to +50°C
Gate mass	2m - 600kg 3.5m - 260kg

1.6.2.3 Speed Gate

## 1.6.2.3.1 Features:

- Rapid opening and closing time ( $\pm 4$  seconds to open and  $\pm 4$  seconds to close). Conventional tracked or cantilever sliding gates normally operate around 0.25 m/sec, which tends to make them unsuitable for high volume traffic control. For example a six meter sliding gate would have an opening/closing cycle of approximately 1 minute. Therefore if there were to be more than 30 vehicle movements per hour, the gate could be almost permanently open, thus providing temptation for 'tailgating' or unauthorized pedestrian entry if gate is unmanned.
- Very adaptable: can accommodate individual customer requirements
- The speed gate will often fit where a conventional swing gate or sliding gate has limited space
- Excellent reliability and life span, with less maintenance due to limited moving parts.

## 1.6.2.3.2 Safety Features

## Main Switch

- In the post near to the motor mounting plate, a single-phase main switch is installed

## Safety (Optional)

- 4 vertical electro safety buffers at the topside of the 2 inner leaves (L-2000 max.)
- horizontal electro safety buffers on the bottom side of the 2 outer leaves (90°)
- The safety buffers are mounted at the lower beams of the 2 inner leaves

## Photoelectric Beam (Optional)

- 1 set photoelectric beam (transmitter and receiver) will be installed in the columns and/or on top of the rail
- Connecting power 12VDC, normally closed Housing IP55

## Manual Override

- Extended handle on brake of the motor to open the speed gate manually in case of an emergency

## 1.6.2.3.3 Drive Mechanism

## Drive

- The speed gate is driven by electric motor, which drives a solid mechanism. Blocking of the gate in closed position is both by mechanical means and by magnetic brake

## Motor Specification

- 0,5 kW 3-phase, 230-400VAC, 50Hz

## IP-Rating

- IP55

## Control Panel

- Mounted inside gate post
- Circuit Breaker
- PLC
- Control Relay

#### 1.6.2.4 Manual Operation Booms

##### 1.6.2.4.1 Technical Specifications

- Manual Barriers are available in 3m, 4.5m and 6m.
- Mild steel or stainless steel housings are available, powder coated in RAL colours
- The small and compact design makes the manual barrier stand out above the rest.
- No more heavy counterweights.
- This unit operates with an internal balance spring mechanism
- Unit can be locked in an up or down position
- Left and right hand configurations are available.
- The barrier comes standard with a breakaway system.
- This ensures that the boom arm stays attached to the barrier and swings away from the roadway in the event that a vehicle crashes into the boom arm
- This barrier can also be equipped with a jack knife kit for height-restricted areas
- Pack sizes: 260 x 260 x 1050 excluding the boom arm
- Mass: 25kg

##### 1.6.2.4.2 Applications

- Ideal for road closures.
- Supervised access control
- Commercial and Industrial check points
- Any manual access control

#### 1.6.2.5 Electric Operating Boom

##### 1.6.2.5.1 Operating Technology

The barrier is 100% locally manufactured and designed to handle high volumes of traffic and has a 100% duty cycle. The motor is equipped with a torque motor which lifts the boom arm through sinusoidal level system which allows the booms arm to be locked in both up and down positions. All the electronic equipment is manufactured to ISO standards. The boom arm lifts up to 85° in the event of power failure. Up to 2 tension springs can be used for counter balancing. Left and right hand barriers are available with round and octagonal boom arms.

##### 1.6.2.5.2 Technical Specifications

- Arm lengths 3m, 4.5m, 6m and 7m long extruded aluminum tubing powder coated in white with red reflective tape.
- Booms come standard with breakaway system
- The boom arm is joined to the boom adaptor with nylon nuts
- Jack knife kits are available for height restriction areas for up to 4.5m boom arms
- Left and right boom arms are available
- Rubber buffers are used for boom dampening to eliminate bouncing
- 60W 220VAC 50Hz motor gear box
- 100% duty cycle
- Operating temperature up to 55°C
- Opens to 85° on power failure
- The cabinet is an IP54 enclosure. 1.6mm mild steel or 1.6mm 3CR12 stainless steel
- Cabinets are powder coated in red and white
- Operating speed is from 2-4 sec from horizontal to vertical position

- Modular electronic plug into all pin bases
- Large lockable hinged door for easy access
- Pack sizes: 400 x 400 x 1050mm excluding boom arm
- Mass: approximately 60kg

1.6.2.6 Electric Operating Spike Boom

1.6.2.6.1 Operating Instruction

The spike barrier operates like a normal barrier. Underneath the boom arm is a metal trench that houses the road spike, which is driven by its own torque motor. When the boom arm is down, the spikes are up. When the barrier gets a signal to open, the spike lowers and the boom opens after a preselected time. This allows the spikes to lower first, then the boom opens. It ensures safe passage for authorized users. The boom will lower after the vehicle has passed over the safety loops. With two torque motors in the spike barrier, one can override the spike in daytime and use it like a normal barrier and night time, one can use the spike with the boom.

1.6.2.6.2 Technical Specification

- The road spike barrier is available from 3m to 5m. Custom size units can be accommodated.
- Barrier boom arms are manufactured from extruded aluminum tubing, powder coated in white and red reflective tape.
- Equipped as standard with an anti-pedestrian aluminum curtain suspended beneath the boom arm to prevent personal injury
- Left and right configuration is available
- The spikes lower before the boom arm opens.
- Spike barrier framework is designed to handle vehicle weighing up to 100 tons
- The cabinet is an IP54 rated enclosure 1.6mm mild steel or 3CR12 stainless steel or 2mm 304 brushed stainless steel.
- The spike protrudes 90mm above the road surface and offer protection from both directions
- The spike barrier modular design allows the unit to be stripped down to small manageable sizes for easy transportation and installation
- Main supply: 220VAC at 130 watts with no robots and 205 watts with robots.

1.6.2.7 Hydraulic Road Blocker

1.6.2.7.1 Applications of Hydraulic Blocker

For controlling access to high security areas like police stations, banks, border posts, cash handling depots, high risk cargo depots, government buildings, airport security areas, embassies etc, as well as for standard risk areas such as car parks, toll roads, hotels, hospitals, etc.

1.6.2.7.2 Specifications

Technical characteristics

Impact resistance	It stops a 6,8 Tons vehicle at a speed of 48 km/h
Height of raised obstacle:	665mm.
Widths of obstacle:	3000, 3500 & 4000 mm
Dimensions of power unit:	width: 1000 mm
Height:	1200 mm
Depth:	520 mm
Dimensions of control cupboard:	width: 600 mm
height:	600 mm

depth:	210 mm
Power supply (power unit):	230/400V 3-phase
Power supply (cupboard):	230V single phase
Power consumption: max.	1,5 kW
Type of oil:	22 cSt
Operating temperature:	-20°C to + 50°C
Net weight of equipment:	1170 kg with a 3000 mm obstacle 1372 kg with a 3500 mm obstacle 1575 kg with a 4000 mm obstacle
Net weight (power unit):	150 kg
Net weight (control cupboard):	25 kg
Operating time:	3 secs (depending on the oil temperature and the length of the sheaths between the group and the obstacle)
Maximum load allowed:	20 T per axle

1.6.2.8 Hydraulic Bollards

1.6.2.8.1 Application

Bollard is used for controlling access to high security areas such as police stations, banks, border posts, and cash handling depots, high risk cargo depots, government buildings, airport security areas and embassies.

**1.6.2.8.2 Specification**

- Blocking Width: 3.0 m, 4.0m, 5.0 m, 6.0 m x (Bollard Height)
- Bollard Blocking Height: 600mm & 800mm
- Technical features: Self-contained hydraulic power pack. Locked in the raised position by solenoids & control valve
- Operating Time: approx.4 seconds Rising /Lowering
- Wheel Load: Wheel load 100 kN according to SLW60 – DIN 1072
- Power: 220 V, 50Hz
- Control: PLC in control cabinet
- Weight: Approx. 130 kg
- Colour: Material Finish Brushed - stainless Steel 304  
Powder coated – Mild Steel
- Drive: Hydraulic Power Pack
- Drive control: KB400 PLC
- Case work (Casing): Mild Steel Galvanized

1.6.2.9 Drop Arm Barrier

1.6.2.9.1 Application

Suitable for pedestrians, wheelchairs, and acts as an emergency exit.

1.6.2.8.2 Features

- Engineered for long-term reliability, fast on site maintenance and durability
- Fully recessed removable access door
- Removable lid for easy access to motor and linkage assembly
- Adjustable mechanism stops provide travel control for drop arm
- Full electrical isolation and overload protection
- This barrier can be operated with a pushbutton or card reader, with an optional beam closing facility

1.6.2.10 Special Needs Barrier

1.6.2.10.1 Applications

Ideal solution for guiding and regulating the flow of people and wheelchair access. Typical applications include retail outlets and leisure centres.

1.6.2.10.2 Features

- Mechanical and motorized models
- Uni- or bi-directional
- Anti-panic opening
- Stainless steel construction

1.6.2.10.3 Specifications

POWER	220 Volt AC (110 Volt AC on request)
FREQUENCY	50Hz / 60Hz
POWER CONSUMPTION	15W
CONTROLLER VOLTAGE	12 Volt DC
LOCKING MECHANISM	90° opening gate 180kg concealed magnetic lock 180° opening gate Solenoid operated locking
PIVOT	Self lubricating plastic bush with stainless steel pin
GATE WING	• Framed – 38mm stainless steel tube frame with glass clamps and 6mm toughened glass infill • Frameless – 10mm toughened glass
INDICATOR LIGHTS	LED indicator lights (red cross, green arrow) mounted on top of gate post
SYSTEMS INTEGRATION	• Integrates with all access control and time & attendance systems • Unlocking controlled through normally open dry contact
POWER FAILURE & FIRE ALARM	Fail-safe – the gate unlocks and can then be opened
DESCRIPTION OF OPERATION	• Gate is triggered either by means of a pushbutton, remote control or access control reader • Gate can then either be pushed or pulled open • Gate closes automatically and relocks

1.6.2.11 Full Height Turnstiles

1.6.2.11.1 Application

Designed for high traffic volume areas. Ideal for corporate foyers allowing prestige access.

1.6.2.11.2 Features

- Heavy-duty solenoids are rated for continuous duty cycle to ensure optimum reliability
- Components of mechanism do not lose their adjustment after years of service under arduous conditions
- Arms are designed to ensure a single entry or exit
- The person is captured in a mantrap where a fingerprint reader, palm reader or a digital pad is positioned. If the person has no valid access, the turnstile arms are locked in position by solenoids

1.6.2.11.3 Specifications

POWER	220 Volt AC (110 Volt AC on request)
FREQUENCY	50Hz / 60Hz
POWER CONSUMPTION	50W (single turnstile) / 100W (double turnstile)
SOLENOID VOLTAGE	24 Volt DC (12 Volt DC on request)
LOGIC VOLTAGE	24 Volt DC
DIMENSIONS	
Single turnstile:	1400mm wide x 2 125mm high 1430mm wide x 2 250mm high - recommended minimum opening size
Double turnstile:	2150mm wide x 2 125mm high 2180mm wide x 2 250mm high - recommended minimum opening size
ROTOR DIAMETER	1200mm
ROTOR ARM CONFIGURATION	3 arm (120°) 4 arm (90°) 5 arm (72°) – ultra secure
ROTOR ARMS	32mm diameter U-tube arms spaced 165mm apart
WEIGHT	Single turnstile (4 arm) 160kg Double turnstile (4 arm) 255kg
DESIGN	Modular bolt-together design for ease of transport and installation. Components can pass through a standard door. Can be packed in broken-down form either onto a pallet or into a crate for transport
SYSTEMS INTEGRATION	Integrates with all access control and time & attendance systems Unlocking for entry / exit rotation controlled through normally open dry contact Transaction / Rotation complete output Integral wire ways with draw wires in place – no exposed wires

1.6.2.12 Half Height Turnstile

1.6.2.12.1 Application

Suited for applications requiring high volume access and medium levels of security  
Used extensively in applications such as office receptions, commercial buildings, and universities

1.6.2.12.2 Features

- The half height turnstile is designed to be an aesthetic and functional prestige access control solution

- Designed for high speed ultra quiet operation

1.6.2.12.3 Specifications

POWER	220 Volt AC (110 Volt AC on request)
FREQUENCY	50Hz / 60Hz
POWER CONSUMPTION	50W
SOLENOID VOLTAGE	24 Volt DC (12 Volt DC on request)
LOGIC VOLTAGE	24 Volt DC
ROTOR DIAMETER	1200mm
ROTOR WING CONFIGURATION	3 wing (120°) 5 arm (72°) – ultra secure
ROTOR WINGS	8mm toughened glass
WEIGHT	Single turnstile (3 wing) 110kg
DESIGN	Modular bolt-together design for ease of transport and installation. Components can pass through a standard door. Can be packed in broken-down form either onto a pallet or into a crate for transport
SYSTEMS INTEGRATION	Integrates with all access control and time & attendance systems Unlocking for entry / exit rotation controlled through normally open dry contact Transaction / Rotation complete output Integral wire ways with draw wires in place – no exposed wires

1.6.2.13 Waist Height Turnstiles

1.6.2.13.1 Application

Suited for applications requiring high volume access and medium levels of security. Used extensively in applications such as office reception areas, health clubs, colleges, libraries, leisure parks and stadiums

1.6.2.13.2 Features

- Zinc plated for corrosion resistance
- Ultra quiet, buffered solenoids and pawls
- Solenoid rates for 100% duty cycle
- Case hardened locking disk and pawls - eliminating any wear
- No routine maintenance whatsoever

1.6.2.13.3 Specifications

POWER	220 Volt AC (110 Volt AC on request)
FREQUENCY	50Hz / 60Hz
POWER CONSUMPTION	50W (single turnstile) / 100W (double turnstile)
SOLENOID VOLTAGE	24 Volt DC (12 Volt DC on request)
LOGIC VOLTAGE	24 Volt DC
ROTOR ARMS	38mm diameter stainless steel fixed tube arm
WEIGHT	Single 68kg Double 114kg

DESIGN	Modular bolt-together design for ease of transport and installation. Components can pass through a standard door. Can be packed in broken-down form either onto a pallet or into a crate for transport
SYSTEMS INTEGRATION	Integrates with all access control and time & attendance systems Unlocking for entry / exit rotation controlled through normally open dry contact Transaction / Rotation complete output Integral wire ways with draw wires in place – no exposed wires

1.6.2.14 Man Traps

1.6.2.14.1 Application

Suited for applications requiring high volume access and high levels of security.

Used extensively at entrances to banks, retail stores, colleges, office blocks and commercial buildings

1.6.2.14.2 Features

- Three sizes allowing for varying levels of security, comfort and access for wheelchairs, trolleys and prams
- Double door security
- Designed for integration with any access control system and for various double door operating configurations

1.6.2.14.3 Specifications

POWER	220 Volt AC (110 Volt AC on request)
FREQUENCY	50Hz / 60Hz
POWER CONSUMPTION	40W (single man-trap) / 80W (double man-trap)
OPERATING VOLTAGE	13.8 Volt DC
DESIGN	Modular bolt-together design for ease of transport and rapid installation. Components can pass through a standard door. Can be packed in broken-down form either onto a pallet or into a crate for transport. All glass is factory fitted into the steel & aluminium frames
SYSTEMS INTEGRATION	Integrates with all access control and time & attendance systems (controlled through a normally open dry contact) Integral wire ways – no exposed wires
FIRE ALARM / EVACUATION	Fail-safe auto-unlock configuration Terminals provided for evacuation mode
INSTALLATION REQUIREMENTS	Free standing structure which can be installed into a new or existing shop front Fixing surface is to be level. Fixed to existing floor by means of four countersunk anchor bolts (M12 x 90)

1.6.2.14 Door Control (Magnetic Locks)

1.6.2.14.1 Monitored Magnetic Lock

Product Description

- 600Kgs Holding force
- Dual voltage 12 & 24VDC
- Current draw 500mA / 250mA
- MOV Surge protection
- Fail- safe type
- Monitored (with LED, Hall effect IC & NO/NC relay)
- Push- off button on armature for instant release
- CE Approved
- Dimension: 265mm (L) x 66mm (W) x 20mm (D)

1.6.2.14.2 Unmonitored Magnetic Locks)

Product Description

- 150Kgs Holding force
- Operating voltage 12VDC
- Current draw 300mA / 150mA
- MOV surge protection
- Fail- safe type
- Unmonitored model
- CE approved
- Dimension: 170mm (L) x 36mm (W) x 24mm(D)

1.6.2.15 Door Control (Strike Locks)

1.6.2.15.1 Monitored Strike Lock

Key Features

- Patented field selectable fail safe/fail secure
- Multi voltage 10-30Vdc
- Fully monitored:
- Integrated door position (reed) switch
- Solenoid/Locked
- Latch position
- 1000kg holding force
- 4hr fire rating
- Mounting tabs as supplied standard

Applications

- High traffic areas
- Fire rated door sets
- Open in/open out door
- Suitable for use with all access control systems
- Doors requiring additional door position monitoring

1.6.2.15.2 Unmonitored Strike Lock

Product Description

- Flush mount striker lock
- Continuous action, Pre-impulse action
- 12VDC or 12VAC Operation

1.6.2.16 Break Glass Unit (BGU)

1.6.2.15.1 Monitored BGU

Product Description

- Mechanical emergency door release switch
- Green surface mount box with conduit knockout
- Manual key resettable actuator
- Push point activation
- With hinged clear plastic protective cover

1.6.2.17 Request to Exit

1.6.2.15.1 Touch Exit Switch

Product Description

- Input voltage: 12 VDC
- Touch to exit
- NO/NC Contact
- Dimensions: (W) 56 x (H) 86 x (D) 20 mm

1.6.2.15.2 Non Touch Exit Switch

Product Description

- Input voltage: 12 VDC
- NO/NC Contact
- Fits standard 4 x 2 box

1.6.2.16 Sensor

1.6.2.16.1 Door Open Sensor

Product Description

- 9mm Operating gap
- NC contact Max supply voltage 50V
- Flush mount installation
- Max 0.5A current