

Model: STRUCTURAL - Heavy Duty



Automatic sliding door assemblies

General applications: Aluminium framed doors and frameless doors (with or without electric motor lock)

Standard: To AS5007/2007 and B.C.A. regulations.

Performance Specification

The automatic (single slide/bi-part) Structural door operators are to be 240Vac supplied and 12Vdc driven electric operators, fully housed in an extruded aluminium housing of height 260mm and width 153mm. The operator will be manufactured in Western Australia and will comply with the relevant Australian Standard for automatic door assemblies (AS5007/2007) and B.C.A. requirements. This equipment shall incorporate the following:

1) Motor

Continuously rated 160Wdc motor to provide an operational rating of 60 minutes per hour 24 hours a day for door weights up to 300kg (For heavier doors the use of a 450Wdc motor should be used). Motor to be directly coupled to gearbox, to supply continuous output torque of 250Ncm at minimum 80% efficiency. The motor is to incorporate an integral encoder for reliable and accurate door position sensing and door speed controlling.

2) Gearbox

Maintenance-free, self lubricating gears to be supported at each end by fully sealed steel roller bearings. The gears are to be fully enclosed in a die cast aluminium housing to prevent exposure to dust and dirt and to prevent leakage or dissolution of lubricant.

3) Drive

Polychloroprene HTD tooth belt 20mm width of 1500kg tensile tensioned with adjustable guide roller for smooth, quiet and reliable operation. All rollers fitted with sealed permanently lubricated roller bearings all running on a heavy duty self aligning hard anodised track.

4) Control

Fully programmable controller with non-volatile ram to provide:

- a) Door control – Independently adjustable variable speed control for both open and close speeds as well as slow final speeds. Brake, torque and dwell timer adjustments should allow for full adjustment of settings capable of being set to comply with the latest Australian Standards.
- b) Auto Reverse – To automatically reverse the door in both open and close cycles. Fully variable sensitivity.
- c) Auto Stop – To automatically stop on closing or opening, back up and retry on reduced speed up to a programmable number of preset times until obstruction is cleared.
- d) Auto Retry – To automatically stop on opening AND closing, back up the door slowly and retry until obstruction is cleared. In the event that the obstruction is not cleared the door should switch into safety standby mode.
- e) Safety – Dual set of photoelectric cells to keep door(s) open if obstructed as per the current Australian Standards. Closing force of doors should not exceed 130Nm of force.
- f) Security Interface – Ability to provide operational data and be fully compatible with card reader, time lock, time clock control and key entry switch.

g) Door Control Switch – Three position switch to provide the following functions:

i) Auto, ii) Off, iii) Lock.

h) Panic button – In the event of an immediate security requirement an internal panic button can activate a programmable door closure where the doors will remain closed or locked until reset from the door control switch.

5) Locking - Electrical locking

The doors are to lock via the operator. The operator is to be fitted with a failsafe motor lock device directly locking the rotor shaft thus preventing locking failures due to door misalignment. This device is to be fully battery backed in power failure. The controller is to provide logical control (ie. Unlock, open then close and relock with a valid request such as card reader or after hours exit push button switch).

On power failure the door is to maintain secure and be able to provide emergency egress and be capable of being locked if required if mains power is not restored. The emergency exit switch fitted adjacent to the door must be accessible, clearly engraved and must operate in both power failure and normal conditions.

6) Actuation Sensors

The operator is to actuate with fully digital computerized microwave sensors with adjustable sensitivity, range and selectable zone detection pattern. The sensors are capable of providing one metre sideways detection from the centre line of the installed unit. These detectors must provide selectable failsafe or fail secure operation.

7) Locking – Manual locking

After-hours the doors are manually switched to the off position and manually locked by a key via a standard lockset key and snib mechanism.

8) Battery Status Indicator and Charger

The operator is to continuously monitor the battery status and indicate a failure through an audible low battery alarm. The controller shall supply a regulated and current limited self charging circuit to keep the battery at its optimum level of charge and to increase the useful life of the battery.

9) Security during Power Failure

In the event of a power failure the controller should still function as normal on backup battery and in the event of a low battery condition should sound an audible low battery alarm.

10) Self Intelligence

The controller is to be capable of being programmed without the need for specialist programming equipment. On-site adjustment should be able to be carried out by suitably trained trade personnel as and when required. The controller status should always be illuminated on an LED display for easy diagnosis of the door operation.

11) Interfacing

The operator will allow for connection of radars, push buttons, break-glass switches, card access, lock and panic buttons as well as security systems and building management systems for both monitoring and control.

12) Fire Alarm Interface

The operator is to be capable of full interface with the fire alarm system to provide both unlock and open facility or open only during normal operation (if not locked) on fire alarm.

13) Warranty

The automatic door operator is to be covered by a comprehensive 12 month labour and 24 month parts warranty from date of commissioning.