



1 GENERAL SPECIFICATION

This specification defines supply of fast sliding door motor, control circuit, features and options for controlled access to car parks, building complex and plants.

2 SYSTEM CONFIGURATION

2.1. Fast Sliding Door Motor

- 2.1.1. For sliding doors adaptable to road width; the door motor should range 2 mt TO 40 mt operable structure constantly and without overheating.
- 2.1.2. Top casing cover of the door motor should be made ST37 quality steel, and dyed with RAL3004 electrostatic dye.
- 2.1.3. Door motor cabinet dimensions should be as follows Width: 175 mm, length: 350 mm, height: 400 mm. Steel lower easel that will be fastened onto ground should be electro galvanizing coated with dimensions as follows: Width: 175 mm, length: 434 mm.
- 2.1.4. Components of the door motor such as the control panel and switches should be as a whole in the motor casing.
- 2.1.5. Bearing capacity of the door motor should be 2000 Kg.
- 2.1.6. Fast door motor feed supply should be 220 volts, the control panel should generate three-phase, transmitting 380 volts in three phases.
- 2.1.7. It should start at a slower pace; gain accelerate and finish slowing in order to prevent impacts on engine and reducer.
- 2.1.8. Door motor speed should be fully adjustable, capable of opening a 10m door in 15 seconds with +/-10%. If operation at a slower pace is particularly needed, it should be capable of opening a 10m door in 100 seconds. Torque should remain unchanged no matter what speed it operates at.
- 2.1.9. Individual manual key should be available for sliding the door open and close manually in case of power cut. It should have a dust cover to protect it against external factors.
- 2.1.10. Motor control panel should be capable of generating 255 volts at places where mains electricity is low, alternatively it will reduce the high voltage for continuous operation of the door.
- 2.1.11. When the engine is potentially damaged, damages incurred on the control panel will be displayed. For instance, the door is jammed, voltage is too poor etc. in case of failure, the motor should be capable of reset and resume operation after turning the fuse on and off.
- 2.1.12. Limiting switch of the door motor should be electromechanical.
- 2.1.13. Fast sliding door motor power should be no less than 750 Wat.

2.2. CONTROL AND LOGIC CIRCUIT

- 2.2.1. Control circuit should be equipped with a structure together with any other necessary equipment needed for the motor unit and all necessary accessories; and it should ensure smooth operation of the system.
- 2.2.2. Control card should be microprocessor-driven.
- 2.2.3. Control circuit should operate at 220-240V 50-60Hz. There should be an internal supply outlet of 12-24V Dc for accessories and equipment.
- 2.2.4. Average voltage for the door motor should not exceed 3 amperes.
- 2.2.5. Control circuit should be placed inside the engine box where connections and settings are enabled.
- 2.2.6. Control circuit will be a PCB print.
- 2.2.7. There should be an inverter system for setting the speed and voltage of the door motor. Inverter voltage and function cabling connections should be locked in a secret spot beyond human touch. There should be parameter settings and warning tags on the front side of the inverter.
- 2.2.8. Inverter body should be fully plastic to avoid a safety risk.
- 2.2.9. Parameters should be selectable with six buttons on the inverter's digital display.
- 2.2.10. An insert socket receiver should be connectable to the control card.
- 2.2.11. Control circuit should have an auto off time set.
- 2.2.12. Control circuit should have deep switches to select different operation modes. Deep switch modes should have automatic turn off enabled/disabled, motor deflexion etc.
- 2.2.13. Inverter of the fast sliding door motor should have CE, UL, RCM, ISO certificates and signs.
- 2.2.14. Inverter of the door motor should be tested for vibration in accordance with IEC 60068-2-64 and IEC 60068-2-6.
- 2.2.15. Inverter of the door motor should enable AI-Back-Up Adaptor for installing programming and coding.
- 2.2.16. Control circuit should allow connection of all access control elements for door opening such as remote control, button, card reader, loop detector, key-driven button, cell phone module, license plate recognition system.
- 2.2.17. Electronic card should have a photoelectric outlet. It should be equipped with a reciprocal safety photoelectric mechanism to prevent the door from shutting when there is an object in front of or behind the door. When an object intervenes while the door shuts, the mechanism should stop and open back, likewise it should stop if and when an object is stuck in between behind the door.

2.3. ACCESSORY EQUIPMENT (One or all selectable)

- 2.3.1. 2 remote controls with 4 channels of 433,9 Mhz should be provided together with the system.
- 2.3.2. 1 Tk antenna should be provided along with the system to safeguard uninterrupted connection of the remote controls on the long distance.
- 2.3.3. A cabled safety photoelectric system should be present for safe operation of the system.
- 2.3.4. Pedestrians and drivers should be warned with a warning light in case the sliding door is in motion or it will automatically close.

- 2.3.5. To open and close the door manually in case of power cut, the mechanism should enable individual manual key.
- 2.3.6. The system should be equipped with a uniform traffic signalisation light of 200V to warn vehicles and regulate vehicle traffic. High quality LEDs should be used for the traffic lights. Traffic light will be red when the road is blocked, otherwise it will be green when the road is clear. (Optional)
- 2.3.7. A LOOP detector system should be available for safe operation of the system. (Optional)
- 2.3.8. Motor cabinet should enable painting in any desired RAL colour as may be chosen by the institution in question. (Optional)
- 2.3.9. Sliding door engine should have a Windows-based software pack to check with the on-off, location info in a computerized medium. (Optional)
- 2.3.10. The system should feature a 180 cm tall photoelectric mechanism at busy checkpoints like schools and plants where passer-by circulation is thick. (Optional)

3. PERFORMANCE

3.1. Opening Speed

- 3.1.1. Fast engine motor should have on-off time of 12m/min. – 40m/min.

3.2. Operation Sustainability and Life

- 3.2.1. Fast sliding door motor should have minimum 2 (two) years of warranty, and spare parts availability for a period of 10 (ten) years.
- 3.2.2. Operating sustainability of the door motor should be 100%.
- 3.2.3. Door motor should be eligible for uninterrupted operation during the day. (100% cycle)
- 3.2.4. Door motor cabinet should have IP54 protection class.
- 3.2.5. Door motor should enable stable operation from -20 to +70 degrees.

4. MANUFACTURER EXPERIENCE

- 4.1.1. Fast sliding door manufacturer should have minimum 14 years of experience. Experience in manufacturing should be proven with official registration documents of the company.
- 4.1.2. Manufacturer should be employing at least 1 mechanical engineer, 1 electronic engineer, 1 mechatronics engineer. Manufacturer should prove this on a documentary basis.
- 4.1.3. Fast sliding door motor product should have a CE certificate.
- 4.1.4. Manufacturer should have TUV CERT ISO 9001-2015, TUV CERT ISO 14001 and TUV CERT OHSAS 18001 quality management certificates and Service Area Compliance Certificate.
- 4.1.5. Manufacturer should have a Made in Turkey certificate or Domestic Production certificate for door motor.
- 4.1.6. Manufacturer should have TS 21 HYB, TS 12540 HYB, TS 12870 HYB and TS 13406 HYB certificates so as to be eligible for providing service to safety products.

5. QUALITY CONTROL TERMS

- 5.1.1. Door motor and equipment should be carefully packed.
- 5.1.2. FA tests will be performed after fast sliding door motor is manufactured and before it is dispatched to the site; a certified FAT certificate will be delivered upon delivery of the product.
- 5.1.3. Once the door motor system is complete, it will be fully tested before installing.

- 5.1.4. Door motor and its sub systems should be masterfully and carefully made.
- 5.1.5. Master dimensions should be compared with drawings and order dimensions.