



1 GENERAL SPECIFICATION

This specification defines supply of sliding door motor, control circuit, features and options for entry and exit checkpoints at villa, building complex, and entities.

2 SYSTEM CONFIGURATION

2.1. Sliding Door Motor

- 2.1.1. For sliding doors adaptable to road width; the door motor should range 1 mt and 7 mt operable structure.
- 2.1.2. Top casing cover of the door motor should be made of high-pressure plastic raw material, providing full protection for the engine and the electronic components under adverse weather conditions.
- 2.1.3. Door motor dimensions should be as follows: Width: 187 mm, length: 340 mm, height: 319 mm. Steel lower easel that will be fastened onto ground should be electro galvanizing coated with dimensions as follows: Width: 170 mm, length: 340 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 600 Kg or 1000 Kg, selected by mode. (to be determined at the proposal)
- 2.1.6. Supply voltage of the door motor should be 220 Volt 50-60 Hz, and the door motor should be 220 Volt AC itself.
- 2.1.7. 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.
- 2.1.8. Once the door motor is assembled on the easel, it should have lids to cover the mounting screws and to provide protection against adverse weather conditions.
- 2.1.9. Limiting switch of the door motor should be electromechanical.
- 2.1.10. Maximum torque of the door motor should be 58 Nm for 600 Kg, and 103 Nm for 1000 Kg.
- 2.1.11. Pull power of the door motor should be 700 N for 600 Kg, 2100 N for 1000 Kg.
- 2.1.12. Output speed of the door motor should be 46 rpm.
- 2.1.13. Sliding door motor should have 280 W power.

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 have a high-performance RISC processor, which should be supported by NanoWatt XLP, and capable of controlling extremely low power.
- 2.2.3. Control panel should be equipped with high protection filter designed and developed against instantaneous potential voltage impacts.
- 2.2.4. Control circuit should operate at 220-240V 50-60Hz. There should be an internal supply outlet of 12-24V Dc for accessories and equipment.
- 2.2.5. Average voltage for the door motor should not exceed 1 amper.
- 2.2.6. Control circuit should be placed inside the engine box where connections and settings are enabled.
- 2.2.7. Control circuit will be a PCB print.
- 2.2.8. The driver's floor should be triac on the electronic card.
- 2.2.9. An insert socket receiver should be connectable to the control board.
- 2.2.10. Automatic closing term setting should be enabled on the control circuit.
- 2.2.11. An optocoupler should be used for inlet and outlet on the electronic card against external disturbance.
- 2.2.12. Control circuit should have deep switches to select different operation modes. Deep switch modes should have automatic turn off on and off mode, motor deflexion etc.
- 2.2.13. 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.
- 2.2.14. Electronic card feeding should be connected via integrated fuse connector, and it should be preserved in engine casing.
- 2.2.15. 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 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. Sliding door engine should have a Windows-based software pack to check with the on-off, location info in a computerized medium. (Optional)
- 2.3.9. 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. Sliding engine motor should have 10m/min on-off time.

3.2. Operation Sustainability and Life

- 3.2.1. 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 less than 75% of value.
- 3.2.3. Door motor cabinet should have IP54 protection class.
- 3.2.4. Door motor should enable stable operation from -20 to +70 degrees.

4. MANUFACTURER EXPERIENCE

- 4.1.1. Sliding door motor 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. 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 the 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 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 sliding 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.
- 5.1.6. Door motor should come up with assembling and user manuals in European standards.