**SUPREMA SECURE MULTI-DOOR I/O MODULE - DM-20**

**TECHNICAL SPECIFICATIONS**

2024-02-13

# PART 1 - GENERAL

The intent of this document is to specify the minimum criteria for the design, supply, installation, and commissioning of the DM-20.

* 1. SUMMARY

1. A door control module, capable of configuring and controlling multiple doors by connecting Wiegand readers and various I/O devices.
   1. REFERENCE
2. Standards
3. Conformity for Europe (CE)
4. UK Conformity Assessed (UKCA)
5. Korea Certification (KC)
6. FCC - Code of Federal Regulations, Title 47, Part 15, Class B
7. Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) - (EC No. 1907/2006)
8. The Waste Electrical and Electronic Equipment (WEEE) - Directive 2012/19/EU
   1. SUBMITTALS
   2. QUALIFICATIONS
9. Manufacturer shall be ISO 9001 certified with a minimum of five years’ experience in producing access control equipment.
10. Installers shall be trained by the Manufacturer to install, configure, and commission the access control system.
    1. WARRANTY
11. Manufacturer shall provide a limited ( ) month warranty for the product to be free of defect in material and workmanship.

END OF SECTION

# PART 2 - PRODUCTS

1. EQUIPMENT
2. Manufacturer   
   Suprema Inc.   
   17F Parkview Office Tower, 248, Jeongjail-ro, Seongnam-si, Gyeonggi-do, 13554, Republic of Korea  
   Tel: 82-31-783-4502, Fax: 82-31-783-4503, [https://www.supremainc.com](https://www.supremainc.com/)  
   [https://support.supremainc.com](https://support.supremainc.com/)
3. Model(s) name: Door Module

Part Number: DM-20

1. Alternates: NONE
2. DESCRIPTION
3. The door control module controls Wiegand readers and various I/O devices.
4. Capable of controlling up to 62 Wiegand readers when connected as daisy-chain via RS-485.
5. Provides various Interfaces.
6. RS-485, TTL Input/Output, Wiegand, Relay, Supervised Input.
7. FEATURES
8. Door control with multiple inputs and outputs.
9. Control the connected Wiegand reader’s LED, Buzzer, Tamper, and more.
10. Detect 4 states such as ON, OFF, Open and Short with 4ch Supervised Inputs.
11. RS-485, TTL Input/Output, Wiegand, Relay, Supervised Input.
12. SPECIFICATIONS

|  |  |  |
| --- | --- | --- |
| Category | Feature | Specification |
| General | CPU | Cortex M3 72 MHz |
| Memory | 128 KB Flash, 20 KB SRAM |
| LED | Multi-color   * Power x 1 * Relay x 4 * TTL Input x 4 * Supervised Input x 4 * TTL Output x 6 * RS-485 x 2 * Run x 1 |
| Operating Temperature | -20 °C ~ 60 °C |
| Storage Temperature | -40 °C ~ 70 °C |
| Operating Humidity | 0 % ~ 80 %, non-condensing |
| Storage Humidity | 0 % ~ 90 %, non-condensing |
| Dimension (W x H x D) | 130 x 90.5 x 35.8 (mm) |
| Certificates | CE, UKCA, KC, FCC, RoHS, REACH, WEEE |
| Interface | RS-485 | 1 ch |
| RS-485 Communication Protocol | OSDP V2 compliant |
| TTL Input | 4 ch |
| TTL Output | 6 ch |
| Supervised Input | 4 ch |
| Relay | 4 Relays |
| Wiegand | 2 ch Inputs   * Voltage: 12 Vdc * Current: Max. 1.5 A |
| Electrical | Power | * Voltage: 12 Vdc * Current: Max. 3.1 A |
| Relay | 2 A @ 30 VDC Resistive load  1 A @ 30 VDC Inductive load |

END OF SECTION

# PART 3 - EXECUTION

1. INSTALLER
2. Contractor personnel shall comply with all applicable state and local licensing requirements.
3. PREPARATION
4. Contractor shall avoid locating the reader/controller in a location subject to direct sunlight, dust or soot.
5. STORAGE
6. The device shall be stored in an environment where temperature is in the range of -40 °C ~ 70 °C.
7. The device shall be stored in an environment where humidity is in the range of 0 % ~ 90 %, non-condensing.
8. INSTALLATION
9. The device shall be installed in an environment where temperature is in the range of -20 °C ~ 60 °C.
10. The device shall be installed in an environment where humidity is in the range of 0 % ~ 80 %, non-condensing.
11. All wires shall be run through conduit to prevent failure caused by rodent damage.
12. Connections between card readers and a door controller shall not exceed 100 meters.
13. All peripheral devices shall be grounded.
14. EXAMINATION
15. All connections to the reader/controller shall be tested for proper levels of performance.

END OF SECTION