

Galaxy Door Control Module (DCM)

Introduction

Door Control Modules (DCMs) can be added onto the Galaxy bus lines to add fully integrated access control. Each DCM allows up to two Wiegand readers to be connected to control two separate doors; each door with an exit button or one door with an entry and exit reader.

Installation and Mounting

The DCM can be supplied installed in a standard plastic RIO box or within a Power RIO box.

Mounting the RIO Box

1. If necessary, remove the DCM PCB from the box to allow access to the screw holes.
2. Fix the base to the mounting surface, using the screw holes provided.
3. All cables must be brought into the enclosure base via the cable entry points. There are six cable entry holes for the entry of alarm cables.
4. Attach the RIO box lid with the four thread forming screws provided.

Mounting the Power RIO Box

The DCM is mounted above the control PCB on a mounting plate.

1. Remove the screws securing the left hand control PCB to the box.
2. Fit the four mounting pillars supplied with the kit in place of the PCB screws.
3. Fit the mounting plate to the pillars and secure using the screws removed from the PCB.
4. Attach the DCM to the mounting plate using the plastic clips supplied.

Inputs

The DCM includes the following sensing inputs:

Door Contact (DC)

This input is a normal alarm zone input that has the same functionality as a normal security zone type. It uses normal 1k/2k double balanced zone wiring.

Request to Exit Contact (EC)

This input is a normally open contact. When activated it will allow the door to unlock for the programmed duration. Additionally, the door can be held unlocked indefinitely by holding the EC closed. In this case, the relay activates only for the programmed duration but the door propped alarm is held off. This can be achieved, for example, by using a keyswitch wired in parallel with the normal EC button.

Function Contact

This uses normal 1k/2k double balanced zone wiring. It has the function of initiating a pre-programmed menu option following a valid card. The normal use is to activate the setting procedure via the reader but any menu option can be programmed.

Tamper Inputs

The tamper circuits for both readers should be wired to the same tamper terminals on the DCM. The two circuits are wired in parallel, each with its own series resistor as follows:

- Reader 1 – 5.6 k Ω
- Reader 2 – 12 k Ω

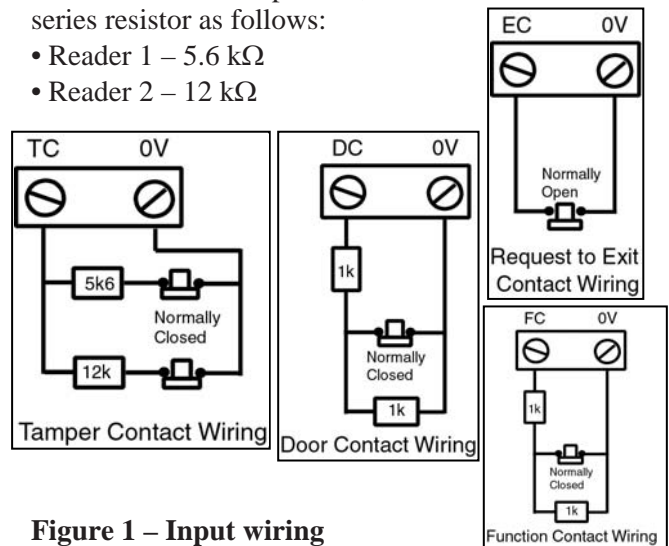


Figure 1 – Input wiring

Addressing

The DCM must be given a unique address before it is connected to a power supply. The DCM can be addressed with the DIP switches. The addressing works in a binary mode. The following table shows each DIP switch with related address number. Switches 4 to 8 must be left in the off position.

Address	Switch			
	1	2	3	4 - 8
0	OFF	OFF	OFF	OFF
1	ON	OFF	OFF	OFF
2	OFF	ON	OFF	OFF
3	ON	ON	OFF	OFF
4	OFF	OFF	ON	OFF
5	ON	OFF	ON	OFF
6	OFF	ON	ON	OFF
7	ON	ON	ON	OFF

Table 1. DIP Switch Addressing

Connecting the DCM to the Galaxy System

The DCM **must** be wired to the Galaxy RS485 (AB) line in parallel (daisy-chain configuration). The DCM requires 12V d.c. This can be supplied from the control panel power supply or from the Power RIO when mounted inside the Power RIO box.

See Figure 3 for a diagram of the connections.

NOTE: If the DCM is the last module on the line, connect a 680 Ω EOL resistor across the **A** and **B** terminals.

Configuring the DCM

The added DCM is configured into the system on power up of the control panel or when exiting from engineer mode. The flash rate of the green comms LED (LED1) on the DCM indicates the status of the communication with the control Panel. A short flash once per second indicates good communications. LED2 when lit indicates that there is power to the DCM.

Connecting a Wiegand Device

A standard Wiegand card reader or keypad can be connected to the DCM. The keypad must operate in 8-bit burst mode.

Wiegand Reader Inputs

The wires from the Reader are connected to the Wiegand Reader Inputs (see Figure 2). Refer to separate Reader instructions for method of wiring the Reader to the DCM.

Buzzer Output

This activates the buzzer on the reader to indicate card read, access granted and card rejected. The output is open collector and can switch up to 12 mA.

LED Output

LED output 3 is used to drive a reader LED. It is open collector and can switch up to 12 mA. LED outputs 1 and 2 are not used. The LED gives a visible indication on the reader of card read and access granted.

Relay Output

This is a relay output which is activated upon any valid card read or RTE button operation in order to temporarily unlock the door. The relay can switch up to 1A @ 30V AC.

Galaxy DCM PCB

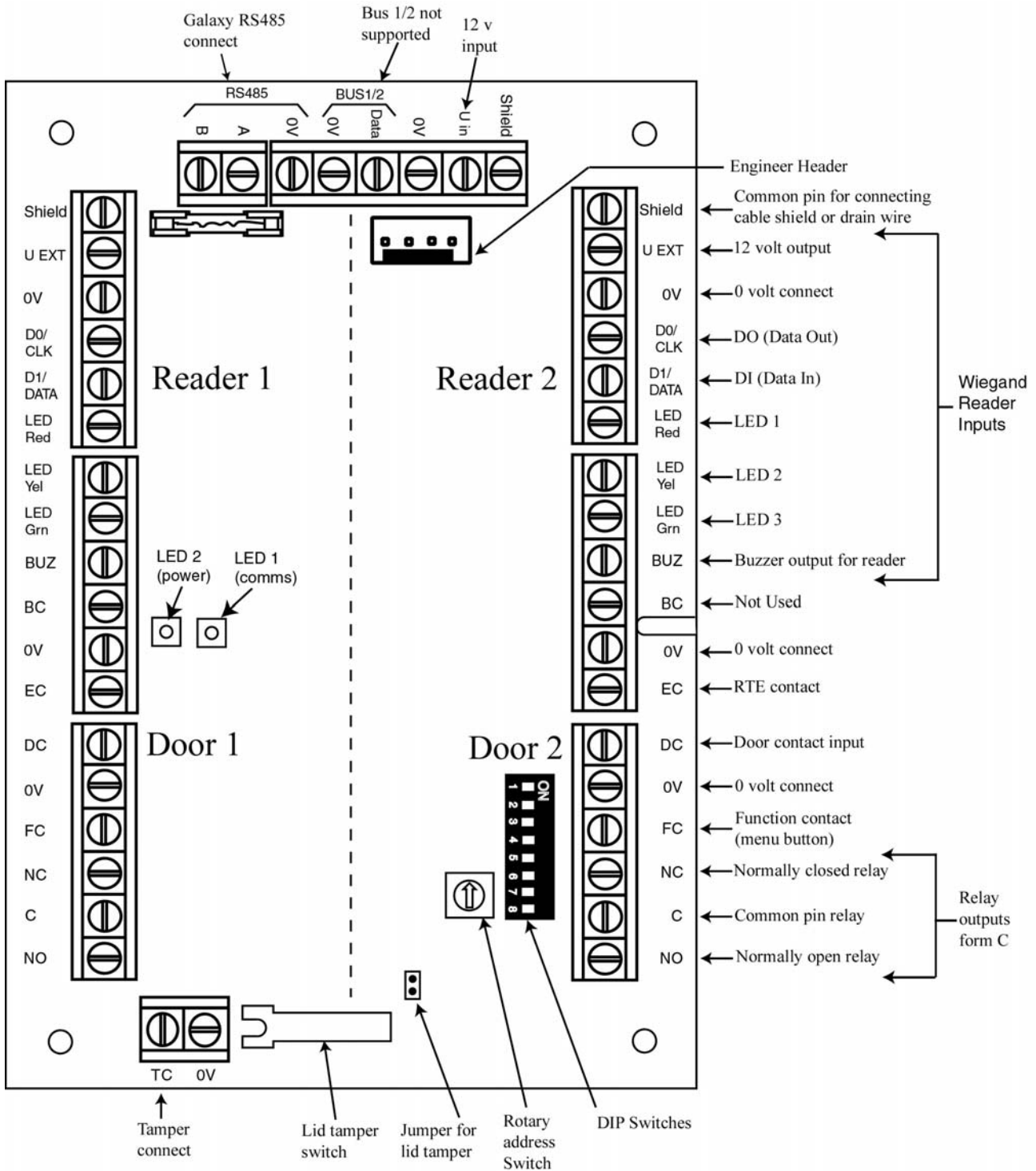


Figure 2 – Galaxy DCM PCB Layout

Notes:

1. If only one door is being connected, then always use the connections for Door 1 (Left Side) and terminate the inputs with a 1K resistor.
2. When door readers are being connected for entry and exit to the same door, then connect the entry reader to Door 1 and connect the exit reader to Door 2.

Specifications

Physical

Weight (RIO): 270g approx.
Dimensions (RIO Box mm): 150 wide x 162 high x 39 deep

For additional weight and Dimension when house within a Power RIO enclosure, please see the Power RIO documentation.

Electrical

Operating voltage range: 10.5V to 15V
Current draw, Typical: 40mA Typical
Current draw, Maximum (2 readers): 130 mA

Compliance

This product is suitable for use in systems compliant to EN50131-1: 2006, EN50133-1 and PD6662.

This product has been tested for compliance to EN50131-3 and EN50133-3 by CNPP.

Security Grade: 3
Environmental class: II

