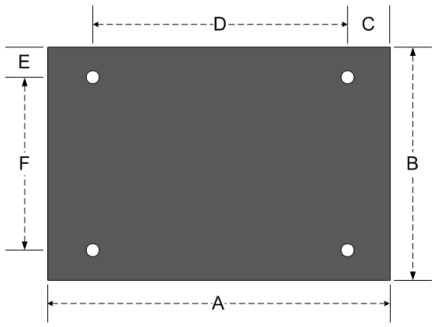
Input / Output (FB3) FREEDOM BRIDGE™ Installation Guide

CAUTION: This product is sensitive to Electrostatic Discharges (ESD). Take precautions while handling the product by using proper grounding straps at all times.

PHYSICAL SPECIFICATIONS

Length: 76mm (3.0in)
Width: 47mm (1.85in)
Height: 17mm (0.67in)
Weight: 34g (1.20oz)

Max Readers: **0**
Max Input: **12**
Max Output **2**



FB3 Base Plate Mounting		
Dim	**mm**	**in**
A	116.07	4.57
B	78.74	3.10
C	15.24	0.60
D	85.59	3.37
E	10.16	0.40
F	58.42	2.30

This Freedom device is certified as follows:

- Electrical: UL294 and UL294B
- Power over Ethernet: IEEE 802af – Mode A only, Class 2 (6.49 Watts)
- EMI Radiation: FCC Part 15 Class B

INSTALLATION REQUIREMENTS

Freedom Bridges should only be installed in **dry**, **non-condensing** environments. The ambient temperature of the environment should range between **-40°C** and **50°C**.

When mounting the Freedom Bridge to a surface, ensure that the mounting surface is **non-conductive**. Causing any short-circuits on the Freedom Bridge may cause it to malfunction.

DC power, input contact, and output device wires should be between 16-28 AWG. They should also be stripped 5.5mm to sufficiently fit the terminal blocks and ensure that they do not come in contact with each other.

INSTALLATION PROCEDURE

For each of the following steps, be sure to use reference on the back for additional details:

1. If you have any **supervised input contacts**, wire them to the **Digital Contact Inputs** using Method 1 or Method 2.

   Note: Only **In5**, **In6**, **In11**, and **In12** support Input Supervision.

2. If you have any **non-supervised input contacts**, wire them to the **Digital Contact Inputs**.
3. Wire the **output devices** to the **Relay Outputs**.
4. Supply power to the Freedom Bridge using either or both of the following methods:
   a. A **2.25 – 5.25W Power over Ethernet (PoE)** port on an Ethernet switch connected to the Freedom Bridge using a Cat5e or Cat6 cable. (Passive injectors not supported; Mode A PoE only)

   b. **10 - 16Vdc & 350mA** (300mA external & 50 mA internal) **DC power** connected directly to the **TB1** terminal on the Freedom Bridge.
5. If you are **not** using **PoE** to power your Freedom Bridge, connect a Cat5e or Cat6 cable from any port on an Ethernet Switch to the RJ-45 connector on the Freedom Bridge.

   Note: Ethernet only supports a **maximum cable length** of **100m**. Greater lengths can be achieved by adding switches or repeaters every 100m.

6. To configure and add the Freedom Bridge to a MESH/Freedom Server, refer to the MESH/Freedom Version 8 Software Guide.

A **flashing green "**Ready" LED light on the Freedom Bridge circuit board indicates that the bridge is attempting to connect to the server.
A **solid green "**Ready" LED light indicates that the Freedom Bridge has established a connection to the server and is ready to use.

WIRING REFERENCE

1 Optional DC Power In

0v	DC Power Ground
+12	DC Power Input

Requirements:

- 10 – 16 Vdc
- 350 mA (300 mA external & 50 mA internal)

2 Reset Button

Press and hold this button for 10 seconds to reset the configuration back to default.

3 Relay Outputs

Nc	Normally Closed
C1-2	Common 1-2
No	Normally Open

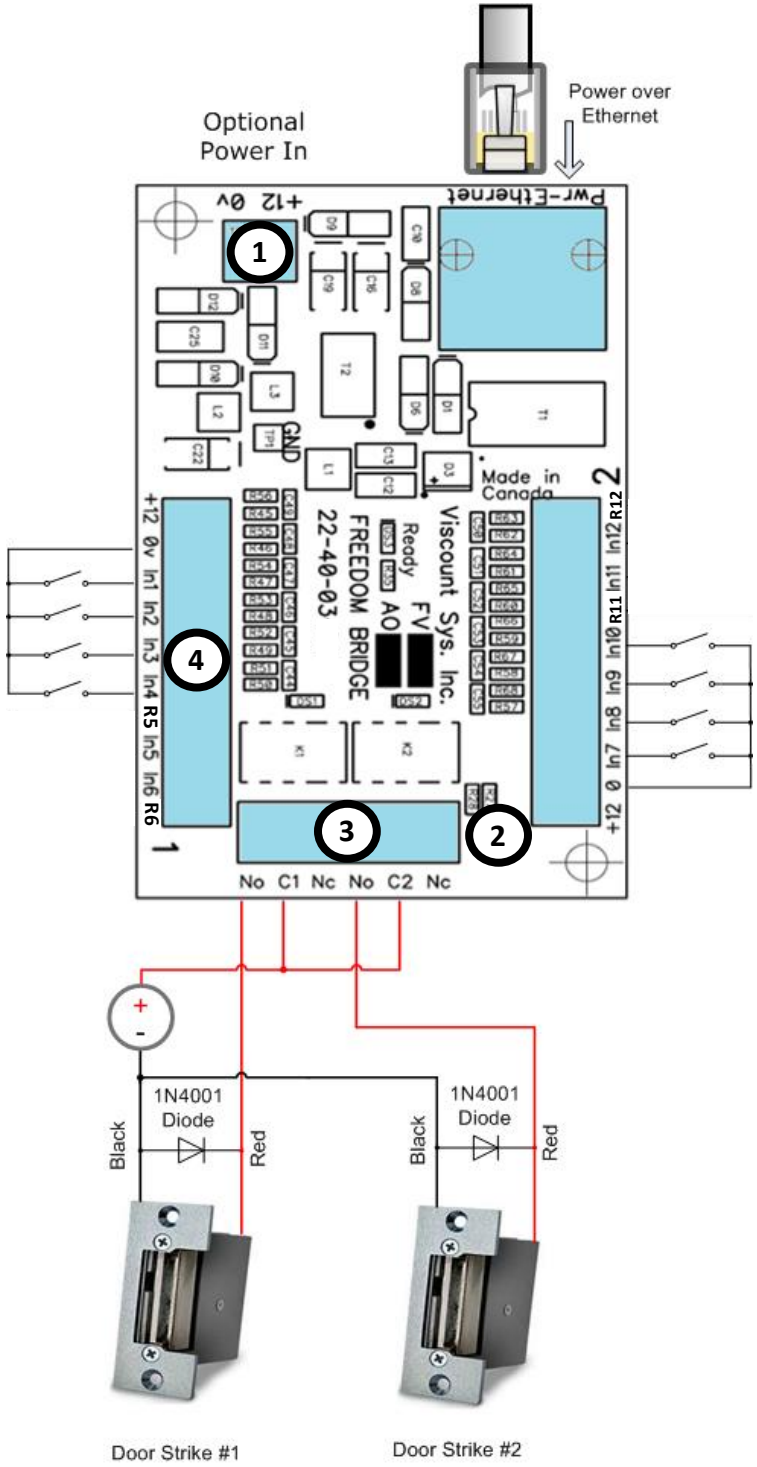
Relay Contact:

- **DC:** 30 Vdc @ 1 Adc
- **AC:** 60 Vac @ 0.5 Aac

NOTE: As long as the total current of the reader plus a door strike **DOES NOT EXCEED 300mA**, you may power the door strike using the power out and ground from an Input terminal block.

50-40-3

IDENTIV



4 Digital Contact Inputs

0v/R#	Ground
12v	Power Output
In1-12*	Input 1-12

12v Power Output using PoE:

- 11.5 - 12.5 Vdc
- 300 mA Max. Current

12v Power Output using DC:

- 8.5 - 16 Vdc
- 300 mA Max. Current

*Only In5, In6, In11, and In12 support Input Supervision