

Input / Output (FB3) Freedom Bridge™

Installation Guide

PART NUMBERS

FREEDOM
by IDENTIV

50-40-I/O, 50-40-I/OL
Replaces 50-40-3

ENTERPHONE
by IDENTIV

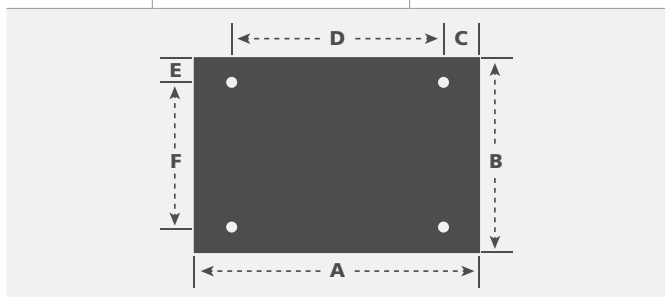
50-24-I/O
Replaces 50-24-3

PHYSICAL SPECIFICATIONS

Length	76 mm (3.00 in.)
Width	47 mm (1.85 in.)
Height	17 mm (0.67 in.)
Weight	34 g (1.20 oz.)
Max Readers	0
Max Input	12
Max Output	2
Certifications	Electrical: UL294 and UL294B Power over ethernet: IEEE 802af Mode A only, Class 2 (6.49 Watts) EMI Radiation: FCC Part 15 Class B

BASE PLATE MOUNTING

Dimension	Millimeters	Inches
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



SUMMARIZED LEVELS OF ACCESS CONTROL COMPONENTS

Destructive Attack	Level I
Line Security	Level I
Endurance	Level I
Standby Power	Level I
Single Point Locking	Level I

⚙️ 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.

Freedom Encryption Bridges should only be mounted to non-conductive surfaces. Incorrect mounting may short-circuit the electronics, which will cause it to malfunction.

DC power, reader, 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 reference the wiring diagram on page 2 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. 12 – 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 100 m.
6. To configure and add the Freedom Bridge to a MESH/Freedom Server, refer to the MESH/Freedom Solution Guide manual.

1

OPTIONAL DC POWER IN

0v	DC Power Ground
+12	DC Power Input
Requirements	<ul style="list-style-type: none"> • 12 – 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

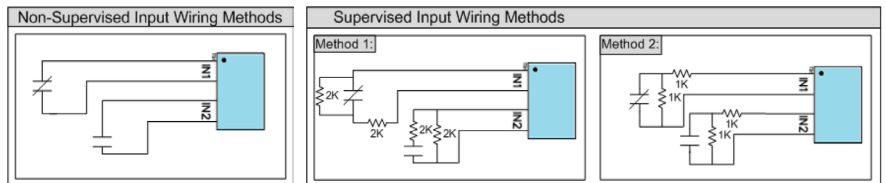
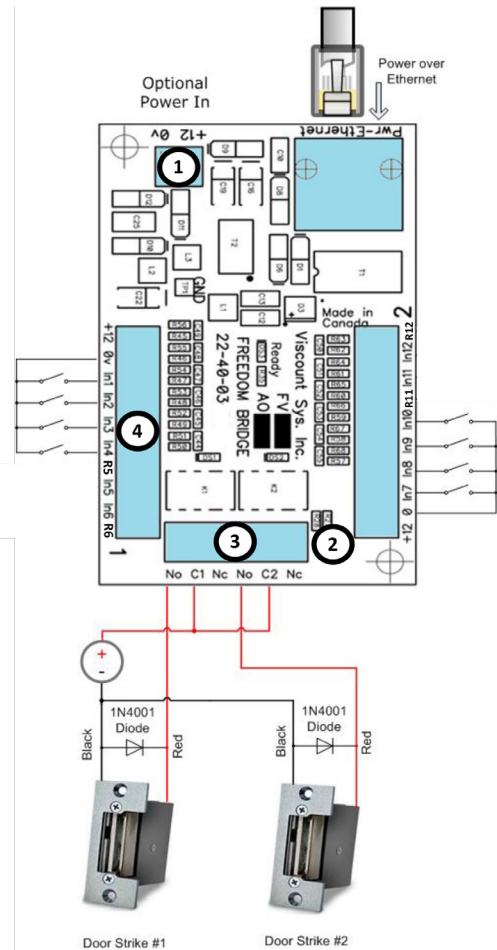
Nc	Normally closed
C1 - C2	Common 1 - 2
No	Normally open
Relay Contact	DC: 30 Vdc @ 1 Adc AC: 60 Vac @ 0.5 Aac

4

DIGITAL CONTACT INPUTS

0v / R#	Ground
12v	Power output
In1 - In12	Input 1 - 12
12v Power Output using PoE	<ul style="list-style-type: none"> • 11.5 - 12.5 Vdc • 300 mA Max. Current
12v Power Output using DC	<ul style="list-style-type: none"> • 8.5 - 16 Vdc • 300 mA Max. Current

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



A flashing green "Ready" LED light on the Freedom Bridge circuit board indicates that the bridge is powered but not connected to a server.



A solid green "Ready" LED light indicates that the Freedom Bridge has established a connection to the server and is ready to use.

CAUTION

This product is sensitive to Electrostatic Discharges (ESD).

Take precautions while handling the product by using proper grounding straps at all times.

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 the reader Input terminal block.