IDENTIV

Primis Single Port RS-485 Bridge™
Installation Guide

PART NUMBERS

PRIMIS — FR-50-40-485, FR-50-40-485L, FR-50-1302-1

ENTERPHONE — FR-50-24-485

PHYSICAL SPECIFICATIONS

Length	76 mm (3.00 in.)
Width	48 mm (1.90 in.)
Height	17 mm (0.67 in.)
Weight	34 g (1.20 oz.)
Readers	1
Supervised Inputs	6
Relay Outputs	2
Certifications	**Electrical:** UL294 **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
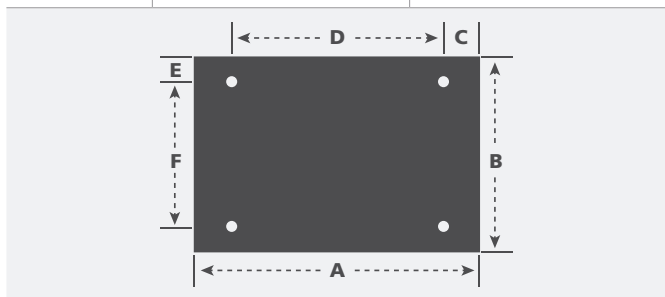
SUMMARIZED LEVELS OF ACCESS CONTROL COMPONENTS

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

⚙ INSTALLATION REQUIREMENTS

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

Primis 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. Connect an RS-485 Reader to the RS-485 Reader Input on the Primis Bridge. The selection of 2-wire or 4-wire operation is done via UDP configuration, as is the baud rate (nominally 57600)

   A. A 2-wire RS-485 reader must be connected with a 4-position connector for +12, A, B, 0v, leaving the other 2 pins (R- and R+) empty. Connect the +12, A, B and the reader shield wire to the appropriate terminal points on the Reader Input.

   B. A 4-wire RS-485 requires a 6-position connector for +12, T-, T+, 0v, R-, R+, where T- means Transmit Inverted signal, and R+ means Receive non-inverted signal.

2. Any unused wires on the reader must be evenly snipped and have their tips insulated using electrical tape or equivalent. The shield wire on the reader must also be completely insulated to prevent ground loops.

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

4. If you have any non-supervised input contacts, wire them to the Digital Contact Inputs.

5. If you have a relay output contact, wire it to the Relay Output.

6. Supply power to the Primis Bridge using either or both of the following methods:

   A. Wire 12 - 16Vdc power, up to 400mA, directly to the terminal on the Primis Bridge.

   B. Connect a Cat5, 5e, or Cat6 cable from any PoE port on an Ethernet Switch to the RJ-45 port on the Primis Bridge. **Note:** Ethernet only supports a maximum cable segment length of 100m (328ft).

7. To add the Primis Bridge to a Primis Server and configure it, refer to the Primis Solution Guide manual.

1 OPTIONAL DC POWER IN

0v	DC Power Ground
+12	DC Power Input
Requirements	• 12 – 16 Vdc • 350 mA (300 mA external & 50 mA internal)

2 RS-485 READER (2 WIRE)

+12	Power Output
A	Data A Input
B	Data B Input
0v	Ground

RS-485 READER (4 WIRE)

+12	Power Output
T-	Transmit Inverted Signal
T+	Transmit Non-Inverted Signal
0v	Ground
R-	Receive Inverted Signal
R+	Receive Non-Inverted Signal
Power Output Using DC	• 8.5 - 16 Vdc • 350 mA max current

3 RESET BUTTON

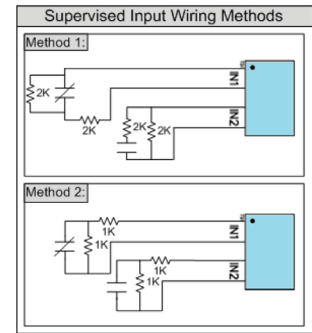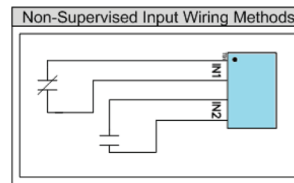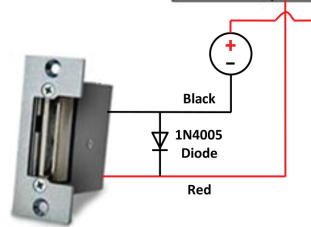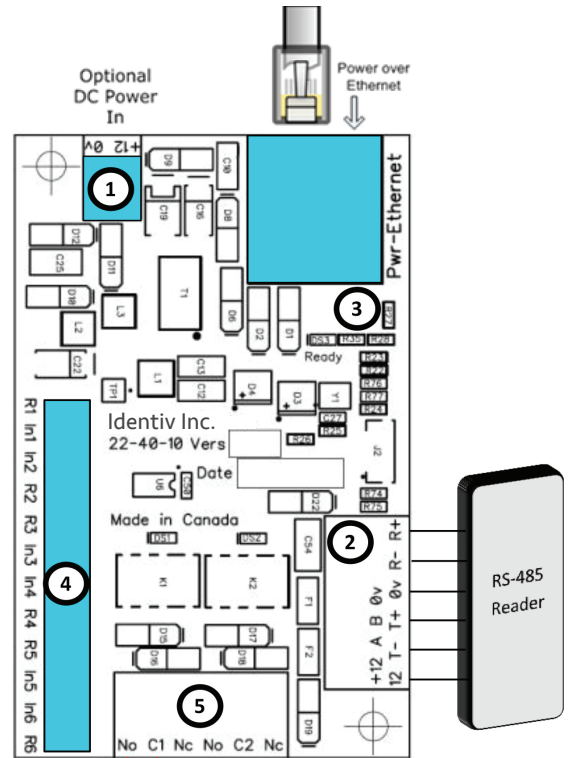Press and hold this button for 10 seconds to reset the configuration back to default.

4 DIGITAL CONTACT INPUTS

R1 - R6	Ground
In1 - In6	Non-supervised or supervised inputs 1-6

5 RELAY OUTPUT

NC	Normally closed
C	Common
No	Normally open
Relay Contact	DC: 30 Vdc @ 1 Adc

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

A solid green "Ready" LED light indicates that the Primis 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.