AL-1170 Reader Interface Module
Installation Instructions

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Introduction

This is the GE *AL-1170 Reader Interface Module Installation Instructions*. Each module is shipped with the following hardware:

- Four clip-in standoffs
- Four mounting screws
- Six 3-position terminal blocks

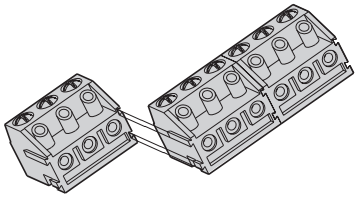
CAUTION: You must be free of static electricity before handling circuit boards. Wear a grounding strap or touch a bare metal surface to discharge static electricity.

Installation

To install the module, do the following:

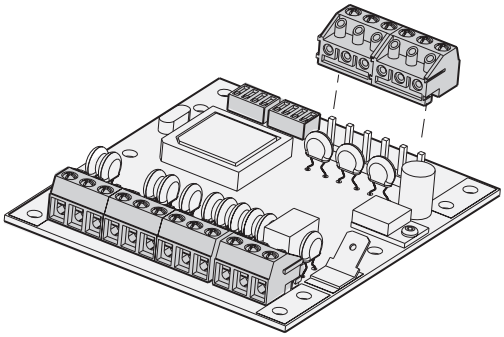
1. Slide the terminal blocks together (*Figure 1*).

Figure 1. Terminal block assembly



2. Slide the terminal blocks over the pins on the card (*Figure 2*).

Figure 2. Terminal block installation

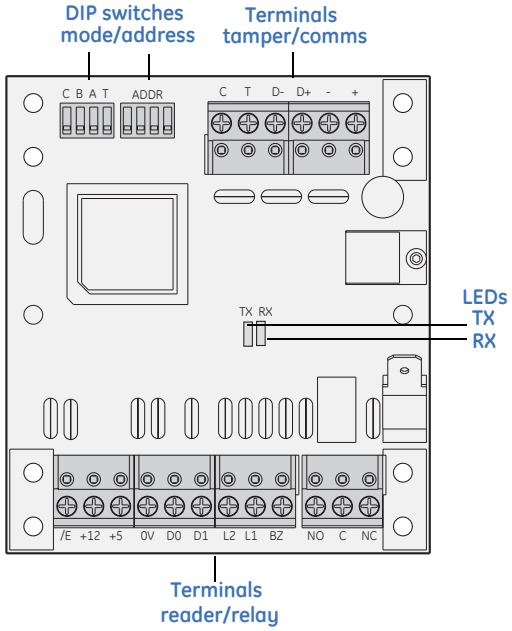


3. Set the appropriate DIP switches (see *DIP switch settings*).
4. Mount the card in the enclosure using four clip-in standoffs and the mounting screws.
5. Wire the module (see *Wiring* on page 2).

DIP switch settings

There are two DIP switch blocks on the module (*Figure 3*).

Figure 3. Circuit board components



The address DIP switches identify the module address to the control panel. Set the address as shown in *Figure 4*.

Figure 4. Address DIP switch settings

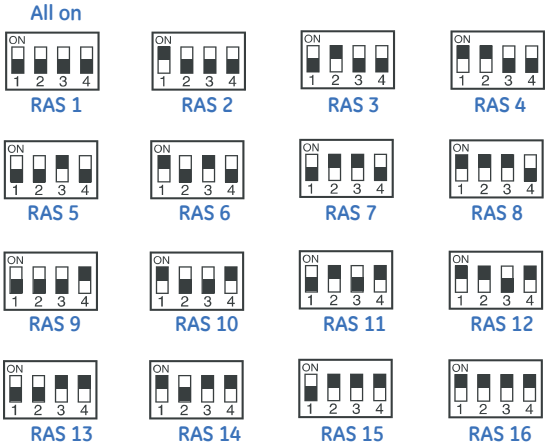


Table 1 describes the mode DIP switch settings.

Table 1. Mode DIP switch settings

DIP switch	Description
T	On = The unit is the last physical device on the databus. Off = The unit is not the last physical device on the databus.
A	On = Enable the off-line programming mode. Off = Disable the off-line programming mode.
B	On = Enable financial institution magnetic swipe cards. Off = Enable Alliance format magnetic swipe cards.
C	On = Magnetic swipe card reader used. Off = Wiegand read used.

Wiring

Table 2 describes the tamper and comms terminals (*Figure 3* on page 1) and their functions.

Table 2. Tamper and comms terminals

Terminal	Description
C, T	Connect the enclosure tamper switch across these terminals. Tamper switch requires normally closed contacts.
D-	Data negative connection of the databus.
D+	Data positive connection of the databus.
-	0 V power supply input.
+	+12 V power supply input.

Table 3 describes the reader and relay terminals (*Figure 3* on page 1) and their functions.

Table 3. Reader and relay terminals

Terminal	Description
/E	Request-to-exit (RTE) input connection for door RTE button. Shorting RTE to 0 V will activate RTE (requires normally open contacts).
+12V	Power supply connection to the reader (100 mA maximum at 12 V for two seconds and 75 mA constant).
+5V	Power supply connection to the reader (100 mA maximum at 5 V for two seconds and 75 mA constant).
0V	Negative power supply connection to the reader.
D0	Data connection to the reader.
D1	Data connection to the reader.
L2	Open collector output to control the reader LED.
L1	Open collector output to control the reader LED.
BZ	Open collector output to control the reader beeper if fitted.
NO/C/NC	This relay is energized for the unlock period (when L1 or L2 is flashing).

Note: The + (positive) wire is connected to +5 V or +12 V, depending on the type of reader used.

Table 4 shows typical reader wiring with an AL-1191/1193 or Wiegand reader.

Table 4. Typical reader wiring

AL-1170 terminal	AL-1191/1193	Typical Wiegand
/E	Pull low to activate	Pull low to activate
+12	Red	Red
+5	Not used	Not used
0V	Black	Black
D0	Green	Green
D1	White	White
L2	Yellow	Orange
L1	Brown	Brown
BZ	Blue	Yellow

LEDs

The RX LED (*Figure 3* on page 1) flashes to indicate polling data is being received on the system databus from the control panel. If the LED does not flash, the control panel is not operational or the databus is faulty (usually cabling).

The TX LED (*Figure 3* on page 1) flashes to indicate the unit is replying to the polling from the control panel. If the RX LED flashes, but the TX LED does not, the module is not programmed to be polled in the control panel or is addressed incorrectly.

FCC compliance

This device complies with part 15 of the FCC rules. Operation is subject to the following three conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

Note: In order to maintain compliance with FCC Class B rules, shielded cable must be used (Belden 8723 or equivalent).

Specifications

Supply voltage	9 to 14 VDC
Current consumption (without reader)	70 mA max.
Reader power output	+5 V to + 12 V (depending on RDR link setting)
Reader output current for two seconds constant	100 mA to 5 VDC max. 135 mA to 5 VDC
Relay contact rating	1 A-0 to 30 VDC
Dimensions	3.1 x 2 in. (80 x 52 mm) size B board
Operating temperature	32 to 122°F (0 to 50°C)
Humidity	95% noncondensing
Listings	UL 294 the Standard for Access Control System Units UL 365 the Standard for Police Station Connected Burglar Alarm Units and Systems UL 609 the Standard for Local Burglar Alarm Units and Systems UL 1610 the Standard for Central Station Burglar-Alarm Units UL 1635 the Standard for Digital Alarm Communicator System Units