

Secured Series Front End Reader Installation Instructions

Proximity Readers (*ProxPoint, ProxPro, ProxPro w/keypad, MiniProx, Thinline II and MaxiProx*) and Wiegand Readers/Keypads

Wiegand Interface Module Specifications:

Mechanical

1.75" W x 2.5" L x .75" H

Electrical:

Operating Voltage: 12VDC (from IEI Door Controller)
Current Draw: 12mA plus the reader

Environmental:

Environment: For indoor use only.
Temperature Tolerance: -20° to 130° F

Description

The Secured Series Wiegand Interface Module is used to connect a 26-bit wiegand reader or keypad to an IEI Door Control Module. The Wiegand Interface Module takes the 26-bit wiegand data from the wiegand reader and translates that to a signal that the IEI Door Control Module can interpret.

Installation Procedure:

- Step 1: Check the Packing List
- Step 2: Mount the Reader Head
- Step 3: Mount the Wiegand Interface Module
- Step 4: Connect the Reader and Wiegand Interface Module to the Door Control Module
- Step 5: Set the Site Code (if necessary)

Step 1: Check the Packing List

- 1 HID, UL Listed Access Control Unit Accessory, Model: either ProxPoint, ProxPro, ProPro w/keypad, MiniProx, Thinline II or MaxiProx (Only included when shipped with HID Prox Reader)
- 1 IEI, UL Listed Access Control Unit Accessory, Model Wiegand Interface Module
- 1 Hardware Pack
- 1 Four-Conductor Wire Harness
- 1 IEI Secured Series Front End Reader Installation Guide
- 1 HID Installation/Instruction Manual (ProxPro, ProPro w/keypad, MiniProx, Thinline II and MaxiProx Only)

Notes:

- 1) The MaxiProx requires a UL Listed power limited power supply, rated 24VDC 2A.
- 2) Effective with firmware version 1.3 or higher, the interface module can control the LED on the wiegand reader or keypad. This connection is made to terminal 5 on the interface model. LED operation is as follows:
 - Normal Condition: LED is red (Terminal 5 is at +12V).
 - Upon Card Presentation (with a recognizable bit format): LED flashes green [and sounder beeps if present] (Terminal 5 – no change).
 - Upon Valid Card Presentation (a credential that is allowed access to the door): LED turns green for the same length of time as the main relay in the IEI Door Control Module (Terminal 5 goes to Ground).

Step 2: Mount the Reader Head

See HID Installation Instructions for mounting the *ProxPro*, *ProPro w/keypad*, *MiniProx*, *Thinline II* and *MaxiProx* readers. When using another UL Listed third party Wiegand reader refer to those instructions. Follow the instructions below for mounting the *ProxPoint* reader.

1. Select an appropriate location to mount the *ProxPoint* Reader Head.
2. Remove the plastic cover on the *ProxPoint* Reader Head.
3. Use a 9/32" drill bit to drill a hole for the cable attached to the *ProxPoint*.
4. When you drill the hole and pull the cable through the wall, drill a small pilot hole for each mounting screw. The mounting screws are self-tapping and should pull themselves through.
5. When you are finished, replace the plastic cover on the *ProxPoint* reader.

Step 3: Mount the Wiegand Interface Module

If possible, IEI recommends that you mount the Wiegand Interface Module close to the Hub Door Control Module. Please note that the Wiegand Interface Module must be mounted indoors. The Wiegand Interface Module can be located up to a maximum of 500 feet from the Wiegand reader (using 20 AWG four-conductor stranded cable with overall foil shield). If necessary, you can mount the Interface Module up to 1000 feet from the IEI Door Control Module (using 18 AWG four-conductor, stranded cable with overall foil shield). This gives you the ability to connect the reader up to 1500' from the IEI Door Control Module if required. All wires and cables must be UL Listed and/or Recognized. **This system must be installed in accordance with the National Electrical Code (NFPA70), local codes, and the authorities having jurisdiction.**

For UL, the Wiegand Interface Module must be mounted using one of the following options:

1. Inside a UL Listed non-conductive electrical box.
2. Placed flat on the bottom of the Hub Module cabinet enclosure below the backplane.

If option 2 is used, the power limited wire connections to the interface module must be routed away from all non-power limited connections inside the cabinet. The power limited and non-power limited wiring must be separated by a minimum of .250" (1/4 inch).

Connecting the Front End drain (shield) wire:

1. The drain (shield) wire from wiegand reader must be connected to terminal 1 (V-) on the Wiegand Interface Module.
2. If the Wiegand Interface Module is mounted at a distance greater than the supplied 4-conductor wire harness used for the Hub Front End connection, the cable shield must be connected to the appropriate place at the Hub Door Controller. See the instruction manual for your controller for details.

Step 4: Connect the Reader and Wiegand Interface Module to the Door Control Module

Figure 1: Connecting an HID proximity reader (ProxPoint, Proxpro, ProxPro w/keypad, MiniProx or ThinLine II) to the Wiegand Interface Module

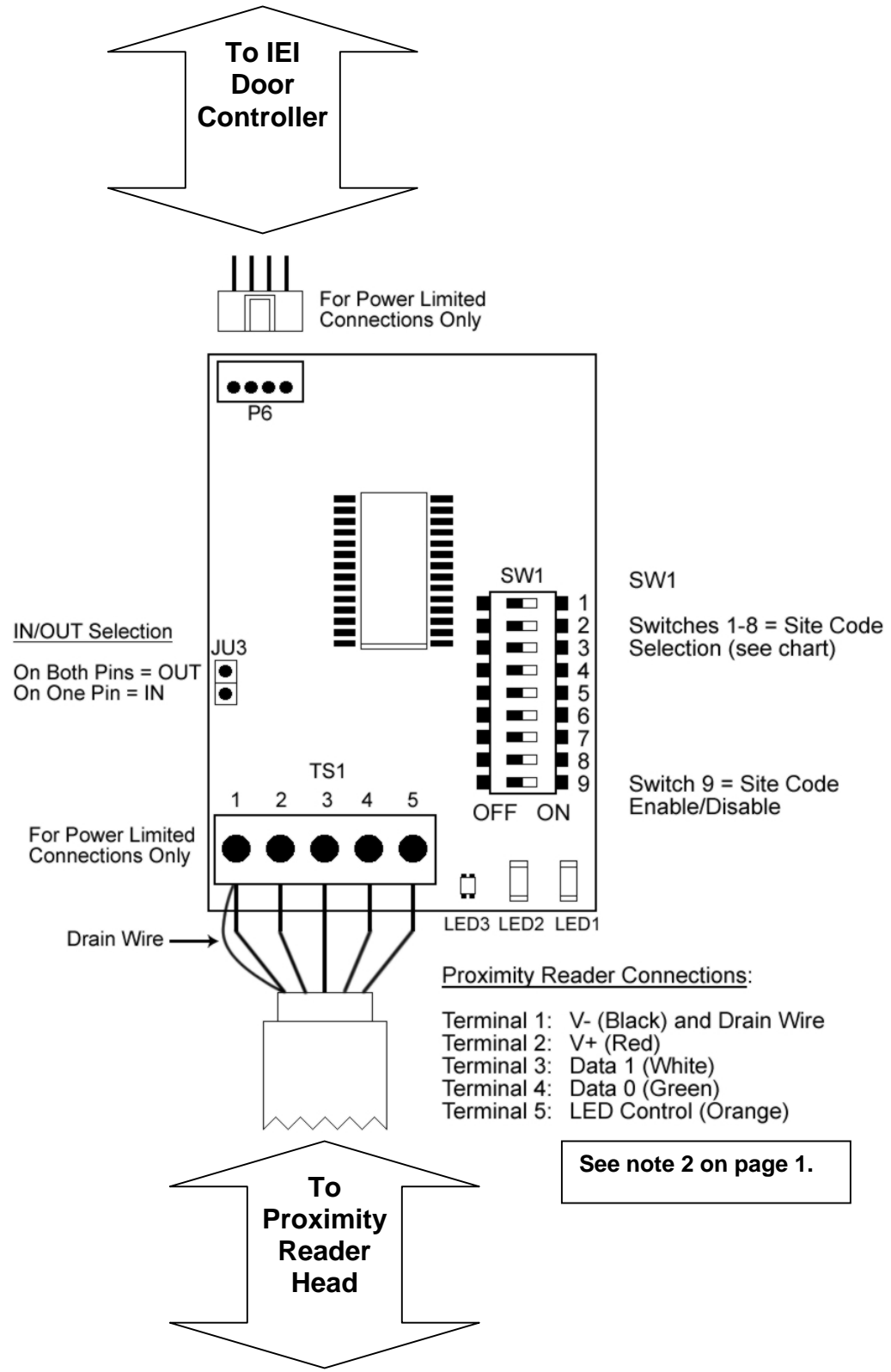
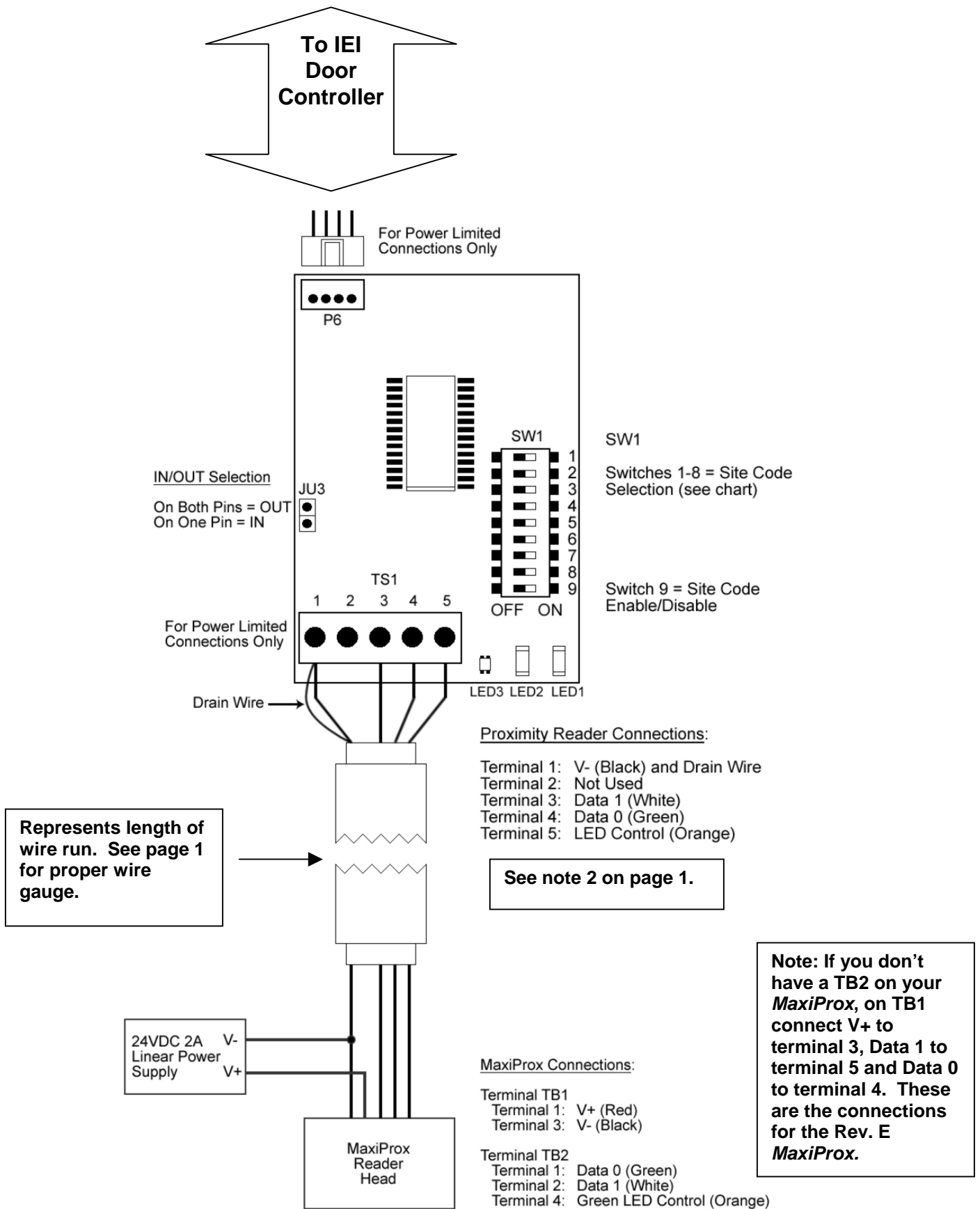
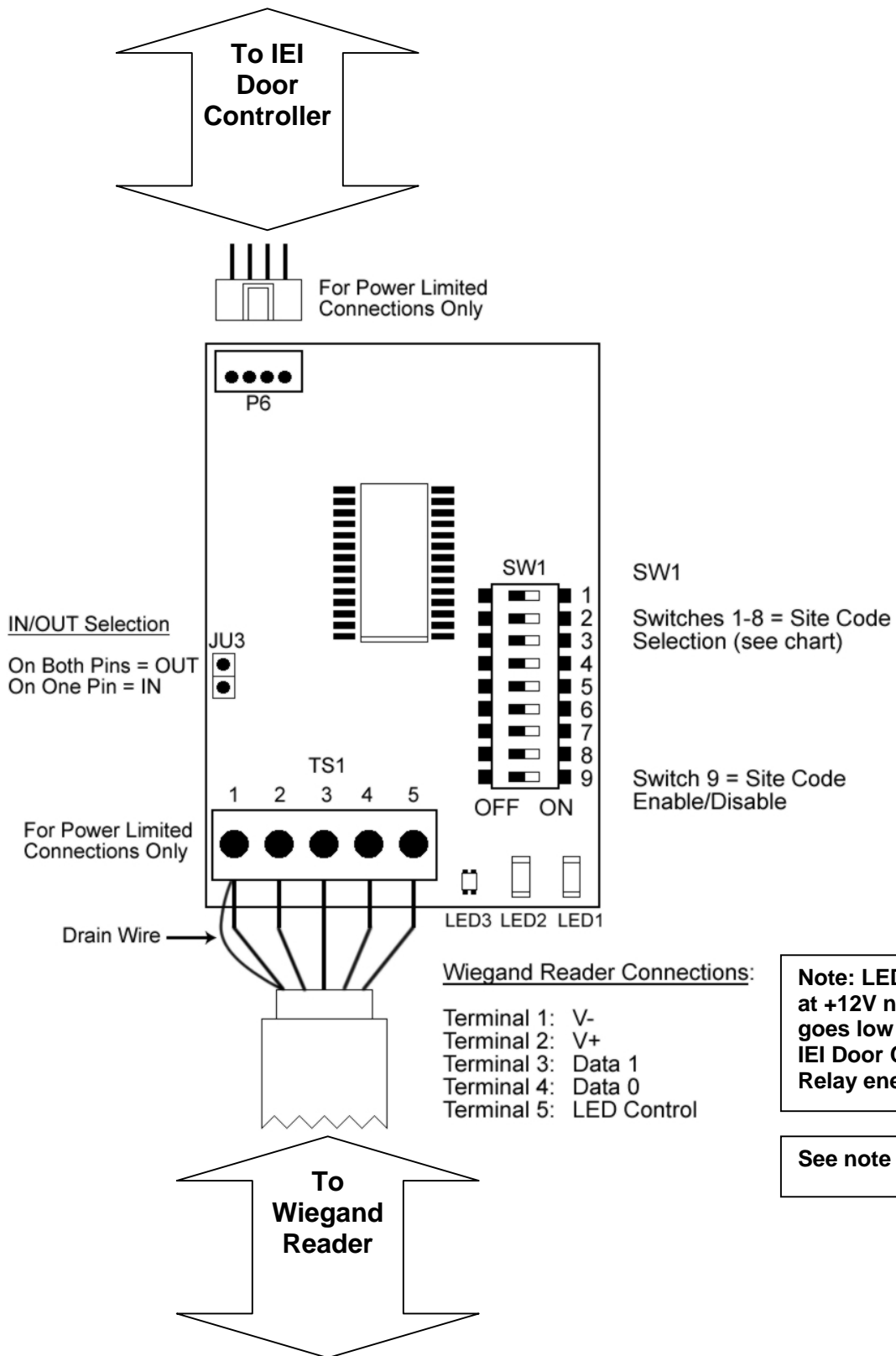


Figure 2: Connecting the HID MaxiProx Proximity Reader to the Wiegand Interface Module



BE SURE YOU ARE USING STRANDED/SHIELDED CABLE OF THE CORRECT GAUGE BETWEEN THESE UNITS.

Figure 3: Connecting a Third Party Wiegand Reader or Keypad to the Wiegand Interface Module



Note: LED Control line is at +12V normally and goes low (Ground) when IEI Door Controller Main Relay energizes.

See note 2 on page 1.

Step 5: Set the Site Code (if necessary)

See the diagram above for dip switch (SW1) location.

Dip Switch 9: If all the access media (i.e. cards/tokens) you are using have the same Site Code, you can enable the Site Code Verification function on the interface board to limit card possibilities.

When this switch is set to **on** the Site Code Number verification function is **enabled**.

When this switch is set to **off** the Site Code Number verification function is **disabled**.

Dip Switches 1 – 8: These eight dip switches set the site code number (0-255) you want to be recognized. This is set using binary format.

If a dip switch is set to **on** it equals **1**.

If a dip switch is set to **off** it equals **0**.

Site Code Selection Chart

Site Code	Dip Switch Number								Site Code	Dip Switch Number								Site Code	Dip Switch Number							
	1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8
0	0	0	0	0	0	0	0	0	34	0	1	0	0	0	1	0	0	68	0	0	1	0	0	0	1	0
1	1	0	0	0	0	0	0	0	35	1	1	0	0	0	1	0	0	69	1	0	1	0	0	0	1	0
2	0	1	0	0	0	0	0	0	36	0	0	1	0	0	1	0	0	70	0	1	1	0	0	0	1	0
3	1	1	0	0	0	0	0	0	37	1	0	1	0	0	1	0	0	71	1	1	1	0	0	0	1	0
4	0	0	1	0	0	0	0	0	38	0	1	1	0	0	1	0	0	72	0	0	0	1	0	0	1	0
5	1	0	1	0	0	0	0	0	39	1	1	1	0	0	1	0	0	73	1	0	0	1	0	0	1	0
6	0	1	1	0	0	0	0	0	40	0	0	0	1	0	1	0	0	74	0	1	0	1	0	0	1	0
7	1	1	1	0	0	0	0	0	41	1	0	0	1	0	1	0	0	75	1	1	0	1	0	0	1	0
8	0	0	0	1	0	0	0	0	42	0	1	0	1	0	1	0	0	76	0	0	1	1	0	0	1	0
9	1	0	0	1	0	0	0	0	43	1	1	0	1	0	1	0	0	77	1	0	1	1	0	0	1	0
10	0	1	0	1	0	0	0	0	44	0	0	1	1	0	1	0	0	78	0	1	1	1	0	0	1	0
11	1	1	0	1	0	0	0	0	45	1	0	1	1	0	1	0	0	79	1	1	1	1	0	0	1	0
12	0	0	1	1	0	0	0	0	46	0	1	1	1	0	1	0	0	80	0	0	0	0	1	0	1	0
13	1	0	1	1	0	0	0	0	47	1	1	1	1	0	1	0	0	81	1	0	0	0	1	0	1	0
14	0	1	1	1	0	0	0	0	48	0	0	0	0	1	1	0	0	82	0	1	0	0	1	0	1	0
15	1	1	1	1	0	0	0	0	49	1	0	0	0	1	1	0	0	83	1	1	0	0	1	0	1	0
16	0	0	0	0	1	0	0	0	50	0	1	0	0	1	1	0	0	84	0	0	1	0	1	0	1	0
17	1	0	0	0	1	0	0	0	51	1	1	0	0	1	1	0	0	85	1	0	1	0	1	0	1	0
18	0	1	0	0	1	0	0	0	52	0	0	1	0	1	1	0	0	86	0	1	1	0	1	0	1	0
19	1	1	0	0	1	0	0	0	53	1	0	1	0	1	1	0	0	87	1	1	1	0	1	0	1	0
20	0	0	1	0	1	0	0	0	54	0	1	1	0	1	1	0	0	88	0	0	0	1	1	0	1	0
21	1	0	1	0	1	0	0	0	55	1	1	1	0	1	1	0	0	89	1	0	0	1	1	0	1	0
22	0	1	1	0	1	0	0	0	56	0	0	0	1	1	1	0	0	90	0	1	0	1	1	0	1	0
23	1	1	1	0	1	0	0	0	57	1	0	0	1	1	1	0	0	91	1	1	0	1	1	0	1	0
24	0	0	0	1	1	0	0	0	58	0	1	0	1	1	1	0	0	92	0	0	1	1	1	0	1	0
25	1	0	0	1	1	0	0	0	59	1	1	0	1	1	1	0	0	93	1	0	1	1	1	0	1	0
26	0	1	0	1	1	0	0	0	60	0	0	1	1	1	1	0	0	94	0	1	1	1	1	0	1	0
27	1	1	0	1	1	0	0	0	61	1	0	1	1	1	1	0	0	95	1	1	1	1	1	0	1	0
28	0	0	1	1	1	0	0	0	62	0	1	1	1	1	1	0	0	96	0	0	0	0	0	1	1	0
29	1	0	1	1	1	0	0	0	63	1	1	1	1	1	1	0	0	97	1	0	0	0	0	1	1	0
30	0	1	1	1	1	0	0	0	64	0	0	0	0	0	0	1	0	98	0	1	0	0	0	1	1	0
31	1	1	1	1	1	0	0	0	65	1	0	0	0	0	0	1	0	99	1	1	0	0	0	1	1	0
32	0	0	0	0	0	1	0	0	66	0	1	0	0	0	0	1	0	100	0	0	1	0	0	1	1	0
33	1	0	0	0	0	1	0	0	67	1	1	0	0	0	0	1	0	101	1	0	1	0	0	1	1	0

Site Code	Dip Switch Number								Site Code	Dip Switch Number								Site Code	Dip Switch Number							
	1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8
102	0	1	1	0	0	1	1	0	154	0	1	0	1	1	0	0	1	206	0	1	1	1	0	0	1	1
103	1	1	1	0	0	1	1	0	155	1	1	0	1	1	0	0	1	207	1	1	1	1	0	0	1	1
104	0	0	0	1	0	1	1	0	156	0	0	1	1	1	0	0	1	208	0	0	0	0	1	0	1	1
105	1	0	0	1	0	1	1	0	157	1	0	1	1	1	0	0	1	209	1	0	0	0	1	0	1	1
106	0	1	0	1	0	1	1	0	158	0	1	1	1	1	0	0	1	210	0	1	0	0	1	0	1	1
107	1	1	0	1	0	1	1	0	159	1	1	1	1	1	0	0	1	211	1	1	0	0	1	0	1	1
108	0	0	1	1	0	1	1	0	160	0	0	0	0	0	1	0	1	212	0	0	1	0	1	0	1	1
109	1	0	1	1	0	1	1	0	161	1	0	0	0	0	1	0	1	213	1	0	1	0	1	0	1	1
110	0	1	1	1	0	1	1	0	162	0	1	0	0	0	1	0	1	214	0	1	1	0	1	0	1	1
111	1	1	1	1	0	1	1	0	163	1	1	0	0	0	1	0	1	215	1	1	1	0	1	0	1	1
112	0	0	0	0	1	1	1	0	164	0	0	1	0	0	1	0	1	216	0	0	0	1	1	0	1	1
113	1	0	0	0	1	1	1	0	165	1	0	1	0	0	1	0	1	217	1	0	0	1	1	0	1	1
114	0	1	0	0	1	1	1	0	166	0	1	1	0	0	1	0	1	218	0	1	0	1	1	0	1	1
115	1	1	0	0	1	1	1	0	167	1	1	1	0	0	1	0	1	219	1	1	0	1	1	0	1	1
116	0	0	1	0	1	1	1	0	168	0	0	0	1	0	1	0	1	220	0	0	1	1	1	0	1	1
117	1	0	1	0	1	1	1	0	169	1	0	0	1	0	1	0	1	221	1	0	1	1	1	0	1	1
118	0	1	1	0	1	1	1	0	170	0	1	0	1	0	1	0	1	222	0	1	1	1	1	0	1	1
119	1	1	1	0	1	1	1	0	171	1	1	0	1	0	1	0	1	223	1	1	1	1	1	0	1	1
120	0	0	0	1	1	1	1	0	172	0	0	1	1	0	1	0	1	224	0	0	0	0	0	1	1	1
121	1	0	0	1	1	1	1	0	173	1	0	1	1	0	1	0	1	225	1	0	0	0	0	1	1	1
122	0	1	0	1	1	1	1	0	174	0	1	1	1	0	1	0	1	226	0	1	0	0	0	1	1	1
123	1	1	0	1	1	1	1	0	175	1	1	1	1	0	1	0	1	227	1	1	0	0	0	1	1	1
124	0	0	1	1	1	1	1	0	176	0	0	0	0	1	1	0	1	228	0	0	1	0	0	1	1	1
125	1	0	1	1	1	1	1	0	177	1	0	0	0	1	1	0	1	229	1	0	1	0	0	1	1	1
126	0	1	1	1	1	1	1	0	178	0	1	0	0	1	1	0	1	230	0	1	1	0	0	1	1	1
127	1	1	1	1	1	1	1	0	179	1	1	0	0	1	1	0	1	231	1	1	1	0	0	1	1	1
128	0	0	0	0	0	0	0	1	180	0	0	1	0	1	1	0	1	232	0	0	0	1	0	1	1	1
129	1	0	0	0	0	0	0	1	181	1	0	1	0	1	1	0	1	233	1	0	0	1	0	1	1	1
130	0	1	0	0	0	0	0	1	182	0	1	1	0	1	1	0	1	234	0	1	0	1	0	1	1	1
131	1	1	0	0	0	0	0	1	183	1	1	1	0	1	1	0	1	235	1	1	0	1	0	1	1	1
132	0	0	1	0	0	0	0	1	184	0	0	0	1	1	1	0	1	236	0	0	1	1	0	1	1	1
133	1	0	1	0	0	0	0	1	185	1	0	0	1	1	1	0	1	237	1	0	1	1	0	1	1	1
134	0	1	1	0	0	0	0	1	186	0	1	0	1	1	1	0	1	238	0	1	1	1	0	1	1	1
135	1	1	1	0	0	0	0	1	187	1	1	0	1	1	1	0	1	239	1	1	1	1	0	1	1	1
136	0	0	0	1	0	0	0	1	188	0	0	1	1	1	1	0	1	240	0	0	0	0	1	1	1	1
137	1	0	0	1	0	0	0	1	189	1	0	1	1	1	1	0	1	241	1	0	0	0	1	1	1	1
138	0	1	0	1	0	0	0	1	190	0	1	1	1	1	1	0	1	242	0	1	0	0	1	1	1	1
139	1	1	0	1	0	0	0	1	191	1	1	1	1	1	1	0	1	243	1	1	0	0	1	1	1	1
140	0	0	1	1	0	0	0	1	192	0	0	0	0	0	0	1	1	244	0	0	1	0	1	1	1	1
141	1	0	1	1	0	0	0	1	193	1	0	0	0	0	0	1	1	245	1	0	1	0	1	1	1	1
142	0	1	1	1	0	0	0	1	194	0	1	0	0	0	0	1	1	246	0	1	1	0	1	1	1	1
143	1	1	1	1	0	0	0	1	195	1	1	0	0	0	0	1	1	247	1	1	1	0	1	1	1	1
144	0	0	0	0	1	0	0	1	196	0	0	1	0	0	0	1	1	248	0	0	0	1	1	1	1	1
145	1	0	0	0	1	0	0	1	197	1	0	1	0	0	0	1	1	249	1	0	0	1	1	1	1	1
146	0	1	0	0	1	0	0	1	198	0	1	1	0	0	0	1	1	250	0	1	0	1	1	1	1	1
147	1	1	0	0	1	0	0	1	199	1	1	1	0	0	0	1	1	251	1	1	0	1	1	1	1	1
148	0	0	1	0	1	0	0	1	200	0	0	0	1	0	0	1	1	252	0	0	1	1	1	1	1	1
149	1	0	1	0	1	0	0	1	201	1	0	0	1	0	0	1	1	253	1	0	1	1	1	1	1	1
150	0	1	1	0	1	0	0	1	202	0	1	0	1	0	0	1	1	254	0	1	1	1	1	1	1	1
151	1	1	1	0	1	0	0	1	203	1	1	0	1	0	0	1	1	255	1	1	1	1	1	1	1	1
152	0	0	0	1	1	0	0	1	204	0	0	1	1	0	0	1	1									
153	1	0	0	1	1	0	0	1	205	1	0	1	1	0	0	1	1									

IN/OUT Jumper (JU3) - When a card is presented and access is granted, this determines whether the IEI Door Control Module records the transaction as IN or OUT.
On both pins = OUT On one pin only = IN

Wiegand Interface Module LEDs

LED 3: This is a bicolor LED that emulates the relay state of the IEI Door Control Module (Red = De-energized; Green = Energized)

LED 2: This is an amber LED that emulates the yellow LED of the IEI Door Control Module (Program Mode, Card Presentation)

LED 1: This is a red LED that blinks when data is received from the Wiegand reader. It also indicates errors using the following flash patterns:

- 1 Flash:** Communication error - The Wiegand Interface Module did not receive all of the Wiegand data from the reader. Check the connections between the Wiegand Interface Module and the reader. **BE SURE TO USE SHIELDED CABLE BETWEEN THESE UNITS.**
- 2 Flashes:** Parity Error - This occurs when the parity of the Wiegand data is incorrect.
- 3 Flashes:** Incorrect Site Code - This occurs when the Site Code contained in the 26-bit Wiegand data does not match the Site Code set on Dip Switches 1 - 8 (This error only occurs when Dip Switch 9 set to **on**).
- 4 Flashes:** Overflow Error - This error occurs when the Wiegand data sent to the Wiegand Interface Module contains more than 26 bits.

If you have any questions concerning the Installation, Application or Operation of this device please call the IEI Technical Support Line at 1-800-343-9502.



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