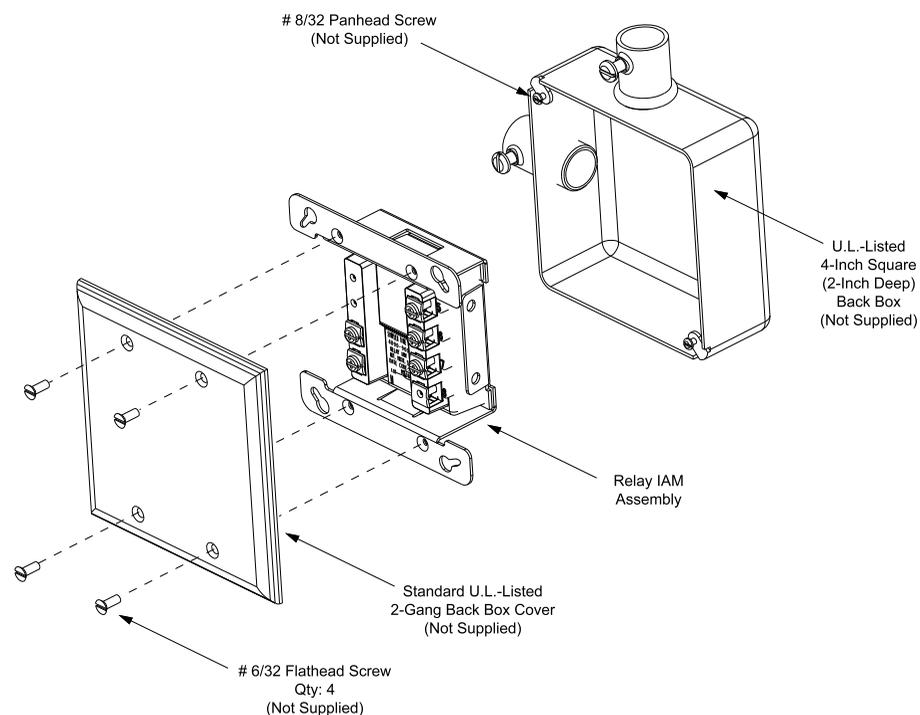## Mechanically Installing the Relay IAM

Install the Relay IAM into a UL Listed 4-inch back box (not supplied) using Figure 4 as a reference. Mount the IAM to the back box as follows:

1. Loosen the two screws on the square back box.
2. Mount the IAM to the back box using the teardrop holes on the mounting bracket.
3. Secure the IAM to the back box using the two #8/32 panhead screws.

Notes:
1. When wiring the Relay IAM, provide a minimum of ¼-inch spacing between IDNet wiring and contact wiring. Use separate conduit entries if the contacts are switching non power-limited power sources. When both power-limited, and non power-limited sources are present, use type FPL, FPLR, or FPLP power-limited cable for power-limited circuits.
2. Simplex offers semi-flush and surface covers (ordered separately) with a light pipe. The cover(s) with light pipe allow viewing of the communications LED without taking the cover off. Installation of the 4090-9801 semi-flush cover and 4090-9802 surface cover are detailed in publication *4090 IDNet™ Semi-Flush/Surface Covers and IAM Bracket Installation Instruction (574-796).*

Figure 4.   Relay IAM Back Box Installation

Cautions and Warnings

DO NOT INSTALL ANY SIMPLEX® PRODUCT THAT APPEARS DAMAGED. Upon unpacking your Simplex product, inspect the contents of the carton for shipping damage. If damage is apparent, immediately file a claim with the carrier and notify an authorized Simplex product supplier.

ELECTRICAL HAZARD - Disconnect electrical field power when making any internal adjustments or repairs. All repairs should be performed by a representative or authorized agent of your local Simplex product supplier.

STATIC HAZARD - Static electricity can damage components. Ground yourself before opening or installing components.

Introduction

The 4090-9002 Relay Individual Addressable Module (IAM) provides the 4008, 4010, 4010ES, 4100U, and 4100ES Fire Alarm Control Panel (FACP) control of one dry form-C contact set (Normally Open, Normally Closed, and Common). The IAM reports its current state back to the FACP for confirmation of operation via the IDNet™ channel. The IDNet channel provides the communication link between the IAM and the FACP and powers the entire Relay IAM circuitry.

Installation

Relay IAM installation consists of the following:

- Setting the Relay IAMs address
- Making electrical connections to the Relay IAM
- Mechanically installing the Relay IAM
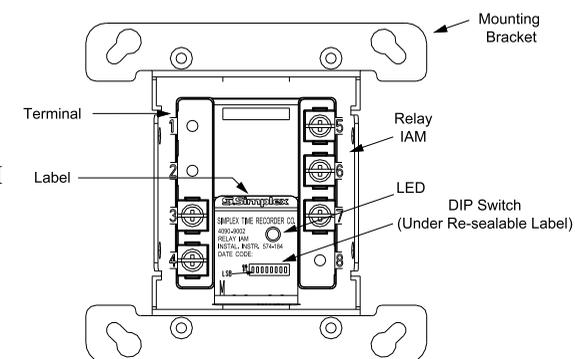
Note: The LED flashes approximately once every three seconds to indicate valid communications with the FACP.

Figure 1. Relay IAM Installation

Setting the Relay IAMs Address

Each Relay IAM has a unique address (1 through 250). The address of the IAM is set via an eight position DIP switch (Figure 1), DIP switch position 1 is the least significant bit (LSB) and position 8 is the most significant bit (MSB). Set the IAMs address using Figure 2 as reference. Use a small screwdriver or pen to set the switches. The device address for the Relay IAM should be written on the re-sealable label. This information provides an aid in troubleshooting the system.

Note: DIP switch in "1" position is "ON" while DIP switch in "0" position is "OFF."

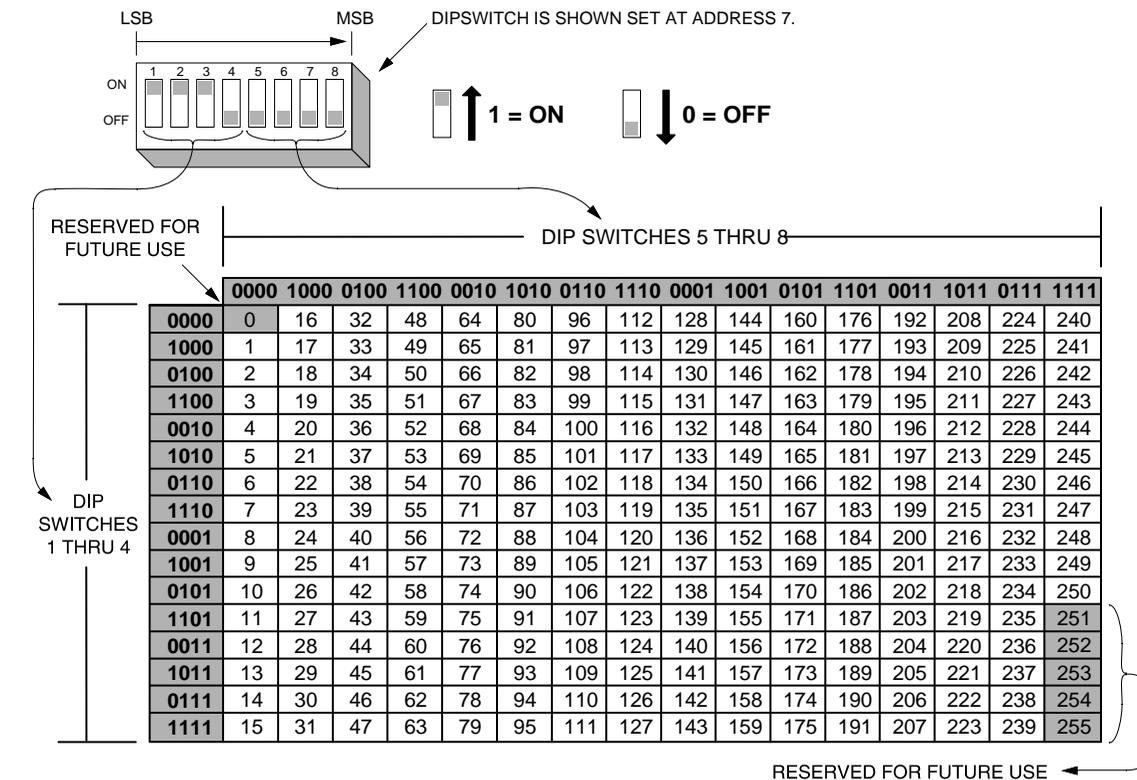| DIP SWITCHES 1 THRU 4 / DIP SWITCHES 5 THRU 8	0000	1000	0100	1100	0010	1010	0110	1110	0001	1001	0101	1101	0011	1011	0111	1111
0000	0	16	32	48	64	80	96	112	128	144	160	176	192	208	224	240
1000	1	17	33	49	65	81	97	113	129	145	161	177	193	209	225	241
0100	2	18	34	50	66	82	98	114	130	146	162	178	194	210	226	242
1100	3	19	35	51	67	83	99	115	131	147	163	179	195	211	227	243
0010	4	20	36	52	68	84	100	116	132	148	164	180	196	212	228	244
1010	5	21	37	53	69	85	101	117	133	149	165	181	197	213	229	245
0110	6	22	38	54	70	86	102	118	134	150	166	182	198	214	230	246
1110	7	23	39	55	71	87	103	119	135	151	167	183	199	215	231	247
0001	8	24	40	56	72	88	104	120	136	152	168	184	200	216	232	248
1001	9	25	41	57	73	89	105	121	137	153	169	185	201	217	233	249
0101	10	26	42	58	74	90	106	122	138	154	170	186	202	218	234	250
1101	11	27	43	59	75	91	107	123	139	155	171	187	203	219	235	251
0011	12	28	44	60	76	92	108	124	140	156	172	188	204	220	236	252
1011	13	29	45	61	77	93	109	125	141	157	173	189	205	221	237	253
0111	14	30	46	62	78	94	110	126	142	158	174	190	206	222	238	254
1111	15	31	47	63	79	95	111	127	143	159	175	191	207	223	239	255

RESERVED FOR FUTURE USE

Figure 2. Relay IAM Address Chart

4008 FACP (IDNet Channel)

Configure the Relay IAM using the *4008 FACP Installation, Programming, and Operating Instructions (579-716)*.

4010 FACP (IDNet Channel)

Configure the Relay IAM to the 4010 panel using the *4010 Fire Alarm – PC Programmer Installation and Programming Instructions (574-187)* and *4010 Fire Alarm – Front Panel Installing, Operating, and Programming Instructions (574-052)*. Refer to 4010 panel label 526-444 for the appropriate revision of the instructions to be used.

4100U, 4100ES, and 4010ES FACP (IDNet Channel)

Configure the Relay IAM to the 4100U panel using the *ES Panel Programmer's Manual (574-849)*.

Making Electrical Connections to the Relay IAM

Input and output signals connect to the Relay IAM via the terminals (1-8) as illustrated in Figure 1. Terminal connections for the IAM are illustrated in Figure 3.

CAUTION: Do not loop wire under terminals. Break wire runs to provide supervision.
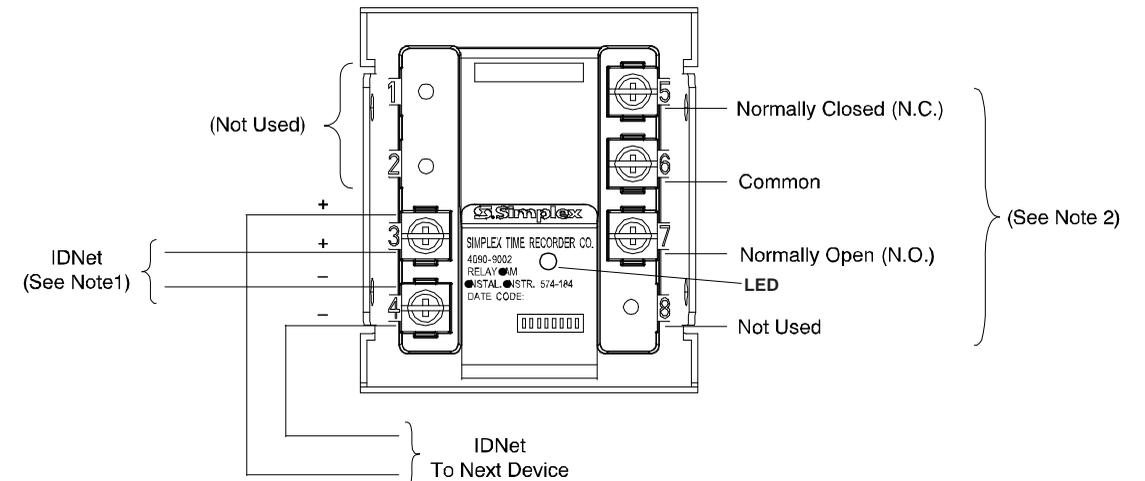
Notes:

1. When connecting two wires to one terminal, position one wire on each side of the terminal screw. Maximum allowable run from the FACP to the farthest device cannot exceed 2500 feet. Refer to field wiring diagrams for further information on wiring Relay IAMs. Refer to the FACP label for appropriate revision of the field wiring diagram to be used. IDNet wiring is supervised and power-limited.

2. Contractor wiring to relay contacts is unsupervised, use #14 AWG or wiring that meets local code requirement. Relay contact wiring is only power-limited if switching power is provided by the FACP or a UL listed, power-limited power supply for fire protective signaling systems. Inductive loads must be suppressed with a suitable suppression device. If switching 120VAC, the power source to the contacts should be externally fused by the user with a 1 Amp 250V quick blow fuse, UL listed to Guide #JDYX – Littlefuse AGC1 or equivalent. The operation of this relay is programmable.

Figure 3. Relay IAM Connections