4090-9051 Supervised IAM Installation Instructions

READ AND SAVE THESE INSTRUCTIONS. Follow the instructions in this installation manual. These instructions must be followed to avoid damage to this product and associated equipment. Product operation and reliability depends upon proper installation.

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. Servicing should be performed by qualified Simplex representatives.

STATIC HAZARD. Static electricity can damage components. Therefore, handle as follows:

- Ground yourself before opening or installing components.
- Prior to installation, keep components wrapped in anti-static material at all times.

Introduction

IDNet™

The 4090-9051 Supervised Individual Addressable Module (IAM) provide four-state status information (NORMAL, OPEN, CURRENT-LIMITED, and SHORT) to the 4010 Fire Alarm Control Panel (FACP) via the IDNet™ channel. The IDNet channel provides the communication link between Supervised IAM and 4010 FACP and powers the entire IAM circuitry. A typical application for this module would be to monitor a waterflow switch.

MAPNET II®

The 4090-9051 Supervised IAM provides three-state status information (NORMAL, OPEN, and ALARM) to the host FACP via the MAPNET II channel. Applications that require current limit sensing are not compatible with MAPNET II channels (Tamper/Waterflow on the same IAM, Manual release/abort, etc.). The MAPNET II channel provides the communication link between the Supervised IAM and host 4100, or 4120, or 4020 FACP and powers the entire IAM circuitry.

Installation

Supervised IAM installation consists of the following:

- Setting the Supervised IAMs address
- Making electrical connections to the Supervised IAM
- Mechanically installing the Supervised IAM

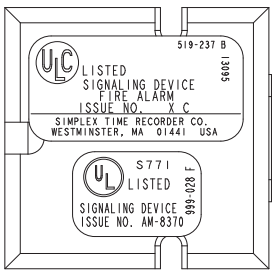


Figure 1. Supervised IAM

Setting the Supervised IAMs Address

Note: The IDNet channel (4010 FACP only) supports address codes 1 through 250. The MAPNET II channel (4100, or 4120, or 4020 FACP) supports address codes 1 through 127.

Each Supervised IAM has a unique address. The address of the IAM is set via an eight-position DIP switch (Figure 2), 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 3 as reference. Use a small screwdriver or pen to set the switches. The device address for the Supervised IAM should be written on the re-sealable label, this information provides an aid in troubleshooting the system.

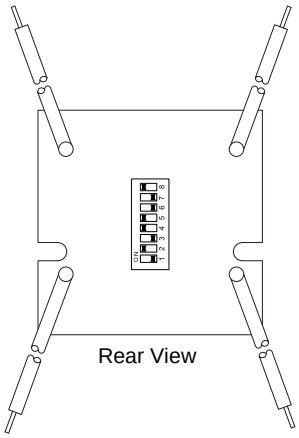
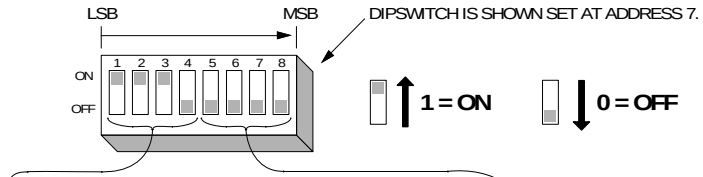


Figure 2. DIP Switch Location

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



RESERVED FOR FUTURE USE — DIP SWITCHES 5 THRU 8

DIP SWITCHES 1 THRU 4

	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 3. Supervised IAM Address Chart

4010 FACP (IDNet Channel)

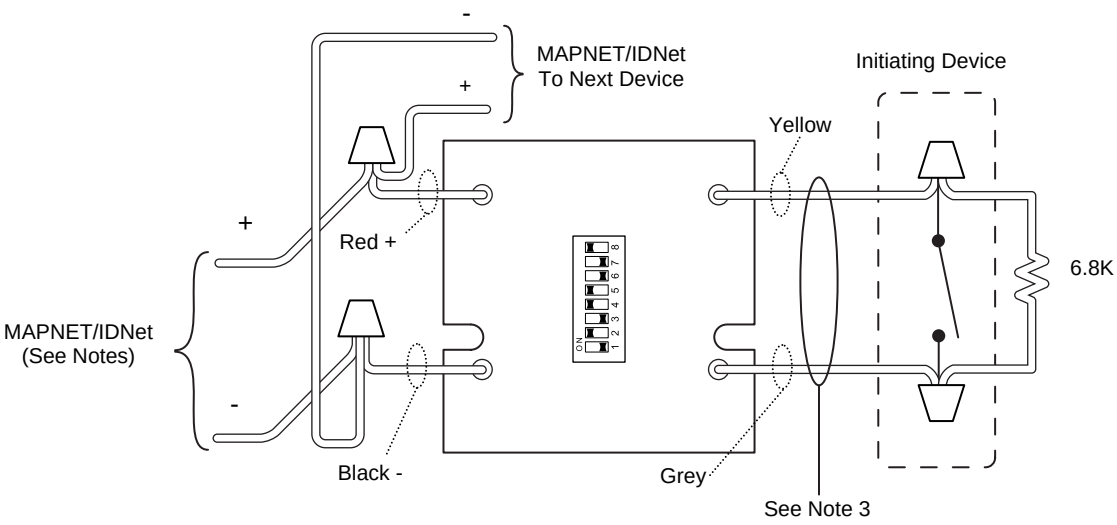
Configure the Supervised IAM to the 4010 panel using the *4010 Fire Alarm - Installation and Programming (574-187)* and *4010 Fire Alarm - Installing, Operating, and Programming Instructions (574-052).* Refer to 4010 panel label 526-444 for appropriate revision of the instructions to be used.

4100/4120/4020 FACP (MAPNET II Channel)

Configure the Supervised IAM to the host FACP using the 4100, 4120, or 4020 Programmer's Report. The Supervised IAM address and location must match up with the address listed in the specification sheets of the 4100, 4120, or 4020 Programmer's Report.

Making Electrical Connections to the Supervised IAM

Input and output signals connect to the Supervised IAM via the wire leads. Wire lead connections for the IAM are illustrated in Figure 4.



Notes:

1. IDNet and MAPNET II lines are 18 AWG twisted pair (shield recommended).
2. Maximum allowable run from FACP to farthest device not to exceed 2500 feet. Maximum total wire (including all T-Taps) from FACP is 10000 feet.
3. Maximum wire length is 400 feet, #18 AWG.
4. Refer to Field Wiring Diagram 842-073 for further information on wiring Supervised IAMs to IDNet. Refer to Field Wiring Diagrams 841-804 or 841-996 for further information on wiring Supervised IAMs to MAPNET II. IDNet and MAPNET II wiring are supervised and power-limited.

Figure 4. Supervised IAM Connections

Supervised IAM Specifications

Table 1: Supervised IAM specifications

Initiating Circuit	19-23 VDC, 24 VDC Nominal Voltage 1 mA max short circuit current 10 ohms max line impedance Supervised Power Limited
Communication Circuit	24 VDC Nominal Voltage 1 mA Supervised Power Limited
Wiring from IAM to Contacts	500ft (152m) max without protectors
	400ft (122m) max with 2081-9044 overvoltage protectors
Dimensions	1-9/16” W X 1-9/16” H X 9/16” D (40mm x 40mm x 14mm)
Temperature Range	32^{O} to 158^{O} F (0^{O} to 70^{O} C), intended for indoor use
Humidity Range	Up to 93% RH at 90^{O} F (32^{O} C)

Mechanically Installing the Supervised IAM

Install the Supervised IAM into a UL Listed single-gang, 4-inch square, or 4-inch octagonal electrical box (not supplied) using Figure 5 as a reference. Mount the Supervised IAM to the electrical box as follows:

1. Insert the Supervised IAM into the electrical box; the attached field wiring holds the Supervised IAM in place inside the electrical box.
2. Secure the cover to the back box using the two #6/32 flathead screws

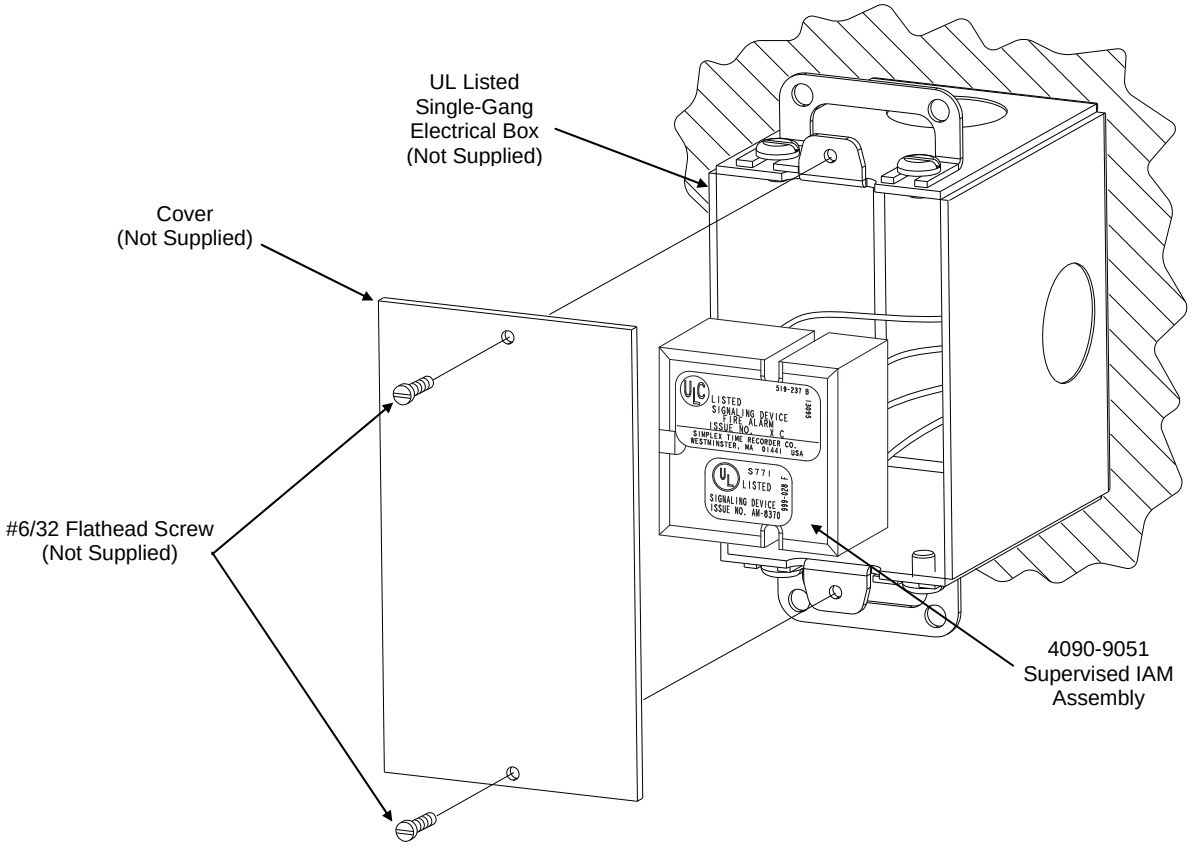


Figure 5. Supervised IAM Back Box Installation