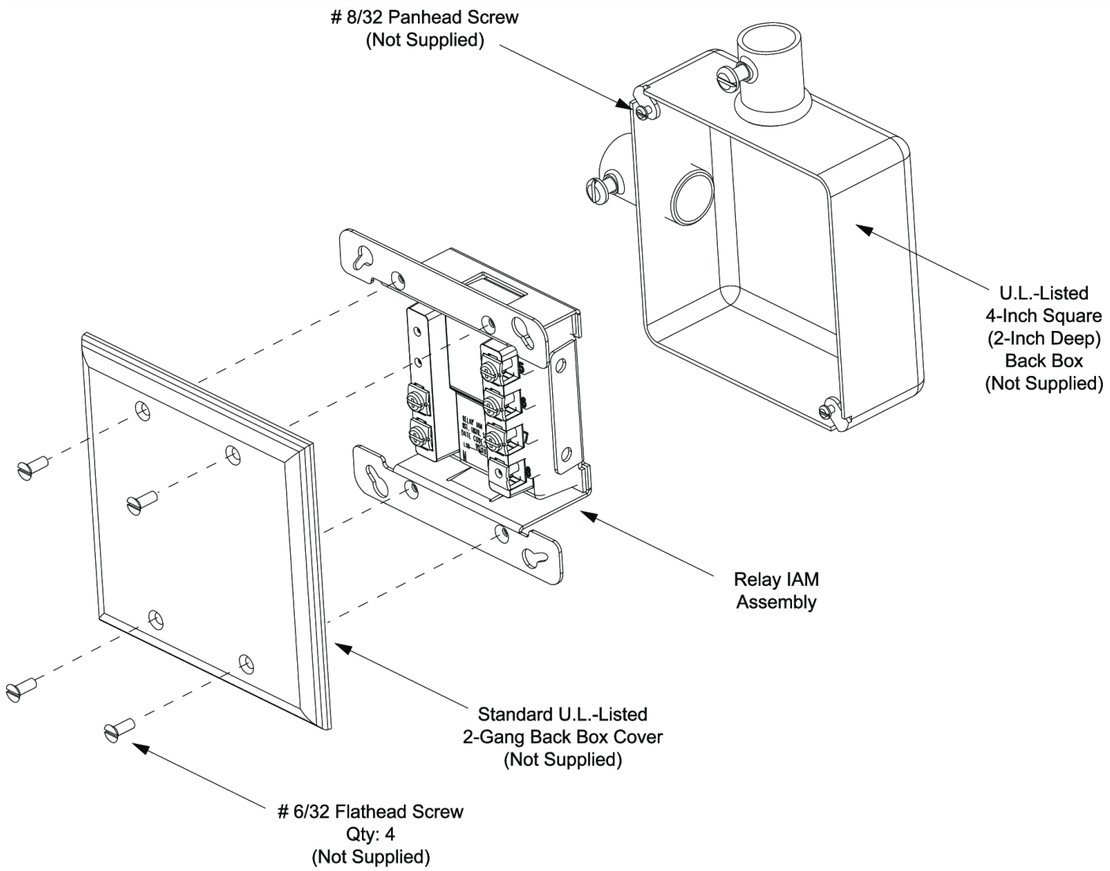



**Figure 4: Relay IAM Back Box Installation**

**Note:**

1. When wiring the Relay IAM, provide a minimum of 0.25 in. 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. Semi-flush and surface covers with a light pipe are available to be ordered separetly. The covers with light pipe allow viewing of the communications LED without taking the cover off. Installation of the A4090-9801 semi-flush cover and A4090-9802 surface cover are detailed in publication *A4090 IDNet Semi-Flush/Surface Covers and IAM Bracket Installation Instructions (574-796AC)*.







## Cautions, warnings, and regulatory information

**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 depend upon proper installation.

**DO NOT INSTALL ANY AUTOCALL™ PRODUCT THAT APPEARS DAMAGED** Upon unpacking your Autocall 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 Autocall product supplier.

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

**STATIC HAZARD** Static electricity can damage components. Handle as follows:

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

## Introduction

The A4090-9002 Relay Individual Addressable Module (IAM) provides the 4010ES, and 4100ES Fire Alarm Control Unit (FACU) control of one dry form-C contact set (Normally Open, Normally Closed, and Common).

The IAM reports its current state back to the FACU for confirmation of operation through the IDNet™ channel. The IDNet™ channel provides the communication link between the IAM and the FACU 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

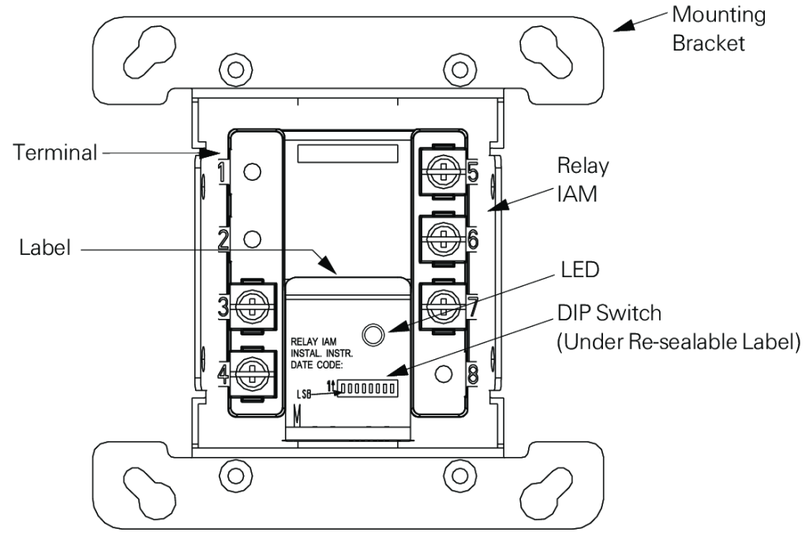



**Figure 1: Relay IAM Installation**

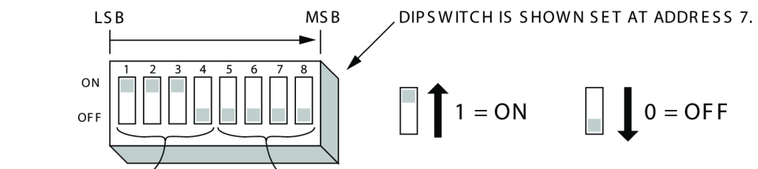
**Note:** The LED flashes approximately once every three seconds to indicate valid communications with the FACU.

## Setting the Relay IAMs Address

Each Relay IAM has a unique address (1 through 250). The address of the IAM is set through 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 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 position **1** is **ON** while DIP switch in position **0** is **OFF**.

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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 |

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**Figure 2: Relay IAM Address Chart**

**4100ES, and 4010ES FACU (IDNet Channel)**

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

## Making Electrical Connections to the Relay IAM

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

**Note:** Do not loop wire under terminals. Break wire runs to provide supervision.





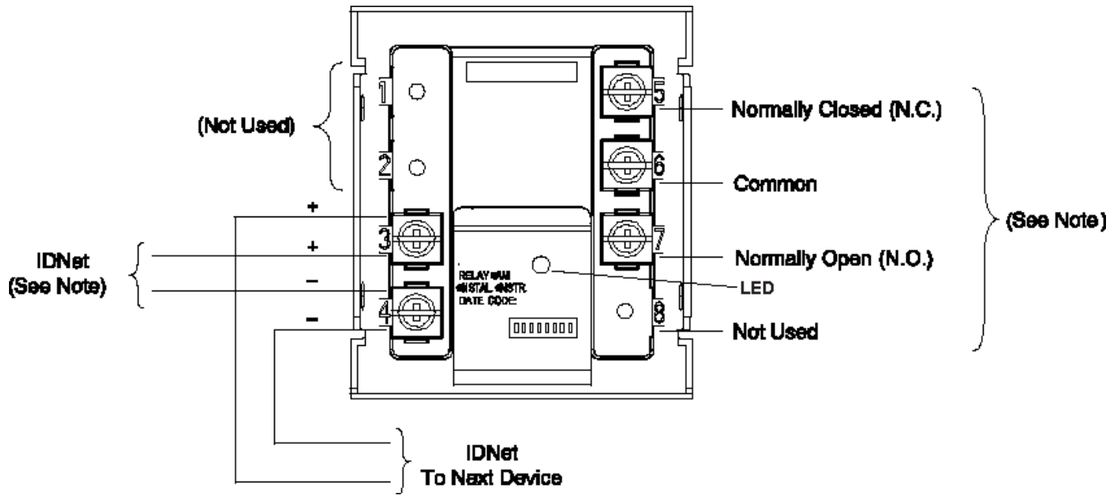


**Figure 3: Relay IAM Connections**

**Note:**

1. When connecting two wires to one terminal, position one wire on each side of the terminal screw. Maximum allowable run from the FACU to the farthest device cannot exceed 2500 ft. Refer to field wiring diagrams for further information on wiring Relay IAMs. Refer to the FACU 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 FACU 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 120 VAC, the power source to the contacts should be externally fused by the user with a 1 Amp 250 V quick blow fuse, UL listed to Guide #JDYX – Littlefuse AGC1 or equivalent. The operation of this relay is programmable.
3. All wiring shall be installed in accordance with the requirements of the National Fire Alarm and Signaling Code, NFPA 72.

## 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.