UL, ULC, CSFM Listed, FM Approved*

Features

IDNet addressable communications supply both data and power over a single wire pair to provide**

· Supervised Class B monitoring of normally open, dry contacts
· Total wiring distance from IAM to supervision resistor(s) of up to 500 ft (152 m)
· Monitored connection is compatible with Autocall A2081-9044 Overvoltage Protectors for outdoor wiring or electrically noisy applications
· For use in indoor locations up to 158° F (70° C) such as attic spaces or similar applications

For use with following Autocall control panels

· Model Series 4007ES, 4010ES, and 4100ES fire alarm control panels for IDNet communications

Model A4090-9001

· Enclosed design minimizes dust infiltration
· Mounts in standard single gang electrical box
· Screw terminals for wiring connections
· Visible LED flashes to indicate communications
· Optional covers are available to allow LED to be viewed after installation (requires mounting bracket, ordered separately)

Model A4090-9051

· Encapsulated design for extended exposure to high humidity (LED is not present on this model)
· Color coded 18 AWG leads for wiring

IDNet communications provides current limited monitoring

· Provides monitoring of tamper switch (supervisory) and waterflow switch (alarm) on same circuit using one point
· Available with IDNet communications only

Multiple operation modes are available and are selectable at the control panel

· Contact closure status can be tracked
· Momentary contact closure conditions can be selected at the panel to be latched or tracked , UL listed to Standard 864

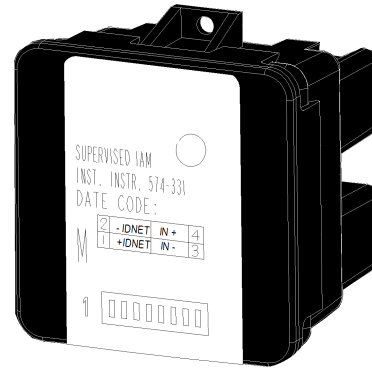**UL listed to Standard 864**

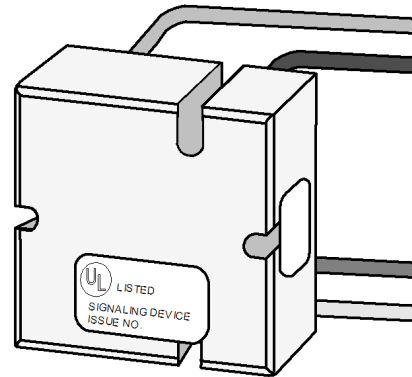Figure 1: A4090-9001 Supervised IAM

Figure 2: A4090-9051 Supervised IAM

Operation

Contact Closure

Closure of the monitored contact(s) initiates an alarm or other response as programmed at the fire alarm control panel. An open in the monitored circuit wiring will cause a trouble to be reported.

Panel Selections

Selections can be made at the control panel to maintain the alarm condition if the initiating device contacts are momentary, such as from a rate-of-rise heat detector, or to track the device contact status .

Current Limited Operation Applications

For use with IDNet communications only, these IAMs can provide quad-state sensing of normal, open circuit, short circuit, and current limited conditions. (Program type is "T-sense.") With the proper end-of-line and current limiting resistors, dual functions such as tamper switch and waterflow switch monitoring can be determined and communicated by a single addressable point.

Description

Individual addressable modules (IAMs)

receive both power and communications from a two-wire IDNet circuit. They provide location specific addressability to a single initiating device (such as single station smoke detector alarm contacts or heat detector contacts) or multiple devices at the same location by monitoring normally open dry contacts and the wiring to an end-of-line resistor.

SKU A4090-9001

A4090-9001 is packaged in a thermoplastic housing and provides screw terminal connections and a status indicating LED.

SKU A4090-9051

A4090-9051 is an encapsulated package with wire leads. It does not provide a status indicating LED.

IAM Product Selection

Table 1: IAM Product Selection

SKU	Description
A4090-9001	Supervised IAM, mounted in thermoplastic housing with screw terminals; see applicable options below
A4090-9051	Supervised IAM, encapsulated with wire leads

Table 2: Optional Trim Plates and Mounting Bracket for Model A4090-9001

SKU	Description	
A4090-9806	For semi-flush mounted box	Trim plate with LED viewing window, requires A4090-9810 mounting bracket, includes mounting screws; galvanized steel
A4090-9807	For surface mounted box	
A4090-9810	Mounting bracket, mounts IAM to electrical box and provides screw holes for trim plate, required for optional trim plates	

Table 3: End-of-Line Resistor Harnesses (ordered separately as required)

SKU	Reference no.	Description	
A4081-9004	733-886	6.8 kΩ, 1/2 W; Standard end-of-line resistor harness for N.O. contact supervision	
A4081-9003	733-896	4.7 kΩ, 1/2 W	Use for current limited monitoring applications
A4081-9005	733-984	1.8 kΩ, 1/2 W	

Specifications

Table 4: Electrical

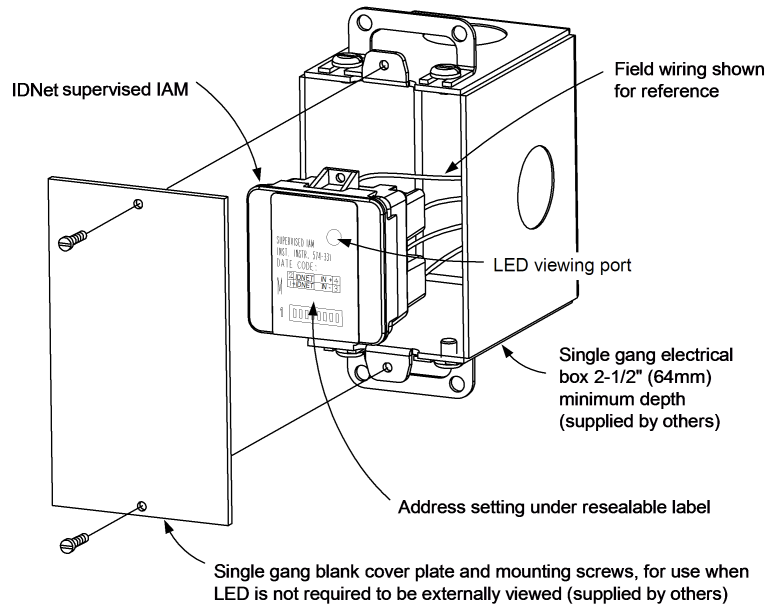| Specification		Rating
Power and Communications		IDNet, auto selected, 1 address per IAM
Input Requirements		Normally open, dry contacts
Wire Connections	A4090-9001	Screw terminals for in/out wiring, 18 to 14 AWG wire (0.82 mm^2 to 2.08 mm^2)
	A4090-9051	Color coded wire leads, 18 AWG (0.82 mm2), 8" long (203 mm)
Reference Documents	Installation Instructions	574-331AC for A4090-9001; 579-572AC for A4090-9051
	Field Wiring Diagrams	842-073 for IDNet operation

Table 5: Wiring Distances

Specification	Rating
Distance from IAM to Contacts	500 ft (152 m) maximum without protectors
	400 ft (122 m) maximum with A2081-9044 Overvoltage Protectors
Wiring Distance Reference per channel, IDNet Communications	2500 ft (762 m) maximum from fire alarm control panel
	10,000 ft (3048 m) maximum total wiring distance (including T-Taps)

Table 6: Mechanical

Specification		Rating
Dimensions	A4090-9001	1-9/16" W x 1-3/4" H x 1-1/4" D (40 mm x 44 mm x 32 mm)
	A4090-9051	1-9/16" W x 1-9/16" H x 9/16" D (40 mm x 40 mm x 14 mm)
Housing Material, A4090-9001		Black thermoplastic
Encapsulation Material, A4090-9051		Epoxy, beige
Temperature Range		32° to 158° F (0° to 70° C); intended for indoor operation
Humidity Range		Up to 93% RH at 100° F (38° C)

Mounting Information

IDNet supervised IAM

Field wiring shown for reference

LED viewing port

Single gang electrical box 2-1/2" (64mm) minimum depth (supplied by others)

Address setting under resealable label

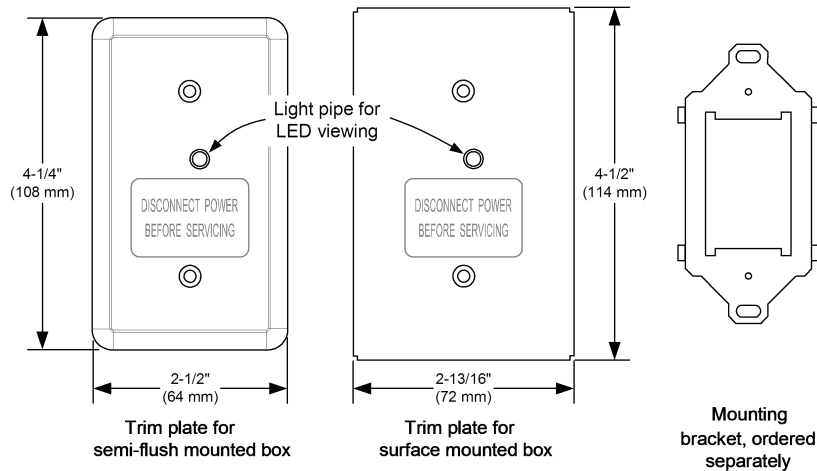**Single gang blank cover plate and mounting screws, for use when LED is not required to be externally viewed (supplied by others)**

Figure 3: Mounting Reference, Single Gang Blank Cover Plate

Note:

Figure 3 shows A4090-9001 IDNet supervised IAM.

Light pipe for LED viewing

4-1/4" (108 mm)

4-1/2" (114 mm)

DISCONNECT POWER BEFORE SERVICING

DISCONNECT POWER BEFORE SERVICING

2-1/2" (64 mm)

2-13/16" (72 mm)

Trim plate for semi-flush mounted box

Trim plate for surface mounted box

Mounting bracket, ordered separately

Figure 4: Optional Trim Plates and Mounting Bracket for Visible LED

Note:

Figure 4 shows the following:

· A4090-9806, Trim plate for semi-flush mounted box
· A4090-9807, Trim plate for surface mounted box
· A4090-9810, Mounting bracket, ordered separately

A4090-9051 Mounting Information

Address setting is at rear of housing

Encapsulated Supervised IAM

Single gang electrical box 2-1/2" (64mm) minimum depth (supplied by others)

Single gang blank cover plate and mounting screws (supplied by others)

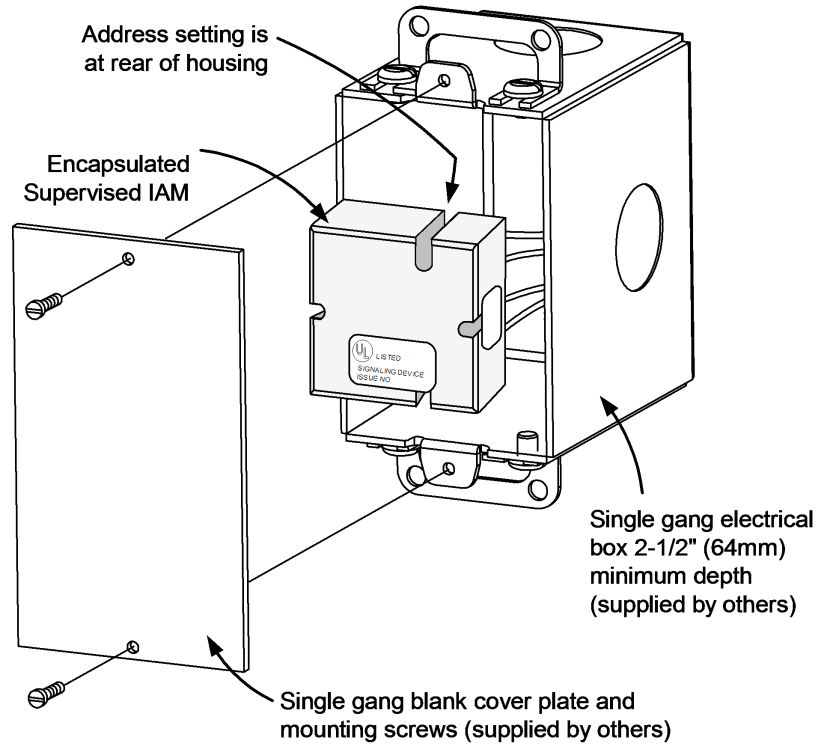**Figure 5: A4090-9051 Mounting Information**

Note:

Figure 5 shows a A4090-9051 Encapsulated Supervised IAM.