Simplex 4090-9001

Simplex 4090-9001 IAM IDNET Supervised Individual Addressable Module User Manual

Model: 4090-9001 | Brand: Simplex

1. Introduction

The Simplex 4090-9001 Individual Addressable Module (IAM) is a supervised device designed for use with Simplex IDNET fire alarm control panels. This module provides supervised monitoring of a normally open or normally closed contact, allowing the fire alarm system to monitor various external devices such as flow switches, tamper switches, or other alarm initiating devices. Its compact design and addressable capabilities ensure efficient and reliable integration into a comprehensive fire detection and alarm system.
This manual provides essential information for the proper installation, operation, and maintenance of the 4090-9001 IAM. Please read all instructions carefully before proceeding with installation or operation.

2. Safety Information

Always adhere to local codes, ordinances, and regulations when installing and operating this device. Failure to do so may result in property damage, injury, or death. Only qualified personnel should install and service this equipment.

General Precautions:

- **ELECTRICAL HAZARD:** Disconnect electrical field power when making any internal adjustments or repairs. All repairs must be performed by a Simplex authorized service representative.
- **ESD CAUTION:** Do not open or service this device unless properly grounded. Electrostatic discharge (ESD) can damage components. Handle with care.
- Ensure all wiring is correctly terminated and secured according to wiring diagrams and local electrical codes.
- Do not expose the module to moisture or extreme temperatures outside its specified operating range. This device is intended for indoor dry applications only.
- Verify compatibility with your existing Simplex IDNET system before installation.

Figure 2.1: Simplex 4090-9001 module shown with its installation instructions sheet, highlighting the importance of reviewing all documentation before installation.

3. Setup and Installation

The 4090-9001 IAM is designed for easy installation within standard electrical boxes or compatible enclosures. Follow these steps for proper setup.

3.1 Physical Installation

1. Mount the module in a suitable electrical box or enclosure, ensuring it is securely fastened. The module is designed for indoor dry applications.
2. Ensure adequate space for wiring and ventilation around the module.

3.2 Wiring Connections

Refer to the module's label and the specific installation instructions (part number 574-331 Rev G, as indicated on the module) for detailed wiring diagrams. The module features terminals for IDNET input/output and supervised contact connections.

Figure 3.1: Front view of the Simplex 4090-9001 module, clearly showing the IDNET input/output terminals (1-4) and the module's model number and revision information.

- Connect the IDNET communication lines to terminals 1 (IDNET IN -) and 2 (IDNET IN +).
- Connect the IDNET communication lines to terminals 3 (IDNET OUT -) and 4 (IDNET OUT +) for daisy-chaining to other IDNET devices.
- Connect the supervised contact circuit to the designated terminals (typically M1 and the associated input). Ensure proper polarity and the use of an End-of-Line Resistor (EOLR) as specified by Simplex for supervision.
- All circuits are power-limited.

3.3 Addressing

The 4090-9001 is an addressable module. Its address is set electronically by the Simplex fire alarm control panel during system configuration. Refer to the control panel's programming manual for details on assigning and verifying module addresses.

4. Operation

The Simplex 4090-9001 IAM operates as an interface between a supervised initiating device circuit and the IDNET communication loop of a Simplex fire alarm control panel.

4.1 Supervised Monitoring

The module continuously monitors the connected contact circuit for changes in state (open or closed, depending on configuration) and for fault conditions (e.g., open circuit, short circuit) using an End-of-Line Resistor (EOLR). Upon detecting an alarm condition (e.g., contact closure for a flow switch) or a fault, the module communicates this status change to the fire alarm control panel via the IDNET loop.

- **Normal State:** The module reports a normal status to the control panel.
- **Alarm State:** When the supervised contact changes state (e.g., closes for an alarm), the module transmits an alarm signal to the control panel.
- **Trouble State:** If a wiring fault (open or short) is detected on the supervised circuit, the module transmits a trouble signal to the control panel.

5. Maintenance

The Simplex 4090-9001 IAM is designed for reliable, long-term operation with minimal maintenance. However, periodic inspection and cleaning are recommended as part of a comprehensive fire alarm system maintenance program.

5.1 Cleaning

If the module accumulates dust or dirt, gently wipe the exterior with a soft, dry cloth. Do not use abrasive cleaners, solvents, or excessive moisture. Ensure the module is powered down before cleaning.

5.2 Inspection

During routine system inspections, visually check the module for any signs of physical damage, loose connections, or environmental stress. Verify that the module's status indicator (if present) is operating normally according to the system's operational guidelines.

Figure 5.1: Side view of the Simplex 4090-9001 module, showing the UL Listed label, indicating compliance with safety standards.

6. Troubleshooting

This section provides guidance for common issues that may arise with the 4090-9001 IAM. For complex problems, contact a qualified Simplex service technician.

Problem	Possible Cause	Solution
Module not recognized by control panel.	Incorrect wiring; Address not assigned or incorrect; Faulty module.	Verify IDNET wiring (terminals 1-4). Check control panel programming for correct address assignment. Test module with a known good unit if possible.
Supervised circuit shows trouble.	Open circuit; Short circuit; Incorrect EOLR; Faulty contact device.	Check wiring for breaks or shorts. Verify correct EOLR value and installation. Test the connected contact device.
Module reports false alarms.	Intermittent contact closure; Electrical noise; Faulty module.	Inspect the connected device for intermittent operation. Check for sources of electrical interference. Consult Simplex technical support.

7. Specifications

Attribute	Detail
Brand	Simplex
Model Number	4090-9001
Product Dimensions	9 x 4 x 8 inches
Item Weight	2.08 ounces
Power Source	Corded Electric (via IDNET loop)
Sensor Type	Photoelectric (refers to general fire alarm system components, not the module itself which monitors contacts)
Alarm Type	Audible (refers to general fire alarm system components, not the module itself which monitors contacts)
Application	Indoor Dry Application
Compatibility	Simplex IDNET Fire Alarm Control Panels
UL Listing	Fire Alarm Equipment Listed

8. Warranty Information

Simplex products are manufactured to high quality standards. For specific warranty terms and conditions, please refer to the warranty statement provided with your purchase or contact Simplex customer service. Keep your proof of purchase for warranty claims.

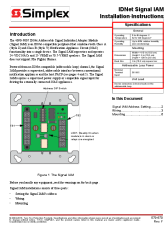
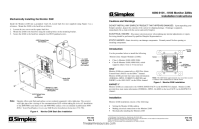
9. Support

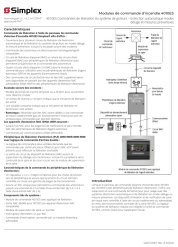
For technical assistance, product inquiries, or service requests, please contact Simplex customer support or your authorized Simplex distributor. Provide the product model number (4090-9001) and any relevant system information when seeking support.
Manufacturer: Simplex
Part Number: 4090-9001

UPC: 753359764849

For additional resources and documentation, visit the official Simplex website or refer to the instruction manual 574-331 Rev G (if available digitally).

Related Documents - 4090-9001

	Simplex 4090-9007 IDNet Signal IAM: Addressable Module for Fire Alarm Systems Detailed technical specifications and features for the Simplex 4090-9007 IDNet Signal Individual Addressable Module (IAM), designed for enhanced selective signaling and audio control in Simplex 4100ES, 4010ES, 4100U, and 4008 Series fire alarm control panels. Includes wiring, operation, and mounting information.
	Simplex IDNet Signal IAM Installation Instructions Detailed installation instructions for the Simplex 4090-9007 IDNet Addressable Signal Individual Adapter Module (Signal IAM), covering address setting, wiring configurations for Class A and Class B Notification Appliance Circuits (NACs), and mounting procedures. This guide provides essential information for integrating the Signal IAM with fire alarm control panels and notification appliances.
	Módulo Direccionable Individual Simplex 4090-9007 IAM de Señal para Paneles de Alarma de Incendios Descubra el Módulo Direccionable Individual (IAM) de Señal Simplex 4090-9007, un periférico IDNet para paneles de control de alarma de incendios 4007ES, 4008, 4010ES, 4100ES y 4100U. Proporciona señalización selectiva, supervisión de NAC, control de audio y cumple con UL, ULC, CSFM y FM.
	Módulo Endereçável Individual Simplex 4090-9007 IDNet para Sinalização de Alarme de Incêndio Este documento técnico detalha o Módulo Endereçável Individual (IAM) Simplex 4090-9007 IDNet, projetado para fornecer sinalização adicional em painéis de controle de alarme de incêndio Simplex séries 4007ES, 4008, 4010ES, 4100ES e 4100U. Inclui características, recursos de supervisão, detalhes de operação, especificações elétricas e mecânicas, requisitos de fiação e informações de montagem para otimização de sistemas de alarme de incêndio.
	Simplex 4090-9101, 4090-9106 Monitor ZAM Installation Instructions Installation instructions for Simplex 4090-9101 and 4090-9106 Monitor Zone Adapter Modules (ZAMs). Covers mechanical installation, address setting via DIP switches, and electrical connections for IDNet and MAPNET II systems.



[Simplex 4010ES: Systèmes de commande d'extinction automatique pour gicleurs]

Guide technique Simplex 4010ES détaillant les modules de commande pour les systèmes d'extinction automatique par gicleurs, couvrant les modes déluge et préventif, avec spécifications, homologations et schémas de câblage.