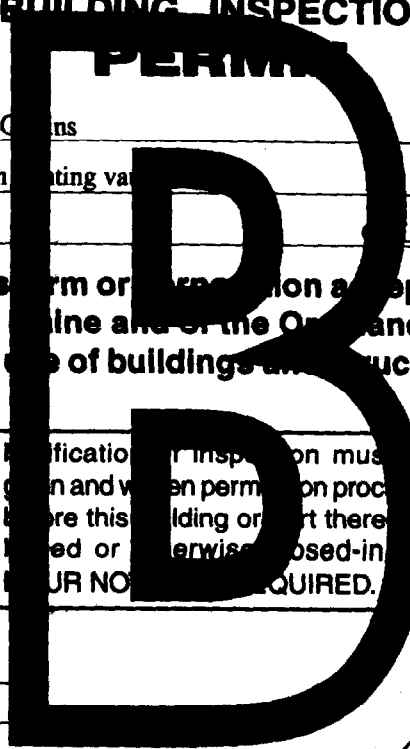


DISPLAY THIS CARD ON PRINCIPAL FRONTAGE OF WORK CITY OF PORTLAND

Please Read Application And Notes, If Any, Attached

BUILDING INSPECTION

Permit Number: 031354



This is to certify that City Of Portland/collins & Collins

has permission to Install Fire Alarm system in existing va

AT 295 Yellowbird Rd 199 A001005

provided that the person or persons firm or corporation accepting this permit shall comply with all of the provisions of the Statutes of this State and of the Ordinances of the City of Portland regulating the construction, maintenance and use of buildings and structures, and of the application on file in this department.

Apply to Public Works for street line and grade if nature of work requires such information.

Notification of inspection must be given and when permission proceeds before this building or part thereof is started or otherwise closed-in. YOUR NO. REQUIRED.

A certificate of occupancy must be procured by owner before this building or part thereof is occupied.

OTHER REQUIRED APPROVALS

Fire Dept. T.M.S.
Health Dept. _____
Appeal Board _____
Other _____
Department Name

[Signature] 4/6/03
Director - Building & Inspection Services

PENALTY FOR REMOVING THIS CARD

City of Portland, Maine - Building or Use Permit Application
 389 Congress Street, 04101 Tel: (207) 874-8703, Fax: (207) 874-8716

Permit No: 03-1354	Issue Date:	CBL: 199 A001005
-----------------------	-------------	---------------------

Location of Construction: 295 Yellowbird Rd	Owner Name: City Of Portland	Owner Address: 389 Congress St	Phone:
Business Name:	Contractor Name: collins & Collins	Contractor Address: Portland	Phone:
Lessee/Buyer's Name	Phone:	Permit Type: Alterations - Commercial	Zone: AB

Past Use: Jetport Lighting Vault	Proposed Use: Jetport Lighting Vault w/fire alarm system	Permit Fee: \$66.00	Cost of Work: \$4,500.00	CEO District: 3
Proposed Project Description: Install Fire Alarm system in lighting vault		FIRE DEPT: <input checked="" type="checkbox"/> Approved <input type="checkbox"/> Denied	INSPECTION: Use Group: N.A. Type: ALARM 11/6/03	
		Signature: <i>[Signature]</i>	Signature: <i>[Signature]</i>	
		PEDESTRIAN ACTIVITIES DISTRICT (P.A.D.)		
		Action: <input type="checkbox"/> Approved <input type="checkbox"/> Approved w/Conditions <input type="checkbox"/> Denied		
		Signature: _____ Date: _____		

Permit Taken By: kwd	Date Applied For: 10/29/2003	Zoning Approval	
-------------------------	---------------------------------	------------------------	--

- This permit application does not preclude the Applicant(s) from meeting applicable State and Federal Rules.
- Building permits do not include plumbing, septic or electrical work.
- Building permits are void if work is not started within six (6) months of the date of issuance. False information may invalidate a building permit and stop all work..

Special Zone or Reviews	Zoning Appeal	Historic Preservation
<input type="checkbox"/> Shoreland	<input type="checkbox"/> Variance	<input checked="" type="checkbox"/> Not in District or Landmark
<input type="checkbox"/> Wetland	<input type="checkbox"/> Miscellaneous	<input type="checkbox"/> Does Not Require Review
<input type="checkbox"/> Flood Zone	<input type="checkbox"/> Conditional Use	<input type="checkbox"/> Requires Review
<input type="checkbox"/> Subdivision	<input type="checkbox"/> Interpretation	<input type="checkbox"/> Approved
<input type="checkbox"/> Site Plan	<input type="checkbox"/> Approved	<input type="checkbox"/> Approved w/Conditions
Maj <input type="checkbox"/> Minor <input type="checkbox"/> MM <input type="checkbox"/>	<input type="checkbox"/> Denied	<input type="checkbox"/> Denied
Date: <i>[Signature]</i>	Date: _____	Date: _____

CERTIFICATION

I hereby certify that I am the owner of record of the named property, or that the proposed work is authorized by the owner of record and that I have been authorized by the owner to make this application as his authorized agent and I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in the application is issued, I certify that the code official's authorized representative shall have the authority to enter all areas covered by such permit at any reasonable hour to enforce the provision of the code(s) applicable to such permit.

SIGNATURE OF APPLICANT ADDRESS DATE PHONE

RESPONSIBLE PERSON IN CHARGE OF WORK, TITLE DATE PHONE

03-1354

All Purpose Building Permit Application

If you or the property owner owes real estate or personal property taxes or user charges on any property within the City, payment arrangements must be made before permits of any kind are accepted.

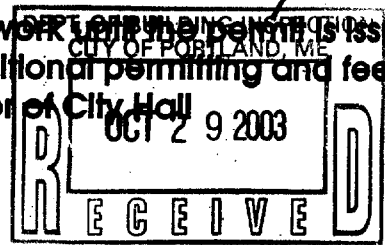
Location/Address of Construction: <u>947-1101 Yellowbird Rd.</u>		
Total Square Footage of Proposed Structure	Square Footage of Lot	
Tax Assessor's Chart, Block & Lot Chart# Block# Lot# <u>199 A 001005</u>	Owner: <u>City of Portland</u>	Telephone:
Lessee/Buyer's Name (If Applicable)	Applicant name, address & telephone:	Cost Of Work: \$ <u>4500</u> Fee: \$ <u>66.00</u>
Current use: <u>lighting vault</u>		
If the location is currently vacant, what was prior use: _____		
Approximately how long has it been vacant: _____		
Proposed use: <u>lighting vault w/ fire alarm system</u>		
Project description:		
Contractor's name, address & telephone: <u>Collins + Collins Electric</u> <u>Box 613 Wilton, ME 04294</u>		
Who should we contact when the permit is ready: _____		
Mailing address: <u>649-2070 645-0953</u>		
We will contact you by phone when the permit is ready. You must come in and pick up the permit and review the requirements before starting any work, with a Plan Reviewer. A stop work order will be issued and a \$100.00 fee if any work starts before the permit is picked up. PHONE:		

IF THE REQUIRED INFORMATION IS NOT INCLUDED IN THE SUBMISSIONS THE PERMIT WILL BE AUTOMATICALLY DENIED AT THE DISCRETION OF THE BUILDING/PLANNING DEPARTMENT, WE MAY REQUIRE ADDITIONAL INFORMATION IN ORDER TO APPROVE THIS PERMIT.

I hereby certify that I am the Owner of record of the named property, or that the owner of record authorizes the proposed work and that I have been authorized by the owner to make this application as his/her authorized agent. I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in this application is issued, I certify that the Code Official's authorized representative shall have the authority to enter all areas covered by this permit at any reasonable hour to enforce the provisions of the codes applicable to this permit.

Signature of applicant: <u>[Signature]</u>	Date: <u>Oct 28, 2003</u>
--	---------------------------

This is NOT a permit, you may not commence ANY work until the permit is issued. If you are in a Historic District you may be subject to additional permitting and fees with the Planning Department on the 4th floor of City Hall





State of Maine

DEPARTMENT OF PROFESSIONAL & FINANCIAL REGULATION

ELECTRICIANS' EXAMINING BOARD

License # MC60018510

Be it known that: **COLLINS AND COLLINS ELECTRIC**
has qualified as required by Title 32 MRSA Chapter 17 and is
licensed as an
ELECTRICAL COMPANY
affiliated with JAY D. COLLINS

ISSUE DATE

Sep 26, 2003

EXPIRATION DATE

Aug 31, 2005

A handwritten signature in cursive script, appearing to read "Robert S. Burroughs".

Commissioner
Authorizing signature

ME 21303

PROTECTION PROFESSIONALS

139 Newbury Street, Portland, Maine 04101-4215

(207) 775-5755 • FAX (207) 775-1895 • E-mail: dhansen2@maine.rr.com

FIRE ALARM SYSTEM

SHOP DRAWINGS SUBMISSION

AIRFIELD LIGHTING VAULT

PORTLAND INTERNATIONAL
JETPORT
PORTLAND, ME

OCTOBER 8, 2003



**AIRFIELD LIGHTING VAULT
PORTLAND INTERNATIONAL JETPORT
PORTLAND, ME**

TABLE OF CONTENTS

- * 164200-14-120 – LW-401 FIRE ALARM PANEL
- * 16418b-0-14 – SEMI-FLUSH TRIM KIT
- * D2071AC – DIGITAL COMMUNICATOR
- * PM6608 (10561) PULL STATIONS
- * 9374 – IONIZATION SMOKE DETECTOR W/ 2-WIRE BASE
- * 6254B-14-24 – HIDB HORN/STROBE 15, 30, 75, 110 CD
- * 2700B-14-24 – STROBE 15, 30, 75, 110 CD
- * ED-284B - 194° HEAT DETECTOR
- * DC-302021-24 – PYROTECTOR OPEN AREA UV FLAME DETECTOR 24VOLTS
- * DEVICE LAYOUT /WIRING DIAGRAM/RISER DIAGRAM

LifeWatch-401 Conventional Zone Fire Alarm Control Panel

Features

- 4 Zones - Expandable to 8 Zones
- Microprocessor Based Control
- Factory Programmed - Field Configurable
- 2 Style Y Notification Appliance Circuits
- 3 Amps Notification and Auxiliary Power
- 24 and 60 Hour Battery Backup
- 8 Form "C" Relay Output Option
- 220/240 Vac, 50/60 HZ Power Supply Option
- Remote Serial Annunciator Option
- Sprinkler Supervisory Service
- Non-Silenceable Bell Service
- Alarm Verification by Zone
- One Person Test Feature
- Zone/Output Bypass Feature
- Subsequent Alarm and Trouble with 24 Hour Reminders
- Alarm, Trouble and Supervisory Last Event Records
- UL Listed, Standard 864

Introduction

The Faraday LW-401 is the next member in a family of products designed to provide cost effective, reliable life safety equipment to the fire alarm market. The microprocessor based fire alarm control panel is supplied with four conventional zones and is expandable to eight. It has many features required by today's demanding market such as field programmability, power limited circuits, one person test, remote annunciation and sufficient power to meet ADA requirements for signaling.

The LW-401 is designed to meet the varied fire alarm needs of small office buildings, apartment buildings, department stores, hotels, strip malls or anywhere a cost efficient, general purpose fire alarm control panel is required.

Description and Features

Initiating Circuits

The base LW-401 has four conventional, Style "B" (Class B) zones which any combination of 30 compatible smoke detectors can be combined on a zone. Any number of thermal detectors, manual stations or other compatible direct shorting devices may be connected to each zone. All of these initiating devices can be mixed on the same zone providing the total power requirement of the zone does not exceed 9 mA supervisory current. The LW-401 has the additional capacity to support detector accessories such as relays, remote alarm lamps and audible bases.



Model LifeWatch-401

Initiating zones can be programmed for many functions. Alarm verification allows detector application in sensitive areas with or without manual stations mixed on the zone as allowed by code. Manual station operation shall not be delayed on verified zones. Generic zone function allows the NAC's in the LW-401 to follow the action of a master fire alarm panel in the facility.

Initiating zones can also be bypassed as required, for example, during construction on the premises.

The system is expanded through the model LWZE-4A expander which has an additional four initiating circuits in addition to relays and open collector outputs. The system can alternately be expanded through the model LWZE-8A expander module which has an additional four Class A (Style D) initiating circuits. The LWZE-8A also converts the four initiating circuits and the two notification circuits on the main LW-401 to Style D (Class A) and Style Z (Class A) respectively.

Notification Appliance Circuits

The base LW-401 has two Style "Y" (Class B) Notification Appliance Circuits, each rated at 1.5 Amps. The total power output of the panel, between the two notification circuits and the auxiliary output, is limited to 3 Amps. The LW-401 notification circuits are power limited to reduce installation costs without the addition of any hardware.

... continued

Three (3) Amps is sufficient to provide power for many applications requiring appliances designed to ADA specifications. Notification Circuits can be programmed for various codes. These include temporal, march time, simplified zone code, and number of rounds. They can also be inhibited during test and programming functions. The two circuits can be individually programmed as non-silenceable. This steady operation can be used for strobes which must continue operation after audible devices are silenced.

Relays and Outputs

The base LW-401 has form "C" relays for general alarm and trouble rated at 1 Amp., 30 VDC. The model LWZE-4A optional expander module has an additional four general purpose, programmable relays rated at 2 Amps., 30 VDC, plus four programmable open collector outputs.

Additionally, the model LWZR-8 relay module provides eight general purpose, programmable relays rated at 2 Amps., 30 Vdc/120 Vac. All remote operations in the fire alarm system are controlled from the LWZE-4A or the LWZR-8, both of which are installed within the LW-401 enclosure.

Visual and Audible Indicators

The LW-401 has visible LED annunciation by zone for alarm and trouble. Additionally, there is a system alarm LED and a system trouble LED. Supervisory zones utilize the zone trouble LED flashing in sync with a system supervisory LED to indicate an off normal situation.

Clustered with the system alarm, trouble and supervisory LEDs are also LEDs for AC power, bypass and test/program mode. A seven segment display reports a code for each system trouble and is also used during testing and programming functions. Trouble conditions are also annunciated by a piezoelectric sounder housed inside the LW-401.

Remote annunciation is accomplished through a serial connection with the model LWRA-8W or LWRA-8B, eight zone LED annunciators. These units display alarm, supervisory and trouble conditions for 8 zones. A total of two modules can be attached to each system. The LWRA-8B comes with a black enclosure, the LWRA-8W with a white enclosure.

Auxiliary Power

The LW-401 contains a 1/2 Amp. auxiliary power circuit which is used to drive remote devices. The total power of the panel, between the auxiliary output and the two notification circuits, is 3 Amps.

Power Supply/Battery Charger

The power supply accepts a 120 Vac/60 Hz input or, optionally, a 220/240 Vac 50 Hz input. On loss of AC power the system switches to battery operation and indicates such by flashing the AC power LED on the display. Battery capacities of 24 and 60 hours are available.

Manual Controls

The LW-401 display has four switches for acknowledging alarm, supervisory and trouble conditions; silencing notification appliance circuits; resetting the system; and for the drill function. These switches are also used when programming the control unit.

Field Programmability and Test Functions

The following functions are field programmable in the LW-401. These features are generally not programmed in the unit as received from the factory. Field programming is accomplished through the display and does not require the use of a computer or any proprietary tools.

Initiating Circuits

Alarm Verification by Zone, Zone Bypass, Supervisory Zone or Generic Zone when the LW-401 is to be used to provide remote notification appliance circuits.

(Note: The default mode is an alarm causing zone.)

Notification Appliance Circuits:

Non-silenceable, Simple Zone Coding, March Time, Temporal, Silence Inhibit, Cutoff Timers and Reminders.

(Note: The default mode is a steady signal.)

Outputs:

Bypass Outputs/Relays.

System Programming:

Zone to Output Matrix and Password Maintenance.

System tests features include the One Person Test feature, a Lamp Test and Search and Clear of the alarm, trouble and supervisory history buffer.

Engineer and Architect Specifications

The fire alarm control panel shall be a Faraday LW-401, shall utilize conventional zones, shall be microprocessor based and fully field programmable. The base panel shall include four initiating zones, relays for general alarm and trouble and two power limited notification circuits capable of a total of 3 Amps of power.

The system shall be expandable via a model LWZE-4A expander module which shall contain an additional four conventional zones, four general purpose relays and four general purpose open collector outputs.

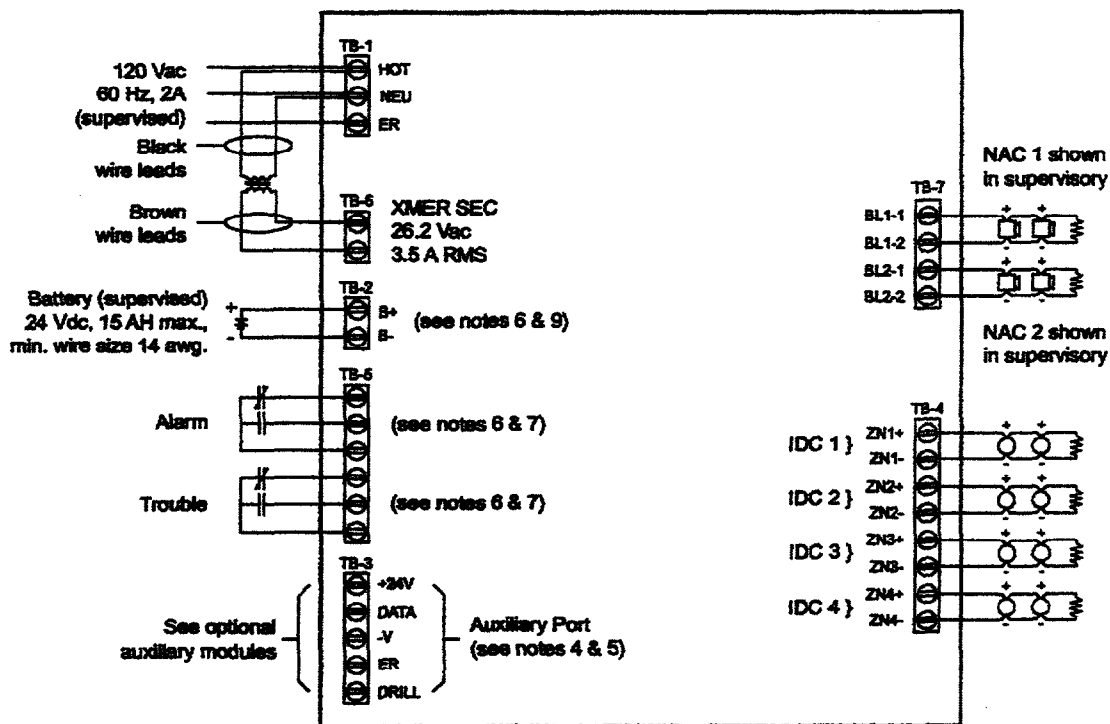
The fire alarm system shall have the following features: subsequent alarm and trouble, one person test feature, brown out protection, 24 or 60 hour battery backup. It shall also have the following selectable features: supervisory zones, alarm verification by zone, non-latching zones, alarm, trouble and supervisory history, notification appliance circuit coding, alarm/trouble 24 hour reminder, and zone/output bypass.

Any initiating device circuit shall have the capability of being mapped to any optional output via the system programming function.

The fire alarm control panel shall be UL listed and meet the requirements of NFPA 72 for local fire alarm control for automatic or manual service, and for sprinkler supervisory and waterflow service.

It shall meet NFPA 72 requirements for central station service when connected to the model DC-100 or DC-101 digital fire communicator.

Wiring Diagram



Notes:

1. All field wiring must be in accordance with NFPA 70, article 760.
2. Make no wiring connections while the system is powered.
3. Alarm relay contacts are shown de-energized and Trouble relay contacts are shown energized.
4. Auxiliary output rated 0.5 amps at +24 Vdc filtered, maximum line impedance of 5 ohms.
5. Combined current output for NAC1, NAC2 and auxiliary outputs is limited to 3.0 amps.
6. Equipment connected to these terminals must be located within the same room.
7. Refer to the LW-401 Operation, Installation, and Maintenance Manual, for further details.
8. No t-tapping allowed.
9. Connect standby batteries only to terminals B+ and B-. The batteries may be installed in either the bottom of the cabinet or in a UL listed battery enclosure.
10. In all cases the Faraday model number is the compatibility identifier, including the control panel, module (s), and all compatible initiating devices.
11. When using the LWCT-1 module, not suitable for remote station protected premises service where separate transmission circuits are required for fire, supervisory, and trouble signals.
12. All power limited wiring requires separation from non-power limited wiring.

Technical Specifications

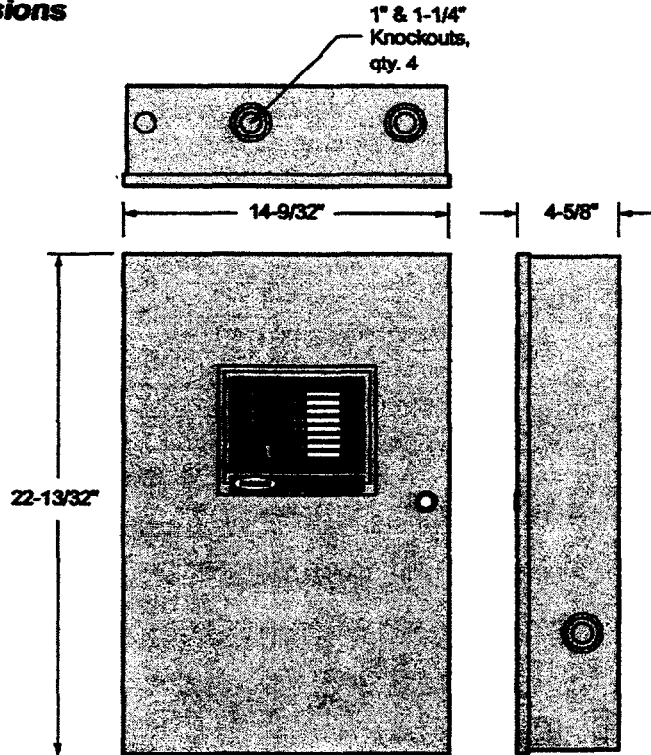
Operating Temperature:
32-120°F (0-49°C)

Humidity:
85% @ 86°F (30°C) up to
24 hrs.

Primary Input Voltage:
LW-401R: 120 Vac, 60 Hz
nominal
LW-401IR: 220/240 Vac, 50 Hz
nominal

Shipping Weight:
LW-401R, 30 lbs. approx.
LW-401IR, 30 lbs. approx.

Dimensions



Ordering Information

Catalog No.	Order No.	Description
LW-401R	16420-0-14-120	Surface mount, 4 zone class "B" (style B), 120 Vac, red
LW-401IR	16420-0-14-240	Surface mount, 4 zone class "B" (style B), 240 Vac, red

Accessories

- LWZE-4A 16411B 4-zone expander module
- LWZE-8A 16412B Class "A" expander module
- LWZR-8 16404B 8 output relay module
- LWCT-1 16405B Municipal tie/leased line module
- LWMT-1A 16413B Battery volt/amp meter module
- LWSF-T 16418B-0-14 Semi-flush trim kit, red
- LWDF-A 16419B-0-3 Deadfront adapter plate, black
- LWRA-8W 16409B-0-4 8-zone LED remote annunciator, white
- LWRA-8B 16409B-0-3 8-zone LED remote annunciator, black



805 S. Maumee Street
 Tecumseh, MI 49286, U.S.A.
 Phone: (800) 465-7115
 Fax: (800) 552-3557
 Http: www.faradayilc.com

WARNING - The information contained in this document is intended only as a summary and is subject to change without notice. The devices described in this document have specific instruction sheets which cover various technical, limitation and liability information. Copies of these instruction sheets and the General Product Warning and Limitations Document, which also contains important information, are provided with the product and are available from the Manufacturer. Information contained in these documents should be consulted before specifying or using the product. For further information or assistance concerning particular problems contact the Manufacturer.

D2071A

Fire Control/Communicator

Specifications

Features

- Three-zone Digital Alarm Communicator Transmitter
- UL Listed for NFPA 72 applications as a control unit or control unit subassembly for digital fire signaling systems
- Can be used as a stand-alone control/communicator for sprinkler systems or as a slave communicator for existing fire alarm systems
- UL Listed as power-limited
- Optional Phone Line Trouble Relay for connection to an external annunciation device
- Optional Alarm Relay for annunciation of Zone 1 Alarm Initiating Circuit
- Dual telephone lines for Central Station reporting
- Primary and alternate telephone numbers
- Built-in phone line trouble LED and buzzer
- Compact and easy to install
- Communicates using BFSK or pulsed single-round fast format (accepts 2300 Hz acknowledgment tone)
- Automatic test reports every 24 hours
- Simple programming with D5100 and D5200 Programmers
- Programmable Retard and Reset for waterflow switches
- Battery lead supervision

Description

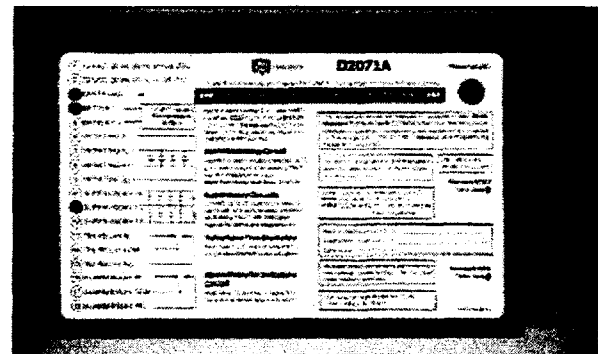
Radionics' D2071A Fire Control/Communicator is a three-zone digital alarm communicator transmitter (DACT). The D2071A can be used in limited stand-alone applications, or in slave applications for off-premises monitoring of an existing Fire Alarm Control Panel (FACP).

Two separate relay sockets are provided so that optional Radionics D136 relays can be installed. These relays provide outputs for Phone Line Trouble and Alarm Initiating Circuit annunciation devices.

Two modular phone jacks on the D2071A provide connections for two separate telephone lines using RJ31X or RJ38X jacks. Both telephone lines are supervised. If one of the phone lines is operational and the other is in trouble, a report is sent to the receiver.

A yellow LED provides a visual indication of trouble conditions on either telephone line. The LED can be viewed through the hole in the cover of the D2071A.

A buzzer provides an audible indication of phone line trouble. The buzzer, LED and the optional relay all follow the phone line trouble. The buzzer automatically silences when a phone trouble signal is communicated to the receiver.



D2071A Fire Control/Communicator

Application

Radionics' D2071A is a three-zone digital alarm communicator transmitter (DACT). It uses two phone lines to transmit to the receiver. A Phone Fail LED and buzzer annunciate phone line failures.

Zone 1 is a four-wire, Class A (NFPA Style D) Alarm Initiating Circuit. In a stand-alone application, this zone can be used to monitor up to five waterflow alarm switches, or up to 100 mechanically operated devices, such as heat detectors and manual pull stations. In a slave application, this zone can be used to monitor an alarm output on an existing FACP.

Zones 2 and 3 are Class B (NFPA Style A) Supervisory Circuits. Each circuit can be used to monitor up to 20 sprinkler supervision devices in a stand-alone application, or can be used to monitor a trouble output on an existing FACP in a slave application.

The D2071A is UL Listed for NFPA Standard 72 (Chapters 4-3 and 4-5).

Installation

The control is mounted in a red, plastic, nonconductive housing. The D2071A's small size allows it to be installed in economical, fire-approved enclosures for stand-alone installations. The D2071A has a sliding cover that can be opened to expose the terminal strip, programming jack and two relay sockets.

Install, test and maintain this device according to its Installation Guide, NFPA 72, Local Codes and the Authority Having Jurisdiction. Failure to follow these procedures may result in failure of the device to operate properly. Radionics is not responsible for devices that are improperly installed, tested and maintained.



radionics

A member of the
Bosch Group

Specifications

D2071A Specifications	
Power Input	12 VAC, 20 VA w/ 12 VDC battery, or 24 VDC from existing FACP
Minimum Panel Voltage	8.5 VDC
Operating Current (Idle)	29.5 mA (12 VAC Mode); 30.0 mA (24 VDC Mode)
Operating Current (Max)	157.6 mA (12 VAC Mode); 166.8 mA (24 VDC Mode)
Maximum Battery Size (Use only in 12 VAC Mode)	7 Ah(Refer to NFPA 72 for required standby time)
Zone 1 Response Time	0.2 to 90 sec., depending on Retard/Reset time
Zone 2 Response Time	Approximately 2 to 4 sec.
Phone Voltage and Current	10 VDC, 10 ma (min); 48 to 52 VDC (normal)
Operating Temperature	+32°F to +120°F (0°C to +50°C)
Wire Specifications	Refer to Article 760 of NEC, NFPA 70
Color	Red
Dimensions* (L x W)	7.8 in. x 4.4 in. (20 cm x 11.2 cm)
Material	Non-conductive plastic (ABS UL94V- O)

* Dimensions include mounting tabs

Listings and Approvals

- Underwriters Laboratories
- CSFM
- MEA
- FM

Ordering Information

Model	Description
D2071AC DACT	Fire Control/Communicator (the complete kit includes phone cords and a version of the D4103R enclosure with a hard-wired transformer installed in it. You need only order a battery to complete the installation)
D2071A DACT	Fire Control/Communicator (Panel only. Select from the accessories below to complete the installation)
D136	Optional relay. K5 enables Phone Line Trouble Relay; K6 enables Initiating Circuit Alarm Relay
D161* or D162	Phone cords for primary and D162 alternate phone line connections
D1220	Transformer (12 VAC only)
D4103R* or D8109	Or other UL Listed fire enclosure
D5100	Hand-held Programmer
D5200	Hand-held Programmer
D2002	Mounting Plate* to mount the D2071A in a D4103R enclosure
D8004	Transformer Enclosure required for the D1220 transformer in commercial fire applications if D2071AC kit is not used

* Included in the D2071AC kit. D4103R in D2071AC kit includes hard-wired transformer.



Manual Pull Stations, Single and Dual Action

Features

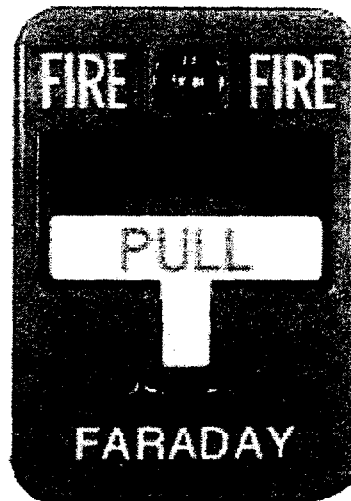
- Single or dual action
- MM101 Key reset
- Wire leads or terminal connections
- Gold plated SPST contacts
- Mounts on standard single gang box
- Surface and weatherproof back boxes
- High-gloss red enamel finish
- Plastic breakrod
- UL listed, CSFM listed, FM approved, MEA approved and ADA compliant

Description

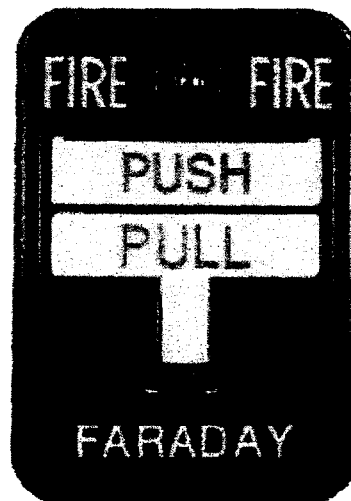
The Faraday Non-Code manual pull stations are a high quality, die-cast metal, available in either single or dual action configurations with SPST contacts, and either wire lead or terminal strip connections. The normally open contact, which closes when the pull station is activated, is rated for 1 amp, 30 VDC. The contacts are gold plated to avoid the risk of corrosion. All models in the series have been tested by UL for compliance to the latest requirements of the Americans with Disabilities Act (ADA).

The Faraday stations are available as single or dual-action devices with key resets, wire leads or terminal connectors and SPST gold contacts.

All models mount on a standard single gang backbox, Faraday model 10564 interior surface metal backbox, or 10565 weather proof backbox.



Single Action Station



Dual Action Station

Wiring Diagrams



Specifications

Switch Rating

1 Amp @ 30 Vdc
 1 Amp @ 125 Vac

Surface Mount Backbox

Dimensions
 4-3/4" (H) x 3-1/4" (W) x
 2-1/4" (D)

Pull Station Dimensions

4-3/4" (H) x 3-1/4" (W) x 1.1" (D)

Color

Red with raised white letters,
 white pull bar with raised red
 letters

Ordering Information

Single Action Stations

Part No.	Description
10560	(SG-32BK2) Wire lead pigtails, key reset
10561	(SG-32SK2) Terminal connectors, key reset

Dual Action Station

10562	(SG-32SK1) Terminal connectors, key reset
-------	---

Notes:

1. For weatherproof units use p/n 10565 back box.
2. Note: These devices are OEM manufactured for Faraday by SIG-COM

Accessories

Part No.	Description
10584	(SGB-32B) Backbox
10565	(SGB-32C) Weatherproof backbox
10586	(SG-GR) Scored plastic breakrod (1)



Faraday, LLC
 805 South Maumee Street
 Tecumseh, Michigan 49286
 Phone: (517) 423-2111
 Fax: (517) 423-2320
 Web: www.faradayllc.com

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FEATURES

- Unique Dual Unipolar Sensor
 - Provides Exceptional Stability
 - Factory Preset at 1.5% Nominal Sensitivity
 - Stable Operation up to 1500 Ft. per Minute (7.6 Meters per second) Air Velocities
- Removable Cover for Field Cleaning
- Visible LED "blinks" in Standby
- Sealed Against Dirt, Insects and Back Pressure
- 3 Year Warranty
- 8.5-35VDC Operating Range
- Field Metering of Detector Sensitivity
- Built-in Test Switch
- Low Standby Current
- Built-in Tamper-resistant Feature
- Designed for Direct Surface or Electrical Box Mounting
- Remote LED Option
- Insect-resistant Screening (.025"/0.635mm openings)
- SEMS Screws for Easy Wiring
- UL Listed, #S911 Vol. 9 SEC. 3
- California State Fire Marshal Listed, #7271-1209:102
- MEA. Listed, #427-91-E Vol. 3
- FM. Listed, #0Q7A3.AY



9374 2-wire Detector

DESCRIPTION

9374 ionization type smoke detectors are specially designed to meet the stringent performance requirements of industrial and municipal fire detection/alarm systems. The design of these detectors emphasizes ease of installation and field maintenance.

9374 ionization smoke detectors contain a unique dual source, dual unipolar chamber detection design which will sense the presence of smoke particles produced by fast combustion as well as slow smoldering fire. This chamber exhibits increased stability, significantly reduces nuisance alarms and provides better performance at higher air velocities. The 9374 is designed to meet the performance criteria required by UL/ULC. Additional key features include a blinking LED standby status indicator, an easily visible alarm indication and provision for convenient field test and metering.

NUISANCE ALARMS

Over 90% of the "false alarms" encountered in the first year of operation are attributed to dirt or dust contamination of the detectors during installation. It is strongly recommended that detectors not be installed until construction has been completed and the building cleaned.

MAINTENANCE

Although cleaning programs should be adapted to the individual environment, Faraday recommends an annual cleaning of any dust from each detector head by using the suction of a vacuum cleaner. Refer to Installation Instructions for further guidance.

APPLICATION NOTES

1. Detectors connected to a 2-wire initiating circuit may be rendered inoperative when another initiating device on the same circuit operates. For damper control, fan control or door holder release from ionization detectors, Faraday recommends the use of 4-wire detectors.
2. To meet NFPA criteria it is suggested that manual initiating devices (breakglass stations, etc.) be located electrically AHEAD of the two wire detectors. If this arrangement is not possible then Class "A" circuitry is recommended. By following these guidelines the operation of manual initiating devices can be assured.
3. The maximum number of 9374 2-wire detectors per zone is 25 units. Refer to particular control panel's owner's manual for exact detector limitations. Total number per zone may vary dependent on control panel model used.
4. Detector location and spacing may require special attention in certain installations. Refer to NFPA 72E "Automatic Fire Detectors" for spacing and location guidelines for detection devices.

TECHNICAL SPECIFICATIONS

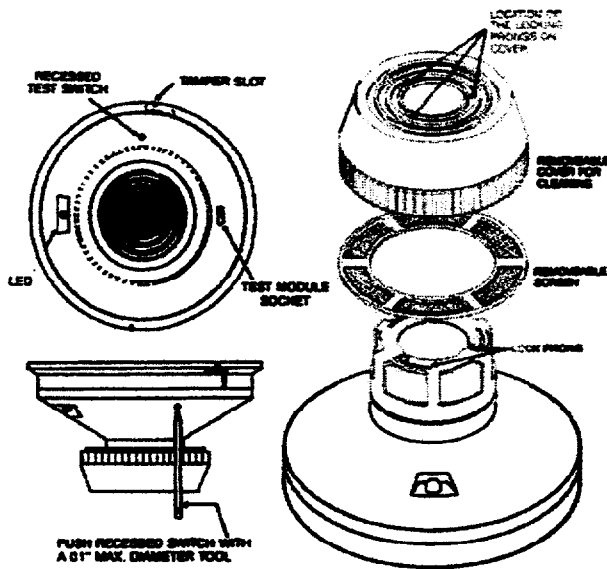
9374 Ionization, Dual Source,
Dual Chamber, Unipolar, 2-wire

General Specifications:	9374
Control Panel Applications:	2-wire
Visual LED Local Alarm:	YES
Remote LED Annunciator Capability:	YES
Operating Voltage Range:	8.5-35VDC
Current Limits	
a) Standby (max.):	100uA
b) Alarm Current (typ.):	NOTE 1
c) Alarm Current (max.):	NOTE 1
Alarm Signal:	Shunt on power leads

NOTE:

1. Two-wire control panels must limit current to 100mA or less.

FARADAY 9374 IONIZATION SMOKE DETECTORS AND ACCESSORIES



(These Devices are OEM Manufactured for Faraday by System Sensor.)

ORDERING INFORMATION

- 9374 (1400) Ionization Detector, 2-wire, Surface Mount
- 9180 (RA400Z) Remote Annunciator (LED)
- 9363 (MOD400R) Field Test Module

The 9374 has been designed to seal the sensing chamber from back pressure air flow, dust, dirt, and insects. The back of the detector is sealed and the chamber is protected by a fine mesh (.025"/0.635 mm) screen. If cleaning is required, it is easy to remove the cover (with a tool) and obtain access to the screen and chamber to perform a thorough cleaning.

Architectural/Engineering Specifications

The detector shall have a dual chamber ionization sensor of the unipolar type. The sensor shall have a nominal sensitivity of 1.5%/ft as measured in a UL smoke box. It shall be possible to perform a calibrated sensitivity and performance test on the detector without the need of generating smoke. The test method shall test all detector circuits.

The detector shall incorporate a solid state voltage regulator which can maintain detection sensitivity over an input voltage range of 8.5-36VDC. Standby current shall be no more than 100 microamps. Current limiting shall protect the detector against power surges and noise protection circuitry shall protect the detector so it can be wired without conduit, where codes allow.

The detector shall have a mounting bracket that allows for direct surface mounting or mounting to a 3 1/2" or 4" octagon box.

A visual indication of an alarm shall be provided by a latching light emitting diode (LED) on the detector which may be seen at ground level. It flashes every ten seconds indicating that power is applied to the detector. The visible alarm signal shall be capable of remote LED annunciation.

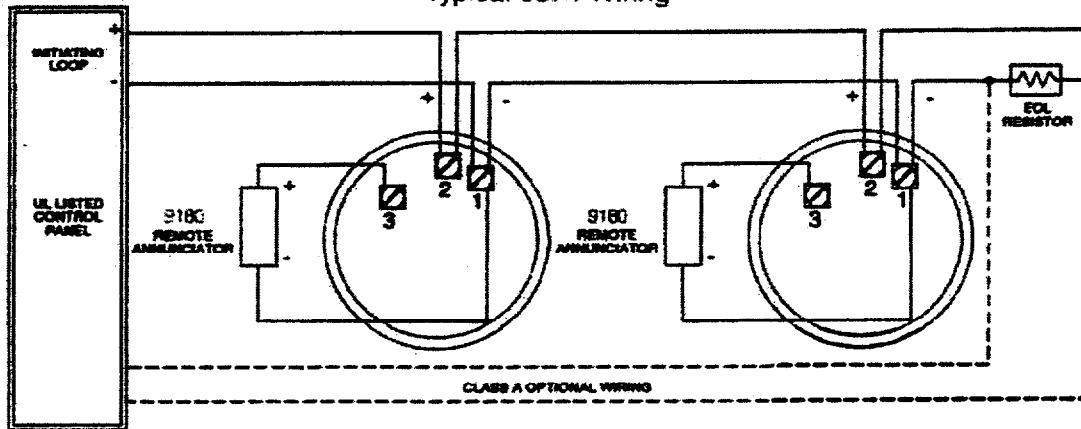
A special test meter shall be available to precisely check the calibration and sensitivity of the detector. Metering points for the test meter shall be accessible on the exterior of the detector.

The detector shall not alarm when exposed to wind gusts up to 2500 feet per minute.

The detector screen and cover assembly should be easily removable for field cleaning.

Wire connections are made by clamping plate and screw.

Typical 9374 Wiring



WARNING - The information contained in this document is intended only as a summary and is subject to change without notice. The devices described in this document have specific instruction sheets which cover various technical, limitation and liability information. Copies of these instruction sheets and the General Product Warning and Limitations Document, which also contains important information, are provided with the product and are available from the Manufacturer. Information contained in these documents should be consulted before specifying or using the product. For further information or assistance concerning particular problems contact the Manufacturer.

Models 6225/6245/6230/6250 DC Electron-Mechanical Horns & 6234/6238/6254/6258 Horn Strobes (Adapter Series)

Features

- Contactless Electro-Mechanical design, resulting in no contact generated interference and high reliability (Patent #5,596,477)
- The Adapter™ feature offers four field selectable candela values - 15/75, 30/75, 75 or 110
- Strobe operates in either sync or non-sync modes
- Strobe synchronization requires the 5406 Sync Control Module
- UL 1971 & UL 464 listed for both wall and ceiling mount – all other listings pending
- ADA/NFPA/ANSI compliant
- Horn/strobe can be wired together or independently
- Screw Terminals accept #12 Awg.
- Made in USA, ISO 9001 quality crafted

Description

The Electron-Mechanical Horns & Horn Strobes combine state of the art electronics with the rugged proven durability of a mechanical horn. The combination of electronics and mechanics provide the maximum penetrating sound power while eliminating problems associated with mechanical contacts. The Adapter feature offers four field selectable candela settings - 15/75, 30/75, 75 or 110.



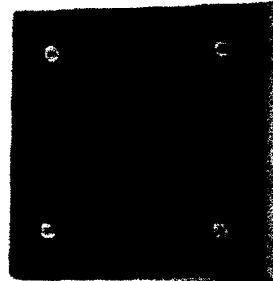
Detail - Adapter selector switch

All models remove the effects of inrush and RFI noise associated with contact operated mechanical devices. This design also eliminates the possibility of dust and dirt contaminating the contacts.

The construction of the horn and horn strobe allows for flush mounting on a standard 4-inch square back box or surface mounting on a 3046 or 3047 surface box.

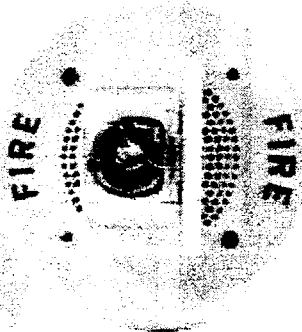
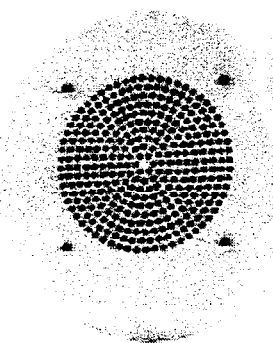
Screw terminals are provided for the horn and strobe. The strobe can be configured to operate independently from the horn. The strobe has a Xenon flashtube with solid state circuitry for maximum reliability and efficiency, and a rounded dome shape made of clear polycarbonate.

Models 6234 & 6254 Horn Strobe



Models 6230 & 6250 Horn

Models 6238 & 6258 Horn Strobe



Models 6225 & 6245 Horn

Engineering Specifications

The audible/visual notification appliances shall be Faraday Series 6234, 6238, 6254, or 6258 Selectable Candela Strobe - Electron Mechanical Horn, or approved equal. The audible appliances shall be Faraday 6225, 6230, 6245, or 6250 Electron Mechanical Horns, or approved equal. The Series 6234, 6238, 6254, and 6258 visual segment shall be the Adapter Selectable Candela Strobe and shall be listed to UL1971 (Standard for Safety Signaling Devices for the Hearing Impaired). Audibles shall be UL listed under Standard 464 (Fire Protective Signaling). In addition to indoor applications, the 6230 and 6250 shall also be UL listed for outdoor applications, when mounted in a Faraday 3014 or 3015 Surface Box. All other appliances shall be listed for indoor applications.

... continued

