

# D7024 Fire Alarm Control Panels

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- ▶ Four detector zones (expandable to eight); up to 20 two-wire smoke detectors per zone
- ▶ Built-in DACT
- ▶ Two notification appliance circuits (NACs) on board with an internal 24 VFWR, 4 A NAC power supply
- ▶ Easily converts to addressable with the addition of a D7039 Multiplex Expansion Module
- ▶ Programmable through front panel interface, remote D7033 Liquid-crystal Display (LCD) Keypads, or remote programming software (RPS)

The D7024 Fire Alarm Control Panels (FACPs) can be used in commercial and public building applications such as schools, universities, manufacturing plants, and health care facilities. They are listed by UL for central station, local, auxiliary, and remote station systems.

The D7024 FACPs support four on-board initiating zones that can be expanded to eight using the D7034. Each initiating zone supports two-wire and four-wire detectors configurable as Class A, Style D (with D7014) or Class B, Style B loops. Each zone can support up to 20 two-wire detectors, or any number of four-wire detectors depending on available power. Each FACP has a built-in digital fire alarm communicator transmitter (DACT).

Enhance the D7024 conventional system features when running version 2.02 or higher firmware by adding a D7039 Multiplex Expansion Module. Adding a D7039 Multiplex Expansion Module to the D7024 turns the conventional FACP into an addressable FACP. The D7039 adds up to 247 addressable points to the base system and adds an additional 400 events to the history buffer for a total of 499 events. The D7039 also increases the number of programmable relay outputs from 18 to 58 and allows up to 100 system users (an addition of 84 PINs to the base system).

## Functions

### Notification Appliance Circuits (NACs)

Two on-board Class B, Style Y or Class A, Style Z (with D7015) NACs provide up to 4 A of 24 VFWR power to operate horns, strobes, bells, and other notification appliances. Each NAC can be programmed to provide Temporal Code 3, steady, pulsed, and synchronized output for Wheelock™ and Gentex™ notification appliances.

### User Interface

A viewing port in the keyed control panel enclosure door shows the system status light-emitting diodes (LEDs) and LCD display while maintaining system keypad security. Unlocking the enclosure door provides access to the system controls for silencing off-normal conditions, zone bypassing, detector resetting, testing, other fire functions, and programming. These functions are also available on all D7033 LCD Keypads connected to the system. All D7036 LCD Annunciators provide custom text annunciation on a 32-character, backlit, two-line LCD display. All system keypads and annunciators have built-in sounders. Back-light intensity and sounder volume are programmable.

### Personal Identification Numbers (PINs)

There are 16 PINs available for accessing system control. Assign each number an authority level to limit access to the system control functions.



#### Notice

The number of PINs increases to 100 with the addition of a D7039 Multiplex Expansion Module.

### History Buffer

The system stores events in a 99-event history buffer.



#### Notice

The number of events that can be stored in the history buffer increases to 499 with the addition of a D7039 Multiplex Expansion Module.

### Central Station Reporting

The D7024 FACPs send reports to two telephone numbers with full single, double, and backup reporting. They communicate in BFSK, SIA, Contact ID, Modem IIIa<sup>2</sup>, and 4/2 and 3/1 Tone Bursts.

### Dirty Smoke Detector Monitoring

All on-board zones and D7034 zones are continuously monitored for smoke detectors signaling a dirty condition using the Bosch Chamber Check<sup>®</sup> feature and CleanMe<sup>®</sup> protocol. If a detector's smoke chamber is dirty, the detector sends a CleanMe signal on the two-wire loop or a dirty detector signal on the addressable loop. The control panel annunciates that there is a dirty detector on the loop or the address. The Chamber Check feature signals a dirty smoke chamber using the LED on the detector head.

### Accessories

The D7024 enclosure has space for additional accessory modules and two D1218 (18 Ah) batteries or two D126 (7 Ah) batteries.

### Certifications and approvals

| Region    | Certification |  |
|-----------|---------------|--|
| USA       | CSFM          | 7165-1615-0147   |
|           | NYC-MEA       | 12-92-e_vol-7  |
|           | NYC-MEA       | 12-92-e_vol-14   |
| Canada    | IC            | Model RADIONICS D7024 - Terminal Equipment List (TEL) - Certification and Engineering Bureau - Industry Canada |
| Hong Kong | HKFSD         | J-005/C/014  |

### Installation/configuration notes

#### Compatible Products

The following products are compatible with the D7024 FACPs:

| Category   | Product ID   | Product Description  |
|--|--|--|
| Batteries and  | D126   | 12 V, 7 Ah battery   |
| Power Supplies   | D1218  | 12 V, 18 Ah battery  |
|  | D7038  | Remote NAC power supply  |
| Detectors  | For two-wire detectors, refer to <i>D7022-D7024 Compatibility List Technogram</i> (P/N: 34445) |  |
| Keypads and Annunciators   | D7030X   | Eight-point LED annunciator (eight red)                              |
|  | D7030X-S2  | Eight-point LED annunciator (two yellow, six red)                    |
|  | D7030X-S8  | Eight-point LED annunciator (eight yellow)                           |
|  | D7032  | Eight-zone LED annunciator expander (eight red)                      |
|  | D7033  | LCD fire system keypad   |
|  | D7036  | LCD annunciator  |
| Modules  | D132B  | Smoke detector reversing relay module                                |
|  | D184A  | Auxiliary local energy interface kit                                 |
|  | D185   | Reversing polarity module  |
|  | D275   | EOL power supervision module   |
|  | D7014  | Zone converter module  |
|  | D7015  | Class B to Class A NAC converter                                     |
|  | D7031  | Silence reset module   |
|  | D7034  | Four-point expander  |
|  | D7035  | Octal relay module   |
|  | D7035B   | Octal relay module in box  |
|  | D7039  | Multiplex expansion module   |
|  | D7039R   | Multiplex expansion module retrofit kit                              |
|  | NAC Devices  | Refer to <i>D7024 NAC Compatibility List Technogram</i> (P/N: 34950) |
| The following additional products are compatible with the D7024 Addressable FACPs: |  |  |
| Category   | Product ID   | Product Description  |
| Detectors and Detector Bases   | D7050  | Addressable photoelectric smoke detector                             |
|  | D7050TH  | Addressable photoelectric smoke and heat detector                    |
|  | D7050-B6   | Addressable detector base  |
| Modules  | D7042  | Multiplex eight-input remote module                                  |
|  | D7042B   | Multiplex eight-input remote module in box                           |
|  | D7044  | Multiplex single-input module  |

|               |            |                                    |
|---------------|------------|------------------------------------|
|               | D7044M     | Mini multiplex single-input module |
|               | D7048      | Multiplex octal driver             |
|               | D7048B     | Multiplex octal driver in box      |
|               | D7052      | Multiplex dual-input module        |
|               | D7053      | Multiplex input-output module      |
| Pull Stations | FMM-7045   | Single-action manual station       |
|               | FMM-7045-D | Double-action manual station       |

### Parts included

| Quant. | Component  |
|--------|--|
| 1      | D7024 board in a static-resistant bag                                  |
| 1      | Enclosure (P/N: 30897)   |
| 1      | Lock set with 2 keys (P/N: 24065)                                      |
| 1      | Transformer (P/N: 29413)   |
| 6      | 2.21 k $\Omega$ end-of-line (EOL) resistors (P/N: 25899 or 4998113202) |
| 1      | Hardware pack  |
| 1      | Literature pack  |



#### Notice

For the D7024 to be addressable, a D7039 Multiplex Expansion Module must be installed. The D7039 is purchased separately.

### Technical specifications

#### Electrical

|                    |                               |
|--------------------|-------------------------------|
| Current (alarm):   | 380 mA                        |
| Current (standby): | 200 mA                        |
| Power (primary)    | 120 VAC, 1.5 A maximum, 60 Hz |

#### Environmental

|                          |                                |
|--------------------------|--------------------------------|
| Relative Humidity:       | Up to 93%, non-condensing      |
| Temperature (operating): | +32°F to +120°F (0°C to +49°C) |

#### Mechanical

|                         |   |
|-------------------------|---|
| Color:                  | Red   |
| Dimensions (H x W x D): | 20.8 in. x 15 in. x 4.3 in.<br>(52.8 cm x 38.1 cm x 10.9 cm)            |
| Material:               | Cold-rolled steel: Base: 18 gauge (1.2 mm);<br>Cover: 19 gauge (1.1 mm) |

### Outputs

|                   |   |
|-------------------|---|
| NAC:              | 24 VFWR nominal, 4 A maximum  |
| On-board Relays:  | Two Form C contacts rated at 5 A, 28 VDC  |
| Off-board Relays: | Up to two D7035 Octal Relay Modules each providing eight Form C relay outputs; contacts rated at 5 A, 28 VDC<br>In an addressable system, up to 20 D7053 Multiplex Input-Output Modules per bus for a total of 40 |

### Sensor Circuits

|                  |                        |
|------------------|------------------------|
| Current:         | 44 mA maximum per loop |
| Line resistance: | 150 $\Omega$           |
| Voltage:         | 24 VDC nominal         |

### Trademarks

All hardware and software product names used in this document are likely to be registered trademarks and must be treated accordingly.

### Ordering information

#### D7024 FACP

Kit contains FACP, enclosure, transformer, and six EOL resistors.

#### Not Available.

Order number **D7024**

#### D7024LC FACP without Enclosure and Transformer

Kit contains FACP only (no enclosure or transformer).

#### Not Available.

Order number **D7024LC**

### Accessories

#### D101X Lock and Key Set

Works with Solution Control Panel Enclosures. Long-body lock set with two keys supplied. Uses the PK625 replacement key.

Order number **D101X**

#### KEY-625 Key

Replacement key for the D101X and D101-PK625 locks. One key supplied.

Order number **KEY-625**

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