

Multi-use Reversing Relay Module

D132B



BOSCH

en Installation Instructions

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1 Notices

These instructions cover the installation of the D132B Multi-Use Reversing Relay Module in a fire system supervised by a fire alarm control panel (FACP).

Install, test and maintain the D132B according to these instructions, NFPA 72, local codes, and the authority having jurisdiction (AHJ). Failure to follow these instructions can result in failure of the detector to initiate an alarm event. Bosch Security Systems, Inc. is not responsible for improperly installed, tested or maintained devices.

**Warning!**

Follow these instructions to avoid personal injury and damage to equipment.

**Notice!**

NFPA 72 requires a complete system-wide functional test be performed following any modifications, repair, upgrades or adjustments made to the system's components, hardware, wiring, programming and software/firmware.

2 Device Description

The D132B is a multipurpose, fully configurable, smoke power-reversing module for activating detectors with local annunciation. The module will operate both two-wire and four-wire 24 V circuits, and also works with Class A or Class B initiating circuits.

An alarm latch connection is provided to allow an initiating loop to be held in alarm after the detector loop power has been reversed to activate any sounders.

The module does not affect compatibility between the FACP and detectors, or the FACP and notification appliance circuits (NACs).

The maximum current available from the FACP smoke power terminals or NACs limits the total number of reversible smoke detectors that can be connected to the module.

Consult the FACP's installation instructions for compatibility with the D132B Multi-Use Reversing Relay Module.

3 Installing the module

The supplied screw and Snap Trac are required to mount the module. It can be mounted anywhere within the FACP's enclosure using the supplied screw with double sided tape as a mounting aid. Several methods of wiring the module can be used.

**Caution!**

The voltage supplied to the NAC sounder power terminals must be compatible with the detector voltage requirements when in alarm (reverse polarity). Unfiltered NAC output power is typically not compatible with detector sounder power requirements. Use a source of filtered power (for example, smoke power) for NAC sounder power on panels with unfiltered NAC output power, and ensure that the total current draw for detector sounders does not exceed the panel's rated filtered power output capacity.

**Notice!**

The D7022, D7024, D8024, D9024, and D10024 do not meet the requirements of UL864, 9th edition. For UL applications, use the FPD-7024.

4 Wiring the module

**Warning!**

Maintain a ¼ in. (6.35 mm) minimum distance between power limited and non-power limited wiring.

**Warning!**

Since full or auxiliary power is applied to loop output terminals TB 1 and TB 2 during an alarm, only connect reversing smoke detectors to these terminals. Do not connect pull stations, heat detectors or other such devices. Doing so will damage the D132B module and/or the FACP.

4.1 Wiring to a D7022 FACP

**Notice!**

The D132B module must be mounted within the control panel enclosure for this application and the D7022 must be set for 24 V operation.

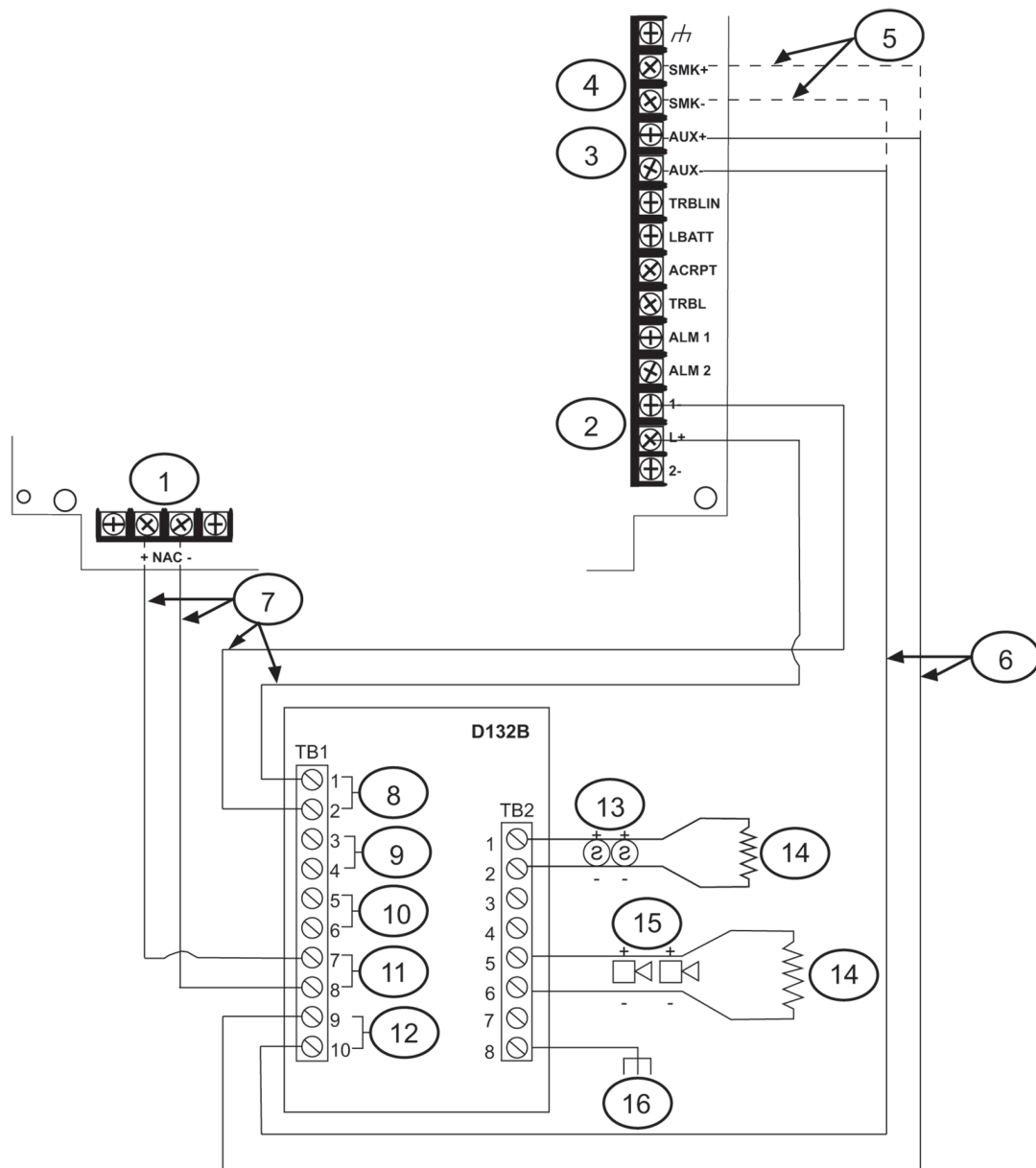


Figure 4.1: Wiring a D132B (2-wire, Class B) to a D7022 FACP

1	NAC output	9	Class A
2	Input point	10	Latch
3	Auxiliary power	11	NAC
4	Smoke power	12	24 VDC
5	Optional filtered power connections	13	24 V 2-wire reversing detectors
6	Unfiltered power; power limited but not supervised	14	2.2 kΩ EOL (power limited and supervised); P?N: F.01U.034.504
7	Power limited and supervised	15	24 V NACs

8	Loop	16	Earth ground
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4.2 Wiring to a D7024 or an FPD-7024 FACP

4.2.1 Two-wire configurations

Class A

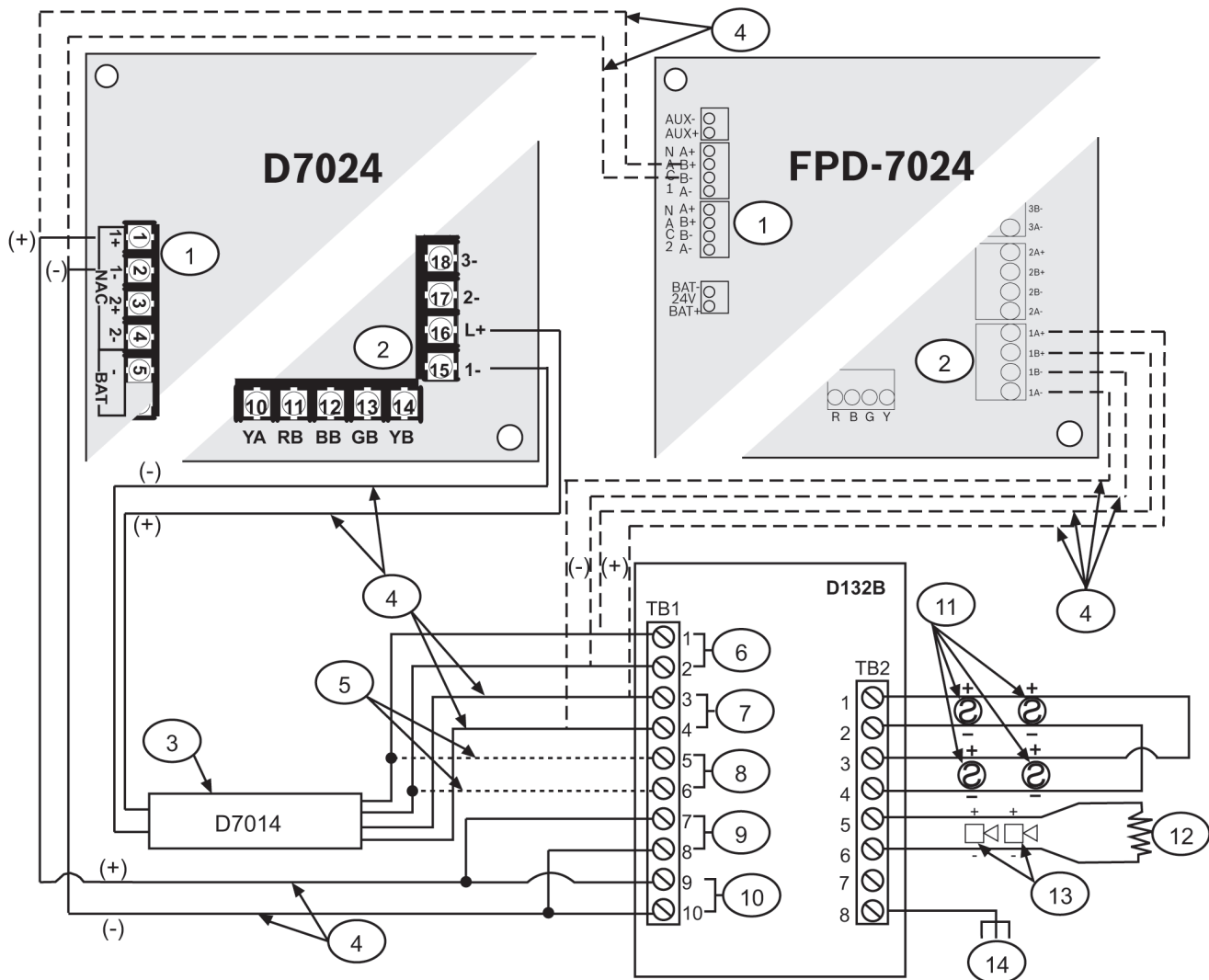


Figure 4.2: Typical 2-wire, Class-A connection

1	NAC output	8	Latch
2	Input point	9	NAC
3	D7014 is discontinued; use only with D7024, Class A	10	24 VDC
4	Power limited and supervised	11	24 V reversing detectors
5	Optional alarm latch	12	2.2 kΩ EOL (power limited and supervised); P/N: F.01U.034.504
6	Loop	13	24 V NACs

4.2.2 Four-wire configurations

**Warning!**

Use only Bosch Security Systems, Inc. D275 Supervisory Relay for 4-wire applications. Use of any other supervisory relay can damage the D132B module or the FACP.

Class A

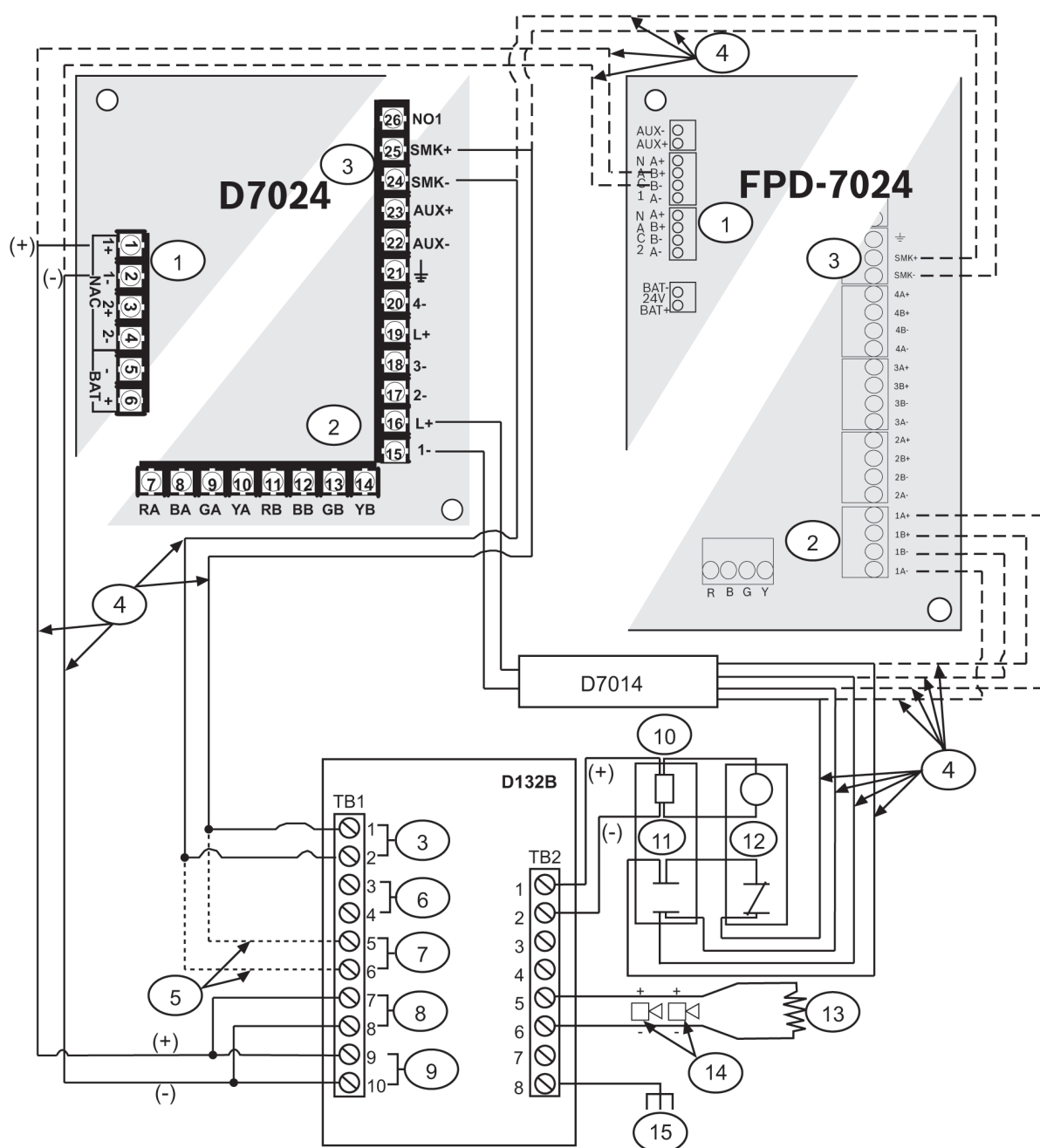


Figure 4.4: Typical 4-wire, Class A connection

1	NAC output	9	NAC
2	Input point	10	24 VDC
3	Smoke power	11	4-wire reversing detectors
4	Power limited and supervised	12	EOL relay (D275 Supervisory Relay)
5	Optional alarm latch	13	2.2 kΩ EOL; P/N: F.01U.034.504

6	D7014 is discontinued; use only with D7024, Class A	14	24 V NACs
7	NC	15	Earth ground
8	Latch		

Class B

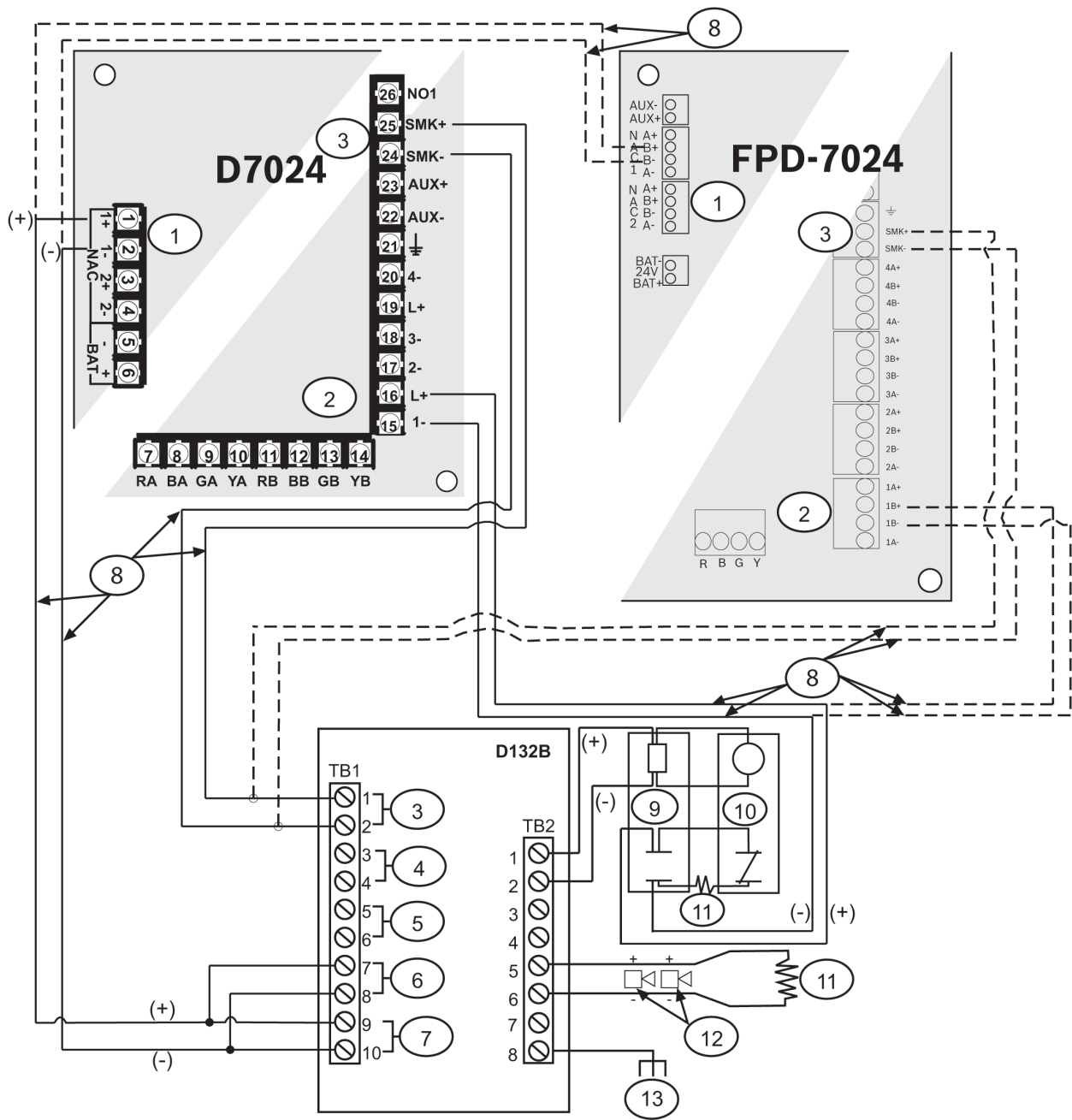


Figure 4.5: Typical 4-wire, Class B connection

1	NAC outputs	8	Power limited and supervised
2	Input point	9	4-wire reversing detectors
3	Smoke power	10	EOL relay (D275 Supervisory Relay)

4	NC	11	2.2 kΩ EOL; P/N: F.01U.034.504
5	Latch	12	24 V NACs
6	NAC	13	Earth ground
7	24 VDC		

4.2.3 Configurations using filtered power

**Notice!**

When using the D132B module on a loop input zone, program the FACP to “map” the loop input to the NAC output connected to the D132B ONLY. This will prevent unwanted troubles on the loop when the module is active. If your application requires that the other loop inputs trigger the NAC output connected to the module, you can prevent unwanted troubles by connecting an end-of-line resistor between FACP loop (+) (D132B TB1 Terminal 1) and D132B TB1 Terminal 5. FACP loop common (D132B TB1 Terminal 2) and D132B TB1 Terminal 6 must also be connected together.

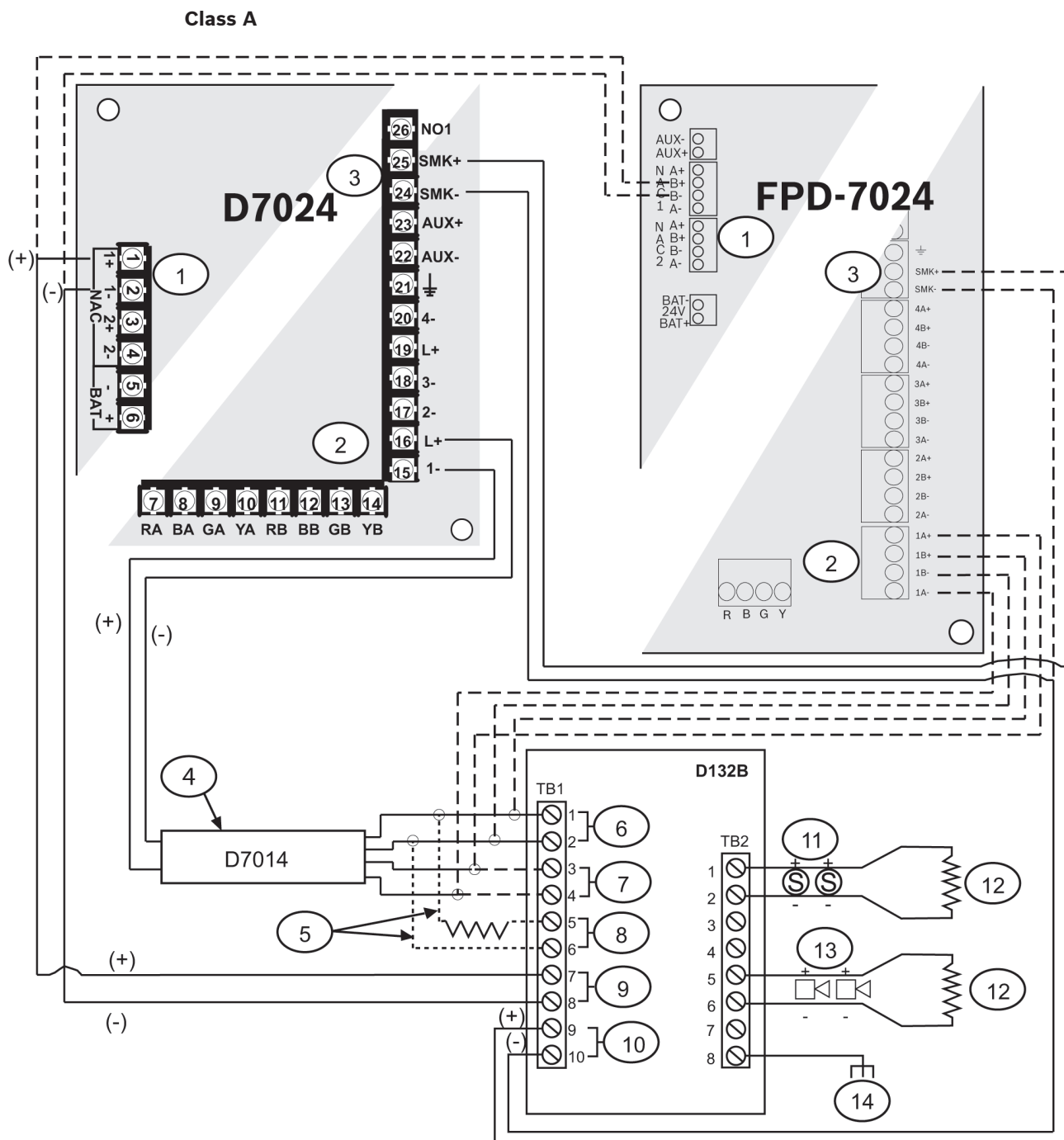


Figure 4.6: Typical Class A connections with filtered power

1	NAC output	8	Latch
2	Input point	9	NAC
3	Smoke power	10	24 VDC
4	D7014 is discontinued; use only with D7024, Class A	11	24 V reversing Detectors
5	Optional alarm latch	12	2.2 kΩ EOL; P/N: F.01U.034.504
6	Loop	13	24 V NACs

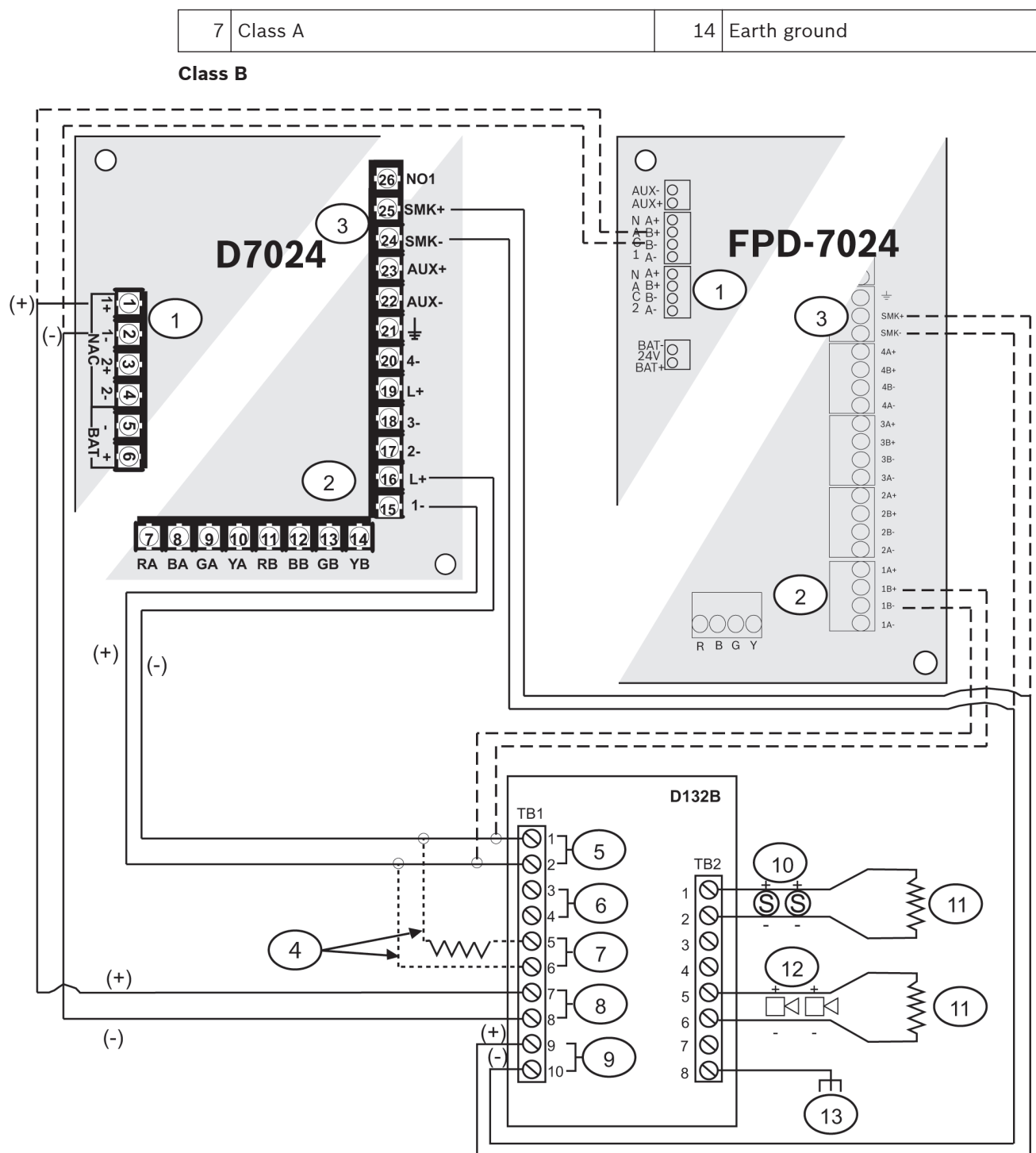


Figure 4.7: Typical Class B connection with filtered power

1	NAC output	8	NAC
2	Input point	9	24 VDC
3	Smoke power	10	24 v reversing detectors
4	Optional alarm latch	11	2.2 kΩ EOL; P/N: F.01U.034.504
5	Loop	12	24 V NACs

6	Not used	13	Earth ground
7	Latch		

4.3 **Wiring to a D8024, D9024, or D10024 FACP**



Warning!
Use only Bosch Security Systems, Inc. D275 Supervisory Relay for 4-wire applications. Use of any other supervisory relay can damage the D132B module or the FACP.



Notice!
Supervision relay must be connected to test detector in loop.

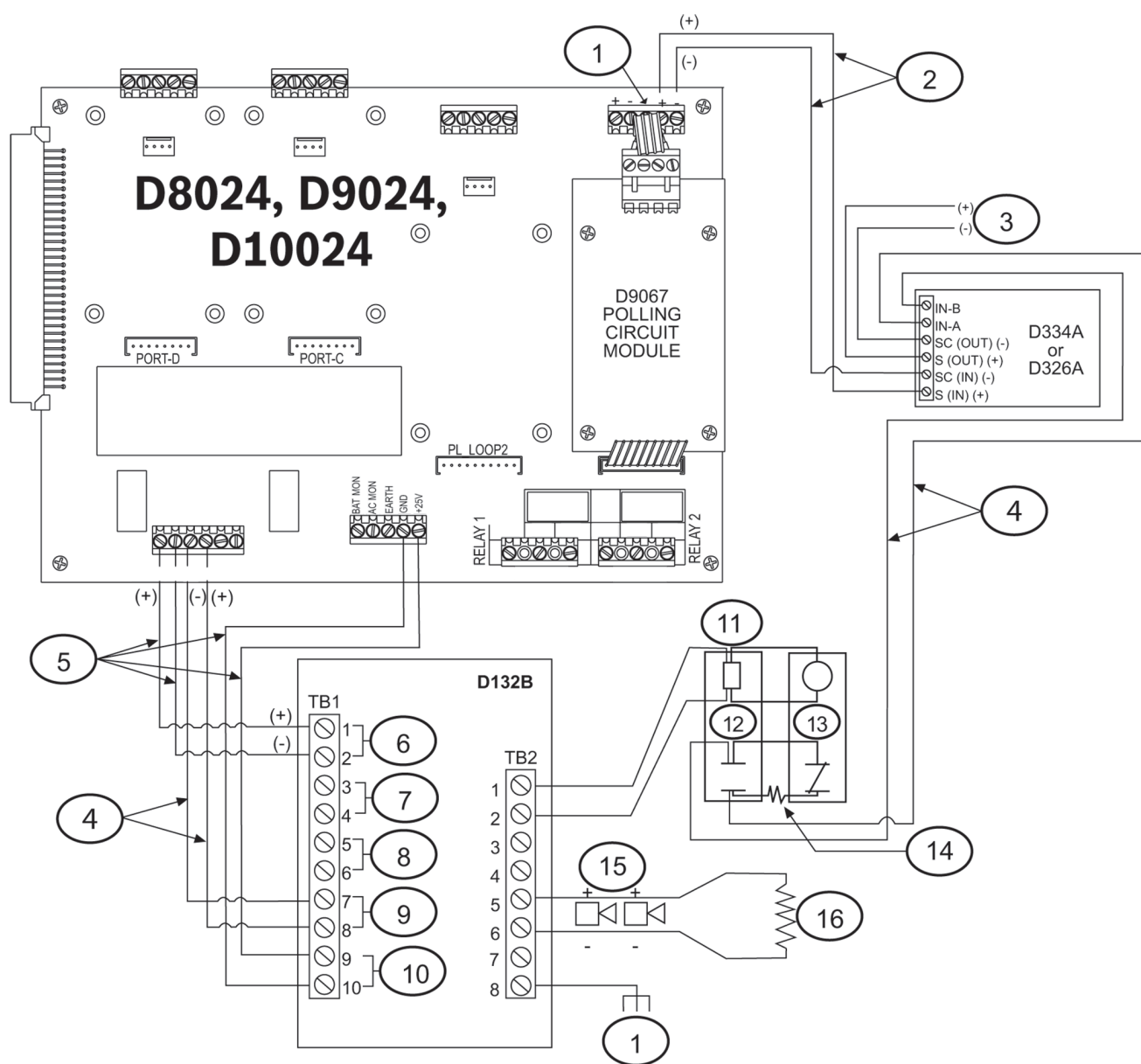


Figure 4.8: Typical D8024, D9024, or D10024 wiring

1	Earth ground	9	NAC
2	Data/Power out (power limited and supervised)	10	24 VDC
3	To other devices	11	4-wire reversing detectors
4	Power limited and supervised	12	Smoke detector
5	Power limited but not supervised	13	D275 Supervisory Relay
6	Smoke power	14	10 kΩ EOL; P/N: 30-01096-103
7	Class A	15	24 V NACs

8	Latch	16	6.8 kΩ EOL (power limited and supervised); P/N: 170-073-682
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5 Specifications

Electrical

Operating Voltage:	10.2 VDC to 30.0 VDC
Current	
Alarm ¹ :	Approx. 150 mA (drawn from terminals 7, 8)
Standby:	<1 μ A
Initiating Loop (maximum):	4 A at 30 VDC (drawn from TB2 terminals 1, 2) supplied to terminals 9, 10
¹ Alarm current must be figured into the NAC or auxiliary supply load	

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