

D7053



Fire Systems

EN | Installation Instructions
Multiplex Input/Output
Module

BOSCH

Notices

These instructions cover the installation of the D7053 Multiplex Input/Output Module in a fire system supervised by a D7024 or DS9400M Fire Alarm Control Panel (FACP) with firmware revision 2.0 or greater and a D7039 or DS9431 Multiplex Expansion Module.

Install, test, and maintain the D7053 according to these instructions, NFPA 72, local codes, and the Authority Having Jurisdiction (AHJ).



Follow the procedures in these instructions to avoid personal injury and damage to the equipment. Failure to follow these instructions can result in the D7053 not operating properly. Bosch is not responsible for improperly installed, tested, or maintained devices.



Test the FACP according to NFPA 72.

1.0 Description

The D7053 (*Figure 1*) is a general purpose module that connects to the control panel's multiplex bus and provides a supervised input loop and a Form "C" Relay output.

All operating power for the D7053 is drawn from the control panel.

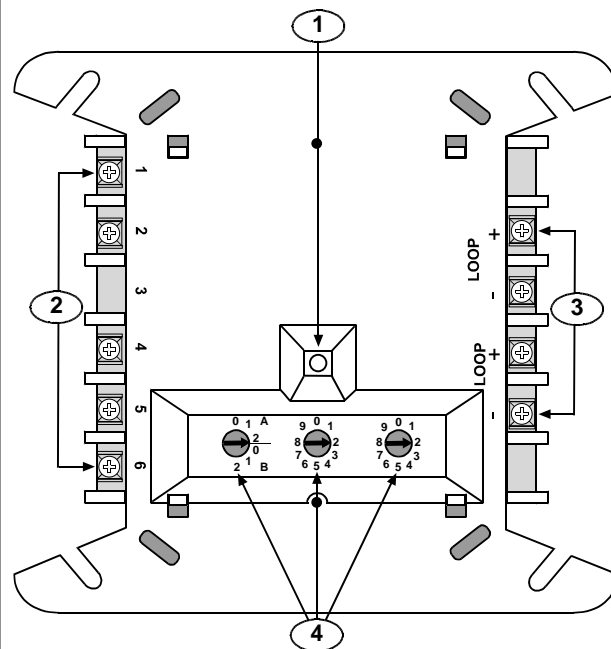
Rotary switches provide convenient address setting.

An on-board Status LED, visible through the low-profile faceplate, indicates normal operation and communication with the control panel. The LED flash rates are:

- **Fast:** Approximately 4 sec indicating an alarm condition.
- **Medium:** Approximately 8 sec indicating a normal operation.
- **Slow:** Approximately 16 sec indicating a trouble condition.

The D7053 can be mounted in a standard double gang box or a 4 in. x 4 in. electrical box.

Figure 1: D7053 Features

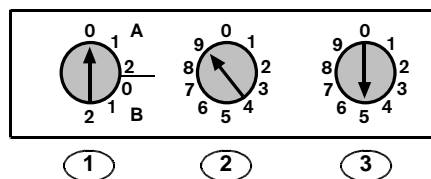


- 1 - Status LED
- 2 - Zone input/output terminals
- 3 - MUX bus loop terminals
- 4 - Rotary address switches

2.0 Setting the Address

Set the D7053 address using a flat-blade screwdriver to position each rotary switch located on the front of the module (*Figure 2*). Note that the switches click when turned.

Figure 2: Setting the Address



- 1 - Hundreds 2 - Tens 3 - Ones
- A = D7024 FACP, B = DS9400M FACP

For example:
0 hundreds, 9 tens, 5 ones = Address 095 on the D7024 FACP

The valid D7053 address is 9 to 255. For additional address limitations refer to the *D7024 Operation and Installation Guide* (P/N: 31499) or the *DS9400M Reference Guide* (P/N: 29428).

The D7053 requires two program addresses. The address cannot be 8 or any multiple of 8 such as 16, 24, 32, and so on.



The A address range works on the D7039 Multiplex Expansion Module with the D7024 FACP. The B address range works on the DS9431 Multiplex Expansion Module with the DS9400M FACP.

Figure 2 on page 2 shows the input address set at 095. The output address is set to the next consecutive address, 096. Because the hundreds address is within the input address range, it works on the D7039 with the D7024 FACP.

3.0 Wiring



Remove all power before making electrical connections. Failure to do so can result in personal injury or damage to the equipment.

The wiring connections are made using the zone wiring and MUX bus loop terminals located on either side of the D7053 (Items 2 and 3 in Figure 1 on page 2).

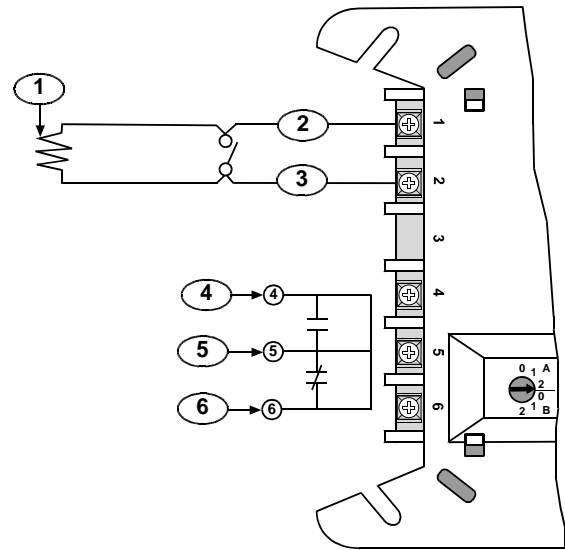
All terminals can accommodate up to and including 12 AWG (2.3 mm) wire. Follow the wiring guidelines specified by NFPA 70 and the local AHJ.

The loop and zone wiring is power limited and supervised. The relay contacts are not power limited or supervised. Refer to Figures 3 and 4 for wiring connections.



Use normally-open (NO) contacts for Underwriters Laboratories, Inc. (UL) Listed fire installations.

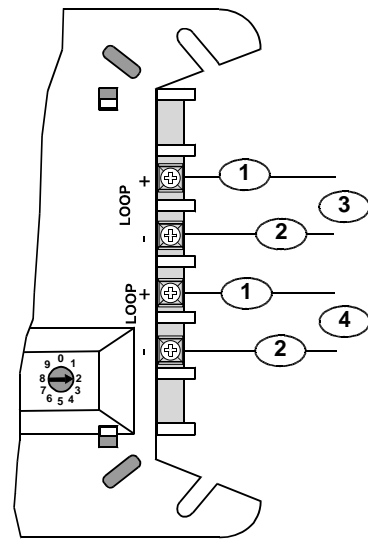
Figure 3: Field Wiring Connections



- 1 - 2.21 kΩ end-of-line (EOL) resistor, UL Listed (P/N: 25899)
- 2 - Zone in (+)
- 3 - Zone in (-)
- 4 - Normally-open (NO)
- 5 - Common (COM)
- 6 - Normally-closed (NC)

Note: The maximum zone wire resistance is 100 Ω.

Figure 4: Loop and Control Panel Wiring Connections



- 1 - MUX bus loop (+)
- 2 - MUX bus loop (-)
- 3 - To the next device
- 4 - From previous device, the D7039, or the DS9431

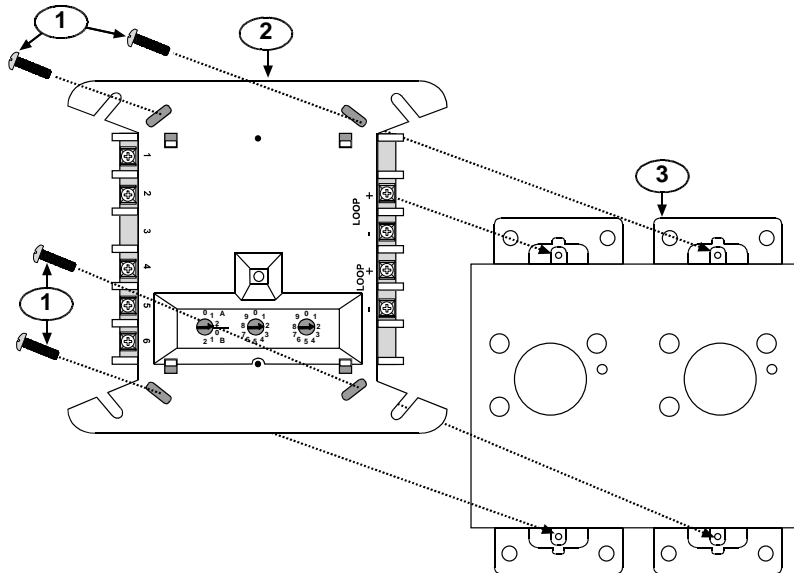
4.0 Installation



Complete all wiring before installing the D7053 and faceplate.

1. Wire the D7053 according to *Figures 3* and *Figure 4* on page 3.
2. Mount the D7053 on a standard double-gang box (*Figure 5*) or 4 in. x 4 in. electrical box (*Figure 6*).

Figure 5: Mounting the D7053 on a Standard Double-Gang Box

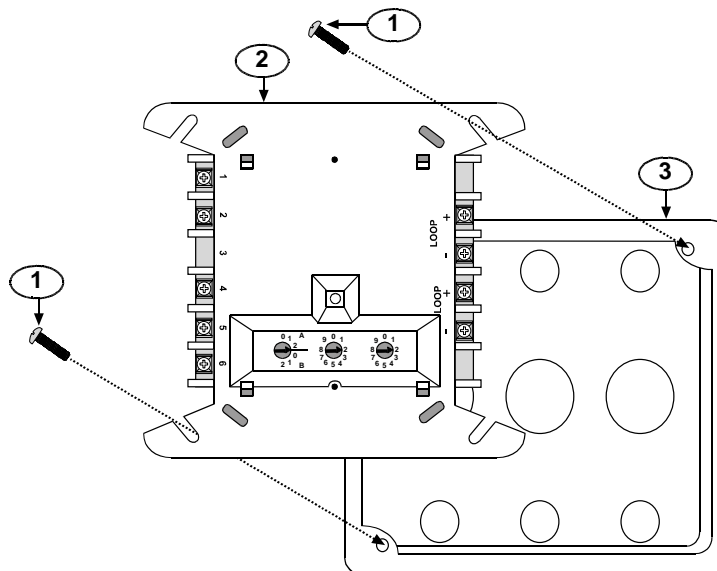


1 - Screws (4), not supplied

2 - D7053 Module

3 - Double-gang box

Figure 6: Mounting the D7053 on an Electrical Box



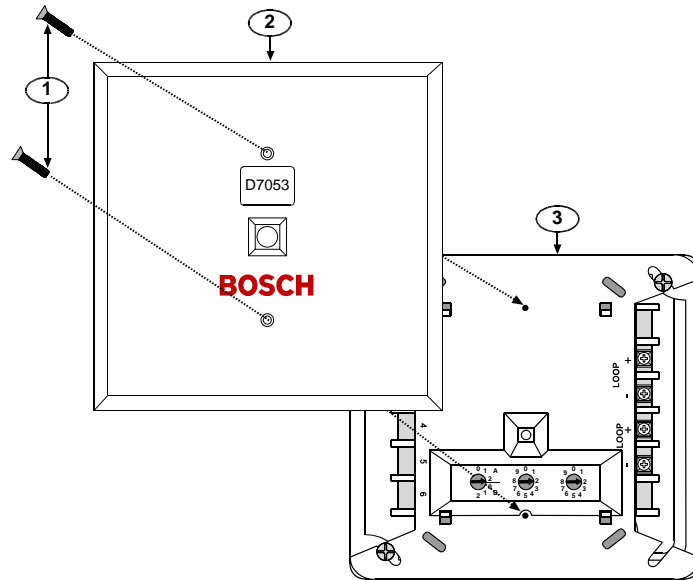
1 - Screws (2), not supplied

2 - D7053 Module

3 - 4 in. x 4 in. electrical box

3. Secure the faceplate to the front of the D7053 (Figure 7).

Figure 7: Mounting the Faceplate



1 - Screws (2), not supplied

2 - Faceplate

3 - D7053 Module on electrical box

5.0 Specifications

Control Panel Programming Type	Input or output
Control Panel Requirements	D7024 or DS9400 Series FACP with ROM version 2.0 or greater and a D7039 or DS9431 Multiplex Expansion Module installed. Refer to the <i>D7024 Operation and Installation Guide</i> (P/N: 31499) or the <i>DS9400M Reference Guide</i> (P/N: 44578) for specific programming information. Refer to the <i>D7039 Installation Guide</i> (P/N: 38685) or the <i>DS9431 Installation Guide</i> (P/N: 41381) for multiplex wiring information.
Multiplex Bus Average Current Draw	Alarm: 700 μ A Standby: 700 μ A Nominal: 12 V
Output Rating	120 VAC at 0.5 A; 1.0 A resistive loads only
Fuse Rating	0.2 in. x 0.8 in. (5 mm x 20 mm) 1.6 A fast acting
Operating Temperature	0°C to +49°C (+32°F to +120°F)
Relative Humidity	93% non-condensing
Listings and Approvals	UL864 California State Fire Marshall (CSFM)

Notes

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