D307

EN

Installation Instructions

Remote Test/Indicator Plate

BOSCH

1.0 Description

Use the D307 Remote Test/Indicator Plate with the D296/D297 Long-Range Beam Smoke Detectors and the D340 Series Duct Smoke Detector Housings (D340, D341, D342, D343). This plate has LEDs to indicate the detectors' status and condition, a signal voltage test point, and a key operated test switch.

2.0 Installation

Install the D296/D297 and the D340 Series according to the *D296/D297 Installation Instructions* (P/N: 31344) and the *D340 Installation Instructions* (P/N: 48188). Ensure the detectors are working properly.

Install the D341/D342 Duct Smoke Detector Housing or the D343 Duct Smoke Detector Housing according to the *D341/D342 Installation Instructions* (P/N: 48196) and the *D343 Installation Instructions* (P/N: 48199).

Mount the D307 on a standard double wire-mold box. Eight conductors from the D296/D297 receivers or D340 are required.

1. Mount the box no farther than 100 ft (30.5 m) from the D296/D297 receivers or 500 ft (152 m) from the D340.
2. Run the wiring from the receiver or duct housing to the box using 18 AWG (1.2 mm) or larger wire.

Ensure all wiring is unpowered before routing.

2.1 Single D307 and D296/D297 Wiring

1. Connect the wiring between the D307 and the D296/D297 as shown in *Figure 1*
2. Apply power and observe the LEDs.
   a. The green LED lights steadily for 60 sec to 120 sec and then flashes. Refer to *Table 1* on pages 5 and 6 for a description of the LED indicators.

2.2 D307 and Multiple D296/D297 Wiring

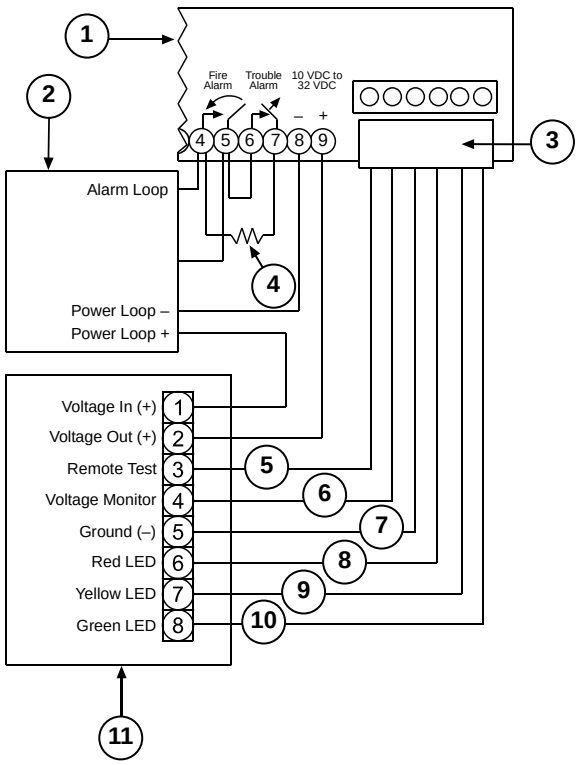
Connect the wiring between the D307 and multiple D296/D297s as shown in *Figure 2* on page 3.

2.3 D307 to D340 Wiring

Connect the wiring between the D307 and D340s as shown in *Figure 3* on page 3 to wire the D307 and the D340 Series.

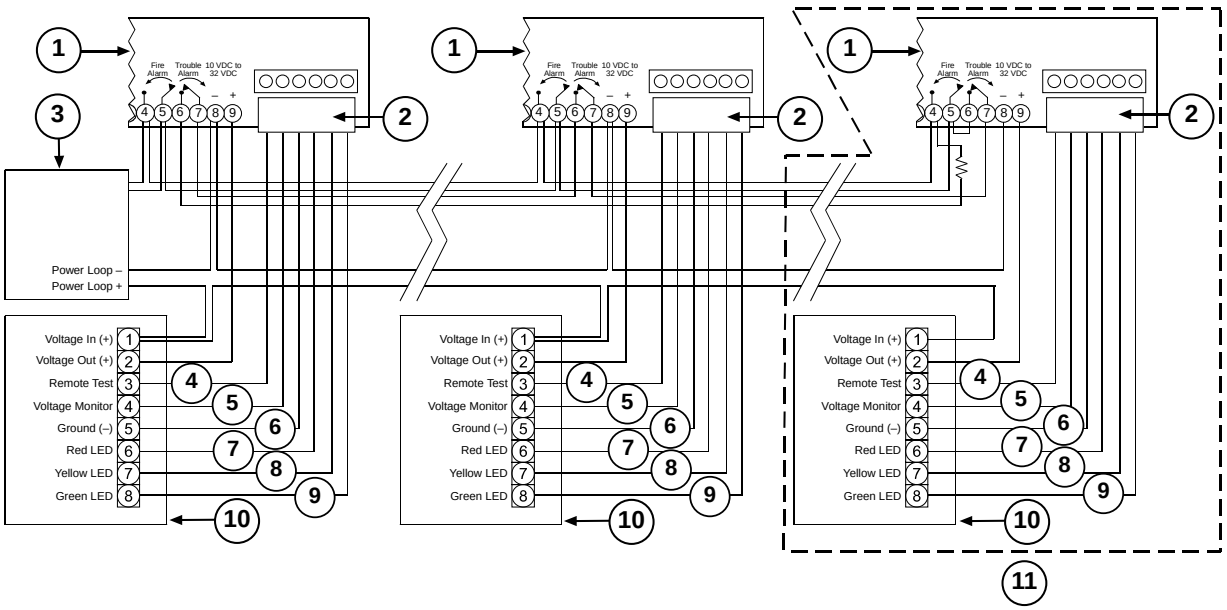
The green LED lights steadily. Refer to *Table 1* on pages 5 and 6 for a description of the LED indicators.

Figure 1: D307 to D296/D297 Wiring



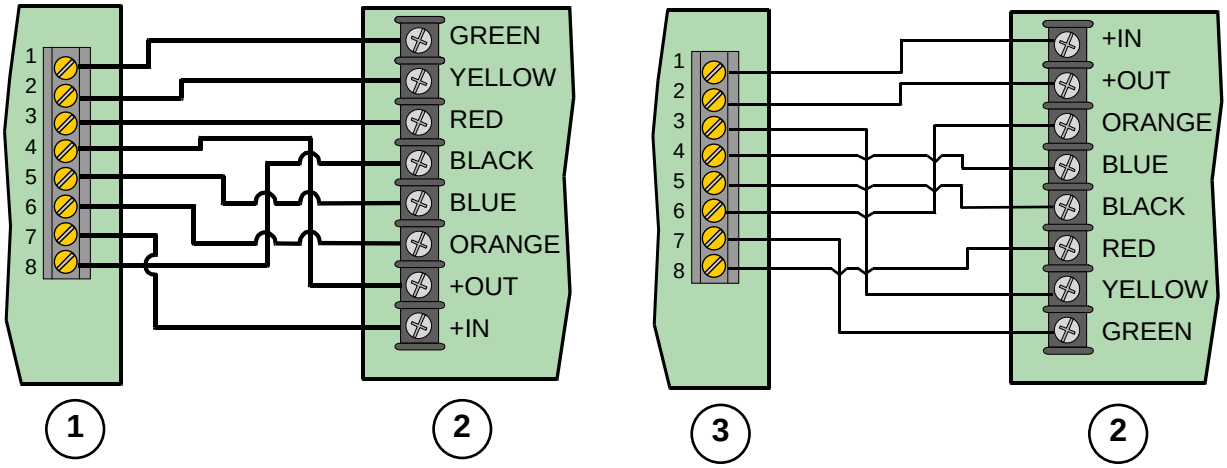
1 - D296/D297 receiver
2 - Fire alarm control panel (FACP)
3 - Remote indicator plate connector
4 - End-of-line resistor
5 - Remote test (orange wire)
6 - Voltage monitor (blue wire)
7 - Ground (black wire)
8 - Red LED (red wire)
9 - Yellow LED (yellow wire)
10 - Green LED (green wire)
11 - D307

Figure 2: Multiple D296/D297 Wiring



1 - D296/D297 receiver (3)
2 - Remote indicator plate connector (3)
3 - Fire alarm control panel (FACP) (3)
4 - Remote test (orange wire) (3)
5 - Voltage monitor (blue wire) (3)
6 - Ground (black wire) (3)
7 - Red LED (red wire) (3)
8 - Yellow LED (yellow wire) (3)
9 - Green LED (green wire) (3)
10 - D307 (3)
11 - Last set

Figure 3: D307 and D340 Wiring



1 - D341/D342 power card
2 - D307
3 - D340/D343 power card

3.0 Testing

Testing activates a fire alarm. Inform all concerned personnel before performing tests.

3.1 D307 and D296/D297

1. Insert the operating key and turn the switch to the TEST position for a minimum of 5 sec.
   The red LED lights steadily and the system sounds an alarm.
2. Turn the switch to RESET for a minimum of 1 sec.
   The red LED turns off and the green LED lights steadily for approximately 60 to 120 sec.
   The receiver proceeds with its Setup Mode. When the setup is completed, the green LED begins flashing.
3. Connect a standard volt-ohm meter (VOM) to the voltage monitor plugs. The voltage reading must range between 3.8 VDC and 4.2 VDC.
   You can also use the voltage monitor to check the sensitivity level of the D296/D297. As the signal level decreases because of dust or dirt buildup on the lenses or system misalignment, the voltage reading also decreases.
   For more information, refer to *Table 1* (on pages 5 and 6) and the *D296/D297 Installation Instructions* (P/N: 31344).

3.2 D307 and D340

1. Insert the operating key and turn the switch to TEST for a minimum of 10 sec.
   The red LED lights steadily and the system sounds an alarm.
2. Turn the switch to RESET for a minimum of 1 sec.
   The red LED turns off and the green LED lights steadily.
   You can also use the voltage monitor to check the D340's sensitivity level after installation (refer to the manufacturer's detector head installation instructions for proper levels).
   For more information, refer to *Table 1* (on pages 5 and 6) and to the related duct smoke detector housing installation instructions:
   - *D340 Installation Instructions* (P/N: 48188)
   - *D341/D342 Installation Instructions* (P/N: 48196)
   - *D343 Installation Instructions* (P/N: 48199)

4.0 Troubleshooting

Table 1: Troubleshooting

D296/D297 Long-Range Beam Smoke Detector				
Red LED	**Yellow LED**	**Green LED**	**Condition**	**Solution**
OFF	OFF	ON	The receiver is initializing and stabilizes within 60 to 120 sec.	
OFF	OFF	Flashing	Normal	
OFF	OFF	OFF	There is no voltage at the receiver.	Check for power at D307's Terminal 1 (+) and Terminal 5 (-), and at Terminal 2 (+) and Terminal 5 (-). Check for power at the D296/D297's receiver Terminal 8 (-) and Terminal 9 (+).
OFF	ON	ON	Trouble The beam is blocked or misaligned.	Clear the beam path or realign the receiver.
OFF	ON	Flashing	Trouble If the reference voltage at the voltage monitor is lower than 2 VDC, dust or dirt on the lenses reduced the signal strength, or vibration misaligned the receiver.	Clean the transmitter and receiver covers. If the reference voltage does not return to 4 VDC, realign the receiver and press the Receiver Setup switch.
OFF	ON	Flashing	Trouble If the reference voltage at the voltage monitor is greater than 4.8 VDC, the beam strength increased because the beam misaligned or the air quality improved.	Reset the detector by moving the keyswitch to RESET for a minimum of 1 sec or resetting the control panel.
ON	OFF	Flashing	Alarm	Determine the cause of the alarm. Reset the detector by moving the keyswitch to RESET for a minimum of 1 sec or resetting the control panel.
ON	ON	ON	Alarm and trouble Alarm occurred and then the beam was blocked.	Determine the cause of the alarm. Reset the receiver by moving the keyswitch to RESET for a minimum of 1 sec. Clear the beam path.
OFF	Flashing	Flashing	Invalid sensitivity setting	Set the receiver to the proper sensitivity setting.
D340 Duct Smoke Detector Housing				
Red LED	**Yellow LED**	**Green LED**	**Condition**	**Solution**
OFF	OFF	OFF	No power to the loop or auxiliary. Wiring is incorrectly connected.	Apply power to both loop and auxiliary. Correct the power or wiring connection.
OFF	OFF	ON	Normal	
OFF	Flashing	ON	Trouble The head is missing from the base, the head is dirty, the cover is missing, or the wiring harness to the base is unplugged.	Clean or replace the head. Replace the cover. If the missing cover does not cause a trouble condition, the tamper jumper is disabled.
ON	OFF	ON	Alarm	Determine the cause of the alarm and reset the detector. If the alarm does not reset from the D307, the reset jumper might be disabled.

Table 1: Continued

D341/D342 Duct Smoke Detector Housing				
Red LED	**Yellow LED**	**Green LED**	**Condition**	**Solution**
OFF	OFF	ON	Normal	
OFF	OFF	OFF	No power is applied or the wiring is incorrectly connected.	Correct the power or wiring connection.
OFF	ON	ON	Trouble The head is dirty or is missing from the base, or the cover is missing.	Clean or replace the head, or replace the cover. If the missing cover does not cause a trouble condition, the tamper jumper is disabled.
ON	ON	ON	Alarm	Determine the cause of the alarm and reset the detector. If the alarm does not reset from the D307, the reset jumper might be disabled.
D343 Duct Smoke Detector Housing				
Red LED	**Yellow LED**	**Green LED**	**Condition**	**Solution**
OFF	OFF	ON	Normal	
OFF	OFF	OFF	No power is applied to the bus and auxiliary, or the wiring is incorrectly wired.	Supply power to the bus and auxiliary. Correct the power or wiring connection.
OFF	Flashing	OFF	Trouble The cover is missing or the wiring harness to the base is unplugged.	Replace the head or cover. If the missing cover does not cause a trouble condition, the tamper jumper is disabled.
ON	OFF	ON	Alarm	Determine the cause of the alarm and reset the detector. If the alarm does not reset from the D307, the reset jumper might be disabled.

5.0 Specifications

Table 2: Specifications

Voltage	10 VDC to 32 VDC
Current Draw	10 mA at 24 VDC, standby 20 mA at 24 VDC, alarm 140 mA at 24 VDC, test (D340 Series only)
Operating Temperature	-22°F to +130°F (-30°C to +54°C). For UL Listed requirements, the operating temperature range is +32°F to 100°F (0°C to +37.8°C)

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