

DS7445i/V2-EXP, DS7447E/V2-EXP



Security Systems

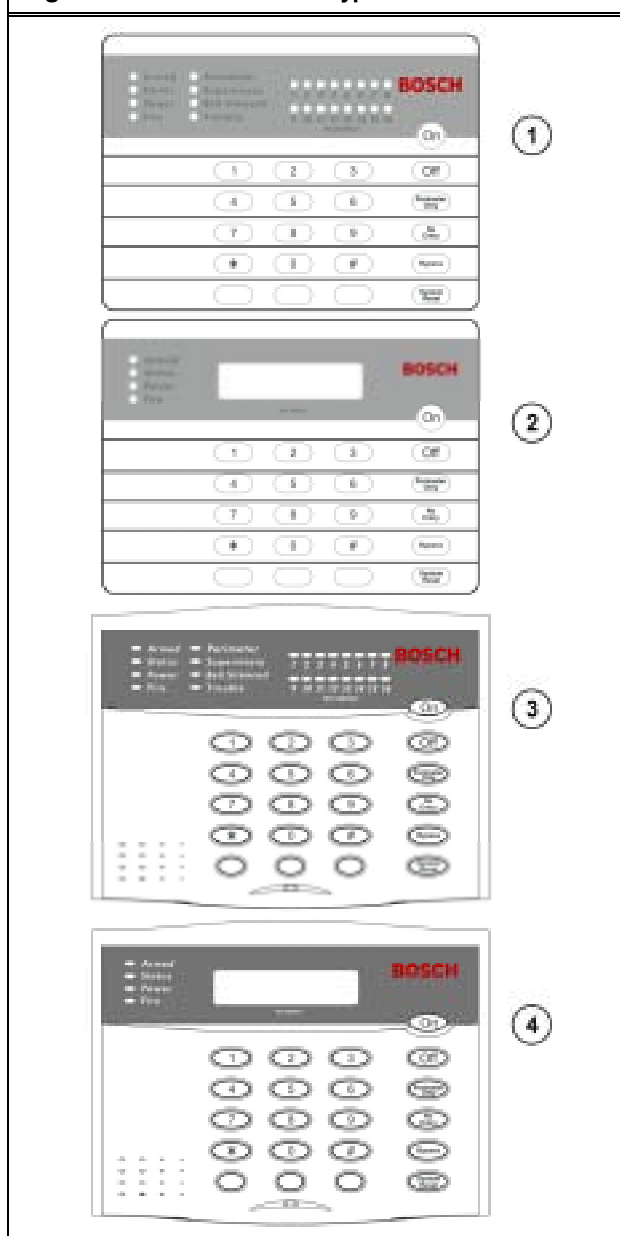
EN | Installation Instructions
Keypads

BOSCH

1.0 General Information

The DS7447E and DS7447V2 are four-wire alphanumeric LCD keypads. The DS7445i and DS7445V2 are four-wire LED keypads. All four keypads support all system functions and are compatible with the DS7060, DS7080i Series, DS7200/DS7200V2 Series, and DS7400Xi Series Control Panels. The DS7447E/DS7447V2 is required for local programming.

Figure 1: Front View of Keypads



- 1 – DS7445i LED Keypad
- 2 – DS7447E LCD Keypad
- 3 – DS7445V2 LED Keypad
- 4 – DS7447V2 LCD Keypad

The keypads can be surface mounted, or mounted to gang boxes (standard single or double) or 50.8 mm (4 in.) square boxes. Refer to *Table 1* for general wiring guidelines.

Table 1: Keypad Wiring Guidelines

Wire Gauge	0.88 mm (#22 AWG) minimum
Wire Type	No shield, 4-wire
Maximum Distance Allowed (between control panel and each keypad)	305 m (1000 ft)



This product complies with all the applicable CE directives.

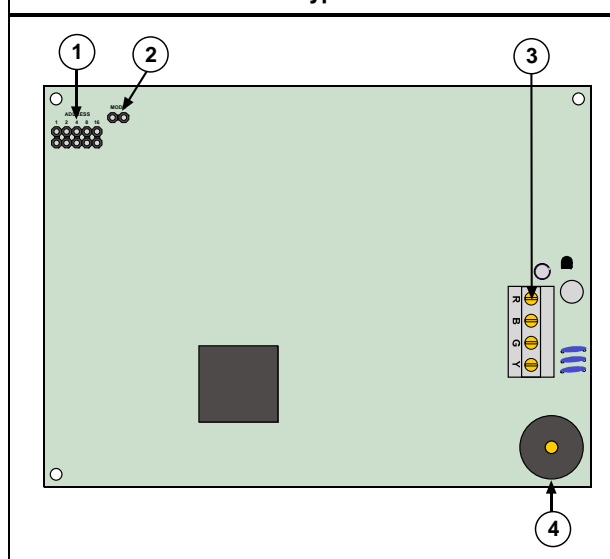
2.0 Keypad Addresses

Each keypad must have a unique address configured using its address pins and must be programmed using the control panel.

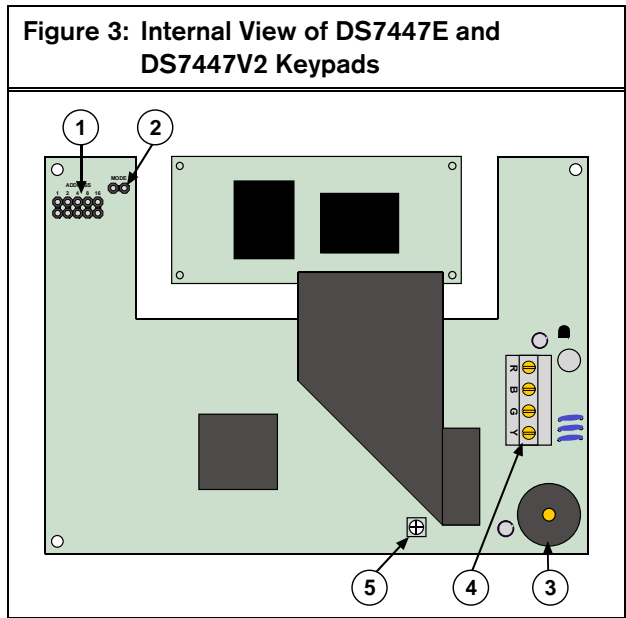
See *Figure 2* and *Figure 3* for address jumper and mode pin locations.

1. Select a different address (0 to 32) for each keypad. Refer to *Table 2* and *Table 3* (in both tables, "ON" indicates a shorting jumper across both pins).
2. Place the shorting jumpers over the address pins. *Figure 4* shows proper shorting jumper placements.

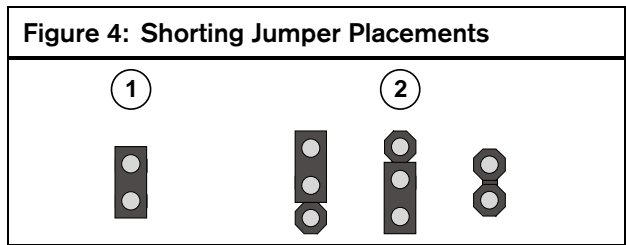
Figure 2: Internal View of DS7445i and DS7445V2 Keypads



- 1 – Address jumper pins
- 2 – Mode pins
- 3 – Option bus terminals
- 4 – Sounder



1 – Address jumper pins 4 – Option bus terminals
 2 – Mode pins 5 – Contrast control
 3 – Sounder



1 – Jumper Plug ON (covers both pins)
 2 – Jumper Plug OFF (3 possible configurations)

Table 2: Keypad Address Selections for DS7060, DS7080i Series, and DS7400Xi Series Control Panels

Module Address	Address Jumpers					Mode
	1	2	4	8	18	
0	OFF	OFF	OFF	OFF	OFF	OFF
1	ON	OFF	OFF	OFF	OFF	OFF
2	OFF	ON	OFF	OFF	OFF	OFF
3	ON	ON	OFF	OFF	OFF	OFF
4	OFF	OFF	ON	OFF	OFF	OFF
5	ON	OFF	ON	OFF	OFF	OFF
6	OFF	ON	ON	OFF	OFF	OFF
7	ON	ON	ON	OFF	OFF	OFF
8	OFF	OFF	OFF	ON	OFF	OFF
9	ON	OFF	OFF	ON	OFF	OFF
10	OFF	ON	OFF	ON	OFF	OFF
11	ON	ON	OFF	ON	OFF	OFF
12	OFF	OFF	ON	ON	OFF	OFF
13	ON	OFF	ON	ON	OFF	OFF
14	OFF	ON	ON	ON	OFF	OFF
15	ON	ON	ON	ON	OFF	OFF

Table 3: Keypad Address Selections for DS7200/DS7200V2 Series Control Panels

Module Address	Address Jumpers					Mode
	1	2	4	8	18	
0*	OFF	OFF	OFF	OFF	OFF	OFF
1	ON	OFF	OFF	OFF	OFF	ON
2	OFF	ON	OFF	OFF	OFF	ON
3	ON	ON	OFF	OFF	OFF	ON
4	OFF	OFF	ON	OFF	OFF	ON
5	ON	OFF	ON	OFF	OFF	ON
6	OFF	ON	ON	OFF	OFF	ON
7	ON	ON	ON	OFF	OFF	ON
8	OFF	OFF	OFF	ON	OFF	ON
9	ON	OFF	OFF	ON	OFF	ON
10	OFF	ON	OFF	ON	OFF	ON
11	ON	ON	OFF	ON	OFF	ON
12	OFF	OFF	ON	ON	OFF	ON
13	ON	OFF	ON	ON	OFF	ON
14	OFF	ON	ON	ON	OFF	ON
15	ON	ON	ON	ON	OFF	ON
16	OFF	OFF	OFF	OFF	ON	ON
17	ON	OFF	OFF	OFF	ON	ON
18	OFF	ON	OFF	OFF	ON	ON
19	ON	ON	OFF	OFF	ON	ON
20	OFF	OFF	ON	OFF	ON	ON
21	ON	OFF	ON	OFF	ON	ON
22	OFF	ON	ON	OFF	ON	ON
23	ON	ON	ON	OFF	ON	ON
24	OFF	OFF	OFF	ON	ON	ON
25	ON	OFF	OFF	ON	ON	ON
26	OFF	ON	OFF	ON	ON	ON
27	ON	ON	OFF	ON	ON	ON
28	OFF	OFF	ON	ON	ON	ON
29	ON	OFF	ON	ON	ON	ON
30	OFF	ON	ON	ON	ON	ON
31	ON	ON	ON	ON	ON	ON
32	OFF	OFF	OFF	OFF	OFF	ON

*Installer's Mode Address Setting: Use for direct connection of Installer's Keypad.

3.0 Mounting

3.1 Considerations

- Ideally, one keypad should be located close to the primary entry/exit door of the premises, and the wire length must be within 305 m (1000 ft) of the control panel.
- Do not mount outdoors [see *Section 7.0 Commercial Fire Applications (DS7400Xi Series)* for commercial fire restrictions].
- The keypad should be mounted no higher than shoulder height of the shortest person using the system.

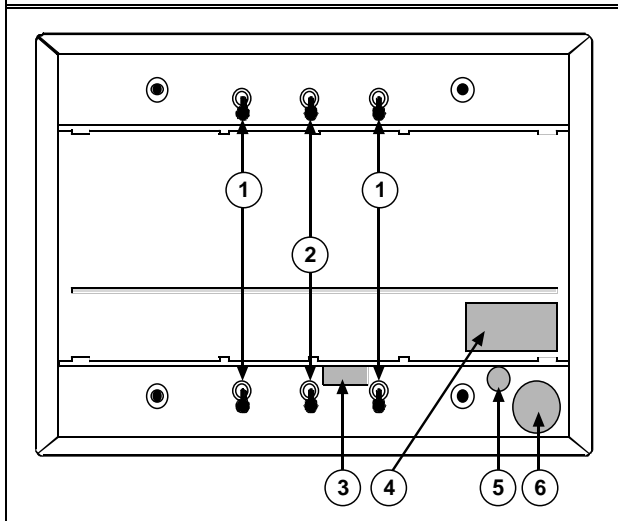
3.2 Instructions

1. Insert a small flat-head screwdriver in each slot at the bottom of the base. Press up, and pull the cover off.
2. Using the base as a template, mark the location of the mounting holes (use any holes). Refer to *Figure 5* to select the mounting holes.
3. Provide an opening in the mounting surface for the wiring.
4. Start the mounting screws.



Do not secure the base at this time.

Figure 5: Back View of Keypad



- 1 - Double gang mounting slots
- 2 - Single gang mounting slots
- 3 - Wire entrance
- 4 - Terminal strip opening. **Do not use as wire entrance!**
- 5 - Tamper Switch. **Install spring on tamper switch!**
- 6 - Sounder opening

4.0 Wiring

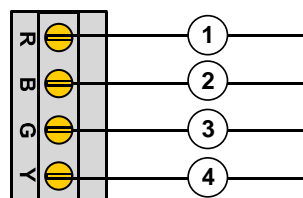
4.1 Control Panel to Keypad Wiring



Be sure all wiring is unpowered before routing.

1. Route wiring from the control panel to the keypads. Up to two keypads can be used on any single 305 m (1000 ft) run of 0.8 mm (#22 AWG) wire. Up to three keypads can be used on any single 305 m (1000 ft) run of 1.2 mm (#18 AWG) wire.
2. Bring the wiring through the wire entrance in the keypad's base and secure the base (*Figure 5*).
3. Connect the wiring to the keypad's terminal strip (*Figure 6*).
4. Place the keypad cover onto the base. While feeding the excess wiring through the back of the base, press the cover straight in until it latches.

Figure 6: Keypad Terminal Connections



- 1 - Power + (red)
- 2 - Power - (black)
- 3 - Data in (green)
- 4 - Data out (yellow)

5.0 DS7447E/DS7447V2 Contrast Control

The DS7447E/DS7447V2 Keypad contrast (refer to *Figure 3* for the location of the contrast control) can be increased by turning the contrast control clockwise. To decrease the contrast, turn the control counterclockwise.

6.0 Special Key Labeling

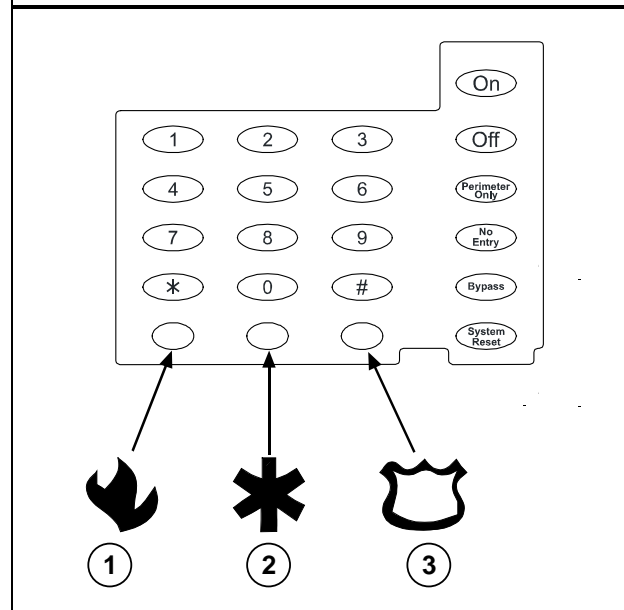


Do not label if keys are unprogrammed.

Consult your control panel's programming instructions for specific function key assignments.

Figure 8 shows typical function button assignments (the DS7445V2/DS7447V2 is shown; the same button assignment applies to the DS7445i/DS7447E).

Figure 7: Special Key Labeling



1 - Fire

2 - Special emergency

3 - Panic

7.0 Instruction Label and Slide

Two instruction labels are provided and one must be placed onto the pull-out slide. The slide can be installed to pull from the left or from the right (slides into rear of base; refer to *Figure 8*).

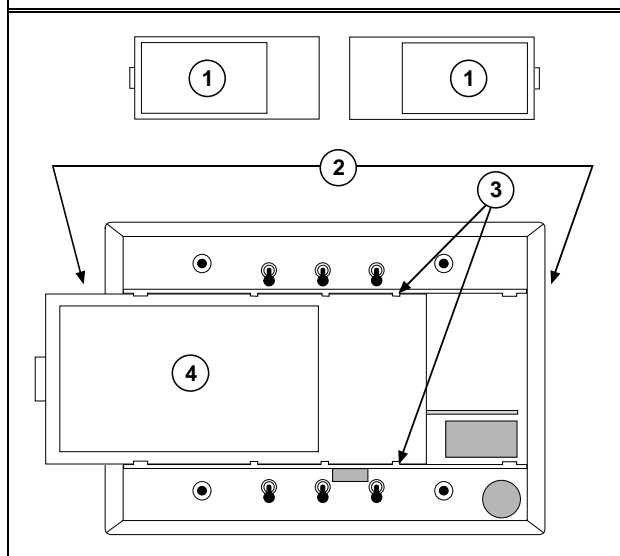
Use *DS7447 Info Card* (P/N: 28815) when installing keypad(s) for use with the DS7060, DS7080i Series, and DS7400Xi Series Control Panels.

Use *DS7445i/V2, DS7447E/V2 Info Card* (P/N: 49646) when installing keypad(s) for use with the DS7200/V2 Series Control Panels.



Be careful when installing the label. Place it as near to the pull-tab as possible.

Figure 8: Instruction label and Slide Installation



1 – Label (two supplied)

2 – Slide label in from either side

3 – Align label behind both sets of teeth

4 – Label installed (wiring on other side)

8.0 Troubleshooting

Table 4: Keypad Troubleshooting

Keypad Notification	Possible Causes
DS7445i/DS7445V2 continuous sounder.	<ul style="list-style-type: none"> Yellow and green wires are disconnected. Keypad not programmed properly at the control panel. Control panel malfunctioned. Replace the control panel.
DS7447E/DS7447V2 continuous sounder and "System Fault" displays.	<ul style="list-style-type: none"> Yellow and green wires are disconnected. Control panel malfunctioned. Replace the control panel.
DS7447E/DS7447V2 continuous sounder and "Not Programmed" displays.	<ul style="list-style-type: none"> Keypad not programmed properly at the control panel.
DS7445i/DS7445V2 3-beep error tone on all keypads.	<ul style="list-style-type: none"> Two or more keypads have same address.
DS7447E/DS7447V2 3-beep error tone on all keypads and "Entry Error. Please try again" displays.	<p><u>DS7400 Series only:</u></p> <ul style="list-style-type: none"> DS7430 MUX Module not installed on main board correctly. Check pin alignment. Keypad and another device on the option bus have the same address.

Bosch Security Systems
130 Perinton Parkway
Fairport, NY 14450-9199
Customer Service: (800) 289-0096
Technical Support: (888) 886-6189

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