

DS3MX-E-I



Security Systems

Installation Guide
3 Zone Mini Control
Panel
EN

BOSCH

1.0 General Information

The DS3MX is a three zone mini control panel, which can be installed as a stand-alone device or connected to the DS7400Xi Alarm Control Panel Multiplex Bus for integrating individual apartment housing units into a large building monitoring system.

The mini control panel has three alarm input zones, one alarm relay output, two solid state outputs, a keyswitch input, and an instant input. The mini control panel supports three user PIN codes including the master code and one door unlock PIN code.

2.0 Specifications

Table 1: Specifications

Operating Voltage:	10.2 VDC to 15 VDC
Operating Current:	30 mA standby 70 mA alarm
Alarm Relay:	C, 3 A 28 VDC/120 VAC
Solid State Output:	250 mA sink max.
Operating Temperature:	-20°C to +50°C (-4°F to +122°F)
Zone Response Time:	500 ms
EOL Resistors:	10 kΩ
Cover/Wall Tamper:	Built-in
Tamper	If the tamper switch is not activated within 3 seconds of powering up, then the tamper is bypassed.

To use with the DS7400Xi requires the DS7400Xi China ROM version 4.05 or later.

3.0 Mounting

1. Mount the DS3MX in a convenient location for operation and no higher than the shoulder height of the shortest person operating the system.
2. Remove the chassis from the base by inserting a small flathead screwdriver in the two slots at the bottom of the housing. Press up while pulling the rear chassis away from the front cover.

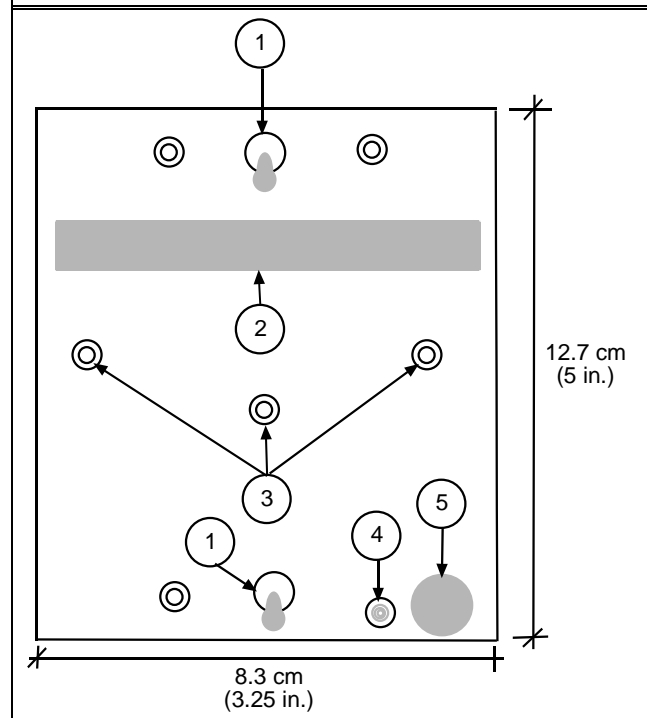
3.1 Wall Mount

Using the base as a guide, mark the location for the three mounting holes and the wire/cable entry on the wall.

3.2 Electrical Box Mounting

The DS3MX can be mounted directly to U.S. or European size switch boxes.

Figure 1: Mounting



- 1 - Single gang mounting slots
- 2 - Wire entrance
- 3 - Wall surface mounting holes
- 4 - Tamper
- 5 - Do not use as wire entrance

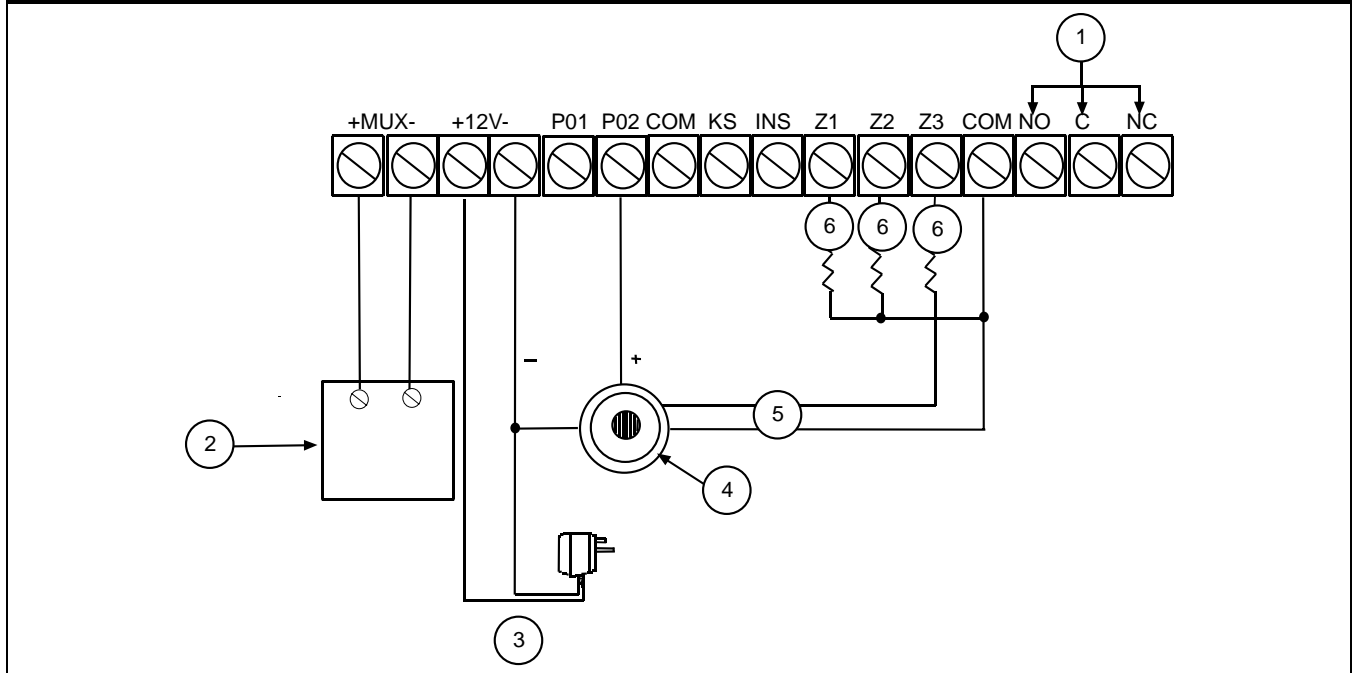
4.0 Wiring



Be sure all wiring is un-powered (de-energized) before routing or connecting to the DS3MX.

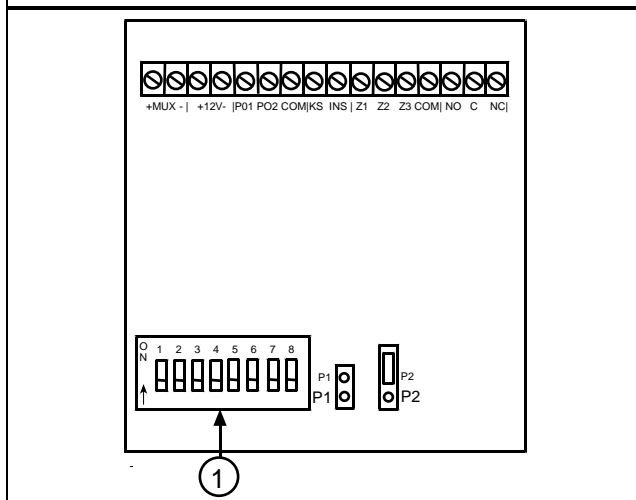
1. Route all wiring for power, zone inputs, and multiplex bus through the rear chassis wire entry hole (see *Figure 1*).
2. Make all necessary wire connections to the DS3MX terminals (see *Figure 2*).
If using a Multiplex device, see *Table 4*.

Figure 2: DS3MX Wiring Diagram



- | | | |
|---------------------------------|--------------------|-----------|
| 1 - Alarm relay | 3 - 12 VDC | 5 - Alarm |
| 2 - DS7430 or DS7436 MUX Driver | 4 - Smoke detector | 6 - 10 K |

Figure 3: Address DIP Switch and Jumper Setting



- 1 - Address DIP switch setting

5.0 Programming Functions

Table 2: Programming Function Steps

Step	Operation	Important Note
1	Master Code [x][x][x][x]	Only the master code can be used to program. The other two user codes cannot be used to program.
2	[*] for 3 seconds to enter	A 1 second beep and the three zone LEDs flash quickly to indicate you entered the Programming Mode.
3	Programming address [x] or [x][x][*]	You only need to input one digit for addresses 0 to 9. For addresses 10 to 23, you must enter two digits.
4	Programming value [x] or [x][x] or [x][x][x] or [x][x][x][x]	You must input four digits for addresses 0 to 2 and 22, three digits for addresses 3 to 5 and 23, and one digit for addresses 6 to 21. A 1 second beep confirms the correct input.
5	Repeat items 3 and 4 to program other addresses	
6	Press [*] for 3 seconds to exit programmers mode.	A 1 second beep and the three zone LEDs off, indicate that you quit the Programming Mode.

1. Enter the four digit master code.



The factory set default master code is [1][2][3][4].

If you forget the master code, do the following to retrieve the factory set default master code:

- a. Power off the DS3MX.
 - b. Plug in jumper J1.
 - c. Power On the DS3MX.
 - d. Remove jumper J1.
2. Press [*] for 3 seconds. The buzzer sounds a 1 second beep and the three zone LEDs flash indicating you entered the programming mode.
 3. Enter the one or two digit programming function, and press [*].
 4. Enter the new value for the function. One long beep (2 seconds) confirms the entry. To program another function, repeat Steps 3 and 4.
Examples:
To change the master code to 3345 after entering the Programming Mode, type:
[0][*][3][3][4][5]
To change the quick arm function after entering programming mode, type:
[1][3][*][1]

Table 3: Program Function Description

Program Function	Description	Factory Default	Allowed Program Value Range
0	Master code	1234	0001 to 9999 (0000 is not allowed)
1	User code 1	1000	0001 to 9999 (0000 = Disable)
2	User code 2	2000	0001 to 9999 (0000 = Disable)
3	Alarm output time	180	000 to 999 (0 second to 999 second)
4	Exit delay	090	000 to 999 (0 second to 999 second)
5	Entry delay	090	000 to 999 (0 second to 999 second)
6	Zone 1 type	2	1 = Instant delay 2 = Delay 3 = 24-hour 4 = Follower
7	Zone 1 bypass	2	1 = Bypass allowed 2 = No bypass allowed

Table 3: continued

Program Function	Description	Factory Default	Allowed Program Value Range
8	Zone 1 shunt	2	1 = Zone shunt allowed 2 = No zone shunt allowed
9	Zone 2 type	4	1 = Instant 2 = Delay 3 = 24-hour 4 = Follower
10	Zone 2 bypass	2	1 = Bypass allowed 2 = No bypass allowed
11	Zone 2 shunt	2	1 = Zone shunt allowed 2 = No zone shunt allowed
12	Zone 3 type	3	1 = Instant 2 = Delay 3 = 24-hour 4 = Follower 5 = Request to exit (REX)
13	Zone 3 bypass	2	1 = Bypass allowed 2 = No bypass allowed
14	Zone 3 shunt	2	1 = Zone shunt allowed 2 = No zone shunt allowed
15	Alarm piezo	1	0 = Off 1 = On
16	SS output 1	1	1 = Follows armed state 2 = Follows zone alarm
17	SS output 2	1	1 = Follows fire reset 2 = Follows zone alarm 3 = Follows door unlock code
18	Quick arm	2	1 = Quick arm on, 2 = Quick arm off
19	Keyswitch input	1	1 = Allows arm only 2 = Allows arm/disarm

Table 3: continued

Program Function	Description	Factory Default	Allowed Program Value Range
20	Panic keys	0	0 = Off 1 = On (enable)
21	Relay function	0	0 = Follows alarm 1 = Follows unlock code
22	Door unlock code	0000	0000 to 9999 (0000 = Disabled)
23	Door unlock time	000	000 to 999 (0 seconds to 999 seconds) 000 = disabled



For each address, you must enter the allowable program value described in *Table 3*. If an incorrect entry is made (not the number length, only the value), you can press [#] to clear your previous entry and re-enter it again.

- After finishing the programming, press [*] for 3 seconds to leave the Programming Mode. One long beep and the three zones' LEDs turn off indicating you left the Programming Mode.



The DS3MX automatically exits the Programming Mode after 3 minutes if there is no activity (no key pressed).

6.0 Zone Types

The DS3MX supports the following zone types and functions.

Instant: When the DS3MX is armed, violating an instant zone causes an immediate alarm.

Delay: When the DS3MX is armed, violating this zone causes an alarm after the entry or exit delay time expires.

Follower: When the DS3MX is armed and the entry zone is violated first, a follower zone experiences the same delay as the entry zone.

24-hour: Active at all times, DS3MX armed, or disarmed. Any violation causes an alarm.

REX: Active at all times, armed, or disarmed. Triggering this input activates the output programmed to follow the unlock code and timer setting.

Bypass: If a zone is programmed to allow bypass, entering a user code, pressing the [Bypass] key, a zone number, and the [On] key, bypasses the zone during this arming period. The zone bypass clears when the DS3MX is disarmed.

Shunt: If a zone is programmed for zone shunt, only the first zone trigger activates the DS3MX. All additional triggers during this armed period are ignored. Shunt clears when the DS3MX is disarmed.

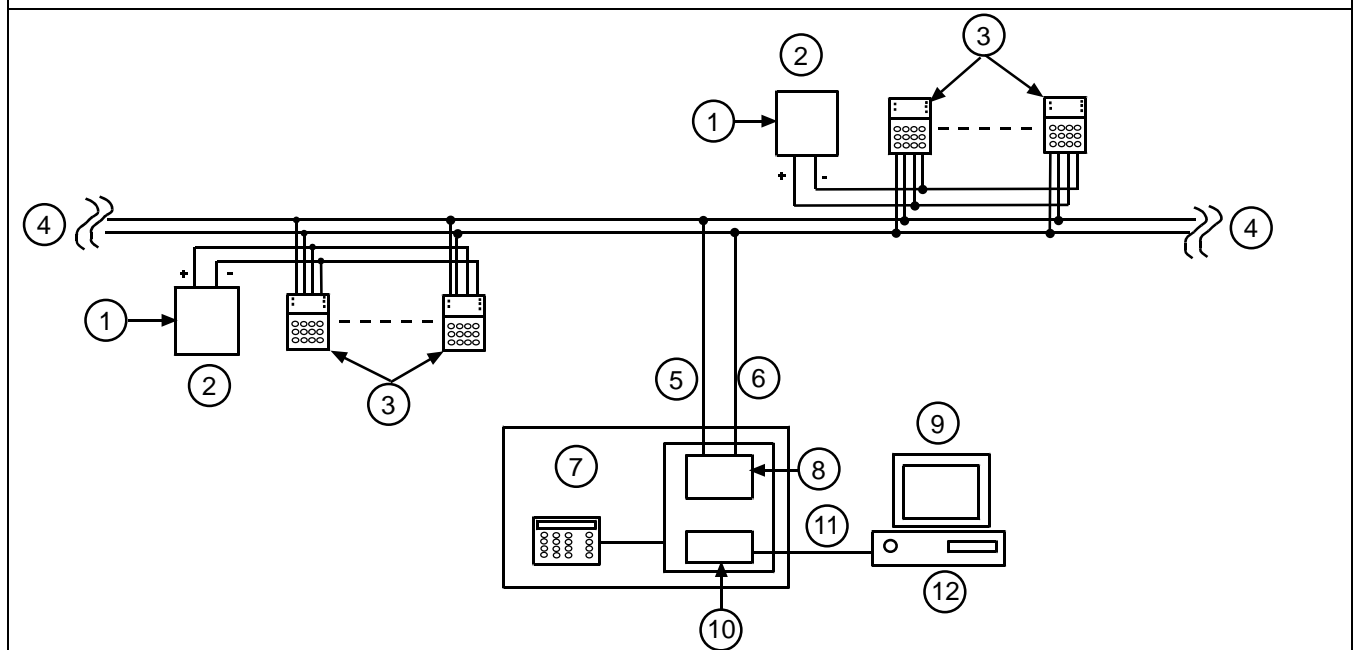
7.0 Using the DS7400Xi Alarm Control

When using the DS3MX on the DS7400Xi Multiplex Bus, the maximum number of devices of all types is 240.

DS3MX devices can be powered directly from the DS7400Xi Aux Power Terminals. However, if connecting more than twelve DS3MX devices, a separate power supply(s) is needed. Each power supply should have its 12 VDC output floating from ground to avoid a MUX bus fault and each should have its own internal battery back-up. See *Figure 4* for power supply connections.

Each DS3MX must have a different address using the DIP switch on the PCB. Follow standard DS7400Xi multiplex point addressing guidelines and refer to *Table 4* for the proper setting.

Figure 4: DS3MX with DS7400Xi System Diagram



1 - 12 VDC Power Supply

2 - 12 VDC @ 2 A supply 20 pieces DS3MX

3 - DS3MX

4 - Up to 240 DS3MX maximum

5 - MUX -

6 - MUX +

7 - DS7400Xi

8 - DS7430/DS7436

9 - CMS-7000

10 - DS7412

11 - RS-232

12 - Central monitoring software

The DS3MX can send the following information to the DS7400Xi: arm, disarm, alarm, tamper, and trouble. Additionally, this information can be reported from the DS7400Xi to the CMS7000 multi-panel monitoring software. Refer to the CMS7000 documents for more information.

See the following sections in the *DS7400Xi Reference Guide* (Ver. 4+ [P/N: 40816]) for more information:

- *Programming Section: Control/Communicator* and *Address 0419 to 0538* (requires the DS7400Xi China ROM version 4.03a or later).
- *Zone Programming Section* if using a zone type of DS3MX = "6."



If we set the DS3MX as a single point mode device, the Zone type is programmed as "0", the same as DS7457 Module. Only if set the DS3MX in the DS3MX expanded mode should the zone type be set to "6"!

- Zone Function Programming Section for more information on the 24-hour zone function. The zone function of DS3MX can only be programmed as 24-hour (value = 2), interior (value = 7), and fire zone without verification (value = 1).

Other programming options are the same as standard device zone types.

8.0 Multiplex Address DIP Switch Settings

Table 4: Multiplex Address DIP Switch Setting

Zone (Point) Address	• = Switch On (Closed)							
	1	2	3	4	5	6	7	8
009					•			•
010					•		•	
011					•		•	•
012					•	•		
013					•	•		•
014					•	•	•	
015					•	•	•	•
016				•				
017				•				•
018				•			•	
019				•			•	•
020				•		•		
021				•		•		•
022				•		•	•	
023				•		•	•	•
024				•	•			
025				•	•			•
026				•	•		•	
027				•	•		•	•
028				•	•	•		

Table 4: continued

Zone (Point) Address	• = Switch On (Closed)							
	1	2	3	4	5	6	7	8
029				•	•	•		•
030				•	•	•	•	
031				•	•	•	•	•
032			•					
033			•					•
034			•				•	
035			•				•	•
036			•			•		
037			•			•		•
038			•			•	•	
039			•			•	•	•
040			•		•			
041			•		•			•
042			•		•		•	
043			•		•		•	•
044			•		•	•		
045			•		•	•		•
046			•		•	•	•	
047			•		•	•	•	•
048			•	•				
049			•	•				•
050			•	•			•	
051			•	•			•	•
052			•	•		•		
053			•	•		•		•
054			•	•		•	•	
055			•	•		•	•	•
056			•	•	•			
057			•	•	•			•
058			•	•	•		•	
059			•	•	•		•	•

Table 4: continued

Zone (Point) Address	1	2	3	4	5	6	7	8
060			•	•	•	•		
061			•	•	•	•		•
062			•	•	•	•	•	
063			•	•	•	•	•	•
064		•						
065		•						•
066		•					•	
067		•					•	•
068		•				•		
069		•				•		•
070		•				•	•	
071		•				•	•	•
072		•			•			
073		•			•			•
074		•			•		•	
075		•			•		•	•
076		•			•	•		
077		•			•	•		•
078		•			•	•	•	
079		•			•	•	•	•
080		•		•				
081		•		•				•
082		•		•			•	
083		•		•			•	•
084		•		•		•		
085		•		•		•		•
086		•		•		•	•	
087		•		•		•	•	•
088		•		•	•			
089		•		•	•			•
090		•		•	•		•	
091		•		•	•		•	•
092		•		•	•	•		
093		•		•	•	•		•
094		•		•	•	•	•	
095		•		•	•	•	•	•
096		•	•					
097		•	•					•
098		•	•				•	
099		•	•				•	•

Table 4: continued

Zone (Point) Address	1	2	3	4	5	6	7	8
100		•	•			•		
101		•	•			•		•
102		•	•			•	•	
103		•	•			•	•	•
104		•	•		•			
105		•	•		•			•
106		•	•		•		•	
107		•	•		•		•	•
108		•	•		•	•		
109		•	•		•	•		•
110		•	•		•	•	•	
111		•	•		•	•	•	•
112		•	•	•				
113		•	•	•				•
114		•	•	•			•	
115		•	•	•			•	•
116		•	•	•		•		
117		•	•	•		•		•
118		•	•	•		•	•	
119		•	•	•		•	•	•
120		•	•	•	•			
121		•	•	•	•			•
122		•	•	•	•		•	
123		•	•	•	•		•	•
124		•	•	•	•	•		
125		•	•	•	•	•		•
126		•	•	•	•	•	•	
127		•	•	•	•	•	•	•
128	•							
129	•							•
130	•						•	
131	•						•	•
132	•					•		
133	•					•		•
134	•					•	•	
135	•					•	•	•
136	•				•			
137	•				•			•
138	•				•		•	
139	•				•		•	•



179	•	•	•	•	•	•	•	•
-----	---	---	---	---	---	---	---	---

Table 4: continued

Zone (Point) Address	1	2	3	4	5	6	7	8
140	•				•	•		
141	•				•	•		•
142	•				•	•	•	
143	•				•	•	•	•
144	•			•				
145	•			•				•
146	•			•			•	
147	•			•			•	•
148	•			•		•		
149	•			•		•		•
150	•			•		•	•	
151	•			•		•	•	•
152	•			•	•			
153	•			•	•			•
154	•			•	•		•	
155	•			•	•		•	•
156	•			•	•	•		
157	•			•	•	•		•
158	•			•	•	•	•	
159	•			•	•	•	•	•
160	•		•					
161	•		•					•
162	•		•				•	
163	•		•				•	•
164	•		•			•		
165	•		•			•		•
166	•		•			•	•	
167	•		•			•	•	•
168	•		•		•			
169	•		•		•			•
170	•		•		•		•	
171	•		•		•		•	•
172	•		•		•	•		
173	•		•		•	•		•
174	•		•		•	•	•	
175	•		•		•	•	•	•
176	•		•	•				
177	•		•	•				•
178	•		•	•			•	

Table 4: continued

Zone (Point) Address	1	2	3	4	5	6	7	8
180	•		•	•		•		
181	•		•	•		•		•
182	•		•	•		•	•	
183	•		•	•		•	•	•
184	•		•	•	•			
185	•		•	•	•			•
186	•		•	•	•		•	
187	•		•	•	•		•	•
188	•		•	•	•	•		
189	•		•	•	•	•		•
190	•		•	•	•	•	•	
191	•		•	•	•	•	•	•
192	•	•						
193	•	•						•
194	•	•					•	
195	•	•					•	•
196	•	•				•		
197	•	•				•		•
198	•	•				•	•	
199	•	•				•	•	•
200	•	•			•			
201	•	•			•			•
202	•	•			•		•	
203	•	•			•		•	•
204	•	•			•	•		
205	•	•			•	•		•
206	•	•			•	•	•	
207	•	•			•	•	•	•
208	•	•		•				
209	•	•		•				•
210	•	•		•			•	
211	•	•		•			•	•
212	•	•		•		•		
213	•	•		•		•		•
214	•	•		•		•	•	
215	•	•		•		•	•	•
216	•	•		•	•			
217	•	•		•	•			•

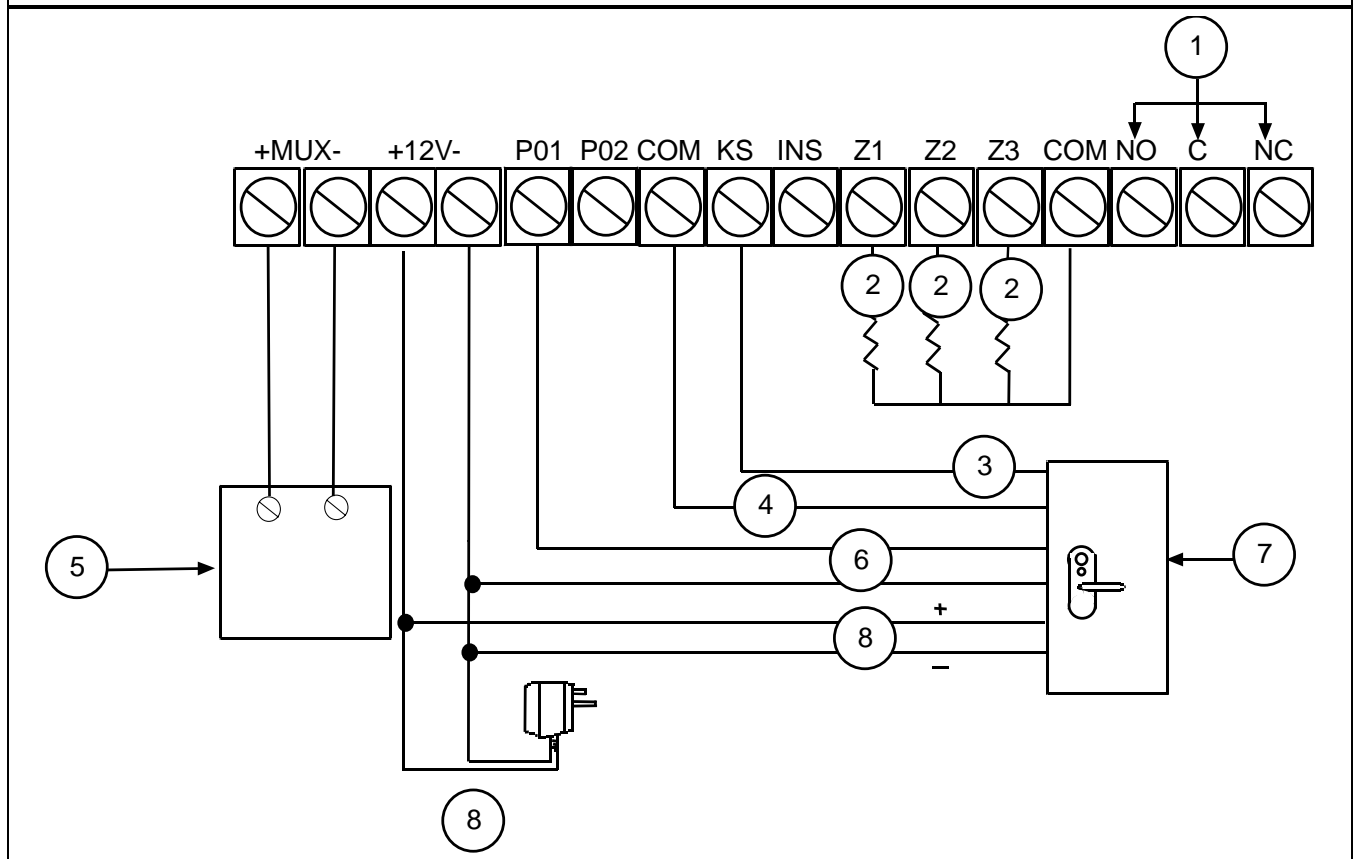
218	•	•	•	•	•		
219	•	•	•	•	•	•	•

Table 4: continued

• = Switch On (Closed)

Zone (Point) Address	1	2	3	4	5	6	7	8
220	•	•		•	•	•		
221	•	•		•	•	•		•
222	•	•		•	•	•	•	
223	•	•		•	•	•	•	•
224	•	•	•					
225	•	•	•					•
226	•	•	•				•	
227	•	•	•				•	•
228	•	•	•			•		
229	•	•	•			•		•
230	•	•	•			•	•	
231	•	•	•			•	•	•
232	•	•	•		•			
233	•	•	•		•			•
234	•	•	•		•		•	
235	•	•	•		•		•	•
236	•	•	•		•	•		
237	•	•	•		•	•		•
238	•	•	•		•	•	•	
239	•	•	•		•	•	•	•
240	•	•	•	•				
241	•	•	•	•				•
242	•	•	•	•			•	
243	•	•	•	•			•	•
244	•	•	•	•		•		
245	•	•	•	•		•		•
246	•	•	•	•		•	•	
247	•	•	•	•		•	•	•
248	•	•	•	•	•			

Figure 5: DS3MX Using Smart Lock Wiring Diagram



- | | | |
|-----------------|---------------------------------|----------------|
| 1 - Alarm relay | 4 - Arm/disarm | 7 - Smart Lock |
| 2 - 10 K | 5 - DS7430 or DS7436 MUX Driver | 8 - 12 VDC |
| 3 - Keyswitch | 6 - Arm LED | |

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

© 2003 Bosch Security Systems
49990E

BOSCH