

# Installation manual for the DS7457i and DS7457iF Single Zone Input Modules

## 1.0 Description

The DS7457i/DS7457iF are Single Zone Input Modules designed to operate with compatible multiplex systems. It provides a supervised input zone for connection of conventional normally open or normally closed inputs. Each DS7457i/DS7457iF occupies one multiplex zone address on the system. The DS7457i/DS7457iF connect to the DS7430 or DS7436 Multiplex Expansion Modules or the D8125MUX Multiplex Expansion Module. For additional DS7457i and DS7457iF installation information, refer to the *D9412GV2/D7412GV2 Approved Applications Compliance Guide* (P/N: F01U003639) and the *D8125MUX Operation and Installation Guide* (P/N: F01U034973).

## 2.0 Specifications

- **Module Requirements:** The DS7457i/DS7457iF is designed to work with the following multiplex modules:

- DS7430 Multiplex Expansion Module
- DS7436 Multiplex Expansion Module.
- D8125MUX Multiplex Expansion Module

- **Line Impedance:**

Maximum Impedance: 4.05 $\Omega$ at +68°F (+20°C) nominal	
Maximum Distance	Size
250 ft	22 AWG
600 ft	18 AWG
76 m	0.65 mm
193 m	1.02 mm
Fire applications require 18 AWG.	


- **Voltage:** 12 VDC nominal
- **Current Draw:** 0.5 mA maximum
- **Zone Response Time:** 400 ms
- **Operating Temperature Range:** +32°F to +122°F (0°C to +50°C)
- **Relative Humidity:** 0% to 93%
- **Signaling Line Circuit Type:** Class B
- **Initiating Device Circuit Type:** Class B

 When used in a fire system, NFPA 72 prohibits this product from sharing a communications bus with non-fire devices.

## 3.0 Programming

Consult the intended control panel's installation guide for multiplex zone (point) programming information. See page 4 for switch settings.

## 4.0 Installation

 After any programming or hardware change, do a functional test of the system as required by local codes.

These Installation Instructions assume the control panel is installed and in proper working condition.

 The control panel must be programmed and the DS7457i/DS7457iF address switches must be set for the DS7457i/DS7457iF to operate.

- Program the control panel as described in the panel's Reference Guide.

 Disconnect power to the panel before running wires to connect the DS7457i/DS7457iF.

- The DS7457i/DS7457iF is compact enough to fit within most backboxes and enclosures.



**BOSCH**

## 5.0 Wiring

DS7457i/iF Terminals	Description
RED	Positive Multiplex Input
BLACK	Negative Multiplex Input
YELLOW	Protection Zone Positive Input
BLACK	Protection Zone Ground

**Table 1: DS7457i/DS7457iF Terminal Descriptions**

- Connect wiring to the DS7457i/DS7457iF as shown in Figures 1- 3.
- Protection zones are designed to monitor Normally Open or Normally Closed dry contacts. They are supervised using 47K ohm end-of-line resistors.

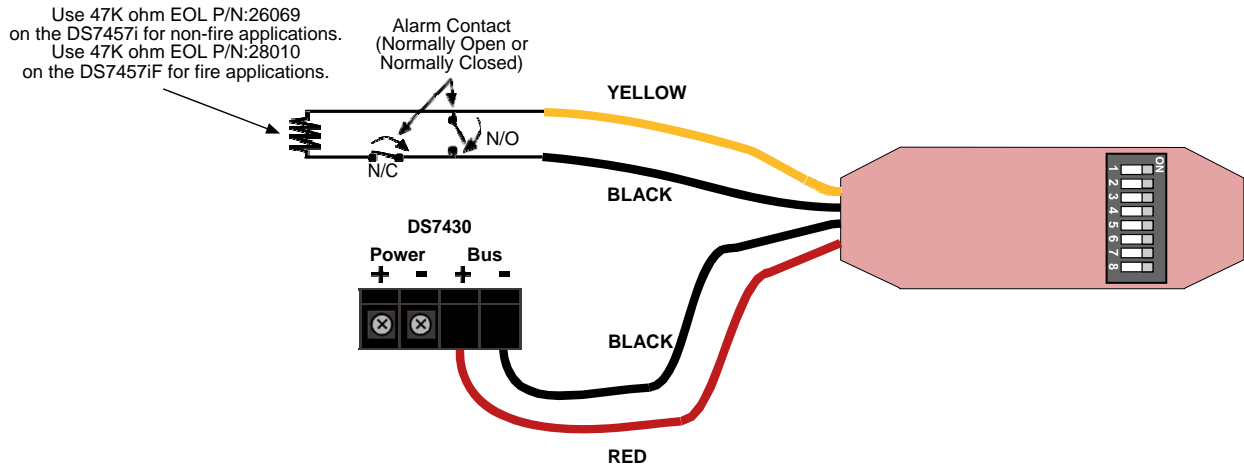


The input zones are power limited and supervised.



When used in fire applications, Normally Open contacts must be used on the input zones.

### 5.1 DS7430 Multiplex Expansion Module Wiring



**Figure 1: Wiring to a DS7430 Multiplex Expansion Module**

### 5.2 DS7436 Multiplex Expansion Module Wiring

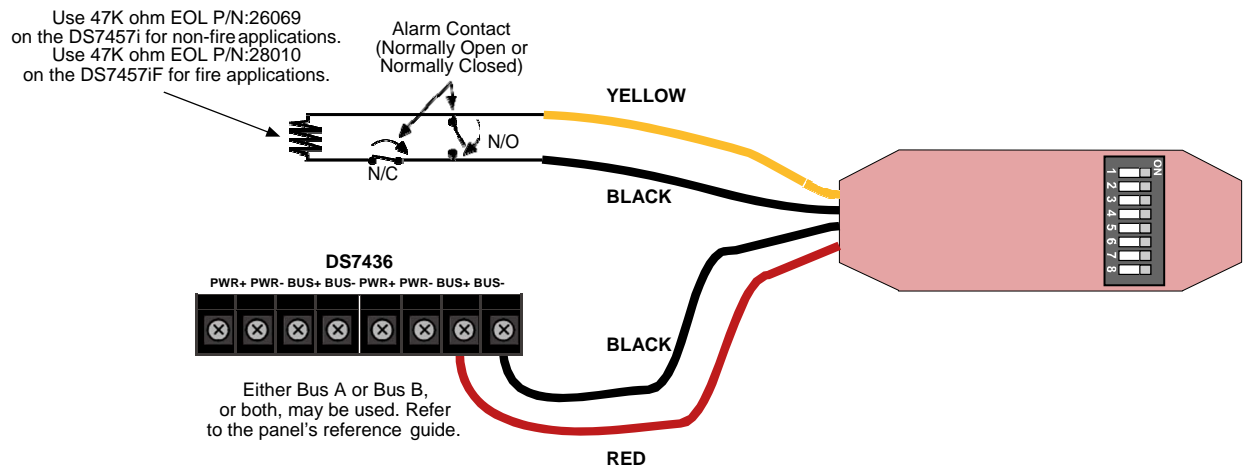
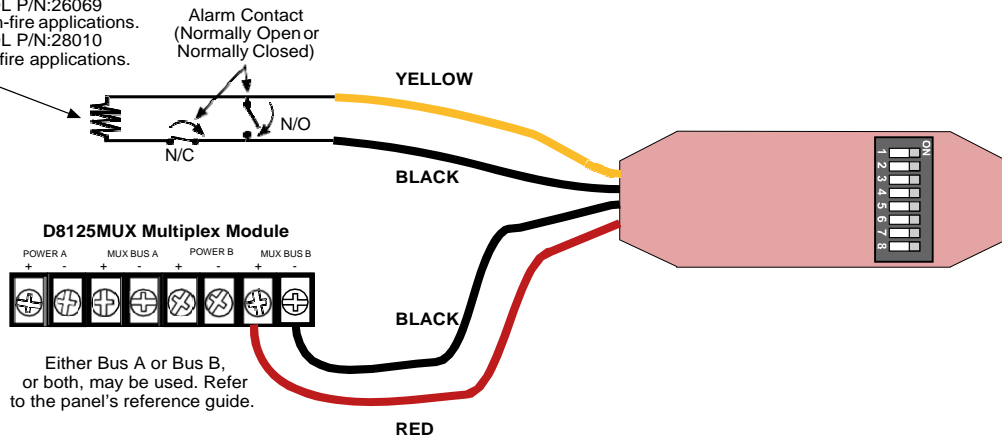


Figure 2: Wiring to a DS7436 Multiplex Expansion Module

### 5.3 D8125MUX Multiplex Expansion Module Wiring

Use 47K ohm EOL P/N:26069 on the DS7457i for non-fire applications.  
Use 47K ohm EOL P/N:28010 on the DS7457iF for fire applications.



Either Bus A or Bus B, or both, may be used. Refer to the panel's reference guide.

Figure 3: Wiring to a D8125MUX Multiplex Expansion Module

### 6.0 Switch Settings

Set the address switch settings before connecting the DS7457i/DS7457iF to the multiplex bus.

**i** No two DS7457i/DS7457iF Single Zone modules may be set to the same address. Having two or more units set to the same address may prevent fault detection or cause multiplex bus failure.

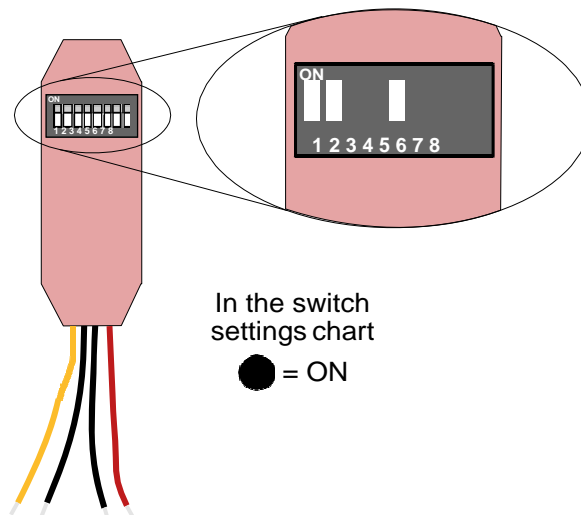
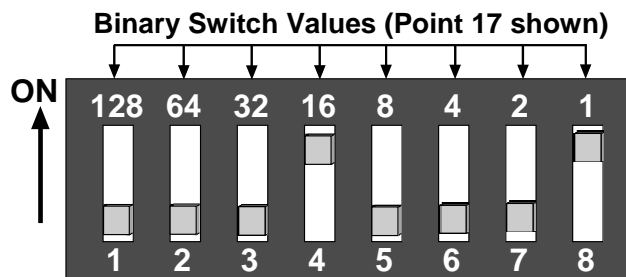


Figure 3: Address Switches

You can find the Address Switch Settings using the chart on the last page, or by calculating the decimal number of the address.



**i** The DS7400 Series control panels cannot be programmed for zone (point) addresses 001-008.

● = SWITCH ON (CLOSED)

ZONE (POINT) ADDRESS	SWITCH NUMBER							
	1	2	3	4	5	6	7	8
001								
002								
003								
004								
005								
006								
007								
008								
009					●			●
010					●		●	
011					●		●	●
012					●	●	●	
013					●	●	●	●
014					●	●	●	
015					●	●	●	●
016					●			
017					●			●
018					●		●	
019					●		●	●
020					●	●		
021					●	●	●	●
022					●	●	●	
023					●	●	●	●
024					●	●		
025					●	●		●
026					●	●	●	
027					●	●	●	●
028					●	●	●	
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					●	●	●	●
060					●	●	●	
061					●	●	●	●
062					●	●	●	●
063					●	●	●	●
064					●			

● = SWITCH ON (CLOSED)

ZONE (POINT) ADDRESS	SWITCH NUMBER							
	1	2	3	4	5	6	7	8
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		●	●				●	●
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		●						

● = SWITCH ON (CLOSED)

ZONE (POINT) ADDRESS	SWITCH NUMBER							
	1	2	3	4	5	6	7	8
129	●							●
130	●						●	
131	●						●	●
132	●				●			
133	●				●		●	
134	●				●	●		
135	●				●	●	●	
136	●				●			
137	●				●		●	
138	●				●		●	
139	●				●		●	●
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	●				●		●	●
179	●				●		●	●
180	●				●		●	●
181	●				●		●	●
182	●				●		●	●
183	●				●		●	●
184	●				●		●	●
185	●				●		●	●
186	●				●		●	●
187	●				●		●	●
188	●				●		●	●
189	●				●		●	●
190	●				●		●	●
191	●				●		●	●
192	●				●		●	●

● = SWITCH ON (CLOSED)

ZONE (POINT) ADDRESS	SWITCH NUMBER							
	1	2	3	4	5	6	7	8
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	●	●					●	●
220	●	●					●	●
221	●	●					●	●
222	●	●					●	●
223	●	●					●	●
224	●	●					●	●
225	●	●					●	●
226	●	●						