FYREYE MKII ADDRESSABLE ZONE MONITOR MODULE WITH ISOLATOR INSTALLATION GUIDE

General

The Fyreye MkII Addressable Zone Monitor Module is supplied with a backbox for surface mounting.

NOTE: The Zone Monitor Module is designed for indoor use only.

This product is loop powered. A loop load claulation must be performed to determine the permissable quantity of ZAZM-MI per loop.

Model No: ZAZM-MI Fyreye MkII Addressable Zone Monitor Module With Isolator

Surface Mounting

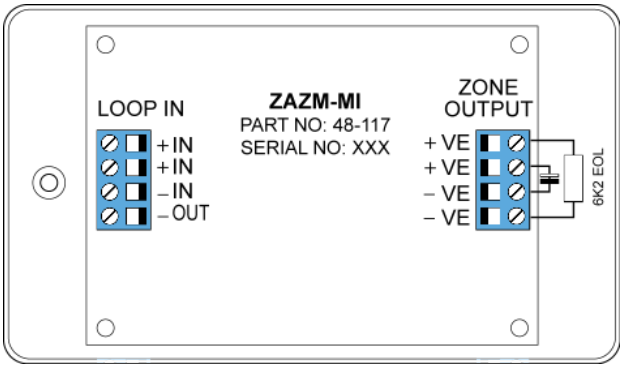
1. Mount the backbox as required and install all cables for termination.
2. Set the address of the unit as shown on page 3.
3. Terminate all cables.
4. Gently push the completed assembly towards the back box until the mounting holes are aligned and secure with the two mounting screws provided. DO NOT OVERTIGHTEN.

Isolator Module

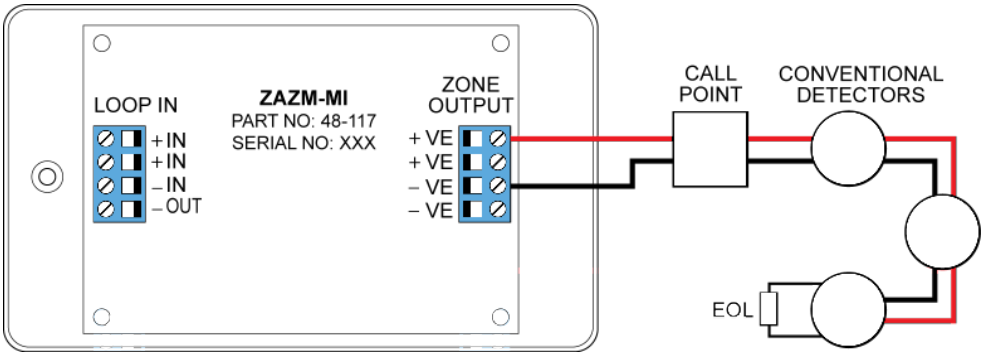
The Zone Monitor Module is fitted with a bi-directional short-circuit isolator and will be unaffected by loop short-circuits on either loop input or output.

Wiring Details

All wiring terminals will accept solid or stranded cables up to 2.5mm^2



Typical Wiring Diagram



Technical Specification

Model	ZAZM-MI
Part Number	48-117
Operating Voltage	17 – 28V DC
Quiescent Current	3.5mA
Alarm Current (LED OFF)	12.6 mA
Alarm Current (LED ON)	13.2 mA
Isolating Current	7.3mA
End of Line Resistor	6.2k
Nominal Alarm Triggering Resistor	1k
Operating Temperature	"-10C to 55C"
Max Humidity	95% RH Non Condensing
IP Rating	IP21C
Size	150 x 90 x 45 mm
Weight	220g

For information on the short circuit isolator operation see document GLT-224-6-9 available from your distributor.

LED Indications

Status	LED Indication
Alarm	Illuminated red when conventional detector zone is in alarm
Polling	Flashed green when the zone monitor is communicating with panel
Isolating	Illuminated yellow when the loop is short or wrong connection circuit

Address Setting

The address of the Zone Monitor Module is set using the eight segments of the DIL switch. Each segment of the switch must be set to “0”(ON) or “1”(OFF), using a small screwdriver or similar tool. A complete list of address settings is shown overleaf. The maximum address is 250.

ADDRESS	SW1	SW2	SW3	SW4	SW5	SW6	SW7	SW8
0								
1	OFF	ON	ON	ON	ON	ON	ON	ON
2	ON	OFF	ON	ON	ON	ON	ON	ON
3	OFF	OFF	ON	ON	ON	ON	ON	ON
4	ON	ON	OFF	ON	ON	ON	ON	ON
5	OFF	ON	OFF	ON	ON	ON	ON	ON
6	ON	OFF	OFF	ON	ON	ON	ON	ON
7	OFF	OFF	OFF	ON	ON	ON	ON	ON
8	ON	ON	ON	OFF	ON	ON	ON	ON
9	OFF	ON	ON	OFF	ON	ON	ON	ON
10	ON	OFF	ON	OFF	ON	ON	ON	ON
11	OFF	OFF	ON	OFF	ON	ON	ON	ON
12	ON	ON	OFF	OFF	ON	ON	ON	ON
13	OFF	ON	OFF	OFF	ON	ON	ON	ON
14	ON	OFF	OFF	OFF	ON	ON	ON	ON
15	OFF	OFF	OFF	OFF	ON	ON	ON	ON
16	ON	ON	ON	ON	OFF	ON	ON	ON
17	OFF	ON	ON	ON	OFF	ON	ON	ON
18	ON	OFF	ON	ON	OFF	ON	ON	ON
19	OFF	OFF	ON	ON	OFF	ON	ON	ON
20	ON	ON	OFF	ON	OFF	ON	ON	ON
21	OFF	ON	OFF	ON	OFF	ON	ON	ON
22	ON	OFF	OFF	ON	OFF	ON	ON	ON
23	OFF	OFF	OFF	ON	OFF	ON	ON	ON
24	ON	ON	ON	OFF	OFF	ON	ON	ON
25	OFF	ON	ON	OFF	OFF	ON	ON	ON
26	ON	OFF	ON	OFF	OFF	ON	ON	ON
27	OFF	OFF	ON	OFF	OFF	ON	ON	ON
28	ON	ON	OFF	OFF	OFF	ON	ON	ON
29	OFF	ON	OFF	OFF	OFF	ON	ON	ON
30	ON	OFF	OFF	OFF	OFF	ON	ON	ON
31	OFF	OFF	OFF	OFF	OFF	ON	ON	ON
32	ON	ON	ON	ON	ON	OFF	ON	ON
33	OFF	ON	ON	ON	ON	OFF	ON	ON
34	ON	OFF	ON	ON	ON	OFF	ON	ON
35	OFF	OFF	ON	ON	ON	OFF	ON	ON
36	ON	ON	OFF	ON	ON	OFF	ON	ON
37	OFF	ON	OFF	ON	ON	OFF	ON	ON
38	ON	OFF	OFF	ON	ON	OFF	ON	ON
39	OFF	OFF	OFF	ON	ON	OFF	ON	ON
40	ON	ON	ON	OFF	ON	OFF	ON	ON
41	OFF	ON	ON	OFF	ON	OFF	ON	ON
42	ON	OFF	ON	OFF	ON	OFF	ON	ON
43	OFF	OFF	ON	OFF	ON	OFF	ON	ON
44	ON	ON	OFF	OFF	ON	OFF	ON	ON
45	OFF	ON	OFF	OFF	ON	OFF	ON	ON
46	ON	OFF	OFF	OFF	ON	OFF	ON	ON
47	OFF	OFF	OFF	OFF	ON	OFF	ON	ON
48	ON	ON	ON	ON	OFF	OFF	ON	ON
49	OFF	ON	ON	ON	OFF	OFF	ON	ON
50	ON	OFF	ON	ON	OFF	OFF	ON	ON
51	OFF	OFF	ON	ON	OFF	OFF	ON	ON
52	ON	ON	OFF	ON	OFF	OFF	ON	ON
53	OFF	ON	OFF	ON	OFF	OFF	ON	ON
54	ON	OFF	OFF	ON	OFF	OFF	ON	ON
55	OFF	OFF	OFF	ON	OFF	OFF	ON	ON
56	ON	ON	ON	OFF	OFF	OFF	ON	ON
57	OFF	ON	ON	OFF	OFF	OFF	ON	ON
58	ON	OFF	ON	OFF	OFF	OFF	ON	ON
59	OFF	OFF	ON	OFF	OFF	OFF	ON	ON
60	ON	ON	OFF	OFF	OFF	OFF	ON	ON
61	OFF	ON	OFF	OFF	OFF	OFF	ON	ON
62	ON	OFF	OFF	OFF	OFF	OFF	ON	ON
63	OFF	OFF	OFF	OFF	OFF	OFF	ON	ON

ADDRESS	SW1	SW2	SW3	SW4	SW5	SW6	SW7	SW8
64	ON	ON	ON	ON	ON	ON	OFF	ON
65	OFF	ON	ON	ON	ON	ON	OFF	ON
66	ON	OFF	ON	ON	ON	ON	OFF	ON
67	OFF	OFF	ON	ON	ON	ON	OFF	ON
68	ON	ON	OFF	ON	ON	ON	OFF	ON
69	OFF	ON	OFF	ON	ON	ON	OFF	ON
70	ON	OFF	OFF	ON	ON	ON	OFF	ON
71	OFF	OFF	OFF	ON	ON	ON	OFF	ON
72	ON	ON	ON	OFF	ON	ON	OFF	ON
73	OFF	ON	ON	OFF	ON	ON	OFF	ON
74	ON	OFF	ON	OFF	ON	ON	OFF	ON
75	OFF	OFF	ON	OFF	ON	ON	OFF	ON
76	ON	ON	OFF	OFF	ON	ON	OFF	ON
77	OFF	ON	OFF	OFF	ON	ON	OFF	ON
78	ON	OFF	OFF	OFF	ON	ON	OFF	ON
79	OFF	OFF	OFF	OFF	ON	ON	OFF	ON
80	ON	ON	ON	ON	OFF	ON	OFF	ON
81	OFF	ON	ON	ON	OFF	ON	OFF	ON
82	ON	OFF	ON	ON	OFF	ON	OFF	ON
83	OFF	OFF	ON	ON	OFF	ON	OFF	ON
84	ON	ON	OFF	ON	OFF	ON	OFF	ON
85	OFF	ON	OFF	ON	OFF	ON	OFF	ON
86	ON	OFF	OFF	ON	OFF	ON	OFF	ON
87	OFF	OFF	OFF	ON	OFF	ON	OFF	ON
88	ON	ON	ON	OFF	OFF	ON	OFF	ON
89	OFF	ON	ON	OFF	OFF	ON	OFF	ON
90	ON	OFF	ON	OFF	OFF	ON	OFF	ON
91	OFF	OFF	ON	OFF	OFF	ON	OFF	ON
92	ON	ON	OFF	OFF	OFF	ON	OFF	ON
93	OFF	ON	OFF	OFF	OFF	ON	OFF	ON
94	ON	OFF	OFF	OFF	OFF	ON	OFF	ON
95	OFF	OFF	OFF	OFF	OFF	ON	OFF	ON
96	ON	ON	ON	ON	ON	OFF	OFF	ON
97	OFF	ON	ON	ON	ON	OFF	OFF	ON
98	ON	OFF	ON	ON	ON	OFF	OFF	ON
99	OFF	OFF	ON	ON	ON	OFF	OFF	ON
100	ON	ON	OFF	ON	ON	OFF	OFF	ON
101	OFF	ON	OFF	ON	ON	OFF	OFF	ON
102	ON	OFF	OFF	ON	ON	OFF	OFF	ON
103	OFF	OFF	OFF	ON	ON	OFF	OFF	ON
104	ON	ON	ON	OFF	ON	OFF	OFF	ON
105	OFF	ON	ON	OFF	ON	OFF	OFF	ON
106	ON	OFF	ON	OFF	ON	OFF	OFF	ON
107	OFF	OFF	ON	OFF	ON	OFF	OFF	ON
108	ON	ON	OFF	OFF	ON	OFF	OFF	ON
109	OFF	ON	OFF	OFF	ON	OFF	OFF	ON
110	ON	OFF	OFF	OFF	ON	OFF	OFF	ON
111	OFF	OFF	OFF	OFF	ON	OFF	OFF	ON
112	ON	ON	ON	ON	OFF	OFF	OFF	ON
113	OFF	ON	ON	ON	OFF	OFF	OFF	ON
114	ON	OFF	ON	ON	OFF	OFF	OFF	ON
115	OFF	OFF	ON	ON	OFF	OFF	OFF	ON
116	ON	ON	OFF	ON	OFF	OFF	OFF	ON
117	OFF	ON	OFF	ON	OFF	OFF	OFF	ON
118	ON	OFF	OFF	ON	OFF	OFF	OFF	ON
119	OFF	OFF	OFF	ON	OFF	OFF	OFF	ON
120	ON	ON	ON	OFF	OFF	OFF	OFF	ON
121	OFF	ON	ON	OFF	OFF	OFF	OFF	ON
122	ON	OFF	ON	OFF	OFF	OFF	OFF	ON
123	OFF	OFF	ON	OFF	OFF	OFF	OFF	ON
124	ON	ON	OFF	OFF	OFF	OFF	OFF	ON
125	OFF	ON	OFF	OFF	OFF	OFF	OFF	ON
126	ON	OFF	OFF	OFF	OFF	OFF	OFF	ON
127	OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON

ADDRESS	SW1	SW2	SW3	SW4	SW5	SW6	SW7	SW8
128	ON	ON	ON	ON	ON	ON	ON	OFF
129	OFF	ON	ON	ON	ON	ON	ON	OFF
130	ON	OFF	ON	ON	ON	ON	ON	OFF
131	OFF	OFF	ON	ON	ON	ON	ON	OFF
132	ON	ON	OFF	ON	ON	ON	ON	OFF
133	OFF	ON	OFF	ON	ON	ON	ON	OFF
134	ON	OFF	OFF	ON	ON	ON	ON	OFF
135	OFF	OFF	OFF	ON	ON	ON	ON	OFF
136	ON	ON	ON	OFF	ON	ON	ON	OFF
137	OFF	ON	ON	OFF	ON	ON	ON	OFF
138	ON	OFF	ON	OFF	ON	ON	ON	OFF
139	OFF	OFF	ON	OFF	ON	ON	ON	OFF
140	ON	ON	OFF	OFF	ON	ON	ON	OFF
141	OFF	ON	OFF	OFF	ON	ON	ON	OFF
142	ON	OFF	OFF	OFF	ON	ON	ON	OFF
143	OFF	OFF	OFF	OFF	ON	ON	ON	OFF
144	ON	ON	ON	ON	OFF	ON	ON	OFF
145	OFF	ON	ON	ON	OFF	ON	ON	OFF
146	ON	OFF	ON	ON	OFF	ON	ON	OFF
147	OFF	OFF	ON	ON	OFF	ON	ON	OFF
148	ON	ON	OFF	ON	OFF	ON	ON	OFF
149	OFF	ON	OFF	ON	OFF	ON	ON	OFF
150	ON	OFF	OFF	ON	OFF	ON	ON	OFF
151	OFF	OFF	OFF	ON	OFF	ON	ON	OFF
152	ON	ON	ON	OFF	OFF	ON	ON	OFF
153	OFF	ON	ON	OFF	OFF	ON	ON	OFF
154	ON	OFF	ON	OFF	OFF	ON	ON	OFF
155	OFF	OFF	ON	OFF	OFF	ON	ON	OFF
156	ON	ON	OFF	OFF	OFF	ON	ON	OFF
157	OFF	ON	OFF	OFF	OFF	ON	ON	OFF
158	ON	OFF	OFF	OFF	OFF	ON	ON	OFF
159	OFF	OFF	OFF	OFF	OFF	ON	ON	OFF
160	ON	ON	ON	ON	ON	OFF	ON	OFF
161	OFF	ON	ON	ON	ON	OFF	ON	OFF
162	ON	OFF	ON	ON	ON	OFF	ON	OFF
163	OFF	OFF	ON	ON	ON	OFF	ON	OFF
164	ON	ON	OFF	ON	ON	OFF	ON	OFF
165	OFF	ON	OFF	ON	ON	OFF	ON	OFF
166	ON	OFF	OFF	ON	ON	OFF	ON	OFF
167	OFF	OFF	OFF	ON	ON	OFF	ON	OFF
168	ON	ON	ON	OFF	ON	OFF	ON	OFF
169	OFF	ON	ON	OFF	ON	OFF	ON	OFF
170	ON	OFF	ON	OFF	ON	OFF	ON	OFF
171	OFF	OFF	ON	OFF	ON	OFF	ON	OFF
172	ON	ON	OFF	OFF	ON	OFF	ON	OFF
173	OFF	ON	OFF	OFF	ON	OFF	ON	OFF
174	ON	OFF	OFF	OFF	ON	OFF	ON	OFF
175	OFF	OFF	OFF	OFF	ON	OFF	ON	OFF
176	ON	ON	ON	ON	OFF	OFF	ON	OFF
177	OFF	ON	ON	ON	OFF	OFF	ON	OFF
178	ON	OFF	ON	ON	OFF	OFF	ON	OFF
179	OFF	OFF	ON	ON	OFF	OFF	ON	OFF
180	ON	ON	OFF	ON	OFF	OFF	ON	OFF
181	OFF	ON	OFF	ON	OFF	OFF	ON	OFF
182	ON	OFF	OFF	ON	OFF	OFF	ON	OFF
183	OFF	OFF	OFF	ON	OFF	OFF	ON	OFF
184	ON	ON	ON	OFF	OFF	OFF	ON	OFF
185	OFF	ON	ON	OFF	OFF	OFF	ON	OFF
186	ON	OFF	ON	OFF	OFF	OFF	ON	OFF
187	OFF	OFF	ON	OFF	OFF	OFF	ON	OFF
188	ON	ON	OFF	OFF	OFF	OFF	ON	OFF
189	OFF	ON	OFF	OFF	OFF	OFF	ON	OFF
190	ON	OFF	OFF	OFF	OFF	OFF	ON	OFF
191	OFF	OFF	OFF	OFF	OFF	OFF	ON	OFF

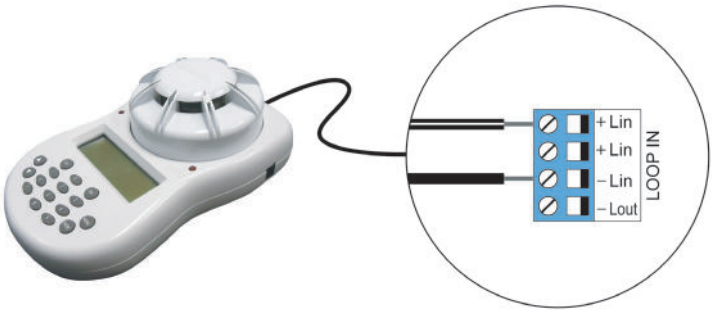
ADDRESS	SW1	SW2	SW3	SW4	SW5	SW6	SW7	SW8
192	ON	ON	ON	ON	ON	ON	OFF	OFF
193	OFF	ON	ON	ON	ON	ON	OFF	OFF
194	ON	OFF	ON	ON	ON	ON	OFF	OFF
195	OFF	OFF	ON	ON	ON	ON	OFF	OFF
196	ON	ON	OFF	ON	ON	ON	OFF	OFF
197	OFF	ON	OFF	ON	ON	ON	OFF	OFF
198	ON	OFF	OFF	ON	ON	ON	OFF	OFF
199	OFF	OFF	OFF	ON	ON	ON	OFF	OFF
200	ON	ON	ON	OFF	ON	ON	OFF	OFF
201	OFF	ON	ON	OFF	ON	ON	OFF	OFF
202	ON	OFF	ON	OFF	ON	ON	OFF	OFF
203	OFF	OFF	ON	OFF	ON	ON	OFF	OFF
204	ON	ON	OFF	OFF	ON	ON	OFF	OFF
205	OFF	ON	OFF	OFF	ON	ON	OFF	OFF
206	ON	OFF	OFF	OFF	ON	ON	OFF	OFF
207	OFF	OFF	OFF	OFF	ON	ON	OFF	OFF
208	ON	ON	ON	ON	OFF	ON	OFF	OFF
209	OFF	ON	ON	ON	OFF	ON	OFF	OFF
210	ON	OFF	ON	ON	OFF	ON	OFF	OFF
211	OFF	OFF	ON	ON	OFF	ON	OFF	OFF
212	ON	ON	OFF	ON	OFF	ON	OFF	OFF
213	OFF	ON	OFF	ON	OFF	ON	OFF	OFF
214	ON	OFF	OFF	ON	OFF	ON	OFF	OFF
215	OFF	OFF	OFF	ON	OFF	ON	OFF	OFF
216	ON	ON	ON	OFF	OFF	ON	OFF	OFF
217	OFF	ON	ON	OFF	OFF	ON	OFF	OFF
218	ON	OFF	ON	OFF	OFF	ON	OFF	OFF
219	OFF	OFF	ON	OFF	OFF	ON	OFF	OFF
220	ON	ON	OFF	OFF	OFF	ON	OFF	OFF
221	OFF	ON	OFF	OFF	OFF	ON	OFF	OFF
222	ON	OFF	OFF	OFF	OFF	ON	OFF	OFF
223	OFF	OFF	OFF	OFF	OFF	ON	OFF	OFF
224	ON	ON	ON	ON	ON	OFF	OFF	OFF
225	OFF	ON	ON	ON	ON	OFF	OFF	OFF
226	ON	OFF	ON	ON	ON	OFF	OFF	OFF
227	OFF	OFF	ON	ON	ON	OFF	OFF	OFF
228	ON	ON	OFF	ON	ON	OFF	OFF	OFF
229	OFF	ON	OFF	ON	ON	OFF	OFF	OFF
230	ON	OFF	OFF	ON	ON	OFF	OFF	OFF
231	OFF	OFF	OFF	ON	ON	OFF	OFF	OFF
232	ON	ON	ON	OFF	ON	OFF	OFF	OFF
233	OFF	ON	ON	OFF	ON	OFF	OFF	OFF
234	ON	OFF	ON	OFF	ON	OFF	OFF	OFF
235	OFF	OFF	ON	OFF	ON	OFF	OFF	OFF
236	ON	ON	OFF	OFF	ON	OFF	OFF	OFF
237	OFF	ON	OFF	OFF	ON	OFF	OFF	OFF
238	ON	OFF	OFF	OFF	ON	OFF	OFF	OFF
239	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF
240	ON	ON	ON	ON	OFF	OFF	OFF	OFF
241	OFF	ON	ON	ON	OFF	OFF	OFF	OFF
242	ON	OFF	ON	ON	OFF	OFF	OFF	OFF
243	OFF	OFF	ON	ON	OFF	OFF	OFF	OFF
244	ON	ON	OFF	ON	OFF	OFF	OFF	OFF
245	OFF	ON	OFF	ON	OFF	OFF	OFF	OFF
246	ON	OFF	OFF	ON	OFF	OFF	OFF	OFF
247	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF
248	ON	ON	ON	OFF	OFF	OFF	OFF	OFF
249	OFF	ON	ON	OFF	OFF	OFF	OFF	OFF
250	ON	OFF	ON	OFF	OFF	OFF	OFF	OFF
251								
252								
253								
254								
255								

Alternative Soft Addressing Option

Using our hand held MkII programmer (Part No: 48-004), the unit can be addressed electronically.

Step 1: Set all addresses to zero 0000000

Step 2: Connect leads to LOOP IN+ and LOOP IN- as shown below



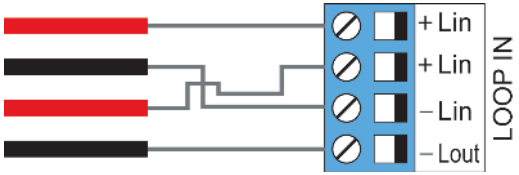
Step 3: Follow the procedure as described in the handheld programmer manual.

NOTE: When a device is soft addressed as above, the address CANNOT BE CHANGED by mechanical setting of the dip-switch. In order to re-enable the dip-switch the unit needs to be set electronically back to zero first.

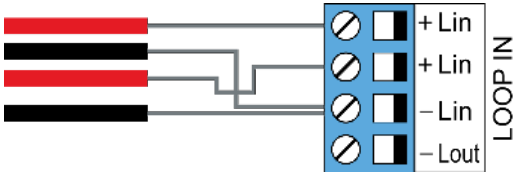
Isolator Function

The Isolator Function can be enabled or disabled according to the wiring method.

B. Enabling the Isolator Function



A. By-passing the Isolator Function



Functional Test Data

Command Bit	Function	Input Bit	Function
3	SELF TEST 0 = Normal 1 = Test active	3	SELF TEST 0 = Normal 1 = Test active
2	ENABLE ALARM LED 0 = Normal 1 = Illuminated alarm led	2	ENABLE ALARM LED CONFIRMED 0 = Normal 1 = Illuminated alarm LED
1	INCREASE MODE 0 = Increase mode disable 1 = Increase mode enable	1	INCREASE MODE CONFIRMED 0 = Increase mode disable confirmed 1 = Increase mode enable confirmed
0	RESET 0 = Normal 1 = Reset on	0	RESET 0 = Normal 1 = Reset on

Input Condition and Status

Status	Safe Area Circuit	Analogue	LED State
Short-circuit fault	<150Ω	8	-
Indeterminate	150Ω-200Ω	8 or 192	-/Alarm
Alarm	200Ω-2.6kΩ	192	Alarm
Indeterminate	2.6kΩ-3.5kΩ	192 or 72	Alarm /-
Normal	3.5kΩ-6.8kΩ	72	-
Indeterminate	6.8kΩ-15kΩ	8 or 72	-
Open-circuit fault	>15kΩ	8	-

Analogue Return Back

Analogue value	08	72	192
State	Open/short circuit	Normal	Alarm/Self-test
LED State	---	---	Alarm LED

Troubleshooting

Before investigating individual units for faults, it is very important to check that the system wiring is fault free. Many fault conditions are the result of simple wiring errors. Check all connections to the unit and make sure that the correct value resistors are fitted where necessary.

Faultfinding

Problem	Possible Cause
No response or missing	Incorrect address setting Incorrect loop wiring
Fault condition reported	Incorrect input wiring Capacitor not fitted with active EOL Detector removed Incorrect EOL Incorrectly fitted active EOL
Analogue value unstable	Dual address Loop data fault, data corruption
Constant Alarm	Incorrect wiring Incorrect end-of-line resistor fitted Incompatible control panel software

CE
0905

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14

GLT-235-DoP-1

EN54-18: 2005
EN54-17: 2005

Fire detection and fire alarm systems – Input/Output Devices
Fire detection and fire alarm systems – Short Circuit Isolators

Zeta Addressable Zone Monitor Module with Isolator
ZAZM-MI

Intended for use in fire detection and fire alarm systems in and around buildings

Response delay (response time) - PASS
Performance under fire conditions - PASS
Operational reliability - PASS
Durability of operational reliability: temperature resistance - PASS
Durability of operational reliability; vibration resistance - PASS
Durability of operational reliability; humidity resistance - PASS
Durability of operational reliability; corrosion resistance - PASS
Durability of operational reliability; electrical stability - PASS