

ZAIO/230 MAINS SWITCHING I/O INSTRUCTION MANUAL

(Fyreye MKII Protocol)

Description

The Mains IO Modules are fully monitored loop powered devices which permit the interfacing of third party equipment with the Fire Alarm Control panel using normally open dry contact connections.

The connection to the input is monitored for fault (open or short circuit) and Alarm conditions.



The interface is used to monitor the contacts of an external system which must be interfaced to the Fire Alarm System, for example a Flow Switch in a sprinkler system to indicate if the sprinklers have been activated or extinguishant level monitoring in Gas Extinguishing systems, etc.

Module is provided with a loop short-circuit isolator and with a voltage free single pole change over mains rated output. The output relay is always powered directly from the detection loop. It is not required to use an external 24V DC power supply. Relay operation is confirmed by an on-board red LED

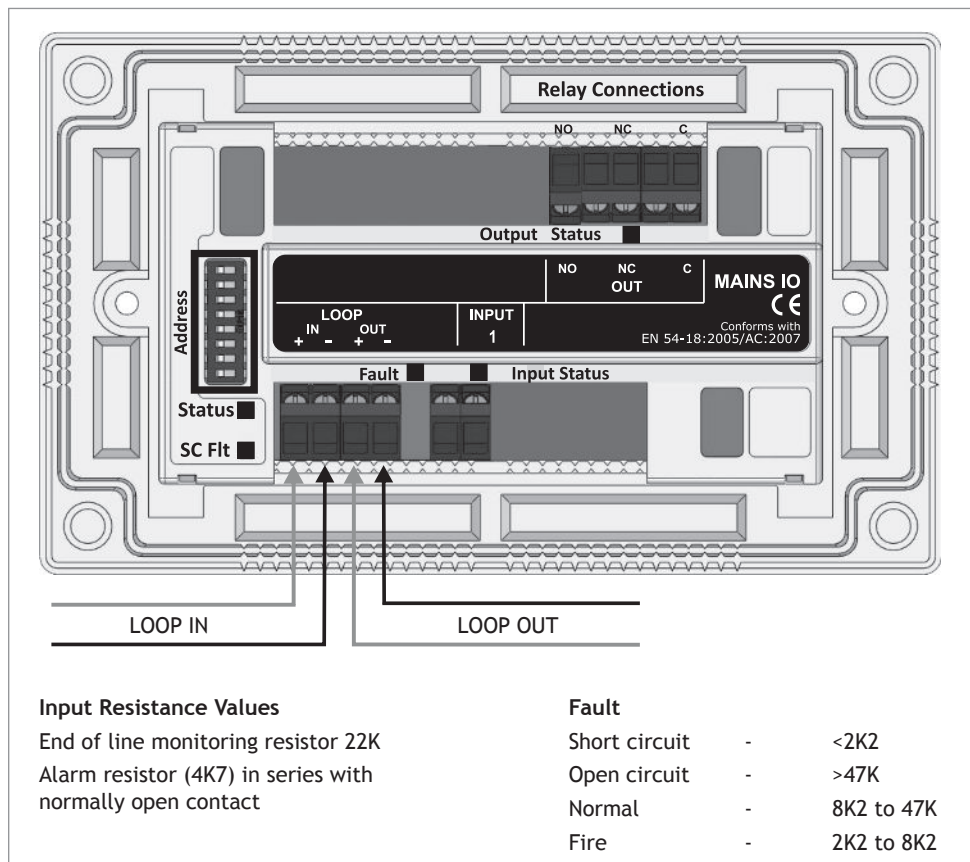
An 8 way D.I.L switch is provided to configure the module's address. This value can be set in the range 1 to 250.

Features

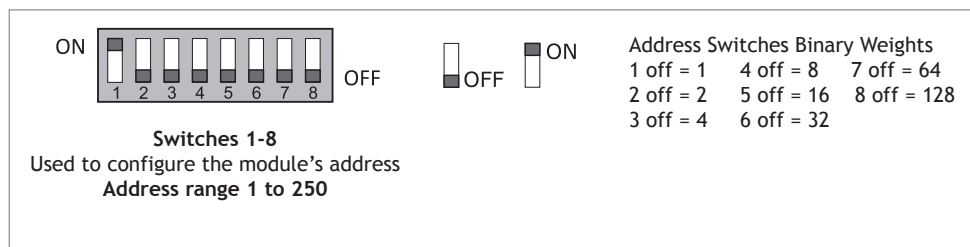
- ✓ Fast Activation Response
- ✓ Loop Powered
- ✓ Five Status LEDs provided
- ✓ Low Power Consumption
- ✓ Module features an integral short-circuit loop isolator
- ✓ Single mains rated relay contact

Connections

Device is polarized



D.I.L Switches Configuration



Address Settings

								Address	
	0								
62	ON	OFF	ON	ON	ON	ON	ON	SW1	
61	ON	OFF	ON	ON	ON	ON	ON	SW2	
60	ON	OFF	ON	ON	ON	ON	ON	SW3	
59	ON	OFF	ON	ON	ON	ON	ON	SW4	
58	ON	OFF	ON	ON	ON	ON	ON	SW5	
57	ON	OFF	ON	ON	ON	ON	ON	SW6	
56	ON	OFF	ON	ON	ON	ON	ON	SW7	
55	ON	OFF	ON	ON	ON	ON	ON	SW8	
54	ON	OFF	ON	ON	ON	ON	ON		
53	ON	OFF	ON	ON	ON	ON	ON		
52	ON	OFF	ON	ON	ON	ON	ON		
51	ON	OFF	ON	ON	ON	ON	ON		
50	ON	OFF	ON	ON	ON	ON	ON		
49	ON	OFF	ON	ON	ON	ON	ON		
48	ON	OFF	ON	ON	ON	ON	ON		
47	ON	OFF	ON	ON	ON	ON	ON		
46	ON	OFF	ON	ON	ON	ON	ON		
45	ON	OFF	ON	ON	ON	ON	ON		
44	ON	OFF	ON	ON	ON	ON	ON		
43	ON	OFF	ON	ON	ON	ON	ON		
42	ON	OFF	ON	ON	ON	ON	ON		
41	ON	OFF	ON	ON	ON	ON	ON		
40	ON	OFF	ON	ON	ON	ON	ON		
39	ON	OFF	ON	ON	ON	ON	ON		
38	ON	OFF	ON	ON	ON	ON	ON		
37	ON	OFF	ON	ON	ON	ON	ON		
36	ON	OFF	ON	ON	ON	ON	ON		
35	ON	OFF	ON	ON	ON	ON	ON		
34	ON	OFF	ON	ON	ON	ON	ON		
33	ON	OFF	ON	ON	ON	ON	ON		
32	ON	OFF	ON	ON	ON	ON	ON		
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25	ON	OFF	ON	ON	ON	ON	ON		
24	ON	OFF	ON	ON	ON	ON	ON		
23	ON	OFF	ON	ON	ON	ON	ON		
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15	ON	OFF	ON	ON	ON	ON	ON		
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12	ON	OFF	ON	ON	ON	ON	ON		
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10	ON	OFF	ON	ON	ON	ON	ON		
9	ON	OFF	ON	ON	ON	ON	ON		
8	ON	OFF	ON	ON	ON	ON	ON		
7	ON	OFF	ON	ON	ON	ON	ON		
6	ON	OFF	ON	ON	ON	ON	ON		
5	ON	OFF	ON	ON	ON	ON	ON		
4	ON	OFF	ON	ON	ON	ON	ON		
3	ON	OFF	ON	ON	ON	ON	ON		
2	ON	OFF	ON	ON	ON	ON	ON		
1	ON	OFF	ON	ON	ON	ON	ON		

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

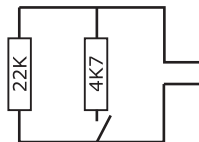
	ADDRESS							
128	ON	ON	ON	ON	ON	ON	ON	OFF
129	ON	ON	ON	ON	ON	ON	ON	OFF
130	ON	OFF	ON	ON	ON	ON	ON	OFF
131	ON	ON	ON	ON	ON	ON	ON	OFF
132	ON	ON	ON	ON	ON	ON	ON	OFF
133	OFF	ON	OFF	ON	ON	ON	ON	OFF
134	ON	OFF	OFF	ON	ON	ON	ON	OFF
135	OFF	OFF	OFF	ON	ON	ON	ON	OFF
136	ON	ON	ON	OFF	ON	ON	ON	OFF
137	OFF	ON	ON	ON	ON	ON	ON	OFF
138	OFF	OFF	ON	ON	ON	ON	ON	OFF
139	ON	ON	ON	ON	ON	ON	ON	OFF
140	ON	ON	ON	OFF	ON	ON	ON	OFF
141	OFF	ON	ON	OFF	ON	ON	ON	OFF
142	ON	ON	ON	OFF	ON	ON	ON	OFF
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158	ON	ON	ON	OFF	ON	ON	ON	OFF
159	OFF	OFF	OFF	OFF	OFF	ON	ON	OFF
160	ON	ON	ON	ON	ON	ON	ON	OFF
161	OFF	ON	ON	ON	ON	ON	ON	OFF
162	ON	ON	ON	ON	ON	ON	ON	OFF
163	OFF	OFF	ON	ON	ON	ON	ON	OFF
164	ON	ON	ON	ON	ON	ON	ON	OFF
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167	OFF	ON	ON	ON	ON	ON	ON	OFF
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	ADDRESS							
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
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196	ON	ON	OFF	ON	ON	ON	OFF	OFF
197	OFF	ON	OFF	ON	ON	ON	OFF	OFF
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199	OFF	OFF	OFF	ON	ON	ON	OFF	OFF
200	ON	ON	ON	OFF	ON	ON	OFF	OFF
201	OFF	ON	ON	ON	ON	ON	OFF	OFF
202	ON	ON	ON	ON	ON	ON	OFF	OFF
203	OFF	OFF	ON	OFF	ON	ON	OFF	OFF
204	ON	ON	ON	OFF	ON	ON	OFF	OFF
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206	ON	OFF	OFF	ON	ON	ON	OFF	OFF
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208	ON	ON	ON	ON	ON	ON	OFF	OFF
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220	ON	ON	ON	ON	ON	ON	OFF	OFF
221	ON	ON	ON	ON	ON	ON	OFF	OFF
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246	ON	OFF	OFF	ON	ON	ON	OFF	OFF
247	OFF	OFF	OFF	ON	ON	ON	OFF	OFF
248	ON	ON	ON	ON	ON	ON	OFF	OFF
249	ON	ON	ON	ON	ON	ON	OFF	OFF
250	ON	OFF	ON	ON	ON	ON	OFF	OFF
251								
252								
253								
254								
255								

Connections

Input

Monitored for Open and Short Circuit - Can be driven by conventional panel's zone repeater outputs. Each I/P should be fitted with 22 K Ohm end-of-line resistor. Fire condition set with 4.7 K Ohm resistor in parallel with e.o.l resistor.



Output

The mains rated relay output provided is a latching relay. In order to reset it apply reset to the panel or alternatively remove power to the panel and re-apply. After a few seconds the relay will revert to it's default position.

Reporting Details

In order to indicate the status of the module's working condition, the following LEDs are provided:

Status: This will flash GREEN every time the address associated with the module is polled by the addressable panel.

Input Status: An I/P status RED LED is provided for the input. This RED LED will be illuminated continuously whenever there is a FIRE condition present at the input terminals. The analogue value reported by the module in this state is 64.

Output Status: An O/P status RED LED is provided for the output. This RED LED will be illuminated continuously whenever the output relay is activated.

Fault: This YELLOW LED will be activated whenever there is either an open or short circuit fault on that particular input. If there is an open or short circuit condition, the analogue value reported to the addressable panel is 4.

SC Fault: This YELLOW LED will be ON when there is a short circuit in the loop.

Technical Specifications

MODEL	ZAIO/230
Part No	48-126
Description	Mains Switching I/O Unit - Fyreye MKII Protocol
Supply Voltage	Loop Powered - 17V to 30V DC
Loop Current - Quiescent (I_Q)	1.3 mA
Loop Current - Alarm	2.9 mA
Loop Current - Fault	2.9 mA (SC) - 2.6 mA (OC)
Loop Current - Output Active	2.8 mA
Output Relay Contact Rating	8A 250 VAC/30V DC
Max. Cable Size	2.5 mm ²
Case Material	ABS
Max. Humidity	95% RH Non-Condensing
Operating Temperature	-10°C to 50°C
Dimensions	150 (W) x 90 (L) x 32 (H)
Weight	210g inc. packaging

Installation Manual Modification History

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Issue	Date	Changes
1.0	04/11/2013	Initial Release
1.1	4/10/2017	Added part number and MKII ref to title. Corrected "switch 8 use"