ZIOU/230 – MAINS IO INSTRUCTION MANUAL

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 125.
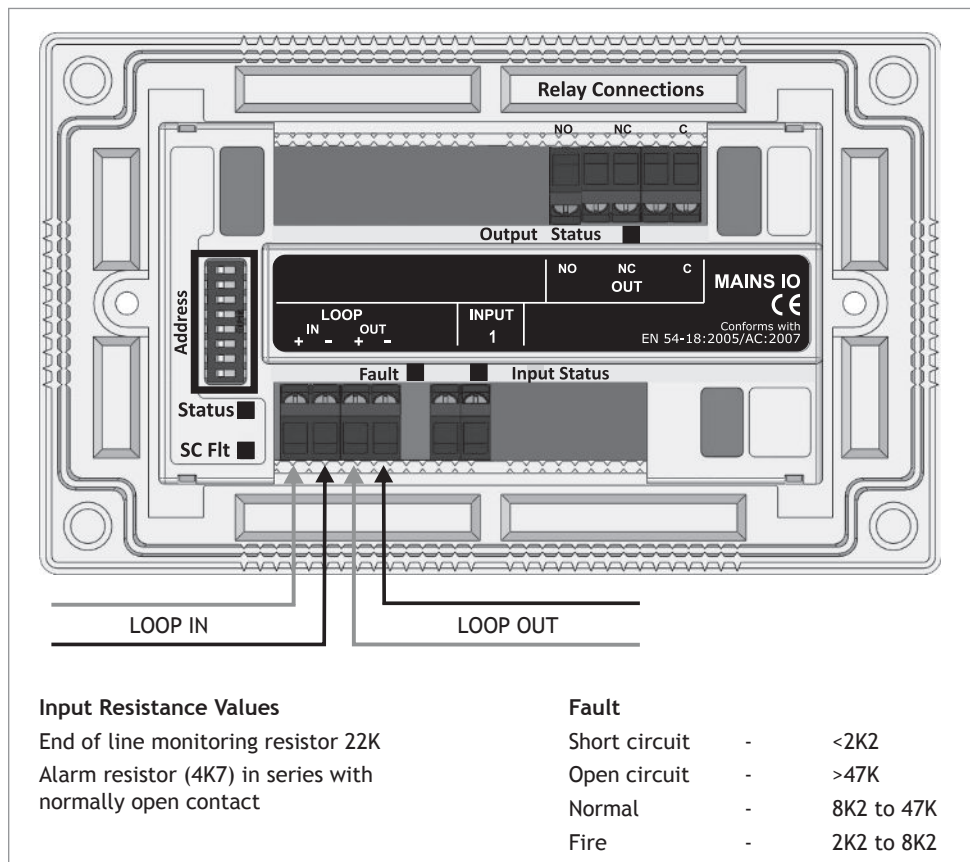
The following programmable functions are available: Input Activation Mode, Delayed Input Alarm Activation, Output Delayed Activation.
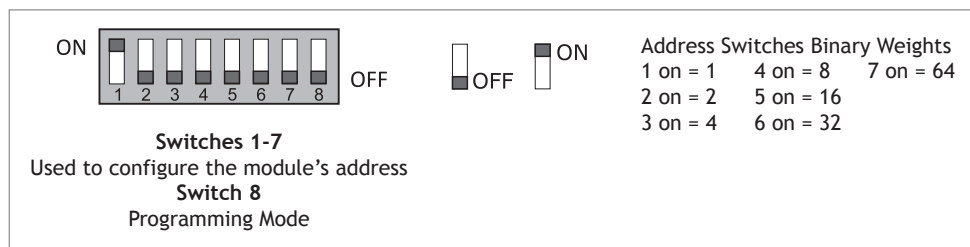
Features

✓ 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
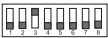
Device is polarized

Input Resistance Values

End of line monitoring resistor 22K

Alarm resistor (4K7) in series with normally open contact

Fault

Short circuit	-	<2K2
Open circuit	-	>47K
Normal	-	8K2 to 47K
Fire	-	2K2 to 8K2
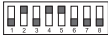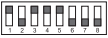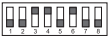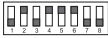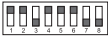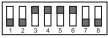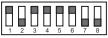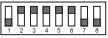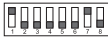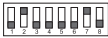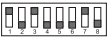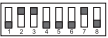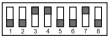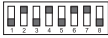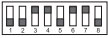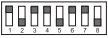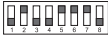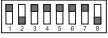
D.I.L Switches Configuration

Switches 1-7
Used to configure the module's address
Switch 8
Programming Mode

Address Switches Binary Weights
1 on = 1   4 on = 8   7 on = 64
2 on = 2   5 on = 16
3 on = 4   6 on = 32

Address Settings

01	02	03	04	05	06	07	08
09	10	11	12	13	14	15	16
17	18	19	20	21	22	23	24
25	26	27	28	29	30	31	32
33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48
49	50	51	52	53	54	55	56
57	58	59	60	61	62	63	64
65	66	67	68	69	70	71	72
73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88
89	90	91	92	93	94	95	96
97	98	99	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			

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.
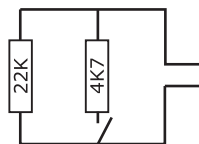
Output

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	ZIOU/230
Part No	48-125
Description	Mains Switching I/O Unit - Standard 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	-10ºC to 50ºC
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	06/2013	Initial Release
1.1	29/07/2013	Format changed to Zeta
1.2	04/11/2013	MKII version removed from table on p.4