ADDRESSABLE INTERFACE UNITS

ZIOU – ADDRESSABLE INPUT OUTPUT UNIT

Description

The Zeta addressable Input Output Unit (ZIOU) is used to interface external equipment to any Zeta Analogue Addressable fire alarm system. It has a switch monitoring input with a 47k end of line resistor, and a Volt Free SELV relay output.

The unit has a built in loop short circuit isolator to help keep the unit operational in the event of a problem on the addressable loop wiring.

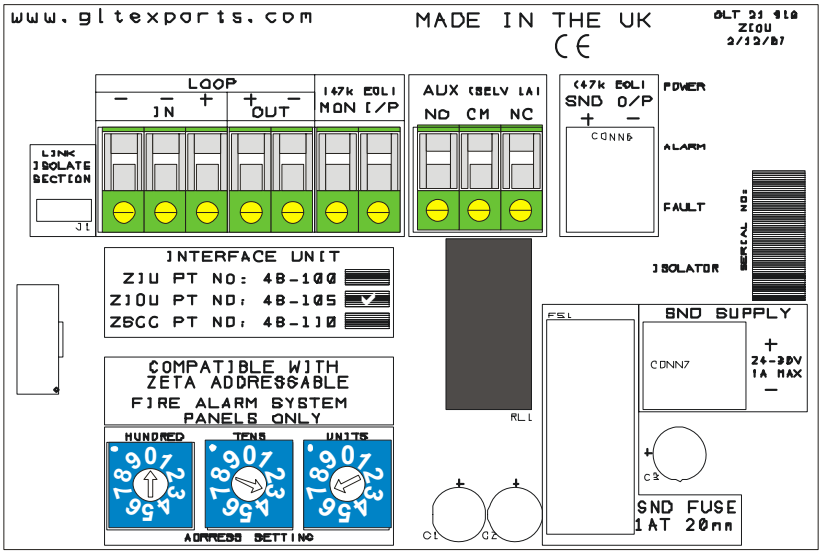
It has 3 indication LEDs on the front of the unit. One for Alarm, one for local fault and one for addressable loop fault (Isolator active).

Connections & Address Setting

The ZIOU has the following connections:-
Loop IN +
Loop IN – (2 connections)
Loop OUT +
Loop out –
MON I/P (2 connections)
AUX RELAY (3 connections, NO, CM, NC)

Normally the loop cables will be connected one pair of +/- to the IN terminals (use either IN- terminal), and the other pair of cables to the OUT terminals. If the isolator needs to be PERMANENTLY bypassed, connect the – OUT to the spare –IN terminal. To temporarily bypass the isolator (eg for a DVM cable continuity check), fit a shorting link to position J1.

The ZIOU is now addressed by 3 rotary switches, one for 100`s one for 10`s, one for units. Select an address between 1 & 126. (The picture shows 037)



PCB Identification

The same PCB is used for The ZIU (input only), ZIOU (Input with volt free relay output), and ZSCC (sounder circuit controller). Each PCB will have an Identification mark (tick or "X") to show which model it is.

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Protocol usage

The ZIOU addressable interface unit`s relay is controlled by command bit 0 from the control panel. It`s operation will depend on whether the control panel has pre-configured outputs (EG Simplicity), or programmable outputs (EG Premier AL)

All it`s indication LEDs are under its own control.

In the event of an alarm, it will set input bit 0 to an active condition, as well as setting it's analogue value to 64 to indicate it's activation.

Technical Data

OPERATING VOLTAGE	17 – 33V DC
QUIESCENT CURRENT	900uA
ALARM CURRENT	10.6mA
FAULT CURRENT	2.8mA
ISOLATING CURRENT	7.3mA
INPUT END OF LINE	47K
DEVICE NORMAL RESISTANCE (RETURN VALUE 16)	10K to 75K
DEVICE OPEN CCT FAULT RESISTANCE (RETURN VALUE 4)	85K to open circuit
DEVICE ALARM RESISTANCE (RETURN VALUE 64)	0K to 5K
RELAY RATING	1 AMP SELV ONLY
OPERATING TEMPERATURE	0ºC to 50ºC
MAX HUMIDITY	95% RH Non Condensing
IP RATING	IP43
SIZE	127 x 88 x 59 mm
WEIGHT	220g

Short Circuit Isolator Specification

MAXIMUM LINE VOLTAGE	33V DC
MINIMUM LINE VOLTAGE (NON ISOLATING)	17V DC
MAXIMUM RATED CONTINUOUS CURRENT	1 Amp
MAXIMUM RATED SWITCHING CURRENT	3 Amp
MAXIMUM LEAKAGE CURRENT (ISOLATING)	0.7 mA
MAXIMUM SERIES IMPEDENCE	0.2 Ohm
ISOLATION VOLTAGE	15.6V +/- 0.5V
ISOLATION RESPONSE TIME	25 us to 300 us
RECONNECTION VOLTAGE	18.5V +/- 0.5V
RECONNECTION TIME	UP TO 2 SEC

Troubleshooting

DEVICE NOT SEEN BY PANEL	CHECK ADDRESS SETTING CHECK WIRING TO DEVICE (FOR CONTINUITY & POLARITY) CHECK FOR LOOP VOLTAGE AT DEVICE + & - TERMINALS
DEVICE REPORTS A FAULT (ANALOGUE VALUE 4)	CHECK WIRING FROM DEVICE TO MONITORED CONTACT CHECK FOR CORRECT END OF LINE
DEVICE REPORTS AN ALARM (ANALOGUE VALUE 64)	CHECK IF MONITORED CONTACTS ARE OPERATING CORECTLY CHECK FOR SHORT CIRCUIT ON WIRING CHECK THAT A NORMALLY CLOSED CONTACT IS **NOT** USED
ANALOGUE VALUE UNSTABLE	CHECK FOR DOUBLE ADDRESS FAULTS CHECK FOR LOOP DATA CORRUPTION WITH LOOP TEST TOOL
LOOP FAULT (ISOLATING) LED ON	CHECK FOR SHORT CIRCUIT ON LOOP CHECK FOR WRONG POLARITY CONNECTION TO LOOP DEVICES CHECK FOR TOO MANY DEVICES BETWEEN ISOLATORS
RELAY NOT OPERATING IN ALARM	PREMIER AL: - CHECK RELAY HAS BEEN PROGRAMMED CORRECTLY PREMIER AD:- RELAY MAY BE CONFIGURED AS ZONAL IF DETECTORS ARE ADDRESSED IN THE SAME ZONE CHECK RELAY RATING HAS NOT BEEN EXCEEDED DISCONNECT LOAD & CHECK THAT RELAY SWITCHES

Other information

Like all electronic equipment, at the end of it`s working life this unit should not be disposed of in a refuse bin.
It should be taken to a local reprocessing site as per the guidelines of the WEEE directive, for correct disposal.

Input/Output section designed to EN54-18:2005
Short Circuit Isolator section designed to EN54-17:2005