Description

The Zeta Quad Zone Monitor Unit (ZTZM/4) is used to connect any conventional Detectors (such as Smoke, Heat, or flame) to any Zeta Analogue Addressable fire alarm system. It has 4 detection circuits, and needs external power to be supplied from a suitable 24 V PSU.

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 Internal indication LEDs for Zone Alarm (red), and Zone fault (yellow) for each of the detector circuits. It also has one for addressable loop fault (Isolator active).

Connections & Address Setting

The ZTZM/4 has the following connections:-
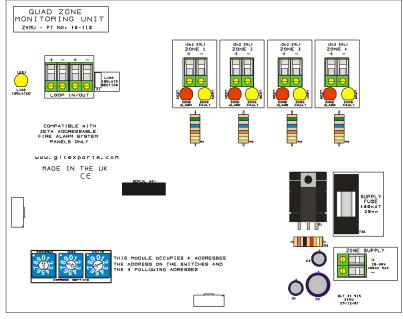Loop IN +
Loop IN –
Loop OUT +
Loop OUT –
ZONE INPUT (4 sets of 2 connections)
SND SUPPLY (2 connections, +24V & 0V)

Normally the loop cables will be connected one pair of +/- to the IN terminals, and the other pair of cables to the OUT terminals. To temporarily bypass the isolator (eg for a DVM cable continuity check), fit a shorting link to position J1.

The ZTZM/4 is addressed by 3 rotary switches, one for 100`s one for 10`s, one for units. Select an address between 1 & 123. This unit will answer at 4 different addresses. The address set on the unit is for circuit 1, address +1 for circuit 2, address +2 for circuit 3 and address +3 for circuit 4.

PCB Identification

The Quad Zone Monitor Unit uses its own unique PCB. It is not used with any other Interface units. It is labeled Z4MU

Protocol usage

The ZTZM/4 addressable interface unit has no outputs. However it`s zone reset signals (which turns off the zone voltage to reset conventional detectors) are controlled by command bit 0 from the control panel. Each circuit has to be reset at its individual address.

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

Each of the 4 zone inputs will report an analogue value of 16 for normal condition, and a value of 64 for an alarm condition. They will also return a fault value of 4 if it loses its external supply, or has seen a problem with the field wiring (open circuit or short circuit)

Technical Data

OPERATING VOLTAGE	17 – 33V DC
QUIESCENT CURRENT	800uA (40 mA from ext PSU)
ALARM CURRENT (4 CIRCUITS)	780uA (105mA from PSU)
FAULT CURRENT (MAX FOR 4 CIRCUITS)	820uA (175mA from PSU)
ISOLATING CURRENT	7.3mA (40 mA from ext PSU)
SOUNDER END OF LINE	2K2
LINE MONITORED CONDITIONS	Open & Short Circuit & ALARM
ALARM CONDITION	Zone current >14mA
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
SOME CIRCUITS SEEN, BUT NOT ALL	CHECK ADDRESS NOT ZERO OR MORE THAN 123
DEVICE REPORTS A FAULT (ANALOGUE VALUE 4)	CHECK WIRING FROM ZTZM/4 TO END OF LINE FOR OPEN CCT CHECK WIRING FROM ZTZM/4 TO E.O.L FOR SHORT CCT CHECK FOR CORRECT END OF LINE (2K2) CHECK ZTZM/4 FUSE IS INTACT CHECK THAT DETECTORS FITTED ARE COMPATIBLE
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
DETECTOR NOT TRIGGERING AN ALARM	CHECK VOLTAGE TO ZONE OK CHECK THAT DETECTOR TAKES BETWEEN 12 & 30 mA CHECK DETECTOR LED LIGHTS IN ALARM CHECK FOR SHORT CIRCUITS BETWEEN ZONES

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.

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

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