

Microprocessor Controlled Vehicle Detector

Features:

- Self-contained miniature boxed unit
- 11-pin relay base connector
- Connectors available for DIN rail mounting (EN 50.022)
- Presence and pulse or fault output
- Fast automatic tuning
- Preset presence time
- Choice of sensitivity levels
- Comprehensive fault detection
- Heavy duty relay outputs
- Choice of supply voltage
- High intensity LED indicator
- Watchdog circuit

The use of a microprocessor combines high performance, with ease of use, in a compact unit.

Primarily intended for parking/barrier applications, this unit will find other uses, including traffic and security. Exceptional noise immunity and reliability, enables this unit to function in normally unacceptable conditions.

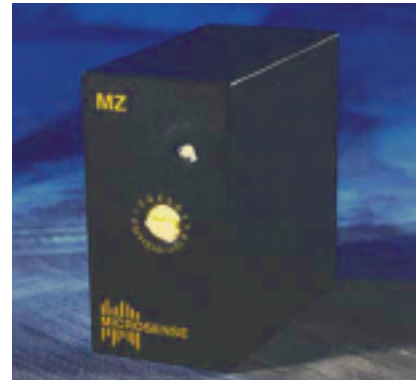
All detection mode functions are set by means of a front panel rotary switch. Tuning is automatic and fast. Once tuned, the detector will track all environmental drifts continuously. The selected presence time is substantially independent of vehicle type. Timing is normally from first vehicle entry.

A loop inductance outside the tuning range of the detector is sensed as a fault. Failure of the internal oscillator, will cause the LED to flash at <0.5 Hz. Open circuit faults will cause the LED to flash at 1Hz.

Short circuit faults will cause the LED to flash at >2Hz. Any of these fault conditions will cause the presence relay to give a permanent presence call.

The unit will attempt to retune until the fault is cleared. Whilst re-tuning, the presence call is maintained.

A watchdog circuit is built into the microprocessor, this will reset the detector in the event of a software timeout.



Where optionally specified, the pulse output is replaced with a fault output. The presence relay will not be active during a fault with this option.

Some vehicles (e.g. high chassis lorries with steel braced radial tyres) produce an increase in inductance, as they pass over the loop. This will cause some detectors to 'lockup'. The MZ range of detectors incorporates a feature to prevent this. Normal operation is unaffected.

SPECIFICATIONS:

Operating Modes:

Selected by a 16-position front panel rotary switch. Table 1 shows the presence times, sensitivities and frequency modes (to avoid crosstalk), for each setting.

Table 1 - Mode Switch Position

Frequency Mode	HIGH		LOW		
Presence Time (Mins)	5	120	5	120	
SENSITIVITY	Low	0	4	8	12
	M/Low	1	5	9	13
	M/High	2	6	1	14
	High	3	7	11	15

Tuning Range:

The tuning range depends on the frequency setting: 20 to 2000 μ H (high frequency) and 10 to 400 μ H (low frequency).



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MZ



Tune Time:

Nominally 2 seconds

Operating Temperature Range:

-40 to +80 °C

Reset:

The detector is automatically reset when power is applied or the mode switch is adjusted. If required, a reset can be effected by rotating the mode switch one (or more) positions and returning to the required setting.

Response Times (All Sensitivities):

Standard response time is typically 150 ms. Fast response <70 ms.

Lightning and Transient Protection:

All inputs are transformer-isolated, protected from over-voltage on loop leads and flash over from internal circuit to ground.

Supply Voltage:

230 or 115 V AC +20% 3 VA max. 24 or 12 V AC/DC +20% 120 mA max.

Outputs:

Presence:

Changeover relay (de-energised for detect).

Pulse:

Relay contacts changeover for 100 +5 ms on detection (standard unit).

Fault:

Changeover relay (de-energised when s/c or o/c loop). Contacts rated 600 VA, 5 A, 250 V AC, 30 V DC.

Note:

When fault output is used, presence relay is inactive during fault conditions.

Failsafe:

Power failure will cause the presence output to give a detect call, the fault output will indicate a fault.

Physical:

38 x 76 x 72 mm (W x H x D) (excluding connector).

Connections:

Via 11 pin 'relay base' at rear of box.

Pin 1 AC live/DC+

Pin 2 AC neutral/DCPin

Pin 3 Pulse output, relay common*

Pin 4 Pulse output, relay contact momentarily closed*

Pin 5 Presence output, relay contact closed for detect

Pin 6 Presence output, relay common

Pin 7 Loop input

Pin 8 Loop input

Pin 9 Safety ground

Pin 10 Presence output, relay contact open for detect

Pin 11 Pulse output, relay momentarily open*

*Alternative function for fault output Option 7

Pin 3 Fault output, relay common

Pin 4 Fault output, contact open for fault

Pin 11 Fault output, contact closed for fault

Ordering Information:

Order as:

MZ-xx

Voltage (12, 24, 115 or 230): _____

Accessories:

Order as - MHS11 harness (colour coded) or MHS11(EBT) harness (single colour with idents).

Options:

A number of options are available on the MZ detector.

Please contact the Sales Department for further details or with enquiries about our product range.