



### DESCRIPTION

The model **103 speed switch** has been designed to monitor the speed of an engine or piece of rotating machinery by detecting the pulses from a magnetic pick-up device.

The electronics are housed in a **robust metal case** encapsulated in resin for environmental protection. The case is suitable for vertical mounting. Connections to the module are via 1/4" blade terminals.

The module can be set to operate the **independent relays** at different speed settings. Either relay can be adjusted to operate from between 10% to 140% of the engines rated running speed.

This **flexibility** allows the module to be used for many different applications including Underspeed or Overspeed protection or crank disconnect facilities.

**Adjustment** of the trip points is via two pre-set potentiometers. Turning clockwise increases the appropriate trip point and turning anti-clockwise decreases the appropriate trip point. The appropriate LED will be illuminated to indicate that the trip has been activated.

On application of a continuous DC supply voltage, the module will start counting pulses from the magnetic pick-up. Should these pulses exceed the pre-set RPM level, then the trips will be activated and the relay contact will change state.

A **latch** is provided to prevent the release of the relays, which can be disabled by applying a continuous negative signal to the 'RESET' terminal.

To **reset** the latch, apply a negative signal to the 'RESET' terminal. Removal of the +Ve DC supply from the module will also reset the latch

**Meter calibration** is via a pre-set potentiometer, which enables the meter output to be scaled to match the optional RPM meter. Rotating the pre-set potentiometer clockwise increases the meter reading.

**NOTE**  
A version is available where relay 1 is permanently non-latching. Relay 2 is latching/non-latching as normal.



### SPECIFICATION

**DC SUPPLY :**

The 103 is powered from the plant battery or from a low voltage supply between 10 to 32V Continuous. The module is electronically stabilised and requires no internal batteries to meet this specification. Internal protection is provided for polarisation errors.

**SENSOR INPUT :**

Magnetic Pick-up  
Impedance 10Ω to 1KΩ.  
Input signal range 1V to 70V AC RMS.

**TRIP LEVELS :**

10% to 140% of rated RPM.

**RELAY CONTACTS :**

16Amp @32VDC rated voltage  
free change-over  
(50V DC Max Rating).

**DIMENSIONS :**

72x87x27.5mm housing.

**OPERATING TEMPERATURE RANGE :**

-15 to +70°C

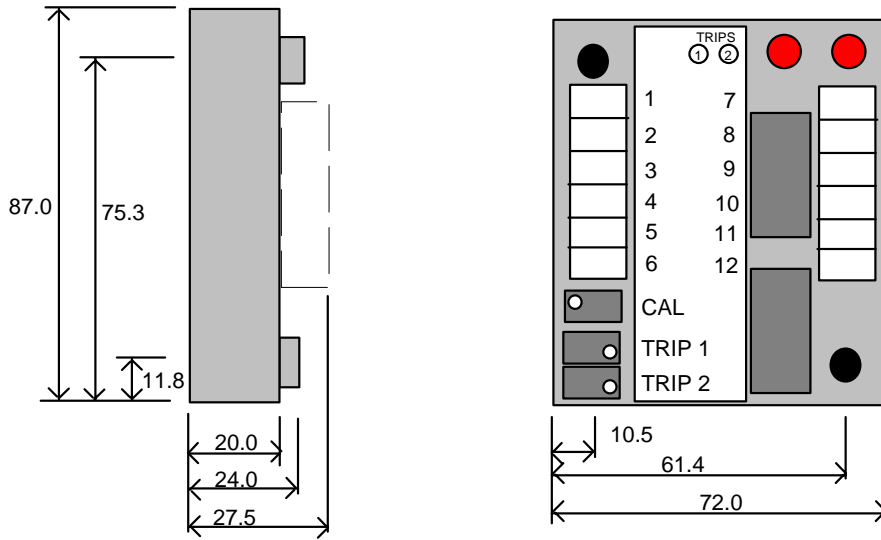
**INDICATIONS :**

'Trip' Active LED per channel.

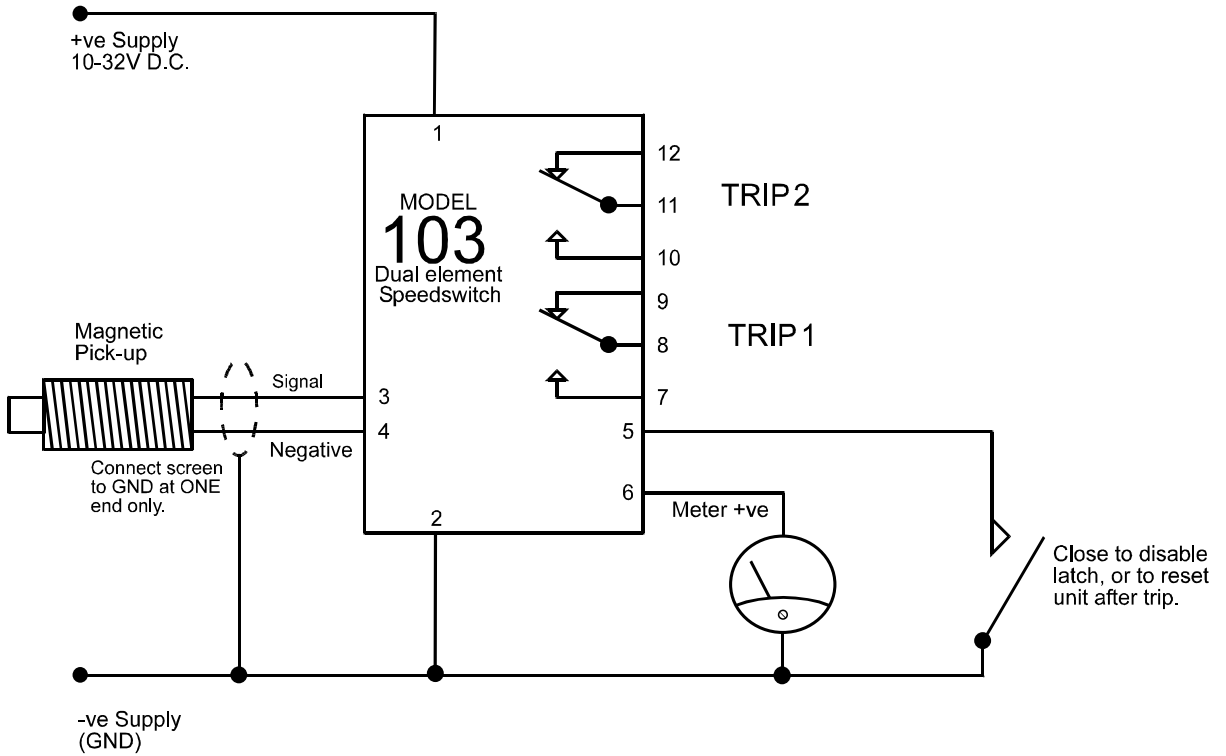
**METER OUTPUT :**

1 milli-amp full scale deflection drive available.

## CASE DIMENSIONS



## TYPICAL CONNECTIONS



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