

The Zero Speed Switch (ZSS) detects the absence or presence of motion of rotating, reciprocating or conveying equipment. This non-contacting unit provides cost effective equipment protection even in the harshest conditions. Typical applications include tail pulley shafts, driven pulleys, motor shaft sensing, and screw conveyor flights.

This rugged unit is impervious to dust, dirt, build-up and moisture, and is ideal for such primary industries as mining, aggregate and cement plants. Operating where other systems are prone to failure, the non-contacting design eliminates the need for lubricating, cleaning and part replacement. Downtime and clean-up expenses associated with conveying equipment failure are reduced by the ZSS. It alarms to minimise spillage, prevent extensive damage and even fire caused by belt slippage at the head pulley, and warn against conveyor malfunction.

The ZSS has built-in selectable start delays, and one form 'C' relay contact. With a phenolic body, it operates from -40 to 60°C (-40 to 140°F).



Product Features

- Up to 38 mm (1.5") gap between ZSS and targets
- Rugged, low maintenance suitable for tough environments
- One form 'C' relay contact (SPDT)
- Provides cost-effect protection

Technical Specifications

Power

- 115 Vac / 50-60 Hz, 10 VA
- 230 Vac / 50-60 Hz, 10 VA
- ± 10% of rated voltage

Output

- 1 form 'C' (S.P.D.T.) dry relay contacts, rated 5 A at 250 Vac, fail-safe operation
- Time Delay
 - start up : 3 seconds ± 1 fixed
- Zero Speed
 - 5 seconds ± 1 (minimum speed 5 to 7.5 ppm)* or
 - 10 seconds ± 2 (minimum speed 10 to 15 ppm)

Operating Temperature

- - 40 to 60°C (- 40 to 140°F)

Dynamic Range

- minimum 6 or 12 pulses per minute*
- maximum 2400 pulses per minute

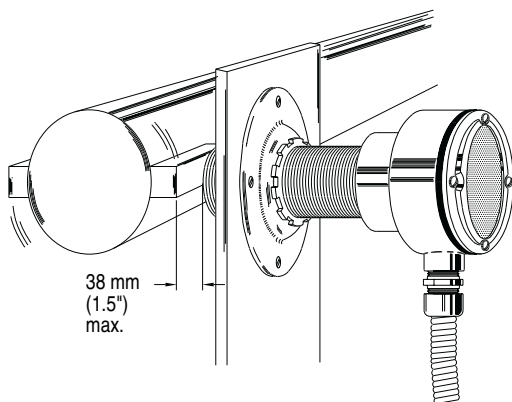
Shipping Weight

- 2 kg (4.4 lbs.)

Approvals

- CSA general purpose
- **NOT CE compliant**

Mounting



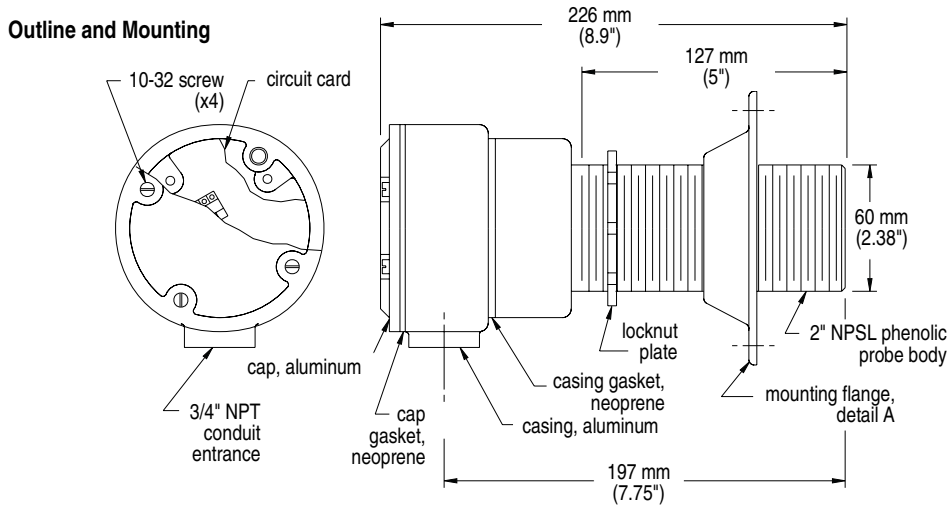
The ZSS probe should be mounted, using the supplied mounting flange, onto a vibration free structure. The gap between the probe and the target should be sufficient such that there is no danger of the target damaging the probe. The maximum allowable gap is 38 mm (1.5") from the face of the target to the face of the probe for target dimensions of 25 x 25 x 50 mm (1 x 1 x 2"). The Zero Speed Switch is sensitive to lateral disturbances to its magnetic field. If the Zero Speed Switch is responding to motion from an interfering target, move the Zero Speed Switch or install a ferrous plate (steel) as a shield between the Zero Speed Switch and the interfering target. Where possible, the probe should be mounted such that the conduit entry is pointing downward to avoid accumulation of condensate in the casing. Connection of the probe should be made via flexible conduit for easier removal or adjustment of the probe.

* Selected via a common jumper.

Specifications are subject to change without notice.

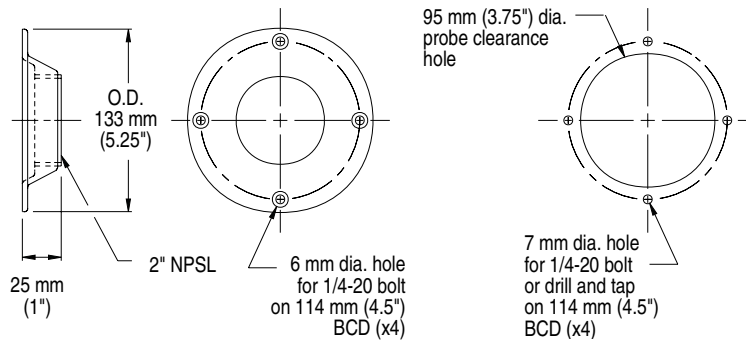
Zero Speed Switch

Dimensions

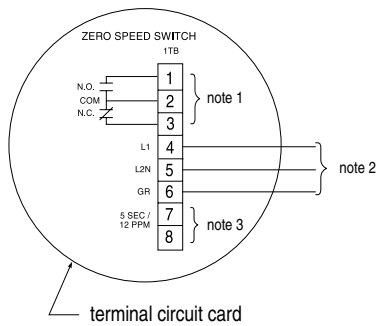


Detail A

Mounting

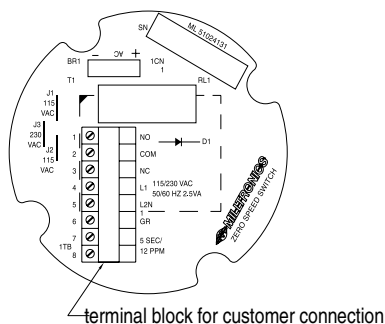


Wiring



Notes

1. Dry contacts shown in de-energized (alarm or shelf) state.
2. ZSS is manufactured for 115 or 230 Vac operation. Correct voltage must be supplied. Voltage lower than the specified will result in an inoperative condition. Voltages higher than the specified will severely change the unit.
3. For 5 second contact closure delay on zero speed and 12 PPM range, connect jumper across 1 TB-7/8. No jumper connection will provide 3 second delay and 6 PPM range.



Notes

- For 115 Vac operation: jumpers J1 and J2 only are installed.
- For 230 Vac operation: jumper J3 only is installed.



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