



**ZSS-I**

**ZSS-I** is a self-contained device used to detect and send output alarms for machinery under speed or zero-speed conditions, as well as early jamming detection. The early detection of the under speed condition is useful in reducing downtime due to jamming or transmission failure, especially in the cases of medium and large motors.

The zero-speed condition is used extensively for safety interlocking applications, including: conveyors, pumps, mixers, centrifugal separators, elevators, saws, and crushers.

As long as the speed (number of pulses per minute) is above the threshold level – adjustable via 25 turn potentiometer within the threshold range – the output circuit assumes its closed state. When the actual speed falls below the threshold level – the output circuit assumes its open state. To preserve the start up delay, the switch should be reset by removing and reapplying the power supply.

When the line voltage is initially applied, the output automatically assumes its closed state for the duration of the start-up delay. This allows the mechanical assembly to overcome inertia and reach its nominal speed, greatly simplifying the interlocking circuit. After the start-up delay, the switch will perform as described above.

Care should be taken not to exceed the maximum frequency rating above which the sensor cannot detect the target and therefore assumes “Zero speed” condition.

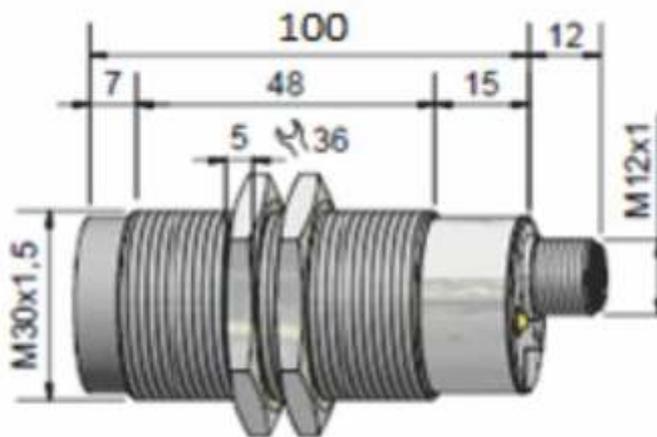
The instrument is a combination of a High frequency Inductive sensor and a speed measuring circuit. It has a preset start up delay to take care of the acceleration period of the machine whose speed is being measured. Open collector PNP output is available for connecting to a PLC or for alarm annunciation or control of the motor driving the machine.

## Salient Features:

- Tubular proximity type design for easy installation
- SS / Brass housing with PTFE facing to withstand oily and greasy conditions
- Dust and weatherproof construction with epoxy potted electronics, IP67 protection
- Visible LED indicators for Pulse, Alarm and Normal operation
- Linear 25 Turn potentiometer for adjusting the speed threshold
- Built-in fixed power-up delay to overcome start-up inertia
- Reverse polarity protection for input supply and current limited open collector PNP output

## Technical Specifications:

<b>Housing :</b>	SS /Brass electroplated M30 X 1.5 X 100mm length Non-Flush mountable with 2Nos. SS /Brass check-nuts
<b>Operating Voltage :</b>	10 to 30 VDC
<b>Output current max :</b>	100 ma Open collector PNP
<b>No Load current :</b>	15 ma
<b>Maximum cycles of operation :</b>	6000 Pulses/min
<b>Threshold frequency range :</b>	6 to 150 or 120 to 3000 Pulses / min
<b>Start up delay :</b>	9 Sec.
<b>Sensing range :</b>	10 mm
<b>Tolerable ambient temperature :</b>	0 to 60 deg C
<b>Indication :</b>	LEDs - Yellow – Pulse, Red – Alarm, Blue – Normal
<b>Cable :</b>	2 Mtrs. Shielded



**NB: Specifications liable to change without notice in lieu of product improvement or up gradation**



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