

The Milltronics MD-256 speed sensor is a high resolution shaft driven speed sensor that operates in conjunction with a conveyor belt scale, providing a signal to an integrator which computes the rate of material being conveyed. At only 1.22 kg (2.68 lb), it is one of the lightest and most durable units ever developed for monitoring conveyor belt speed. With its rugged cast aluminium housing, it is suitable for outdoor installation, and its low weight prolongs bearing life.

It is directly coupled to a rotating tail or bend pulley shaft to ensure accurate belt-travel readout, eliminating problems caused by belt slippage or material build-up. The MD-256 converts shaft rotation into a pulse train of 256 pulses per revolution using a high precision rotary optical encoder. The digital signal is transmitted as speed input to any Milltronics integrator for calculation of belt speed, flow rate and totalized weight.

This high resolution speed sensor provides a frequency signal proportional to the shaft speed, enabling low or varying shaft speeds to be read accurately. The quadrature type shaft encoder prevents erroneous speed signals due to vibration or shaft oscillation. The MD-256 is easily mounted and is bi-directional for either clockwise or anti-clockwise belt travel.

## Technical Specifications

### Power

- +10 to +15Vdc, 30mA (from integrator)

### Ambient Temperature

- -40 to 55 °C (-40 to 131 °F)

### Input

- shaft rotation 0.5 to 470 rpm, bi-directional

### Output

- unidirectional open collector sinking output
- +5Vdc, 25mA max. (to integrator)
- 256 pulses per revolution
- 2 to 2000 Hz

### Product Features

- Light and rugged design, IP65 rated
- Compact and economical
- Easy, low cost installation
- Accurate belt speed detection
- High resolution, suitable for low or varying shaft speeds
- Bi-directional for either clockwise or anti-clockwise shaft rotation



### Enclosure

- general purpose
- aluminum

### Cable (optional)

- 3-wire shielded, 0.75 mm<sup>2</sup> (18 AWG)
- max. run 305 m (1000 ft)

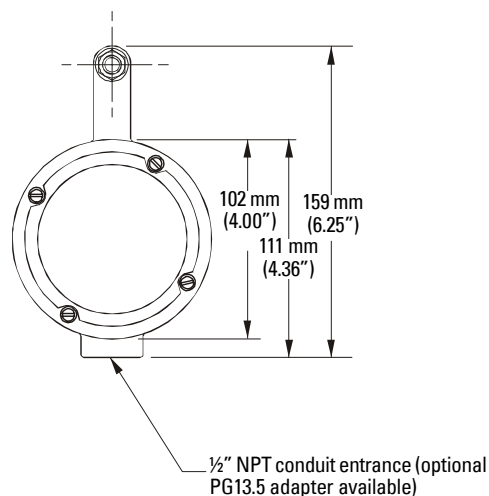
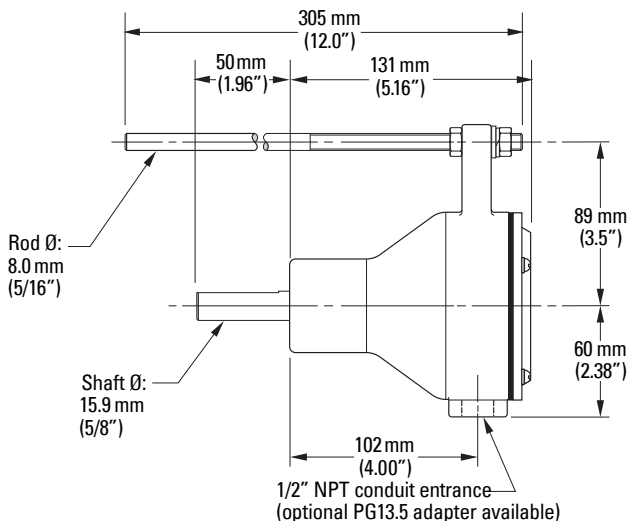
### Weight

- 1.22 kg (2.68 lbs)

### Approvals

- NEMA 4X, IP65, CE\*

## Dimensions

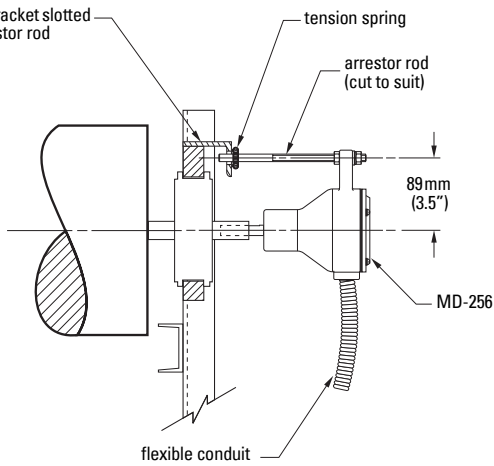
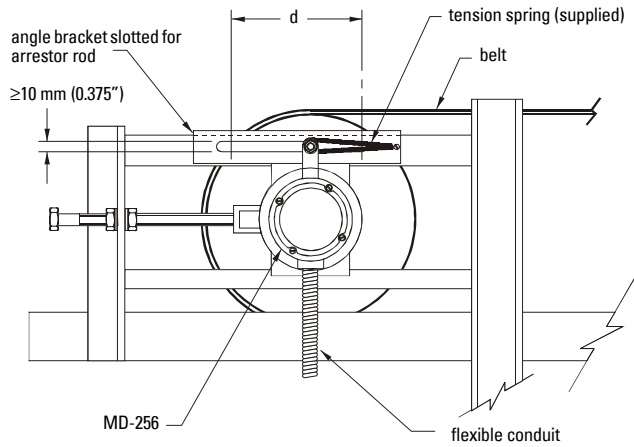


\* EMC performance available upon request.

Specifications are subject to change without notice.

## Mounting

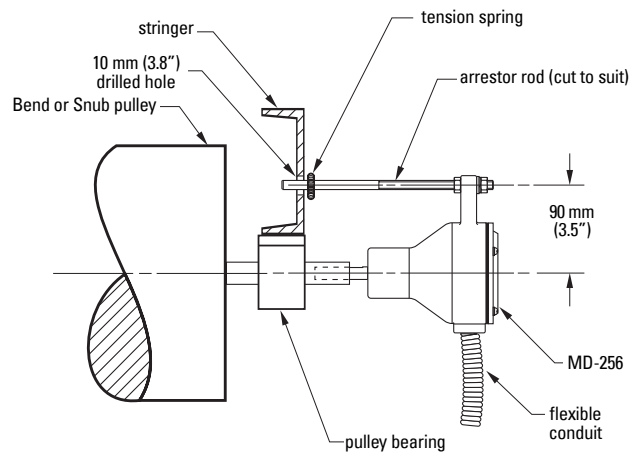
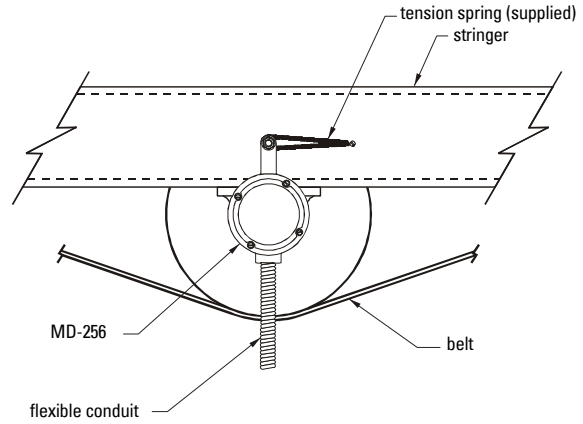
### Mounting to a Tail Pulley



#### Notes:

- Distance 'd' is the take up travel on the tail pulley
- When adjusting the belt take up, ensure that there is play on the arrestor rod. If the arrestor rod is pushed against the end of its travel slot then premature bearing wear may result.

### Mounting to a Bend or Snub Pulley



#### Notes:

- When mounting to a bend or snub pulley only a 3/8" (10 mm) drilled hole is required for the arrestor rod.

## Wiring

Description	Terminal
+15 Vdc	1
speed out-CW	2
speed out-CCW	3
common	4
ground	G

- Determine the pulley shaft rotation on the end of the pulley shaft to which the MD-256 is attached.
- If the pulley shaft is rotating clockwise then connect the appropriate wire to terminal 2. If the pulley shaft is rotating counter clockwise then connect the appropriate wire to terminal 3.
- Do not common terminals two or three at the same time.
- Ground shield of cable at integrator only.