

# MODEL BPMS-1, 2, 4 & 12 UNDER SPEED SWITCH



**Model BPMS-1, 2, 4 & 12**

The **Model BPMS-1, 2, 4 & 12 Speed Switches** are used for accurate sensing of Under Speed, Over Speed and Zero Speed conditions on rotating shafts, pulleys or other rotating equipment within your plant. It has one of the most innovative designs for installation today. It utilizes a magnet for attachment to the rotating shaft. Tapping the pulley and coupling the speed sensor is no longer required. Simply apply the speed sensor to the shaft and a strong magnet holds it in place, wire it up and you are ready to go.

### **Unique Features:**

- “Snap” in place installation
- “Break-away” design, allows it to detach from the shaft if a large object strikes it
- Universal power supply, 20-240 VAC or VDC
- 2-Wire
- Can be retrofitted with other proximity switches such as PNP, NPN or Smart Prox (SS version).
- High visible LED to confirm proper installation and operation
- Multiple pulse ranges 1, 2, 4, 12 pulse units
- Stop switch version which operates like a NC relay contact.
- 140lb holding force rare earth magnet

The **Model BPMS-1, 2, 4 & 12 Speed Switch** are unmatched in ease of installation and durability. Simply “snap” the BPMS onto the shaft that is to be monitored and complete the wiring. The cost to install other types of speed monitoring products usually surpasses the cost of the BPMS to the user. The BPMS is not permanently attached to the conveyor shaft it is considered to be “break-away” in design. In other words, safety concerns are minimal. If an object strikes the BPMS, no damage will occur. The BPMS simply detaches from the shaft.

The proximity switch in the BPMS is a standard two-wire 18mm tubular switch that is capable of handling voltages from 20-240 VAC or DC. If your specification requires NPN or PNP or smart proximity outputs, the BPMS Speed Switch can be retrofitted.

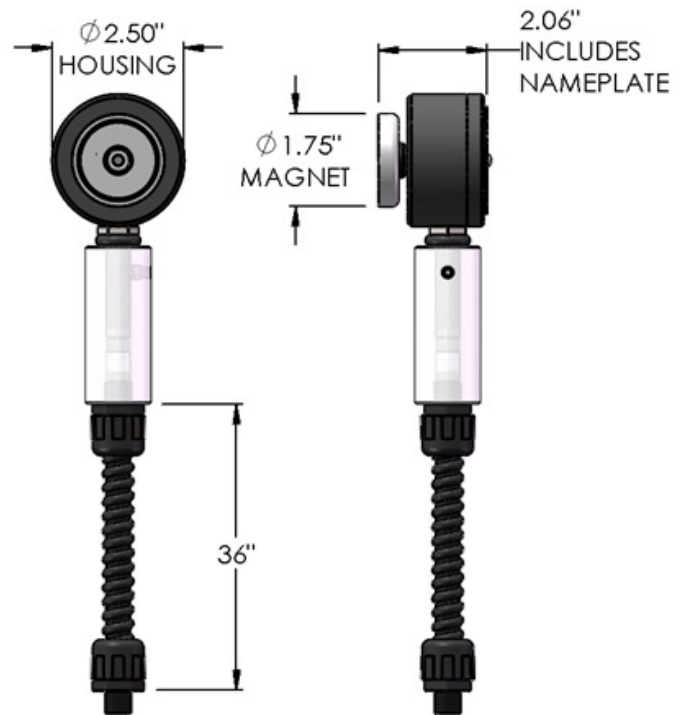
The coupler that guards the proximity switch is opaque in color so the operational LED can be monitored. In proper operation, the highly visible LED will illuminate to determine if the BPMS is sending pulses. The BPMS is equipped with a 36 inch plastic cable guard with 1/4”NPT threaded connector to assist in wiring. The shaft size of the conveyor or rotating piece of equipment that is to be monitored needs to be larger than 1” inch to ensure proper holding strength for the magnet rotor.

# SPECIFICATIONS

## Model BPMS-1, 2, 4 & 12 Specifications:

- Operating Voltage: 20-240 VAC/DC
- Max Current Load: 250mA @ 25°C and 200mA @ 70°C
- Switching Frequency: 120 Hz
- Leakage Current: 1.7mA max leakage @ 120 VAC,  $\leq 2.0$ mA VDC
- Voltage Drop:  $\leq 4$ V @  $>25$ mA
- Holding Current: 5mA max
- Protection: Resettable short circuit overload protection
- Switching Hysteresis: 2-20% of rated sensing distance
- Repeat Accuracy:  $<3\%$  sensing distance
- Output Indicator LED: 360° viewable LED
- Operating Temperature: -13° to 158°F (-25° to 70°C)
- Enclosure Rating: NEMA-4, 4X, 6, 6P, 12 and 13 (IP-67)
- Shock: 30g sine wave, 11 ms per IEC68-2-76
- Vibration: 10 to 50 Hz, 1mm amplitude
- Housing: Stainless steel, polycarbonate end balls, Ryton® front cap (Proximity Sensor)
- Cable: AWM style 2038 (PVC)

## Dimensional Information All Sensors



## Models Available:

- |              |                                          |
|--------------|------------------------------------------|
| • BPMS-1     | 1-pulse per revolution, standard sensor  |
| • BPMS-2     | 2-pulse per revolution, standard sensor  |
| • BPMS-4     | 4-pulse per revolution, standard sensor  |
| • BPMS-12    | 12-pulse per revolution, standard sensor |
| • BPMS-1NPN  | 1-pulse per revolution, NPN sensor       |
| • BPMS-1PNP  | 1-pulse per revolution, PNP sensor       |
| • BPMS-2NPN  | 2-pulse per revolution, NPN sensor       |
| • BPMS-2PNP  | 2-pulse per revolution, PNP sensor       |
| • BPMS-4PNP  | 4-pulse per revolution, PNP sensor       |
| • BPMS-4NPN  | 4-pulse per revolution, NPN sensor       |
| • BPMS-12PNP | 12-pulse per revolution, PNP sensor      |
| • BPMS-12NPN | 12-pulse per revolution, NPN sensor      |
| • BPMS-1SS   | 1-pulse stop switch version, stop switch |
| • BPMS-2SS   | 2-pulse stop switch version, stop switch |
| • BPMS-4SS   | 4-pulse stop switch version, stop switch |

## Options Controllers:

- BPWD-1 controller, monitors the signal from the BPMS-1 switch and provides a relay when the unit drops out, DIN rail mount.
- PL70-115 Speed Monitor, monitors one BPMS-1 switch, provides user programming, i.e. start-up delays, alarm set-points, one DPDT contact and one (1) 4-20mA output. Eliminates the need for a PLC.

BPWD-1



PL70-115

