

## **Zero Speed Switch**

### **Magnetic Loss of Motion Detector**

#### **Part 1. General**

##### **1.1 Scope**

- A.** This section describes the requirements for a magnetic loss of motion detector.
- B.** Under this item, the contractor shall furnish and install the magnetic loss of motion detector indicated on the plans and as herein specified.

##### **1.2 Submittals**

- A.** The following information shall be included in the submittal for this section:
  - 1. Data sheets and catalog literature for the magnetic loss of motion detector.
  - 2. Interconnection and dimensional drawings.
  - 3. Recommended Spare Parts

#### **Part 2. Products**

##### **2.1 Magnetic Loss of Motion Detector**

- A.** The detector shall be a self-contained probe housing the magnetic sensing assembly and the electronics.
- B.** The detector shall have one set of dry contacts for indication of motion or lack of motion in rotating, reciprocating and conveying equipment. The contacts shall be form C, SPDT rated at 250 VAC, 3A .
- C.** Upon slowdown or sudden stoppage, the detector shall sense the change and operate the dry contact.
- D.** The detector shall sense the proximity of a ferromagnetic target up to 2” from face of magnetic sensing assembly using the Faraday principal of detection.

- E. Signal wires shall be capable of using the same conduit as the drive motor and its control circuits.
- F. The detector shall be capable of sensing through non-ferrous metals such as stainless steel.
- G. The detector shall be totally non-contacting.
- H. The detector shall have a minimum dropout timing of 10 (+/- 1) seconds or 6 pulses per minute.
- I. Operating temperatures shall be -40°F to 140°F.
- J. Input power shall be 115/230 +/-10% VAC, 50/60 hZ, 2VA
- K. The detector shall have built-in startup time delays.
- L. The detector shall have a 2" NPSL process connection.
- M. The detector shall be a Milltronics brand Zero Speed Switch.

**Part 3. Operator Functions**

**3.1 Calibration**

- A. Set up of the detector shall be accomplished by installing per manufacturer's recommendations and setting the desired drop-out alarm selection.

**3.2 Alarm Function Details**

- A. The detector can be wired directly into a motor control center for stoppage of motor or associated equipment.
- B. The detector can be wired to a PLC for action control as programmed into the PLC.

**Part 4. Execution**

**4.1 Installation**

- A. Install and wire per manufacturer's recommendations.

- B. Set drop-out timing function on the terminal block.

**Part 5. Warranty**

**5.1 Terms**

- A. The manufacturer of the above specified equipment shall guarantee for twenty four (24) months from equipment startup or thirty (30) months from date of shipment, whichever occurs first, that the equipment shall be free from defects in design, workmanship or materials.
- B. In the event a component fails to perform as specified or is proven defective in service during the warranty period, the manufacturer shall promptly repair or replace the defective part at no cost to the owner.

**Part 6. Options**

**6.1 Related Equipment**

- A. None

**Part 7. Spare Parts**

**7.1 Recommended Spare Parts**

- A. None