



**Self-contained  
Prox sensor and motion detector**

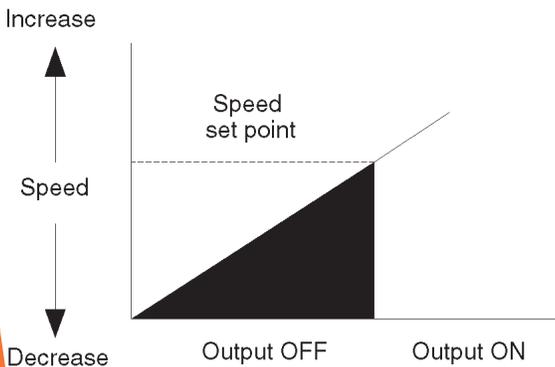
The **1248A** is a self-contained combination proximity sensor and speed switch (motion detector) in easy to install limit style unit. Two-wire circuit is wired in same manner as a limit switch. A plug-in receptacle saves wiring time. There are three user selectable speed ranges that cover 5 through 7500 pulses per minute and an adjustable start time delay of 0 to 20 seconds. An LED indicates that the output is energized and a target adjustment mode aids setup.

**ORDERING DATA**

**ORDERING CODE 1248A – 1A4P**

**OPERATION**

- Output de-energized when monitored motion is below speed set point
- Output energizes when monitored motion reaches or exceeds speed set point
- Energized output will not de-energize until monitored motion drops below speed set point
- Output automatically resets-energizes when monitored speed again reaches speed set point



**SPECIFICATIONS**

**INPUT**

**VOLTAGE:** 20 to 250 VAC/DC  
**FREQUENCY:** 50/60 Hz or DC  
**LEAKAGE:** ≤ 2mA  
**TRANSIENT PROTECTION:** MOV

**OUTPUT**

**MAX. LOAD CURRENT:** 500 mA (continuous)  
**VOLTAGE:** ≤ 9 Volts (with resistive load max. load current)  
**MAX. INRUSH CURRENT:** 7 A  
**MIN. LOAD CURRENT:** 5 mA

**SENSING**

**SENSING DISTANCE:** 12.7mm (0.5 in)  
**TARGET SIZE:** 40mm x 40mm mild steel

**TIMING**

**SPEED RANGES:** 3 (user selectable)  
A = 5 - 75 ppm\*  
B = 50 - 750 ppm  
C = 500 - 7500 ppm  
**MAX. SPEED at which sensor can detect target:** 10,000 ppm  
**HYSTERESIS:** 10% differential between pickup & dropout speeds.  
**RESPONSE TIME:** All speed ranges 3 msec / 3 msec (target present / target absent)  
**DELAY IN READINESS:** 100 msec (with start up delay at zero)  
**START UP TIME DELAY:** 0 - 20 seconds. (user adjustable)

\*ppm = speed (RPM) X number of targets

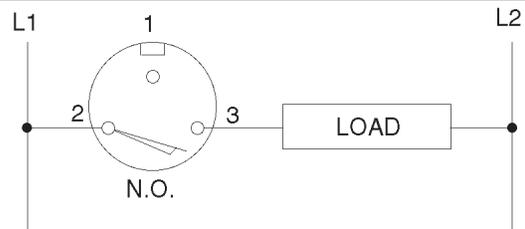
**PHYSICAL**

**TEMPERATURE RANGE:** -25°C to +70°C  
**HOUSING MATERIAL:** Fire-retardant ABS/polycarbonate blend  
**ENVIRONMENTAL RATING:** NEMA 1,3,4,6,12,13,IP67  
**TERMINATION:** 3-Pin mini-style connector

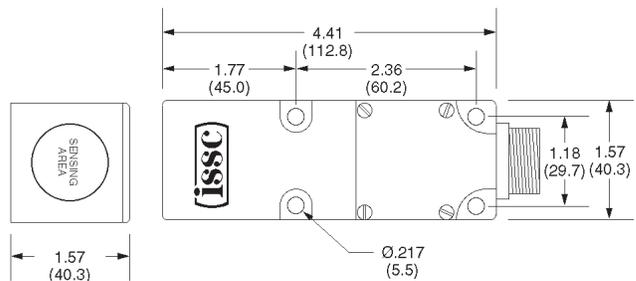
**ACCESSORIES**

2 m cable with connector RP-503  
5 m cable with connector RP-503-5

**WIRING**



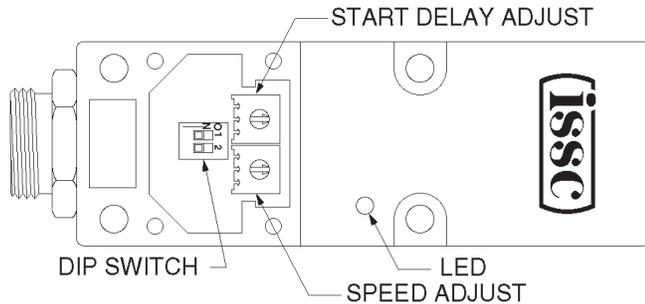
**DIMENSIONS** millimeters



**ADJUSTMENTS**

**Initial Start Time Delay** (0-20 Sec., Adjustable)

The 1248A is supplied with an initial start time delay which energizes the output for the time specified when power is applied to the unit. This feature provides time at start-up for the monitored equipment to reach a speed that will maintain an energized output. The output de-energizes if the speed of the monitored equipment fails to reach the set point by the end of this delay. Removing and reapplying power resets the initial time delay.

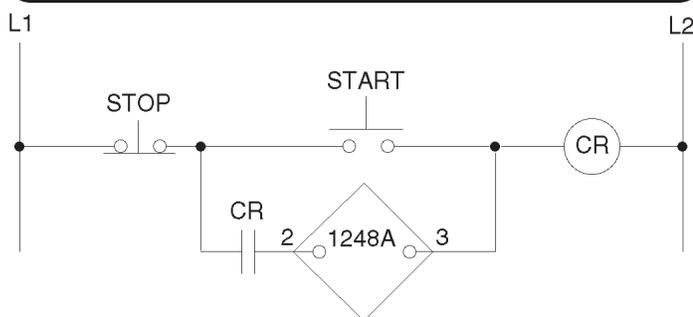


**DIP switch range selection**

The DIP switch selects one of the three ranges or test mode. The switches can be changed without removing power from the device. **When the test mode is selected, the 1248A emulates a standard prox switch.** The output comes on when the target is present. If power is applied with the switches set for test mode the 1248A enters a factory test mode. Turn off power and set switches to off to exit.

RANGE	SPEED ppm	SWITCH 1	SWITCH 2
A	5-75	OFF	OFF
B	50-750	ON	OFF
C	500-7500	OFF	ON
TEST	-	ON	ON

**APPLICATION EXAMPLE**



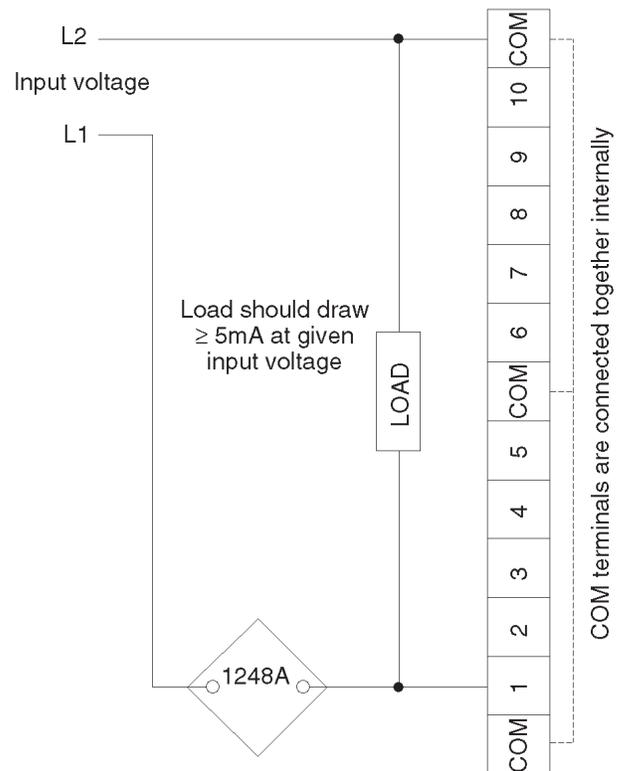
NOTE: This circuit requires the start time delay to be adjusted for no less than 1/2 sec.

**SPECIAL CONSIDERATIONS FOR  
PLC APPLICATIONS**

When using the model 1248A as a direct input to a PLC, the minimum load current specification of 5mA must be taken into consideration. Most of today's PLC's have a very high input impedance which does not allow enough current for the 1248A to operate properly.

The solution to this problem is to parallel a load (a resistor or indicator lamp) with the PLC input.

**Typical PLC Application Example:**



See your PLC User's Manual for specific wiring details.