

Installation Instructions

Bulletin 871P DC Inductive Proximity Can Motion Sensor

IMPORTANT: SAVE THESE INSTRUCTIONS FOR FUTURE USE.

Sensor Dimensions [mm (in.)]	Motion Range [mm (in.)]		Sensing Range [mm (in.)]		Container Sizes	Part Number		
	Steel	Aluminum	Steel	Aluminum		PVC Cable	Mini Quick-Disconnect	Micro Quick-Disconnect
140 x 45 x 58 (5.5 x 1.75 x 2.25)	19 (0.75)	13 (0.51)	29 (1.14)	15 (0.20)	202 - 704	871P-DD29NB140-A2	871P-DD29NB140-N4	871P-DD29NB140D4

Description

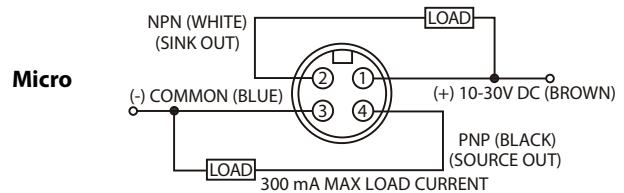
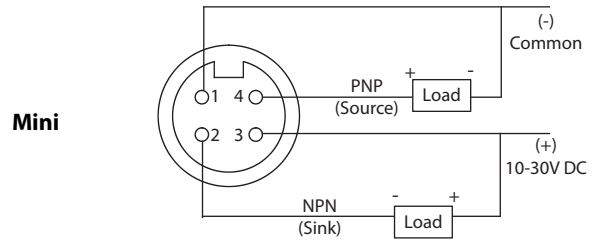
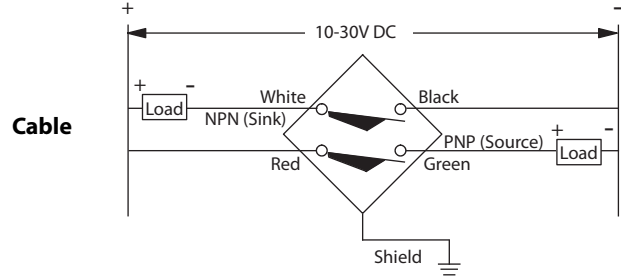
Bulletin 871P inductive proximity can motion sensors are self contained solid state devices. These devices are designed specifically for sensing motion of size 202 to 704 metal cans without physical contact.

The 871P can sensor family combines rugged construction and superior sensing capability to provide long lasting durability and performance in hostile manufacturing and filling environments.

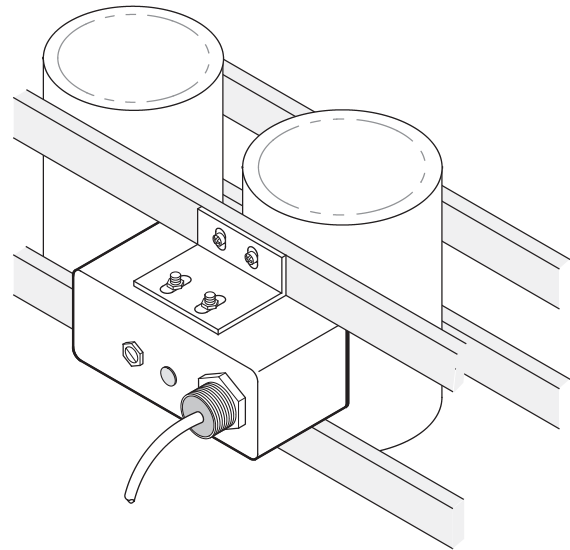
Specifications

Outputs	Normally Open NPN and PNP
Load Current	300 A
Operating Voltage	10...30V DC
Operating Current	25 mA (off), 55 mA (on)
Voltage Drop	≤2.5V
Repeatability	≤2%
Hysteresis	10% typical
Output Time Delay	0.5 sec after motion stops
False Pulse Protection	Incorporated
Transient Noise Protection	Incorporated
Short Circuit Protection	Incorporated
Overload Protection	Incorporated
Reverse Polarity Protection	Incorporated
Enclosure	NEMA 1, 3, 4, 4X, 6, 6P, 12, 13, IP67, 1200psi (8270kPa) washdown
Connections	Cable: 2 m (6.5 ft) shielded PVC 4-wire, 22 AWG Quick-Disconnect: 4-pin mini or micro styles
LEDs	Dim Blink: Cans moving Bright Steady: No motion
Potentiometer	Sensing range adjust
Operating Temperature [C (F)]	-20°...+70° (0°...+160°)
Housing Material	Stainless steel, plastic face
Mounting	2 stainless steel studs
Cable Fitting	1/2 in. NPT

Wiring Diagrams



Typical Application



Installation

Select the location for sensor mounting. Ensure that the target to sensor clearance is approximately 6.4 mm (0.25 in.), the sensor is at least 51mm (2 in.) away from other proximity sensors, and there are no metal objects adjacent to the sensor's face or sides that may distort the sensing field. Mount the sensor using 871A-BR58 sensor bracket mounting assembly or other suitable bracketing.

Route the sensor's 4-conductor cable to a junction box. Connect the cabling to the load device according to the appropriate wiring diagram. Note that the maximum load current for either NPN or PNP output is 300mA. The PNP (voltage source) output level tracks the DC input voltage level.

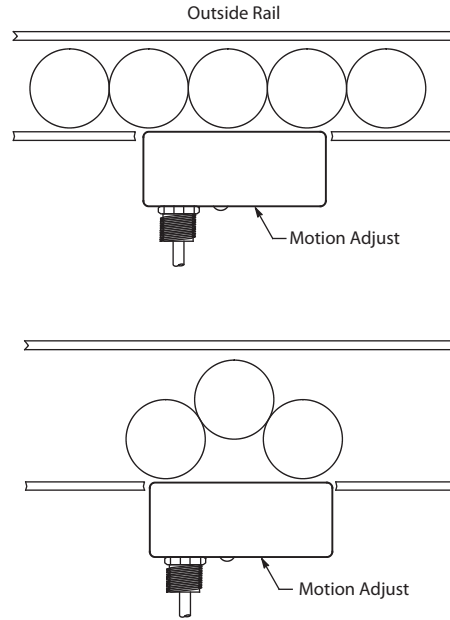
Apply power to the sensor. Turn the Motion Adjust potentiometer to its full counterclockwise position.

Position containers in front of the sensor as shown at right, depending on the conveyor system to be used. Adjust the position of the sensor forward until the output LED is on and brightly lit.

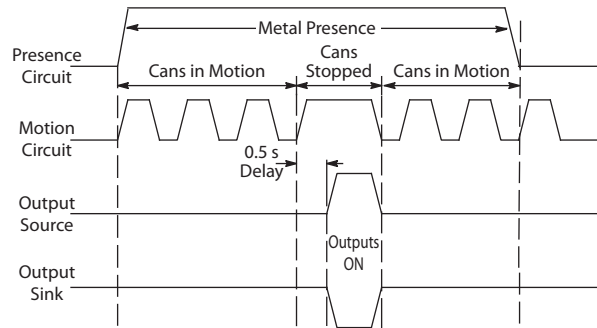
Start the conveyor and run at normal line speed. Adjust the Motion Adjust potentiometer clockwise so that the sensor is detecting the peaks of the container and not the valleys. The motion LED should flash dimly for each passing container.

If the LED fails to blink for each container, adjust the Motion Adjust potentiometer clockwise or position the sensor closer to the containers. If the LED remains on, turn the Motion Adjust potentiometer counterclockwise or position the sensor farther from the containers.

Stop the conveyor with containers in front of the sensor. The LED should turn on brightly after 0.5 seconds. If the output LED fails to turn on, adjust the position of the sensor inward until the LED turns on.

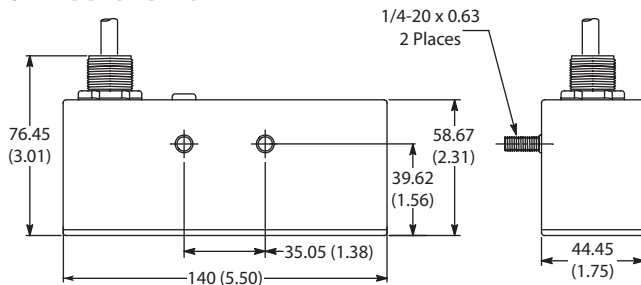


Timing Diagram

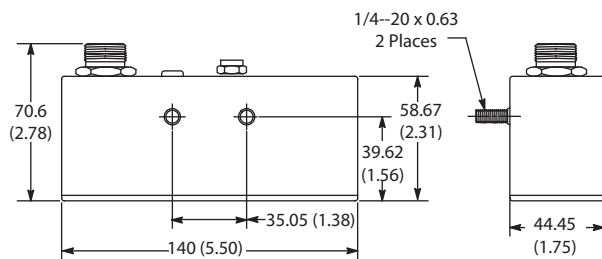


Dimensions-[mm (in.)]

871P-DD29NB140-A2



871P-DD29NB140-N4 and 871P-DD29NB140D4



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