



Interference Sensing Module

Form No. IS

aerospace
climate control
electromechanical
filtration
fluid & gas handling
hydraulics
pneumatics
process control
sealing & shielding



ENGINEERING YOUR SUCCESS.

Interference Sensing Module

- Ever get your hand caught in a door?
- Have elevator doors close on you without opening up?
- Have you seen damaged goods in a conveyor?

Parker-Origa's **NEW** Interference Sensing Module solves all these problems and more. It is designed to automatically reverse the direction of a pneumatic cylinder when it detects an obstruction.

What are the benefits of this technology?

Benefits:

- Clean, simple design — Eliminates complex circuitry.
- Cost effective — Compared to alternative systems.
- Versatile — Controls all types of cylinders (AZ AZV, OSP-P, R, ROV) ranging from 8 mm to 80mm.
- Sensitive — Controls loads ranging from 2 ounces to over 400 lbs.
- High flow rates — Cv of 1.3
- Wide variety of voltages — 9 volt battery to 220 VAC

Applications:

- Automatic Doors/Door Guards
- Flying Knives
- Pallet Handling
- Automatic Feed & Conveyor Systems
- Variable Height Pick & Place
- Elevator Systems
- Case Packaging

How the system works.

(See Figure 1.)

Momentary input from the start button shifts the valve to extend the cylinder (rodless or rod-type). Once the cylinder reaches the full extended position a momentary input signal from the retract button shifts the valve to retract the cylinder.

Loss of back pressure, caused by an obstruction, triggers the pressure switch to shift the valve and retract the cylinder. A reed switch overrides the detection at the cylinder's full extended position. If the normally closed reed switch is not used, the the cylinder will automatically retract after reaching the full extended position.

System Setup:

1. Load.

The supply pressure should be adjusted (regulated) to satisfy the load requirement of the system.

- The supply pressure range can be adjusted with a standard regulator.
- The supply pressure range of the IS module is between 22 and 116 PSI.

2. Speed.

The flow controls on the IS module should be adjusted to satisfy the speed requirement of the system.

- The exhaust throttle flow control can be adjusted with a flat head screw driver.

3. Sensitivity.

The pressure switch should be adjusted to meet the sensitivity requirement of the system.

- The pressure switch can be adjusted by turning knob on the pressure switch and locking it in place with a 2mm allen wrench.
- A clockwise adjustment results in more sensitivity.
- A counter-clockwise adjustment results in less sensitivity.

Ordering Instructions

Voltage	Part Number
12 VDC	IS0250-0133
24 VDC	IS0250-0233
110 VAC	IS0250-5733
220 VAC	IS0250-6133

Component Characteristics

Description	Units	Value
Medium		air
Filtration	μ	40
Lubrication		None
Supply Pressure (min.) (max.)	PSI	22 116
Flow	Cv l/min	1.3 1300
Ambient Temperature (min.) (max.)	°F	14 140
Fluid Temperature (min.) (max.)	°F	14 158

Power Consumption

Inrush	AC		DC
	50 Hz	60 Hz	
12	—	—	2.8 W
24	8.5 VA	8.5 VA	2.5 W
110	8.5 VA	8.5 VA	2.7 W
220	8.5 VA	8.5 VA	3.5 W
Holding	AC		DC
	50 Hz	60 Hz	
12	—	—	2.8 W
24	8.5 VA	8.5 VA	2.5 W
110	8.5 VA	8.5 VA	2.7 W
220	8.5 VA	8.5 VA	3.5 W

Continuous Duty Solenoid Coils

Figure 1.

System Setup Diagram

Figure 1 is a system setup diagram for the 150PSI-4433 Solenoid Valve. The diagram illustrates the connection between the valve, a pressure switch, a rodless or rod-type cylinder, and a pressure inlet.

Valve Components and Labels:

- Retract / Extend:** Labels for the two solenoid ports.
- Connect Ports 1 & 2 for Normally Closed:** Instruction for the pressure switch connection.
- Sensitivity Adjustment:** Instruction for the pressure switch.
- P min (22 PSI (1.5 bar))** and **P max (116 PSI (8 bar))**: Pressure range specifications.
- Part Number: 150PSI-4433**
- Extended Speed Flow Control**, **Supply Pressure**, and **Retract Speed Flow Control**: Labels for the valve's internal components.

System Components and Connections:

- Pressure Inlet (22 - 116 PSI):** The main pressure source connected to the valve.
- Pressure Switch (Normally Closed):** Connected to the valve's retract port (1) and the pressure inlet. It is labeled with "1" and "2".
- Rodless or Rod-Type Cylinder (Sized for load and speed):** The actuator connected to the valve's extend port (2) and the pressure inlet. It features a **Reed Switch (Normally Closed)** and two **Momentary Manual Input** ports (Retract and Extend, both labeled "Not Included").

The diagram shows the valve's internal components, including the reed switch, pressure switch, and pressure inlet, and the external components, including the cylinder and the pressure switch.

32mm

165mm

Wires Out Here

256mm

Cylinder Ports
G1/4

Retract

Extend

Connect Pins 1 & 2
for normally Closed

Sensitivity
Adjustment

Setup Instructions:
1. Adjust supply pressure
for load
2. Adjust flow control
for speed.
3. Adjust sensitivity for
automatic retraction.

P min 22 PSI (1.5 bar)
P max 110 PSI (8 bar)

Part Number: 150250-4433

Extended Speed
Flow Control

Supply
Pressure

Retract Speed
Flow Control

Pressure Ports
G1/4

Flow Controls

12VDC on request.

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