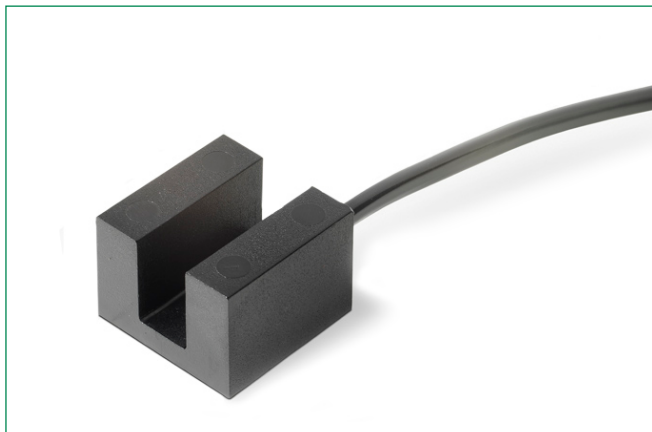


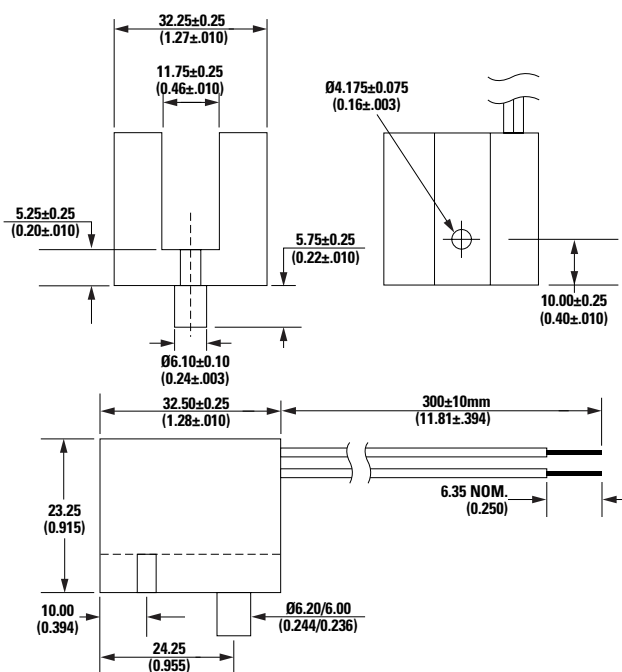
59090 Series

Heavy Duty Vane Sensor



Dimensions

Dimensions in mm (inch)



Description

The 59090 is a robust reed vane sensor with integral actuator magnet. It's actuation occurs when a suitable low carbon steel vane passes through the slot between the magnet and switch. It has different contact types such as normally closed, high voltage normally closed and changeover. It is capable of switching up to 265Vac/300Vdc at 10VA. It is ideally suited to position and limit sensing, security, linear actuator, industrial process control and shaft rotation. It is also suited for heavy duty applications such as off-road and heavy vehicles and farm machinery.

Features & Benefits

- Sensor and magnet contained in single housing
- Sensor operates when ferrous vane passes through slot
- Normally closed standard
- Choice of cable length and connector
- Hermetically sealed, magnetically operated contacts continue to operate long after optical and other technologies fail due to contamination
- Quick and reliable single screw mounting with location feature
- No standby power requirement

Applications

- Position and limit sensing
- Security system switch
- Linear actuators
- Industrial process control
- Shaft rotation sensing
- Off-Highway or Agriculture equipment compatible

59090 Series

Heavy Duty Vane Sensor

Electrical Ratings

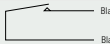
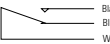

Contact Type			Normally Closed	Change Over	Normally Open
Switch Type			4	3	1
Contact Rating ¹		VA/Watt - max.	10	5	5
Voltage ⁴	Switching ²	Vdc - max.	200	175	175
		Vac - max.	140	120	120
	Breakdown ³	Vdc - min.	250	200	200
Current ⁴	Switching ²	Adc - max.	0.5	0.25	0.25
		Aac - max.	0.35	0.18	0.18
	Carry	Adc - max.	1.2	1.50	1.50
Resistance ⁵	Contact, Initial	Ω - max.	0.3	0.100	0.100
	Insulation	Ω - min.	10 ¹⁰	10 ⁹	10 ⁹
Capacitance	Contact	pF - typ.	0.3	1	1
Temperature	Operating	°C	-40 to +105	-40 to +125	-40 to +125
Temperature	Storage	°C		-65 to +125	-65 to +125
Product Characteristics					
Operate Time ⁶		ms - max.	1.0	0.7	0.7
Release Time ⁶		ms - max.	1.0	1.0	1.0
Shock ⁷	11ms ½ sine	G - max.	100	50	50
Vibration ⁷	50-2000 Hz	G - max.	30	30	30

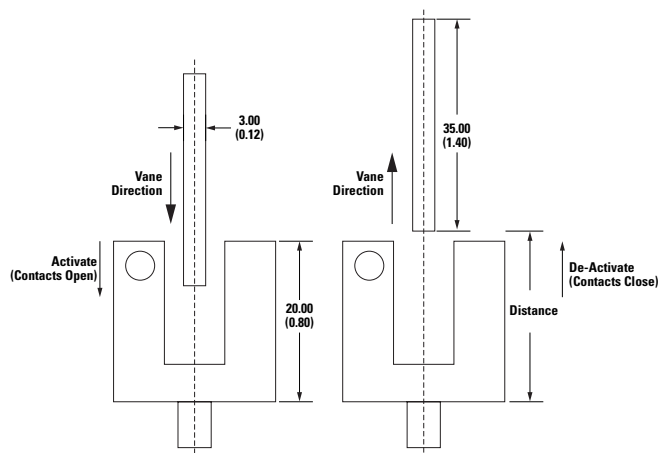
Notes:

- Contact rating - Product of the switching voltage and current should never exceed the wattage rating. Contact Littelfuse for additional load/life information.
- When switching inductive and/or capacitive loads, the effects of transient voltages and/or currents should be considered. Refer to Application Notes AN108A and AN107 for details.
- Breakdown Voltage - per MIL-STD-202, Method 301.
- Electrical Load Life Expectancy - Contact Littelfuse with voltage, current values along with type of load.
- This resistance value is for 11.81mm wire length. Resistance changes when wire lengthens.
- Operate (including bounce)/Release Time - per EIA/NARM RS-421-A, diode suppressed coil (Coil II).
- Shock and Vibration - per EIA/NARM RS-421-A and MIL-STD-202.
- For custom modifications to the wire length or size, or adding a special connector, please contact Littelfuse.

Activation

Select Option			
Switch Type		Activation Distance mm (inch) Average	De-Activation Distance mm (inch) Average
1	Normally Open	0.81	0.81
3	Change Over	-	-
4	Normally Closed	0.71	0.95

Schematics	Switch Type
	1
	3
	4



59090 Series

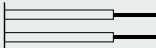
Heavy Duty Vane Sensor

Cable Length Options

Wire Type: 20AWG 7/28 TXL 125C SAE J1128	
Select Option	Cable Length mm (inch)
02	300 (11.81)
05	1000(39.37)

Cable Type: 22AWG 3-Conductor UL1569	
Select Option	Cable Length mm (inch)
12	300(11.81)
15	1000(39.37)

Termination Specification

Termination Options	
Select Option	Description (Two-wire versions illustrated)
A	Tinned leads (6.4±0.76)mm 

Packaging

Packaging Option	Packaging Specification	Quantity	Quantity & Packaging Code	Taping Width
Bulk	Bulk	500	N/A	N/A

Part Numbering System

