

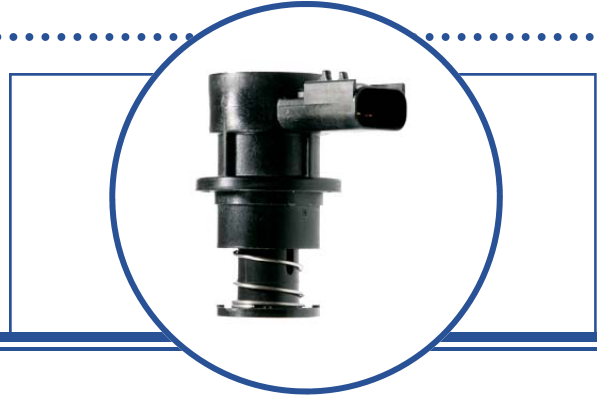
Linear Position Sensor

OABS3100 Series



Features:

- Non-contacting inductive Autopad™ Technology
- Perfect choice for both pressure and vacuum actuators
- Long stroke length - up to 17mm
- Electrically and mechanically tolerant to off-axis motion
- Ideal for harsh environments



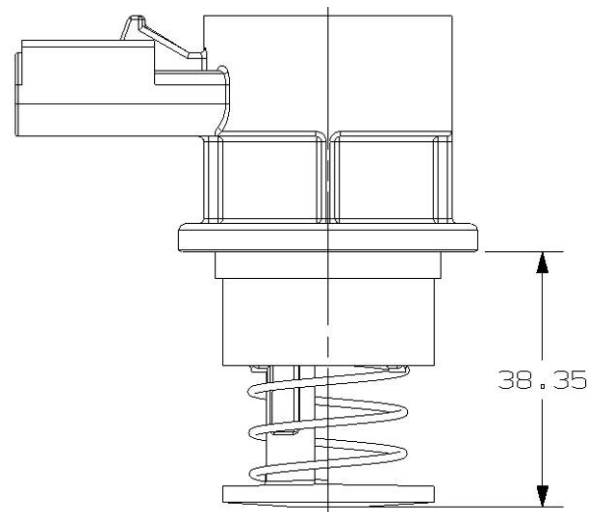
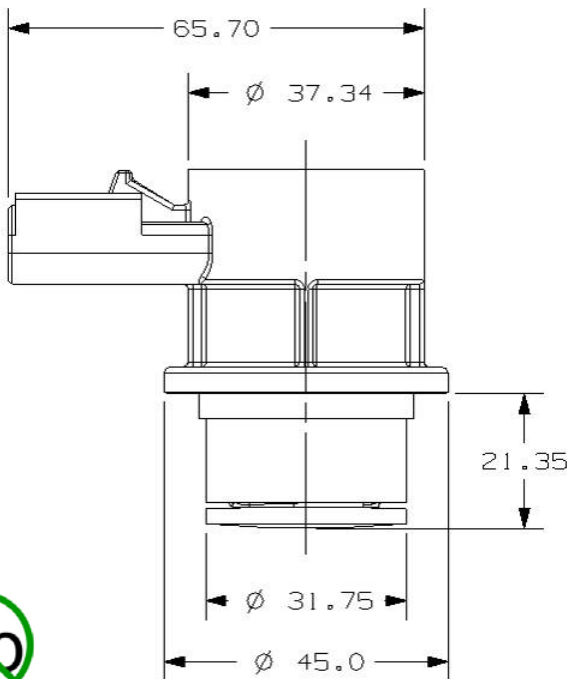
Description

The OABS3100 series is an inductive non-contacting linear position sensor designed specifically for an underhood automotive environment. This sensor utilizes Optek's Autopad™ technology which provides class-leading linearity, resolution, and stability over temperature. The standard mounting feature is a crimp flange with an o-ring groove for crimping to pressure or vacuum driven actuators. The output is fully programmable (slope, upper and lower clamps) for an output span up to 17mm. Longer measurement ranges, PWM output, and alternate mounting features are available – please contact your Optek sales representative for further information. The active electronics are contained within the main housing and completely isolated from the moving element to enhance durability.



Automotive Applications:

- Turbo wastegate or bypass valve actuators
- EGR valves
- Control application using spool valve position sensing



RoHS

Temperature Ratings

Storage Temperature Range	-40° C to +160° C
Operating Temperature Range	-40° C to +150° C

Output Characteristics⁽⁵⁾

Sensor Output	Analog Ratiometric Single Output ⁽¹⁾ 10% to 90% of supply voltage over 17mm linear travel ^{(2), (3)}
Supply Voltage	5 V ±10%
Resolution	12 bit
Total Linearity Error	< ± 2 %
Current Draw (Max at 150° C)	20 mA

Mechanical

Mating Connector	FCI part # 54200346 3-way connector ⁽²⁾
Mounting Feature	Flange with o-ring groove for crimp assembly ^{(2), (4)}

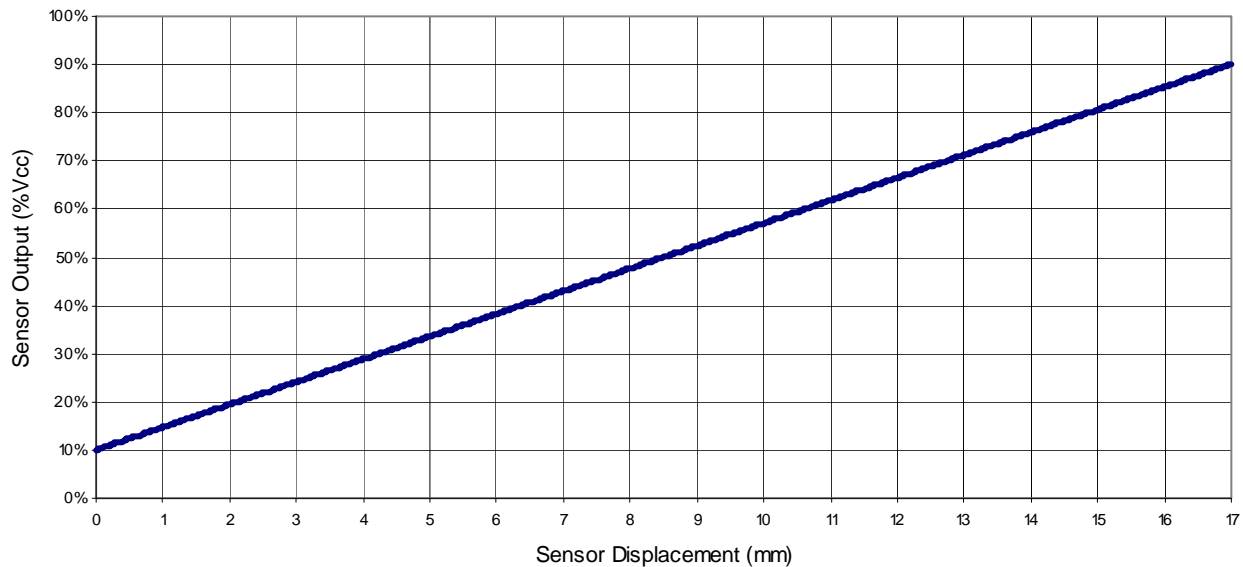
Durability

Full Stroke	10 million cycles, -40° C to 150° C
Thermal Shock	1000 cycles, -40° C to 150° C

NOTES:

- (1) PWM output also available
- (2) Consult with Optek's sales representative for other options
- (3) Output clamping and diagnostic ranges are adjustable and programmable
- (4) O-Ring dimensions available upon request
- (5) All measurements taken at T_A = 25° C unless otherwise noted

Linear Position Sensor Typical Output



Note:

For larger or smaller electrical output with respect to displacement, please contact your Optek sales representative.