



### GHSE19-050A-02-10S

# GHSE19/GHSI19 Spring-Loaded LVIT Linear Position Sensors



## Low cost, compact, high performance gauging probes

The GHSE-19/GHSI-19 series of LVIT (Linear Variable Inductance Transducer) spring-loaded position sensors by Alliance Sensors Group are contactless devices designed for dimension measurements. They are suitable for use in a variety of settings where the sensing element cannot be attached to the object being measured. Typical applications include the following:

- Quality Assurance (QA) labs
- Position measuring applications in factory automation systems
- Industrial and commercial applications such as automotive testing, mil/aero test stands, robotic arms, and packaging equipment

GHSE-19/GHSI-19 Linear Variable Inductance Transducers are offered in nominal full scale ranges from 0.25 to 4.0 in [6.35 to 101.6 mm] with excellent resolution and high stroke-to-body-length ratios. The maximum tip contact force applied to the item being measured is 1lbf [0.454 kgf].

GHSE-19/GHSI-19 sensors have a 0.75 in [19mm] diameter stainless steel body with a 1/2-20 UNF-2A thread 1.5 in [38mm] long with two hex jam nuts for drop-in installation in place of a spring-loaded DC LVDT gage head.

These sensors utilize a probe equipped with a No. 9 contact tip and are offered with a PT02A-10-6P connector. Operating from a variety of DC voltages, models are available with either 0-10 V or 4-20 mA output (see table below). All include ASG's proprietary SenSet™ field calibration feature.

## Features

- Spring-loaded LVIT Technology™ (Linear Variable Inductance Transducer)
- Contactless operation prevents internal wear-out from dithering or rapid cycling
- Excellent stroke-to-body-length ratio
- Proprietary SenSet™ Field Adjustable Range Scaling



### GHSE19/GHSI19 Series Spring-Loaded LVIT Linear Position Sensors Selection Chart

Part Number	Price	Drawing Link	Nominal Range (in [mm])	Body Length (in [mm])	Spring Rate (lbf/in [kgf/cm])	Maximum Force (lbf [kgf])
<b>0-10 V models</b>						
<a href="#">GHSE19-006A-02-10S</a>	\$-04j6h:	<a href="#">PDF</a>	0.25 [6.35]	3.50 [88.9]	0.75 [0.134]	0.9 [0.41]
<a href="#">GHSE19-013A-02-10S</a>	\$-04j6i:	<a href="#">PDF</a>	0.5 [12.7]	3.50 [88.9]	0.75 [0.134]	0.9 [0.41]
<a href="#">GHSE19-025A-02-10S</a>	\$-04j6j:	<a href="#">PDF</a>	1.0 [25.4]	4.00 [101.6]	0.75 [0.134]	0.9 [0.41]
<a href="#">GHSE19-050A-02-10S</a>	\$-04j6k:	<a href="#">PDF</a>	2.0 [50.8]	5.08 [129.0]	0.43 [0.077]	1.0 [0.45]
<a href="#">GHSE19-075A-02-10S</a>	\$-04j6l:	<a href="#">PDF</a>	3.0 [76.2]	6.16 [156.5]	0.30 [0.054]	1.0 [0.45]
<a href="#">GHSE19-100A-02-10S</a>	\$-04j6c:	<a href="#">PDF</a>	4.0 [101.6]	7.25 [184.1]	0.23 [0.041]	1.0 [0.45]
<b>4-20mA models</b>						
<a href="#">GHSI19-006A-02-20S</a>	\$-04j6d:	<a href="#">PDF</a>	0.25 [6.35]	3.50 [88.9]	0.75 [0.134]	0.9 [0.41]
<a href="#">GHSI19-013A-02-20S</a>	\$-04j6e:	<a href="#">PDF</a>	0.5 [12.7]	3.50 [88.9]	0.75 [0.134]	0.9 [0.41]
<a href="#">GHSI19-025A-02-20S</a>	\$-04j6f:	<a href="#">PDF</a>	1.0 [25.4]	4.00 [101.6]	0.75 [0.134]	0.9 [0.41]
<a href="#">GHSI19-050A-02-20S</a>	\$-04j6g:	<a href="#">PDF</a>	2.0 [50.8]	5.08 [129.0]	0.43 [0.077]	1.0 [0.45]
<a href="#">GHSI19-075A-02-20S</a>	\$-04j6n:	<a href="#">PDF</a>	3.0 [76.2]	6.16 [156.5]	0.30 [0.054]	1.0 [0.45]
<a href="#">GHSI19-100A-02-20S</a>	\$-04j6o:	<a href="#">PDF</a>	4.0 [101.6]	7.25 [184.1]	0.23 [0.041]	1.0 [0.45]

1. NOTE: All GHSI and GHSE models require [PT06A-10-6S-SR](#) connector and user-supplied cable

### GHSE19/GHSI19 Series Spring-Loaded LVIT Linear Position Sensors Specifications

<b>Analog I/Os</b>	0-10VDC output with 12-30VDC power source; 4-20 mA (3-wire) output with 18-30VDC power source, 60mA max, 167°F [75°C] max
<b>Measuring Ranges</b>	0.25 to 4.0 in [6.35 to 101.6 mm] full scale (nominal)
<b>Linearity Error</b>	±0.15% of full scale output (FSO) typical, ±0.25% max
<b>Resolution</b>	0.025% of full scale
<b>Operating Temperature</b>	GSHE19 (0-10V models) -40 to +221°F [-40 to +105°C] GHSI19 (4-20mA models): -4 to 185°F [-20 to +85°C]
<b>Temperature Coefficient</b>	±0.015% of FS/K
<b>Vibration</b>	5-20Hz, 0.5 in peak-to-peak; 20-2000 Hz, 4.2 g peak-to-peak
<b>Shock</b>	1000g, 11ms
<b>Terminations</b>	IEC IP-67
<b>Humidity</b>	95% RH, non-condensing
<b>Connection</b>	Alliance Sensors Group connector, <a href="#">PT06A-10-6S-SR</a> , 6-pin, solder, straight cable entry.

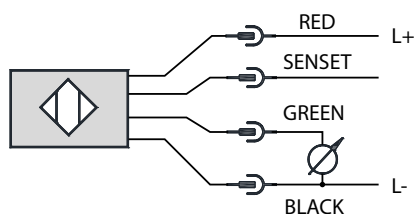
# GHSE19/GHI19 Spring-Loaded LVIT Linear Position Sensors

## Connector



Connector for GHSx Linear Position Sensors		
Part Number	Price	Description
<b><u>PT06A-10-6S-SR</u></b>	\$;-4j7t:	Alliance Sensors connector, PT0 6-pin solder, straight cable entry, 6-pole. For use with GHSx linear position sensors.

## Wiring Diagram



Wiring Table	
<b>+DC Power Input</b>	E
<b>Common Ground</b>	D
<b>Analog Output</b>	A
<b>SenSet™</b>	B