ALLIANCE SENSORS GROUP
A DIVISION OF H.G. SCHAEVITZ LLC

GHSE19/GHI19 Spring-Loaded LVIT Linear Position Sensors

GHSE19-050A-02-10S

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

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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])
0-10 V models						
GHSE19-006A-02-10S	$765.00	PDF	0.25 [6.35]	3.50 [88.9]	0.75 [0.134]	0.9 [0.41]
GHSE19-013A-02-10S	$775.00	PDF	0.5 [12.7]	3.50 [88.9]	0.75 [0.134]	0.9 [0.41]
GHSE19-025A-02-10S	$801.00	PDF	1.0 [25.4]	4.00 [101.6]	0.75 [0.134]	0.9 [0.41]
GHSE19-050A-02-10S	$827.00	PDF	2.0 [50.8]	5.08 [129.0]	0.43 [0.077]	1.0 [0.45]
GHSE19-075A-02-10S	$853.00	PDF	3.0 [76.2]	6.16 [156.5]	0.30 [0.054]	1.0 [0.45]
GHSE19-100A-02-10S	$878.00	PDF	4.0 [101.6]	7.25 [184.1]	0.23 [0.041]	1.0 [0.45]
4-20mA models						
GHSI19-006A-02-20S	$765.00	PDF	0.25 [6.35]	3.50 [88.9]	0.75 [0.134]	0.9 [0.41]
GHSI19-013A-02-20S	$775.00	PDF	0.5 [12.7]	3.50 [88.9]	0.75 [0.134]	0.9 [0.41]
GHSI19-025A-02-20S	$801.00	PDF	1.0 [25.4]	4.00 [101.6]	0.75 [0.134]	0.9 [0.41]
GHSI19-050A-02-20S	$827.00	PDF	2.0 [50.8]	5.08 [129.0]	0.43 [0.077]	1.0 [0.45]
GHSI19-075A-02-20S	$853.00	PDF	3.0 [76.2]	6.16 [156.5]	0.30 [0.054]	1.0 [0.45]
GHSI19-100A-02-20S	$878.00	PDF	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

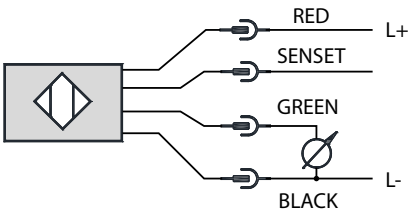
Analog I/Os	0-10VDC output with 12-30VDC power source; 4-20 mA (3-wire) output with 18-30VDC power source, 60mA max, 167°F [75°C] max
Measuring Ranges	0.25 to 4.0 in [6.35 to 101.6 mm] full scale (nominal)
Linearity Error	±0.15% of full scale output (FSO) typical, ±0.25% max
Resolution	0.025% of full scale
Operating Temperature	GSHE19 (0-10V models) -40 to +221°F [-40 to +105°C] GSHI19 (4-20mA models): -4 to 185°F [-20 to +85°C]
Temperature Coefficient	±0.015% of FS/K
Vibration	5-20Hz, 0.5 in peak-to-peak; 20-2000 Hz, 4.2 g peak-to-peak
Shock	1000g, 11ms
Terminations	IEC IP-67
Humidity	95% RH, non-condensing
Connection	Alliance Sensors Group connector, PT06A-10-6S-SR, 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***
PT06A-10-6S-SR	$41.50	Alliance Sensors connector, PT0 6-pin solder, straight cable entry, 6-pole. For use with GHSx linear position sensors.

Wiring Diagram



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