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

LVE45/LVI45 LVIT Inductive Linear Position Sensors

LVE45-100R-01-10S

The LV45 series LVIT (Linear Variable Inductance Transducer) position sensors are designed for heavy-duty industrial measuring applications that require rugged devices. Typical applications include the following:

- Steel, aluminum, and paper mills
- Power generation steam valves
- Material creep measurements
- Roadway/bridge expansion
- Hydro power plants

LV45 sensors use a contactless inductive technology that allows them to replace other types of technology sensors like potentiometers and DC LVDTs in most applications. With a simple coil design, a captive 1/2 inch diameter connecting rod with 1/2-20 male thread, a stainless steel thick-walled housing, and a radial M12 connection, the sensors are shorter and more robust than their DC-LVDT counterparts. With a wider temperature range, LV45 sensors can withstand the vibration and shock levels found in mills and power plants as well as the temperature and humidity found in outdoor applications.

Features

- LVIT Technology™ (Linear Variable Inductance Transducer)
- Contactless operation
- Excellent stroke-to-body-length ratio
- Stroke ranges from 100 to 375 mm (4 to 15 inches)
- Proprietary SenSet™ field adjustable range scaling

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Part Number	Price	Drawing Link	Stroke mm [in]	Body Length mm [in]	Output	Connection	Housing Material
0-10 VDC models							
LVE45-100R-01-10S	$922.00	PDF	100 [4.0]	250.9 [9.88]	0-10 VDC	5-pin M12 quick-disconnect	Stainless steel
LVE45-150R-01-10S	$1,045.00	PDF	150 [6.0]	301.7 [11.88]	0-10 VDC	5-pin M12 quick-disconnect	Stainless steel
LVE45-200R-01-10S	$1,168.00	PDF	200 [8.0]	352.5 [13.88]	0-10 VDC	5-pin M12 quick-disconnect	Stainless steel
LVE45-250R-01-10S	$1,217.00	PDF	250 [10.0]	403.3 [15.88]	0-10 VDC	5-pin M12 quick-disconnect	Stainless steel
LVE45-300R-01-10S	$1,266.00	PDF	300 [12.0]	454.1 [17.88]	0-10 VDC	5-pin M12 quick-disconnect	Stainless steel
LVE45-375R-01-10S	$1,316.00	PDF	375 [15.0]	530.4 [20.88]	0-10 VDC	5-pin M12 quick-disconnect	Stainless steel
4-20 mA models							
LVI45-100R-01-20S	$922.00	PDF	100 [4.0]	250.9 [9.88]	4-20 mA	5-pin M12 quick-disconnect	Stainless steel
LVI45-150R-01-20S	$1,045.00	PDF	150 [6.0]	301.7 [11.88]	4-20 mA	5-pin M12 quick-disconnect	Stainless steel
LVI45-200R-01-20S	$1,168.00	PDF	200 [8.0]	352.5 [13.88]	4-20 mA	5-pin M12 quick-disconnect	Stainless steel
LVI45-250R-01-20S	$1,217.00	PDF	250 [10.0]	403.3 [15.88]	4-20 mA	5-pin M12 quick-disconnect	Stainless steel
LVI45-300R-01-20S	$1,266.00	PDF	300 [12.0]	454.1 [17.88]	4-20 mA	5-pin M12 quick-disconnect	Stainless steel
LVI45-375R-01-20S	$1,316.00	PDF	375 [15.0]	530.4 [20.88]	4-20 mA	5-pin M12 quick-disconnect	Stainless steel

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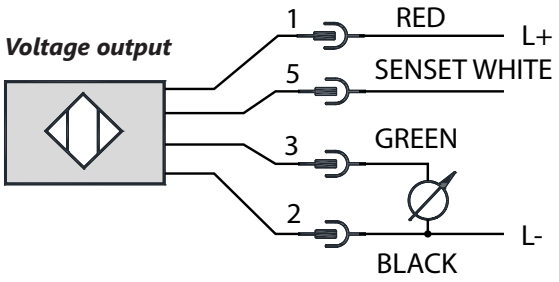
LVE45/LVI45 LVIT Inductive Linear Position Sensors Specifications	
Analog I/Os	0-10V output with 12 -30V input, 35 mA max. 4-20 mA (3-wire) output with 18-30V input, 60 mA max. [75° C max]
Measuring Ranges	100 to 450 mm [4 to 18 in] full-scale [nominal]
Linearity Error	< ± 0.15% of Full Scale Output [FSO] typical, ±0.25% max
Resolution	0.025% of FSO
Update Rate	300Hz [nominal]
Operating Temperature	Current output: -20 to +85°C; [-40 to +185°F]; Voltage output: -40 to 105°C [-40 to 221°F]
Temperature Coefficient	< ± 0.015% of FS/°C
Vibration	5-20 Hz, 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	5-pin M12 quick-disconnect
Mounting	rod eyes [see 2D drawing for specifications]
Agency Approval *	CE

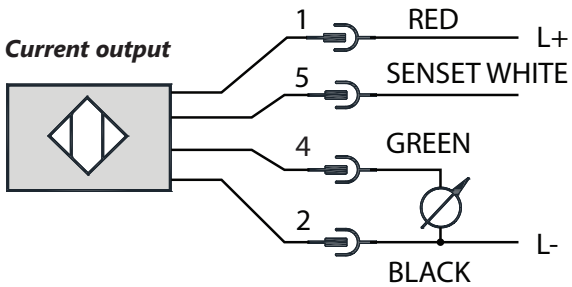
***To obtain the most current agency approval information, see the Agency Approval Checklist section on the specific part number's web page.**

Wiring Diagram



Wiring Table		
I/O Function	***Cable Color***	***PIN***
DC Power Input	Red	1
Ground	Black	2
Voltage Output	Green	3
Current Output	Green	4
SenSet™	White	5

***Shield not connected internally**



5-pin M12 Connector