

LVE45/LVI45 LVIT Inductive Linear Position Sensors



LVE45-100R-01-10S



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

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.



LVE45/LVI45 LVIT Inductive Linear Position Sensors

Part Number	Price	Drawing Link	Stroke mm [in]	Body Length mm [in]	Output	Connection	Housing Material
0-10 VDC models							
LVE45-100R-01-10S	\$:,005avf:	PDF	100 [4.0]	250.9 [9.88]	0-10 VDC	5-pin M12 quick-disconnect	Stainless steel
LVE45-150R-01-10S	\$:,005avg:	PDF	150 [6.0]	301.7 [11.88]	0-10 VDC	5-pin M12 quick-disconnect	Stainless steel
LVE45-200R-01-10S	\$:,005avh:	PDF	200 [8.0]	352.5 [13.88]	0-10 VDC	5-pin M12 quick-disconnect	Stainless steel
LVE45-250R-01-10S	\$:-005avi:	PDF	250 [10.0]	403.3 [15.88]	0-10 VDC	5-pin M12 quick-disconnect	Stainless steel
LVE45-300R-01-10S	\$:-005avj:	PDF	300 [12.0]	454.1 [17.88]	0-10 VDC	5-pin M12 quick-disconnect	Stainless steel
LVE45-375R-01-10S	\$:,005avk:	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	\$:-005avl:	PDF	100 [4.0]	250.9 [9.88]	4-20 mA	5-pin M12 quick-disconnect	Stainless steel
LVI45-150R-01-20S	\$:,005avn:	PDF	150 [6.0]	301.7 [11.88]	4-20 mA	5-pin M12 quick-disconnect	Stainless steel
LVI45-200R-01-20S	\$:,005avo:	PDF	200 [8.0]	352.5 [13.88]	4-20 mA	5-pin M12 quick-disconnect	Stainless steel
LVI45-250R-01-20S	\$:,005avp:	PDF	250 [10.0]	403.3 [15.88]	4-20 mA	5-pin M12 quick-disconnect	Stainless steel
LVI45-300R-01-20S	\$:,005avq:	PDF	300 [12.0]	454.1 [17.88]	4-20 mA	5-pin M12 quick-disconnect	Stainless steel
LVI45-375R-01-20S	\$:,005avs:	PDF	375 [15.0]	530.4 [20.88]	4-20 mA	5-pin M12 quick-disconnect	Stainless steel

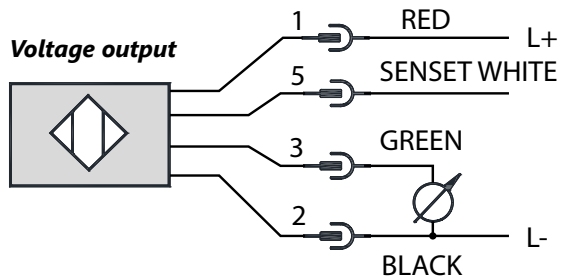
LVE45/LVI45 LVIT Inductive Linear Position Sensors

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	$< \pm 0.15\%$ of Full Scale Output [FSO] typical, $\pm 0.25\%$ 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	$< \pm 0.015\%$ 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

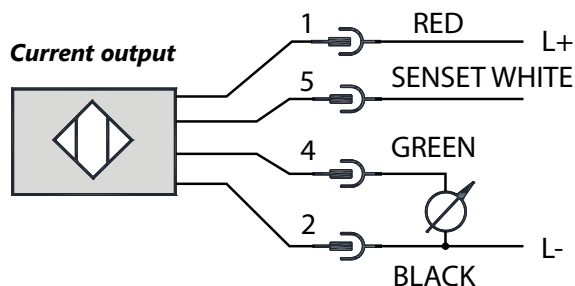
*To obtain the most current agency approval information, see the Agency Approval Checklist section on the specific part number's web page.

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

