

# 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
<b>0-10 VDC models</b>							
<a href="#">LVE45-100R-01-10S</a>	\$1,116.00	<a href="#">PDF</a>	100 [4.0]	250.9 [9.88]	0-10 VDC	5-pin M12 quick-disconnect	Stainless steel
<a href="#">LVE45-150R-01-10S</a>	\$1,238.00	<a href="#">PDF</a>	150 [6.0]	301.7 [11.88]	0-10 VDC	5-pin M12 quick-disconnect	Stainless steel
<a href="#">LVE45-200R-01-10S</a>	\$1,362.00	<a href="#">PDF</a>	200 [8.0]	352.5 [13.88]	0-10 VDC	5-pin M12 quick-disconnect	Stainless steel
<a href="#">LVE45-250R-01-10S</a>	\$1,411.00	<a href="#">PDF</a>	250 [10.0]	403.3 [15.88]	0-10 VDC	5-pin M12 quick-disconnect	Stainless steel
<a href="#">LVE45-300R-01-10S</a>	\$1,460.00	<a href="#">PDF</a>	300 [12.0]	454.1 [17.88]	0-10 VDC	5-pin M12 quick-disconnect	Stainless steel
<a href="#">LVE45-375R-01-10S</a>	\$1,510.00	<a href="#">PDF</a>	375 [15.0]	530.4 [20.88]	0-10 VDC	5-pin M12 quick-disconnect	Stainless steel
<b>4-20 mA models</b>							
<a href="#">LVI45-100R-01-20S</a>	\$1,116.00	<a href="#">PDF</a>	100 [4.0]	250.9 [9.88]	4-20 mA	5-pin M12 quick-disconnect	Stainless steel
<a href="#">LVI45-150R-01-20S</a>	\$1,238.00	<a href="#">PDF</a>	150 [6.0]	301.7 [11.88]	4-20 mA	5-pin M12 quick-disconnect	Stainless steel
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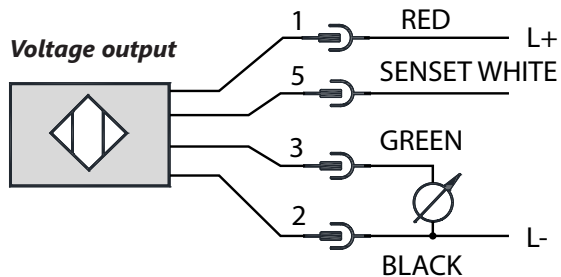
# LVE45/LVI45 LVIT Inductive Linear Position Sensors

## LVE45/LVI45 LVIT Inductive Linear Position Sensors Specifications

<b>Analog I/Os</b>	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]
<b>Measuring Ranges</b>	100 to 450 mm [4 to 18 in] full-scale [nominal]
<b>Linearity Error</b>	$< \pm 0.15\%$ of Full Scale Output [FSO] typical, $\pm 0.25\%$ max
<b>Resolution</b>	0.025% of FSO
<b>Update Rate</b>	300Hz [nominal]
<b>Operating Temperature</b>	Current output: -20 to +85°C; [-40 to +185°F]; Voltage output: -40 to 105°C [-40 to 221°F]
<b>Temperature Coefficient</b>	$< \pm 0.015\%$ of FS/°C
<b>Vibration</b>	5-20 Hz, 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>	5-pin M12 quick-disconnect
<b>Mounting</b>	rod eyes [see 2D drawing for specifications]
<b>Agency Approval *</b>	CE

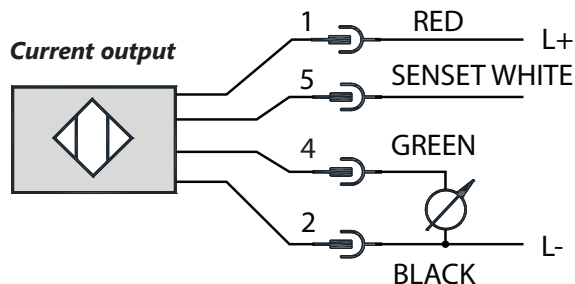
\*To obtain the most current agency approval information, see the Agency Approval Checklist section on the specific part number's web page.

## 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**

