

## HE-Series with Enhanced Resolution and SSI Interface



**Assembly part number:**

Li100P2-Q25LM1-HESG25X3-H1181

**Measuring Range Specifications**

Measuring span (L):	100, 200, 300, 400, 500, 600, 700, 800, 900, 1,000 mm
Blind zone (a):	29 mm
Blind zone (b):	29 mm
Nominal distance:	1.5 mm

**System**

Resolution:	0.001 mm
Repeatability:	10 µm (0.01 mm)
Linearity deviation:	≤ 0.1% of full scale
Temperature drift:	≤ ±0.0001 % / K
Ambient temperature:	-25 to +70 °C

**Electrical Data**

Operating voltage:	15-30 VDC
Residual ripple:	≤ 10% U <sub>pp</sub>
Isolation test voltage:	≤ 0.5 kV
Short-circuit protection:	yes
Wire breakage / reverse polarity protection:	yes/yes (voltage supply)
Output function:	8-wire, SSI, 25 bit gray code
Process data area:	bit 0... bit 19
Diagnostic bits:	bit 21: Positioning element left the measuring range and is outside the detectable area bit 22: Positioning element is in the measuring range, lower signal quality (e.g., distance is too large) bit 23: Positioning element is outside the measuring range) bit 24: Synchronous operation active
Current consumption:	< 50 mA
Sample rate:	5 kHz

**Housing Style**

Housing style:	rectangular, Q25L
Dimensions:	profile 35 x 25 mm, L = measuring range + 58 mm
Housing material:	aluminum
Material active face:	plastic, PA6-GF30
Connection:	connector, M12 x 1
Vibration resistance:	55 Hz (1 mm)
Shock resistance:	30 g (11 ms)
Protection class (IEC 60529/EN 60529):	IP67

**LEDs**

Power indication:	green LED
Measuring range indication:	green/yellow multifunctional LED

**Product Features**

- Enhanced resolution (up to 20 bit) depending on sensor length
- Enhanced sample rate of 5 kHz
- Excellent temperature stability and linearity through direct digital signal transmission
- SSI interface
- M12 Eurofast connector (8-pin)
- 29 mm blind zones
- Robust extruded aluminum housing
- Watertight (IP67) polycarbonate insert
- Multifunction LED

**Measuring Range Indicated via LED**

- **Green:** The positioning element is in the measuring range.
- **Yellow:** The positioning element is in the measuring range with a lower signal quality (e.g., the distance between sensor and element is too large).
- **Yellow flashing:** The positioning element is outside of the measuring range (max. range).
- **Off:** The positioning element is outside the programmed range but inside the total, non-programmed measuring length.

**High-Precision Digital SSI Output**

SSI (synchronous serial interface) is a 4-wire data communication standard commonly used in industry to transmit position data digitally. The conductors in the cable are shielded twisted pairs that enhance EMI/RFI protection. In addition to the clock and data wires, it also has separate power wiring.

**HE-Series with Enhanced Resolution and SSI Interface**

**Part Number Key: HE-Series / SSI**

A	B	C		D	E		G		H
LI	100	P0	-	Q25L	M0	-	HESG25X3	-	H1181

A	Type
LI	Linear Inductive

D	Housing Style
Q25L	Rectangular, 25 x 35 mm

B	Measuring Span
100	100 mm
200	200 mm
300	300 mm
400	400 mm
500	500 mm
600	600 mm
700	700 mm
800	800 mm
900	900 mm
1000	1000 mm

E	Mounting Bracket
M0	No Mounting Brackets
M1	M1-Q25L
M2	M2-Q25L
M3	M3-Q25L

G	Operating Voltage and Output Type
HESG25X3	15-30 VDC, SSI, Gray Code, 25 bit, 3 LEDs

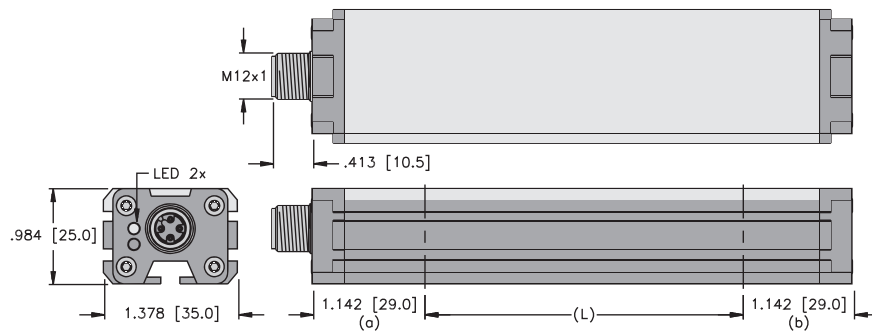
C	Positioning Element
P0	No Positioning Element
P1	P1-Li-Q25L (Captive)
P2	P2-Li-Q25L (Floating)*
P3	P3-Li-Q25L (Floating, Right Angle)*

\*Operates at a distance of 0-4 mm from the sensor surface

H	Type of Connection
H1181	8-pin M12 Eurofast Connector

Linear Position Technology

**Dimensions: HE-Series / SSI**

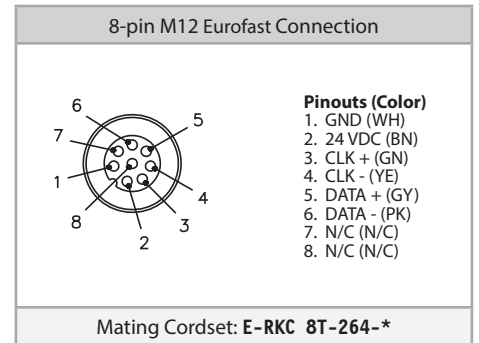


**Note:** Right angle cable direction

**Ordering Information**

The Q-track linear position sensors are available in different lengths from 100 to 1,000 mm, in increments of 100 mm. The sensors, mounting accessories, and positioning elements are available individually or as a kit.

**Wiring Diagram: E-Series / SSI**



\* Length in meters.

See page H1, Connectivity, for cables and connectors.