

Q17L Compact Series, Analog Output (U/I)



Measuring Range Specifications

Max. measuring span:	50, 100, 150, 200, 300 mm
Blind zone (a):	22 mm
Blind zone (b):	9 mm (Li50 = 16 mm)
Nominal distance:	1.5 mm

System

Resolution:	12 bit
Repeat accuracy:	≤ 0.025% of full scale
Linearity deviation:	≤ 0.5% of full scale
Temperature drift:	≤ ±0.01 % / K
Ambient temperature:	-25 to +70 °C -40 to +70 °C (S97 version)

Electrical Data

Operating voltage:	15-30 VDC (LIU5) 8-30 VDC (LU4)
Residual ripple:	≤ 10% U _{pp}
No-load current:	≤ 50 mA
Isolation test voltage:	≤ 0.5 kV
Short-circuit protection:	yes
Wire breakage / reverse polarity protection:	yes/yes (supply voltage)
Output function:	4-wire, analog output
Voltage output:	0-10 V (LIU5) 0.5-4.5 V (LU4)
Current output:	4-20 mA (LIU5)
Load resistance of voltage output:	≥ 4.7 kΩ
Load resistance of current output:	≤ 0.4 kΩ
Current consumption:	< 50 mA
Sampling rate:	700 Hz

Housing Style

Housing style:	rectangular, Q17L
Dimensions:	20 x 16.5 mm, length L = measuring length + 32 mm, (Li50 + 38 mm)
Housing material:	plastic, PC-GF10
Cable quality:	5.2 mm, Li9YH-11YH, PUR (LIU5) 5.2 mm, Lif32Y32Y, TPE (LU4)
Connection:	cable/cable with connector, M12 x 1
Vibration resistance:	55 Hz (1 mm)
Shock resistance:	30 g (11 ms)
Protection class (IEC 60529/EN 60529):	IP67

Miscellaneous

Included in delivery:	P1-Li-QR14/Q17L (position element), M1.1-Q17L, M1.2-Q17L (mounting feet)
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Product Features

- 12 bit resolution
- Current and voltage output in one device
- M12 Eurofast connector (5-pin)
- Cable, open end
- Extreme short blind zones
- Programmable measuring range
- Watertight (IP67) fully potted polycarbonate housing

Measuring Range Indicated via LED

- **Green:** The positioning element is in the measuring range.
- **Green/flashing:** The positioning element is in the measuring range with a lower signal quality (e.g., the distance between sensor and element is too large).
- **Off:** The positioning element is outside the programmed range.

Setting the Measuring Range

The initial and final value of the measuring range is set at the push of a button, either via a teach adapter or programming line (pin 5). Furthermore, the output curve can be inverted.

- Factory setting (0 V/4 mA at the connector end): Jumper pin 5 and pin 1 for 10 sec.
- Factory setting inverted: Jumper pin 5 and pin 3 for 10 sec.
- Setting the initial value: Move positioning element to desired position and jumper pin 5 and pin 3 for 2 sec.
- Setting the final value: Move positioning element to desired position and jumper pin 5 and pin 1 for 2 sec.

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Part Number Key: Q17L Series

A	B	C		D	E		F		G		H
LI	50	P1	-	Q17L	M1	-	LU4X2	-	0.3M-RS5	/	S97

A	Type
LI	Linear Inductive

B	Measuring Span
50	50 mm
100	100 mm
150	150 mm
200	200 mm
300	300 mm

C	Positioning Element, Floating
P1	P1-Li-QR14/Q17L*

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

D	Housing Style
Q17L	Rectangular, 16.5 x 20 mm

E	Mounting Bracket
M1	M1.1-Q17L and M1.2-Q17L

F	Operating Voltage and Output Type
LU4X2	8-30 VDC, 0.5-4.5 V, 2 LEDs
LIU5X2	15-30 VDC, 4-20 mA, 0-10 V, 2 LEDs

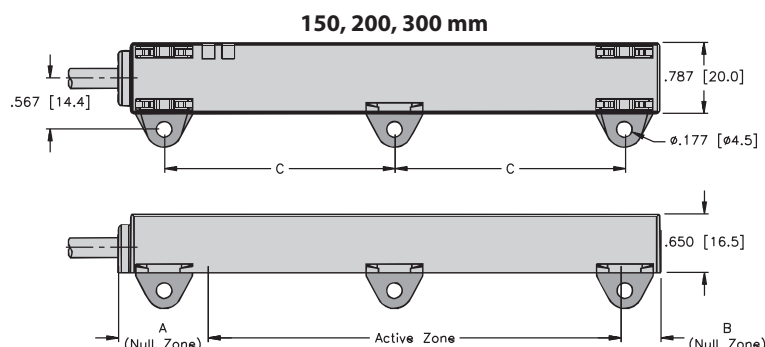
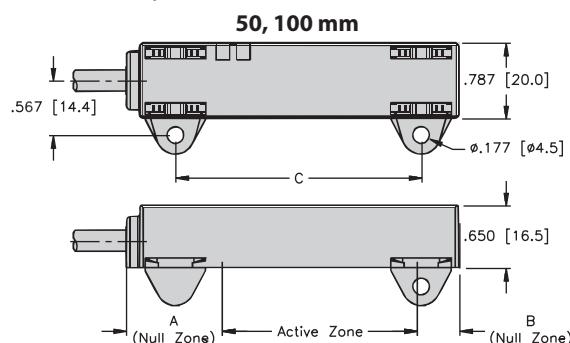
G	Type of Connection*
0.3M-RS5 (Blank)	Cable (0.3 m PUR) w/ M12 Eurofast Connector Cable (2 m PUR)

*TPE cable for output type 'LU4'.

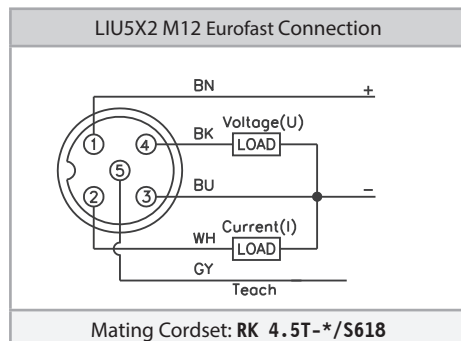
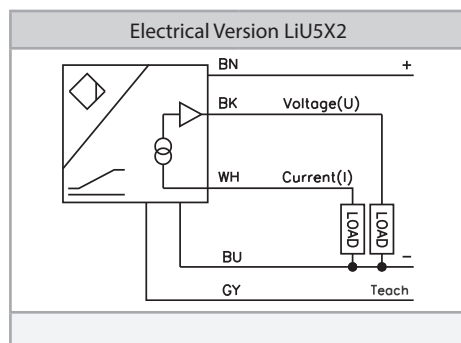
H	Specials (Optional)
S97	-40 to +70 °C Extended Temperature Range ¹⁾

¹⁾Only available for output type 'LU4'.

Dimensions: Q17L Series



Wiring Diagram: Q17L



* Length in meters.

Table 1:

Measuring Range	Mounting Hole Dimensions (C)
50 mm	65 mm
100 mm	108 mm
150 mm	79 mm
200 mm	104 mm
300 mm	154 mm

See page H1, Connectivity, for cables and connectors.

