

QR14 Miniature Series, Analog Output (U/I)



Measuring Range Specifications

Measuring span (A...B):	25 mm
Blind zone (a):	17 mm
Blind zone (b):	7.5 mm
Nominal distance:	1.5 mm

System

Resolution:	12 bit
Repeat accuracy:	≤ 0.025% of full scale
Linearity deviation:	≤ 1% 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:	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, QR14
Dimensions:	53.5 x 49 x 14 mm
Housing material:	plastic, PBT-GF30-V0
Cable quality:	5.2 mm, LifYY, PVC (LiU5) 5.2 mm, Lif 32Y32Y, 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):	IP68/IP69K

LEDs

Power on indication:	green LED
Measuring range indication:	green/green flashing (multifunctional LEDs)

Miscellaneous

Included in delivery:	P1-Li-QR14/Q17L
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Product Features

- 12 bit resolution
- Current and voltage output in one device
- M12 Eurofast connector (4-pin)
- Cable, open end
- Extreme short blind zones
- Watertight (IP68/IP69K) 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.

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Part Number Key: QR14 Series

A	B	C		D		E		F		G
LI	25	P1	-	QR14	-	LIU5X2	-	0.3-RS4	/	S97

A	Type
LI	Linear Inductive

B	Measuring Span
25	25 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
QR14	Rectangular, 53.5 x 14 mm

E	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

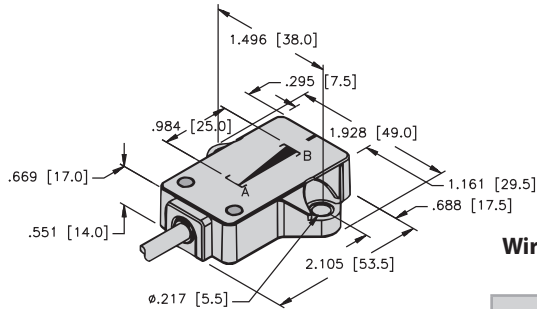
F	Type of Connection*
0.3-RS4 (Blank)	Cable (0.3 m PUR) w/ M12 Eurofast Connector Cable (2 m PUR)

*TPE cable for output type 'LU4X2'.

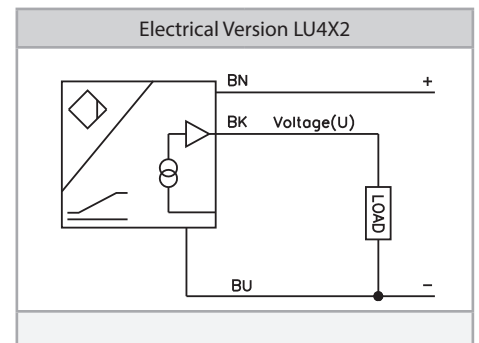
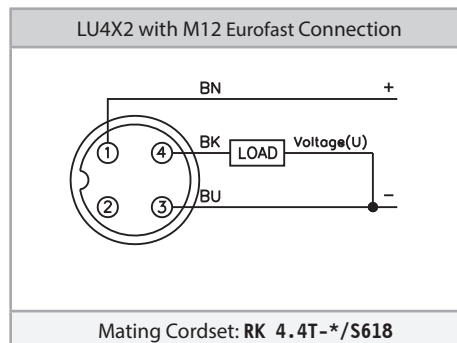
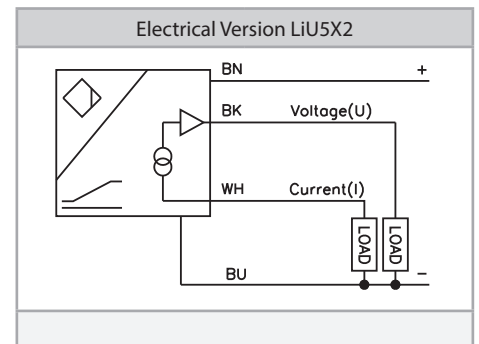
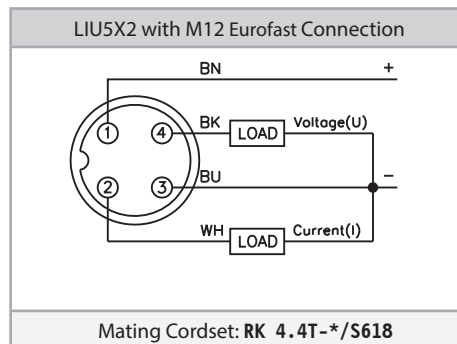
G	Specials (Optional)
S97	-40 to +70 °C Extended Temperature Range ¹⁾

¹⁾ Only available for output type 'LU4X2'.

Dimensions: QR14 Series



Wiring Diagram: QR14



See page H1, Connectivity, for cables and connectors.