

## Rotary Inductive Sensors, Incremental Output, QR24

Part Number	ID Number	Measuring Range	Resolution	Ambient Temperature	Operating Voltage	Output	Dimensional Drawing	Wiring Diagram
Ri 360P0-QR24M0-INCRX2-H1181	M1590910	0-360°	1-5000* ppr	-40 to +185 °F (-40 to +85 °C)	15-30 VDC	Push-Pull/HTL	1	1
Ri 360P0-EQR24M0-INCRX2-H1181	M1590912	0-360°	1-5000* ppr	-40 to +185 °F (-40 to +85 °C)	15-30 VDC	Push-Pull/HTL	1	1

NOTE: Incremental output QR24 sensors not to be used for speed feedback.

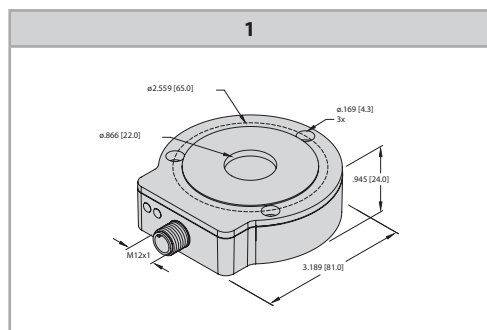
\* Easyteach pulse rates available: 360, 512, 1000, 1024, 2048, 2500, 3600, 4096, 5000 ppr

### Technical Specifications:

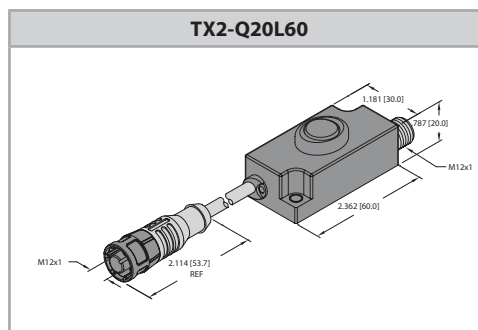
Linearity deviation:	≤ 0.05% of full scale
Temperature drift:	≤ ±0.003% / K
Residual ripple:	≤ 10% Uss
Rated insulation voltage:	≤ 0.5 kV
Short-circuit protection:	yes
Wire-break/Rev. pol. protection:	yes/yes
Pulse frequency max.:	200 kHz
Signal level high:	min. V+ - 2V
Signal level low:	max. 2V
Sampling rate:	1000 Hz
Current consumption:	< 100 mA

Housing:	QR24
Dimensions:	81 x 78 x 24 mm
Housing material (QR24):	Metal/Plastic, ZnAlCu1/PBT-GF30-V0
Housing material (EQR24):	Stainless Steel/Plastic V4A (1.4404) PA12-GF30
Shaft type:	Hollow shaft
Electrical connection:	M12 x 1
Vibration resistance:	55 Hz (1 mm)
Shock resistance:	40 g, 6 ms (continuous)
Degree of protection:	IP68/IP69K
Power-on indication:	LED, green
Measuring range indication:	LED, yellow, yellow flashing

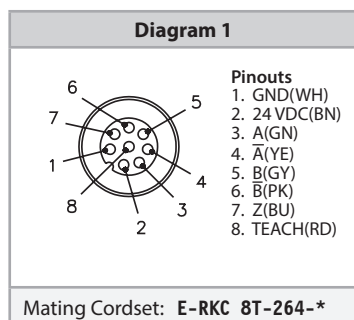
### Dimensions:



### Easyteach Programming Tool:



### Wiring Diagrams:



### Sample Configuration: IO-Link Master

The following components can be used for parameterization of the QR24 incremental sensor through IO-Link:

1 x IO-Link Master	USB-2-IOL-0002
1 x Connection Cable	RKC 8.302T-1.5-RSC4T/TX320



## Rotary Inductive Sensors, Analog Output, QR24

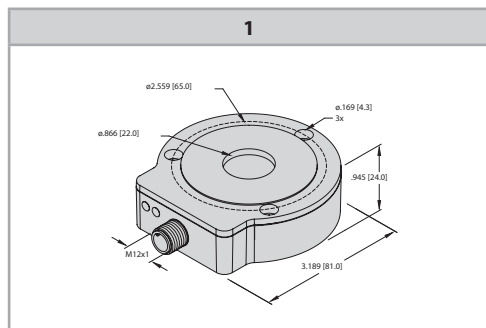
Part Number	ID Number	Measuring Range	Resolution (16bit)	Ambient Temperature	Operating Voltage	Voltage Output	Current Output	Dimensional Drawing	Wiring Diagram
Ri360P0-QR24M0-ELIU5X2-H1151	M1590908	0-360°	≤ 0.006°	-40 to +185 °F (-40 to +85 °C)	15-30 VDC	0-10 V	4 - 20 mA	1	1
Ri360P0-QR24M0-ELU4X2-H1151/S97	M1590909	0-360°	≤ 0.006°	-40 to +185 °F (-40 to +85 °C)	8-30 VDC	0.5 - 4.5 V	N/A	1	2

### Technical Specifications:

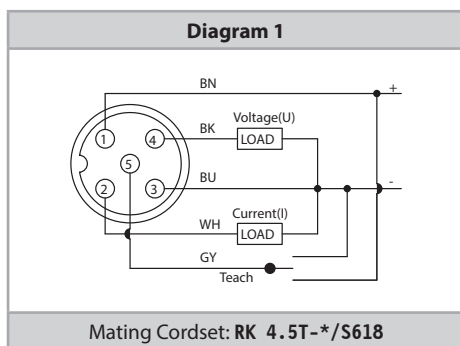
Linearity deviation:	≤ 0.5% of full scale
Temperature drift:	≤ ±0.004% / K
Residual ripple:	≤ 10% U <sub>ss</sub>
Rated insulation voltage:	≤ 0.5 kV
Short-circuit protection:	yes
Wire-break/Rev. pol. protection:	yes/yes
Load resistance (voltage):	≥ 4.7 kΩ
Load resistance (current):	≤ 0.4 kΩ
Sampling rate:	5000 Hz
Current consumption:	< 100 mA

Housing:	QR24
Dimensions:	81 x 78 x 24 mm
Housing material:	Metal/Plastic, ZnAlCu1/PBT-GF30-V0
Shaft type:	Hollow shaft
Electrical connection:	M12 x 1
Vibration resistance:	55 Hz (1 mm)
Shock resistance:	40 g, 6 ms (continuous)
Degree of protection:	IP68/IP69K
Power-on indication:	LED, green
Measuring range indication:	LED, yellow, yellow flashing

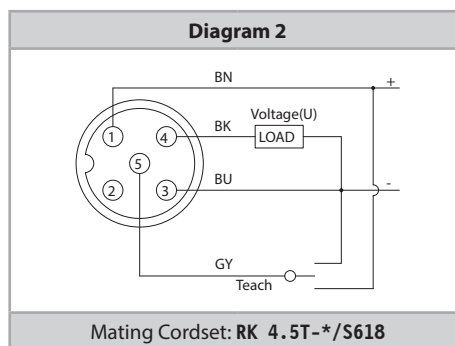
### Dimensions:



### Wiring Diagrams:



\* Length in meters.



\* Length in meters.

## Rotary Inductive Sensors, SSI Output, QR24

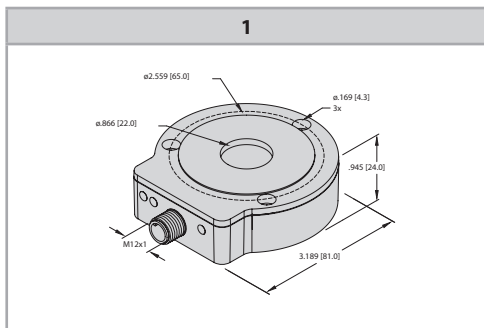
Part Number	ID Number	Measuring Range	Resolution (16-bit)	Ambient Temperature	Operating Voltage	Output Function	Dimensional Drawing	Wiring Diagram
Ri 360P0-QR24M0-HESG25X3-H1181	M1590905	0-360°	≤ 0.006°	-40 to +185 °F (-40 to +85 °C)	15-30 VDC	SSI	1	1
Ri 360P0-EQR24M0-HESG25X3-H1181	M1590911	0-360°	≤ 0.006°	-40 to +185 °F (-40 to +85 °C)	15-30 VDC	SSI	1	1

### Technical Specifications:

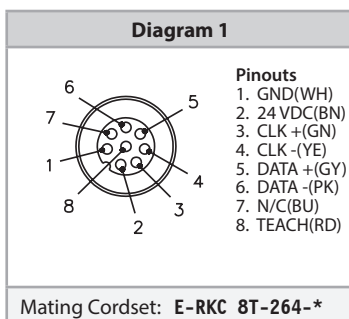
Linearity deviation:	≤ 0.05% of full scale
Temperature drift:	≤ ±0.003% / K
Residual ripple:	≤ 10% U <sub>ss</sub>
Rated insulation voltage:	≤ 0.5 kV
Short-circuit protection:	yes
Wire-break/Rev. pol. protection:	yes/yes (supply voltage)
Output function:	8-wire, SSI, 25 bit, gray coded
Process data area:	Configurable
Diagnostic bits:	Bit 22: Positioning was changed during power drop Bit 23: Positioning element has reached the end of the measuring range. This is indicated by a lower signal quality Bit 24: Positioning element is outside the measuring range. Data messages parameterizable as multiturn and singleturn process data or error bits

Sampling rate:	5000 Hz
Current consumption:	< 100 mA
Housing:	QR24
Dimensions:	81 x 78 x 24 mm
Housing material (QR24):	Metal/Plastic, ZnAlCu1/PBT-G30-V0
Housing material (EQR24):	Stainless Steel/Plastic V4A (1.4404) PA12-GF30
Shaft type:	Hollow shaft
Electrical connection:	M12 x 1
Vibration resistance:	55 Hz (1 mm)
Shock resistance:	40g, 6ms (continuous)
Degree of protection:	IP68/IP69K
Power-on indication:	LED, green
Measuring range indication:	LED, yellow, yellow flashing
Error indication:	LED, red

### Dimensions:



### Wiring Diagrams:



### Sample Configuration: IO-Link Master

The following components can be used for parameterization of the QR24 SSI sensor through IO-Link:

1 x IO-Link Master	USB-2-IOL-0002
1 x Connection Cable	RKC 8.302T-1.5-RSC4T/TX320



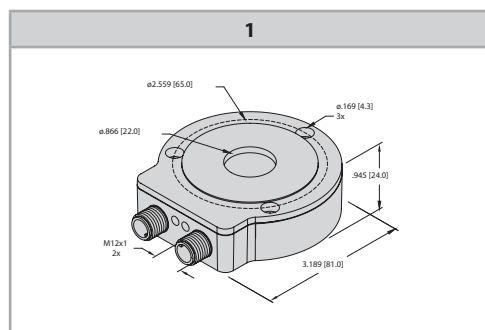
## Rotary Inductive Sensors, CANopen Output, QR24

Part Number	ID Number	Measuring Range	Resolution (16-bit)	Ambient Temperature	Operating Voltage	Output Function	Dimensional Drawing	Wiring Diagram
Ri360P0-QR24M0-CNX4-2H1150	M1590914	0-360°	≤ 0.006°	-40 to +185 °F (-40 to +85 °C)	10-30 VDC	CANopen, DS406V3.2 LSS DS 305	1	1

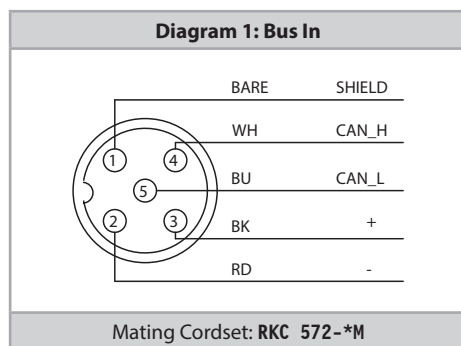
### Technical Specifications:

Linearity deviation:	≤ 0.05% of full scale	Housing:	QR24
Temperature drift:	≤ ±0.003% / K	Dimensions:	81 x 78 x 24 mm
Residual ripple:	≤ 10% U <sub>ss</sub>	Housing material:	Metal/Plastic, ZnAlCu1/PBT-GF30-V0
Rated insulation voltage:	≤ 0.5 kV	Shaft type:	Hollow shaft
Node ID:	1 - 127, factory default: 3	Electrical connection:	2 x M12 x 1
Baud rate:	10, 20, 50, 125, 250, 500, & 800 kbps factory default: 125 kbps	Vibration resistance:	55 Hz (1 mm)
Sampling rate:	1000 Hz	Shock resistance:	40 g, 6 ms (continuous)
Current consumption:	< 60 mA	Degree of protection:	IP68/IP69K
		Power-on indication:	LED, green
		Measuring range indication:	LED, yellow, yellow flashing
		Status CANopen:	LED, green/red

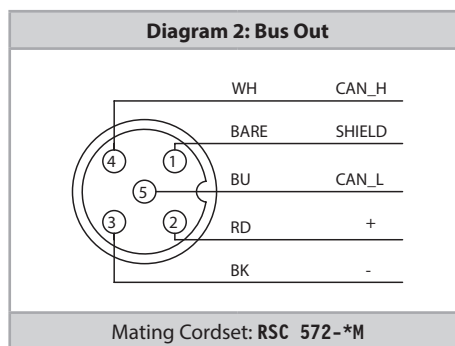
### Dimensions:



### Wiring Diagrams:



\* Length in meters.



\* Length in meters.