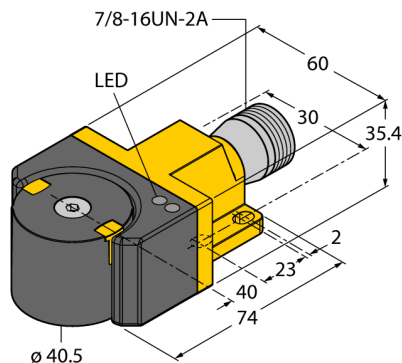


Inductive Angle Sensor With Analog Output RI360P1-DSU35-ELIU5X2-B1150/S1265

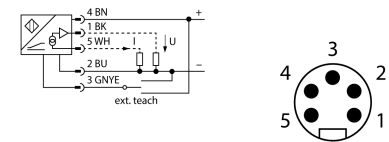
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- Rectangular, housing DSU35
- Plastic, PP-GF30-VO
- Detecting angular positions of 0° to 360°
- P1-RI-DSU35 positioning element included in delivery
- Measuring range displayed via LED
- Programmable measuring range
- Immune to electromagnetic interference
- Resolution, 12-bit
- 15...30 VDC
- 0...10 V and 4...20 mA
- Stainless steel connectors, Minifast 7/8", 5-pin
- Stainless steel fastening sleeve

Wiring Diagram

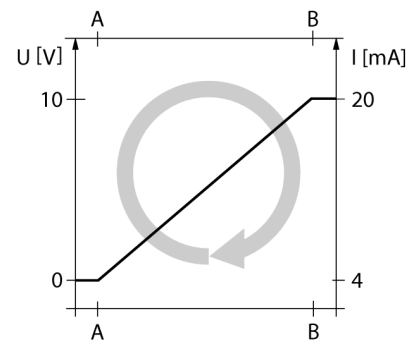


Functional principle

Inductive measuring principle provides more safety

Based on the functional principle of RLC coupling, the sensor operates absolutely wear-free and is immune to magnetized metal splinters and other interference fields.

Owing to the differential analysis, the output signal remains almost unchanged, even if the position of the positioning element deviates from the ideal axis of rotation.

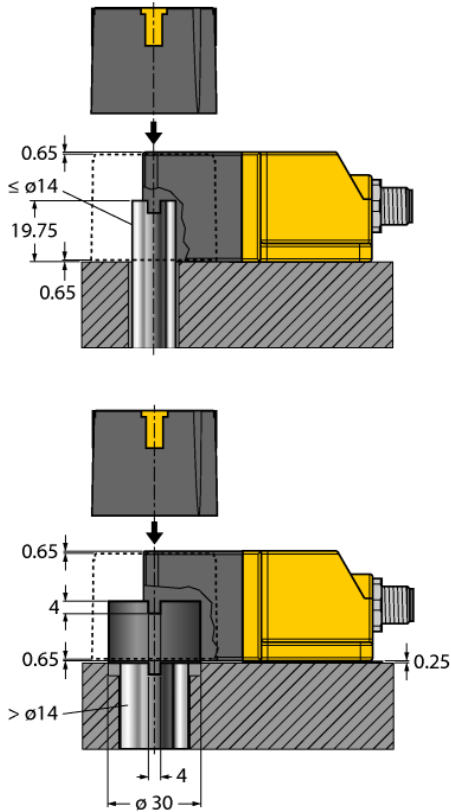


Type designation	RI360P1-DSU35-ELIU5X2-B1150/S1265
Ident-No.	1593040
Measuring principle	inductive
Resolution	12 bit
Measuring range	0...360°
Nominal distance	1 mm
Repeat accuracy	≤ 0.025 % of full scale
Linearity deviation	≤ 1 % f.s.
Temperature drift	≤ ± 0.02 % / K
Ambient temperature	-25...+75 °C
Operating voltage	15...30 VDC
Residual ripple	≤ 10 % U _{ss}
Isolation test voltage	≤ 0.5 kV
Short-circuit protection	yes
Wire breakage/Reverse polarity protection	yes/ yes (voltage supply)
Output function	5-pin, Analog output
Output type	absolute singleturn
Voltage output	0...10V
Current output	4...20 mA
Load resistance voltage output	≥ 4.7 kΩ
Load resistance, current output	≤ 0.4 kΩ
Sample rate	500 Hz
Current consumption	< 50 mA
Dimensions	71 x 60 x 35.4 mm
Shaft Type	Blind hole shaft
Housing material	Plastic, PP-GF30
Housing material, positioning element	plastic, PA66 + PA6I/6T-GF40
Electrical connection	Connector, 7/8"
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP68/IP69K
MTTF	138 years acc. to SN 29500 (Ed. 99) 40 °C
Packaging unit	1
Power-on indication	LED, Green
Measuring range display	multifunction LED, green
Included in delivery	TURCK knowledge management

Inductive Angle Sensor With Analog Output RI360P1-DSU35-ELIU5X2-B1150/S1265

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Ri-DSU35 for mounting on rotary actuators

The Ri-DSU35 angle sensor and the well-established Ni4-DSU35 inductive dual sensor are identical in construction. The user also profits from the enormous mounting flexibility of the device. The sensor can be mounted on all standard rotary actuators with a shaft diameter of max. 14 mm thanks to an extensive range of available accessories. For larger shaft diameters use the BTS-DSU35-Z02 accessories.

LED function

Operating voltage

Green: Power on

Measuring range

Green: Positioning element is in the measuring range

Green flashing: Positioning element is in the measuring range, signal low (e.g. distance too large)

LED OFF: Positioning element is outside the detection range

Inductive Angle Sensor With Analog Output RI360P1-DSU35-ELIU5X2-B1150/S1265



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Teaching instructions

Individual (teaching with positioning element)

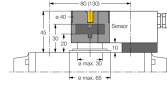
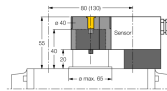
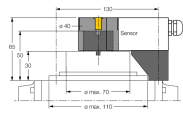
Bridge pin between teach input Pin 5 (GY)	Gnd Pin 3 (BU)	Ub Pin 1 (BN)	LED
2 s	start value	end value	status LED flashes then turns steady after 2 s
10 s	CCW rotation, then return to last preset value	CW rotation, then return to last preset value	after 10 s status LED flashes fast for 2 s
15 s	-	default setting (360°, CW)	after 15 s power and status LED alternate

Preset – Mode (teaching without positioning element)

Bridge pin between teach input Pin 5 (GY)	Gnd Pin 3 (BU)	Ub Pin 1 (BN)	LED
2 s	activate preset mode	activate preset mode	status LED steady, flashes after 2 s
10 s	CCW rotation, then return to last preset value	CW rotation, then return to last preset value	after 10 s status LED flashes fast for 2 s
15 s	-	default setting (360°, CW)	after 15 s power and status LED alternate
Angular range	Gnd Pin 3 (BU)	Ub Pin 1 (BN)	Status LED
30°	press once	-	1 x flashing
45°	press twice	-	2 x flashing
60°	press three times	-	3 x flashing
90°	-	press once	1 x flashing
180°	-	press twice	2 x flashing
270°	-	press three times	3 x flashing
360°	-	press four times	4 x flashing

**Inductive Angle Sensor
With Analog Output
RI360P1-DSU35-ELIU5X2-B1150/S1265**

Accessories

Type code	Ident-No.	Description	
BTS-DSU35-Z01	6900229	Mounting kit dual sensors, for larger rotary actuators: Spacer plate and snap ring max. Ø 65 mm; hole pattern on flange surface 30 x 80 mm (30 x 130 mm); connection shaft (shaft extension) height 30 mm / Ø max. 30 mm	
BTS-DSU35-Z02	6900230	Mounting kit dual sensors, for larger rotary actuators: Ø disc and snap ring max. 65 mm; hole pattern on flange surface 30 x 80 mm (30 x 130 mm); connection shaft (shaft extension) height 20 (30) mm / Ø max. 40 mm	
BTS-DSU35-Z03	6900231	Mounting kit dual sensors, for larger rotary actuators: Ø disc and snap ring max. 110 mm; hole pattern on flange surface 30 x 130 mm; connection shaft (shaft extension) height 30 mm / Ø max. 70 mm	
BTS-DSU35-Z07	6900403	Mounting kit dual sensors, for larger rotary actuators: Ø disc and snap ring max. 110 mm; hole pattern on flange surface 30 x 130 mm; connection shaft (shaft extension) height 50 mm / Ø max. 75 mm	