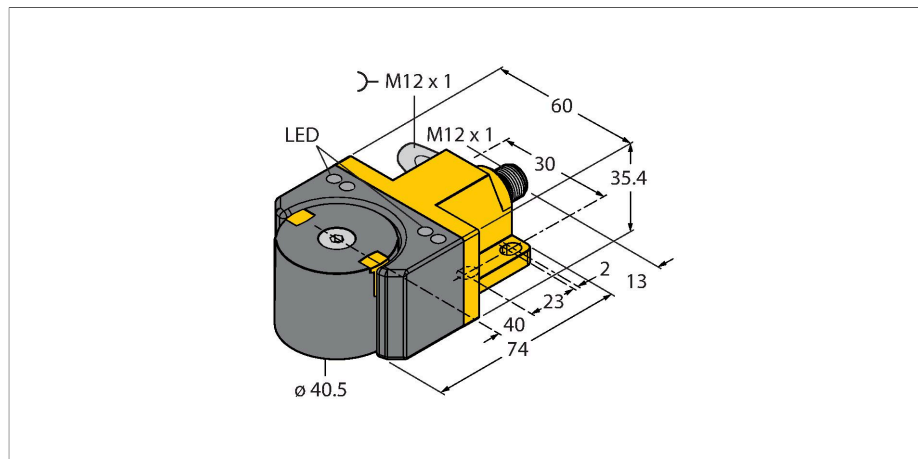


RI360P1-DSU35-CNX4-2H1650

Inductive Angle Sensor – With CANopen Interface

Premium Line



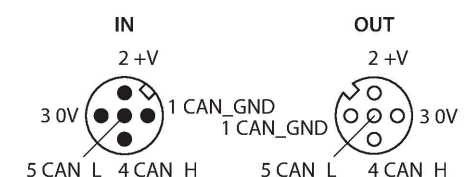
Features

- Rectangular, housing DSU35
- Plastic, PP-GF30-VO
- Detecting angular positions of 0° to 360°
- CANopen interface
- Baud rate 10 kbps up to 1 Mbps; Factory setting: 125 kbps
- Node address 1 to 127; Factory setting 3
- Terminating resistor switched in via - CANopen device access
- Immune to electromagnetic interference
- 10 ... 30 VDC
- M12 x 1 male, 5-pin, CAN in, CAN out
- Acc. to CiA DS-301, CiA 305, CiA 406

Technical data

Type	RI360P1-DSU35-CNX4-2H1650
ID	1593011
Measuring principle	Inductive
General data	
Measuring range	0...360 °
Nominal distance	1 mm
Mounting conditions	Non-flush
Repeat accuracy	≤ 0.025 % of full scale
Linearity deviation	≤ 1 % f.s.
Temperature drift	≤ ± 0.02 %/K
Output type	Absolute singleturn
Resolution singleturn	16 Bit
Electrical data	
Operating voltage U_B	10...30 VDC
Ripple U_{ss}	≤ 10 % U_{Bmax}
Isolation test voltage	0.5 kV
Wire break/reverse polarity protection	yes (voltage supply)
Communication protocol	CANopen
Interface	CANopen, DS406 device profile, LSS DS 305
Node ID	1...127; Werkseinstellung: 3
Baud rate	10/20/50/125/250/500/1000 kbps, factory setting 125 kbps
Sample rate	800 Hz
Current consumption	< 60 mA
Mechanical data	
Design	Dual sensor for rotary actuators, DSU35

Wiring diagram



Functional principle

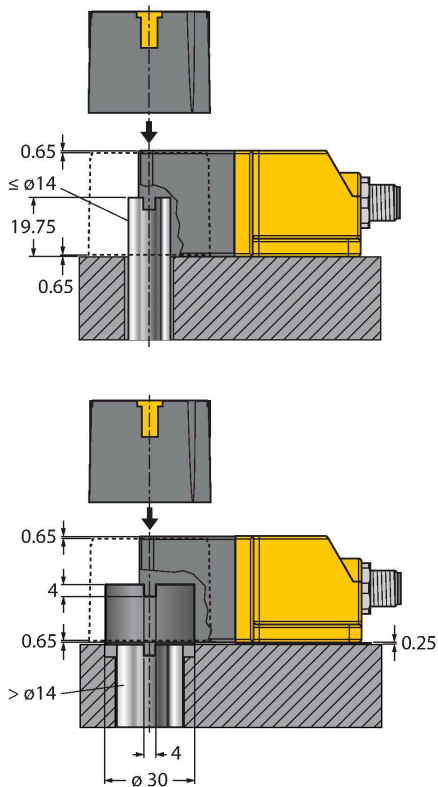
The measuring principle of inductive angle sensors is based on oscillation circuit coupling between the positioning element and the sensor, whereby an output signal is provided proportional to the angle of the positioning element. The rugged sensors are wear and maintenance-free, thanks to the contactless operating principle. They convince through their excellent repeatability, resolution and linearity within a broad temperature range. The innovative technology ensures a high immunity to electromagnetic DC and AC fields.

Technical data

Dimensions	74 x 60 x 35.4 mm
Flange type	Flange without mounting element
Housing material	Plastic, PP-GF30
Electrical connection	Connector, M12 × 1
Environmental conditions	
Ambient temperature	-25...+70 °C
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
Power-on indication	LED, Green
Measuring range display	LED, yellow, yellow flashing
Included in delivery	Positioning element P1-Ri-DSU35, countersunk screw M6 x 25, 2 cylinder screw M5 x 12, 2 lock washers A5

Mounting instructions

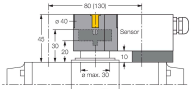
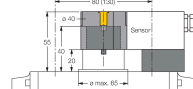
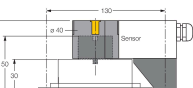

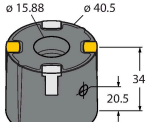
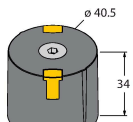
Mounting instructions/Description



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.

- Status/Power LED:
- Green: Sensor is supplied properly, positioning element in the coverage
 - Yellow: Positioning element is in the measuring range, signal low (e.g. distance too large)
 - Yellow flashing: Positioning element is outside the detection range
- Status CAN
- Green/Red: CAN communication active/not active
 - Red/Green alternating: LSS services active
 - Green flashing: Pre-operational state
 - Green 1 × flashing: CAN communication stopped
 - Red 2 × flashing: Error control event
 - Red 3 × flashing: Sync Error

Accessories

<p>BTS-DSU35-Z01</p>  <p>Mounting kit for dual sensors for larger rotary actuators; Ø spacer plate and snap ring: max. 65 mm; hole pattern on receptacle surface: 30 x 80 mm (30 x 130 mm); connection shaft (shaft extension) height: 20 mm/ Ø: max. 30 mm</p>	<p>BTS-DSU35-Z02</p>  <p>Mounting kit for dual sensors for larger rotary actuators; Ø spacer plate and snap ring: max. 65 mm; hole pattern on receptacle surface: 30 x 80 mm (30 x 130 mm); connection shaft (shaft extension) height: 20 mm (30 mm)/Ø: max. 40 mm</p>
<p>BTS-DSU35-Z03</p>  <p>Mounting kit for dual sensors for larger rotary actuators; Ø spacer plate and snap ring: max. 110 mm; hole pattern on receptacle surface: 30 x 130 mm; connection shaft (shaft extension) height: 30 mm/Ø: max. 70 mm</p>	<p>BTS-DSU35-Z07</p>  <p>Mounting kit for dual sensors for larger rotary actuators; Ø spacer plate and snap ring: max. 110 mm; hole pattern on receptacle surface: 30 x 130 mm; connection shaft (shaft extension) height: 50 mm/Ø: max. 75 mm</p>
<p>P4-RI-DSU35</p>  <p>• Mounting on shaft extension 5/8" using set screw</p>	<p>P1-RI-DSU35</p>  <p>Positioning element for angle sensors RI-DSU35• Mounted via M6 × 25 countersunk screw</p>

Accessories

Dimension drawing	Type	ID	
	RKC5701-5M	6931034	Bus cable for CAN (DeviceNet, -CANopen), M12 female connector, straight, cable length: 5 m, jacket material: PUR, anthracite; cULus approval