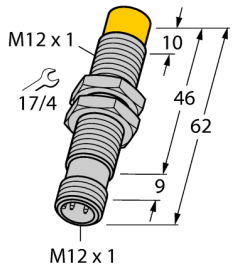
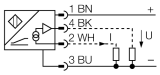
Inductive sensor with analog output NI5-M12-LIU-H1141

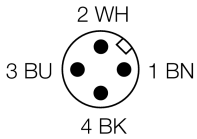
Industrial Automation



- **Threaded barrel, M12 x 1**
- **Chrome-plated brass**
- **4-wire, 15…30 VDC**
- **Analog output**
- **0…10 V and 0…20 mA**
- **Male M12 x 1**

Wiring diagram



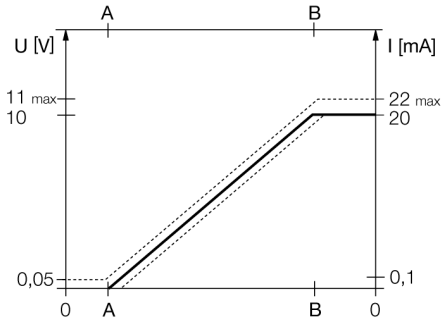


Type code	NI5-M12-LIU-H1141
Ident no.	1535535
Measuring range [A…B]	0.5…4mm
Mounting condition	non-flush
Correction factors	St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4
Repeatability	≤ 1 % of measuring range |A - B|
	≤ 0.5 %, after warm-up 0.5 h
Reproducibility	≤ 35 µm
	≤ 17.5 µm, after a warm-up time of 0.5 h
Linearity deviation	≤ 5 %
Temperature drift	≤ ± 0.06 % / K
Ambient temperature	-25…+70 °C
Operating voltage	15…30VDC
Residual ripple	≤ 10 % U_{ss}
No-load current I_0	≤ 8 mA
Rated insulation voltage	≤ 0.5 kV
Short-circuit protection	yes
Wire breakage / Reverse polarity protection	yes/ complete
Output function	4-wire, analog output
Voltage output	0…10V
Current output	0…20mA
Load resistance voltage output	≥ 4.7 kΩ
Load resistance current output	≤ 0.4 kΩ
Measuring sequence frequency	100 Hz
Design	threaded barrel, M12 x 1
Dimensions	62 mm
Housing material	metal, CuZn, chrome-plated
Material active area	Plastic, PA
Max. tightening torque housing nut	10 Nm
Connection	male, M12 x 1
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP67
MTTF	751 years acc. to SN 29500 (Ed. 99) 40 °C

Functional principle

Inductive TURCK sensors with analog output accomplish simple control tasks. They provide a current, voltage or frequency signal proportional to the target's distance. The output signal is linear to the distance of the target over the entire sensing range.

Measuring range



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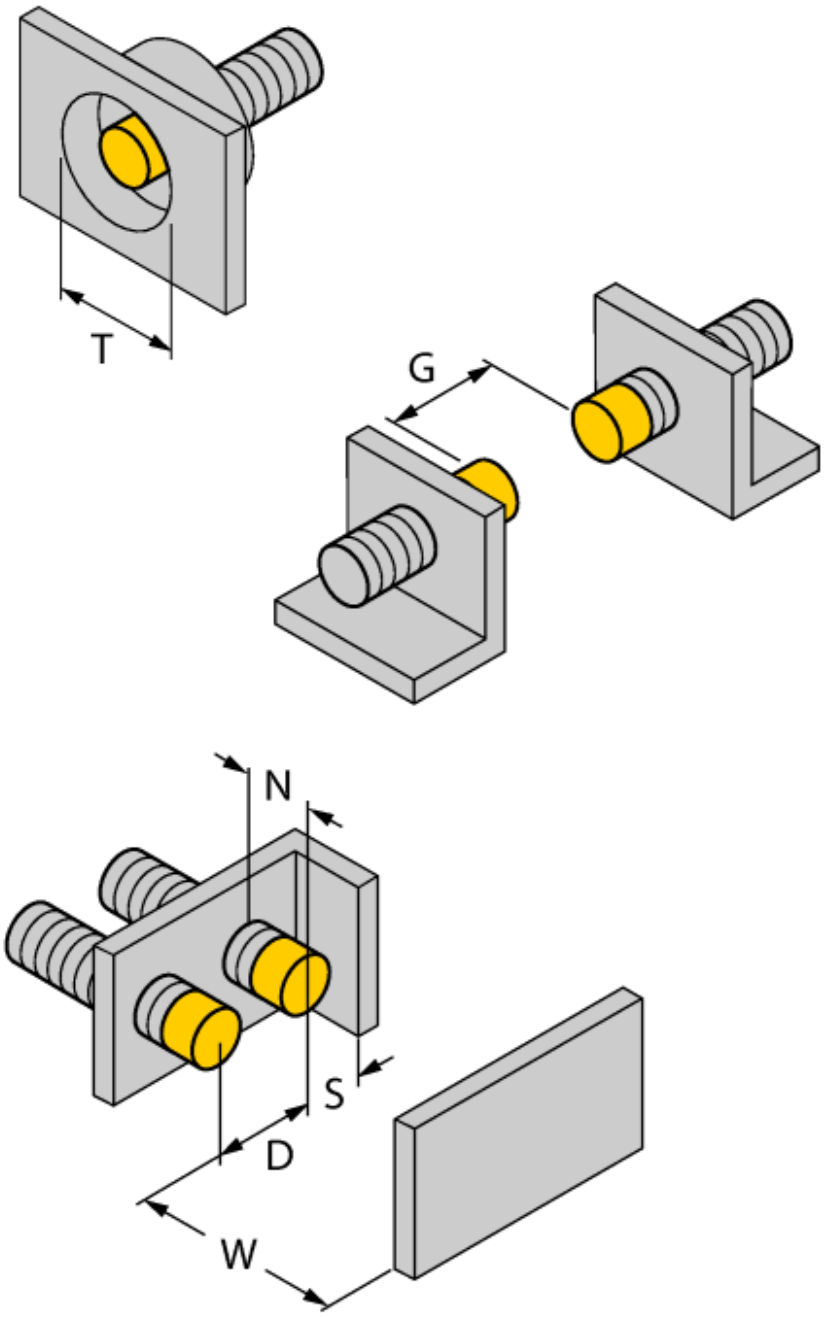
Distance D	36 mm
Distance W	12 mm
Distance T	3 x B
Distance S	18 mm
Distance G	24 mm
Distance N	8 mm

Diameter of the active area B	Ø 12 mm



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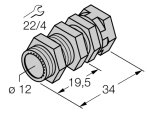
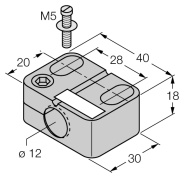
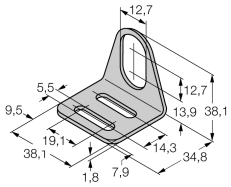
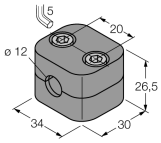
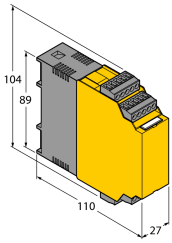
Accessories

Type code	Ident no.	Description	Dimension drawing
QM-12	6945101	Quick-mount bracket with dead-stop; material: Chrome-plated brass Male thread M16 x 1. Note: The switching distance of proximity switches can be reduced by the use of quick-mount brackets.	
BST-12B	6947212	Fixing clamp for threaded barrel devices, with dead-stop; material: PA6	
MW-12	6945003	Mounting bracket for threaded barrel devices; material: Stainless steel A2 1.4301 (AISI 304)	
BSS-12	6901321	Mounting bracket for smooth and threaded barrel devices; material: Polypropylene	
IM43-13-SR	7540041	Limit value monitor; 1-channel; input 0/4…20 mA or 0/2…10 V; supply of 2- or 3-wire transmitters/sensors; limit value adjustment via teach button; three relay outputs with one NO contact each; removable terminal blocks; 27 mm wide; universal voltage supply 20…250 VUC; further limit value monitors are described in our "Interface Technology" catalog.	

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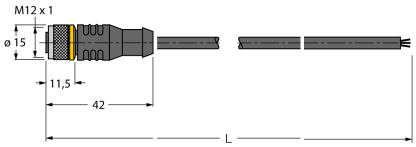
Wiring accessories

Type code	Ident no.	Description	Dimension drawing
RKC4T-2/TEL	6625010	Connection cable, female M12, straight, 3-pin, cable length: 2 m, sheath material: PVC, black; cULus approval; other cable lengths and qualities available, see www.turck.com	

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