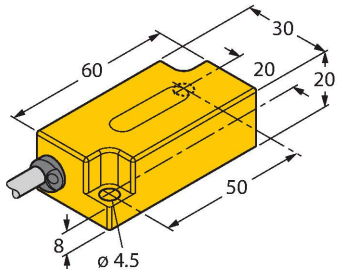
B1N360V-Q20L60-2LU3/S1217
– with increased damping



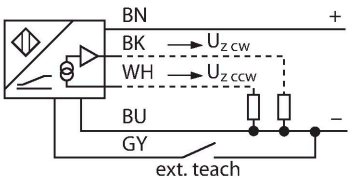
Technical data

Type	B1N360V-Q20L60-2LU3/S1217
ID	1534124
Special version	S1217 corresponds to: Inclinometers: 1 s response time and 6 Hz low-pass filter and level 8
Measuring principle	Acceleration
General data	
Measuring range	0…360 °
Number of measuring axes	1
Repeatability	≤ 0.2 % of measuring range |A - B|
Linearity deviation	≤ 0.6 %
Temperature drift	≤ ± 0.05 %/K
Resolution	≤ 0.14 °
Electrical data	
Operating voltage	10…30 VDC
Isolation test voltage	≤ 0.5 kV
Short-circuit protection	yes
Wire breakage/Reverse polarity protection	Complete
Output function	5-wire, Analog output
Voltage output	0.1…4.9 V
	2 outputs, one for CW and one for CCW
Load resistance voltage output	≥ 40 kΩ
Response time	1 s
	Time for the output signal to reach 90% of the adjusted measuring range

Features

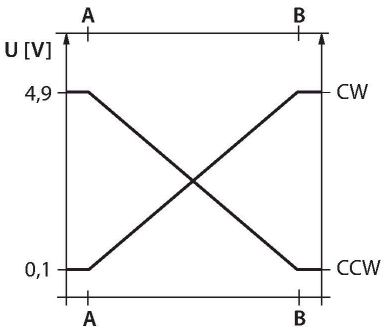
- Plastic, PBT-GF30-V0
- Response time 1 s
- Cutoff frequency 6 Hz
- Measuring range adjustable via teach adapter TX1-Q20L60
- 10…30 VDC
- Two counter-running 0.1 … 4.9 V analog outputs improve machine safety through redundancy

Wiring diagram



Functional principle

The TURCK inclinometers incorporate a micromechanical pendulum, operating on the principle of MEMS technology (Mikro Elektro Mechanic Systems).
The pendulum basically consists of two 'plate' electrodes arranged in parallel with a dielectric placed in the middle. When the sensor is inclined, the dielectric in the middle moves, causing the capacitance ratio between both electrodes to change.
The downstream electronics evaluates this change in capacitance and generates a corresponding output signal.

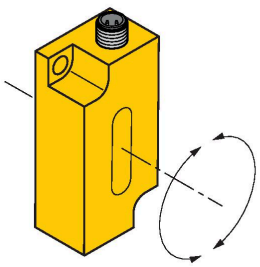


Technical data

Current consumption	50…105 mA (voltage-dependent)
Mechanical data	
Design	Rectangular, Q20L60
Dimensions	60 x 30 x 20 mm
Housing material	Plastic, PC
Electrical connection	Cable
Cable quality	Ø 5.5 mm, Lif32Y32Y, TPE, 2 m
	Low temp. flexible and E-chain capable
Core cross-section	5 x 0.34 mm^2
Environmental conditions	
Ambient temperature	-30…+70 °C
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP68 IP69K
MTTF	203 years acc. to SN 29500 (Ed. 99) 40 °C

Mounting instructions

Mounting instructions/Description

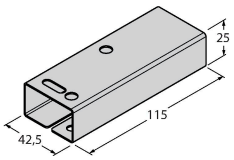


Adjusting the measuring range via TX1-Q20L60 teach adaptor

Setting the angular range in CW direction:
1. Move sensor to start position
2. Press and hold Teach-Gnd until the output is set to 4 mA (approx. 1 s)
3. Move sensor to end position
4. Press and hold Teach-Gnd until the output is set to 20 mA (approx. 3 s)

Resetting the angular range:
1. Press and hold Teach-Gnd until the output is set to 12 mA (approx. 6 s)
2. Angle measurement is set back to 360° degrees (in position "connector outgoing topwards" the sensor provides an output signal in accordance with 0° degrees)

Accessories

GUARD-Q20L60	A9684
	Protective housing for Q20L60 inclinometers for protecting against mechanical impact; material: Stainless steel