Ultrasonic sensor

UCC4000-50GK-B26-8MOL

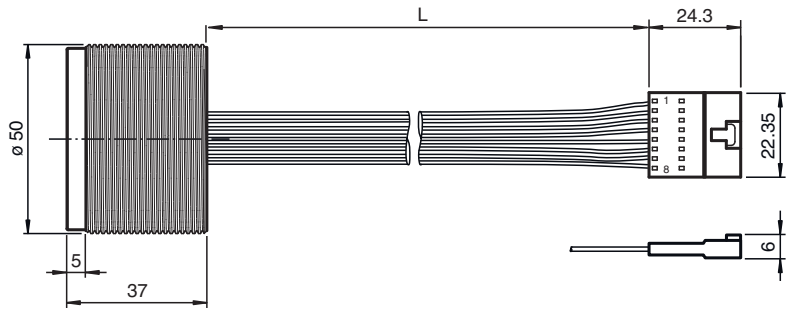
- Thread M50
- PTFE coated transducer
- Power save mode
- PWM output
- Physical LIN interface
- Serial Interfaces
- Temperature compensation

Single head system

Function

The distance measurement is carried out over the runtime of the ultrasonic impulse. A measuring cycle is triggered by sending a start telegram. Once the measurement has been taken, the result is returned in 8-bit form.

Dimensions



Technical Data

General specifications		
Sensing range		250 ... 4000 mm
Dead band		0 ... 250 mm
Standard target plate		100 mm x 100 mm
Transducer frequency		approx. 75 kHz
Electrical specifications		
Operating voltage	U_B	for UART and PWM operation: $U_{UART/PWM}$ = 2.5 ... 5 V DC, typical 3.3 V for LIN operation: U_{LIN} = 8 ... 18 V DC, typical 12 V
No-load supply current	I_0	≤ 60 mA at 3.3 V DC ≤ 20 mA at 12 V DC
Quiescent current indication		< 3 µA during standby mode at UART- and PWM operation
Power consumption	P_0	≤ 250 mW in the measurement operating mode
Time delay before availability	t_v	≤ 95 ms

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Technical Data

Interface 1		
Interface type		Physical LIN interface
Transfer rate		19.2 kBit/s (8N1)
Cycle time		80 ms
Resolution		16 mm (corresponding to 1 LSB)
Interface 2		
Interface type		UART 3.3V
Transfer rate		19.2 kBit/s (8N1)
Cycle time		80 ms
Resolution		16 mm (corresponding to 1 LSB)
Input		
Input type		Standby active
Signal level		low: 0 ... 0.8 V
Output		
Output type		PWM output (PNP) , not short-circuit protected
Resolution		pulse length 10 µs /cm
Output rated operating current		max. 10 mA
Temperature influence		3 % of full-scale value over the entire temperature range
Directive conformity		
Electromagnetic compatibility		
Directive 2014/30/EU		EN IEC 60947-5-2:2020 : chapter 8.2.6.2.2, 8.2.6.2.3, 8.2.6.3 The sensor is designed to be supplied by a battery. The sensor signals are further processed in a control unit, which is also responsible for EMC protection.
Ambient conditions		
Ambient temperature		-25 ... 70 °C (-13 ... 158 °F)
Storage temperature		-40 ... 85 °C (-40 ... 185 °F)
Mechanical specifications		
Connection type		fixed cable with plug
Degree of protection		IP66 / IP67 (connector excluded)
Material		
Housing		PBT
Transducer		epoxy resin/hollow glass bead mixture; Polyurethane foam, PTFE coated
Connector		Molex connector 70107-0007
Number of pins		8
Cable		
Length	L	276 mm ± 20 mm
Mass		100 g
Factory settings		
Output		PWM output (PNP) Temperature compensation Address setting 7
Beam width		wide
General information		
Scope of delivery		2 nuts plastic

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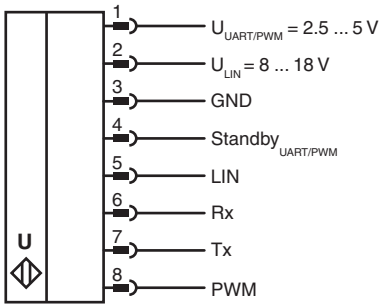
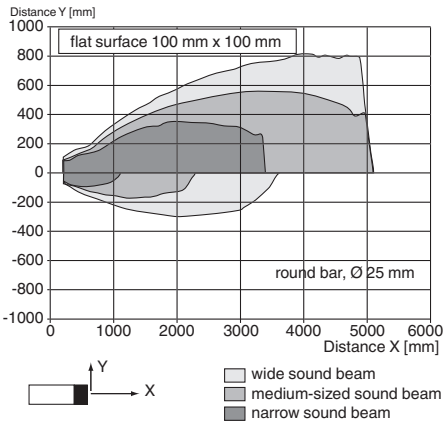
Connection



Characteristic Curve

Characteristic response curve



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