



Ultrasonic sensor module

Ultrasonic time of flight sensor with integrated driving unit

Series/Type:	X150P0754
Ordering code:	B59150X0754P030
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Version:	1.2

Preliminary datasheet

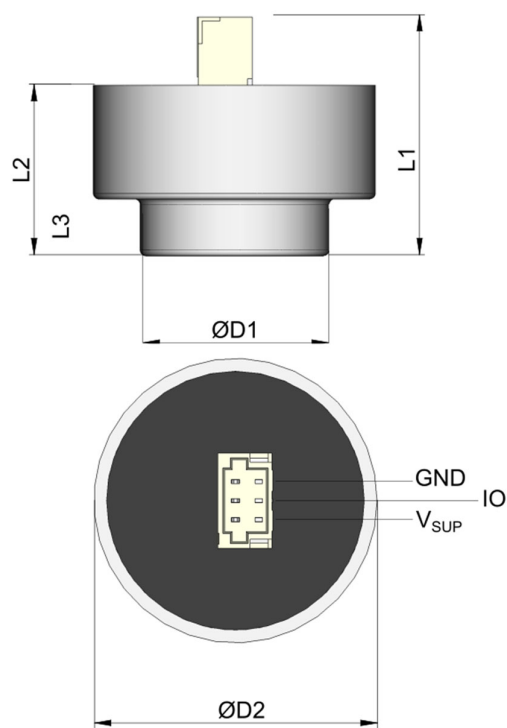
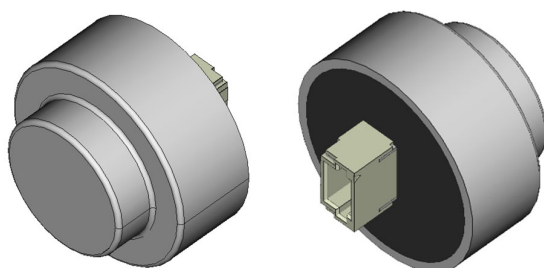
Piezo driven ultrasonic time of flight sensor module with integrated driving unit

Applications

- Distance and level measurement in air
- Obstacle detection in air

Features

- Digital 3 wire interface
- Compact, closed membrane ultrasonic sensor design
- Configurable by user
- Low minimal measurement distance
- Dust and splash water protected


Dimensions

	Parameter	Symbol	Unit	Typical
1	Front diameter	D1	mm	10
2	Total diameter	D2	mm	15
3	Total length	L1	mm	13
4	Pot length	L2	mm	9
5	Length of front cylinder	L3	mm	3

Preliminary datasheet
Electrical specification

	Parameter	Symbol	Unit	Typical
1	Supply voltage	V _{SUP}	V	12
2	Current consumption	I	mA	5.5
3	Power down mode	I	mA	<1
4	Communication Interface	proprietary bidirectional IO (3-wire), point to point architecture		
5	Connector	Harwin M40-3010346		

Functional parameters

	Parameter	Symbol	Unit	Typical
1	Minimal measuring distance ¹⁾	D _{min}	cm	12
2	Maximal measuring distance ¹⁾	D _{max}	cm	200
3	Directivity ²⁾	α	°	+/-30
4	Operating frequency	f	kHz	75

¹⁾ evaluated based on test target: cylindrical pole, 75mm diameter, 1m height, standard conditions for temperature and humidity.

²⁾ circular beam

Overall system performance depends on mounting conditions.

Handling

- Do not drop the component and use it in application
- Do not touch the 3 pin connector or PCB without ESD protection

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