



## Ultrasonic sensor module

Ultrasonic time of flight sensor with integrated driving unit

**Series/Type:** X150P0754  
**Ordering code:** B59150X0754P030  
**Date:** October 2020  
**Version:** 1.0

**Preliminary datasheet**
**Applications**

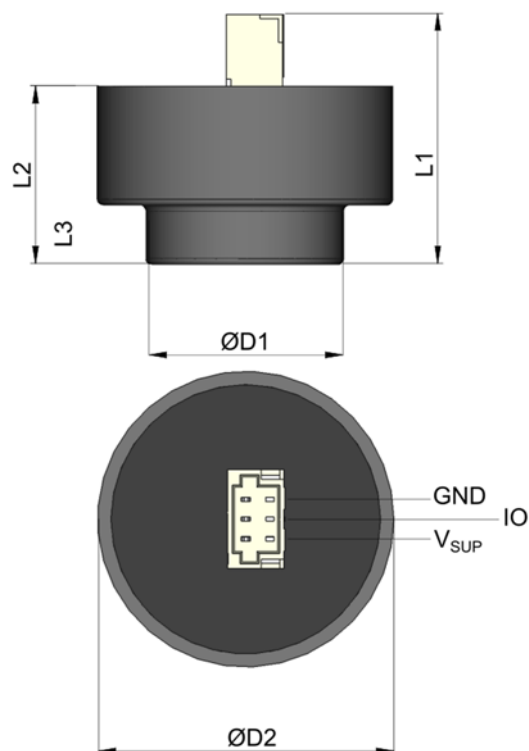
- Distance and level measurement in air
- Obstacle detection in air

**Features**

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


**Dimensions**

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



**Preliminary datasheet**
**Electrical specification**

Parameter	Symbol	Unit	Typical
Supply voltage	V <sub>SUP</sub>	V	12
Current consumption	I	mA	5.5
Power down mode	I	mA	<1
ASIC	elmos 524.33		
Communication Interface	Proprietary bidirectional IO (3-wire), point to point architecture		
Connector	Harwin M40-3010346		

**Functional parameters**

Parameter	Symbol	Unit	Typical
Minimal measuring distance <sup>1)</sup>	Dmin	cm	12
Maximal measuring distance <sup>1)</sup>	Dmax	cm	200
Directivity <sup>2)</sup>	α	°	±30
Operating frequency	f	kHz	75

<sup>1)</sup> Evaluated based on test target: cylindrical pole, 75 mm diameter, 1 m height, standard conditions for temperature and humidity.

<sup>2)</sup> Circular beam

Overall system performance depends on mounting conditions.

**Handling**

- Any parts that have fallen are to be considered defective
- Do not touch the 3 pin connector without ESD protection

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