

Ultrasound, sensing the level

One step ahead of the world



Dual-frequency non-contact level detection

Y050T1 50/200 kHz air transducer

Long sensing range

Short blind zone

High resolution

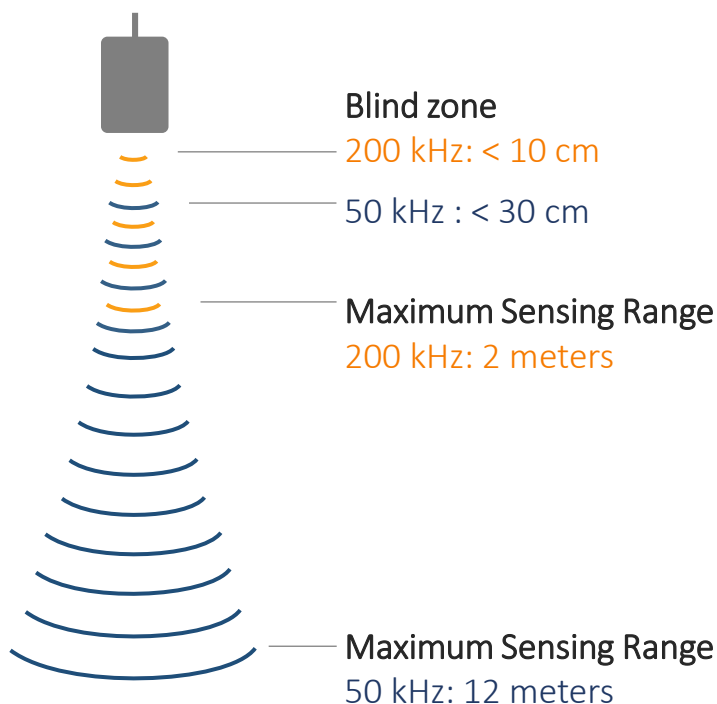
High reliability

Waterproof IP68

Chemical resistance

PVDF housing (FDA compliance)

Patented technologies



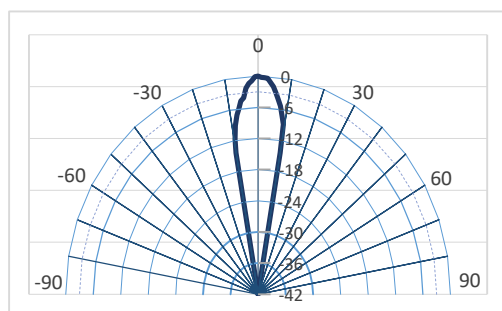
Y050T1 is a novel dual-frequency ultrasonic air transducer working as a signal transmitting and receiving unit. The dual-frequency transducer can detect as long as up to 12 meter range at 50 kHz operating mode along with only 10 cm blind zone at 200 kHz mode. This ultrasonic transducer is particularly suitable for non-contact level detection and proximity measurement with high resolution, long sensing range, short blind zone as well as exceptional reliability.

Specifications

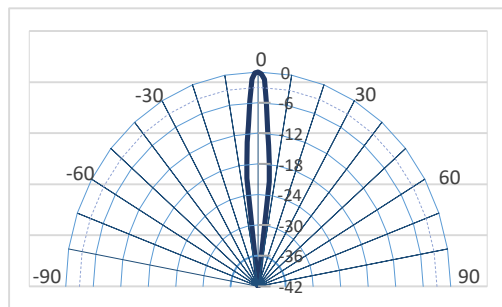
Y050T1 (P/N: H2KY050KT1CD00)	50 kHz	200 kHz	
Operation Frequency	50	200	kHz
Capacitance (@1 kHz, 1Vrms)	1500	1500	pF
Directivity (Full Angle @-3 dB)	10	6	degree
Maximum Driving Voltage (2% Duty Cycle Tone Burst)	1000	1000	Vpp
Maximum Sensing Range	12	2	meter
Blind Zone	< 30	< 10	cm

Directivity Diagram

50 kHz



200 kHz

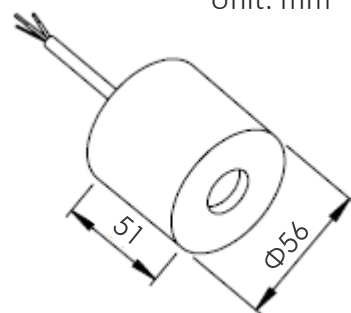


Major Applications

- Proximity measurement
- Non-contact level detection
- River level monitoring
- Petrochemical industry
- Food and beverage industry
- Water supply and drainage industry
- Grain, powder, granular material level detection

Dimensions

Housing material: PVDF
Unit: mm



Driving Conditions

Conditions	Values		Unit
Operation Frequency	50	200	kHz
Driving Voltage	< 1000	< 1000	Vp-p
Sensing Range	0.3 - 12	0.1 - 2.0	meters
Interval of Driving	> 20	> 20	ms
Pulse Number	3 - 20	3 - 20	pulses