AUDIOWELL

PRODUCT
CATALOGUE
Industrial Control

AUDIOWELL
SENSOR TECHNOLOGY

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AUDIOWELL INTRODUCTION

Audiowell Electronics(Guangdong) Co., Ltd. (AUDIOWELL) was established in 1999, stock abbreviation: Audiowell, stock code: 920491. The company is a high-tech enterprise specializing in the research, design, production and sales of intelligent sensors and actuators and related applications.

Owning four manufacturing bases, Audiowell possesses the ability of of transducer chip preparation, structural design,intelligent algorithm, precision machining and packaging and testing technology and the main products are intelligent sensors and actuators. Products are widely used in intelligent vehicle, intelligent meters, smart homes, smart security, smart terminals and other fields. Audiowell committs to becoming the main provider of the core components of the perception layer and the execution layer and their solutions.

AUDIOWELL
SENSOR TECHNOLOGY

SENSOR TECHNOLOGY

Sensor technology shaping an intelligent life.

INDUSTRIAL CONTROL

Ultrasonic Flow Sensor Module

Clamp-on Ultrasonic Flow Sensor

Vortex Flow Sensor

Piezo Stack Actuator

Piezoelectric Jetting Valve

Flexible Sensor

Electric Gripper

High-power Ultrasonic Transducer

Ultrasonic Obstacle Avoidance Sensor

Seismic Hydroacoustic Geophone

Buzzer

PRODUCTS
CATALOGUE

INDUSTRIAL CONTROL

Ultrasonic Flow Sensor 04
Clamp-on Ultrasonic Flow Sensor 05
Vortex Flow Sensor 06
Piezo Stack Actuator 07
Piezoelectric Jetting Valve 08
Flexible Sensor 09
Electric Gripper 10
High-power Ultrasonic Transducer 11
Seisimic Hydroacoustic Geophone 12
Ultrasonic Obstacle Avoidance Sensor 13
Buzzer 14
Lineup 15

Ultrasonic Flow Sensor

Features
- No moving parts
- High accuracy
- Low power consumption
- Digital output

Applications
- Intelligent water management system
- Industrial equipment
- Smart irrigation system

Model	FS0016	FS0023	FS0024
Nominal Diameter (mm)	15	20	25
Operating voltage (V)	5	5~24	4.7~5.3
Flow range (L/min)	0.04~42	0.04~83	0.04~100
Max. operating pressure (MPa)	1.6	1.6	1.6
Communication method	UART	UART	UART
Operating temp. (℃)	+0.1~+50	+0.1~+50	+0.1~+50

Clamp-on Ultrasonic Flow Sensor

Features

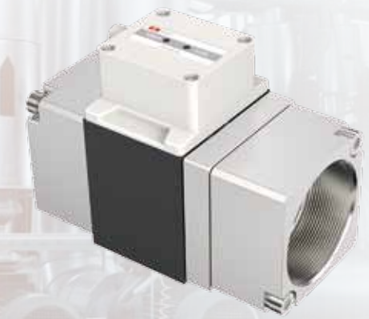
- Non-contact, high-precision measurement by external clamping
- Adaptable to rigid metal and soft plastic tubing
- Compatible with a wide range of fluids such as water, ethanol, chemical solutions, etc.

Applications

- Industry, light industry, food, chemical industry, petroleum, electric power, metallurgy, urban utilities, etc.

Model	HZ0029-000	
Pipe O.D. (mm)	18~23	23~28
Nominal diameter	DN15	DN20
Piping material	Metal/Resin	
Available liquids	All liquids (water, oil, adhesives, lubricants, pharmaceuticals)	
Flow rate range (L/min)	60	100
Operating temperature (° C)	0~+85	
Repeatability (Response time)	0.5 s:+2.0%/5 s:+0.5%/ 10 s: +0.35%/60 s: +0.15%	

Votex Ultrasonic Flow Sensor



Features

- Instantaneous flow measurement range 50~250L/min
- Modular design, small size, low pressure loss
- Strong resistance to air bubbles and impurities
- Instantaneous flow rate accuracy ±3%F.S.

Applications

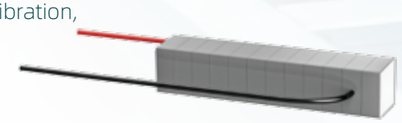
- Industry, light industry, chemical industry, petroleum, electric power, etc.

Model	FV0001	FV0004
Nominal Diameter	DN10	DN40
Instantaneous Flow Test Range (L/min)	2~16	50~250
Instantaneous Fow Rate Accuracy (F.S.)	±3%	±3%
Response Time (s)	≤1	≤3
Operating Voltage (VDC)	12~24	12~24
Operating Temperature (℃)	+0.1~+50	+0.1~+50
Max. Operating Pressure (MPa)	1.0	1.0

Piezo Stack Actuator

Features

- Displacement movements down to the micron level
- With High thrust and fast response time
- High reliability due to longitudinal stacked structure.
- Resistant to high and low temperatures, strong vibration, long life of up to 1 billion cycles.



Applications

- High precision valve control for industrial equipment
- Dispensing Valve

Model	PA0001
Drive Voltage (V)	0~120
Displacement (no load) (μm)	35±15%
Hysteresis	<15%
Resonant Frequency (KHz)	35±10%
Capacitance (μF)	6.0±15%
Dielectric Loss (W)	<2.5%
Size (mm)	7x7x36.0

Piezoelectric Jetting Valve

Features

- High accuracy and fast dispensing speed
- Modular design, high configurability
- Adjustable stroke for precise dispensing control
- Continuous operating frequency up to 3000Hz

Applications

- Semiconductor packaging
- Device packaging and bonding

Model	ADW PV0200
Operating frequency(MAX) (Hz)	Single point:3000 Succession:1000
Spray volume(MIN) (nL)	1
Tolerance of accuracy	±1%
Applicable Viscosity (mPa.s)	500,000
Stacking life (million)	800
Size (mm)	98x26x115
Glue point diameter (mm)	0.15

Flexible Sensor

Features

- Flexible and ultra-thin, 200-400 microns, down to 100 microns
- High sensitivity, large response
- Ultra-fast response, 10 ms fast response and recovery time
- Wide range, 0~2 MPa linear operating range

Applications

- Intelligent robot

Model	AW105
Thickness (μm)	200-400
Response time (ms)	10
Linear operating range (MPa)	0~2
Detection limit (Pa)	≤0.5
Size range (mm)	1x1~10x10

Electric Gripper

Features

- Precision force control, the highest accuracy ± 0.01N
- Flexible gripping, easy to deal with fragile and brittle workpieces
- Intelligent control, support a variety of motion control mode
- Support customisation to meet various precision force control

Applications

Healthcare

Agricultural

Intelligent factory

Intelligent Home

Intelligent Warehouse

Robotics

High-power Ultrasonic Transducer

Features

- High power drive, large amplitude
- High Qm value, stable performance
- Low resonance impedance and low dielectric loss.

Applications

- Ultrasonic welding equipment
- Ultrasonic cleaning

Model	HN0775
Resonant frequency (KHz)	36.1±5%
Static capacitance (pF)	2500±20%
Quality factor	>800
Dimension (mm)	50x17x6.5 50x20x6.5

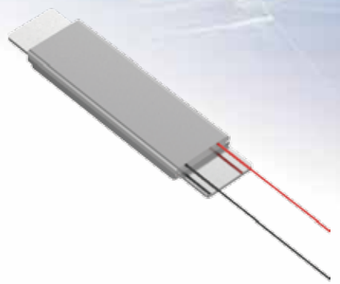
Seismic Hydroacoustic Geophone

Features

- High reliability
- High sensitivity, small vibration and shock can be detected
- High strength structure ensures service life

Applications

- Ocean landform exploration



Model	US0076
Appearance	
Resonance frequency (KHz)	14±1.5
Sensitivity (dB)	-192.5±1.5(0-1KHz)
Insulation resistance (MΩ)	≥10000
Free capacitance (pF)	9.3±5%
Max. allowable water depth (m)	250

Ultrasonic Obstacle Avoidance Sensor

Features

- Long detection range, up to 5m
- Built-in circuit which matches the self-developed transducer
- IP69 protection class, superior weather resistance, stability and anti-interference

Applications

- AGV
- Intelligent unmanned vehicle (UAV)

Model	VU0001-001	VU0002-001	VU0004-001	VU0005-000
Appearance				
Frequency (Khz)	48	55.5	55.5	48
Directivity (°)	X: 60 Y: 60	X: 90 Y: 45	X: 90 Y: 45	X: 60 Y: 60
Max.range* (mm)	5000	2500	2500	5000
Accuracy (cm)	≤ ±5	≤ ±5	≤ ±5	≤ ±5
Communication Protocol	LIN 2.2	LIN 2.2	I/O	I/O
Protection class	IP69	IP69	IP69	IP69
Dedicated Chip	elmos 524.24	/	elmos 524.09	/

*Φ75mm tube measurement

Buzzer

Features

- Small size, easy to install
- Stable performance

Applications

- Device alarm

Model	QJ0609-012
Appearance	
Resonant frequency (Khz)	3000
S.P.L (dB)	≥85(12V/100cm)
Operating voltage (V)	5.0~18.0
Protection class	IP66
Dimensions (mm)	D36.5×26

Lineup

Products	Appearance	Water management	Intelligent device/AGV	Dispenser	Welding/CleaningEquipment	Seismometer
Ultrasonic Flow Sensor		■			■	
Clamp-on Flow Sensor				■		
Vortex Flow Sensor				■		
Piezo Stack Actuator				■		
Piezoelectric Jetting Valve				■		
Flexible Sensor			■			
Electric Gripper			■			
High-power Ultrasonic Transducer					■	
Ultrasonic Sensor			■			
Seismic Hydroacoustic Geophone						■
Buzzer			■	■	■	