

Ultrasonic Distance Meter

DIGITAL ADVANCED SENSORS **DAS**

UDS10

UDS10 is compact ultrasonic distance meter that improved abilities of environment-proof from such as noise and vibration by noise cancelling algorithm. Customers can set measuring distance range by themselves for measuring distance, detecting object.

- Noise cancelling algorithm to avoid environmental effect
- Compact size, light-weight and cost-effectiveness
- Customers can set measuring range by themselves



General Specifications

Item	Specification
Ultrasonic Frequency	40KHz
Distance Range	0.5 ... 3m (Default)
Max. Range	... 5m
Power Source	15 ... 20VDC
Current Consumption	<30mA
Output of A type	0.5 ... 4.5Vdc
Output of B type	5V Hi/Low
Dimensions ¹⁾	W27 x H24 x D49mm
Weight	25g

¹⁾ Without Mounting

- ✓ Verifying repeatability is not possible regarding characteristic of ultrasonic which very sensitive to environmental effect such as temperature, humidity or air density.

Data Descriptions for A-type

$$= \left\{ \left(\frac{\text{Range}}{4V} \right) \times (\text{Output } V - 0.5V) \right\} + \text{Min. Range}$$

(Distance) Range : max range – min range
 4V (Output V Range) : 4.5V – 0.5V = 4V

e.g. 0.5...3m range, Output 2.5V,

$$= \left\{ \left(\frac{3 - 0.5}{4V} \right) \times (2.5V - 0.5V) \right\} + 0.5m = 1.75m$$

Wiring Connections

	Color	Description
UDS10A/B	RED	V+
	BLACK	GND (COM)
	GREEN	Output+
	WHITE	Teach-In

Distance Range Settings

Default distance range is 0.5 to 3 meters. Customers can set the range by themselves if necessary.

- 1) Fix the sensor in a large indoor place where steady air condition and non-obstacles.
- 2) Place a flat panel which over 50 x 50 cm at the minimum distance of required range.
- 3) Connect Teach-In wire (White) to GND (Black) for 3 seconds. LED indicator blinks 3 times per second if completed.
- 4) Move the panel at the maximum distance of required range. Maximum distance is up to 5 meters.
- 5) Connect Teach-In wire to GND again. LED indicator is on and maintained if completed.
- 6) Power off the sensor and on again.

Notice, output may reversed if the minimum range is over the maximum range.

Factory Reset

Connect Teach-In wire to GND at the same time as powered on and maintain for 3 seconds. Distance range will be cleared as the default.

Detecting Object (B-type)

UDS10 B-type exports 5V Hi level signal when detecting a object in its distance range otherwise 0V Lo level signal. This level signal cannot operate any external elements.

Ordering Code

Format : UDS10(1)

(1)	A	Distance measurement
	B	Object detector
	C	OPEN COLLECTOR-type

e.g. UDS10A / UDS10B

Options

Adding IP65 waterproof sealing (charged)

NOTES

- 1) Noise and ripple may occurs malfunctions.
- 2) Obstacles, continuous noise or unsteady air condition may occurs malfunctions.
- 3) Set distance range only in case of necessary.
Keep the panel not to incline during the setting.
- 4) Ultrasonic has not straightness as laser.
- 5) Resolution is changing along with distance range. Narrow range is better for the resolution.
- 6) Specifications, design and components can be changed without prior notice to improve its performances.

DAS Co., Ltd.

128 Bibong-ro, Bibong-myeon,
Hwaseong-si, Gyeonggi-do, 18284

Republic of Korea

TEL : +82 31) 356-3541

email : das@das-co.com

Web : <http://das-co.com>