Ultrasonic Distance Sensor

Featuring LoRaWAN®

EM400-UDL

Milesight

EM400-UDL is a designed non-contact ultrasonic distance sensor featuring LoRaWAN®. With this low power consumption technology, EM400-UDL can work up to 10 years with two 9000 mAh batteries. With multiple selective probes and different detecting ranges, it can satisfy different requirements.

With high protection IP rating and waterproof enclosure, EM400-UDL is widely used for outdoor applications such as water level, fill level of tanks and silos, presence of objects or snow level.

Combining with Milesight LoRaWAN® gateway and Milesight IoT Cloud solution, users can manage all sensor data remotely and visually.

◆ Features

- ➢ Selective probes vary from 25 to 1000 cm for multiple applications
- ➢ Equipped with NTC temperature sensor for the detection and alarm of burning
- ➢ Built-in 3-axis accelerometer sensor to monitor device tilt status
- ➢ Damp-proof coating inside and IP67 waterproof enclosure for outdoor applications
- ➢ Built-in two 9000 mAh replaceable batteries and work for 10 years without replacement
- ➢ Ultra-wide-distance wireless transmission up to line of sight of 15 km
- ➢ Equipped with NFC for one touch configuration, support card emulation mode
- ➢ Function well with standard LoRaWAN® gateways and network servers
- ➢ Compatible with Milesight IoT Cloud

◆ Specifications

Model	Standard Version	Pro Version	Snow Version
Measurement			
Distance			
Range	C050: 25 ~ 500 cm C100: 25 ~ 1000 cm	W050: 30 ~ 500 cm W100: 50 ~ 1000 cm	S050: 50 ~ 500 cm
Accuracy	± (1+0.3%*S) cm[1], S=distance (- 15°C ~ 60°C)	±1% FS (- 30°C ~ 65°C)	±1% FS (- 30°C ~ 65°C)
Resolution	1 mm		
Device Position			
Status	Normal/Tilt		
Temperature			
Range	-40 ~ 125°C		
Resolution	0.1°C		
Wireless Transmission			
Technology	LoRaWAN®		
Frequency	CN470/IN865/RU864/EU868/US915/AU915/KR920/AS923-1&2&3&4		
Tx Power	16 dBm (868 MHz)/20 dBm (915MHz)/19 dBm (470MHz)		
Sensitivity	-137dBm @300bps		
Mode	OTAA/ABP Class A		
Operation			
Power On & Off	NFC, Power Button (Internal)		
Configuration	Mobile App (via NFC)		
Physical Characteristics			
Power Supply	2 x 9000 mAh ER26500 Li-SOCL$_2$ Batteries		
Battery Life[2]	> 10 years (10 min interval, 25°C)		
Operating Temperature	- 30°C ~ 70°C		
Relative Humidity	≤95% (non-condensing)		
Ingress Protection	IP67		
Dimension	118 × 65 × 80 mm		
Material	ABS + PC (Flame Retardant)		

[1] This accuracy is applicable to the measuring range of 25~800cm.
[2] Tested under laboratory conditions and for guideline purposes only.

Color	Black gray (C050/C100), Gray (W050/W100/S050)
Installation	On the Flat Surfaces with Screws