US-S25AN

Ultrasonic Sensors

- Handy M18 cylinder
- Integrated amplifier for easy adjustment

Type

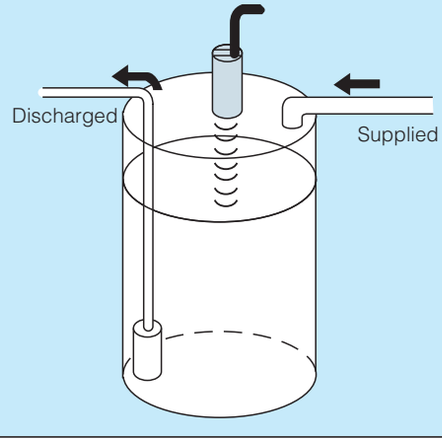
Detection method	Detecting distance	Model	Operation mode	Output mode
Reflective type	60-250mm	**US-S25AN**	Proportional output	Analog output

- Applicable comparator

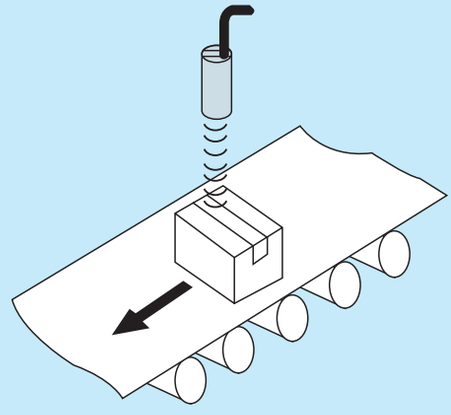
(ANP Series)

Sample Applications

Detection of level of water in tank



Height measurement



US-S25AN

Rating/Performance/Specification

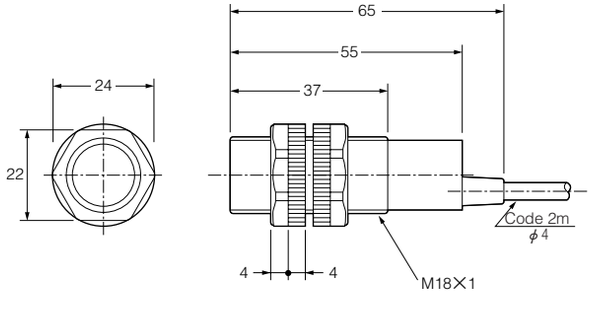
Rating/performance	Type	Ultrasonic (analog output)
	Model	**US-S25AN**
	Detection method	Ultrasonic reflective
	Detecting distance	60 – 250mm ± 10mm
	Detection object	30 x 30mm (sample object: 1-mm thick aluminum plate)
	Power supply	24V DC ±10% / Ripple 10% or less
	Current consumption	25mA MAX
	Response time	10 → 2 V: 30 ms max. / 2 → 10 V: 300 ms max.
	Output mode	Voltage output in proportion to distance, effective voltage: 2 V± 0.2 V ~ 10 V ± 0.3V Rating: source current 10 mA max. (at output voltage 10 V)
	Minimum resolution	2 mm (with 80 mV ripple) *
	Linearity	±5% of F.S. max.
	Temperature characteristics	0.025% of F.S./ °C
Specification	Ultrasonic frequency	350kHz ±15kHz
	Indicator	Not provided
	Connection	Permanently attached cord (ϕ4) 0.2 mm² x 3 cores, 2 m (Black)
	Mass	65 g max.
	Protective feature	Protection against reverse connection

*While thee minimum resolution is 2 mm, accuracy of less than 1 mm may be available by integrating the analog output voltage.

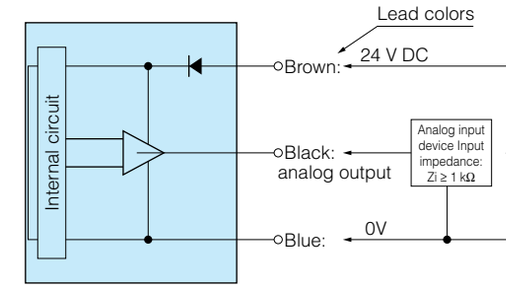
Environmental Specification

Environmen	Ambient temperature	–10 ~ +55 °C (non-freezing)
	Ambient humidity	35-85%RH (non-condensing)
	Ambient wind speed	1m/s max
	Protective structure	IP54(no water drops allowed on head)
	Vibration	10-55 Hz / 1.5 mm amplitude / 2 hours each in 3 directions
	Shock	500 m/s² / 2 times each in 3 directions (ultrasonic element excluded)

Dimensions (in mm)

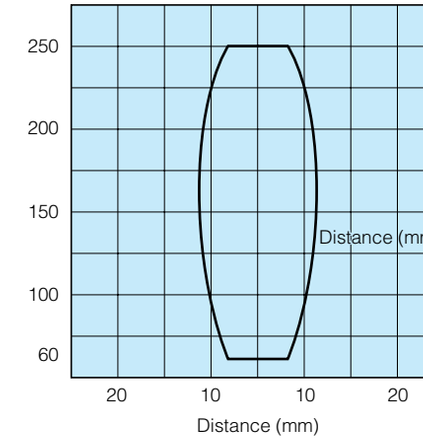


Input/Output Circuit and Connection



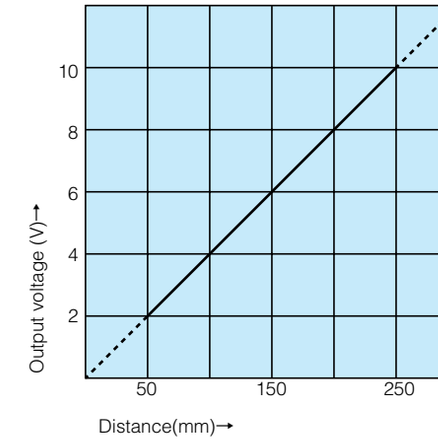
Characteristics (Typical Example)

- Activation area characteristics



- Normal voltage is not output unless the object passes across the central axis.

- Distance-output characteristics



- The effective range is 60-250 mm (distance) or 2 V ± 0.2 V ~ 10 V ± 0.3V (voltage). Be sure to use signals within this range.
- It takes about 5-10 minutes before the output voltage stabilizes after power-up. For adjustment or operation requiring accuracy, supply power well in advance. The fluctuation may reach about 100 mV.