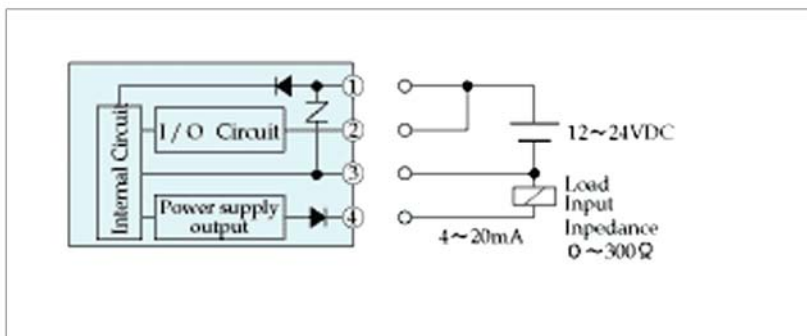


# USA series

- This is Ultrasonic analog sensor with 4 to 20mA output.
- Fine detection installed CPU converter.



## OUTPUT CIRCUIT



## SPECIFICATIONS

Models	USA-S1AN	USA-S3AN
Detection	Ultrasonic reflection	
Range	100 to 1000mm	400 to 3000mm
Non sensing range	Less than 100mm	Less than 400mm
Detecting object	100 x 100mm, t=2mm, Aluminum board	
Power supply	12V to 24VDC, ±10%, Ripple 10% Max.	
Power consumption	1.3W(Max.) / (Current consumption approx. 110mA at 12VDC approx. / 55mA at 24VDC)	
Response time	150ms(Max.)	300ms(Max.)
Analog output	4 to 20mA Current output (Load resistive 0 to 250 Ohm)	
Min. resolution(*1)	0.9mm(0.1% F.S.)	Min. resolution(*1)
Linearity	±1% within F.S.	
Temperature charact.	1% F.S.(Max.) against an output value at 23° in a range of -10 to 55°	
Ultrasonic frequency	Approx. 200KHz	Ultrasonic frequency
Indicators	Operation: Orange, Run: Green, 4mA: Red, mid: Orange, 20mA: Green	
Teaching system	Distance setting, Output inversion	
Teaching input	SET button or external input	
Connection	M12 x 4p Din connector system *2	
Weight	150g(Max.)	300g(Max.)
Protection	Output short circuit protection, / Power output reverse connecting protection	
Features	Mutual interference prevention/Temperature compensation built-in	
Materials	Case: Nickel-plated, Detection / face: Nylon resin, Silicon, Glass epoxy resin	
Temperature range	Operating : -10 to +55°C, Storage : -40 to +85°C	
Humidity	35 to 85%RH	
Enclosure rating	IP67	
Vibration resistance	10Hz	
Shock resistance	50G 3 times in X, Y and Z directions	
Dielectric strength	1,000VAC 50/60Hz for 1minute	
Insulation resistance	Min. 50MO(at 500VDC)	

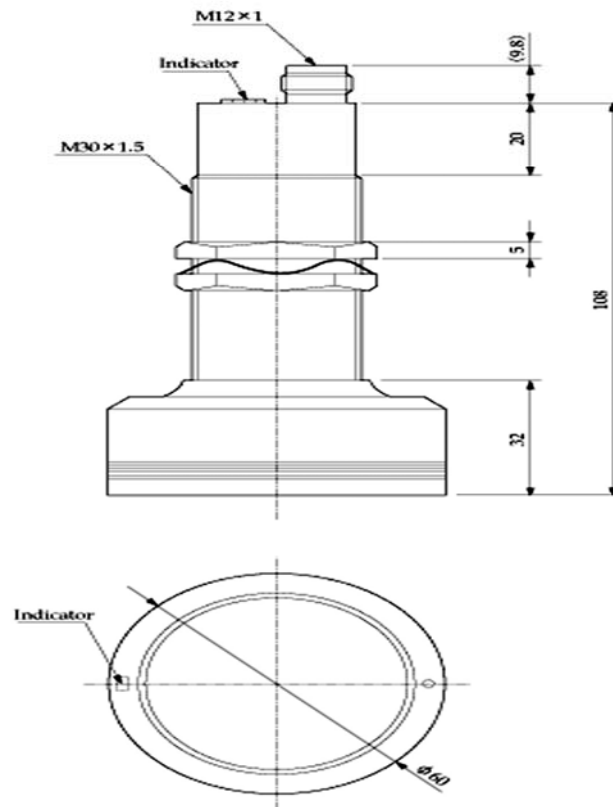
\*1 The value Min. 15min after power is supplied(or re-supplied).  
The value may slightly fluctuate due to external disturbance, etc.  
\*2 Cable with connector for M12 sensor is sold separately and available as an optional.

## DIMENSIONS



## DIMENSIONS

USA-S3AN



FAC-D4R2 (2m)  
FAC-D4R5 (5m)

