

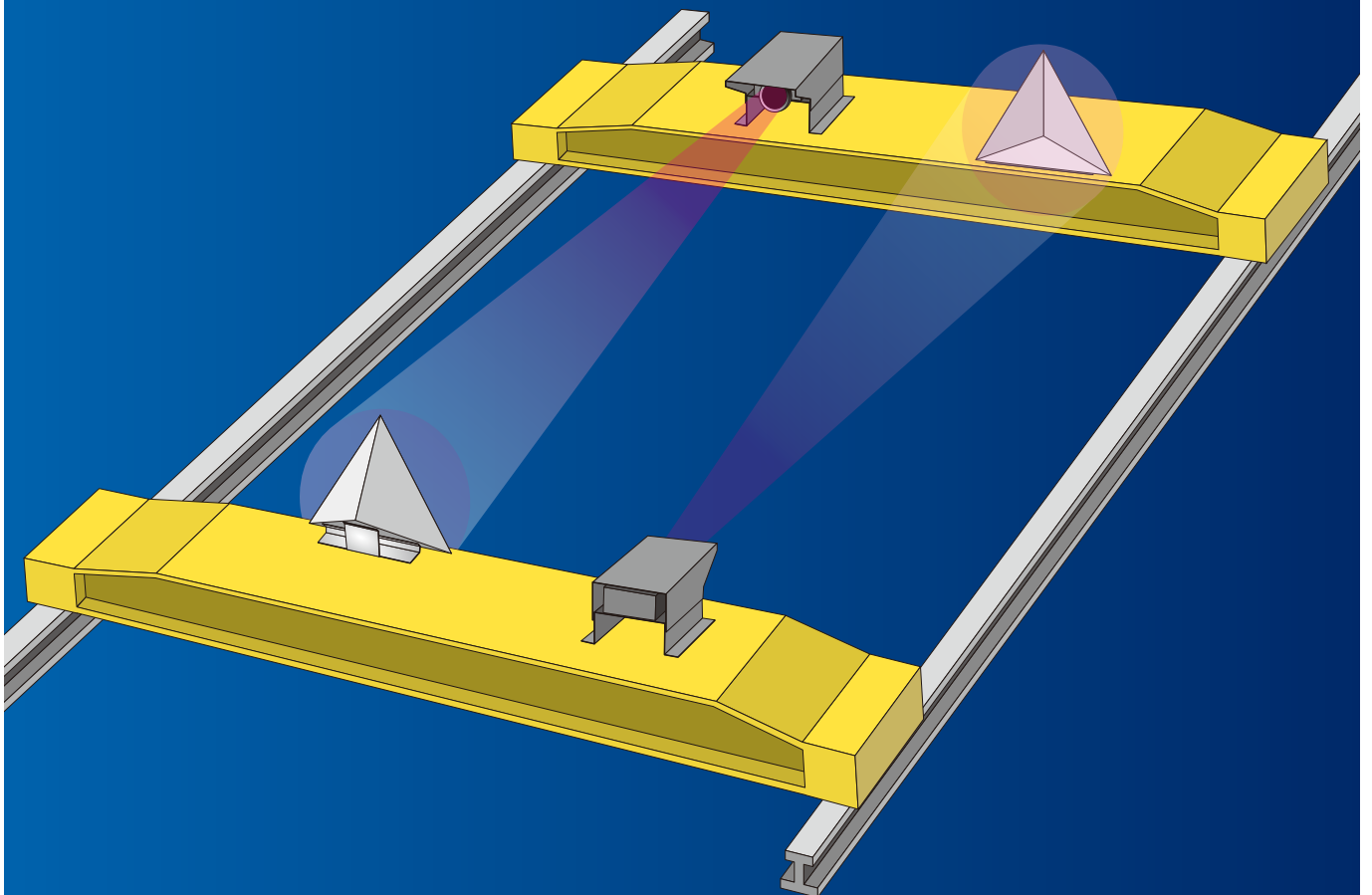


Microwave Range Finder  
For Crane Crash Avoidance

**MWS-CAS-3A/B**

**MICRO-ROBO**

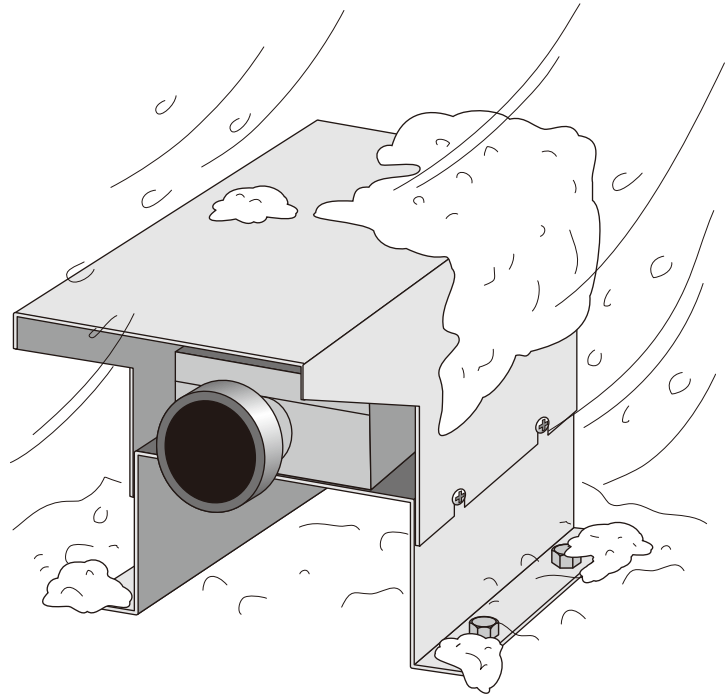
**TWO OUTPUTS FOR BOTH  
SLOWING AND STOPPING**



**WADECO CO.,LTD.**

## Microwave Range Finder For Crane Crash Avoidance **MICRO-ROBO**

The MWS-CAS-3A/B Micro-Robo is a microwave range finder specifically for use on overhead cranes as a crash avoidance sensor. The sensor and reflector are installed face-to-face on adjacent overhead cranes running on the same rails. When one crane enters the preset slowing or stopping distances, the sensor will output a signal for the crane to either slow down or stop.



**Reliable detection under  
all weather conditions.**

### Features

#### ■ Distance-measurement type, two outputs.

The distance adjustment is simple because the sensor measures distance and outputs a signal to either slow down or stop the crane.

#### ■ Analog output

The measured distance is output as an analog current.

#### ■ Unaffected by adverse environments

Microwaves are generally unaffected by environmental conditions, thus this sensor is unaffected by rain, wind, snow, frost, heavy dust, smoke or vapor.

#### ■ No beam slippage

Beam adjustment is easy because the beam is conical-shaped and there will be no errors caused by slipping of the beam.

#### ■ No set-to-set interference

This permits use of multiple Micro-Robos in close proximity to each other.

#### ■ Enclosure rating IP65 equivalent

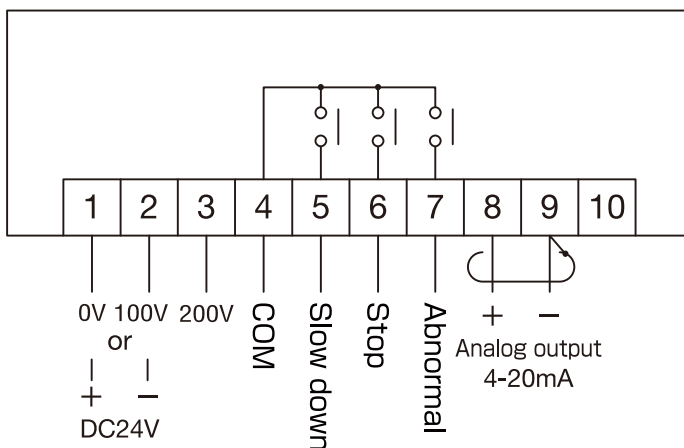
#### ■ New economical type

## Specifications

Sensor type	MWS-CAS-3A or MWS-CAS-3B	MWS-CAS-3ADC or MWS-CAS-3BDC
Reflector type	CR-500	
Power supply	AC100~120V or AC200~240V $\pm$ 10% 50/60Hz	DC24V
Operating range	1.5m to 50m	
Measurement accuracy	Approx. $\pm$ 0.5m	
Frequency & transmission power	24GHz approx. Less than 10mW	
Slow down output	Relay contact AC250V, 3A, $\cos\phi=1$ , XX.Xm preset by rotary switch	
Stop output	Relay contact AC250V, $\cos\phi=1$ , XX.Xm preset by rotary switch	
Abnormal output	Relay contact AC250V, $\cos\phi=1$	
Analog output	Distance output : 4~20mA (0~50m) , Abnormal output : 3.5mA	
Delay time from power on to function	Approx. 5sec.	
Power consumption	10VA	
Noise immunity	Pulse noise from noise simulator $\pm$ 1.5KV (normal and common mode)	
Ambient operating temperature	-10°C ~ +55°C (14°F ~ 131°F)	
Enclosure rating	IP65/NEMA4 equivalent	
Construction	Sensor: aluminum diecast (main body), SS400 (base and cover) Reflector: SS400	
Color	Grey	
Weight	Sensor: 7.3kg Reflector: 4.2kg	

Type A should be installed on one crane and type B should be installed on the other crane in order to prevent interference between the two sensors.

## Wiring

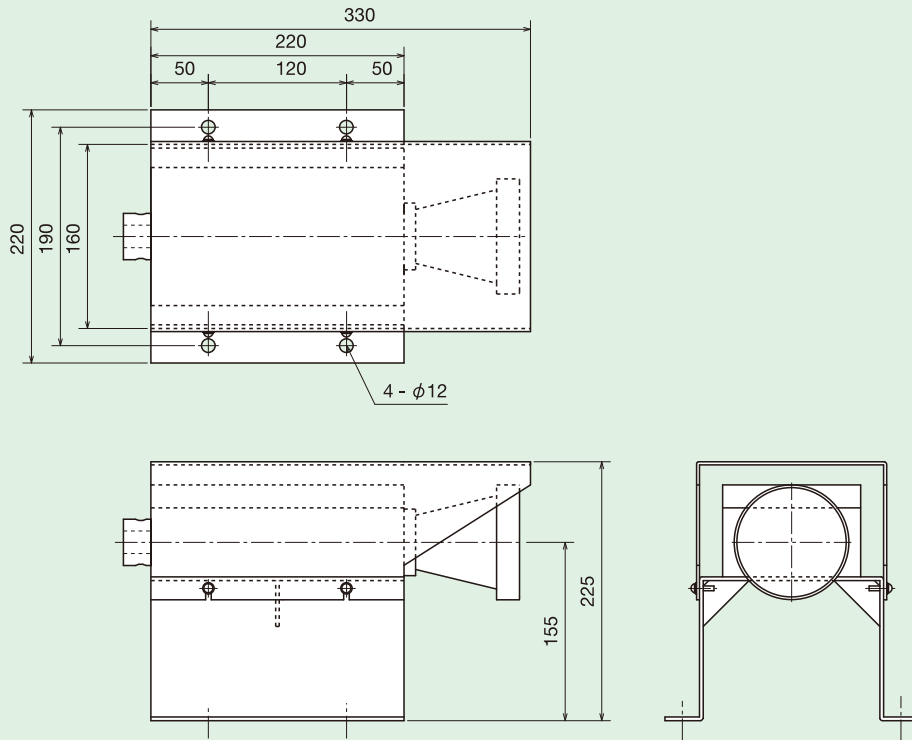


## Relay configuration

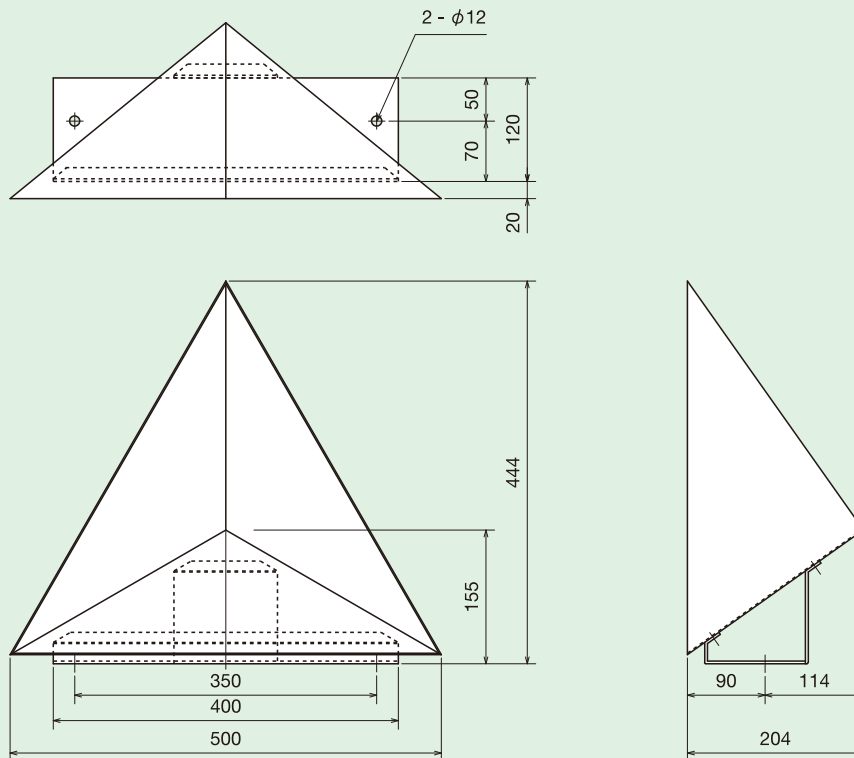
Purpose		Slow down	Stop	Abnormal
Terminal number		4-5	4-6	4-7
Unpowered state		Open	Open	Open
Powered State	Non-detecting state	Closed	Closed	Closed
	Detecting state	Open	Open	Open

# Dimensions

## Sensor



## Reflector



These specifications may be changed without notice.

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