

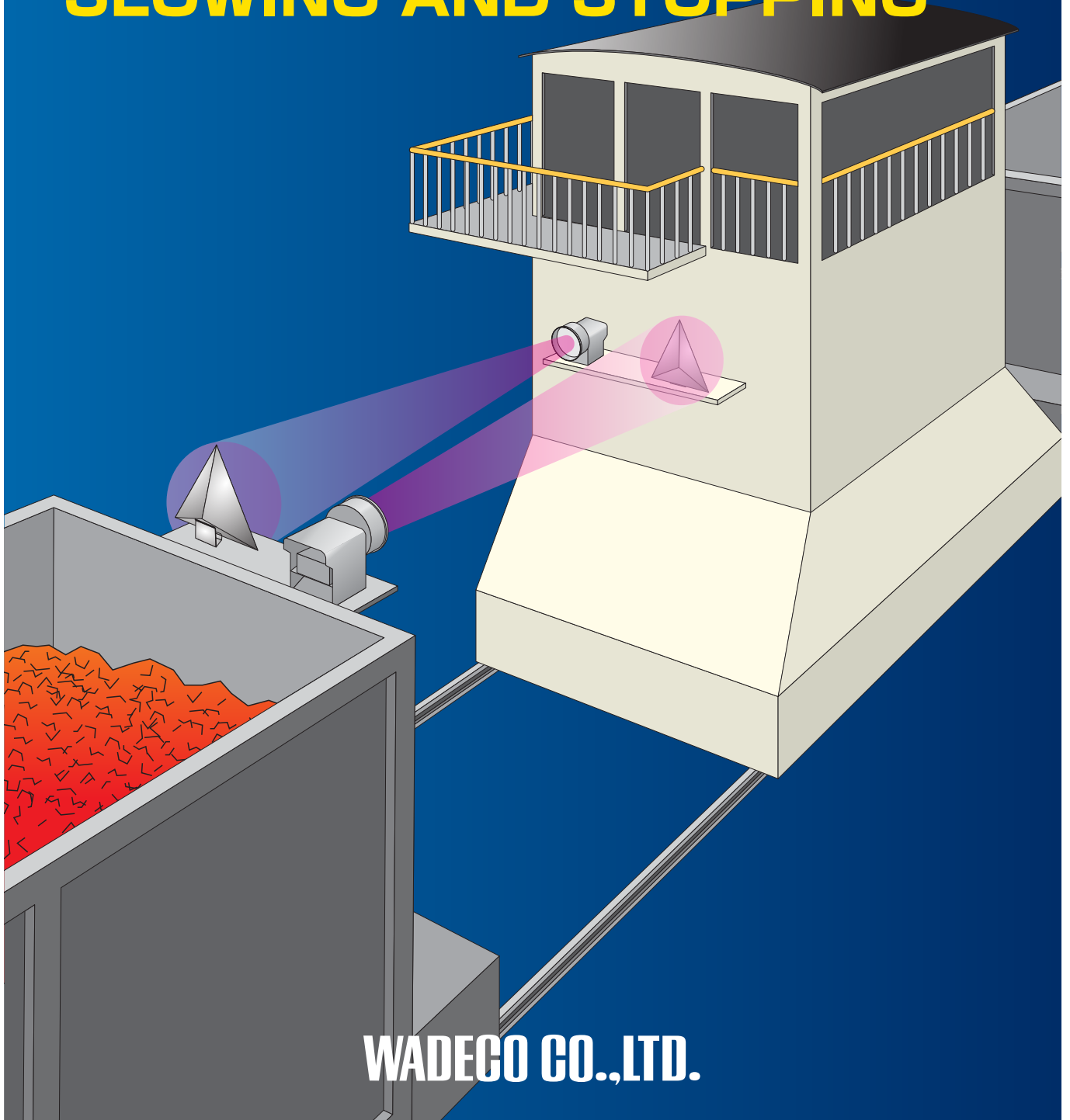


Microwave Range Finder For Crane Crash Avoidance

MWS-CAS-3-P PAT.PEND.

MICRO-ROBO

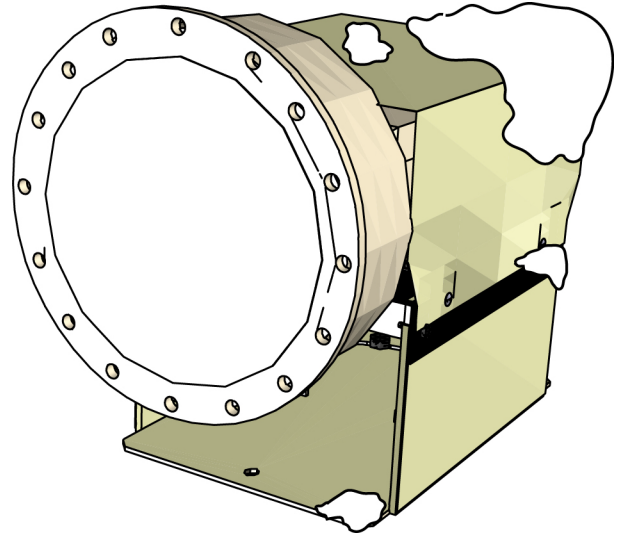
**TWO OUTPUTS FOR BOTH
SLOWING AND STOPPING**



WADECO CO.,LTD.

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

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



**Reliable detection under
all weather conditions.**

Features

■ Reflector type

Even if one car's power supply is disconnected, the crash avoidance system for the other car is still functional.

■ 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 car.

■ Long-Distance Type

Measurement up to 80m without misreadings due to unnecessary reflections.

■ 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.

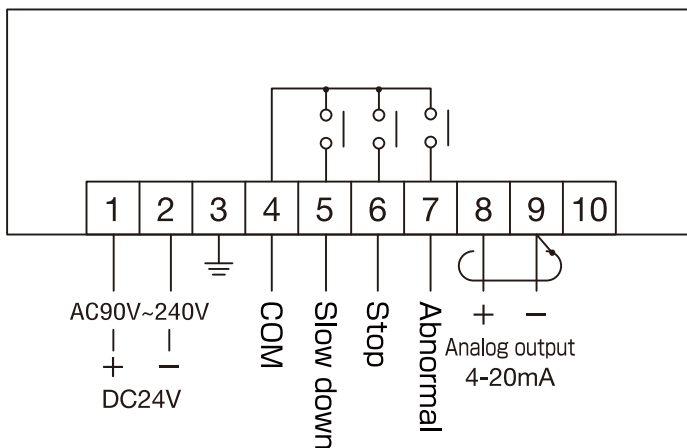
■ Enclosure rating IP65 equivalent

■ New economical type

Specifications

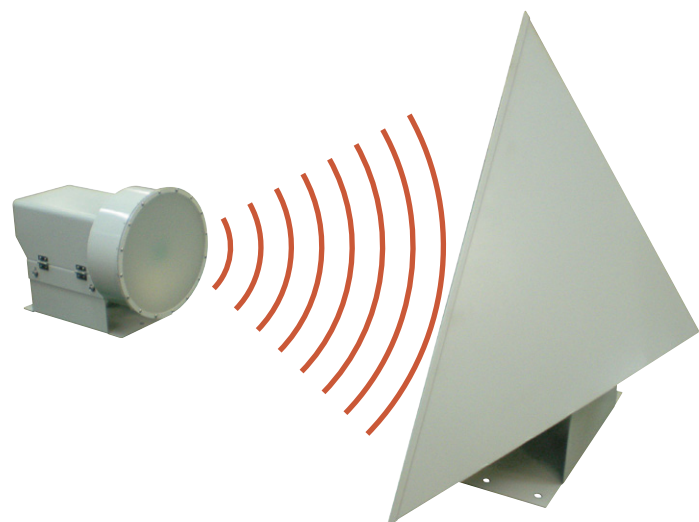
Sensor type	MWS-CAS-3-P	MWS-CAS-3-PDC
Reflector type	CR-600	
Power supply	AC90V~240V, 50/60Hz	DC24V
Maximum operating range	Select 20, 40, 60 or 80m	
Measurement accuracy	±3% or ±0.5m (whichever is larger)	
Frequency & transmission power	24GHz approx. Less than 10mW	
Slow down output	Relay contact AC250V, 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 Accuracy: ±0.5% to full scale, Max. load resistance: 400 Ohms	
Delay time from power on to function	Approx. 5sec.	
Power consumption	10VA	
Noise immunity	Pulse noise from noise simulator ±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), SPCC (base and cover) Reflector: SPCC	
Color	Grey	
Weight	Sensor: approx. 12kg Reflector: approx. 6kg	

Wiring

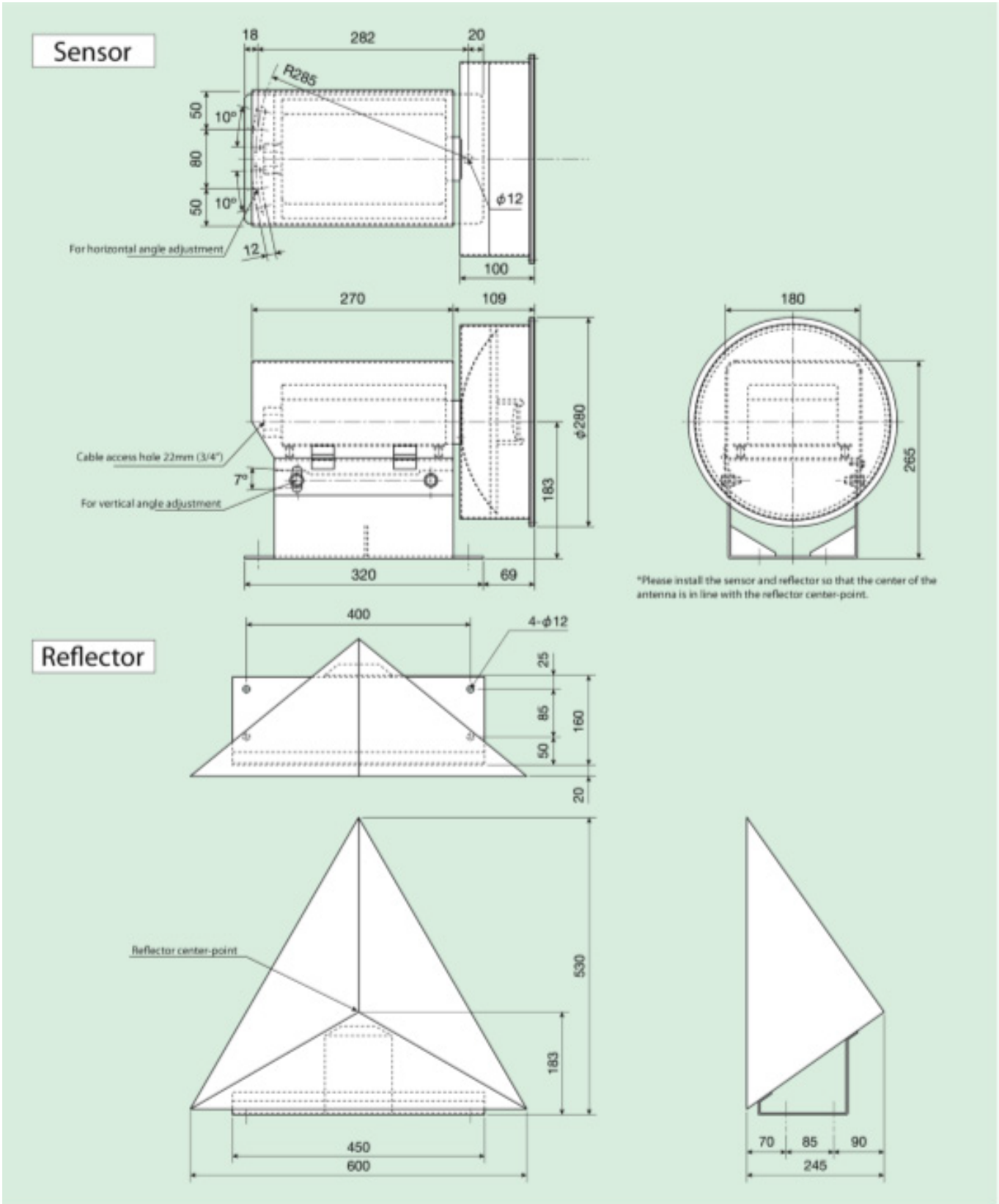


Relay configuration

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



These specifications may be changed without notice.



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