Close Crane Warning Device

MBX- 211

Geometry setting system is applied and detecting precision is high!

This is a microwave overhead traveling close crane warning device. Consisting of two sets of transmitter/receiver installed oppositely, when two cranes approach each other until the both detecting areas overlap, the microwave of the opposite side is mutually detected, and an alarm signal is executed.

This device provides excellent detecting accuracy and axis is not dislocated by vibration because of geometrical settng system utilizing the directivity of horn antenna.

Malfunction doesn't cause by leakage signal from opposite channel or reflective wave from buildings because of synchronous settng of power frequency.

Monitor output which can check both transmission and reception of microwave provides.

This device can get output in series from detecting distance to crane contacting point without interlocking circuit by adjusting installing angle.

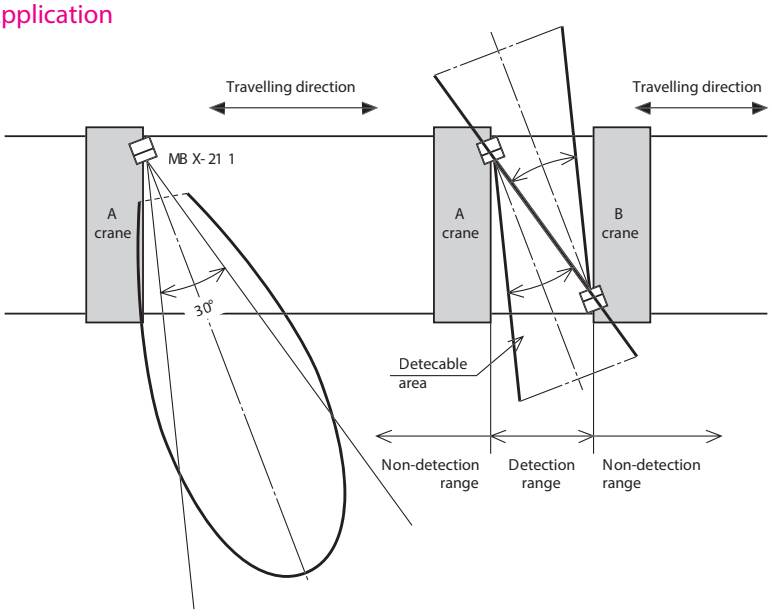
This device can be used outdoor because characteristic of microwave isn't be affected by direct light, wind or rain etc.

Specifications

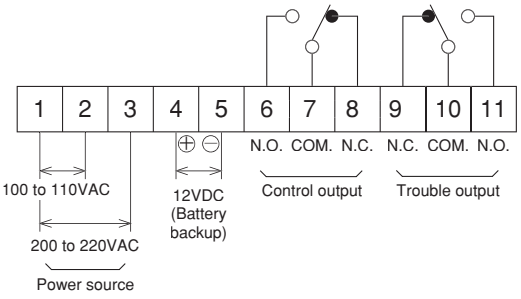
Type	Microwave type
Model	MBX-211
Power source	100 to 110VAC/200 to 220VAC(± 10% 50/60Hz)
Power consumption	3.5VA or les s
Detecting distance	0 to 20m when installing angle is 20 ˚(Recommended), 10 to 40m when installing angle is 4 5˚(Max.)
Hysteresis	15% or less of detecting distanc e
Microwave	10,525GHz, ± 15MHz
Antenna	Horn antenna: directive angle 3 0˚(Horizontal and vertical)
Response time	50msec or less(400msec or less when returned)
Control output Trouble output *	1C relay contact(250VAC 5A, 30VDC 5A, cos ρ=1)
Indicators	Power, operation, monitor(Normal, transmission trouble, reception trouble)
Sensitivity adjustment	Course adjuster: 5 steps(5dB), fine adjuster: 5dB
Connection	M4 screw terminal, applicable wire 3.5mm 2
Ambient temperature	-10 to +55
Ambient humidity	45 to 85%RH(Not icing)
Case	Steel plate(SPCC)
Weight	Approx. 12kg

*In case that reception level is lowered to 1/4, it is e xecuted after appro x. 1 0 sec.
Note) In case of outdoor use, rain-proof cover is available as an option.

Application



■ Connection



● **Control output**

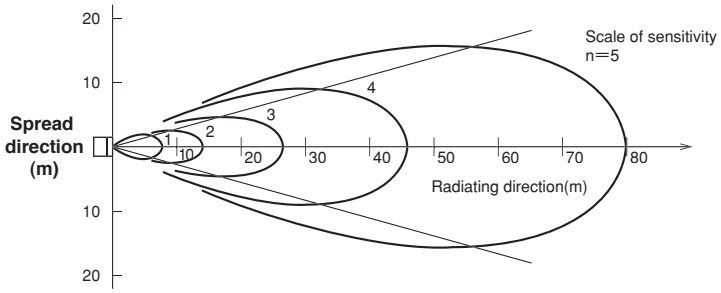
Terminal No.		6—7	7—8
Power-off state		OPEN	CLOSE
Power-on state	When non-detecting	CLOSE	OPEN
	When detecting	OPEN	CLOSE

● **Trouble output**

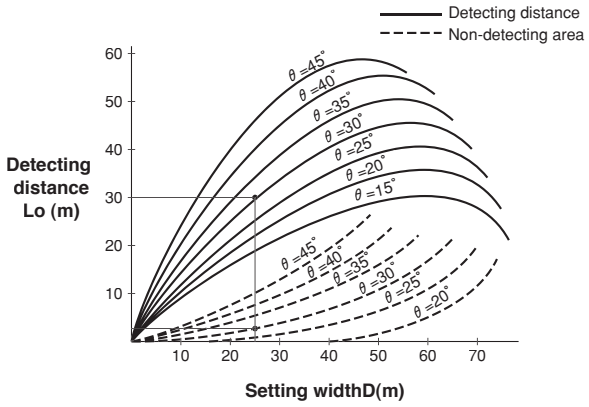
Terminal No.		9—10	10—11
Power-off state		CLOSE	OPEN
Power-on state	When normal	OPEN	CLOSE
	When troubled	CLOSE	OPEN

■ Characteristic data(Typical example)

Directivity



Setting width(D), Setting angle(θ), Detectable distance(Lo)



Ex) In case of Lo=30m and θ=30°, set to D=approx. 26m. In that case, non-detecting area is approx. 2.5m.

■ External dimensions