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.

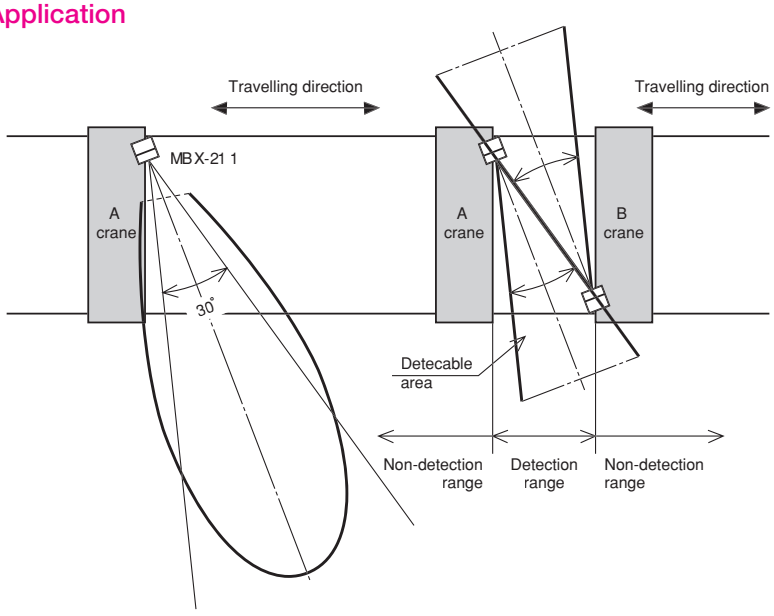
- This device provides excellent detecting accuracy and axis is not dislocated by vibration because of geometrical setting system utilizing the directivity of horn antenna.
- Malfunction doesn't cause by leakage signal from opposite channel or reflective wave from buildings because of synchronous setting 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

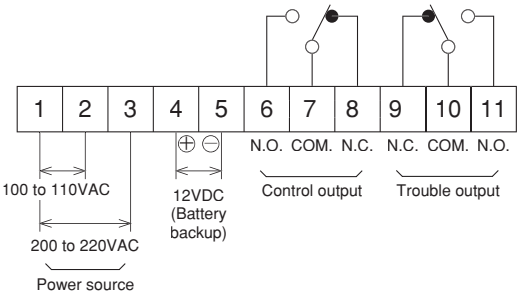
Type	Microwave type
Model	MBX-211
Power source	100 to 110VAC/200 to 220VAC(±10% 50/60Hz)
Power consumption	3.5VA or less
Detecting distance	0 to 20m when installing angle is 20°(Recommended), 10 to 40m when installing angle is 45°(Max.)
Hysteresis	15% or less of detecting distance
Microwave	10,525GHz, ±15MHz
Antenna	Horn antenna: directive angle 30°(Horizontal and vertical)
Response time	50msec or less(400msec or less when returned)
Control output Trouble output*	1C relay contact(250VAC 5A, 30VDC 5A, cosϕ=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 executed after approx. 10 sec.
Note) In case of outdoor use, rain-proof cover is available as an option.

■ Application



■ Connection



● **Control output**

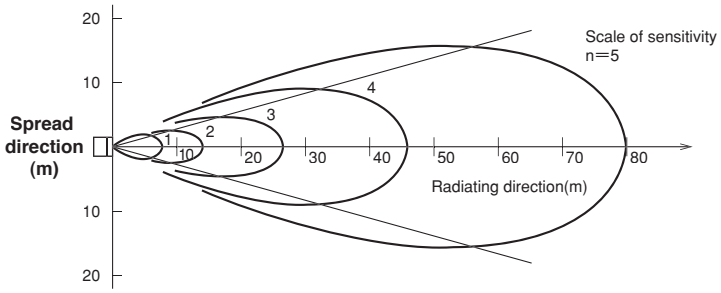
Terminal No.		6—7	7—8
Power-off state		OPEN	CLOSE
Power-on state	When non-detecting	CLOSE	OPEN
	When detecting	OPEN	CLOSE

● **Trouble output**

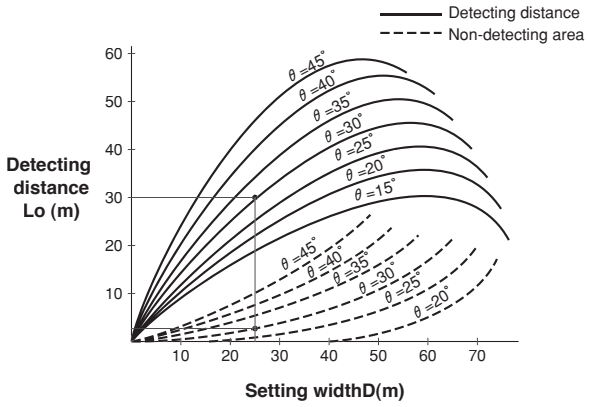
Terminal No.		9—10	10—11
Power-off state		CLOSE	OPEN
Power-on state	When normal	OPEN	CLOSE
	When troubled	CLOSE	OPEN

■ 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