

# Waveguide Type Detector

## MBX- 30 1C A

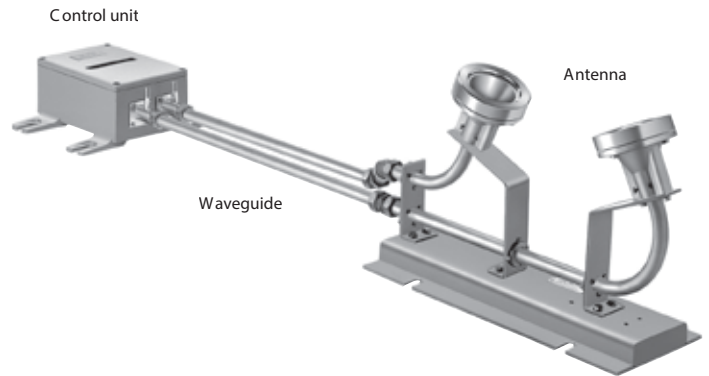
Microwave type which isn't affected by vapor, disturbance light or smoke etc.

This is a microwave detector. It consists of an antenna as detecting part and control unit composed of oscillator, wave detector and amplifier, and these two components are coupled together by a wave guide. Since the antenna is free from any electronic part which may be affected by heat, it can be used in high temperature environment without being cooled by water.

This device is suitable for using under bad environment because microwave isn't affected by vapor, disturbance light, smoke etc.

This device is reflective type. It is possible to detect small pipe, too.

This device provides monitor output that is monitoring oscillation of microwave.



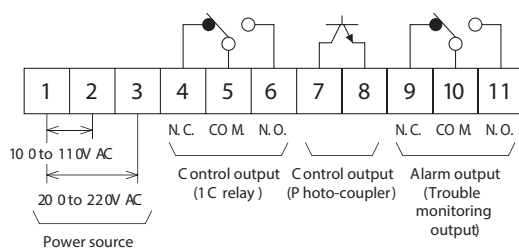
### Specifications

Type	Microwave type
Model	Control unit: MBX-301CA Antenna: MAR-201(without air purge), MAR-251(with air purge ) Waveguide: MWG-20(Semi-seamless •2m long), MWG-25(Seamless •2m long ) MFG-20(Flexible •0.5m long ) Joint: MSJ-20(Socket), MBJ-20(Elbow), MCJ-20(Elbow with 45 °)
Power source	100 to 110VAC/200 to 220VAC( ± 10% 50/60Hz)
Power consumption	4.5VA or less
Detecting distance	Approx. 300mm from antenna surface
Detectable objects	Steel plate with reflection surface, 50 x 50mm
Hysteresis	1mm to 30mm(Adjustable)
Microwave	10.525GHz ± 15MHz
Allowable waveguide length	25m or less(Total of transmission and reception)
Air blowing of waveguide	Air quality: Industrial clean air, Air amount: 20 lit/min., Air pressure: 980kPa(In case of MAR-251 )
Response time	Contact output: 10ms, photo-coupler output: 3ms
Control output	1C relay(250VAC 3A, 30VDC 5A, cos ρ=1), Photo-coupler(75V 100mA)
Alarm output *1	1C relay(250VAC 3A, 30VDC 5A, cos ρ=1)
Indicators	Power lamp, operation lamp, alarm lamp, 5-step reception level lamp *2
Connection	M4 screw terminal, hub body with gland(Hole dia. ρ 18)
Ambient temperature	Control unit: -10 to +60 °C, Antenna/waveguide: -20 to +600 °C
Case	Antenna: Bronze casting, Control unit: Aluminum die-casting
Weight	Control unit: Approx. 10kg, antenna: Approx. 11kg

\*1. When oscillation of microwave is stopped by power failure or circuit trouble, this output is executed.

\*2. Reception level is indicated with 5 steps.

### Connection



#### Control output

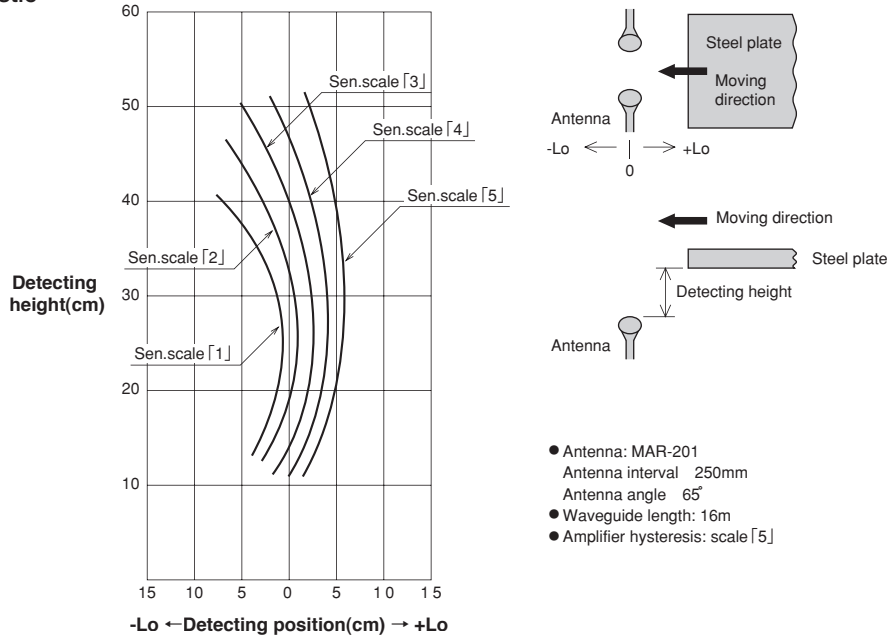
Terminal No .	4-5	5-6	7-8
Power-off state	CL OSE	OP EN	—
Power - on state	When non-detecting	OP EN	CL OSE
	When detecting	CL OSE	OP EN

#### Alarm ouput(Trouble monitoring output )

Terminal No .	9-10	10-11
Power-off state	CL OSE	OP EN
Power - on state	When normal	OP EN
	When troubled	CL OSE

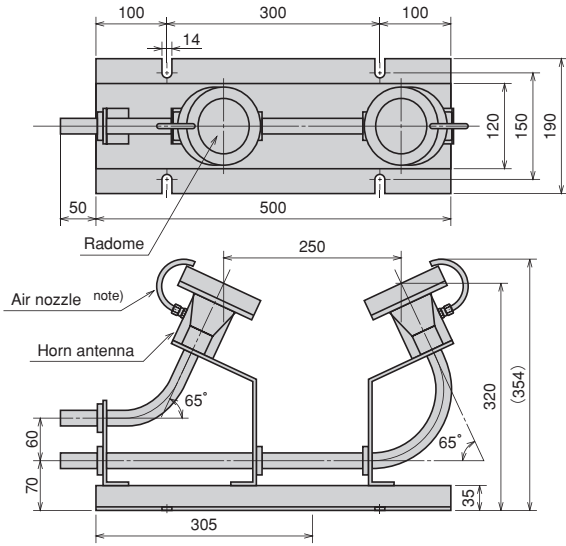
■ Characteristic data(Typical example)

Detecting characteristic

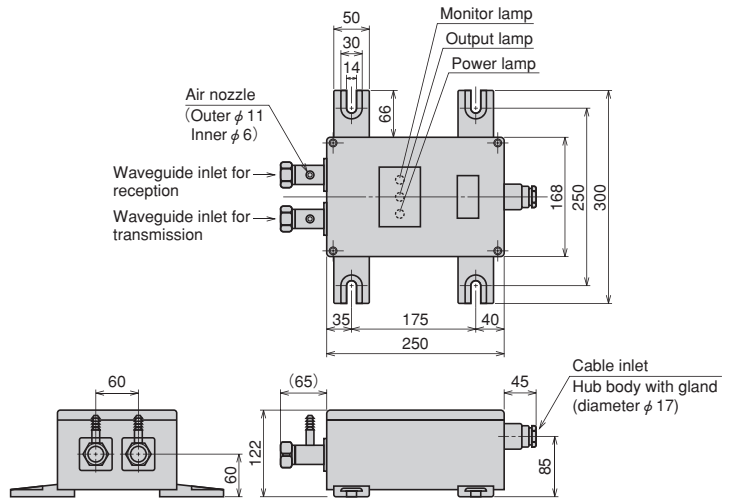


■ External dimensions

Antenna(MAR-201/MAR-251)



Control unit



Note) Only MAR-251