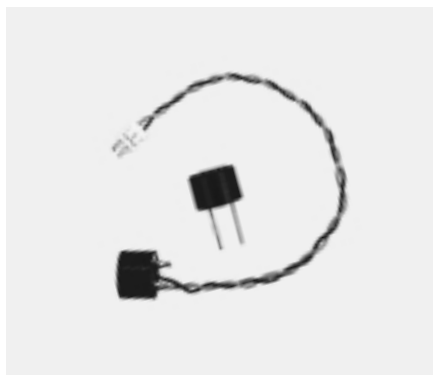


SENSORS

ULTRASONIC SENSORS

MA40 SERIES



MA40 SERIES OPEN TYPE FEATURES

- Small size: 10 and 16
- Combined types
- High SPL types
- Low voltage/current types

APPLICATIONS

- Burglar alarms
- Object detection devices
- Distance measurement devices

MA40E SERIES WATERPROOF TYPE FEATURES 40kHz Sensors

- Waterproof
- Many types leaded/not
- Short ringing time
- Directive models

APPLICATIONS

- Rear backing sonar
- Corner sonar

DIMENSIONS: mm

OPEN	MA40S4R/S 	MA40B8R/S 	MA40S5 	MA40B7
	MA40S4R/S 	MA40B8R/S 	MA40S5 	MA40B7
WATERPROOF	MA407S-1 	MA40F14-1B 	MA40E7R/S 	MA40E8-2
	MA407S-1 	MA40F14-1B 	MA40E7R/S 	MA40E8-2

SPECIFICATIONS

Part Number	MA40E7R/S	MA40S4R/S	MA40B8R/S	MA40B7	MA40E7S-1	MA40S5	MA40E8-2	MA40MF14-1B
Construction	Waterproof type	Open structure type			Waterproof type	Open structure type	Waterproof type	
Using Method	Receiver and Transmitter (Dual use) type				Combined use type			
Nominal Frequency (kHz)	40							
Overall Sensitivity (dB)	—	—	—	-45 ⁺⁴ ₋₅	—	-50 ± 4	—	—
Sensitivity (dB)	-74 min.	-63 ± 3	-63 ± 3	—	-72 min.	—	-85 min.	-87 min.
Sound Pressure (dB)	106 min.	120 ± 3	120 ± 3	—	106 min.	—	106 min.	103 min.
Directivity (deg)	100	80	50	44	75	70	75	110 x 50
Capacitance (pF)	2200 ± 20%	2550 ± 20%	2000 ± 20%	2000 ± 20%	2200 ± 20%	2550 ± 20%	2800 ± 20%	4000 ± 20%
Operating Temp. Range(°C)	-30 ~ +85	-40 ~ +85	-30 ~ +85			-40 ~ +85	-30 ~ +85	
Detectable Range (m)	0.2 ~ 3	0.2 ~ 4	0.2 ~ 6	0.2 ~ 4	0.2 ~ 3	0.2 ~ 2.5	0.2 ~ 1.5	0.2 ~ 1.5
Resolution (mm)	9							
Dimension (mm)	18φ x 12h	9.9φ x 7.1h	16φ x 12h	16φ x 12h	9.9φ x 7.1h		14φ x 8h	
Weight (g)	4.5	0.7	2.0	2.0	4.5	0.7	2.4	2.4
Allowable Input Voltage (Vp-p) (Rectangular wave)	85 (40kHz) Pulse width 0.4ms Interval 100ms	20 (40kHz) Continuous signal	40 (40kHz) Continuous signal	100 (40kHz) Pulse width 0.4ms Interval 100ms	100Vpp Pulse width 0.4ms Interval 100ms	60 (40kHz) Pulse width 0.4ms Interval 100ms	160 (40kHz) Pulse width 0.8ms Interval 60ms	160Vpp Pulse width 0.8ms Interval 60ms
Packaging Quantity (Pcs.)	90	540	150	150	90	540	80	150

PART NUMBERING SYSTEM

MA40	□	□(-□)	(R/S)
40kHz FAMILY	B: 16mm dia. S: SMALL 10mm dia. E: WATERPROOF	MODEL	R: RECEIVER FOR DUAL TYPE S: SENDER FOR DUAL TYPE

For more detailed information regarding this product line in North America, consult us. To receive additional information on Murata Products call 1-800-831-9172.