OHDMB Series Magnetic Recognition Sensors/ Magnetic Head

1. General Description

OHDMB Series Magnetic Recognition Sensors are a magneto-dependent sensor with high sensitivity, which is also called magnetic heads. They are composed of semiconductor material indium stibnite (InSb) magnetic resistance chips and permanent magnet supplying InSb magnetic resistance chip bias. With hard metal as its outer covering, the sensors have excellent anti-interference ability. Magnetic sensors, with excellent assembly techniques, have extremely high-cost performance.

OHDMB series sensors can replace the sensor of MURATA and NIKKOSHI.

2. Features

- High stability and excellent SNR
- Contactless detection, stable output, and fast response
- Output voltage is independent of the moving speed of the magnetic objects
- Pure-resistance sensing element with strong anti-interference capability
- Chips are linearly arranged, and all channels respond simultaneously
- Wide detection width and low noise

3. Applications

- Dynamic Money Detector
- Static Money Detector
- Detection of Weak magnetic ink
- Detection of RMB and Foreign currency
- Detect the magnetic signal of banknotes
- Detection of magnetic metal and bar magnets

4. Absolute Maximum Ratings $T_A = 25℃$

Parameter	Symbol	Value	Unit
Supply Voltage	V_{amax}	5.5	V
Insulation Resistance	R_{insmin}	5	MΩ
Operating Temperature Range	T_o	-20~+60	℃
Storage Temperature	T_s	-20~+60	℃

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5. Technical Characteristics T_a = 25℃

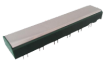
Parameter	Symbol	Min	Typ	Max	Unit
Sensitivity	**s**	900	1200	-	mVp-p
Symmetry	**d**	0	-	35	%
Sub-Resistance	R_{sub}	0.1	-	2	KΩ
Total-Resistance	R_{total}	0.2	-	4	KΩ
Noise	V_o	-	-	50	uVp-p
Effective Detection Width — OHDMB-01	**W**	-	4.3	-	mm
Effective Detection Width — OHDMB-01A	**W**	-	7.3	-	mm
Effective Detection Width — OHDMB-01B	**W**	-	22.5	-	mm
Effective Detection Width — OHDMB-04	**W**	-	4ch*10	-	mm
Effective Detection Width — OHDMB-06	**W**	-	6ch*10	-	mm
Effective Detection Width — OHDMB-09	**W**	-	9ch*10	-	mm
Effective Detection Width — OHDMB-13	**W**	-	13ch*10	-	mm
Effective Detection Width — OHDMB-18	**W**	-	18ch*10	-	mm
Effective Detection Width — OHDMB-24	**W**	-	24ch*7.3	-	mm
Effective Detection Width — OHDMB-64	**W**	-	64ch*1	-	mm
Effective Detection Width — OHDMB-129	**W**	-	129ch*1	-	mm
Magnetic Flux Density	**B**	-	0.12	-	T
Resolution	**T**	-	0.75	-	mm

6. Note

1. Sensitivity: Amplify electric current with 1100 times, when magnetic head scanning surface aims at the tinsel (0.1mm) with 100mA, 50Hz A.C. and slide linearly with it slowly, then measure the peak-to-peak value of the output voltage with an oscilloscope, and the maximum value is sensitivity.
2. Symmetry = |MR1-MR2| / MR1 (or MR2).
3. Noise: Using an amplifier with an operating frequency f = 1000 Hz and a gain of 10,000, measure the maximum peak-to-peak noise voltage V_{P-P} at the output with an oscilloscope.

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7. Order Information

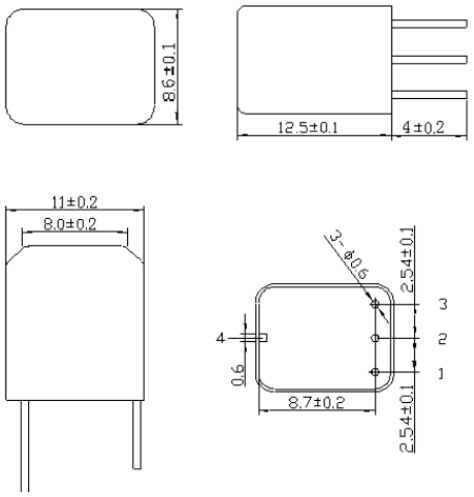
Part Number	Package Type	Effective Detection Width
OHDMB-01		4.3mm
OHDMB-01A		7.3mm
OHDMB-01B		22.5mm
OHDMB-04		4ch*10mm
OHDMB-06		6ch*10mm
OHDMB-09		9ch*10
OHDMB-13		13ch*10
OHDMB-18		18ch*10
OHDMB-24		24ch*7.3
OHDMB-64		64ch*1

Note: More specifications can be customized.

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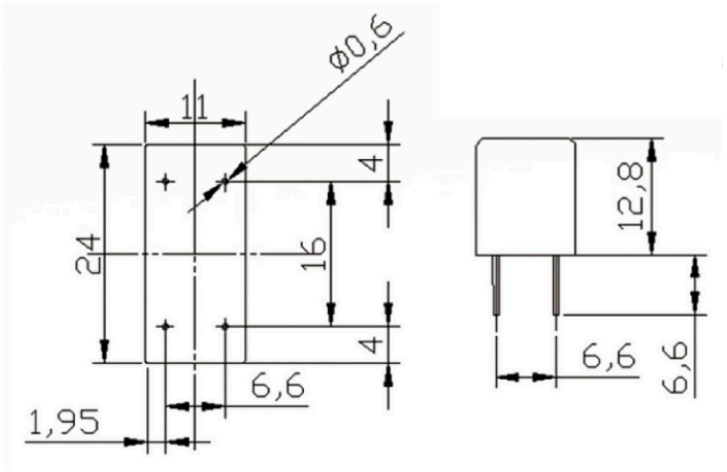
8. Dimensions (Unit: mm)

OHDMB-01
OHDMB-01A

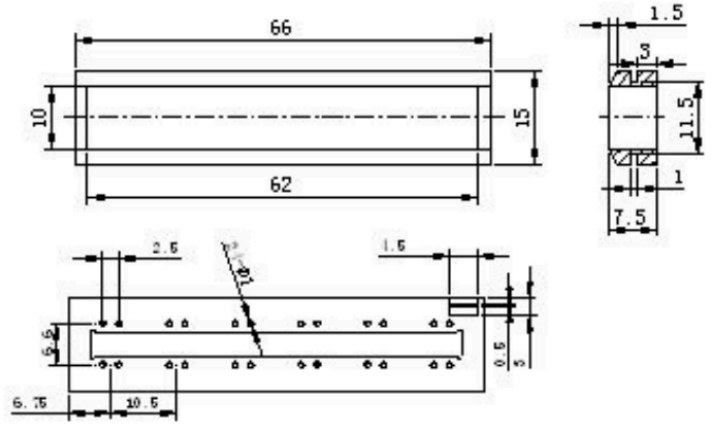


Pin 1: Output
Pin2: Vcc
Pin3: Ground
Pin 4: Frame Ground

OHDMB-01B

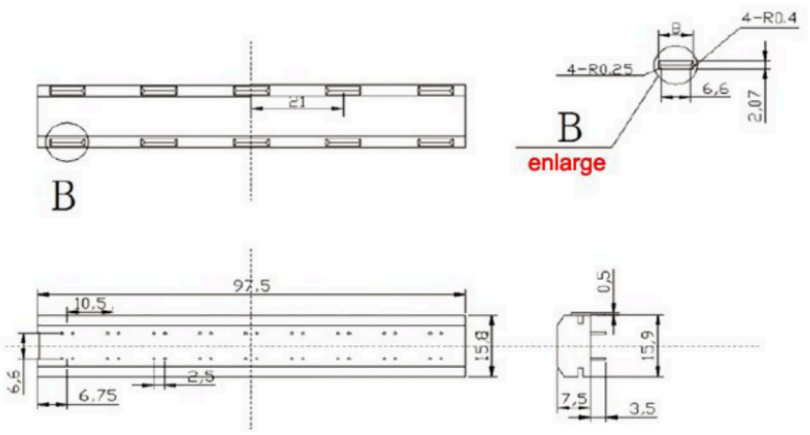


OHDMB-06

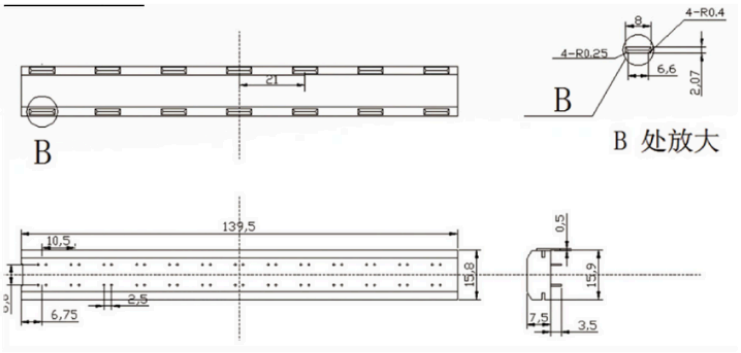


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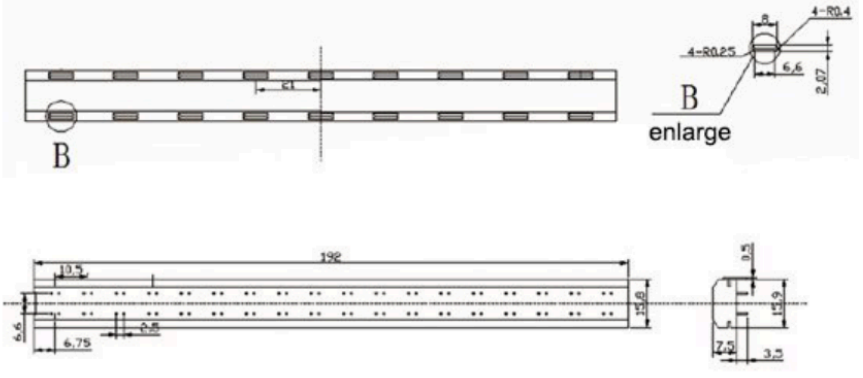
OHDMB-09



OHDMB-13



OHDMB-18



For more information

Ouzhuo Technology maintains an office in North America and cooperates with local distributors in selected countries, including in Europe, to provide sales and technical support. For application assistance, current specifications, pricing, or local partnership channels, please contact us in the way most convenient to you. Thank you for your support!

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NOTICE

The information presented in this datasheet is for reference only. Specifications may change without notice.