



## MRS-13

- Feature**
- Because A, B and Z phase have output of positive phase and negative phase, output is high, and there are a few changes in the inside point voltage by temperature.
  - A magnetic resistance element is an InSb mono-crystal. That sensitivity and the ratio of S/N are high.
  - It can be detected even if detected material doesn't stick to the detection side.
  - Output doesn't depend on the movement speed of the magnetic body, and it can detect a stationary body.
  - A detection part is pure resistance, and hardly catches guidance noise.
  - It is the miniature metal case package which can use even the limited space

### Absolute Maximum Rating (Ta=25C)

Item	Symbol	Standard Value	Unit
Excitation,Maximum	Va max	6.3	V
Allowable Loss	P <sub>D</sub>	100	mW
Operation Environmental Temperature	T <sub>opp</sub>	-10 ~ +80	°C
Operation Environmental Humidity		-0 ~ +98	%RH
Preserved Environmental Temperature	T <sub>stg</sub>	-40 ~ +120	°C

### Electrical Property (Ta=25C)

No.	Item	Symbol	Condition	min.	Typ.	Max.	Unit
1	Input resistance	R	*1 I <sub>c</sub> ≤ 1mA	120	—	330	Ω
2	Offset Voltage	V <sub>oa</sub> , V <sub>oa</sub> <sup>-</sup> V <sub>ob</sub> , V <sub>ob</sub> <sup>-</sup> V <sub>oz</sub> , V <sub>oz</sub> <sup>-</sup>	*1 Regular rotation	2.20	—	2.80	V
3	Output voltage	V <sub>A</sub> <sup>-</sup> V <sub>A</sub> <sup>-</sup> V <sub>B</sub> <sup>-</sup> V <sub>B</sub> <sup>-</sup> V <sub>Z</sub> <sup>-</sup> V <sub>Z</sub> <sup>-</sup>	*1	0.50 0.50 0.50 0.50 0.90 0.90	0.70 0.70 0.70 0.70 — —	— — — — — —	Vp-p Vp-p Vp-p Vp-p Vp-p Vp-p
4	A-A <sup>-</sup> , B-B <sup>-</sup> Output-deviation	d	*1 $\left  \frac{2(V_A - V_A^-) \times 100}{(V_A + V_A^-)} \right $ *1 $\left  \frac{2(V_B - V_B^-) \times 100}{(V_B + V_B^-)} \right $	—	—	30 30	% %
5	Isolation Resistance		DC 500V	100		—	MΩ
6	AC voltage resistant		AC 500V(O-P) 1min.	It is necessary that there is no wrong point.			
7	AC max voltage resistant			600	—	—	V0-P

\*1 Condition of measurement

Input voltage : 5.00±0.01V

Gap : 0.15mm

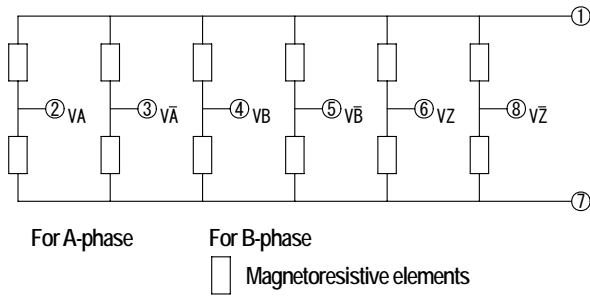
Designated gear : module 0.4

Revolution : 1500±100r.p.m

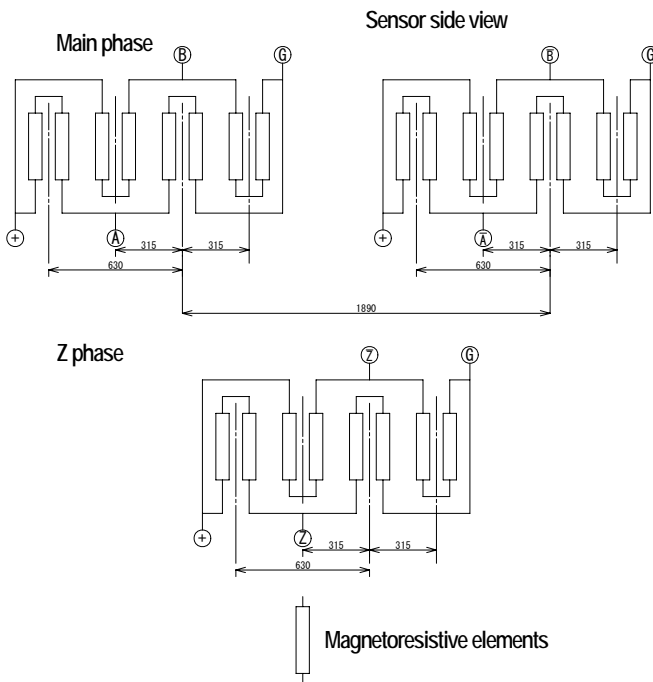




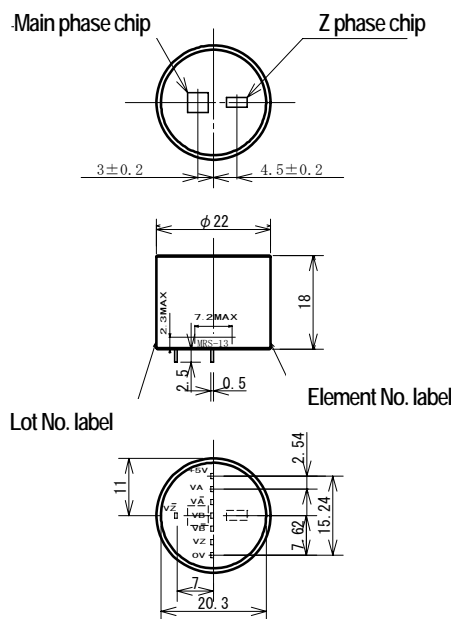
## Internal Circuit Figure



## Arrangement figure of resistance (unit : $\mu\text{m}$ )



## Contour Measure Figure



# The product specifications and the appearance are possibility of changing without notice.

