

# MRSM75

## Rotation detection MR sensor

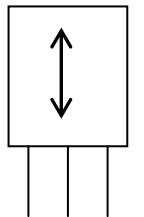
### FEATURES

- Rotation Detection sensor
  - Various usages for rotation detection
  - Operating with independent pole
  - Superior Temperature stability
  - Wide operating source voltage
  - No contact detection sensor
  - dependable for various use

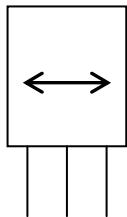


### FUNDAMENTAL OPERATION

Direction of Magnetic Field

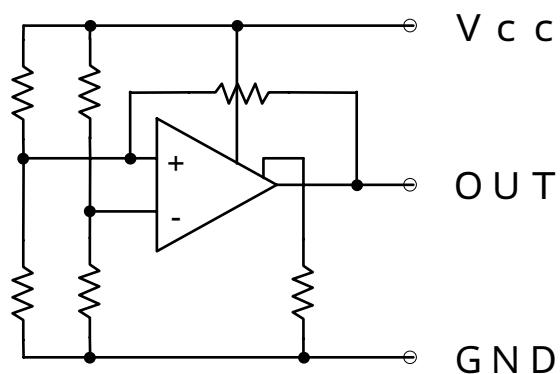


**A** Direction



**B** Direction

Circuit Block



## PERFORMANCE

Performance Characteristics (Ta = 25±3°C unless otherwise specified)

	Operating require Condition	Output Voltage
<b>When power switch is ON</b>	<b>H = 0 .0mT(Magnetic Flux Density) {0 A/m (Magnetic Field Strength)}</b>	<b>Unfixed</b>
<b>When magnetic field is applied To A direction</b>	<b>H 3.0(Typ)mT(Magnetic Flux Density) {2.4kA/m (Magnetic Field Strength)}</b>	<b>Hi-level</b>
<b>When magnetic field is applied To B direction</b>	<b>H 3.0 mT(Magnetic Flux Density) {2.4kA/m (Magnetic Field Strength)}</b>	<b>Lo-level</b>

Operating Conditions Recommended (Ta = 25±3°C unless otherwise specified)

Item	Symbol	Condition	Min	Std	Max	Unit
<b>Source Voltage</b>	<b>Vcc</b>	-	<b>3</b>	<b>12</b>	<b>30</b>	<b>V</b>
<b>Load Resistance</b>	<b>RL</b>	<b>Vcc=12V</b>	<b>10.0</b>	-	-	<b>k</b>
<b>Ambient Temperature</b>	<b>Ta</b>	-	<b>-20</b>	<b>25</b>	<b>80</b>	<b>°C</b>
<b>Applied magnetic Field</b>	<b>H</b>	-	<b>3.0</b> <b>(2.4)</b>	-	-	<b>mT<sup>*1</sup></b> <b>(kA/m)</b> <b><sup>*2</sup></b>

\*1) 1 [mT](SI) = 10 [G] (CGS)      \*2) ( ) = [kA/m](SI)

Electrical Characteristics (Ta = 25 ± 3 °C unless otherwise specified)

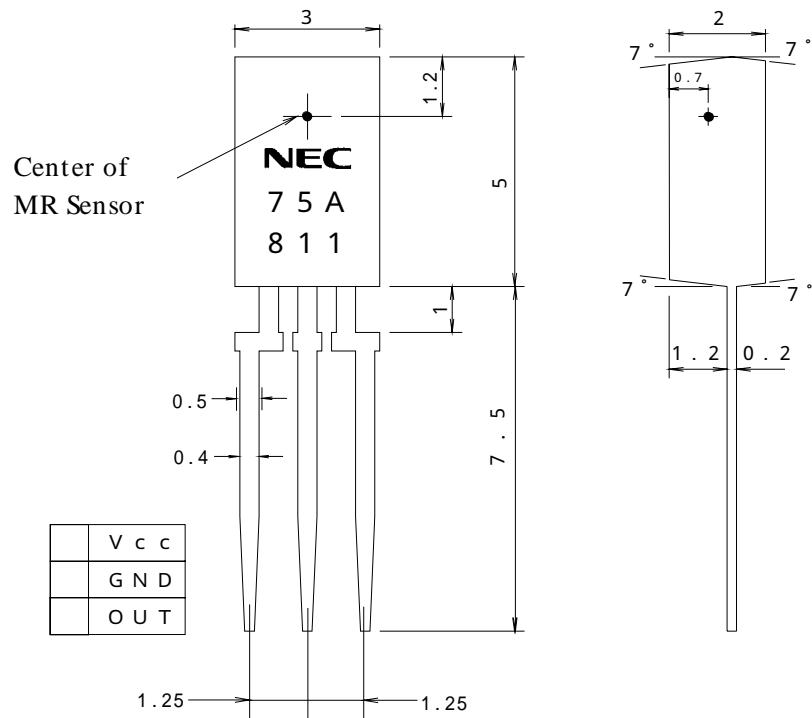
Item	Symbol	Condition	Min	Std	Max	Unit
<b>Circuit Current</b>	<b>Icc</b>	<b>Vcc=12V</b> <b>Output open</b>	-	-	<b>5</b>	<b>mA</b>
<b>Output Voltage 1</b>	<b>VoH</b>	<b>RL=10 k</b> <b>Vcc=12V</b>	<b>10</b>	-	-	<b>V</b>
<b>Output Voltage 2</b>	<b>VoL</b>	<b>RL=10 k</b> <b>Vcc=12V</b>	-	-	<b>1</b>	<b>V</b>
<b>Response Frequency</b>	<b>f(max)</b>	<b>Vcc=12V</b>	-	-	<b>2</b>	<b>kHz</b>

# ABSOLUTE MAXIMUM RATINGS

(Ta=25±3°C unless otherwise specified)

Item	Condition	Specifications	Unit
Source Voltage	-	36	V
Operating Temperature	-	-20 ~ +80	°C
Storage Temperature		-40 ~ +125	°C

## Dimensions (Unit:mm)



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