

TS-324R-05-0300

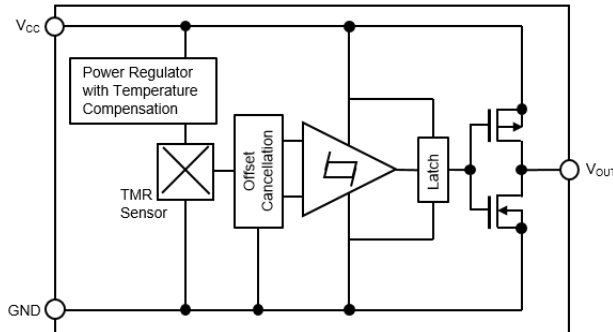


Product image serves as example only.

# TS-324R-05-0300

Omnipolar  
Flatpack TMR Sensor

## Block Diagram



## Features

- › Compact size
- › CMOS push-pull output
- › Ultra-Low power consumption
- › Excellent thermal stability

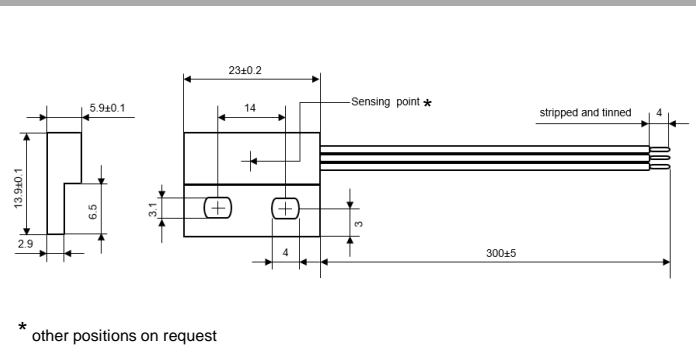
## Approvals



## Absolute Maximum Ratings

Symbol	Parameter	Wire Colour	Limit	Unit
V <sub>CC</sub>	Supply Voltage	Blue	7	V
V <sub>RCC</sub>	Reverse Supply Voltage		0.3	V
I <sub>OUTSINK</sub>	Output Current		9	mA
B	Magnetic Flux Density		2800	G
V <sub>ESD</sub>	ESD Level (HBM)		4	kV

## Dimensions



## Wire Assignment

Symbol	Function	Wire Colour
V <sub>CC</sub>	Supply Voltage	Blue
V <sub>OUT</sub>	Output	White
GND	Ground	Black

TS - 324R - 05 - 0300  
Wire Length [mm]

## Material Information

	Material	Colour
Housing	ABS	Black
Wire	UL1007/1569, AWG24	Blue, White, Black
Potting Compound	Epoxy	Black

## Environmental Characteristics

Operating Temperature	°C	- 20 to + 85
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Electrical Characteristics

Symbol	Parameter	Wire Colour	Min.	Typ.	Max.	Unit	Conditions
V <sub>CC</sub>	Supply Voltage	Blue	1.8	3.0	5.5	V	Operating
V <sub>OH</sub>	Output High Voltage	White	V <sub>CC</sub> -0.3		V <sub>CC</sub>	V	
V <sub>OL</sub>	Output Low Voltage	White	0		0.2	V	
I <sub>CC</sub>	Supply Current			1.5		µA	Output Open
F	Response Frequency			1000		Hz	

Note: A 100 nF capacitor is connected between V<sub>CC</sub> and GND during all tests on the above table.

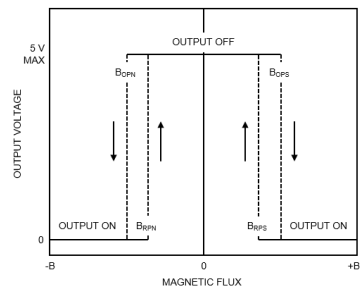
Magnetic Characteristics

Symbol	Parameter	Min.	Typ.	Max.	Unit
B <sub>OPS</sub>	Operate Point		0.5		mT
B <sub>OPN</sub>			-0.5		mT
B <sub>RPS</sub>	Release Point		0.4		mT
B <sub>RPN</sub>			-0.4		mT
B <sub>H</sub>	Hysteresis		0.1		mT

Output Behavior vs. Magnetic Pole

Parameter	Test Conditions	Output
South Pole	$B > B_{OPS}$	Low (On)
	$0 < B < B_{RPS}$	High (Off)
North Pole	$B < B_{OPN}$	Low (On)
	$0 > B > B_{RPN}$	High (Off)

Note: When power is turned on under zero magnetic field, the output is "High".



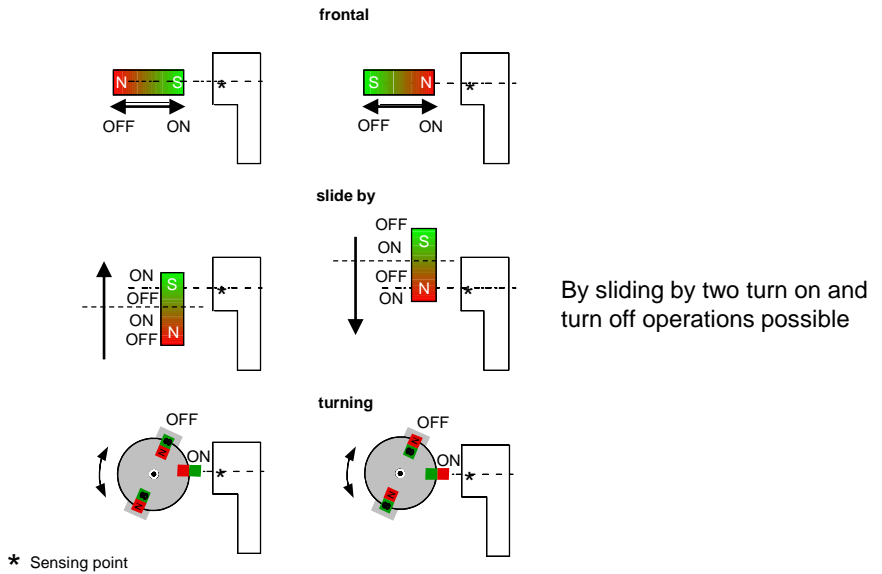
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Magnetic Approach (for example) for Omnipolar Type



Application Information

In our products an external bypass capacitor is connected in close proximity to the device between the supply and ground pins to reduce noise. The value for the external bypass capacitor is 0.1  $\mu\text{F}$ .

