

TS-324R-03-0300

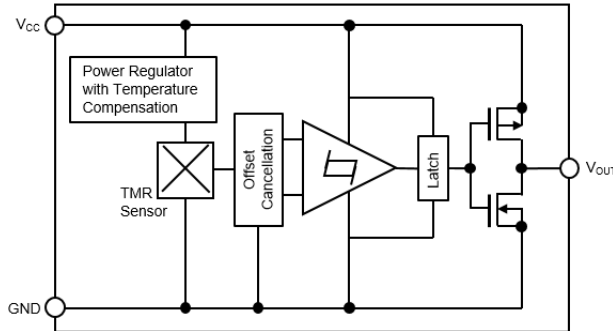


Product image serves as example only.

TS-324R-03-0300

Omnipolar
Flatpack TMR Sensor

Block Diagram



Features

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

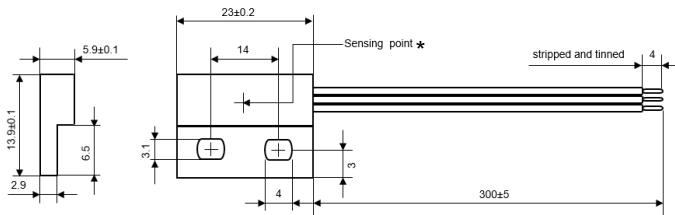
Approvals



Absolute Maximum Ratings

| Symbol | Parameter | Wire Colour | Limit | Unit |
|----------------------|------------------------|-------------|-------|------|
| V _{CC} | Supply Voltage | Blue | 7 | V |
| V _{RCC} | Reverse Supply Voltage | | 0.3 | V |
| I _{OUTSINK} | Output Current | | 9 | mA |
| B | Magnetic Flux Density | | 2800 | G |
| V _{ESD} | ESD Level (HBM) | | 4 | kV |

Dimensions



* other positions on request

Wire Assignment

| Symbol | Function | Wire Colour |
|------------------|----------------|-------------|
| V _{CC} | Supply Voltage | Blue |
| V _{OUT} | Output | White |
| GND | Ground | Black |

TS - 324R - 03 - 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 _{CC} | Supply Voltage | Blue | 1.8 | 3.0 | 5.5 | V | Operating |
| V _{OH} | Output High Voltage | White | V _{CC} -0.3 | | V _{CC} | V | |
| V _{OL} | Output Low Voltage | White | 0 | | 0.2 | V | |
| I _{CC} | Supply Current | | | 1.5 | | µA | Output Open |
| F | Response Frequency | | | 1000 | | Hz | |

Note: A 100 nF capacitor is connected between V_{CC} and GND during all tests on the above table.

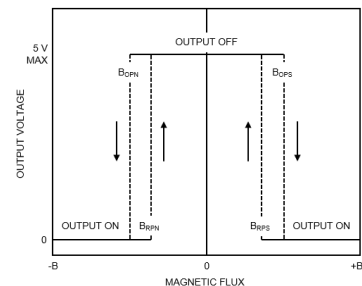
Magnetic Characteristics

| Symbol | Parameter | Min. | Typ. | Max. | Unit |
|------------------|---------------|------|------|------|------|
| B _{OPS} | Operate Point | | 3.5 | | mT |
| B _{OPN} | | | -3.5 | | mT |
| B _{RPS} | Release Point | | 2.2 | | mT |
| B _{RPN} | | | -2.2 | | mT |
| B _H | Hysteresis | | 1.3 | | 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".



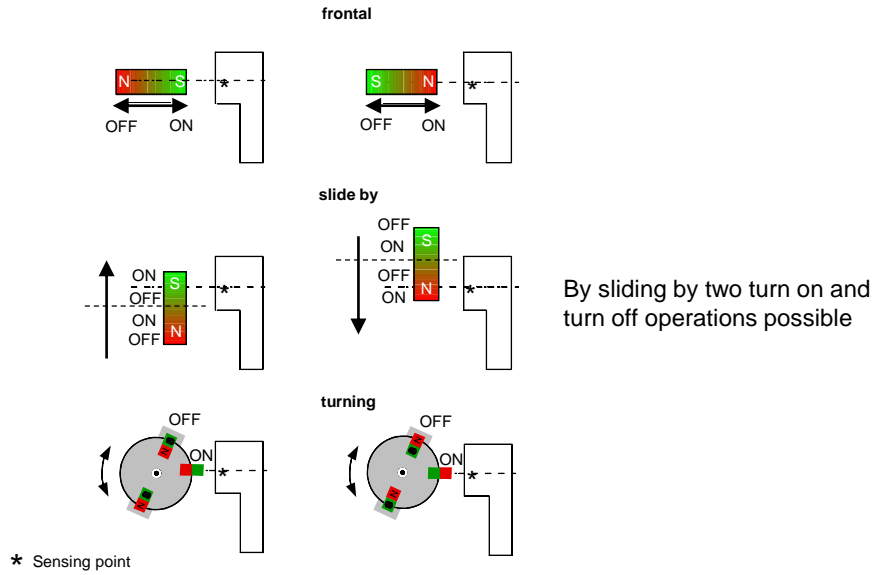
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Magnetic Approach (for example) for Omnipolar Type



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 μF .

