

TS-2212M-04-0300



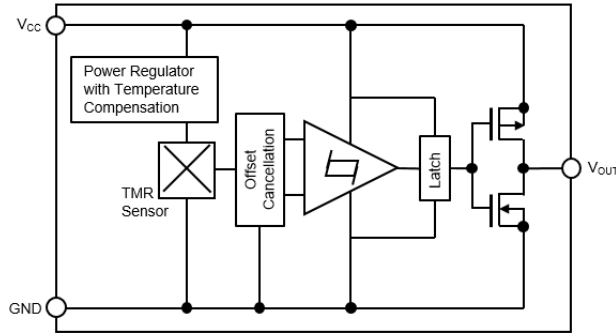
Product image serves as example only.

TS-2212M-04-0300

Omnipolar

TMR Sensor M12 Thread

Block Diagram



Features

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

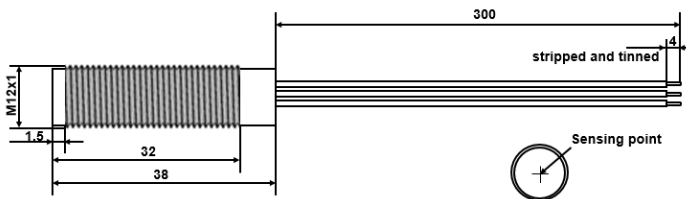
Approvals



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



Wire Assignment

Symbol	Function	Wire Colour
V_{CC}	Supply Voltage	Blue
V_{OUT}	Output	White
GND	Ground	Black

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Wire Length [mm]

Material Information

	Material	Colour
Housing	Nickel plated brass	Nickel
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.

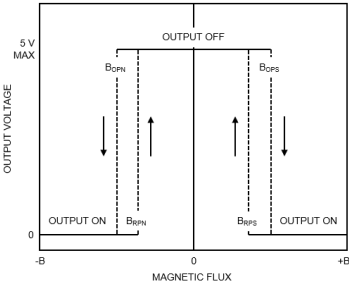
Magnetic Characteristics

Symbol	Parameter	Min.	Typ.	Max.	Unit
B_{OPS}	Operate Point		1.7		mT
B_{OPN}			-1.7		mT
B_{RPS}	Release Point		1.0		mT
B_{RPN}			-1.0		mT
B_H	Hysteresis		0.7		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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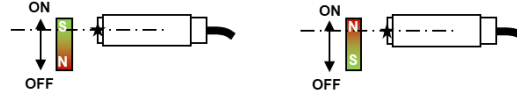
Magnetic Approach (for example) for Omnipolar Type

omnipolar

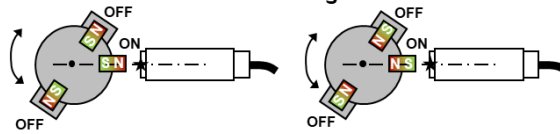
frontal



slide by



turning



★ Sensing point

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 .

