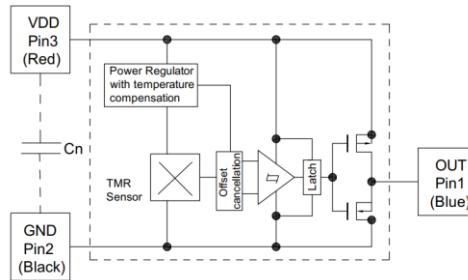


Values nom. in mm

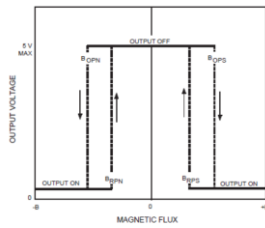
TMR Series (X)			1	2	3	4	5
Type	—		3 Wire Switch digital OMNIPOLAR CMOS	3 Wire Switch digital OMNIPOLAR CMOS	3 Wire Switch digital OMNIPOLAR CMOS	3 Wire Switch digital BIPOLAR CMOS	3 Wire Switch digital BIPOLAR CMOS
Absolute Maximum Ratings							
Supply Voltage	V _{CC}	V	7	7	7	7	7
Reverse Supply Voltage	V _{RCC}	V	0.3	0.3	0.3	0.3	0.3
Output Current	I _{OUTSINK}	mA	9	9	9	9	9
Electrical Characteristics (V_{CC}=3.0V, T_A=25°C)							
Supply Voltage (Operate)	V _{CC}	V	1.8 ... 5.5	1.8 ... 5.5	1.8 ... 5.5	1.8 ... 5.5	1.8 ... 5.5
Output High Voltage	V _{OH}	V	V _{CC} -0.3	V _{CC} -0.3	V _{CC} -0.3	V _{CC} -0.3	V _{CC} -0.3
Output Low Voltage	V _{OL}	V	0.0 ... 0.2	0.0 ... 0.2	0.0 ... 0.2	0.0 ... 0.2	0.0 ... 0.2
Supply Current (Output open) typ	I _{CC}	μA	1.5	1.5	1.5	1.5	1.5
Response Frequency	f	Hz	1000	1000	1000	1000	1000
Magnetical Characteristics							
TMR Series	—		1	2	3	4	5
Operate Point	B _{OP}	G	17 / -17	35 / -35	5/-5	17	5
Release Point	B _{RP}	G	10 / -10	22 / -22	4/-4	-17	-5
Hysteresis BH	B _H	G	7	13	1.0	34	10
Environmental Characteristics							
Operating temperature	°C		-40...+100	-40...+100	-40...+100	-40...+100	-40...+100
Material Information							
TMR Series	—		1	2	3	4	5
Housing material	—		PBT+20GF	PBT+20GF	PBT+20GF	PBT+20GF	PBT+20GF
Housing color	—		black	black	black	black	black
Cable type	—		UL1569	UL1569	UL1569	UL1569	UL1569
Cable AWG	—		24	24	24	24	24
Cable color	—		blue/black/red	blue/black/red	blue/black/red	blue/black/red	blue/black/red
Available Magnet	Customized version (available upon request)				Approvals		
Various	TMR Type / Cable type / Cable color / Cable length / Cable ends / Housing color / Connector assembly				RoHS		

Block Diagram

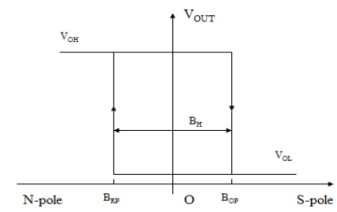


Magnetic Flux

OMNIPOLAR



BIPOLAR / LATCHING



Output Behaviour vs. Magnetic Pole

OMNIPOLAR

Magnetic Polarity	Test Conditions	Output
South	$B > B_{OPN}$	Low (On)
	$0 < B < B_{RPN}$	High (Off)
North	$B < B_{OPN}$	Low (On)
	$0 > B > B_{RPN}$	High (Off)

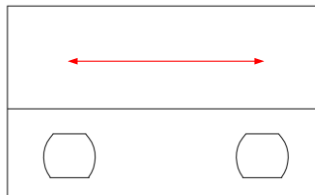
Note: when power is turned on under zero magnetic field, the output is "High".

BIPOLAR / LATCHING

Parameter	Test Conditions	Output
South Pole	$B > B_{OP}$	Low (On)
North Pole	$B < B_{RP}$	High (Off)

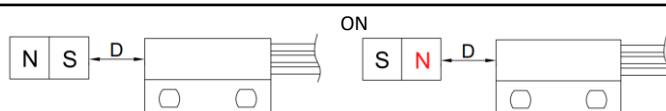
Note: when power is turned on under zero magnetic field, the output is "High".

Sensing Direction



Activation Distance

OMNIPOLAR

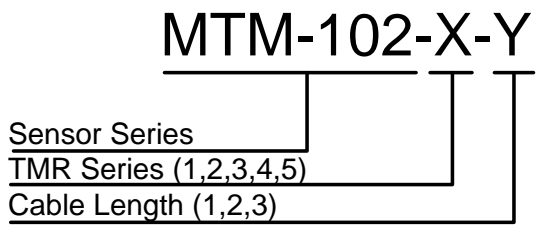


BIPOLAR / LATCHING



TMR Series		1	2	3	4	5
	G (typ.)	17	35	5	17	5
ON (S-Pole) (D)*1	mm ≥	24	15	41	20	43

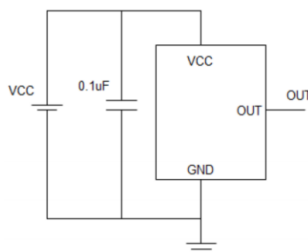
Cable Length Option (Y)	
1	150mm +/-5
2	300mm +/-10
3	500mm +/-10

Order information / Part Number System
<p>MTM-102-X-Y</p>  <p>Sensor Series TMR Series (1,2,3,4,5) Cable Length (1,2,3)</p>

*1 Using masetec reference magnet NdFeB 21x7x4.7mm

NOTES

It is recommended that an external bypass capacitor be connected in close proximity to the device between the supply and ground to reduce noise. The typical value of the external capacitor is 0.1µF



APPLICATIONS - OMNIPOLAR

- Utility Meters including Water, Gas, and Heat Meters
- Proximity Switches
- Position and Speed Sensing
- Motor and Fan Control

APPLICATIONS - BIPOLAR

- Utility Meters including Water, Gas, and Heat Meters
- Solid State Switches
- Speed Sensing
- Rotary and Linear Position Sensing