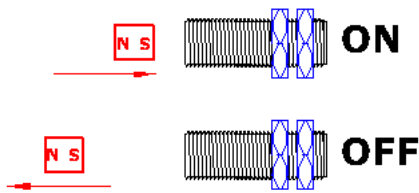


MFM7-MRS-L5T21 - Hall or Magneto Resistive Switch Sensor

www.sensorso.com

Magneto resistive switch, 15 Gauss, load dump & EMI protection w/ 5k pull up, Plastic .7" flange mount 1.5" long housing, free end Teflon 22AWG wires, 1 foot

Digital output switches on and off with a magnet.

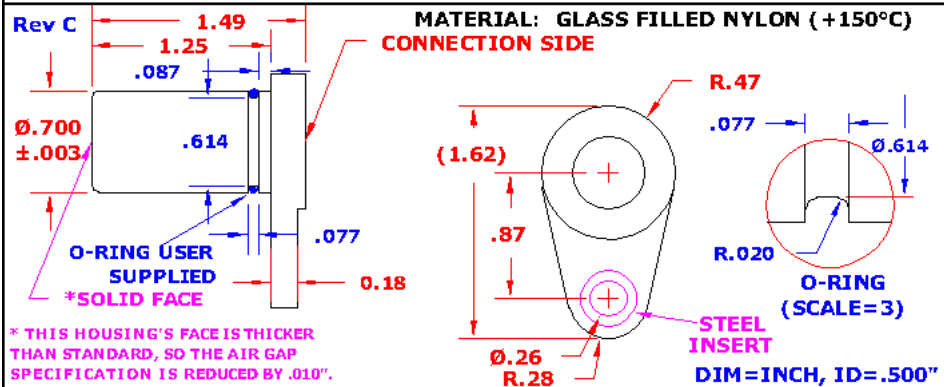


Type - HS

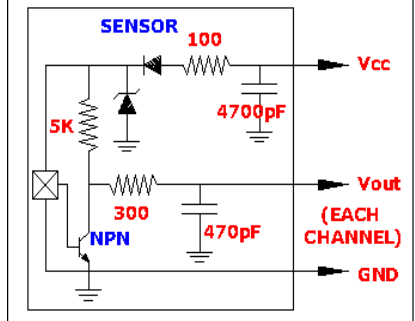
- o OMNIPOLAR OPERATION
- o LARGE DECTION GAP
- o TEMPERATURE STABLE

ENVIRONMENTAL SPECIFICATIONS - MFM7	
Corrosion Resistance	500 hours salt spray ASTM B-117
Installation Torque	15 Foot-Pounds Maximum
Enclosure	Nema 1,3,4,6,13 & IEC IP67
Vibration	10 G's 10 to 2000 Hz Sinusodal
Mechanical Shock	50 G's, 11 mS Half-Sine

MFM7, Glass Filled Nylon Flanged Housing



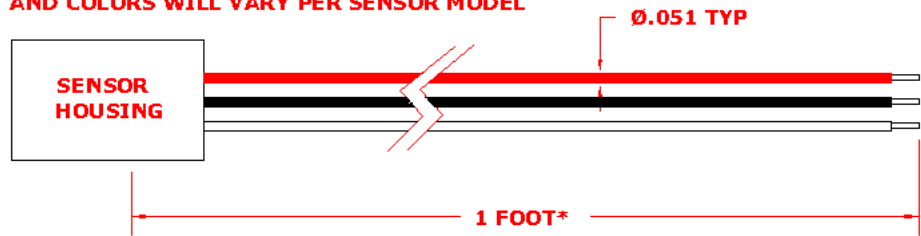
L5, NPN with 5k Pull Up, Protection & EMI Filter



T21, Free End Teflon 22AWG Wires

FREE END WIRE LEADS
 22 AWG, TEFLON 200°C, 19/34
 3 WIRES SHOWN. THE NUMBER OF WIRES AND COLORS WILL VARY PER SENSOR MODEL

*OTHER STANDARD LENGTHS:
 3", 6", 2', 5', 10', AND 20'



Connections Chart

Red	Vcc
Black	Ground
White	Vout
T21-MRS	

Date Code 'YYM'

YY = YEAR, M = MONTH

A JAN	D APR	H JUL	L OCT
B FEB	E MAY	J AUG	M NOV
C MAR	G JUN	K SEP	N DEC

The MRS sensor provides one digital output that is normally OFF and turns ON when a magnetic field is present. The magneto resistive switch triggers from either pole of a magnet. Note that OUTPUT ON means LOW for NPN sensors and HIGH for PNP sensors. The MRS is an extremely sensitive switch that triggers when exposed to a field of 15 Gauss from either magnetic pole.

The distance between the sensor face and either pole of a magnet that operates the switch (turns the output transistor on) is referred to as the 'Operate Air Gap'. This gap is determined by looking at the magnet's flux density vs. air gap curve. The distance that produces the magnetic field equal to or less than 'Release Point' specified on this sheet is the Release air gap. The must operate air gap is the distance at which the magnet produces a field equal to the MAX operate point of the Hall switch. The must release gap is the distance the at which the magnet produces a field equal to the MIN release point. Note that magnets produce weaker fields as the temperature increases.

In addition to the MRS, we offer a variety of South Pole and Either pole Hall Effect and Magneto resistive sensors including multiple programmable sensors, North and South Pole output sensors, latching sensors, and sensors with speed/count and direction outputs. Check our website or contact us to discuss all of our magnetic speed, count, and position detection sensors.

MRS-L5, Electrical & Functional Specifications

ABSOLUTE MAX LIMITS	MIN	MAX	UNITS
Supply Voltage, Vcc	-30	+30	Volts DC
Voltage applied to output, 1 minute max	-25	+25	Volts
Current into output	--	20	mA
Current out of output	--	Vcc/5k	mA
Load Dump, 100mS Rs = 5 per ISO 7637-2	--	200	Volts
Maximum Field Strength	No Maximum, Sensor will not be damaged		

ELECTRICAL SPECS	CONDITIONS	MIN	MAX	UNITS
Temperature Range *	Operating	-40	+110	Deg C
Supply Voltage, Vcc	Over temperature	+4.05	+30	Volts DC
Supply Current, Output Off	Into Vcc	3	11	mA
Frequency Range	True 0 Speed	0	100	kHz
Vol Output Low	Vcc = 24, Rload > 100k	0	0.7	Volts
Voh Output High	Vcc = 24, Rload > 100k	18	24	Volts
Internal Pull Up Resistor	Vcc to Vout	4.9	5.1	k Ohms
Output Rise Time 10-90%	Cload < 100pF	--	8.0	uS
Output Fall Time 90-10%	Cload < 100pF	--	2.0	uS
ESD **	Nondestructive	--	2000**	Volts
EMI **	20k to 1 G Hz	--	100	V/M

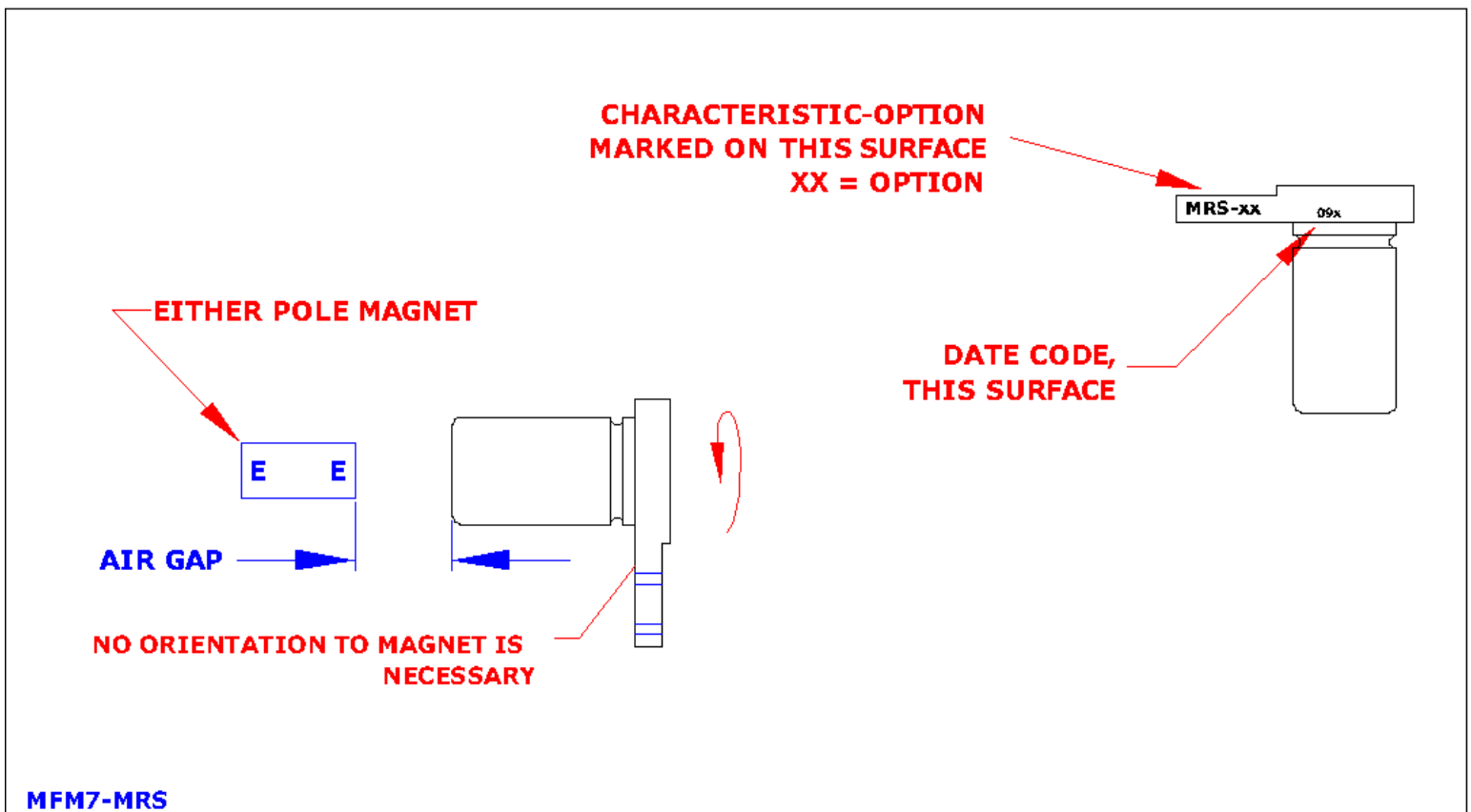
* T max = 150°C is available, contact factory

** Estimate based on similar product testing

MAGNETIC CHARACTERISTICS	MIN	TYP	MAX	UNITS
Operate Point over temp (tested at 20C)	10	15	25	Gauss Either Pole
Release Point over temp	4	10	--	Gauss Either Pole
Hysteresis	--	5	8	Gauss Either Pole

Rev A

Violet specs are 100 % tested at 25°C before shipping



MFM7-MRS