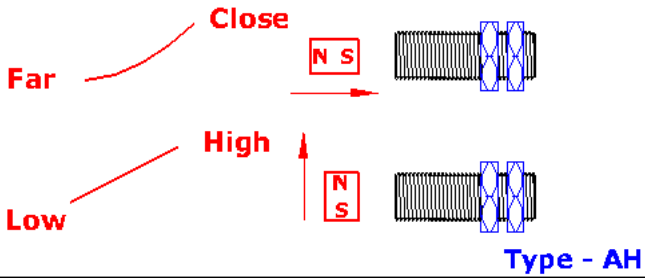


# A47-PAM-RGT21 - Analog Hall Sensor

2 Point Programmable Analog Hall, regulated input, 0-5V output, Aluminum 15/32-32 x 1" housing, free end Teflon 22AWG wires, 1 foot

## Analog Output Proportional to Field Strength, Gap or Height

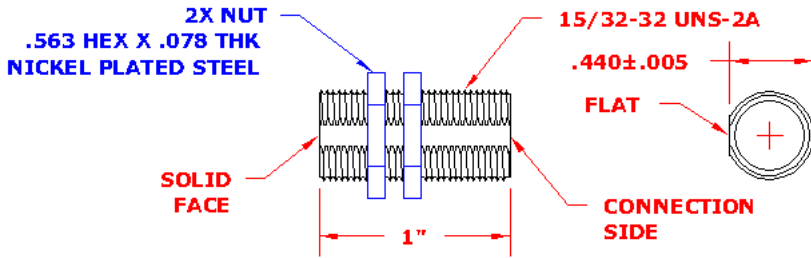


- o POTTED AND SEALED
- o RESISTANT TO SHOCK AND VIBRATION
- o LOW COST
- o RATIOMETRIC OR REGULATED
- o INFINITE RESOLUTION

ENVIRONMENTAL	Specifications	A47
Corrosion Resistance	500 hours salt spray	ASTM B-117
Installation Torque	13 Foot-Pounds	Maximum
Enclosure	Nema 1,3,4,6,13 & IEC	IP67
Vibration	10G	2 to 2000 Hz. Continuous
Mechanical Shock	100 G,	11 ms

## A47, Housing, Anodized Aluminum, 15/32 - 32, 1" Long

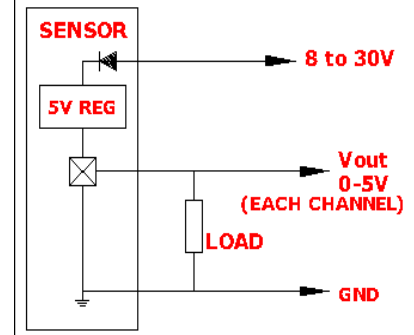
HOUSING MATERIAL: BLACK ANODIZED 6061-T6 AL



Rev A

DIM=INCH, ID=.335

## RG, Linear Regulator



## T21, Free End Teflon 22AWG Wires

### FREE END WIRE LEADS

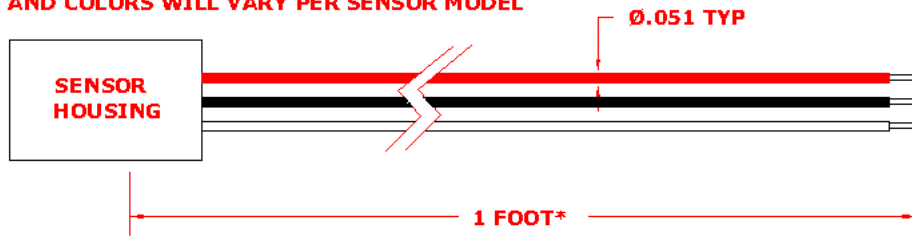
22 AWG, TEFLON 200°C, 19/34

3 WIRES SHOWN. THE NUMBER OF WIRES

AND COLORS WILL VARY PER SENSOR MODEL

\*OTHER STANDARD LENGTHS:

3", 6", 2', 5', 10', AND 20'



Rev A

DIM=INCH

## Connections Chart

Red	Vcc
Black	Ground
Green	Analog Vout
Slate*	Program
*Leave Open If Present	
<b>T21-PAM</b>	

## 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 PAM Analog Hall Sensor provides an analog output that changes in relation to the magnetic field strength perpendicular to the sensor's face. The Ratiometric version (-5V) means that the output voltage is proportional to the supply voltage. The regulated version (-RG) has an internal voltage regulator, and therefore the output does not change proportional to the supply voltage.

These Hall Effect sensors are useful for resolving the height, position, and movement of external magnets, the amplitude of current traveling down a conductor, the magnitude of field present in an electro-coil, etc. These sensors are polarity sensitive, and two field strengths are programmed into the chip. These points may be determined and programmed using different gaps to a specific magnet. The sensor then calculates a gain between these 2 points, which determines the output voltage between the program points.

Sensor Solutions offers several additional analog output Hall Effect sensors with 2V and 2.5V offset voltages, and gains between 1mV/G and 5mV/G. PAH sensors are also available with programmable offset voltage, gain, and temperature compensation. Contact us or check our website to see our other Analog Hall sensors.

These sensors may have an additional wire exiting the housing. This is a program wire that is to be left open. Connecting this wire to power or allowing it to ground will damage the sensor.

## PAM-RG, Electrical & Functional Specifications

ABSOLUTE MAX LIMITS	MIN	MAX	UNITS
Supply Voltage, Vcc	-30	30	Volts
Voltage at Output	-5	8.5	Volts
Continuous Output Current	-10	+10	mA
Vout Short Circuit Duration	--	3	Minutes
ESD	-7	+7	kVolts
Load Dump, 40mS	--	TBD	Volts

ELECTRICAL SPECS	CONDITIONS	MIN	MAX	UNITS
Temperature Range *	Operating	-40	+110*	Deg C
Supply Voltage, Vcc	Operating	+8.0	+30	Volts DC
Supply Current	Into Vcc	2.5	11	mA
Output Current	Recommended	-2	+2	mA
Load Capacitance	Cable and Load	n/a	+1.0	uF
Frequency Range **	Programmable	0	2000**	Hz
Saturation Voltage Low	I sink < 1.0 mA	0	.35	Volts
Saturation Voltage High	I source < 1.0 mA	4.65	5.25	Volts
Impulse Response Time ***	See note ***	2	10	mS
Gap 1&2 Voltage Accuracy	T=25°C	-130	+130	mV
Air Gap Setpoint Accuracy	At Programming	-.001	+.001	inches

\* T max = 125°C is available, contact factory

\*\* See Chart for programmable options

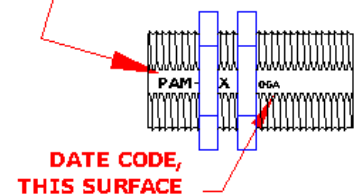
\*\*\* Depends on frequency range programming

PROGRAMMABLE CHARACTERISTICS	MIN	MAX	UNITS
Field Level at Setpoint 1 & 2	-1500	1500	Gauss
Voltage at Setpoint 1 & 2	.25	4.75	Volts
3dB Frequency Range	80	2000	Hz
Temperature Coefficient of Magnet	-3100	+400	ppm/°C
Clamp output low and high	0.00	5.00	Volts

Rev B

# Programmed to 900-06-\_\_\_\_\_

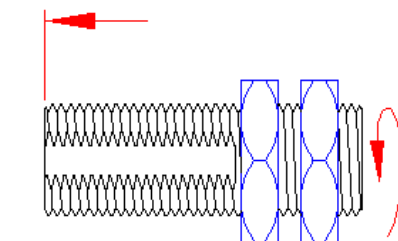
CHARACTERISTIC-OPTION  
MARKED ON THIS SURFACE  
(XX = ELECTRICAL OPTION)



AH, HS & HL  
Magnet Detection

AIR  
GAP

N S



NO ORIENTATION  
REQUIRED

MAGNET OR EXTERNAL FIELD,  
STRENGTH & POLE DEPEND  
ON PROGRAMMING.

A47-PAM