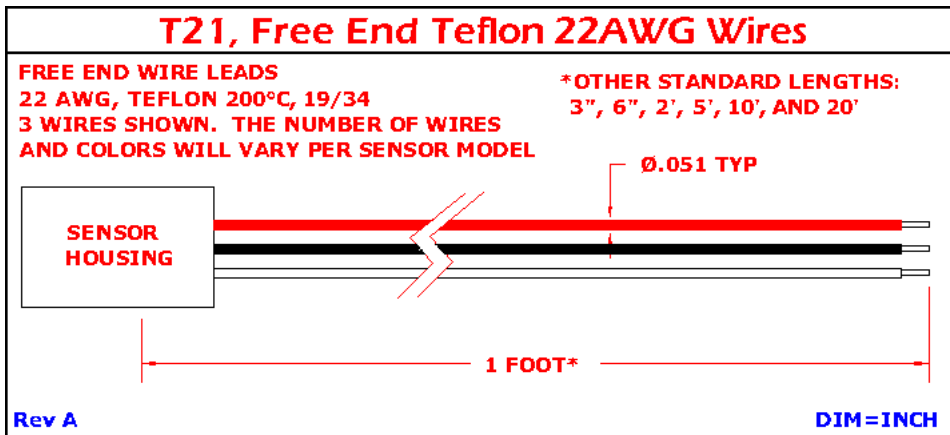
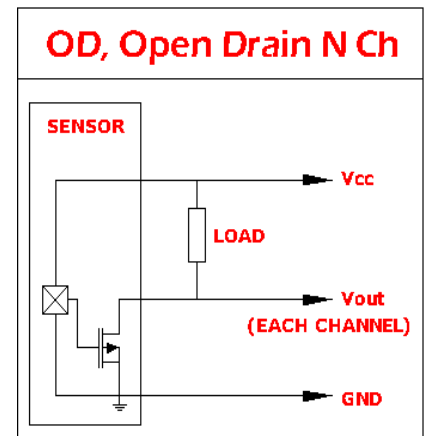
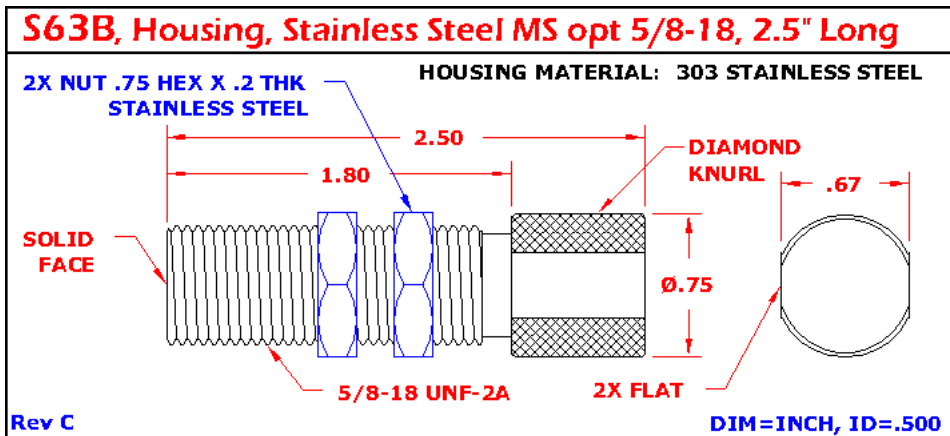


- o GREATER AIR GAP RANGE
- o SOLID STATE (Nothing to wear out!)
- o TEMPERATURE STABLE
- o NEAR 0 SPEED OPERATION
- o DYNAMIC, SELF ADJUSTING

ENVIRONMENTAL SPECIFICATIONS - S63B	
Corrosion Resistance	500 hours salt spray ASTM B-117
Installation Torque	80 Foot-Pounds Maximum
Enclosure	Nema 1,3,4,6,13 & IEC IP67
Vibration	10 G's 2 to 2000 Hz Sinusoidal
Mechanical Shock	100 G's, 11 ms Half-Sine



Connections Chart	
Red	Vcc
Black	Ground
White	Digital Vout
T21-37ADSO	

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 37ADSO 'Target Tracker' speed sensor provides a digital output that tracks ferrous metal targets. DSO type single channel sensors do not require specific orientation to the target and will detect standard ferrous gears from 0 - 32 pitch. These sensors are also ideal for the detection of gears with uneven tooth spacing, detecting holes in rotating discs, or the detection of other targets such as bolt heads, studs, or other ferrous features on rotating targets.

The sensor has an internal magnet, and a sensing element at the face of the sensor. When ferrous metal is present, the amount of magnetic flux increases. When the metal goes away, the amount of flux decreases. The on board logic inside the sensor triggers the output on when the flux increases, and off when the flux decreases. This acts to self-calibrate the output so that an accurate edge is present at both the leading and falling edge of any ferrous metal target.

Target Specifications on the next page are per detecting an end-sensed, 14.5 pressure angle, steel spur gear. The presence of ferrous metals or strong magnetic fields in close proximity to the sensor's internal magnet may invalidate the specifications. Engineers are available to assist in target design and applications with non-standard targets. Custom target specifications can only be guaranteed when the customer supplies a target along with any additional components that may affect sensor output, and the customer has validated function in the finished application.

These sensors power up with the output transistor OFF. This transistor turns ON for the first time on the approach of a 'tooth'. After the first tooth, they will not miss a target. Note: for NPN sensors, off is a high signal, while PNP sensors off is a low signal. Additional gear tooth sensors are available. Check our website or contact us to compare all of our gear tooth and single channel speed sensor options.

37ADSO-OD, Electrical & Functional Specifications

ABSOLUTE MAX LIMITS	MIN	MAX	UNITS
Supply Voltage, Vcc	-0.3	+30	Volts DC
Voltage applied to output	-0.3	+30	Volts
Current into output	--	30	mA
Load Capacitance	--	0.01	uF
Current out of output	--	n/a	mA
Load Dump, 40mS Rs = 20	--	60	Volts

ELECTRICAL SPECS	CONDITIONS	MIN	MAX	UNITS
Temperature Range *	Operating	-40	+110*	Deg C
Supply Voltage, Vcc	Over temperature	+3.5	+24	Volts DC
Supply Current	Into Vcc	+1.5	+5	mA
Frequency Range	Near zero speed	0.1	15K	Hz
Saturation Voltage Low	I sink = 20 mA	0	0.6	Volts
Output Leakage Current	Output high	0	10	uA
Output Rise Time 10-90%	R pu=1k, C < 100pF	--	2.0	uS
Output Fall Time 90-10%	R pu=1k, C < 100pF	--	1.0	uS
ESD **	Nondestructive	--	2000	Volts
EMI **	20k to 1 G Hz	--	20	V/M

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

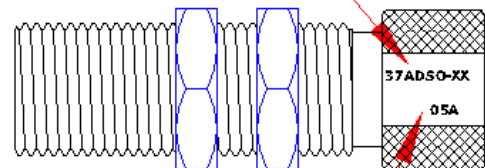
*** Non contacting

** CMOS IC is static sensitive.

TARGET PERFORMANCE GEAR PITCH ~(#Teeth/Diam. in inches)	AIR GAP RANGE***	TYPICAL MAX GAP	TYP. OUTPUT DUTY CYCLE	ALIGNMENT SKEW ANGLE
4 (.785" tooth to tooth)	.000 to .180"	.240"	40 to 60 %	360 DEG
8 (.393" tooth to tooth)	.000 to .125"	.160"	40 to 60 %	360 DEG
12 (.262" tooth to tooth)	.000 to .070"	.105"	40 to 60 %	360 DEG
16 (.196" tooth to tooth)	.000 to .050"	.070"	40 to 60 %	360 DEG
20 (.157" tooth to tooth)	.000 to .030"	.055"	40 to 60 %	360 DEG
24 (.131" tooth to tooth)	.000 to .020"	.040"	40 to 60 %	360 DEG
32 (.098" tooth to tooth)	.000 to .008"	.020"	40 to 60 %	360 DEG

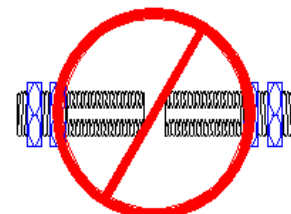
Rev C

**CHARACTERISTIC-OPTION
MARKED ON THIS SURFACE
, xx=OPTION**

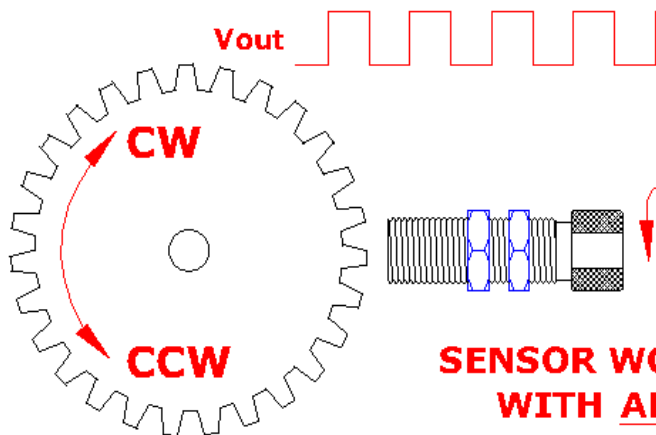


**DATE CODE,
THIS SURFACE**

**DO NOT CONTACT
FACE TO FACE**



**CONTACT WITH OTHER MAGNETS
MAY DECREASE THE SENSOR'S
MAXIMUM AIR GAP.**



**SENSOR WORKS
WITH ANY
ORIENTATION**