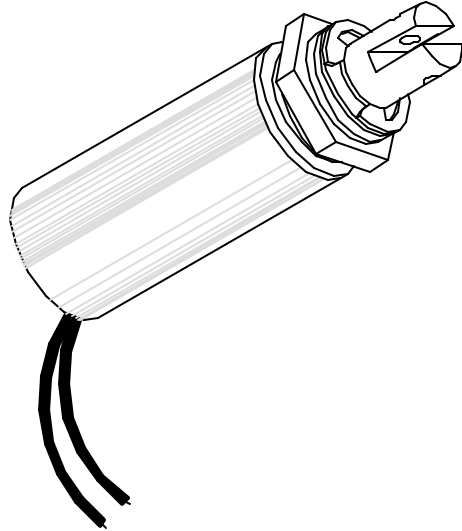


# MAGNETIC SENSOR SYSTEMS

## *Pull Type Tubular Solenoid*



**Series S-20-90**  
**0.9" DIA X 2"**  
**[23.0 mm X 50.8 mm]**

**TOTAL WEIGHT: 5.6 OUNCES [160 GR]**  
**PLUNGER WEIGHT: 1.6 OUNCES [45 GR]**

duty cycle	1 (100%)	1/2 (50%)	1/4 (25%)	1/10 (10%)
maximum "ON" time, (Sec.)	$\infty$	300	60	12
watts	9	18	36	90
approximate ampere turns	825	1165	1650	2610

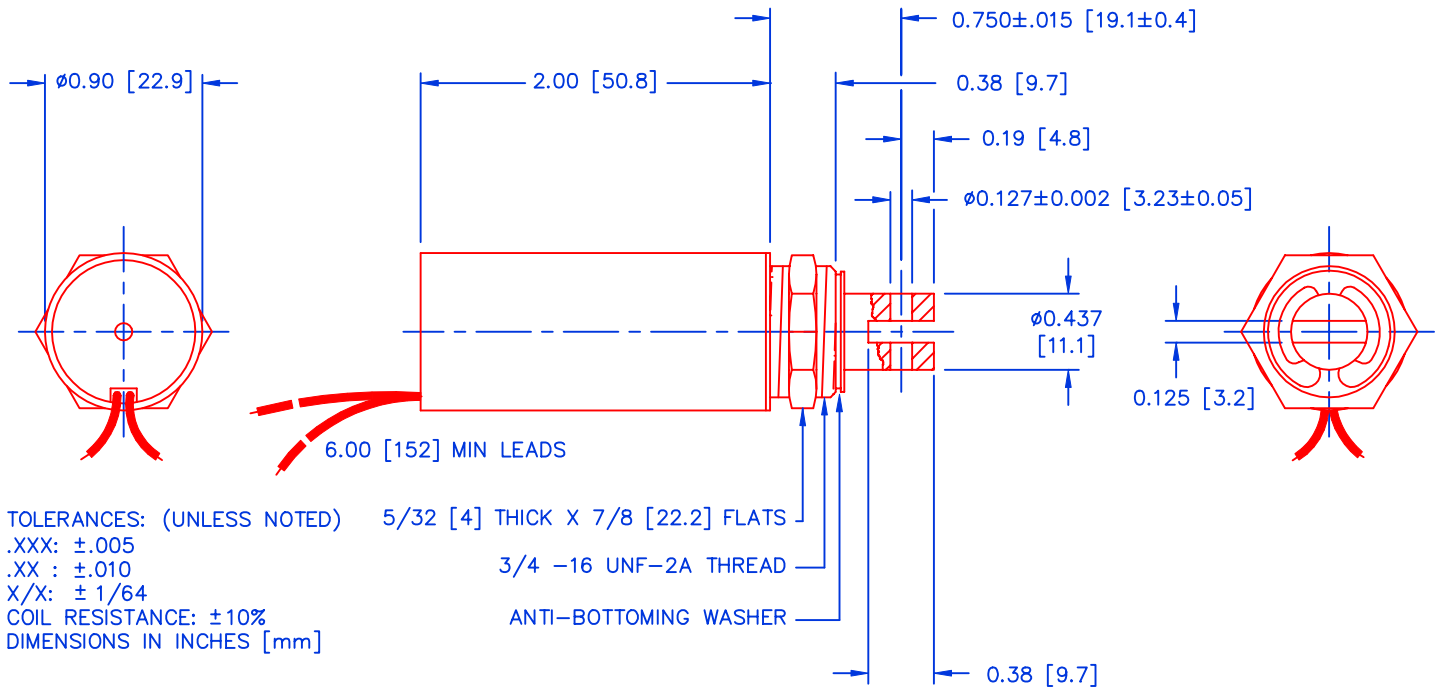
AWG number	resistance ( $\Omega$ )	volts DC	volts DC	volts DC	volts DC
22	0.6	2.3	3.2	4.5	7.1
23	0.8	2.7	3.8	5.3	8.5
24	1.5	3.7	5.2	7.4	12.0
25	2.5	4.8	6.7	9.5	15.0
26	4.5	6.4	9.0	12.7	20.1
27	7.0	7.9	11.2	15.9	25.1
28	11.0	9.9	14.1	19.9	31.4
29	16.3	12.1	17.1	24.2	38.3
30	26.6	15.5	21.9	31.0	49.0
31	40.0	19.0	26.8	37.9	60.0
32	66.5	24.5	34.6	48.9	77.4
33	114	32.0	45.2	63.9	101
34	171	39.2	55.4	78.3	124
35	240	46.5	65.8	93.0	147
36	404	60.3	85.2	121	191
37	620	74.7	106	149	236
38	938	91.9	130	184	291
39	1770	126	179	252	399

HEAT SINK: For proper heat dissipation, body of solenoid should be mounted on an equivalent of 4.0" x 4.0" x 1/8" aluminum plate in an unrestricted flow of air.

# MAGNETIC SENSOR SYSTEMS

S-20-90

## MECHANICAL DIMENSIONS



TOLERANCES: (UNLESS NOTED)  
 .XXX:  $\pm .005$   
 .XX :  $\pm .010$   
 X/X:  $\pm 1/64$   
 COIL RESISTANCE:  $\pm 10\%$   
 DIMENSIONS IN INCHES [mm]

SOLENOID SHOWN ENERGIZED

## TYPICAL PULL FORCE VERSUS STROKE

