

MAGNETIC SENSOR SYSTEMS

Tubular Electromagnet



Series E-66-38
0.38" DIA X 0.66"
[9.6 mm X 16.7 mm]

TOTAL WEIGHT: 0.20 OUNCES [5 GR]

duty cycle	1 (100%)	1/2 (50%)	1/4 (25%)	1/10 (10%)
maximum "ON" time, (Sec.)	∞	180	40	8
watts	0.6	1.2	2.4	6.0
approximate ampere turns	112	158	224	354

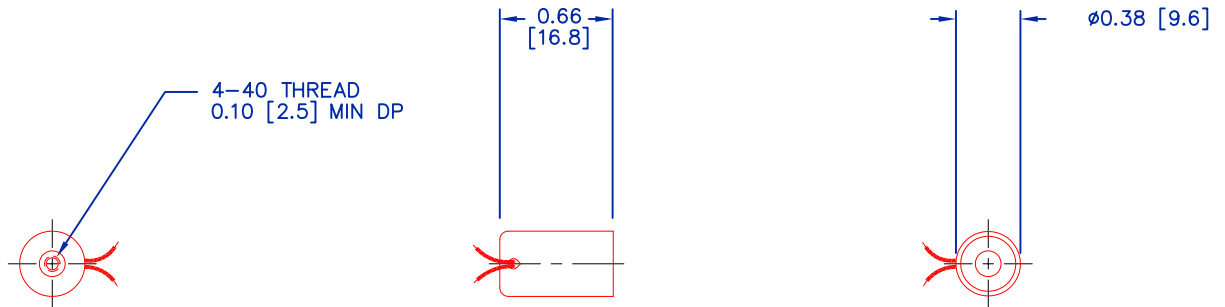
AWG number	resistance (Ω)	volts DC	volts DC	volts DC	volts DC
27	0.39	0.48	0.68	1.0	1.5
28	0.52	0.56	0.79	1.1	1.8
29	0.69	0.64	0.91	1.3	2.0
30	1.43	0.93	1.3	1.9	3.0
31	1.93	1.1	1.5	2.2	3.4
32	3.20	1.4	2.0	2.8	4.4
33	5.28	1.8	2.5	3.6	5.6
34	7.43	2.1	3.0	4.2	6.7
35	12.1	2.7	3.8	5.4	8.5
36	20.8	3.5	5.0	7.1	11.2
37	30.3	4.3	6.0	8.5	13.5
38	47.8	5.4	7.6	10.7	16.9
39	88.9	7.3	10.3	14.6	23.1
40	127	8.7	12.4	17.5	27.7
41	183	10.5	14.8	21.0	33.1
42	281	13.0	18.4	26.0	41.0

HEAT SINK: For proper heat dissipation, body of electromagnet should be mounted on an equivalent of 1.0" x1.0" x 1/16" metal plate in an unrestricted flow of air.

MAGNETIC SENSOR SYSTEMS

E-66-38

MECHANICAL DIMENSIONS



TOLERANCES: (UNLESS NOTED)

0.XXX: ±0.005

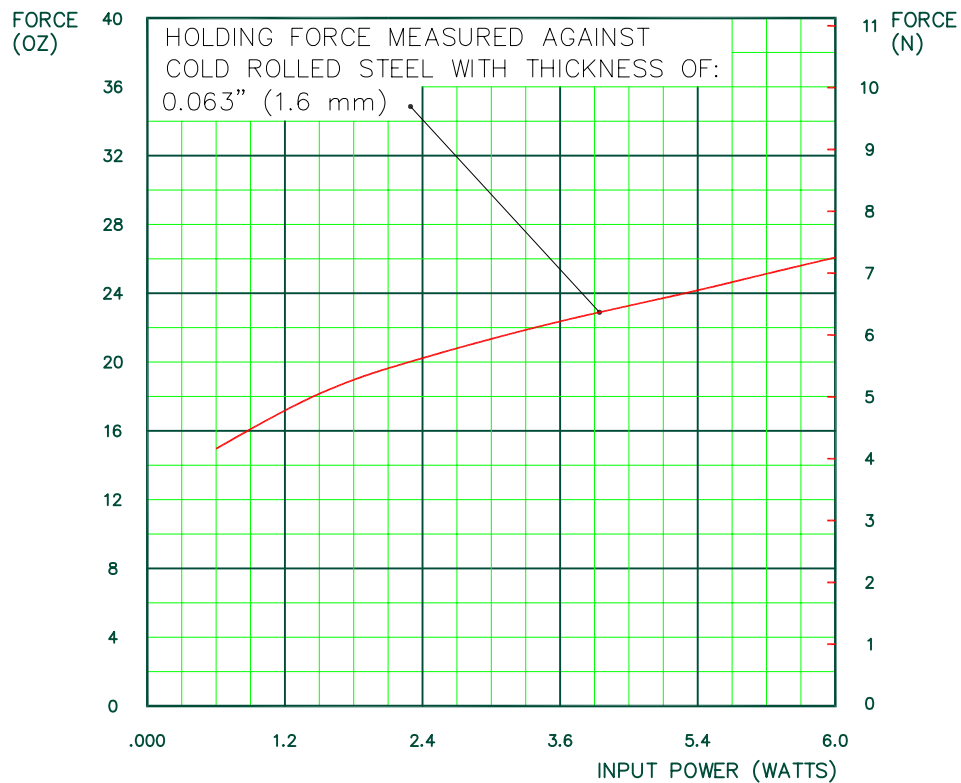
0.XX : ±0.010

X/X: ±1/64

COIL RESISTANCE: ±10%

DIMENSIONS IN INCHES [mm]

TYPICAL HOLD FORCE VERSUS INPUT POWER



MAGNETIC SENSOR SYSTEMS

Tubular Electromagnet



Series E-66-75
0.75" DIA X 0.66"
[19.1 mm X 16.8 mm]

TOTAL WEIGHT: 0.8 OUNCES [23 GR]

duty cycle	1 (100%)	1/2 (50%)	1/4 (25%)	1/10 (10%)
maximum "ON" time, (Sec.)	∞	300	120	30
watts	1	2	4	10
approximate ampere turns	210	300	420	660

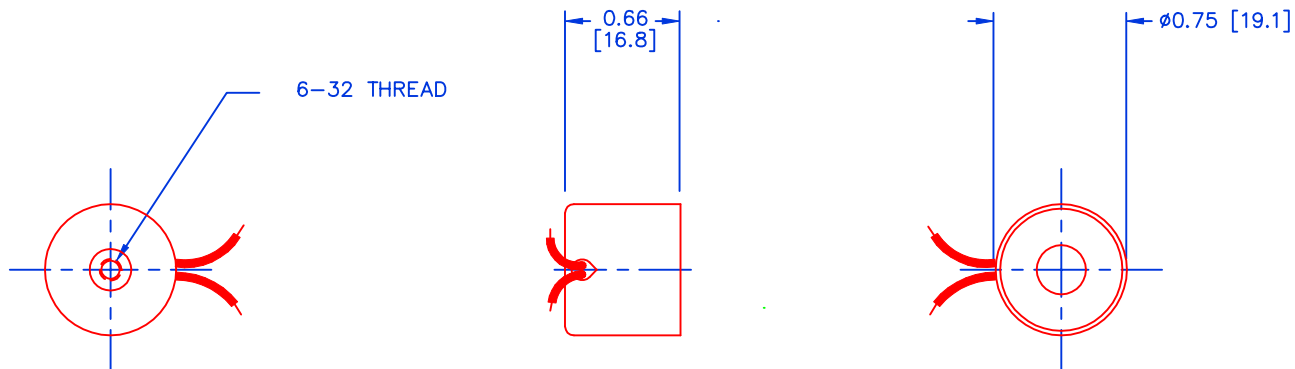
AWG number	resistance (Ω)	volts DC	volts DC	volts DC	volts DC
25	0.9	0.9	1.3	1.9	3.0
26	1.2	1.1	1.6	2.2	3.5
27	2.1	1.4	2.0	3.0	4.6
28	2.9	1.7	2.4	3.4	5.4
29	4.7	2.2	3.1	4.3	6.9
30	8.4	2.9	4.1	6.0	9.2
31	12.5	3.5	5.0	7.1	11.2
32	19.0	4.4	6.2	9.0	13.8
33	30.7	5.5	7.8	11.1	18.0
34	52.6	7.3	10.3	14.5	22.9
35	84.3	9.2	13.0	18.4	30.0
36	134	12.0	16.3	23.1	36.5
37	236	15.4	21.7	30.7	48.6
38	367	19.2	27.1	38.3	60.6
39	552	24.0	33.2	48.0	74.3
40	892	30.0	42.2	59.7	94.4
41	1268	36.0	50.4	72.0	113
42	1857	43.1	60.9	86.2	137

HEAT SINK: For proper heat dissipation, body of electromagnet should be mounted on an equivalent of 1.25" x 1.25" x 1/8" metal plate in an unrestricted flow of air.

MAGNETIC SENSOR SYSTEMS

E-66-75

MECHANICAL DIMENSIONS



TOLERANCES: (UNLESS NOTED)

0.XXX: ±0.005

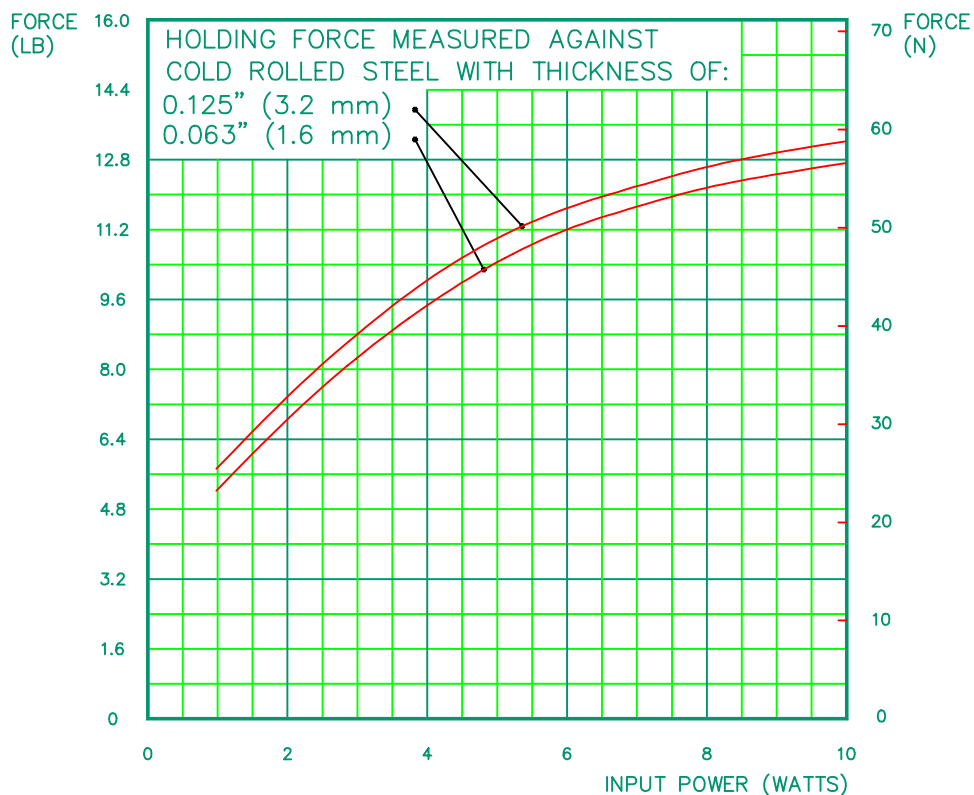
0.XX : ±0.010

X/X: ±1/64

COIL RESISTANCE: ±10%

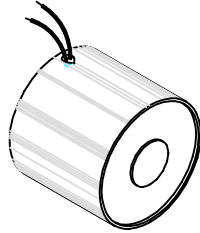
DIMENSIONS IN INCHES [mm]

TYPICAL HOLD FORCE VERSUS INPUT POWER



MAGNETIC SENSOR SYSTEMS

Tubular Electromagnet



Series E-77-82
0.82" DIA X 0.77"
[20.8 mm X 19.6 mm]

TOTAL WEIGHT: 1.1 OUNCES [31 GR]

duty cycle	1 (100%)	1/2 (50%)	1/4 (25%)	1/10 (10%)
maximum "ON" time, (Sec.)	∞	480	150	40
watts	1.25	2.50	5.00	12.50
approximate ampere turns	270	385	540	860

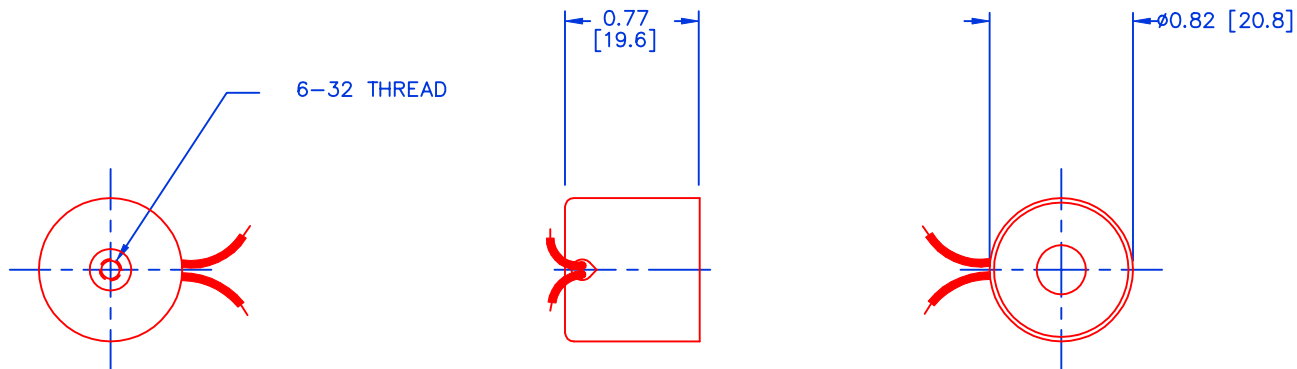
AWG number	resistance (Ω)	volts DC	volts DC	volts DC	volts DC
25	1.4	1.3	1.9	2.7	4.2
26	2.0	1.6	2.2	3.2	5.0
27	3.3	2.0	3.0	4.0	6.4
28	5.3	2.6	3.7	5.2	8.2
29	8.5	3.3	4.6	6.5	10.3
30	15.9	4.5	6.3	9.0	14.1
31	24.2	5.5	7.8	11.0	17.4
32	36.3	6.7	9.5	13.5	21.3
33	60.8	9.0	12.3	17.4	27.6
34	96.8	11.0	15.6	22.0	36.0
35	153	13.8	19.5	27.6	43.7
36	239	18.0	24.4	34.5	54.6
37	400	22.4	31.6	44.7	70.7
38	543	26.0	36.8	52.1	82.4
39	950	34.5	48.7	68.9	109
40	1525	43.7	61.8	87.3	138
41	2139	51.7	73.1	103	164
42	3620	67.3	95.1	135	213

HEAT SINK: For proper heat dissipation, body of electromagnet should be mounted on an equivalent of 1.25" x 1.25" x 1/8" metal plate in an unrestricted flow of air.

MAGNETIC SENSOR SYSTEMS

E-77-82

MECHANICAL DIMENSIONS



TOLERANCES: (UNLESS NOTED)

0.XXX: ±0.005

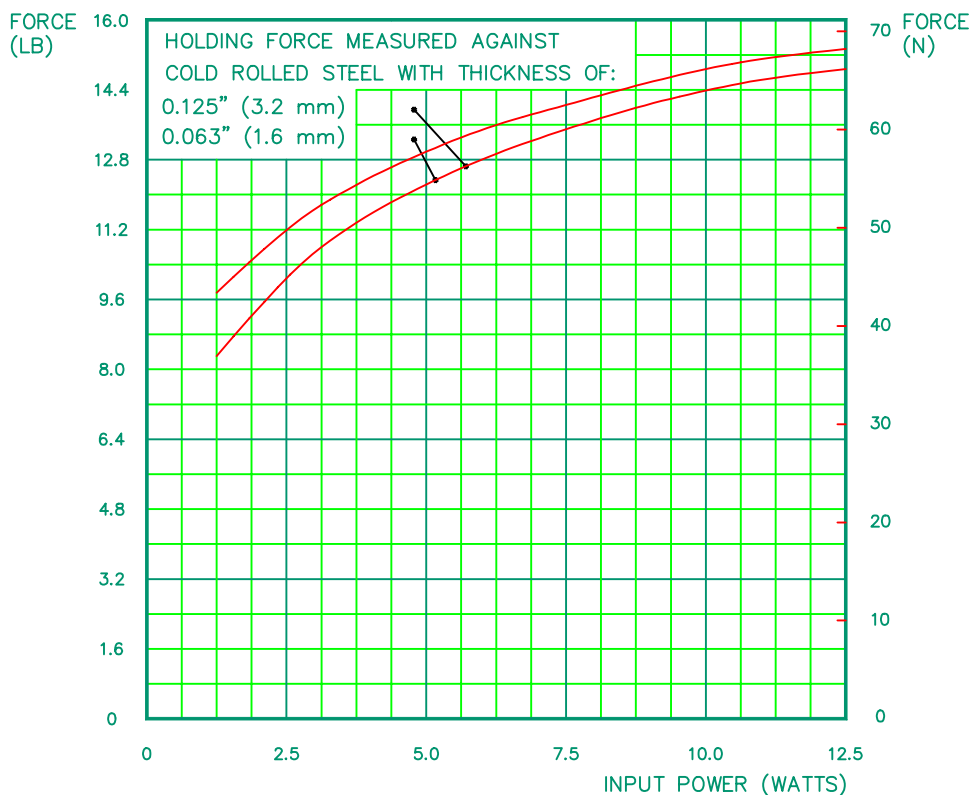
0.XX : ±0.010

X/X: ±1/64

COIL RESISTANCE: ±10%

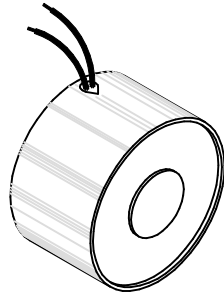
DIMENSIONS IN INCHES [mm]

TYPICAL HOLD FORCE VERSUS INPUT POWER



MAGNETIC SENSOR SYSTEMS

Tubular Electromagnet



Series E-66-100
1" DIA X 0.66"
[25.4 mm X 16.8 mm]

TOTAL WEIGHT: 1.6 OUNCES [45 GR]

duty cycle	1 (100%)	1/2 (50%)	1/4 (25%)	1/10 (10%)
maximum "ON" time, (Sec.)	∞	500	150	40
watts	1.25	2.5	5	12.5
approximate ampere turns	210	300	420	660

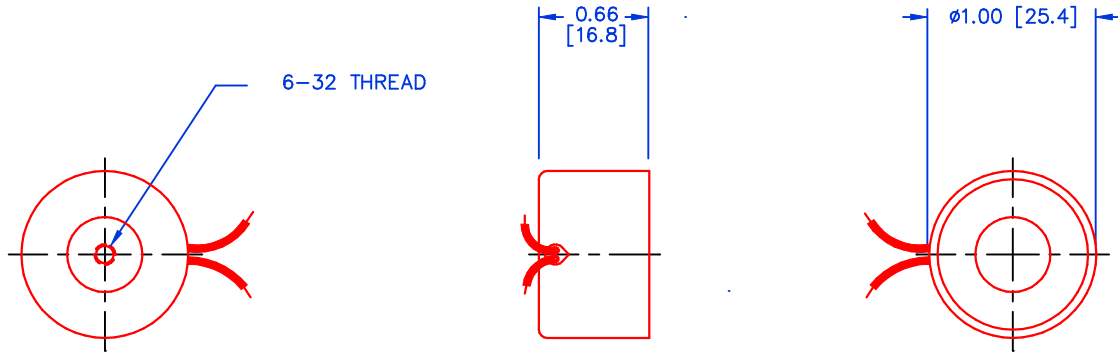
AWG number	resistance (Ω)	volts DC	volts DC	volts DC	volts DC
24	0.7	0.9	1.3	1.9	3.0
25	1.2	1.2	1.7	2.5	3.9
26	2.0	1.5	2.2	3.1	4.9
27	3.0	1.9	2.7	3.8	6.0
28	5.0	2.5	3.6	5.0	8.0
29	7.3	3.0	4.2	6.0	9.4
30	12.2	3.9	5.5	7.7	12.2
31	18.8	4.8	6.7	9.5	15.0
32	29.0	6.0	8.5	12.0	19.0
33	47.1	7.7	10.8	15.3	24.2
34	75.5	9.9	13.9	19.7	31.2
35	121	12.4	18.0	24.8	39.2
36	184	15.4	21.8	30.8	48.7
37	295	19.1	27.0	38.2	60.4
38	450	24.0	33.9	48.0	75.8
39	790	31.8	48.0	63.6	101
40	1240	39.7	56.2	79.4	126
41	1855	48.3	68.3	96.6	153

HEAT SINK: For proper heat dissipation, body of electromagnet should be mounted on an equivalent of 1.5" x1.5" x 1/8" metal plate in an unrestricted flow of air.

MAGNETIC SENSOR SYSTEMS

E-66-100

MECHANICAL DIMENSIONS



TOLERANCES: (UNLESS NOTED)

0.XXX: ± 0.005

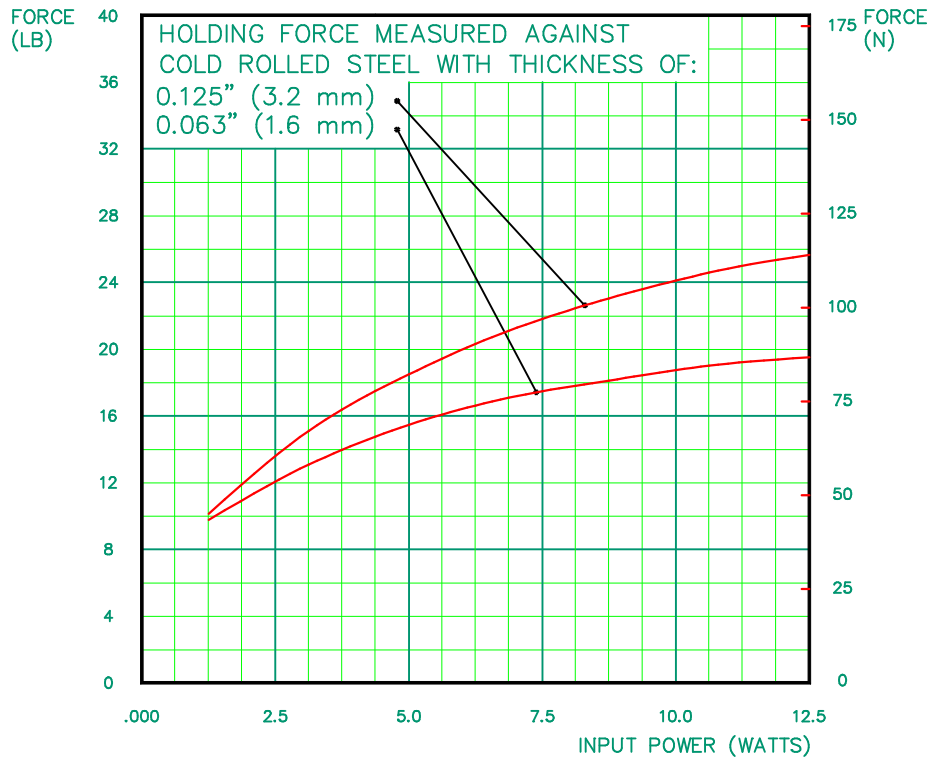
0.XX : ± 0.010

X/X: $\pm 1/64$

COIL RESISTANCE: $\pm 10\%$

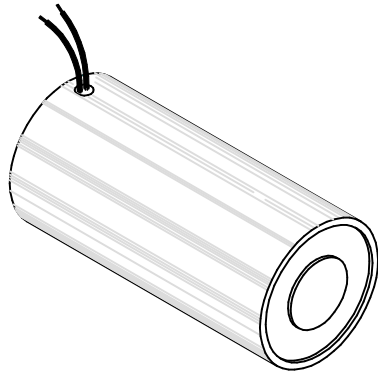
DIMENSIONS IN INCHES [mm]

TYPICAL HOLD FORCE VERSUS INPUT POWER



MAGNETIC SENSOR SYSTEMS

Tubular Electromagnet



Series E-20-100
1" DIA X 1.94"
[25.4 mm X 49.3 mm]

TOTAL WEIGHT: 5.3 OUNCES [150 GR]

duty cycle maximum "ON" time, (Sec.)	1 (100%) ∞	1/2 (50%) 600	1/4 (25%) 120	1/10 (10%) 30
watts approximate ampere turns	4 640	8 905	16 1280	40 2025

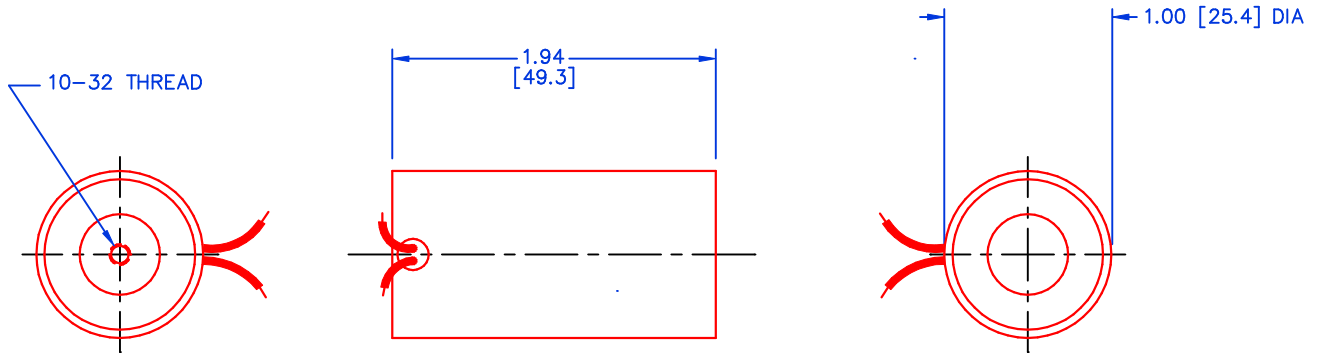
AWG number	resistance (Ω)	volts DC	volts DC	volts DC	volts DC
22	1.1	2.2	3.2	4.5	7.1
23	1.5	2.3	3.3	4.6	7.3
24	2.9	3.4	4.9	6.9	10.9
25	4.0	3.8	5.4	7.6	12.1
26	7.1	5.5	7.8	11.0	18.0
27	9.9	6.1	9.0	12.2	19.4
28	17.1	9.0	12.4	18.0	27.7
29	27.5	10.5	14.9	21.1	33.3
30	46.2	13.3	18.8	26.6	42.0
31	72.0	16.2	24.0	32.3	51.1
32	110	20.7	30.0	41.4	65.5
33	175	27.7	39.1	55.3	87.5
34	270	33.4	48.0	66.7	106
35	450	42.5	60.1	85.0	134
36	665	52.5	74.3	105	166
37	1040	64.9	91.8	130	205
38	1550	81.5	120	163	258
39	2750	120	166	235	371

HEAT SINK: For proper heat dissipation, body of electromagnet should be mounted on an equivalent of 4.0" x4.0" x 1/8" metal plate in an unrestricted flow of air.

MAGNETIC SENSOR SYSTEMS

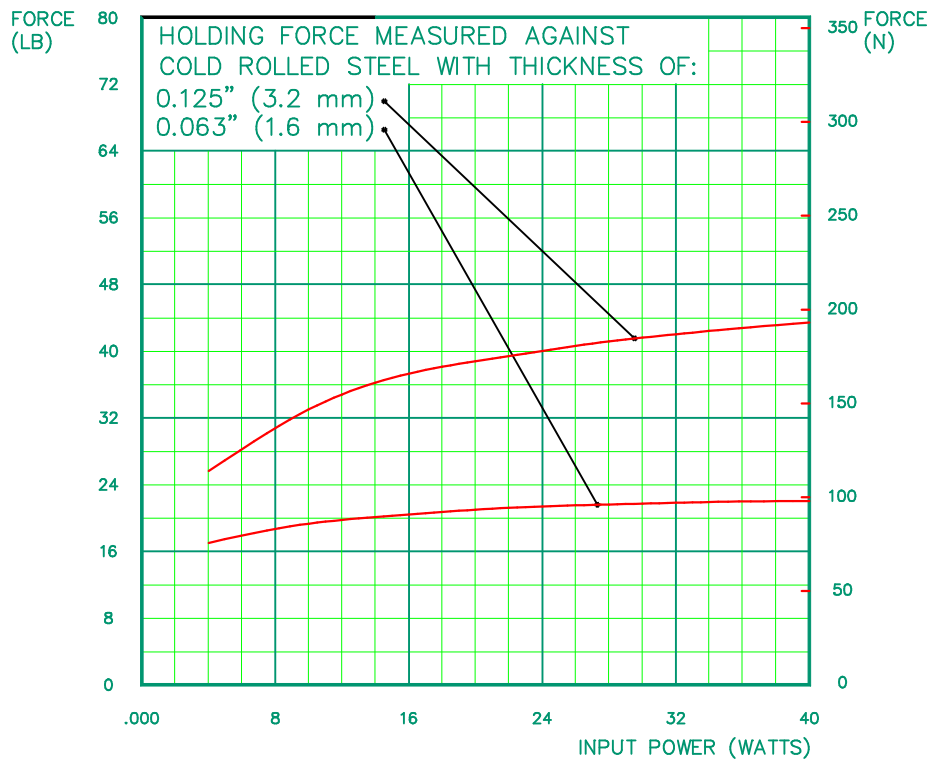
E-20-100

MECHANICAL DIMENSIONS



TOLERANCES: (UNLESS NOTED)
 0.XXX: ± 0.005
 0.XX : ± 0.010
 X/X: $\pm 1/64$
 COIL RESISTANCE: $\pm 10\%$
 DIMENSIONS IN INCHES [mm]

TYPICAL HOLD FORCE VERSUS INPUT POWER



MAGNETIC SENSOR SYSTEMS

Tubular Low Profile Electromagnet



Series E-05-125
1 1/4" DIA X 0.50"
[31.8 mm X 12.7 mm]

TOTAL WEIGHT: 1.8 OUNCES [51 GR]

duty cycle	1 (100%)	1/2 (50%)	1/4 (25%)	1/10 (10%)
maximum "ON" time, (Sec.)	∞	420	120	30
watts	1.25	2.5	5	12.5
approximate ampere turns	840	1180	1670	2650

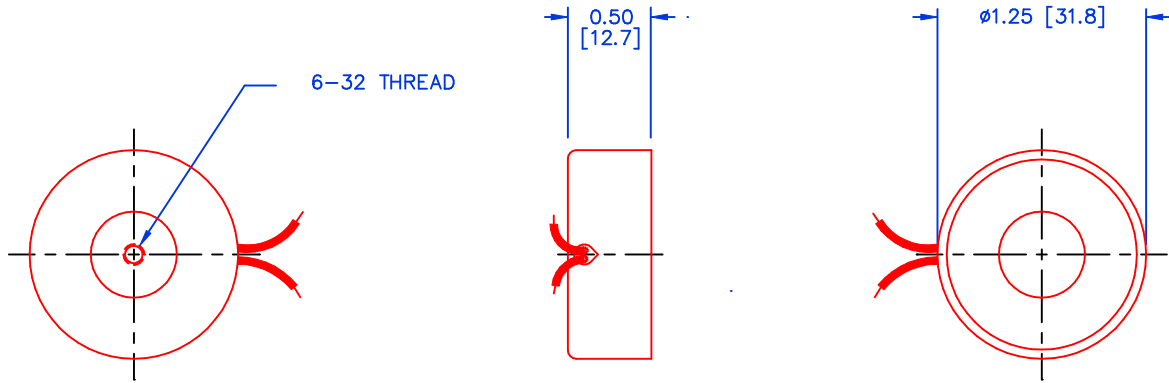
AWG number	resistance (Ω)	volts DC	volts DC	volts DC	volts DC
24	0.8	1.0	1.4	2.0	3.1
25	1.3	1.3	1.8	2.5	4.0
26	1.9	1.6	2.2	3.1	4.9
27	3.0	1.9	2.7	3.9	6.1
28	4.7	2.4	3.4	4.9	7.7
29	7.3	3.0	4.3	6.0	9.5
30	11.9	3.9	5.4	7.7	12.2
31	18.9	4.9	6.9	9.7	15.4
32	28.4	6.0	8.4	12.0	18.8
33	46.0	7.6	10.7	15.2	24.0
34	72.3	9.5	13.4	19.0	30.1
35	117	12.1	17.1	24.2	38.2
36	193	15.5	22.0	31.1	49.1
37	337	20.5	29.0	41.1	64.9
38	434	24.0	33.0	46.6	73.7
39	756	30.7	43.5	61.5	97.2
40	1197	38.7	54.7	77.4	122
41	1912	48.9	69.1	97.8	155

HEAT SINK: For proper heat dissipation, body of electromagnet should be mounted on an equivalent of 2.0" x 2.0" x 1/8" metal plate in an unrestricted flow of air.

MAGNETIC SENSOR SYSTEMS

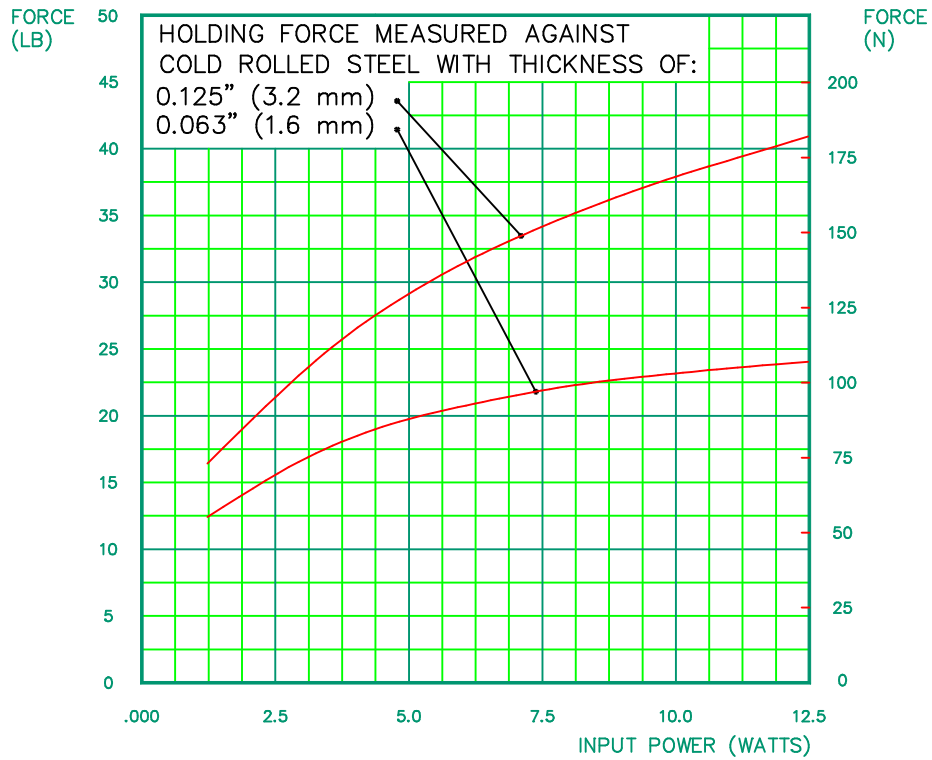
E-05-125

MECHANICAL DIMENSIONS



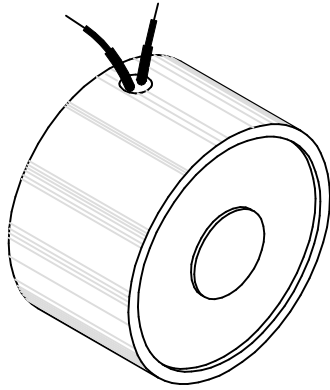
TOLERANCES: (UNLESS NOTED)
 0.XXX: ± 0.005
 0.XX : ± 0.010
 X/X: $\pm 1/64$
 COIL RESISTANCE: $\pm 10\%$
 DIMENSIONS IN INCHES [mm]

TYPICAL HOLD FORCE VERSUS INPUT POWER



MAGNETIC SENSOR SYSTEMS

Tubular Electromagnet



Series E-09-150
 1 1/2" DIA X 0.87"
 [38.1 mm X 22.1 mm]

TOTAL WEIGHT: 4.8 OUNCES [136 GR]

duty cycle	1 (100%)	1/2 (50%)	1/4 (25%)	1/10 (10%)
maximum "ON" time, (Sec.)	∞	600	180	45
watts	3	6	12	30
approximate ampere turns	840	1180	1670	2650

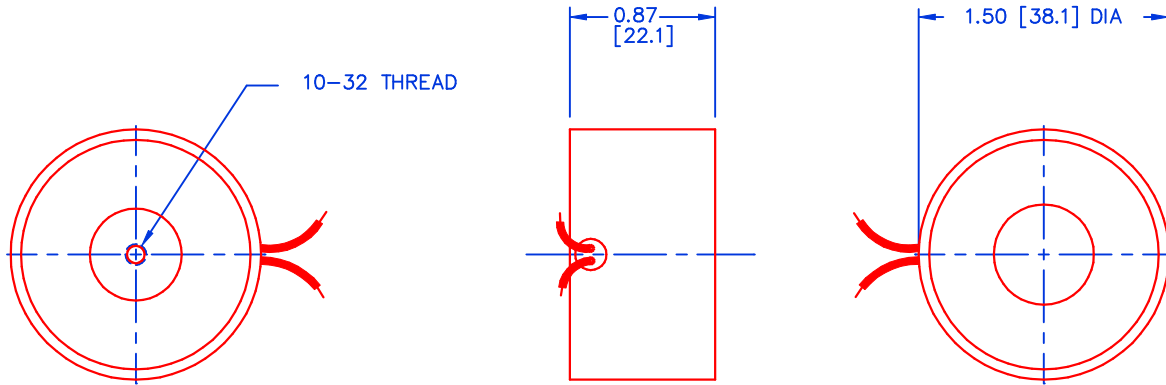
AWG number	resistance (Ω)	volts DC	volts DC	volts DC	volts DC
24	2.6	2.7	3.9	5.4	8.6
25	4.1	3.4	4.8	6.8	10.8
26	6.5	4.3	6.1	8.7	13.7
27	10.0	5.4	7.6	10.8	17.1
28	15.9	6.9	9.7	13.8	21.8
29	25.3	8.6	12.2	17.2	27.2
30	48.1	12.5	17.6	24.9	39.4
31	63.7	13.8	19.6	27.7	43.8
32	95.7	17.1	24.2	34.3	54.2
33	155	21.8	30.8	43.5	68.9
34	244	27.6	39.1	55.2	87.4
35	394	35.0	49.5	70.0	110.7
36	606	43.9	62.1	87.8	138.8
37	1017	54.1	76.6	108.3	171.2
38	1464	68.5	96.9	137.0	216.6
39	2548	89.5	126.6	179.1	283.2
40	4034	114.2	161.5	228.4	361.1
41	5845	139.5	197.3	279.1	441.3

HEAT SINK: For proper heat dissipation, body of electromagnet should be mounted on an equivalent of 3.0" x3.0" x 1/8" metal plate in an unrestricted flow of air.

MAGNETIC SENSOR SYSTEMS

E-09-150

MECHANICAL DIMENSIONS



TOLERANCES: (UNLESS NOTED)

0.XXX: ± 0.005

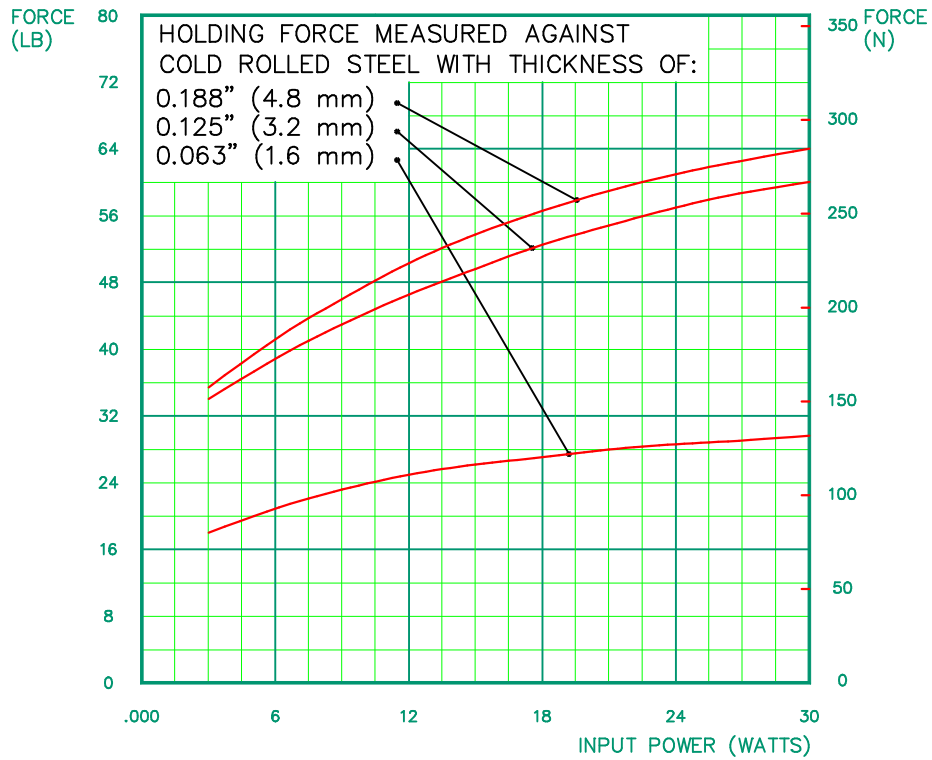
0.XX : ± 0.010

X/X: $\pm 1/64$

COIL RESISTANCE: $\pm 10\%$

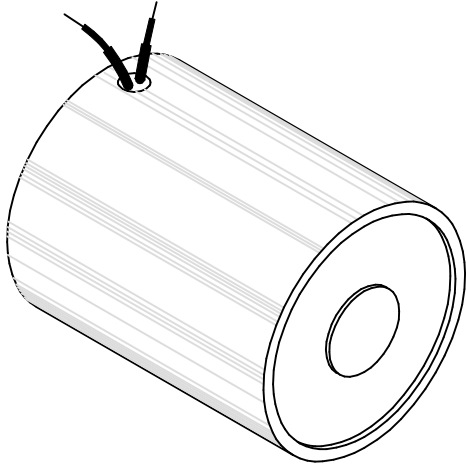
DIMENSIONS IN INCHES [mm]

TYPICAL HOLD FORCE VERSUS INPUT POWER



MAGNETIC SENSOR SYSTEMS

Tubular Electromagnet



Series E-22-150
1 1/2" DIA X 2.15"
[38.1 mm X 54.6 mm]

TOTAL WEIGHT: 11.9 OUNCES [340 GR]

duty cycle	1 (100%)	1/2 (50%)	1/4 (25%)	1/10 (10%)
maximum "ON" time, (Sec.)	∞	600	180	60
watts	5	10	20	50
approximate ampere turns	860	1220	1720	2720

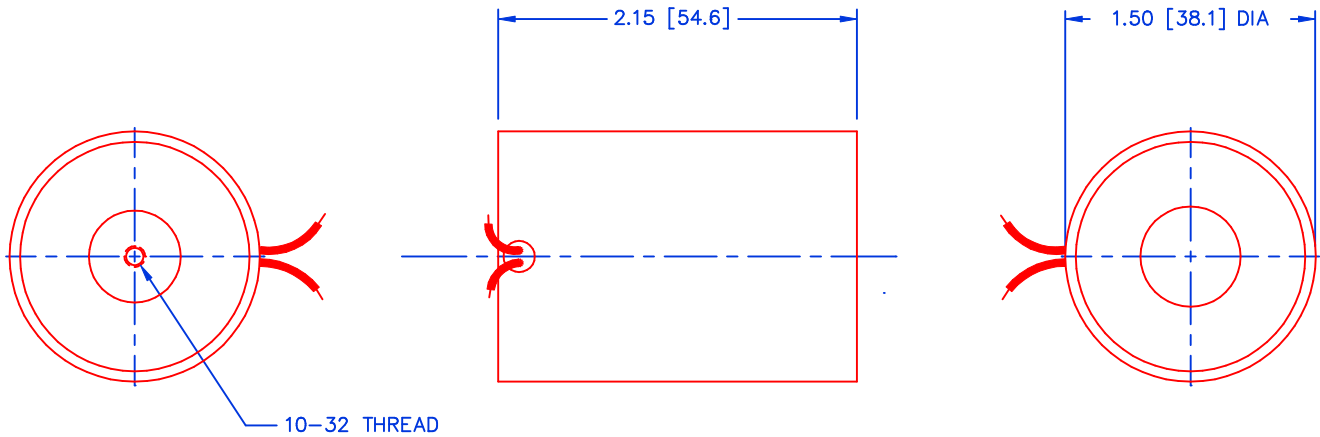
AWG number	resistance (Ω)	volts DC	volts DC	volts DC	volts DC
19	0.7	1.9	2.7	3.8	6.0
20	1.0	2.2	3.1	4.4	6.9
21	1.9	3.1	4.4	6.2	9.7
22	3.0	3.9	5.5	7.7	12.2
23	4.6	4.8	6.8	9.6	15.2
24	7.4	6.1	8.6	12.2	19.2
25	12.1	7.8	11.0	15.6	24.6
26	20.2	10.0	14.2	20.1	31.8
27	30.5	12.3	17.5	24.7	39.1
28	46.6	15.3	21.6	30.5	48.3
29	76.4	19.5	27.6	39.1	61.8
30	126	25.1	35.5	50.2	79.4
31	192	31.0	43.8	62.0	98
32	305	39.1	55.2	78.1	124
33	483	49.1	69.5	98.3	155
34	787	62.7	88.7	126	198
35	1260	79.4	112	159	251
36	1976	99.4	141	199	314
37	2930	121	171	242	383

HEAT SINK: For proper heat dissipation, body of electromagnet should be mounted on an equivalent of 6.0" x 6.0" x 1/8" metal plate in an unrestricted flow of air.

MAGNETIC SENSOR SYSTEMS

E-22-150

MECHANICAL DIMENSIONS



TOLERANCES: (UNLESS NOTED)

0.XXX: ± 0.005

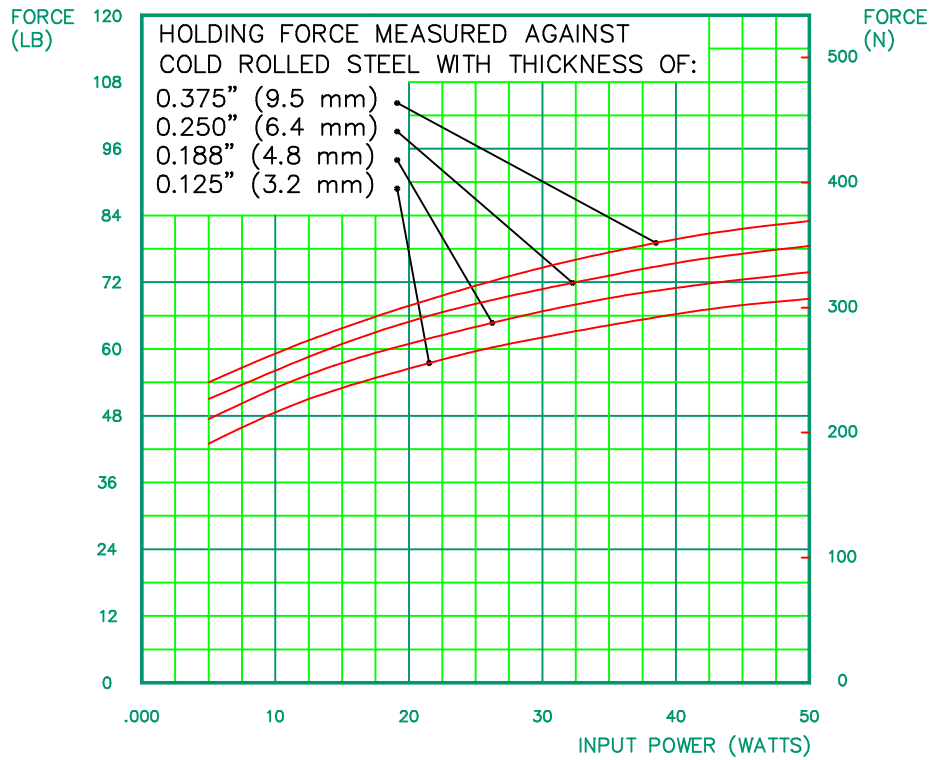
0.XX : ± 0.010

X/X: $\pm 1/64$

COIL RESISTANCE: $\pm 10\%$

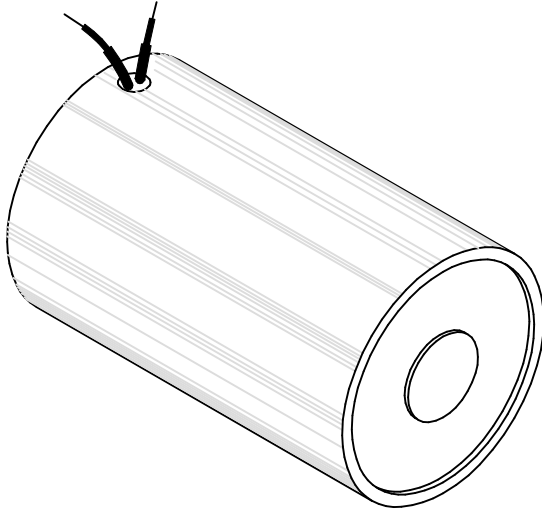
DIMENSIONS IN INCHES [mm]

TYPICAL HOLD FORCE VERSUS INPUT POWER



MAGNETIC SENSOR SYSTEMS

Tubular Electromagnet



Series E-28-150
1 1/2" DIA X 2.81"
[38.1 mm X 71.4 mm]

TOTAL WEIGHT: 16.4 OUNCES [465 GR]

duty cycle	1 (100%)	1/2 (50%)	1/4 (25%)	1/10 (10%)
maximum "ON" time, (Sec.)	∞	600	180	60
watts	6	12	24	60
approximate ampere turns	1110	1570	2220	3510

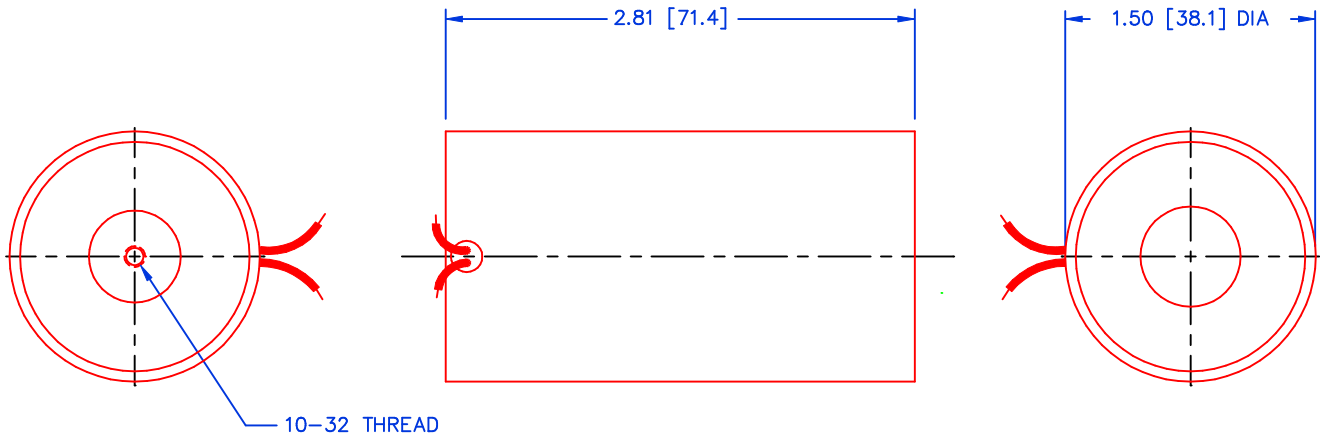
AWG number	resistance (Ω)	volts DC	volts DC	volts DC	volts DC
18	0.6	1.9	2.7	3.8	6.0
19	1.0	2.4	3.5	4.9	7.7
20	1.3	2.8	3.9	5.6	8.8
21	2.6	3.9	5.6	7.9	12.5
22	4.1	5.0	7.0	9.9	15.7
23	6.3	6.1	8.7	12.3	19.4
24	10.1	7.8	11.0	15.6	24.6
25	16.5	9.9	14.1	19.9	31.4
26	27.5	12.8	18.2	25.7	40.6
27	41.5	15.8	22.3	31.6	49.9
28	63.4	19.5	27.6	39.0	61.7
29	104	25.0	35.3	50.0	79.0
30	171	32.0	45.3	64.1	101
31	261	39.6	56.0	79.1	125
32	412	49.7	70.3	99.4	157
33	652	62.5	88.5	125	198
34	1062	79.8	113	160	252
35	1701	101	143	202	320
36	2668	127	179	253	400

HEAT SINK: For proper heat dissipation, body of electromagnet should be mounted on an equivalent of 6.0" x 6.0" x 1/8" metal plate in an unrestricted flow of air.

MAGNETIC SENSOR SYSTEMS

E-28-150

MECHANICAL DIMENSIONS



TOLERANCES: (UNLESS NOTED)

0.XXX: ± 0.005

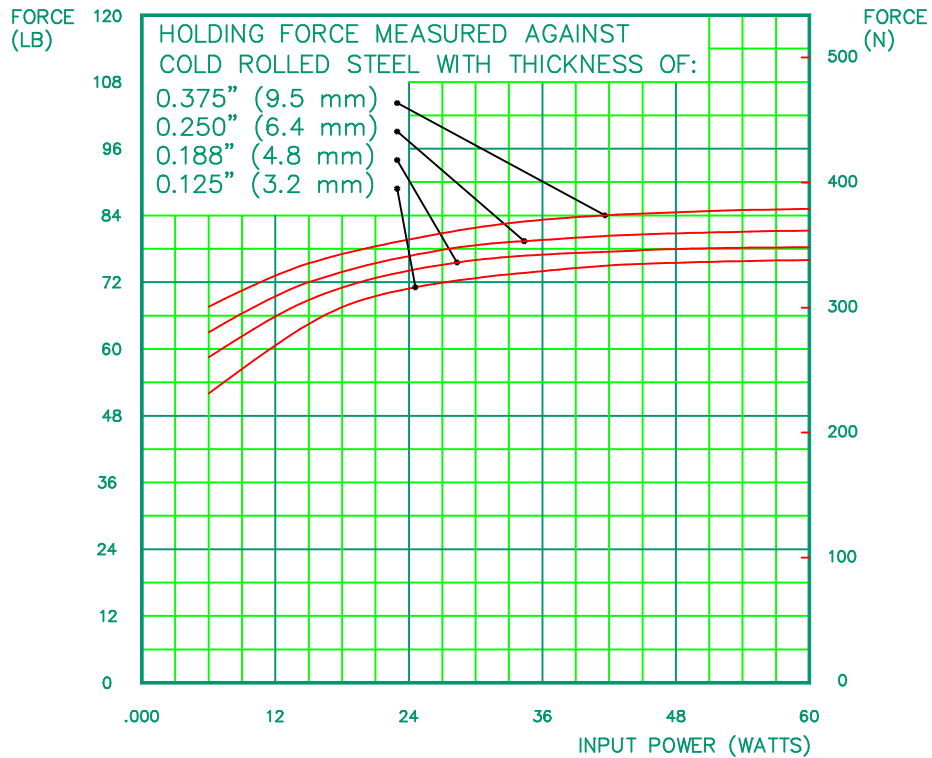
0.XX : ± 0.010

X/X: $\pm 1/64$

COIL RESISTANCE: $\pm 10\%$

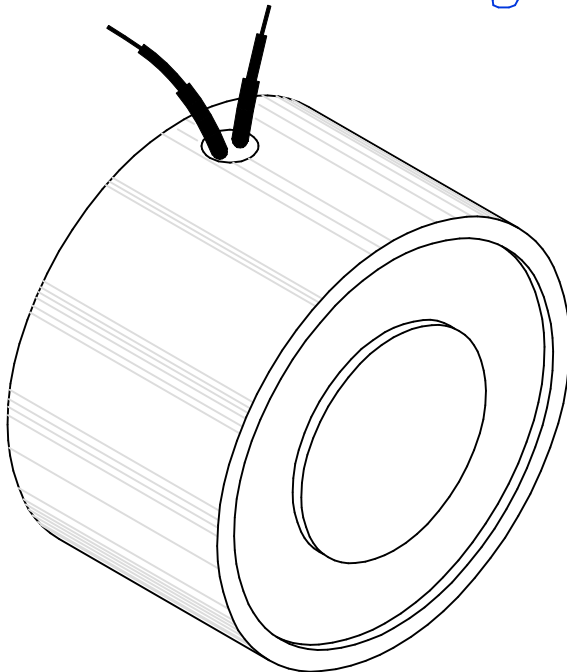
DIMENSIONS IN INCHES [mm]

TYPICAL HOLD FORCE VERSUS INPUT POWER



MAGNETIC SENSOR SYSTEMS

Tubular Electromagnet



Series E-16-260
2 5/8" DIA X 1.56"
[66.8 mm X 39.6 mm]

TOTAL WEIGHT: 29.5 OUNCES [836 GR]

duty cycle	1 (100%)	1/2 (50%)	1/4 (25%)	1/10 (10%)
maximum "ON" time, (Sec.)	∞	2000	600	120
watts	5	10	20	50
approximate ampere turns	600	850	1200	1900

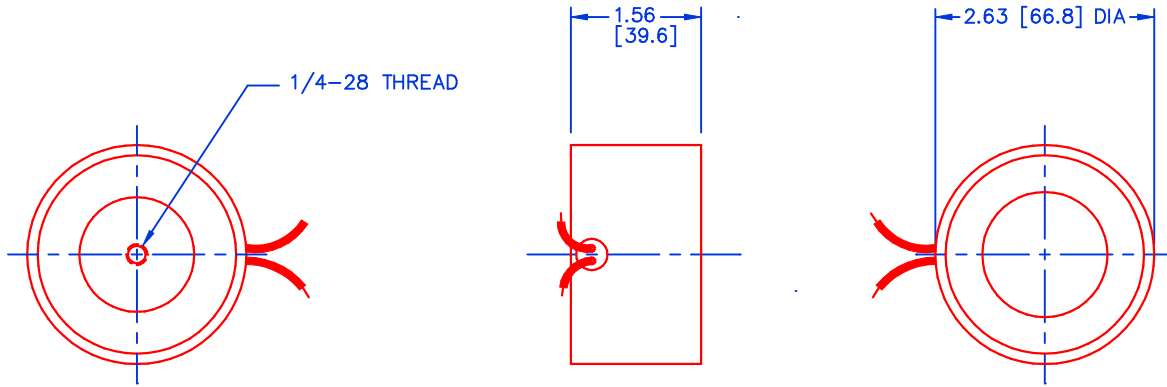
AWG number	resistance (Ω)	volts DC	volts DC	volts DC	volts DC
19	1.4	2.6	3.6	5.2	8.1
20	1.8	2.9	4.1	5.8	9.1
21	3.0	3.8	5.4	7.7	12.1
22	4.5	4.8	6.8	9.6	15.2
23	7.8	6.1	8.6	12.1	19.1
24	12.0	7.7	10.9	15.5	24.5
25	18.5	9.6	13.5	19.1	30.3
26	32.5	12.5	17.7	25.1	39.7
27	48.4	15.7	22.2	31.4	49.6
28	75.2	19.8	28.0	39.6	62.6
29	127	25.4	36.0	50.9	80.4
30	201	31.7	44.9	63.4	100
31	313	39.1	55.4	78.3	124
32	469	48.8	69.0	97.6	154
33	770	62.1	87.8	124	196
34	1330	80.3	114	161	254
35	2257	103	146	207	327
36	3225	128	181	256	404

HEAT SINK: For proper heat dissipation, body of electromagnet should be mounted on an equivalent of 3.0" x3.0" x 1/4" metal plate in an unrestricted flow of air.

MAGNETIC SENSOR SYSTEMS

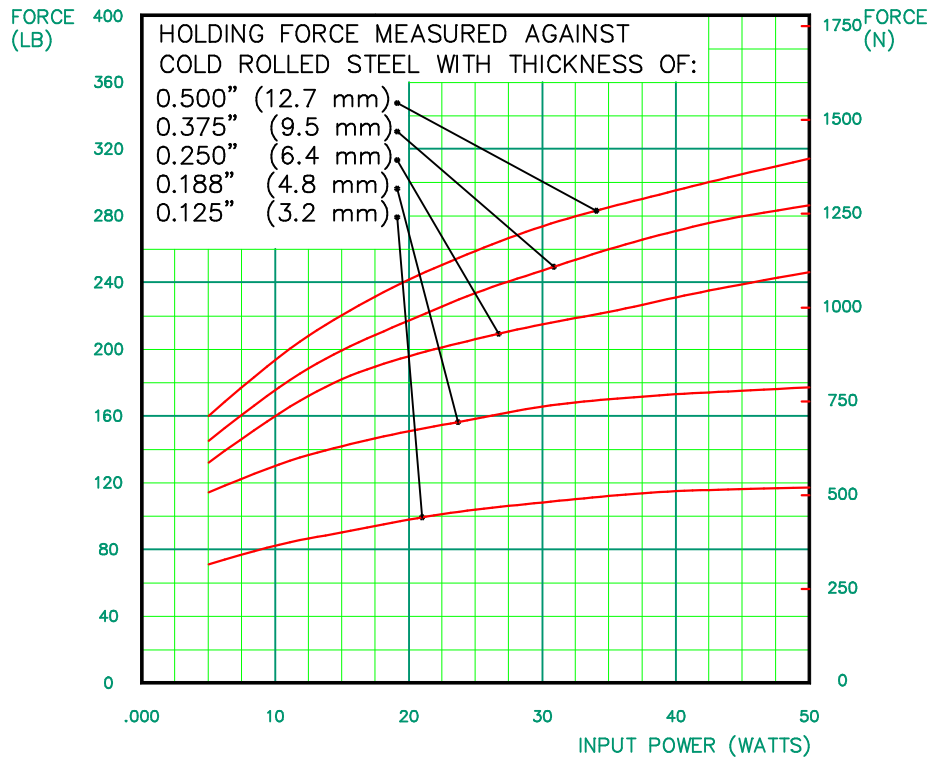
E-16-260

MECHANICAL DIMENSIONS



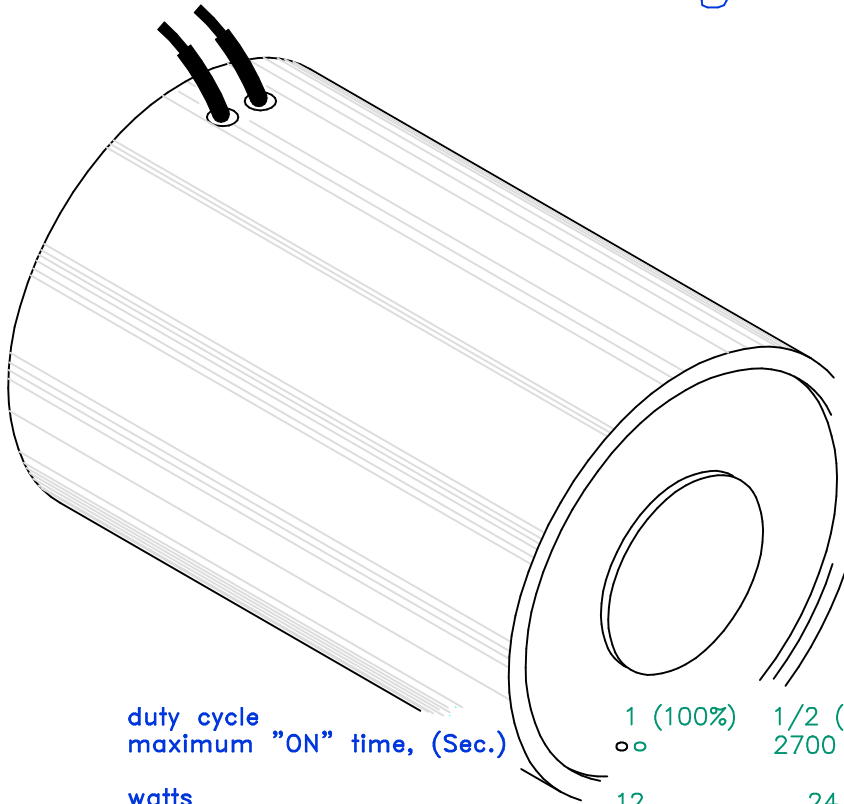
TOLERANCES: (UNLESS NOTED)
 0.XXX: ± 0.005
 0.XX : ± 0.010
 X/X: $\pm 1/64$
 COIL RESISTANCE: $\pm 10\%$
 DIMENSIONS IN INCHES [mm]

TYPICAL HOLD FORCE VERSUS INPUT POWER



MAGNETIC SENSOR SYSTEMS

Tubular Electromagnet



Series E-40-300
3.0" DIA X 4.0"
[76.2 mm X 101.6 mm]

TOTAL WEIGHT: 5.8 LB [2.6 KG]

duty cycle maximum "ON" time, (Sec.)	1 (100%) ○○	1/2 (50%) 2700	1/4 (25%) 900	1/10 (10%) 240
watts	12	24	48	120
approximate ampere turns	1815	2565	3630	5740

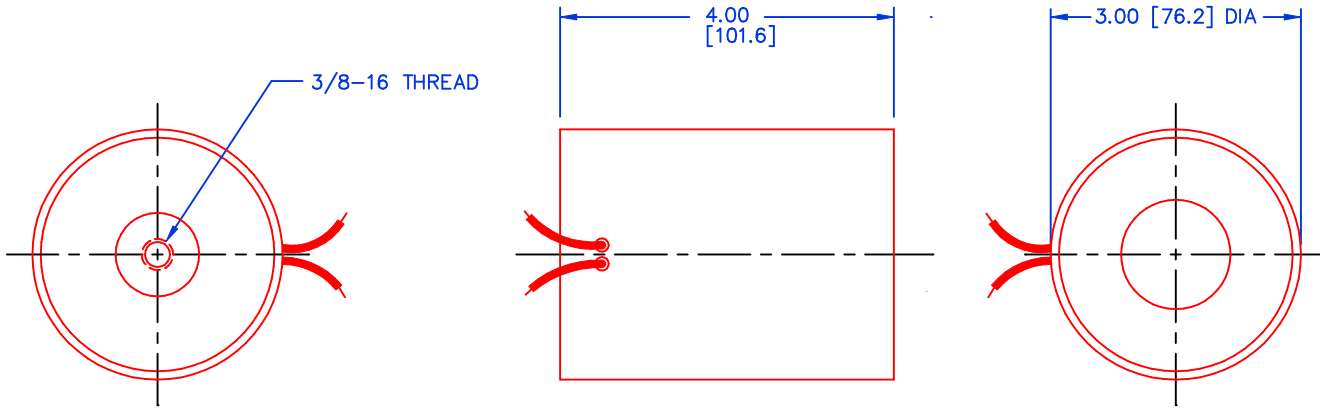
AWG number	resistance (Ω)	volts DC	volts DC	volts DC	volts DC
15	0.8	3.1	4.4	6.3	9.9
16	1.3	3.9	5.6	7.9	12.5
17	1.9	4.8	6.8	9.6	15.1
18	3.2	6.2	8.8	12.5	19.7
19	5.2	7.9	11.2	15.8	24.9
20	8.8	10.3	14.5	20.6	32.5
21	14.2	13.0	18.4	26.1	41.2
22	22.6	16.5	23.3	32.9	52.1
23	34.1	20.2	28.6	40.5	64.0
24	54.6	25.6	36.2	51.2	80.9
25	89.4	32.8	46.3	65.5	104
26	139	40.9	57.8	81.8	129
27	235	53.0	75.0	106	168
28	350	64.8	91.7	130	205
29	550	81.2	115	163	257
30	822	99.3	141	199	314
31	1447	132	186	264	417
32	2110	159	225	318	503
33	3450	204	287	407	644

HEAT SINK: For proper heat dissipation, body of electromagnet should be mounted on an equivalent of 4.0" x 4.0" x 1/4" metal plate in an unrestricted flow of air.

MAGNETIC SENSOR SYSTEMS

E-40-300

MECHANICAL DIMENSIONS



TOLERANCES: (UNLESS NOTED)
 0.XXX: ±0.005
 0.XX : ±0.010
 X/X: ±1/64
 COIL RESISTANCE: ±10%
 DIMENSIONS IN INCHES [mm]

TYPICAL HOLD FORCE VERSUS INPUT POWER

