



**GUARDIAN**  
Electric Manufacturing

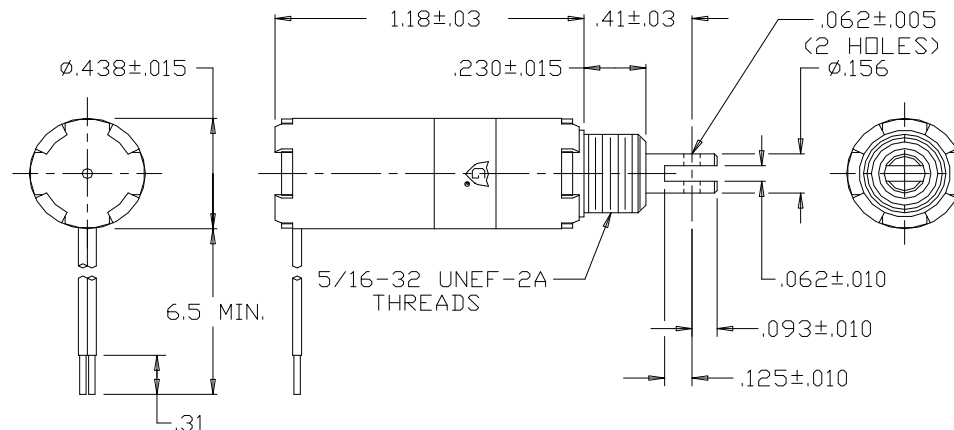
**ISO 9001 / AS9100 Certified Company**

Woodstock, IL 60098 Ph. (815)334-3600 Fax (815)337-0377

Or visit us at our website [www.guardian-electric.com](http://www.guardian-electric.com)

**Model T3.5 X 9**

**DC Tubular Solenoid**



Solenoid shown energized and fully seated.

Supplied with mounting bracket, hex nut and lockwasher (not shown).

Spring kits are available (consult factory).

Total Weight: .61 oz.

Plunger Weight: .11 oz.

| Model No.   | Part No.       | Duty Cycle   | Voltage | Resistance (Ω) | Power (W) | Current (mA) |
|-------------|----------------|--------------|---------|----------------|-----------|--------------|
| T3.5x9-I-12 | A420-062658-06 | Intermittent | 12VDC   | 31.1           | 4.9       | 386          |
| T3.5x9-C-12 | A420-062658-05 | Continuous   | 12VDC   | 60.2           | 2.5       | 199          |
| T3.5x9-I-24 | A420-062658-01 | Intermittent | 24VDC   | 122            | 5         | 197          |
| T3.5x9-C-24 | A420-062658-02 | Continuous   | 24VDC   | 254            | 2.4       | 94           |

When ordering, please refer to Part No., as listed above.

Consult factory for custom configurations.

| Pull Force (oz.)  |       |       |       |       |       |       |       |       | Holding Force (oz.) |
|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|---------------------|
| Stroke (in.)      | 0.050 | 0.125 | 0.250 | 0.375 | 0.500 | 0.625 | 0.750 | 1.000 | -                   |
| Continuous Duty   | 3     | 1     | 0.5   | n/a   | n/a   | n/a   | n/a   | n/a   | 20                  |
| Intermittent Duty | 5     | 2     | 1     | n/a   | n/a   | n/a   | n/a   | n/a   | 21                  |

### UL Recognition

Recognized under the  
Component Recognition Program of  
**Underwriters Laboratories, Inc.**

### Continuous Duty

100% 'On' Time

### Intermittent Duty

25% 'On' Time, (100 Seconds 'On' Max.  
Followed By 300 Seconds 'Off' Min.)

### RoHS

These parts comply with **RoHS** Directive 2002/95/EC



**GUARDIAN**  
Electric Manufacturing

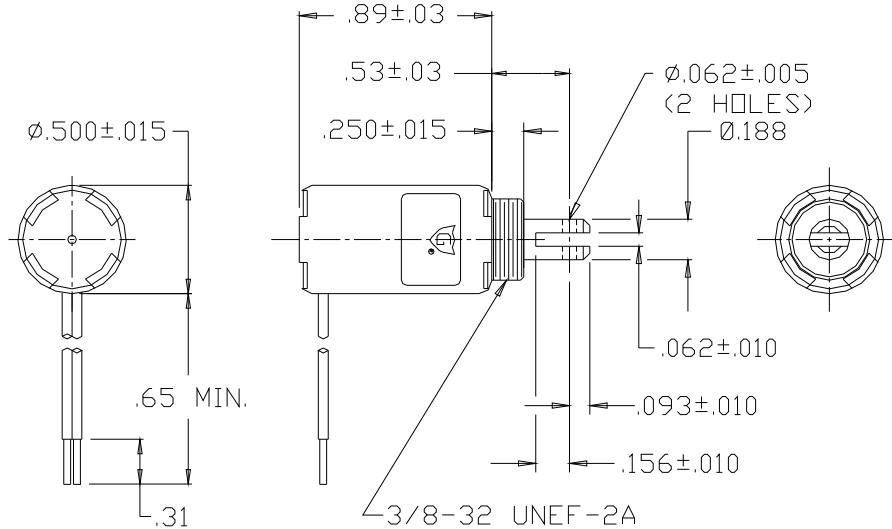
**ISO 9001 / AS9100 Certified Company**

Woodstock, IL 60098 Ph. (815)334-3600 Fax (815)337-0377

Or visit us at our website [www.guardian-electric.com](http://www.guardian-electric.com)

## Model T4 x 7

## DC Tubular Solenoid



Solenoid shown energized and fully seated.

Supplied with mounting bracket, hex nut and lockwasher (not shown).

Spring kits are available (consult factory).

Total Weight: .58 oz.

Plunger Weight: .14 oz.

| Model No. | Part No.       | Duty Cycle   | Voltage | Resistance (Ω) | Power (W) | Current (mA) |
|-----------|----------------|--------------|---------|----------------|-----------|--------------|
| T4x7-I-12 | A420-066004-00 | Intermittent | 12VDC   | 32.3           | 4.7       | 372          |
| T4x7-C-12 | A420-066003-00 | Continuous   | 12VDC   | 62.5           | 2.4       | 192          |
| T4x7-I-24 | A420-066006-00 | Intermittent | 24VDC   | 131            | 4.6       | 183          |
| T4x7-C-24 | A420-066005-00 | Continuous   | 24VDC   | 270            | 2.2       | 89           |

When ordering, please refer to Part No., as listed above.

Consult factory for custom configurations.

| Pull Force (oz.)  |       |       |       |       |       |       |       |       | Holding Force (oz.) |
|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|---------------------|
| Stroke (in.)      | 0.050 | 0.125 | 0.250 | 0.375 | 0.500 | 0.625 | 0.750 | 1.000 | -                   |
| Continuous Duty   | 3     | 1     | 0.5   | n/a   | n/a   | n/a   | n/a   | n/a   | 20                  |
| Intermittent Duty | 6     | 2     | 1     | n/a   | n/a   | n/a   | n/a   | n/a   | 24                  |

### UL Recognition

Recognized under the   
Component Recognition Program of  
**Underwriters Laboratories, Inc.**

### Continuous Duty

100% 'On' Time

### Intermittent Duty

25% 'On' Time, (100 Seconds 'On' Max.  
Followed By 300 Seconds 'Off' Min.)

### RoHS

These parts comply with **RoHS** Directive 2002/95/EC



**GUARDIAN**  
Electric Manufacturing

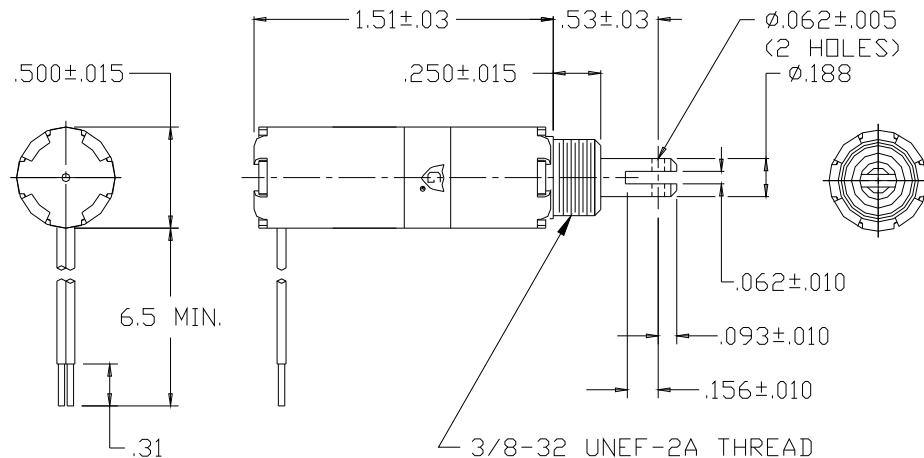
**ISO 9001 / AS9100 Certified Company**

Woodstock, IL 60098 Ph. (815)334-3600 Fax (815)337-0377

Or visit us at our website [www.guardian-electric.com](http://www.guardian-electric.com)

**Model T4 x 12**

**DC Tubular Solenoid**



Solenoid shown energized and fully seated.

Supplied with mounting bracket, hex nut and lockwasher (not shown).

Spring kits are available (consult factory).

Total Weight: 1.00 oz.

Plunger Weight: .28 oz.

| Model No.  | Part No.       | Duty Cycle   | Voltage | Resistance (Ω) | Power (W) | Current (mA) |
|------------|----------------|--------------|---------|----------------|-----------|--------------|
| T4x12-I-12 | A420-066012-00 | Intermittent | 12VDC   | 24.7           | 6.1       | 486          |
| T4x12-C-12 | A420-066011-00 | Continuous   | 12VDC   | 49.8           | 3.0       | 241          |
| T4x12-I-24 | A420-066014-00 | Intermittent | 24VDC   | 96.7           | 6.3       | 248          |
| T4x12-C-24 | A420-066013-00 | Continuous   | 24VDC   | 195            | 3.1       | 123          |

When ordering, please refer to Part No., as listed above.

Consult factory for custom configurations.

| Pull Force (oz.)  |       |       |       |       |       |       |       |       | Holding Force (oz.) |
|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|---------------------|
| Stroke (in.)      | 0.050 | 0.125 | 0.250 | 0.375 | 0.500 | 0.625 | 0.750 | 1.000 | -                   |
| Continuous Duty   | 4     | 2     | 1     | n/a   | n/a   | n/a   | n/a   | n/a   | 22                  |
| Intermittent Duty | 7     | 3     | 1     | n/a   | n/a   | n/a   | n/a   | n/a   | 25                  |

### UL Recognition

Recognized under the   
Component Recognition Program of  
**Underwriters Laboratories, Inc.**

### Continuous Duty

100% 'On' Time

### Intermittent Duty

25% 'On' Time, (100 Seconds 'On' Max.  
Followed By 300 Seconds 'Off' Min.)

### RoHS

These parts comply with **RoHS** Directive 2002/95/EC



**GUARDIAN**  
Electric Manufacturing

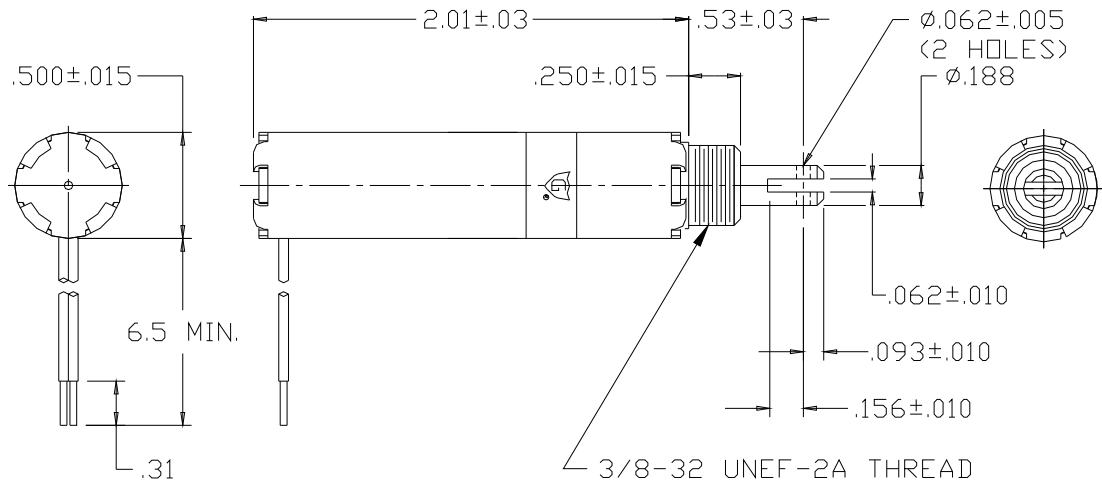
**ISO 9001 / AS9100 Certified Company**

Woodstock, IL 60098 Ph. (815)334-3600 Fax (815)337-0377

Or visit us at our website [www.guardian-electric.com](http://www.guardian-electric.com)

**Model T4 x 16**

**DC Tubular Solenoid**



Solenoid shown energized and fully seated.

Supplied with mounting bracket, hex nut and lockwasher (not shown).

Spring kits are available (consult factory).

Total Weight: 1.35 oz.

Plunger Weight: .36 oz.

| Model No.  | Part No.       | Duty Cycle   | Voltage | Resistance (Ω) | Power (W) | Current (mA) |
|------------|----------------|--------------|---------|----------------|-----------|--------------|
| T4x16-I-12 | A420-066020-00 | Intermittent | 12VDC   | 17.7           | 8.5       | 678          |
| T4x16-C-12 | A420-066019-00 | Continuous   | 12VDC   | 45.1           | 3.4       | 266          |
| T4x16-I-24 | A420-066022-00 | Intermittent | 24VDC   | 72.7           | 8.3       | 330          |
| T4x16-C-24 | A420-066021-00 | Continuous   | 24VDC   | 173            | 3.5       | 139          |

When ordering, please refer to Part No., as listed above.

Consult factory for custom configurations.

| Pull Force (oz.)  |       |       |       |       |       |       |       |       | Holding Force (oz.) |
|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|---------------------|
| Stroke (in.)      | 0.050 | 0.125 | 0.250 | 0.375 | 0.500 | 0.625 | 0.750 | 1.000 | -                   |
| Continuous Duty   | 5     | 3     | 1     | n/a   | n/a   | n/a   | n/a   | n/a   | 23                  |
| Intermittent Duty | 8     | 4     | 2     | n/a   | n/a   | n/a   | n/a   | n/a   | 28                  |

### UL Recognition

Recognized under the   
Component Recognition Program of  
**Underwriters Laboratories, Inc.**

### Continuous Duty

100% 'On' Time

### Intermittent Duty

25% 'On' Time, (100 Seconds 'On' Max.  
Followed By 300 Seconds 'Off' Min.)

### RoHS

These parts comply with **RoHS** Directive 2002/95/EC



**GUARDIAN**  
Electric Manufacturing

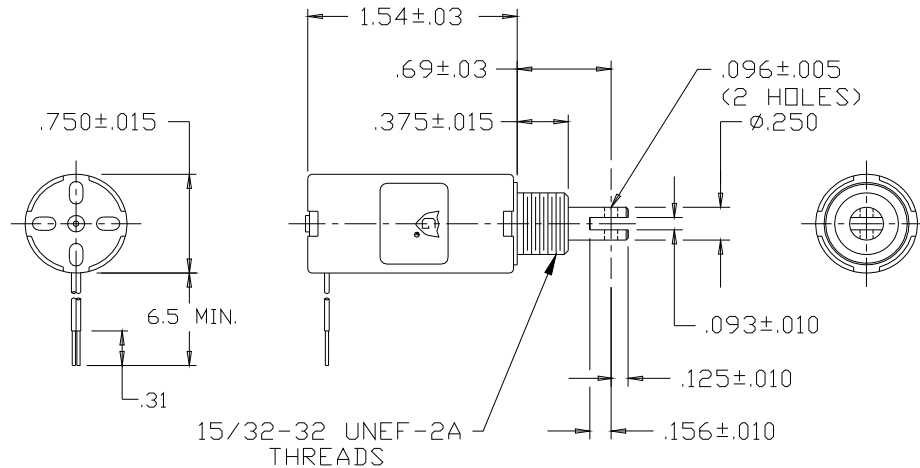
**ISO 9001 / AS9100 Certified Company**

Woodstock, IL 60098 Ph. (815)334-3600 Fax (815)337-0377

Or visit us at our website [www.guardian-electric.com](http://www.guardian-electric.com)

**Model T6 x 12**

**DC Tubular Solenoid**



Solenoid shown energized and fully seated.

Supplied with mounting bracket, hex nut and lockwasher (not shown).

Spring kits are available (consult factory).

Total Weight: 2.34 oz.

Plunger Weight: .42 oz.

| Model No.  | Part No.       | Duty Cycle   | Voltage | Resistance (Ω) | Power (W) | Current (mA) |
|------------|----------------|--------------|---------|----------------|-----------|--------------|
| T6x12-I-12 | A420-066028-00 | Intermittent | 12VDC   | 12.1           | 12.5      | 992          |
| T6x12-C-12 | A420-066027-00 | Continuous   | 12VDC   | 31.7           | 4.8       | 379          |
| T6x12-I-24 | A420-066030-00 | Intermittent | 24VDC   | 60.6           | 10        | 396          |
| T6x12-C-24 | A420-066029-00 | Continuous   | 24VDC   | 121            | 5         | 198          |

When ordering, please refer to Part No., as listed above.

Consult factory for custom configurations.

| Pull Force (oz.)  |       |       |       |       |       |       |       |       | Holding Force (oz.) |
|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|---------------------|
| Stroke (in.)      | 0.050 | 0.125 | 0.250 | 0.375 | 0.500 | 0.625 | 0.750 | 1.000 | -                   |
| Continuous Duty   | 17    | 9     | 5     | 2     | n/a   | n/a   | n/a   | n/a   | 48                  |
| Intermittent Duty | 24    | 13    | 9     | 6     | n/a   | n/a   | n/a   | n/a   | 53                  |

### UL Recognition

Recognized under the   
Component Recognition Program of  
**Underwriters Laboratories, Inc.**

### Continuous Duty

100% 'On' Time

### Intermittent Duty

25% 'On' Time, (100 Seconds 'On' Max.  
Followed By 300 Seconds 'Off' Min.)

### RoHS

These parts comply with **RoHS** Directive 2002/95/EC



**GUARDIAN**  
Electric Manufacturing

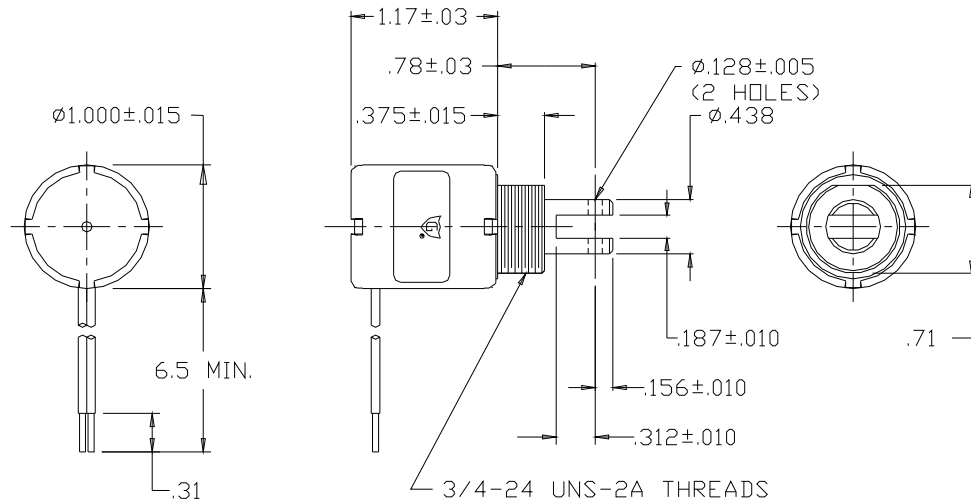
**ISO 9001 / AS9100 Certified Company**

Woodstock, IL 60098 Ph. (815)334-3600 Fax (815)337-0377

Or visit us at our website [www.guardian-electric.com](http://www.guardian-electric.com)

**Model T8 x 9**

**DC Tubular Solenoid**



Solenoid shown energized and fully seated.

Supplied with mounting bracket, hex nut and lockwasher (not shown).

Spring kits are available (consult factory).

Total Weight: 3.46 oz.

Plunger Weight: 1.03 oz.

| Model No. | Part No.       | Duty Cycle   | Voltage | Resistance (Ω) | Power (W) | Current |
|-----------|----------------|--------------|---------|----------------|-----------|---------|
| T8x9-I-12 | A420-066653-00 | Intermittent | 12VDC   | 10.9           | 13.9      | 1.1 A   |
| T8x9-C-12 | A420-066652-00 | Continuous   | 12VDC   | 35.5           | 4.3       | 228 mA  |
| T8x9-I-24 | A420-066655-00 | Intermittent | 24VDC   | 44             | 13.7      | 545 mA  |
| T8x9-C-24 | A420-066654-00 | Continuous   | 24VDC   | 135            | 4.5       | 178 mA  |

When ordering, please refer to Part No., as listed above.

Consult factory for custom configurations.

| Pull Force (oz.)  |       |       |       |       |       |       |       |       | Holding Force (oz.) |
|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|---------------------|
| Stroke (in.)      | 0.050 | 0.125 | 0.250 | 0.375 | 0.500 | 0.625 | 0.750 | 1.000 | -                   |
| Continuous Duty   | 20    | 10    | 4     | 1     | 0.5   | n/a   | n/a   | n/a   | 96                  |
| Intermittent Duty | 42    | 30    | 15    | 6     | 2     | n/a   | n/a   | n/a   | 128                 |

### UL Recognition

Recognized under the   
Component Recognition Program of  
**Underwriters Laboratories, Inc.**

### Continuous Duty

100% 'On' Time

### Intermittent Duty

25% 'On' Time, (100 Seconds 'On' Max.  
Followed By 300 Seconds 'Off' Min.)

### RoHS

These parts comply with **RoHS** Directive 2002/95/EC



**GUARDIAN**  
Electric Manufacturing

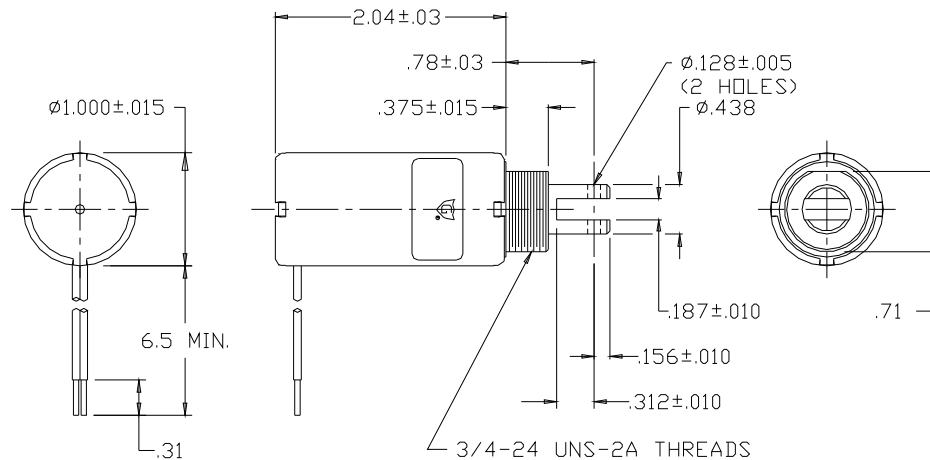
**ISO 9001 / AS9100 Certified Company**

Woodstock, IL 60098 Ph. (815)334-3600 Fax (815)337-0377

Or visit us at our website [www.guardian-electric.com](http://www.guardian-electric.com)

**Model T8 x 16**

**DC Tubular Solenoid**



Solenoid shown energized and fully seated.

Supplied with mounting bracket, hex nut and lockwasher (not shown).

Spring kits are available (consult factory).

Total Weight: 5.80 oz.

Plunger Weight: 1.57 oz.

| Model No.  | Part No.       | Duty Cycle   | Voltage | Resistance (Ω) | Power (W) | Current |
|------------|----------------|--------------|---------|----------------|-----------|---------|
| T8x16-I-12 | A420-066643-00 | Intermittent | 12VDC   | 9.3            | 16.3      | 1.29 A  |
| T8x16-C-12 | A420-066642-00 | Continuous   | 12VDC   | 28.3           | 5.3       | 424 mA  |
| T8x16-I-24 | A420-066645-00 | Intermittent | 24VDC   | 36.1           | 16.8      | 665 mA  |
| T8x16-C-24 | A420-066644-00 | Continuous   | 24VDC   | 110            | 5.5       | 218 mA  |

When ordering, please refer to Part No., as listed above.

Consult factory for custom configurations.

| Pull Force (oz.)  |       |       |       |       |       |       |       |       | Holding Force (oz.) |
|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|---------------------|
| Stroke (in.)      | 0.050 | 0.125 | 0.250 | 0.375 | 0.500 | 0.625 | 0.750 | 1.000 | -                   |
| Continuous Duty   | 30    | 18    | 11    | 5     | 4     | 3     | 2     | n/a   | 103                 |
| Intermittent Duty | 60    | 40    | 25    | 19    | 15    | 10    | 8     | n/a   | 125                 |

### UL Recognition

Recognized under the   
Component Recognition Program of  
**Underwriters Laboratories, Inc.**

### Continuous Duty

100% 'On' Time

### Intermittent Duty

25% 'On' Time, (100 Seconds 'On' Max.  
Followed By 300 Seconds 'Off' Min.)

### RoHS

These parts comply with **RoHS** Directive 2002/95/EC



**GUARDIAN**  
Electric Manufacturing

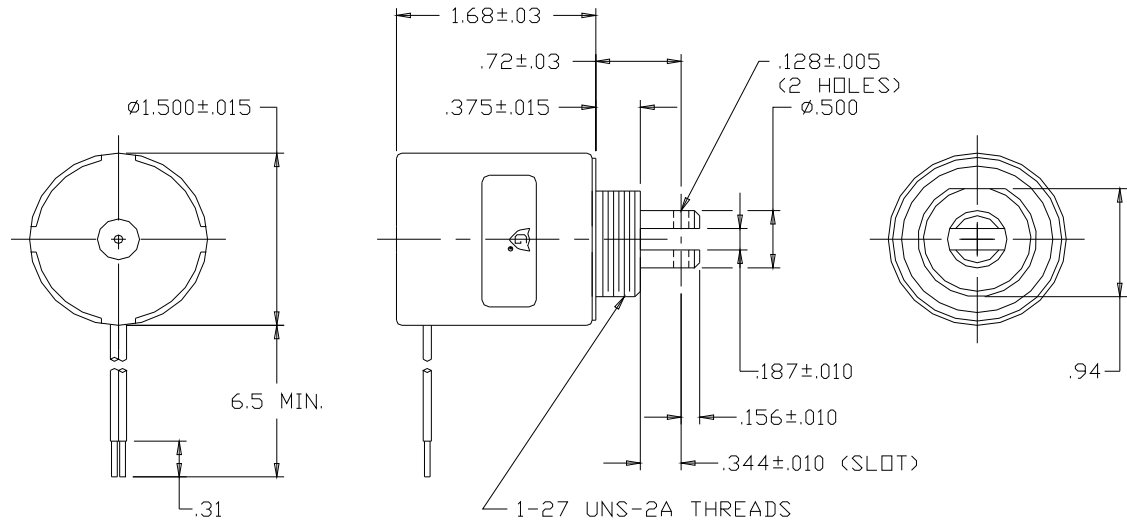
**ISO 9001 / AS9100 Certified Company**

Woodstock, IL 60098 Ph. (815)334-3600 Fax (815)337-0377

Or visit us at our website [www.guardian-electric.com](http://www.guardian-electric.com)

## Model T12 x 13

## DC Tubular Solenoid



Solenoid shown energized and fully seated.

Supplied with mounting bracket, hex nut and lockwasher (not shown).

Spring kits are available (consult factory).

Total Weight: 10.2 oz.

Plunger Weight: 1.6 oz.

| Model No.   | Part No.       | Duty Cycle   | Voltage | Resistance (Ω) | Power (W) | Current |
|-------------|----------------|--------------|---------|----------------|-----------|---------|
| T12x13-I-12 | A420-066052-00 | Intermittent | 12VDC   | 7.3            | 20.7      | 1.64 A  |
| T12x13-C-12 | A420-066051-00 | Continuous   | 12VDC   | 22.8           | 6.6       | 526 mA  |
| T12x13-I-24 | A420-066054-00 | Intermittent | 24VDC   | 28.4           | 21.3      | 845 mA  |
| T12x13-C-24 | A420-066053-00 | Continuous   | 24VDC   | 90.4           | 6.7       | 265 mA  |

When ordering, please refer to Part No., as listed above.

Consult factory for custom configurations.

| Pull Force (oz.)  |       |       |       |       |       |       |       |       | Holding Force (oz.) |
|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|---------------------|
| Stroke (in.)      | 0.050 | 0.125 | 0.250 | 0.375 | 0.500 | 0.625 | 0.750 | 1.000 | -                   |
| Continuous Duty   | 80    | 40    | 18    | 10    | 5     | 2     | 1     | n/a   | 188                 |
| Intermittent Duty | 140   | 104   | 55    | 30    | 20    | 15    | 7     | n/a   | 215                 |

### UL Recognition

Recognized under the   
Component Recognition Program of  
**Underwriters Laboratories, Inc.**

### Continuous Duty

100% 'On' Time

### Intermittent Duty

25% 'On' Time, (100 Seconds 'On' Max.  
Followed By 300 Seconds 'Off' Min.)

### RoHS

These parts comply with **RoHS** Directive 2002/95/EC



**GUARDIAN**  
Electric Manufacturing

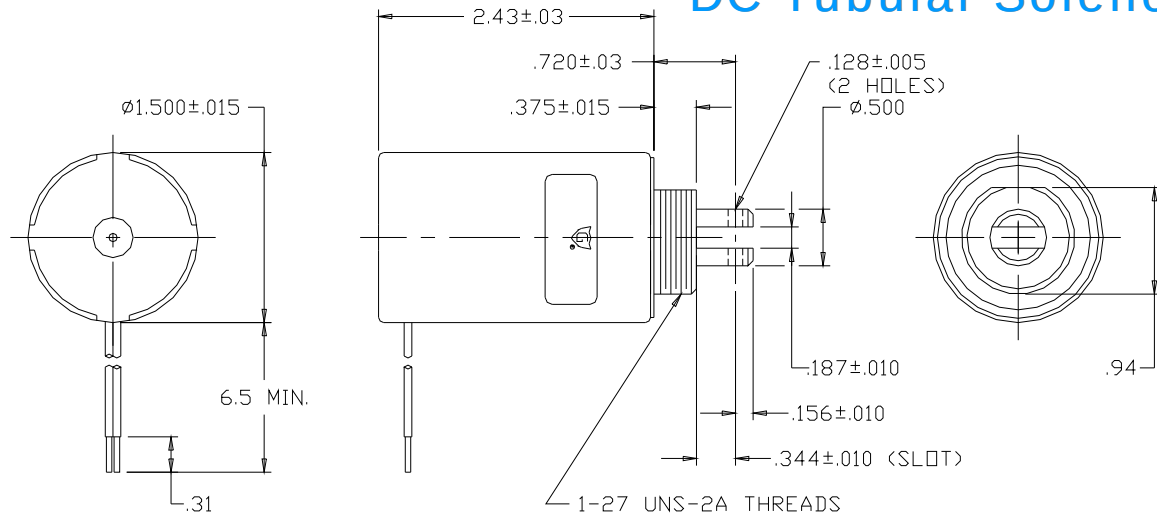
**ISO 9001 / AS9100 Certified Company**

Woodstock, IL 60098 Ph. (815)334-3600 Fax (815)337-0377

Or visit us at our website [www.guardian-electric.com](http://www.guardian-electric.com)

**Model T12 x 19**

**DC Tubular Solenoid**



Solenoid shown energized and fully seated.

Supplied with mounting bracket, hex nut and lockwasher (not shown).

Spring kits are available (consult factory).

Total Weight: 10.2 oz.

Plunger Weight: 1.6 oz.

| Model No.   | Part No.       | Duty Cycle   | Voltage | Resistance (Ω) | Power (W) | Current |
|-------------|----------------|--------------|---------|----------------|-----------|---------|
| T12x19-I-12 | A420-066843-00 | Intermittent | 12VDC   | 5.6            | 27        | 2.14 A  |
| T12x19-C-12 | A420-066842-00 | Continuous   | 12VDC   | 17.5           | 8.6       | 686 mA  |
| T12x19-I-24 | A420-066845-00 | Intermittent | 24VDC   | 22.1           | 27.4      | 1.09 A  |
| T12x19-C-24 | A420-066844-00 | Continuous   | 24VDC   | 68             | 8.9       | 353 mA  |

When ordering, please refer to Part No., as listed above.

Consult factory for custom configurations.

| Pull Force (oz.)  |       |       |       |       |       |       |       |       | Holding Force (oz.) |
|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|---------------------|
| Stroke (in.)      | 0.050 | 0.125 | 0.250 | 0.375 | 0.500 | 0.625 | 0.750 | 1.000 | -                   |
| Continuous Duty   | 100   | 60    | 30    | 20    | 18    | 15    | 10    | 8     | 179                 |
| Intermittent Duty | 145   | 110   | 70    | 50    | 40    | 35    | 27    | 20    | 205                 |

### UL Recognition

Recognized under the   
Component Recognition Program of  
**Underwriters Laboratories, Inc.**

### Continuous Duty

100% 'On' Time

### Intermittent Duty

25% 'On' Time, (100 Seconds 'On' Max.  
Followed By 300 Seconds 'Off' Min.)

### RoHS

These parts comply with **RoHS** Directive 2002/95/EC



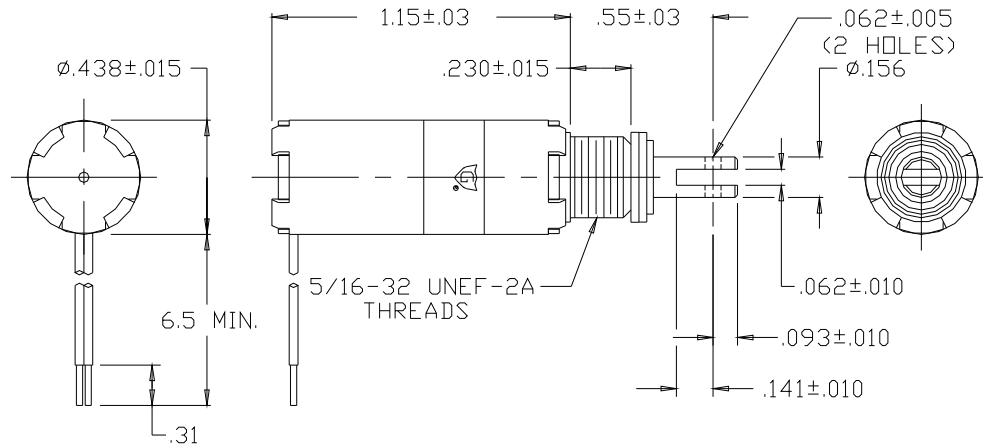
**GUARDIAN**  
Electric Manufacturing

**ISO 9001 / AS9100 Certified Company**

Woodstock, IL 60098 Ph. (815)334-3600 Fax (815)337-0377

Or visit us at our website [www.guardian-electric.com](http://www.guardian-electric.com)

## Model LT3.5 x 9 Long-Life DC Tubular Solenoid



Solenoid shown energized and fully seated.

Supplied with mounting bracket, hex nut and lockwasher (not shown).

Spring kits are available (consult factory).

Total Weight: .6 oz.

Plunger Weight: .1 oz.

| Model No.    | Part No.       | Duty Cycle   | Voltage | Resistance (Ω) | Power (W) | Current (mA) |
|--------------|----------------|--------------|---------|----------------|-----------|--------------|
| LT3.5x9-I-12 | A420-064803-00 | Intermittent | 12VDC   | 27             | 5.6       | 444          |
| LT3.5x9-C-12 | A420-064802-00 | Continuous   | 12VDC   | 52.4           | 2.9       | 229          |
| LT3.5x9-I-24 | A420-064805-00 | Intermittent | 24VDC   | 105            | 5.8       | 229          |
| LT3.5x9-C-24 | A420-064804-00 | Continuous   | 24VDC   | 221            | 2.7       | 109          |

When ordering, please refer to Part No., as listed above.

Consult factory for custom configurations.

| Pull Force (oz.)  |       |       |       |       |       |       |       |       | Holding Force (oz.) |
|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|---------------------|
| Stroke (in.)      | 0.050 | 0.125 | 0.250 | 0.375 | 0.500 | 0.625 | 0.750 | 1.000 | -                   |
| Continuous Duty   | 3     | 1.5   | 1     | n/a   | n/a   | n/a   | n/a   | n/a   | 1.5                 |
| Intermittent Duty | 6     | 2     | 1.5   | n/a   | n/a   | n/a   | n/a   | n/a   | 1.8                 |

### UL Recognition

Recognized under the   
Component Recognition Program of  
**Underwriters Laboratories, Inc.**

### Continuous Duty

100% 'On' Time

### Intermittent Duty

25% 'On' Time, (100 Seconds 'On' Max.  
Followed By 300 Seconds 'Off' Min.)

### RoHS

These parts comply with **RoHS** Directive 2002/95/EC



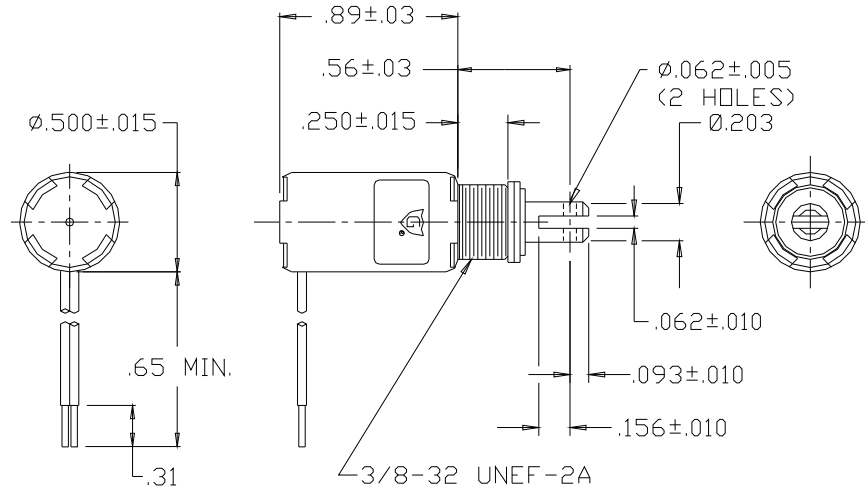
**GUARDIAN**  
Electric Manufacturing

**ISO 9001 / AS9100 Certified Company**

Woodstock, IL 60098 Ph. (815)334-3600 Fax (815)337-0377

Or visit us at our website [www.guardian-electric.com](http://www.guardian-electric.com)

## Model LT4 x 7 Long-Life DC Tubular Solenoid



Solenoid shown energized and fully seated.

Supplied with mounting bracket, hex nut and lockwasher (not shown).

Spring kits are available (consult factory).

Total Weight: .71 oz.

Plunger Weight: .15 oz.

| Model No.  | Part No.       | Duty Cycle   | Voltage | Resistance (Ω) | Power (W) | Current (mA) |
|------------|----------------|--------------|---------|----------------|-----------|--------------|
| LT4x7-I-12 | A420-064811-00 | Intermittent | 12VDC   | 32.5           | 4.7       | 369          |
| LT4x7-C-12 | A420-064810-00 | Continuous   | 12VDC   | 63.3           | 2.4       | 190          |
| LT4x7-I-24 | A420-064813-00 | Intermittent | 24VDC   | 121            | 5         | 198          |
| LT4x7-C-24 | A420-064812-00 | Continuous   | 24VDC   | 264            | 2.3       | 91           |

When ordering, please refer to Part No., as listed above.

Consult factory for custom configurations.

| Pull Force (oz.)  |       |       |       |       |       |       |       |       | Holding Force (oz.) |
|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|---------------------|
| Stroke (in.)      | 0.050 | 0.125 | 0.250 | 0.375 | 0.500 | 0.625 | 0.750 | 1.000 | -                   |
| Continuous Duty   | 3.5   | 2     | 0.5   | n/a   | n/a   | n/a   | n/a   | n/a   | 3                   |
| Intermittent Duty | 6     | 3     | 1     | n/a   | n/a   | n/a   | n/a   | n/a   | 9                   |

### UL Recognition

Recognized under the   
Component Recognition Program of  
**Underwriters Laboratories, Inc.**

### Continuous Duty

100% 'On' Time

### Intermittent Duty

25% 'On' Time, (100 Seconds 'On' Max.  
Followed By 300 Seconds 'Off' Min.)

### RoHS

These parts comply with **RoHS** Directive 2002/95/EC



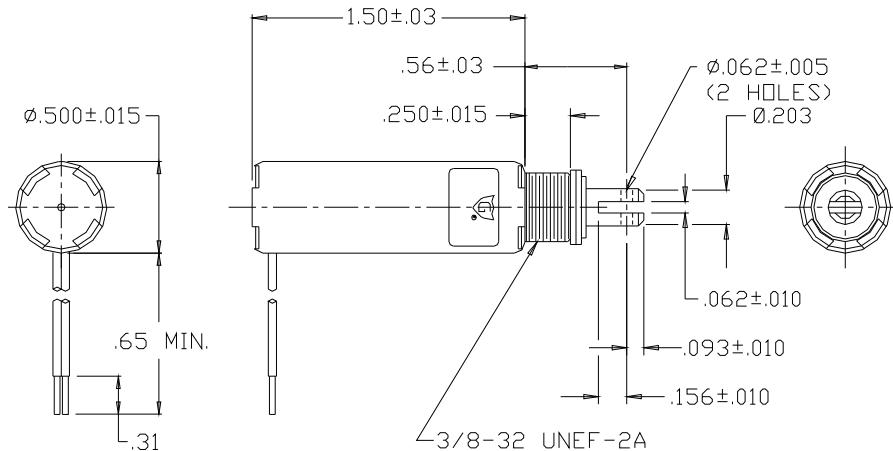
**GUARDIAN**  
Electric Manufacturing

**ISO 9001 / AS9100 Certified Company**

Woodstock, IL 60098 Ph. (815)334-3600 Fax (815)337-0377

Or visit us at our website [www.guardian-electric.com](http://www.guardian-electric.com)

## Model LT4 x 12 Long-Life DC Tubular Solenoid



Solenoid shown energized and fully seated.

Supplied with mounting bracket, hex nut and lockwasher (not shown).

Spring kits are available (consult factory).

Total Weight: 1.1 oz.

Plunger Weight: .21 oz.

| Model No.   | Part No.       | Duty Cycle   | Voltage | Resistance (Ω) | Power (W) | Current (mA) |
|-------------|----------------|--------------|---------|----------------|-----------|--------------|
| LT4x12-I-12 | A420-064819-00 | Intermittent | 12VDC   | 19.2           | 7.9       | 625          |
| LT4x12-C-12 | A420-064818-00 | Continuous   | 12VDC   | 49.3           | 3.1       | 243          |
| LT4x12-I-24 | A420-064821-00 | Intermittent | 24VDC   | 76.3           | 7.9       | 315          |
| LT4x12-C-24 | A420-064820-00 | Continuous   | 24VDC   | 192            | 3.2       | 125          |

When ordering, please refer to Part No., as listed above.

Consult factory for custom configurations.

| Pull Force (oz.)  |       |       |       |       |       |       |       |       | Holding Force (oz.) |
|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|---------------------|
| Stroke (in.)      | 0.050 | 0.125 | 0.250 | 0.375 | 0.500 | 0.625 | 0.750 | 1.000 | -                   |
| Continuous Duty   | 9     | 3     | 1.5   | 0.5   | n/a   | n/a   | n/a   | n/a   | 10                  |
| Intermittent Duty | 16    | 8     | 3     | 1.5   | n/a   | n/a   | n/a   | n/a   | 18                  |

### UL Recognition

Recognized under the   
Component Recognition Program of  
**Underwriters Laboratories, Inc.**

### Continuous Duty

100% 'On' Time

### Intermittent Duty

25% 'On' Time, (100 Seconds 'On' Max.  
Followed By 300 Seconds 'Off' Min.)

### RoHS

These parts comply with **RoHS** Directive 2002/95/EC



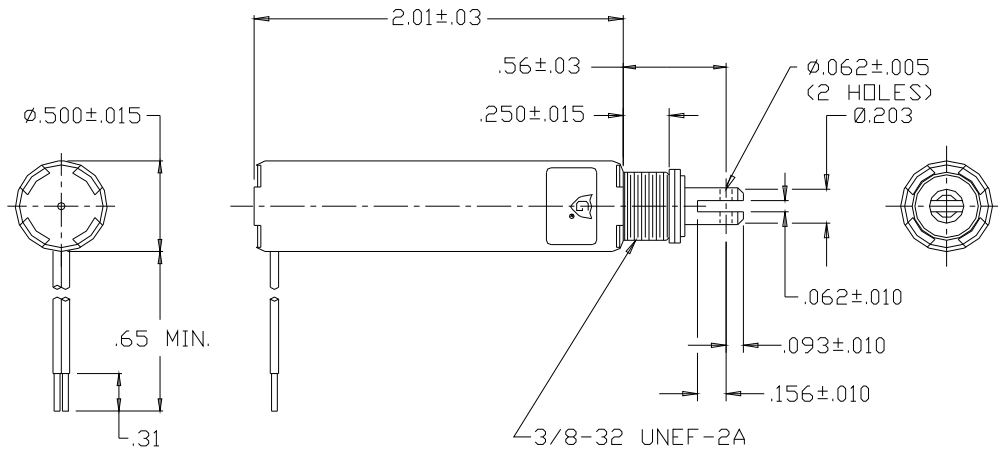
**GUARDIAN**  
Electric Manufacturing

**ISO 9001 / AS9100 Certified Company**

Woodstock, IL 60098 Ph. (815)334-3600 Fax (815)337-0377

Or visit us at our website [www.guardian-electric.com](http://www.guardian-electric.com)

## Model LT4 x 16 Long-Life DC Tubular Solenoid



Solenoid shown energized and fully seated.

Supplied with mounting bracket, hex nut and lockwasher (not shown).

Spring kits are available (consult factory).

Total Weight: 1.43 oz.

Plunger Weight: .28 oz.

| Model No.   | Part No.       | Duty Cycle   | Voltage | Resistance (Ω) | Power (W) | Current (mA) |
|-------------|----------------|--------------|---------|----------------|-----------|--------------|
| LT4x16-I-12 | A420-064827-00 | Intermittent | 12VDC   | 14             | 10.8      | 857          |
| LT4x16-C-12 | A420-064826-00 | Continuous   | 12VDC   | 42.5           | 3.6       | 282          |
| LT4x16-I-24 | A420-064829-00 | Intermittent | 24VDC   | 69.1           | 8.8       | 347          |
| LT4x16-C-24 | A420-064828-00 | Continuous   | 24VDC   | 168            | 3.6       | 143          |

When ordering, please refer to Part No., as listed above.

Consult factory for custom configurations.

| Pull Force (oz.)  |       |       |       |       |       |       |       |       | Holding Force (oz.) |
|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|---------------------|
| Stroke (in.)      | 0.050 | 0.125 | 0.250 | 0.375 | 0.500 | 0.625 | 0.750 | 1.000 | -                   |
| Continuous Duty   | 8     | 3     | 1     | 0.5   | n/a   | n/a   | n/a   | n/a   | 13                  |
| Intermittent Duty | 14    | 7     | 3     | 1.5   | n/a   | n/a   | n/a   | n/a   | 17                  |

### UL Recognition

Recognized under the   
Component Recognition Program of  
**Underwriters Laboratories, Inc.**

### Continuous Duty

100% 'On' Time

### Intermittent Duty

25% 'On' Time, (100 Seconds 'On' Max.  
Followed By 300 Seconds 'Off' Min.)

### RoHS

These parts comply with **RoHS** Directive 2002/95/EC



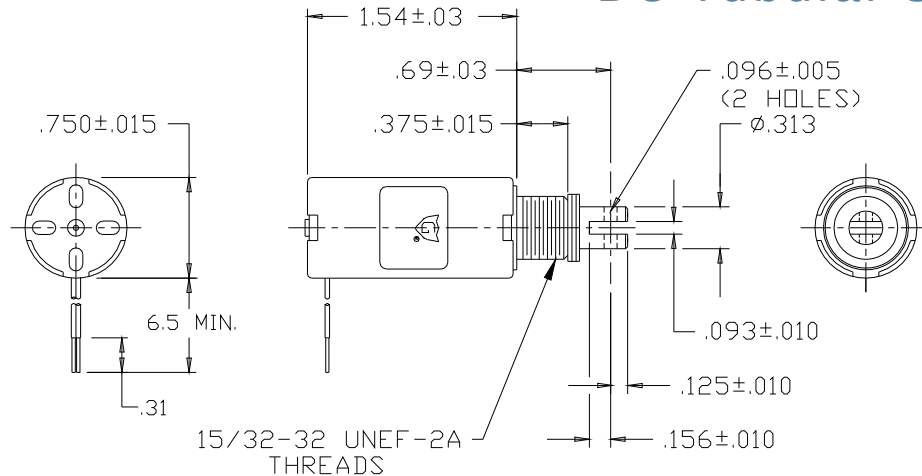
**GUARDIAN**  
Electric Manufacturing

**ISO 9001 / AS9100 Certified Company**

Woodstock, IL 60098 Ph. (815)334-3600 Fax (815)337-0377

Or visit us at our website [www.guardian-electric.com](http://www.guardian-electric.com)

## Model LT6 x 12 Long-Life DC Tubular Solenoid



Solenoid shown energized and fully seated.

Supplied with mounting bracket, hex nut and lockwasher (not shown).

Spring kits are available (consult factory).

Total Weight: 2.53 oz.

Plunger Weight: .57 oz.

| Model No.   | Part No.       | Duty Cycle   | Voltage | Resistance (Ω) | Power (W) | Current (mA) |
|-------------|----------------|--------------|---------|----------------|-----------|--------------|
| LT6x12-I-12 | A420-064835-00 | Intermittent | 12VDC   | 13.8           | 11        | 870          |
| LT6x12-C-12 | A420-064834-00 | Continuous   | 12VDC   | 35             | 4.3       | 343          |
| LT6x12-I-24 | A420-064837-00 | Intermittent | 24VDC   | 53.8           | 11.2      | 446          |
| LT6x12-C-24 | A420-064836-00 | Continuous   | 24VDC   | 138            | 4.4       | 174          |

When ordering, please refer to Part No., as listed above.

Consult factory for custom configurations.

| Pull Force (oz.)  |       |       |       |       |       |       |       |       | Holding Force (oz.) |
|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|---------------------|
| Stroke (in.)      | 0.050 | 0.125 | 0.250 | 0.375 | 0.500 | 0.625 | 0.750 | 1.000 | -                   |
| Continuous Duty   | 28    | 10    | 5     | 1     | 0.5   | n/a   | n/a   | n/a   | 21                  |
| Intermittent Duty | 45    | 22    | 10    | 5     | 1     | n/a   | n/a   | n/a   | 39                  |

### UL Recognition

Recognized under the   
Component Recognition Program of  
**Underwriters Laboratories, Inc.**

### Continuous Duty

100% 'On' Time

### Intermittent Duty

25% 'On' Time, (100 Seconds 'On' Max.  
Followed By 300 Seconds 'Off' Min.)

### RoHS

These parts comply with **RoHS** Directive 2002/95/EC



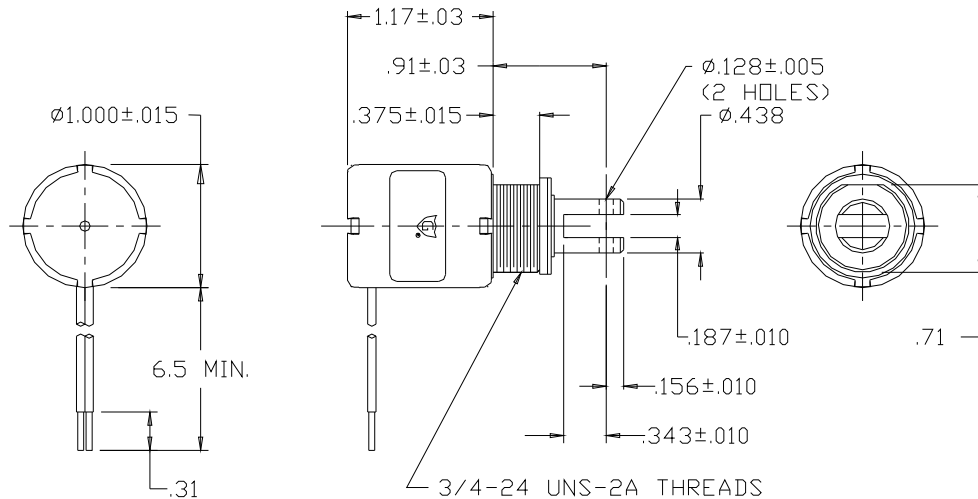
**GUARDIAN**  
Electric Manufacturing

**ISO 9001 / AS9100 Certified Company**

Woodstock, IL 60098 Ph. (815)334-3600 Fax (815)337-0377

Or visit us at our website [www.guardian-electric.com](http://www.guardian-electric.com)

## Model LT8 x 9 Long-Life DC Tubular Solenoid



Solenoid shown energized and fully seated.

Supplied with mounting bracket, hex nut and lockwasher (not shown).

Spring kits are available (consult factory).

Total Weight: 3.7 oz.

Plunger Weight: 1.1 oz.

| Model No.  | Part No.       | Duty Cycle   | Voltage | Resistance (Ω) | Power (W) | Current |
|------------|----------------|--------------|---------|----------------|-----------|---------|
| LT8x9-I-12 | A420-064843-00 | Intermittent | 12VDC   | 11.1           | 13.6      | 1.08 A  |
| LT8x9-C-12 | A420-064842-00 | Continuous   | 12VDC   | 27.6           | 5.5       | 435 mA  |
| LT8x9-I-24 | A420-064845-00 | Intermittent | 24VDC   | 44.6           | 13.6      | 538 mA  |
| LT8x9-C-24 | A420-064844-00 | Continuous   | 24VDC   | 109            | 5.5       | 220 mA  |

When ordering, please refer to Part No., as listed above.

Consult factory for custom configurations.

| Pull Force (oz.)  |       |       |       |       |       |       |       |       | Holding Force (oz.) |
|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|---------------------|
| Stroke (in.)      | 0.050 | 0.125 | 0.250 | 0.375 | 0.500 | 0.625 | 0.750 | 1.000 | -                   |
| Continuous Duty   | 25    | 10    | 5     | 2     | 0.5   | n/a   | n/a   | n/a   | 24                  |
| Intermittent Duty | 50    | 27    | 10    | 6     | 2     | n/a   | n/a   | n/a   | 60                  |

### UL Recognition

Recognized under the   
Component Recognition Program of  
**Underwriters Laboratories, Inc.**

### Continuous Duty

100% 'On' Time

### Intermittent Duty

25% 'On' Time, (100 Seconds 'On' Max.  
Followed By 300 Seconds 'Off' Min.)

### RoHS

These parts comply with **RoHS** Directive 2002/95/EC



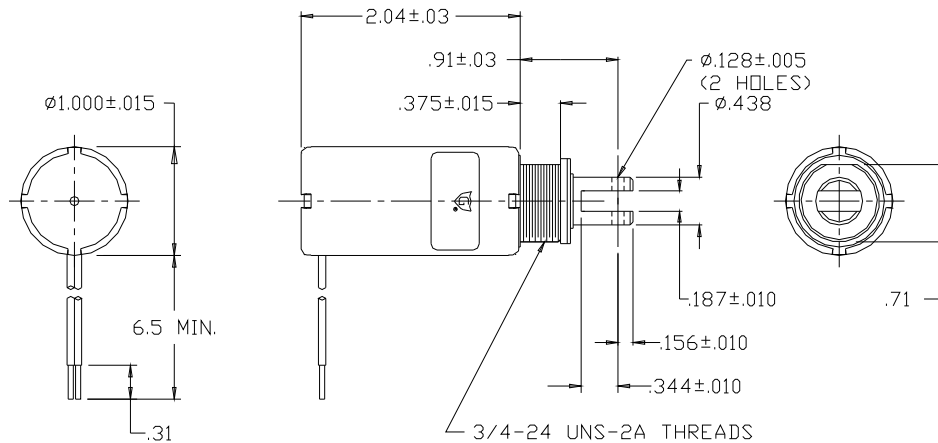
**GUARDIAN**  
Electric Manufacturing

**ISO 9001 / AS9100 Certified Company**

Woodstock, IL 60098 Ph. (815)334-3600 Fax (815)337-0377

Or visit us at our website [www.guardian-electric.com](http://www.guardian-electric.com)

## Model LT8 x 16 Long-Life DC Tubular Solenoid



Solenoid shown energized and fully seated.

Supplied with mounting bracket, hex nut and lockwasher (not shown).

Spring kits are available (consult factory).

Total Weight: 6.4 oz.

Plunger Weight: 1.4 oz.

| Model No.   | Part No.       | Duty Cycle   | Voltage | Resistance (Ω) | Power (W) | Current |
|-------------|----------------|--------------|---------|----------------|-----------|---------|
| LT8x16-I-12 | A420-064851-00 | Intermittent | 12VDC   | 6.2            | 24.4      | 1.94 A  |
| LT8x16-C-12 | A420-064850-00 | Continuous   | 12VDC   | 19.3           | 7.8       | 622 mA  |
| LT8x16-I-24 | A420-064853-00 | Intermittent | 24VDC   | 29.7           | 20.4      | 808 mA  |
| LT8x16-C-24 | A420-064852-00 | Continuous   | 24VDC   | 77.2           | 7.8       | 311 mA  |

When ordering, please refer to Part No., as listed above.

Consult factory for custom configurations.

| Pull Force (oz.)  |       |       |       |       |       |       |       |       | Holding Force (oz.) |
|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|---------------------|
| Stroke (in.)      | 0.050 | 0.125 | 0.250 | 0.375 | 0.500 | 0.625 | 0.750 | 1.000 | -                   |
| Continuous Duty   | 45    | 28    | 12    | 9     | 5     | 3     | 1     | n/a   | 43                  |
| Intermittent Duty | 80    | 55    | 35    | 25    | 15    | 10    | 3     | n/a   | 66                  |

### UL Recognition

Recognized under the   
Component Recognition Program of  
**Underwriters Laboratories, Inc.**

### Continuous Duty

100% 'On' Time

### Intermittent Duty

25% 'On' Time, (100 Seconds 'On' Max.  
Followed By 300 Seconds 'Off' Min.)

### RoHS

These parts comply with **RoHS** Directive 2002/95/EC



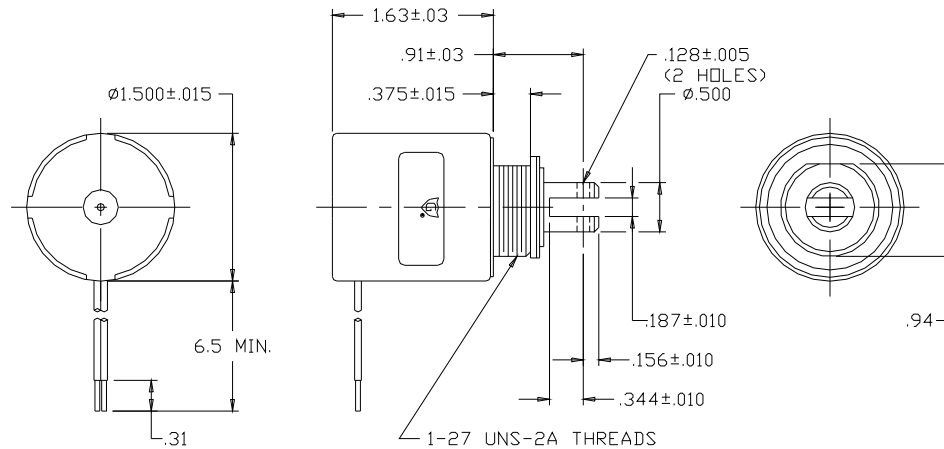
**GUARDIAN**  
Electric Manufacturing

**ISO 9001 / AS9100 Certified Company**

Woodstock, IL 60098 Ph. (815)334-3600 Fax (815)337-0377

Or visit us at our website [www.guardian-electric.com](http://www.guardian-electric.com)

## Model LT12 x 13 Long-Life DC Tubular Solenoid



Solenoid shown energized and fully seated.

Supplied with mounting bracket, hex nut and lockwasher (not shown).

Spring kits are available (consult factory).

Total Weight: 10.6 oz.

Plunger Weight: 1.8 oz.

| Model No.    | Part No.       | Duty Cycle   | Voltage | Resistance (Ω) | Power (W) | Current |
|--------------|----------------|--------------|---------|----------------|-----------|---------|
| LT12x13-I-12 | A420-064859-00 | Intermittent | 12VDC   | 5.9            | 25.6      | 2.03 A  |
| LT12x13-C-12 | A420-064858-00 | Continuous   | 12VDC   | 18.3           | 8.3       | 656 mA  |
| LT12x13-I-24 | A420-064861-00 | Intermittent | 24VDC   | 22             | 27.5      | 1.09 A  |
| LT12x13-C-24 | A420-064860-00 | Continuous   | 24VDC   | 71.2           | 8.5       | 337 mA  |

When ordering, please refer to Part No., as listed above.

Consult factory for custom configurations.

| Pull Force (oz.)  |       |       |       |       |       |       |       |       | Holding Force (oz.) |
|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|---------------------|
| Stroke (in.)      | 0.050 | 0.125 | 0.250 | 0.375 | 0.500 | 0.625 | 0.750 | 1.000 | -                   |
| Continuous Duty   | 90    | 45    | 20    | 15    | 5     | 3     | 1.5   | n/a   | 100                 |
| Intermittent Duty | 160   | 118   | 67    | 40    | 20    | 10    | 7     | n/a   | 144                 |

### UL Recognition

Recognized under the   
Component Recognition Program of  
**Underwriters Laboratories, Inc.**

### Continuous Duty

100% 'On' Time

### Intermittent Duty

25% 'On' Time, (100 Seconds 'On' Max.  
Followed By 300 Seconds 'Off' Min.)

### RoHS

These parts comply with **RoHS** Directive 2002/95/EC



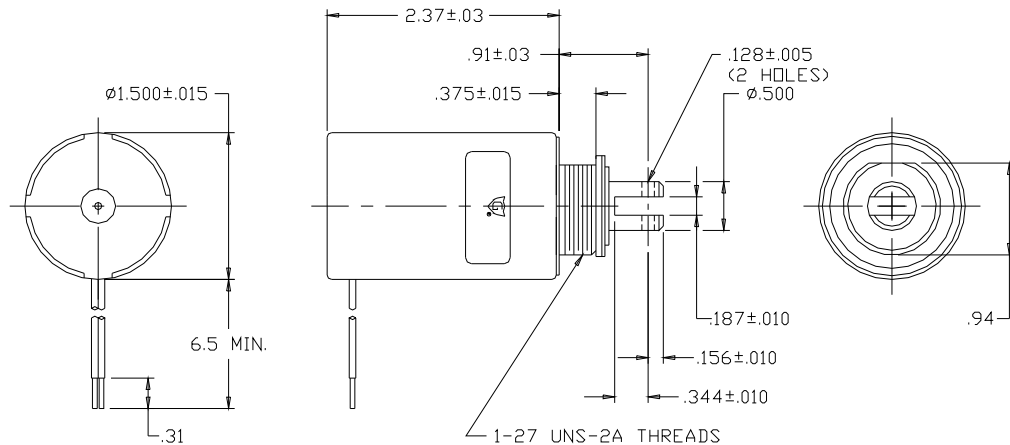
**GUARDIAN**  
Electric Manufacturing

**ISO 9001 / AS9100 Certified Company**

Woodstock, IL 60098 Ph. (815)334-3600 Fax (815)337-0377

Or visit us at our website [www.guardian-electric.com](http://www.guardian-electric.com)

## Model LT12 x 19 Long-Life DC Tubular Solenoid



Solenoid shown energized and fully seated.

Supplied with mounting bracket, hex nut and lockwasher (not shown).

Spring kits are available (consult factory).

Total Weight: 14.6 oz.

Plunger Weight: 2.2 oz.

| Model No.    | Part No.       | Duty Cycle   | Voltage | Resistance (Ω) | Power (W) | Current |
|--------------|----------------|--------------|---------|----------------|-----------|---------|
| LT12x19-I-12 | A420-064867-00 | Intermittent | 12VDC   | 4.6            | 32.4      | 2.58 A  |
| LT12x19-C-12 | A420-064866-00 | Continuous   | 12VDC   | 14.8           | 10.2      | 811 mA  |
| LT12x19-I-24 | A420-064869-00 | Intermittent | 24VDC   | 18.6           | 32.5      | 1.29 A  |
| LT12x19-C-24 | A420-064868-00 | Continuous   | 24VDC   | 71.8           | 8.4       | 334 mA  |

When ordering, please refer to Part No., as listed above.

Consult factory for custom configurations.

| Pull Force (oz.)  |       |       |       |       |       |       |       |       | Holding Force (oz.) |
|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|---------------------|
| Stroke (in.)      | 0.050 | 0.125 | 0.250 | 0.375 | 0.500 | 0.625 | 0.750 | 1.000 | -                   |
| Continuous Duty   | 110   | 70    | 32    | 20    | 15    | 8     | 5     | 3     | 139                 |
| Intermittent Duty | 170   | 140   | 97    | 75    | 45    | 35    | 20    | 10    | 160                 |

### UL Recognition

Recognized under the   
Component Recognition Program of  
**Underwriters Laboratories, Inc.**

### Continuous Duty

100% 'On' Time

### Intermittent Duty

25% 'On' Time, (100 Seconds 'On' Max.  
Followed By 300 Seconds 'Off' Min.)

### RoHS

These parts comply with **RoHS** Directive 2002/95/EC



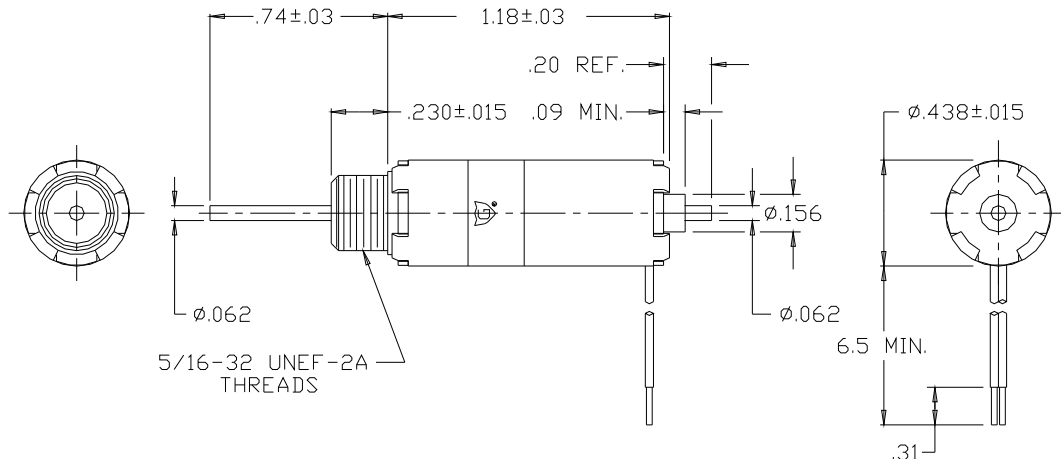
**GUARDIAN**  
Electric Manufacturing

**ISO 9001 / AS9100 Certified Company**

Woodstock, IL 60098 Ph. (815)334-3600 Fax (815)337-0377

Or visit us at our website [www.guardian-electric.com](http://www.guardian-electric.com)

## Model TP3.5 x 9 Push-Type DC Tubular Solenoid



Solenoid shown energized and fully seated.

Supplied with mounting bracket, hex nut and lockwasher (not shown).

Spring kits are available (consult factory).

Total Weight: .61 oz.

Plunger Weight: .1 oz.

| Model No.    | Part No.       | Duty Cycle   | Voltage | Resistance (Ω) | Power (W) | Current (mA) |
|--------------|----------------|--------------|---------|----------------|-----------|--------------|
| TP3.5x9-I-12 | A420-063496-02 | Intermittent | 12VDC   | 31.1           | 4.9       | 386          |
| TP3.5x9-C-12 | A420-063496-05 | Continuous   | 12VDC   | 60.2           | 2.5       | 199          |
| TP3.5x9-I-24 | A420-063496-04 | Intermittent | 24VDC   | 122            | 5         | 197          |
| TP3.5x9-C-24 | A420-063496-06 | Continuous   | 24VDC   | 254            | 2.4       | 94           |

When ordering, please refer to Part No., as listed above.

Consult factory for custom configurations.

| Push Force (oz.)  |       |       |       |       |       |       |       |       | Holding Force (oz.) |
|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|---------------------|
| Stroke (in.)      | 0.050 | 0.125 | 0.250 | 0.375 | 0.500 | 0.625 | 0.750 | 1.000 | -                   |
| Continuous Duty   | 3     | 1     | 0.5   | n/a   | n/a   | n/a   | n/a   | n/a   | 15                  |
| Intermittent Duty | 5     | 2     | 1     | n/a   | n/a   | n/a   | n/a   | n/a   | 17                  |

### UL Recognition

Recognized under the   
Component Recognition Program of  
**Underwriters Laboratories, Inc.**

### Continuous Duty

100% 'On' Time

### Intermittent Duty

25% 'On' Time, (100 Seconds 'On' Max.  
Followed By 300 Seconds 'Off' Min.)

### RoHS

These parts comply with **RoHS** Directive 2002/95/EC



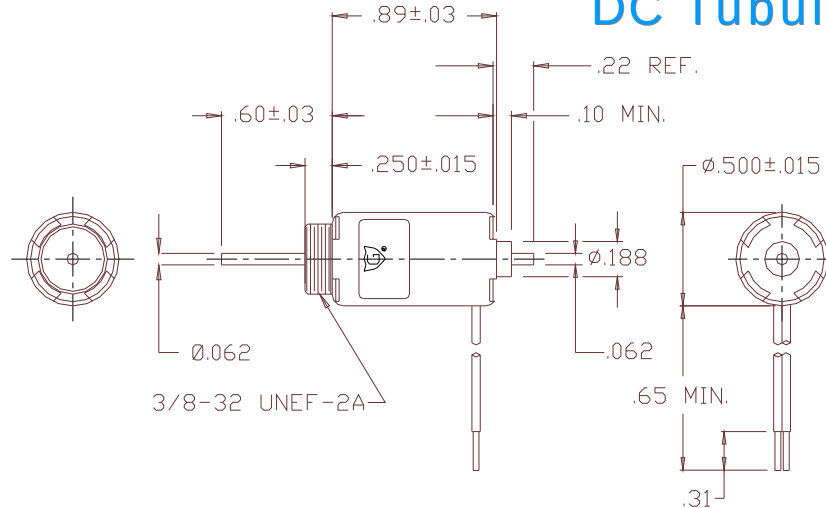
**GUARDIAN**  
Electric Manufacturing

**ISO 9001 / AS9100 Certified Company**

Woodstock, IL 60098 Ph. (815)334-3600 Fax (815)337-0377

Or visit us at our website [www.guardian-electric.com](http://www.guardian-electric.com)

## Model TP4 x 7 Push-Type DC Tubular Solenoid



Solenoid shown energized and fully seated.

Supplied with mounting bracket, hex nut and lockwasher (not shown).

Spring kits are available (consult factory).

Total Weight: .61 oz.

Plunger Weight: .1 oz.

| Model No.  | Part No.       | Duty Cycle   | Voltage | Resistance (Ω) | Power (W) | Current (mA) |
|------------|----------------|--------------|---------|----------------|-----------|--------------|
| TP4x7-I-12 | A420-066065-00 | Intermittent | 12VDC   | 32.3           | 4.5       | 372          |
| TP4x7-C-12 | A420-066067-00 | Continuous   | 12VDC   | 62.5           | 2.4       | 192          |
| TP4x7-I-24 | A420-066070-00 | Intermittent | 24VDC   | 131            | 4.6       | 183          |
| TP4x7-C-24 | A420-066069-00 | Continuous   | 24VDC   | 270            | 2.2       | 89           |

When ordering, please refer to Part No., as listed above.

Consult factory for custom configurations.

| Push Force (oz.)  |       |       |       |       |       |       |       |       | Holding Force (oz.) |
|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|---------------------|
| Stroke (in.)      | 0.050 | 0.125 | 0.250 | 0.375 | 0.500 | 0.625 | 0.750 | 1.000 | -                   |
| Continuous Duty   | 3     | 1     | 0.5   | n/a   | n/a   | n/a   | n/a   | n/a   | 16                  |
| Intermittent Duty | 6     | 2     | 1     | n/a   | n/a   | n/a   | n/a   | n/a   | 20                  |

### UL Recognition

Recognized under the   
Component Recognition Program of  
**Underwriters Laboratories, Inc.**

### Continuous Duty

100% 'On' Time

### Intermittent Duty

25% 'On' Time, (100 Seconds 'On' Max.  
Followed By 300 Seconds 'Off' Min.)

### RoHS

These parts comply with **RoHS** Directive 2002/95/EC



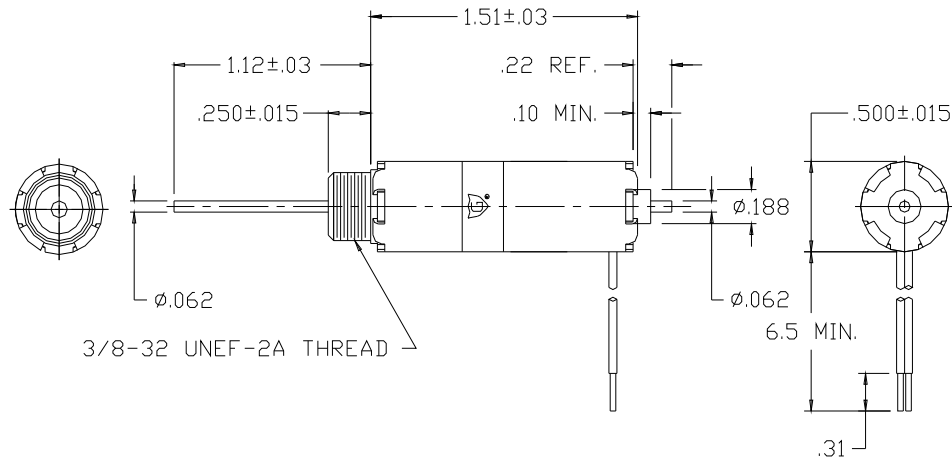
**GUARDIAN**  
Electric Manufacturing

**ISO 9001 / AS9100 Certified Company**

Woodstock, IL 60098 Ph. (815)334-3600 Fax (815)337-0377

Or visit us at our website [www.guardian-electric.com](http://www.guardian-electric.com)

## Model TP4 x 12 Push-Type DC Tubular Solenoid



Solenoid shown energized and fully seated.

Supplied with mounting bracket, hex nut and lockwasher (not shown).

Spring kits are available (consult factory).

Total Weight: 1.00 oz.

Plunger Weight: .28 oz.

| Model No.   | Part No.       | Duty Cycle   | Voltage | Resistance (Ω) | Power (W) | Current (mA) |
|-------------|----------------|--------------|---------|----------------|-----------|--------------|
| TP4x12-I-12 | A420-066076-00 | Intermittent | 12VDC   | 24.7           | 5.8       | 486          |
| TP4x12-C-12 | A420-066075-00 | Continuous   | 12VDC   | 49.8           | 2.9       | 241          |
| TP4x12-I-24 | A420-066078-00 | Intermittent | 24VDC   | 96.7           | 6.0       | 248          |
| TP4x12-C-24 | A420-066077-00 | Continuous   | 24VDC   | 195            | 3.0       | 123          |

When ordering, please refer to Part No., as listed above.

Consult factory for custom configurations.

| Push Force (oz.)  |       |       |       |       |       |       |       |       | Holding Force (oz.) |
|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|---------------------|
| Stroke (in.)      | 0.050 | 0.125 | 0.250 | 0.375 | 0.500 | 0.625 | 0.750 | 1.000 | -                   |
| Continuous Duty   | 4     | 2     | 1     | n/a   | n/a   | n/a   | n/a   | n/a   | 18                  |
| Intermittent Duty | 7     | 3     | 1     | n/a   | n/a   | n/a   | n/a   | n/a   | 20                  |

### UL Recognition

Recognized under the   
Component Recognition Program of  
**Underwriters Laboratories, Inc.**

### Continuous Duty

100% 'On' Time

### Intermittent Duty

25% 'On' Time, (100 Seconds 'On' Max.  
Followed By 300 Seconds 'Off' Min.)

### RoHS

These parts comply with **RoHS** Directive 2002/95/EC



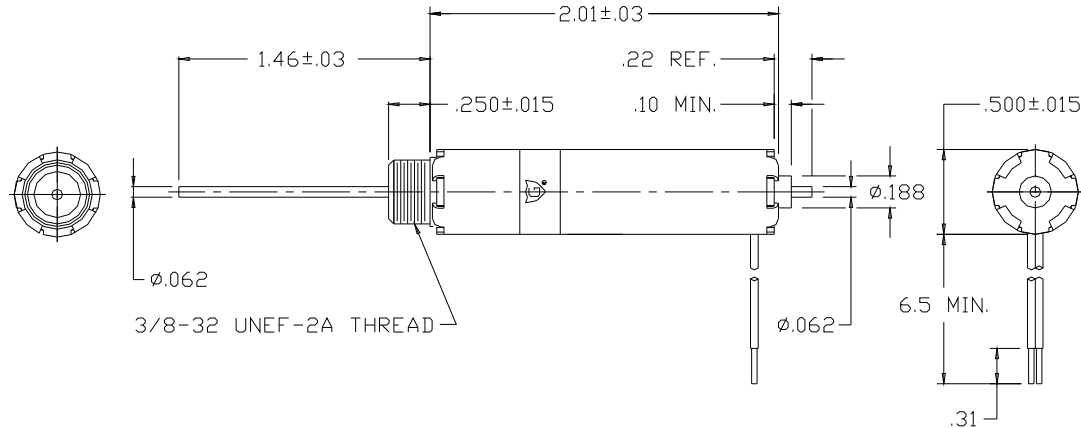
**GUARDIAN**  
Electric Manufacturing

**ISO 9001 / AS9100 Certified Company**

Woodstock, IL 60098 Ph. (815)334-3600 Fax (815)337-0377

Or visit us at our website [www.guardian-electric.com](http://www.guardian-electric.com)

## Model TP4 x 16 Push-Type DC Tubular Solenoid



Solenoid shown energized and fully seated.

Supplied with mounting bracket, hex nut and lockwasher (not shown).

Spring kits are available (consult factory).

Total Weight: 1.35 oz.

Plunger Weight: .36 oz.

| Model No.   | Part No.       | Duty Cycle   | Voltage | Resistance (Ω) | Power (W) | Current (mA) |
|-------------|----------------|--------------|---------|----------------|-----------|--------------|
| TP4x16-I-12 | A420-066084-00 | Intermittent | 12VDC   | 17.7           | 8.5       | 678          |
| TP4x16-C-12 | A420-066083-00 | Continuous   | 12VDC   | 45.1           | 3.4       | 266          |
| TP4x16-I-24 | A420-066086-00 | Intermittent | 24VDC   | 72.7           | 8.3       | 330          |
| TP4x16-C-24 | A420-066085-00 | Continuous   | 24VDC   | 173            | 3.5       | 139          |

When ordering, please refer to Part No., as listed above.

Consult factory for custom configurations.

| Push Force (oz.)  |       |       |       |       |       |       |       |       | Holding Force (oz.) |
|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|---------------------|
| Stroke (in.)      | 0.050 | 0.125 | 0.250 | 0.375 | 0.500 | 0.625 | 0.750 | 1.000 | -                   |
| Continuous Duty   | 4     | 2.5   | 1     | n/a   | n/a   | n/a   | n/a   | n/a   | 18                  |
| Intermittent Duty | 6.5   | 3     | 2     | n/a   | n/a   | n/a   | n/a   | n/a   | 22                  |

### UL Recognition

Recognized under the   
Component Recognition Program of  
**Underwriters Laboratories, Inc.**

### Continuous Duty

100% 'On' Time

### Intermittent Duty

25% 'On' Time, (100 Seconds 'On' Max.  
Followed By 300 Seconds 'Off' Min.)

### RoHS

These parts comply with **RoHS** Directive 2002/95/EC



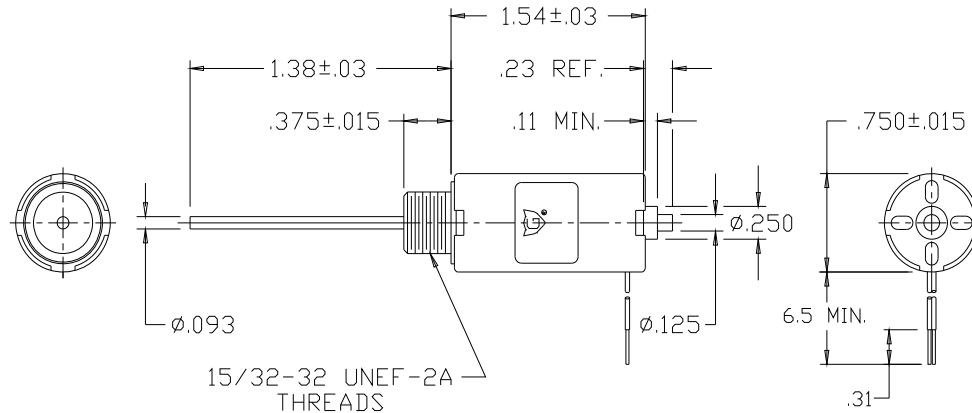
**GUARDIAN**  
Electric Manufacturing

**ISO 9001 / AS9100 Certified Company**

Woodstock, IL 60098 Ph. (815)334-3600 Fax (815)337-0377

Or visit us at our website [www.guardian-electric.com](http://www.guardian-electric.com)

## Model TP6 x 12 Push-Type DC Tubular Solenoid



Solenoid shown energized and fully seated.

Supplied with mounting bracket, hex nut and lockwasher (not shown).

Spring kits are available (consult factory).

Total Weight: 2.34 oz.

Plunger Weight: .42 oz.

| Model No.   | Part No.       | Duty Cycle   | Voltage | Resistance (Ω) | Power (W) | Current (mA) |
|-------------|----------------|--------------|---------|----------------|-----------|--------------|
| TP6x12-I-12 | A420-066092-00 | Intermittent | 12VDC   | 12.1           | 12.5      | 992          |
| TP6x12-C-12 | A420-066091-00 | Continuous   | 12VDC   | 31.7           | 4.8       | 379          |
| TP6x12-I-24 | A420-066094-00 | Intermittent | 24VDC   | 60.6           | 10.1      | 399          |
| TP6x12-C-24 | A420-066093-00 | Continuous   | 24VDC   | 121            | 5         | 198          |

When ordering, please refer to Part No., as listed above.

Consult factory for custom configurations.

| Push Force (oz.)  |       |       |       |       |       |       |       |       | Holding Force (oz.) |
|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|---------------------|
| Stroke (in.)      | 0.050 | 0.125 | 0.250 | 0.375 | 0.500 | 0.625 | 0.750 | 1.000 | -                   |
| Continuous Duty   | 13    | 7     | 4     | 2     | n/a   | n/a   | n/a   | n/a   | 38                  |
| Intermittent Duty | 19    | 10    | 7     | 5     | n/a   | n/a   | n/a   | n/a   | 43                  |

### UL Recognition

Recognized under the   
Component Recognition Program of  
**Underwriters Laboratories, Inc.**

### Continuous Duty

100% 'On' Time

### Intermittent Duty

25% 'On' Time, (100 Seconds 'On' Max.  
Followed By 300 Seconds 'Off' Min.)

### RoHS

These parts comply with **RoHS** Directive 2002/95/EC



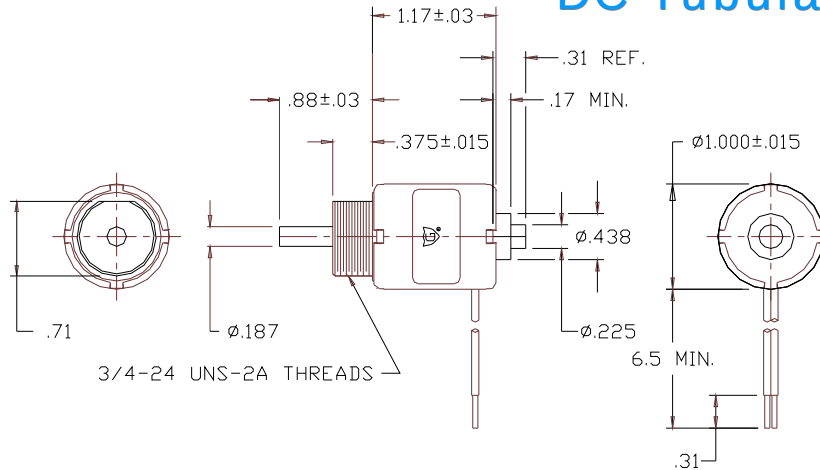
**GUARDIAN**  
Electric Manufacturing

**ISO 9001 / AS9100 Certified Company**

Woodstock, IL 60098 Ph. (815)334-3600 Fax (815)337-0377

Or visit us at our website [www.guardian-electric.com](http://www.guardian-electric.com)

## Model TP8 x 9 Push-Type DC Tubular Solenoid



Solenoid shown energized and fully seated.

Supplied with mounting bracket, hex nut and lockwasher (not shown).

Spring kits are available (consult factory).

Total Weight: 3.46 oz.

Plunger Weight: 2.20 oz.

| Model No.  | Part No.       | Duty Cycle   | Voltage | Resistance (Ω) | Power (W) | Current |
|------------|----------------|--------------|---------|----------------|-----------|---------|
| TP8x9-I-12 | A420-066673-00 | Intermittent | 12VDC   | 10.9           | 13.9      | 1.1 A   |
| TP8x9-C-12 | A420-066672-00 | Continuous   | 12VDC   | 35.5           | 4.3       | 338 mA  |
| TP8x9-I-24 | A420-066675-00 | Intermittent | 24VDC   | 44             | 13.7      | 545 mA  |
| TP8x9-C-24 | A420-066674-00 | Continuous   | 24VDC   | 135            | 4.5       | 178 mA  |

When ordering, please refer to Part No., as listed above.

Consult factory for custom configurations.

| Push Force (oz.)  |       |       |       |       |       |       |       |       | Holding Force (oz.) |
|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|---------------------|
| Stroke (in.)      | 0.050 | 0.125 | 0.250 | 0.375 | 0.500 | 0.625 | 0.750 | 1.000 | -                   |
| Continuous Duty   | 16    | 8     | 3     | 1     | n/a   | n/a   | n/a   | n/a   | 76                  |
| Intermittent Duty | 34    | 24    | 15    | 5     | 1     | n/a   | n/a   | n/a   | 123                 |

### UL Recognition

Recognized under the   
Component Recognition Program of  
**Underwriters Laboratories, Inc.**

### Continuous Duty

100% 'On' Time

### Intermittent Duty

25% 'On' Time, (100 Seconds 'On' Max.  
Followed By 300 Seconds 'Off' Min.)

### RoHS

These parts comply with **RoHS** Directive 2002/95/EC



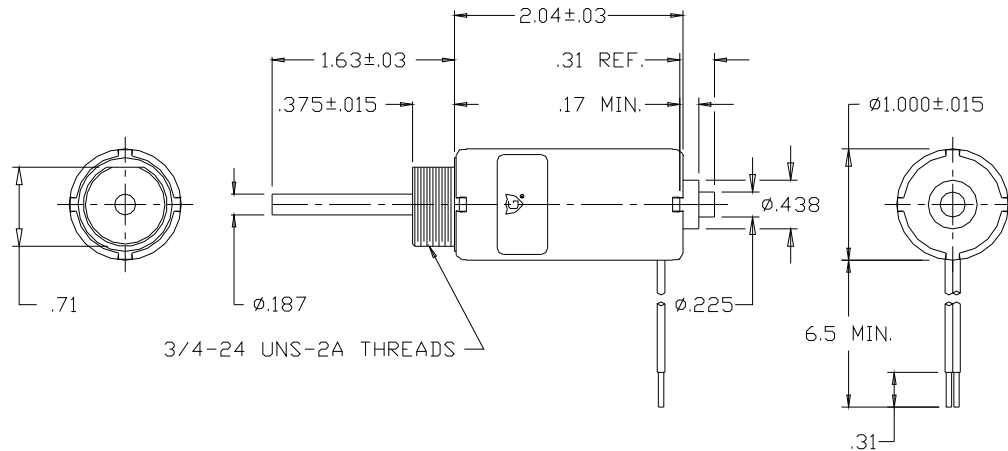
**GUARDIAN**  
Electric Manufacturing

**ISO 9001 / AS9100 Certified Company**

Woodstock, IL 60098 Ph. (815)334-3600 Fax (815)337-0377

Or visit us at our website [www.guardian-electric.com](http://www.guardian-electric.com)

## Model TP8 x 16 Push-Type DC Tubular Solenoid



Solenoid shown energized and fully seated.

Supplied with mounting bracket, hex nut and lockwasher (not shown).

Spring kits are available (consult factory).

Total Weight: 5.80 oz.

Plunger Weight: 1.57 oz.

| Model No.   | Part No.       | Duty Cycle   | Voltage | Resistance (Ω) | Power (W) | Current |
|-------------|----------------|--------------|---------|----------------|-----------|---------|
| TP8x16-I-12 | A420-066663-00 | Intermittent | 12VDC   | 9.3            | 16.3      | 1.29 A  |
| TP8x16-C-12 | A420-066662-00 | Continuous   | 12VDC   | 28.3           | 5.3       | 424 mA  |
| TP8x16-I-24 | A420-066665-00 | Intermittent | 24VDC   | 36.1           | 16.8      | 665 mA  |
| TP8x16-C-24 | A420-066664-00 | Continuous   | 24VDC   | 110            | 5.5       | 218 mA  |

When ordering, please refer to Part No., as listed above.

Consult factory for custom configurations.

| Push Force (oz.)  |       |       |       |       |       |       |       |       | Holding Force (oz.) |
|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|---------------------|
| Stroke (in.)      | 0.050 | 0.125 | 0.250 | 0.375 | 0.500 | 0.625 | 0.750 | 1.000 | -                   |
| Continuous Duty   | 24    | 14    | 9     | 4     | 3     | 2     | 1     | n/a   | 83                  |
| Intermittent Duty | 48    | 32    | 20    | 14    | 12    | 8     | 6     | n/a   | 100                 |

### UL Recognition

Recognized under the   
Component Recognition Program of  
**Underwriters Laboratories, Inc.**

### Continuous Duty

100% 'On' Time

### Intermittent Duty

25% 'On' Time, (100 Seconds 'On' Max.  
Followed By 300 Seconds 'Off' Min.)

### RoHS

These parts comply with **RoHS** Directive 2002/95/EC



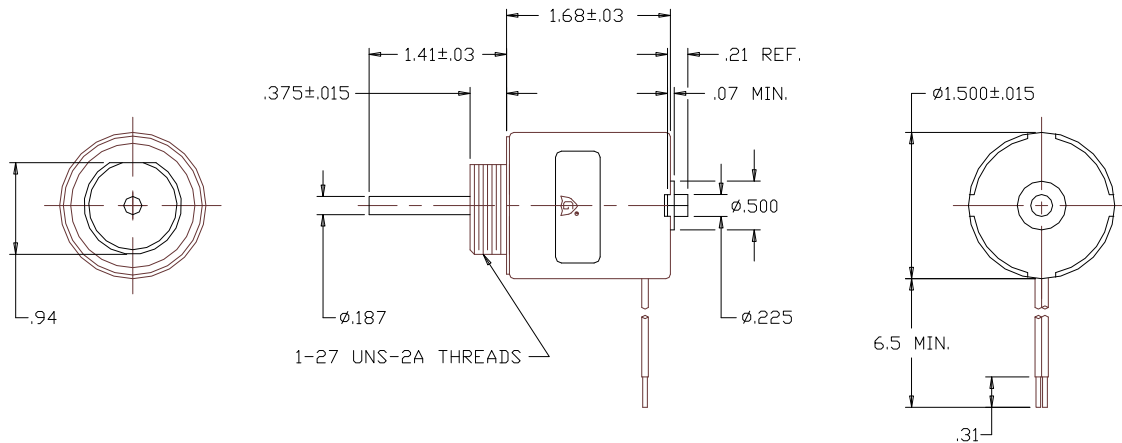
**GUARDIAN**  
Electric Manufacturing

**ISO 9001 / AS9100 Certified Company**

Woodstock, IL 60098 Ph. (815)334-3600 Fax (815)337-0377

Or visit us at our website [www.guardian-electric.com](http://www.guardian-electric.com)

## Model TP12 x 13 Push-Type DC Tubular Solenoid



Solenoid shown energized and fully seated.

Supplied with mounting bracket, hex nut and lockwasher (not shown).

Spring kits are available (consult factory).

Total Weight: 10.2 oz.

Plunger Weight: 1.65 oz.

| Model No.    | Part No.       | Duty Cycle   | Voltage | Resistance (Ω) | Power (W) | Current |
|--------------|----------------|--------------|---------|----------------|-----------|---------|
| TP12x13-I-12 | A422-064103-03 | Intermittent | 12VDC   | 7.3            | 20.7      | 1.64 A  |
| TP12x13-C-12 | A422-064103-04 | Continuous   | 12VDC   | 22.8           | 6.6       | 526 mA  |
| TP12x13-I-24 | A422-064103-01 | Intermittent | 24VDC   | 28.4           | 21.3      | 845 mA  |
| TP12x13-C-24 | A422-064103-02 | Continuous   | 24VDC   | 90.4           | 6.7       | 265 mA  |

When ordering, please refer to Part No., as listed above.

Consult factory for custom configurations.

| Push Force (oz.)  |       |       |       |       |       |       |       |       | Holding Force (oz.) |
|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|---------------------|
| Stroke (in.)      | 0.050 | 0.125 | 0.250 | 0.375 | 0.500 | 0.625 | 0.750 | 1.000 | -                   |
| Continuous Duty   | 64    | 32    | 20    | 15    | 4     | 2     | 1     | n/a   | 146                 |
| Intermittent Duty | 112   | 84    | 44    | 28    | 16    | 12    | 5     | n/a   | 168                 |

### UL Recognition

Recognized under the   
Component Recognition Program of  
**Underwriters Laboratories, Inc.**

### Continuous Duty

100% 'On' Time

### Intermittent Duty

25% 'On' Time, (100 Seconds 'On' Max.  
Followed By 300 Seconds 'Off' Min.)

### RoHS

These parts comply with **RoHS** Directive 2002/95/EC



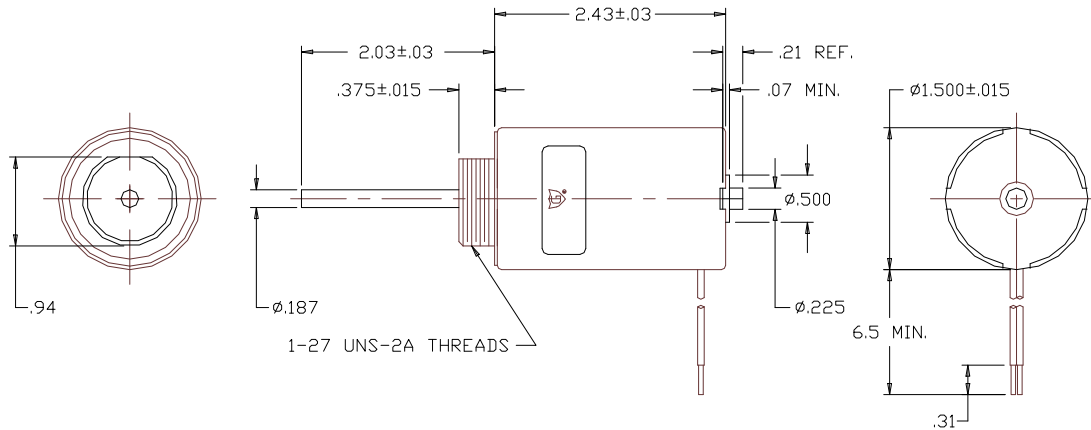
**GUARDIAN**  
Electric Manufacturing

**ISO 9001 / AS9100 Certified Company**

Woodstock, IL 60098 Ph. (815)334-3600 Fax (815)337-0377

Or visit us at our website [www.guardian-electric.com](http://www.guardian-electric.com)

## Model TP12 x 19 Push-Type DC Tubular Solenoid



Solenoid shown energized and fully seated.

Supplied with mounting bracket, hex nut and lockwasher (not shown).

Spring kits are available (consult factory).

Total Weight: 14.2 oz.

Plunger Weight: 2.20 oz.

| Model No.    | Part No.       | Duty Cycle   | Voltage | Resistance (Ω) | Power (W) | Current |
|--------------|----------------|--------------|---------|----------------|-----------|---------|
| TP12x19-I-12 | A422-064104-03 | Intermittent | 12VDC   | 5.6            | 27        | 2.15 A  |
| TP12x19-C-12 | A422-064104-04 | Continuous   | 12VDC   | 17.5           | 8.6       | 685 mA  |
| TP12x19-I-24 | A422-064104-01 | Intermittent | 24VDC   | 22.1           | 27.4      | 1.09 A  |
| TP12x19-C-24 | A422-064104-02 | Continuous   | 24VDC   | 68             | 8.9       | 353 mA  |

When ordering, please refer to Part No., as listed above.

Consult factory for custom configurations.

| Push Force (oz.)  |       |       |       |       |       |       |       |       | Holding Force (oz.) |
|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|---------------------|
| Stroke (in.)      | 0.050 | 0.125 | 0.250 | 0.375 | 0.500 | 0.625 | 0.750 | 1.000 | -                   |
| Continuous Duty   | 80    | 48    | 24    | 16    | 14    | 12    | 8     | 6     | 143                 |
| Intermittent Duty | 116   | 88    | 56    | 40    | 32    | 28    | 22    | 16    | 163                 |

### UL Recognition

Recognized under the   
Component Recognition Program of  
**Underwriters Laboratories, Inc.**

### Continuous Duty

100% 'On' Time

### Intermittent Duty

25% 'On' Time, (100 Seconds 'On' Max.  
Followed By 300 Seconds 'Off' Min.)

### RoHS

These parts comply with **RoHS** Directive 2002/95/EC



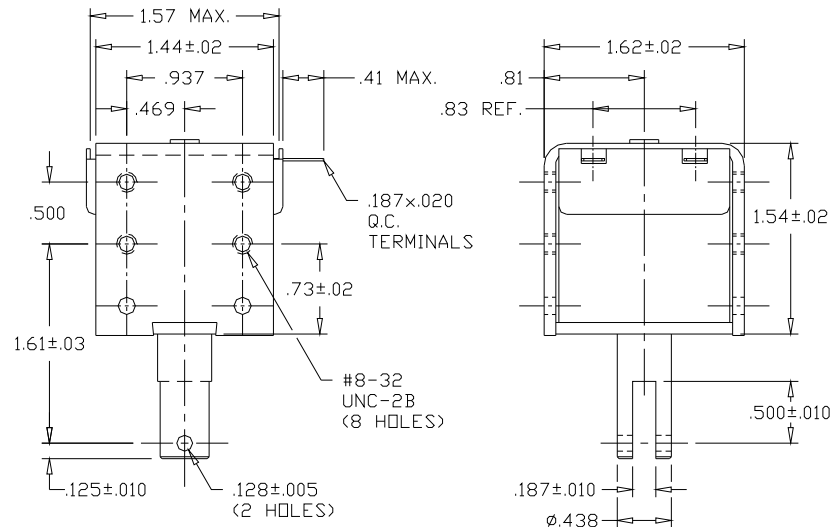
**GUARDIAN**  
Electric Manufacturing

**ISO 9001 / AS9100 Certified Company**

Woodstock, IL 60098 Ph. (815)334-3600 Fax (815)337-0377

Or visit us at our website [www.guardian-electric.com](http://www.guardian-electric.com)

## Model 2 DC Frame Solenoid



Solenoid shown energized and fully seated.

Spring kits are available (consult factory).

Total Weight: 9.5 oz.

Plunger Weight: 1.1 oz.

| Model No. | Part No.       | Duty Cycle   | Voltage | Resistance (Ω) | Power (W) | Current |
|-----------|----------------|--------------|---------|----------------|-----------|---------|
| 2-I-12D   | A420-065513-00 | Intermittent | 12VDC   | 5.8            | 26.1      | 2.07 A  |
| 2-C-12D   | A420-065512-00 | Continuous   | 12VDC   | 18.1           | 8.4       | 663 mA  |
| 2-I-24D   | A420-065515-00 | Intermittent | 24VDC   | 22.6           | 26.8      | 1.06 A  |
| 2-C-24D   | A420-065514-00 | Continuous   | 24VDC   | 71             | 8.5       | 338 mA  |

When ordering, please refer to Part No., as listed above.

Consult factory for custom configurations.

| Pull Force (oz.)  |       |       |       |       |       |       |       |       | Holding Force (oz.) |
|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|---------------------|
| Stroke (in.)      | 0.050 | 0.125 | 0.250 | 0.375 | 0.500 | 0.625 | 0.750 | 1.000 | -                   |
| Continuous Duty   | 95    | 48    | 15    | 8     | 4     | 2     | 1     | n/a   | 145                 |
| Intermittent Duty | 125   | 93    | 70    | 32    | 20    | 15    | 12    | 10    | 181                 |

### UL Recognition

Recognized under the   
Component Recognition Program of  
**Underwriters Laboratories, Inc.**

### Continuous Duty

100% 'On' Time

### Intermittent Duty

25% 'On' Time, (100 Seconds 'On' Max.  
Followed By 300 Seconds 'Off' Min.)

### RoHS

These parts comply with **RoHS** Directive 2002/95/EC



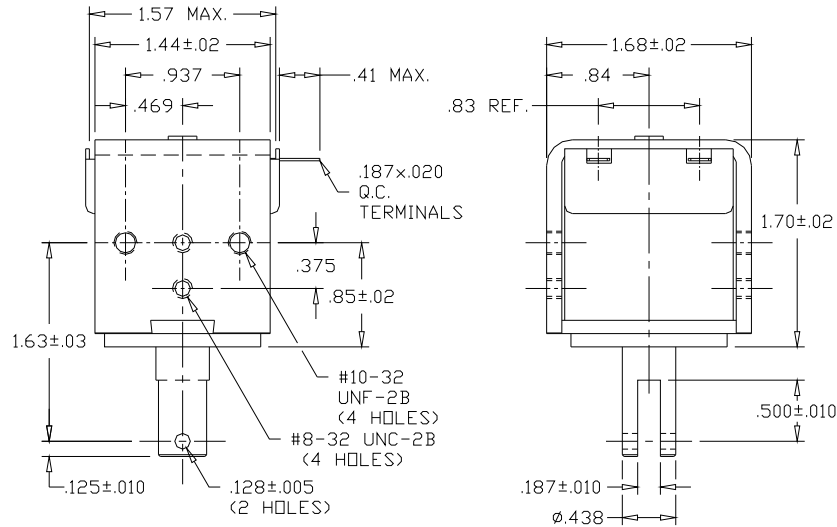
**GUARDIAN**  
Electric Manufacturing

**ISO 9001 / AS9100 Certified Company**

Woodstock, IL 60098 Ph. (815)334-3600 Fax (815)337-0377

Or visit us at our website [www.guardian-electric.com](http://www.guardian-electric.com)

## Model 2HD DC Frame Solenoid



Solenoid shown energized and fully seated.

Spring kits are available (consult factory).

Total Weight: 11.7 oz.

Plunger Weight: 1.2 oz.

| Model No. | Part No.       | Duty Cycle   | Voltage | Resistance (Ω) | Power (W) | Current |
|-----------|----------------|--------------|---------|----------------|-----------|---------|
| 2HD-I-12D | A420-065493-00 | Intermittent | 12VDC   | 5.8            | 26.1      | 2.07 A  |
| 2HD-C-12D | A420-065492-00 | Continuous   | 12VDC   | 18.1           | 8.4       | 663 mA  |
| 2HD-I-24D | A420-065495-00 | Intermittent | 24VDC   | 22.6           | 26.8      | 1.06 A  |
| 2HD-C-24D | A420-065494-00 | Continuous   | 24VDC   | 71             | 8.5       | 338 mA  |

When ordering, please refer to Part No., as listed above.

Consult factory for custom configurations.

| Pull Force (oz.)  |       |       |       |       |       |       |       |       | Holding Force (oz.) |
|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|---------------------|
| Stroke (in.)      | 0.050 | 0.125 | 0.250 | 0.375 | 0.500 | 0.625 | 0.750 | 1.000 | -                   |
| Continuous Duty   | 100   | 48    | 15    | 8     | 4     | 2     | 1     | n/a   | 155                 |
| Intermittent Duty | 135   | 93    | 70    | 32    | 20    | 15    | 12    | 10    | 191                 |

### UL Recognition

Recognized under the   
Component Recognition Program of  
**Underwriters Laboratories, Inc.**

### Continuous Duty

100% 'On' Time

### Intermittent Duty

25% 'On' Time, (100 Seconds 'On' Max.  
Followed By 300 Seconds 'Off' Min.)

### RoHS

These parts comply with **RoHS** Directive 2002/95/EC



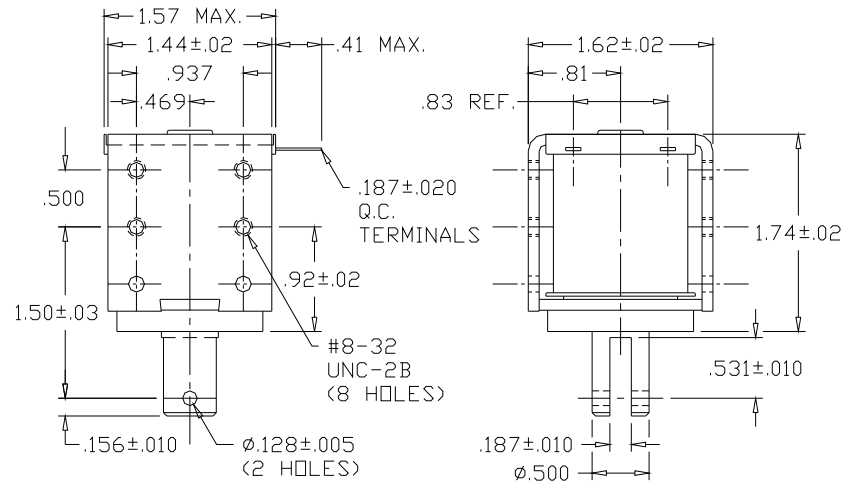
**GUARDIAN**  
Electric Manufacturing

**ISO 9001 / AS9100 Certified Company**

Woodstock, IL 60098 Ph. (815)334-3600 Fax (815)337-0377

Or visit us at our website [www.guardian-electric.com](http://www.guardian-electric.com)

## Model 3HD DC Frame Solenoid



Solenoid shown energized and fully seated.

Spring kits are available (consult factory).

Total Weight: 10.70 oz.

Plunger Weight: 1.53 oz.

| Model No. | Part No.       | Duty Cycle   | Voltage | Resistance (Ω) | Power (W) | Current |
|-----------|----------------|--------------|---------|----------------|-----------|---------|
| 3HD-I-12D | A420-065923-00 | Intermittent | 12VDC   | 5.45           | 27.7      | 2.2 A   |
| 3HD-C-12D | A420-065922-00 | Continuous   | 12VDC   | 16.7           | 9.1       | 719 mA  |
| 3HD-I-24D | A420-065925-00 | Intermittent | 24VDC   | 22.1           | 27.4      | 1.09 A  |
| 3HD-C-24D | A420-065924-00 | Continuous   | 24VDC   | 65.8           | 9.2       | 365 mA  |

When ordering, please refer to Part No., as listed above.

Consult factory for custom configurations.

| Pull Force (oz.)  |       |       |       |       |       |       |       |       | Holding Force (oz.) |
|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|---------------------|
| Stroke (in.)      | 0.050 | 0.125 | 0.250 | 0.375 | 0.500 | 0.625 | 0.750 | 1.000 | -                   |
| Continuous Duty   | 115   | 55    | 20    | 10    | 8     | 4     | 2     | 1     | 145                 |
| Intermittent Duty | 165   | 107   | 60    | 40    | 30    | 15    | 12    | 5     | 181                 |

### UL Recognition

Recognized under the   
Component Recognition Program of  
**Underwriters Laboratories, Inc.**

### Continuous Duty

100% 'On' Time

### Intermittent Duty

25% 'On' Time, (100 Seconds 'On' Max.  
Followed By 300 Seconds 'Off' Min.)

### RoHS

These parts comply with **RoHS** Directive 2002/95/EC



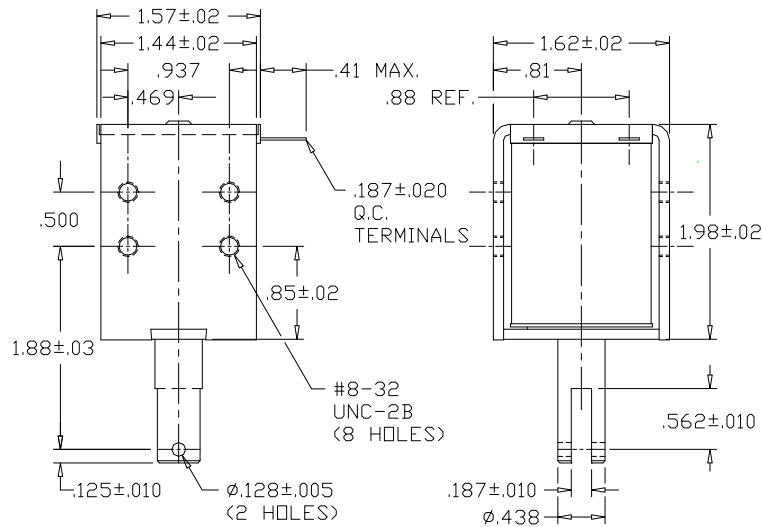
**GUARDIAN**  
Electric Manufacturing

**ISO 9001 / AS9100 Certified Company**

Woodstock, IL 60098 Ph. (815)334-3600 Fax (815)337-0377

Or visit us at our website [www.guardian-electric.com](http://www.guardian-electric.com)

## Model 4 DC Frame Solenoid



Solenoid shown energized and fully seated.

Spring kits are available (consult factory).

Total Weight: 12.6 oz.

Plunger Weight: 1.6 oz.

| Model No. | Part No.       | Duty Cycle   | Voltage | Resistance ( $\Omega$ ) | Power (W) | Current |
|-----------|----------------|--------------|---------|-------------------------|-----------|---------|
| 4-I-12D   | A420-065943-00 | Intermittent | 12VDC   | 3.96                    | 38.2      | 3.03 A  |
| 4-C-12D   | A420-065942-00 | Continuous   | 12VDC   | 15.8                    | 9.6       | 759 mA  |
| 4-I-24D   | A420-065945-00 | Intermittent | 24VDC   | 15.8                    | 38.3      | 1.52 A  |
| 4-C-24D   | A420-065944-00 | Continuous   | 24VDC   | 61.3                    | 9.9       | 392 mA  |

When ordering, please refer to Part No., as listed above.

Consult factory for custom configurations.

| Pull Force (oz.)  |       |       |       |       |       |       |       |       | Holding Force (oz.) |
|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|---------------------|
| Stroke (in.)      | 0.050 | 0.125 | 0.250 | 0.375 | 0.500 | 0.625 | 0.750 | 1.000 | -                   |
| Continuous Duty   | 100   | 60    | 20    | 14    | 9     | 5     | 3     | 1     | 155                 |
| Intermittent Duty | 140   | 112   | 97    | 60    | 40    | 27    | 22    | 20    | 181                 |

### UL Recognition

Recognized under the   
Component Recognition Program of  
**Underwriters Laboratories, Inc.**

### Continuous Duty

100% 'On' Time

### Intermittent Duty

25% 'On' Time, (100 Seconds 'On' Max.  
Followed By 300 Seconds 'Off' Min.)

### RoHS

These parts comply with **RoHS** Directive 2002/95/EC



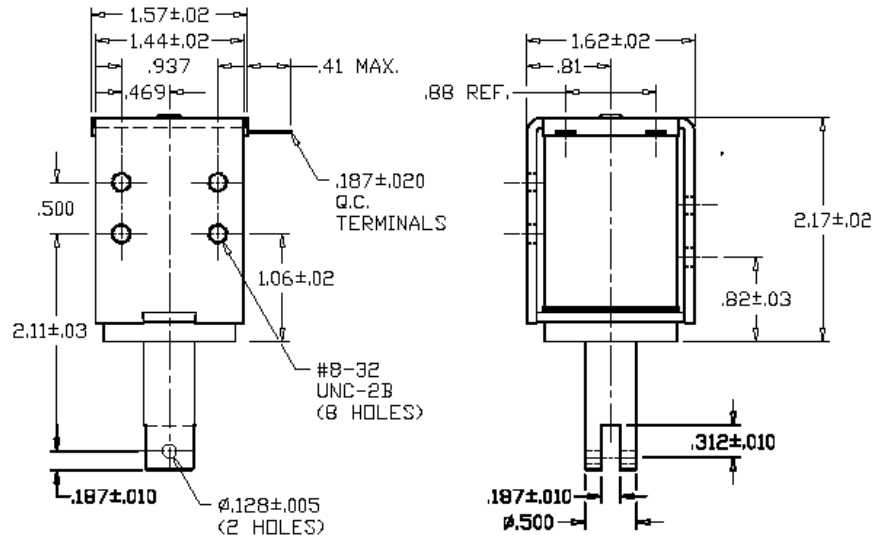
**GUARDIAN**  
Electric Manufacturing

**ISO 9001 / AS9100 Certified Company**

Woodstock, IL 60098 Ph. (815)334-3600 Fax (815)337-0377

Or visit us at our website [www.guardian-electric.com](http://www.guardian-electric.com)

## Model 4HD DC Frame Solenoid



Solenoid shown energized and fully seated.

Spring kits are available (consult factory).

Total Weight: 14.1 oz.

Plunger Weight: 2.4 oz.

| Model No. | Part No.       | Duty Cycle   | Voltage | Resistance (Ω) | Power (W) | Current |
|-----------|----------------|--------------|---------|----------------|-----------|---------|
| 4HD-I-12D | A420-065433-00 | Intermittent | 12VDC   | 4.68           | 32.3      | 2.6 A   |
| 4HD-C-12D | A420-065432-00 | Continuous   | 12VDC   | 14.8           | 10.2      | 811 mA  |
| 4HD-I-24D | A420-065435-00 | Intermittent | 24VDC   | 18.9           | 32        | 1.27 A  |
| 4HD-C-24D | A420-065434-00 | Continuous   | 24VDC   | 57.5           | 10.5      | 417 mA  |

When ordering, please refer to Part No., as listed above.

Consult factory for custom configurations.

| Pull Force (oz.)  |       |       |       |       |       |       |       |       | Holding Force (oz.) |
|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|---------------------|
| Stroke (in.)      | 0.050 | 0.125 | 0.250 | 0.375 | 0.500 | 0.625 | 0.750 | 1.000 | -                   |
| Continuous Duty   | 125   | 92    | 50    | 33    | 20    | 10    | 8     | 5     | 204                 |
| Intermittent Duty | 165   | 130   | 85    | 60    | 40    | 30    | 22    | 20    | 235                 |

### UL Recognition

Recognized under the   
Component Recognition Program of  
**Underwriters Laboratories, Inc.**

### Continuous Duty

100% 'On' Time

### Intermittent Duty

25% 'On' Time, (100 Seconds 'On' Max.  
Followed By 300 Seconds 'Off' Min.)

### RoHS

These parts comply with **RoHS** Directive 2002/95/EC



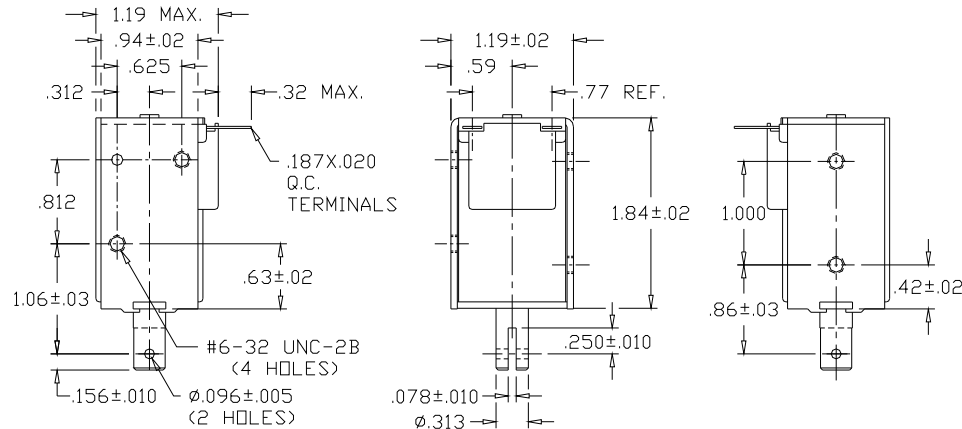
**GUARDIAN**  
Electric Manufacturing

**ISO 9001 / AS9100 Certified Company**

Woodstock, IL 60098 Ph. (815)334-3600 Fax (815)337-0377

Or visit us at our website [www.guardian-electric.com](http://www.guardian-electric.com)

## Model 11 DC Frame Solenoid



Solenoid shown energized and fully seated.

Spring kits are available (consult factory).

Total Weight: 5.3 oz.

Plunger Weight: .6 oz.

| Model No. | Part No.       | Duty Cycle   | Voltage | Resistance ( $\Omega$ ) | Power (W) | Current |
|-----------|----------------|--------------|---------|-------------------------|-----------|---------|
| 11-I-12D  | A420-065573-00 | Intermittent | 12VDC   | 7.5                     | 20.2      | 1.6 A   |
| 11-C-12D  | A420-065572-00 | Continuous   | 12VDC   | 18.4                    | 8.2       | 652 mA  |
| 11-I-24D  | A420-065575-00 | Intermittent | 24VDC   | 29.1                    | 20.8      | 825 mA  |
| 11-C-24D  | A420-065574-00 | Continuous   | 24VDC   | 93.1                    | 6.5       | 258 mA  |

When ordering, please refer to Part No., as listed above.

Consult factory for custom configurations.

| Pull Force (oz.)  |       |       |       |       |       |       |       |       | Holding Force (oz.) |
|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|---------------------|
| Stroke (in.)      | 0.050 | 0.125 | 0.250 | 0.375 | 0.500 | 0.625 | 0.750 | 1.000 | -                   |
| Continuous Duty   | 35    | 21    | 10    | 6     | 4     | 2     | 1     | n/a   | 82                  |
| Intermittent Duty | 58    | 46    | 27    | 18    | 10    | 8     | 6     | 5     | 93                  |

### UL Recognition

Recognized under the   
Component Recognition Program of  
**Underwriters Laboratories, Inc.**

### Continuous Duty

100% 'On' Time

### Intermittent Duty

25% 'On' Time, (100 Seconds 'On' Max.  
Followed By 300 Seconds 'Off' Min.)

### RoHS

These parts comply with **RoHS** Directive 2002/95/EC



# GUARDIAN

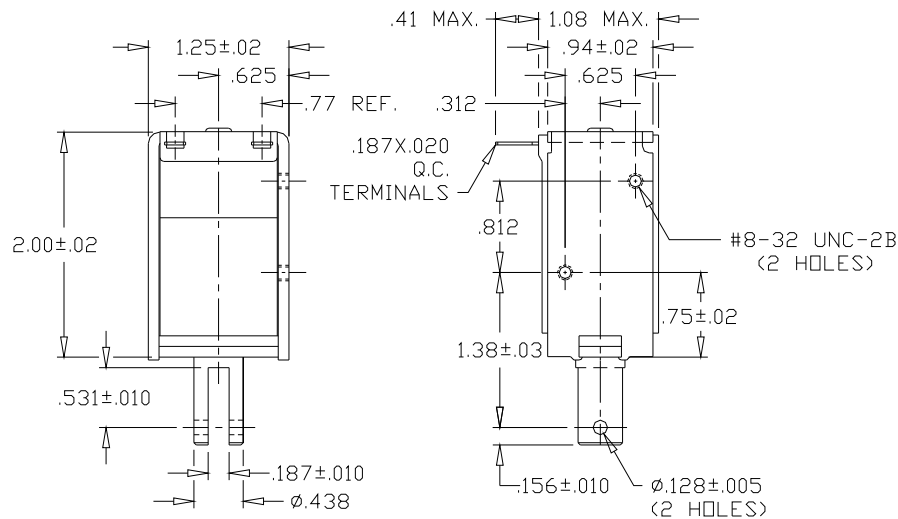
Electric Manufacturing

**ISO 9001 / AS9100 Certified Company**

Woodstock, IL 60098 Ph. (815)334-3600 Fax (815)337-0377

Or visit us at our website [www.guardian-electric.com](http://www.guardian-electric.com)

## Model 11HD DC Frame Solenoid



Solenoid shown energized and fully seated.

Spring kits are available (consult factory).

Total Weight: 6.6 oz.

Plunger Weight: 1.3 oz.

| Model No.  | Part No.       | Duty Cycle   | Voltage | Resistance (Ω) | Power (W) | Current |
|------------|----------------|--------------|---------|----------------|-----------|---------|
| 11HD-I-12D | A420-065763-00 | Intermittent | 12VDC   | 7.78           | 19.4      | 1.5 A   |
| 11HD-C-12D | A420-065762-00 | Continuous   | 12VDC   | 19             | 8         | 632 mA  |
| 11HD-I-24D | A420-065765-00 | Intermittent | 24VDC   | 29.3           | 20.6      | 819 mA  |
| 11HD-C-24D | A420-065764-00 | Continuous   | 24VDC   | 76.3           | 7.9       | 315 mA  |

When ordering, please refer to Part No., as listed above.

Consult factory for custom configurations.

| Pull Force (oz.)  |       |       |       |       |       |       |       |       | Holding Force (oz.) |
|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|---------------------|
| Stroke (in.)      | 0.050 | 0.125 | 0.250 | 0.375 | 0.500 | 0.625 | 0.750 | 1.000 | -                   |
| Continuous Duty   | 70    | 35    | 14    | 8     | 5     | 3     | 2     | 1     | 150                 |
| Intermittent Duty | 100   | 73    | 35    | 22    | 18    | 10    | 7     | 5     | 168                 |

### UL Recognition

Recognized under the   
Component Recognition Program of  
**Underwriters Laboratories, Inc.**

### Continuous Duty

100% 'On' Time

### Intermittent Duty

25% 'On' Time, (100 Seconds 'On' Max.  
Followed By 300 Seconds 'Off' Min.)

### RoHS

These parts comply with **RoHS** Directive 2002/95/EC



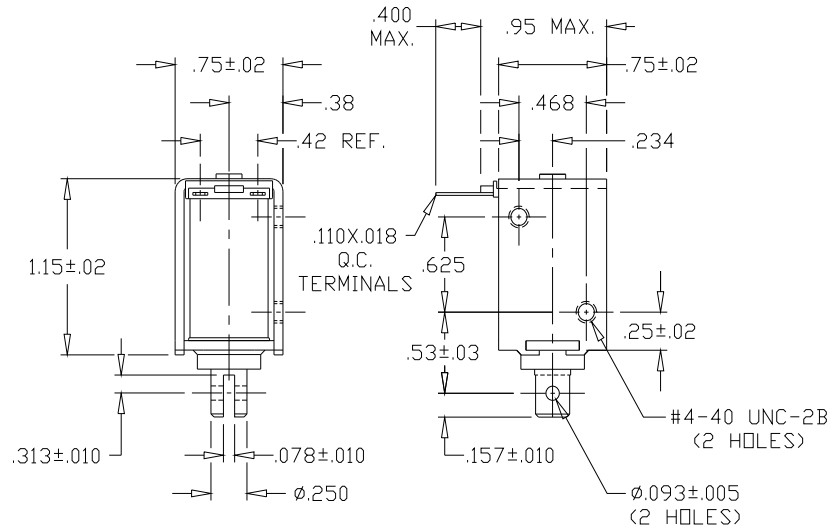
**GUARDIAN**  
Electric Manufacturing

**ISO 9001 / AS9100 Certified Company**

Woodstock, IL 60098 Ph. (815)334-3600 Fax (815)337-0377

Or visit us at our website [www.guardian-electric.com](http://www.guardian-electric.com)

## Model 22 DC Frame Solenoid



Solenoid shown energized and fully seated.

Spring kits are available (consult factory).

Total Weight: 1.6 oz.

Plunger Weight: .2 oz.

| Model No. | Part No.       | Duty Cycle   | Voltage | Resistance ( $\Omega$ ) | Power (W) | Current (mA) |
|-----------|----------------|--------------|---------|-------------------------|-----------|--------------|
| 22-I-12D  | A420-065803-00 | Intermittent | 12VDC   | 22.6                    | 6.7       | 531          |
| 22-C-12D  | A420-065802-00 | Continuous   | 12VDC   | 45.7                    | 3.3       | 263          |
| 22-I-24D  | A420-065805-00 | Intermittent | 24VDC   | 93.2                    | 6.5       | 258          |
| 22-C-24D  | A420-065804-00 | Continuous   | 24VDC   | 182                     | 3.3       | 132          |

When ordering, please refer to Part No., as listed above.

Consult factory for custom configurations.

| Pull Force (oz.)  |       |       |       |       |       |       |       |       | Holding Force (oz.) |
|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|---------------------|
| Stroke (in.)      | 0.050 | 0.125 | 0.250 | 0.375 | 0.500 | 0.625 | 0.750 | 1.000 | -                   |
| Continuous Duty   | 11    | 3     | 2     | 1     | n/a   | n/a   | n/a   | n/a   | 39                  |
| Intermittent Duty | 20    | 8     | 3     | 2     | 1     | n/a   | n/a   | n/a   | 45                  |

### UL Recognition

Recognized under the   
Component Recognition Program of  
**Underwriters Laboratories, Inc.**

### Continuous Duty

100% 'On' Time

### Intermittent Duty

25% 'On' Time, (100 Seconds 'On' Max.  
Followed By 300 Seconds 'Off' Min.)

### RoHS

These parts comply with **RoHS** Directive 2002/95/EC



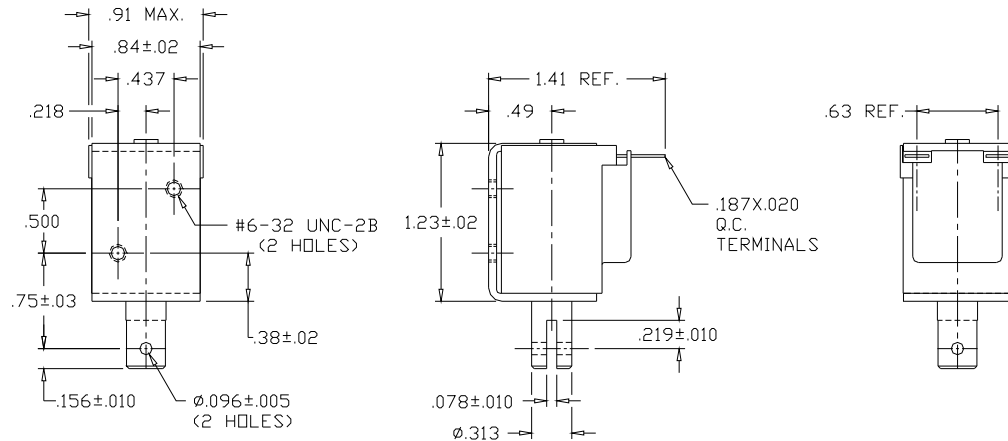
**GUARDIAN**  
Electric Manufacturing

**ISO 9001 / AS9100 Certified Company**

Woodstock, IL 60098 Ph. (815)334-3600 Fax (815)337-0377

Or visit us at our website [www.guardian-electric.com](http://www.guardian-electric.com)

## Model 24 DC Frame Solenoid



Solenoid shown energized and fully seated.

Spring kits are available (consult factory).

Total Weight: 2.40 oz.

Plunger Weight: .45 oz.

| Model No. | Part No.       | Duty Cycle   | Voltage | Resistance (Ω) | Power (W) | Current (mA) |
|-----------|----------------|--------------|---------|----------------|-----------|--------------|
| 24-I-12D  | A420-065823-00 | Intermittent | 12VDC   | 13.8           | 11        | 870          |
| 24-C-12D  | A420-065822-00 | Continuous   | 12VDC   | 35.5           | 4.3       | 338          |
| 24-I-24D  | A420-065825-00 | Intermittent | 24VDC   | 53.9           | 11.2      | 445          |
| 24-C-24D  | A420-065824-00 | Continuous   | 24VDC   | 137            | 4.4       | 175          |

When ordering, please refer to Part No., as listed above.

Consult factory for custom configurations.

| Pull Force (oz.)  |       |       |       |       |       |       |       |       | Holding Force (oz.) |
|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|---------------------|
| Stroke (in.)      | 0.050 | 0.125 | 0.250 | 0.375 | 0.500 | 0.625 | 0.750 | 1.000 | -                   |
| Continuous Duty   | 15    | 6     | 4     | 2     | 1     | n/a   | n/a   | n/a   | 48                  |
| Intermittent Duty | 33    | 18    | 9     | 4     | 2     | n/a   | n/a   | n/a   | 65                  |

### UL Recognition

Recognized under the   
Component Recognition Program of  
**Underwriters Laboratories, Inc.**

### Continuous Duty

100% 'On' Time

### Intermittent Duty

25% 'On' Time, (100 Seconds 'On' Max.  
Followed By 300 Seconds 'Off' Min.)

### RoHS

These parts comply with **RoHS** Directive 2002/95/EC



# GUARDIAN

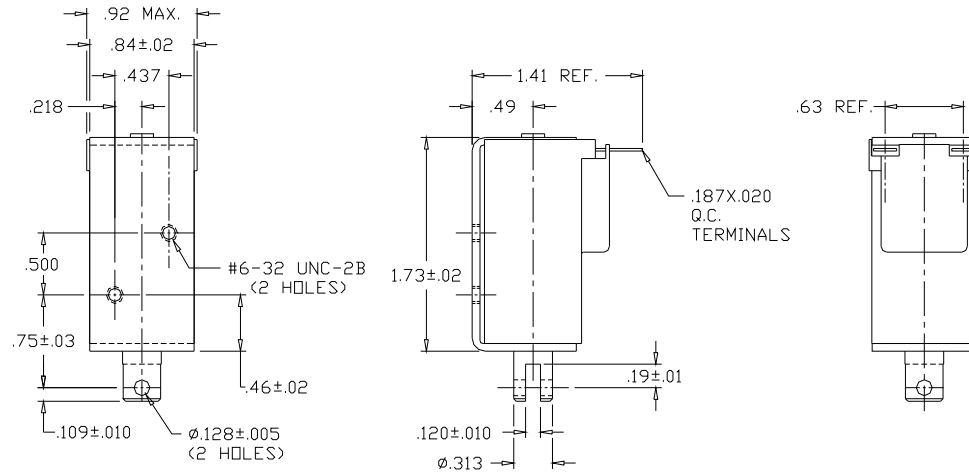
Electric Manufacturing

**ISO 9001 / AS9100 Certified Company**

Woodstock, IL 60098 Ph. (815)334-3600 Fax (815)337-0377

Or visit us at our website [www.guardian-electric.com](http://www.guardian-electric.com)

## Model 26 DC Frame Solenoid



Solenoid shown energized and fully seated.

Total Weight: 3.2 oz.

Plunger Weight: .5 oz.

| Model No. | Part No.       | Duty Cycle   | Voltage | Resistance (Ω) | Power (W) | Current |
|-----------|----------------|--------------|---------|----------------|-----------|---------|
| 26-I-12D  | A420-065543-00 | Intermittent | 12VDC   | 10.7           | 14.1      | 1.1 A   |
| 26-C-12D  | A420-065542-00 | Continuous   | 12VDC   | 26.7           | 5.7       | 449 mA  |
| 26-I-24D  | A420-065545-00 | Intermittent | 24VDC   | 41.5           | 14.6      | 578 mA  |
| 26-C-24D  | A420-065544-00 | Continuous   | 24VDC   | 104            | 5.8       | 231 mA  |

When ordering, please refer to Part No., as listed above.

Consult factory for custom configurations.

| Pull Force (oz.)  |       |       |       |       |       |       |       |       | Holding Force (oz.) |
|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|---------------------|
| Stroke (in.)      | 0.050 | 0.125 | 0.250 | 0.375 | 0.500 | 0.625 | 0.750 | 1.000 | -                   |
| Continuous Duty   | 25    | 12    | 5     | 3     | 2     | 1     | n/a   | n/a   | 58                  |
| Intermittent Duty | 30    | 24    | 16    | 13    | 12    | 6     | 3     | 2     | 75                  |

### UL Recognition

Recognized under the   
Component Recognition Program of  
**Underwriters Laboratories, Inc.**

### Continuous Duty

100% 'On' Time

### Intermittent Duty

25% 'On' Time, (100 Seconds 'On' Max.  
Followed By 300 Seconds 'Off' Min.)

### RoHS

These parts comply with **RoHS** Directive 2002/95/EC



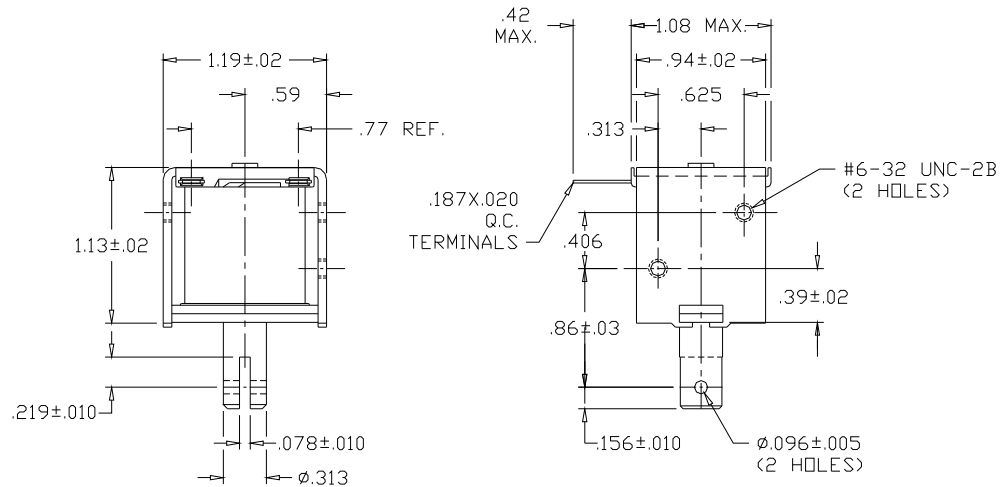
**GUARDIAN**  
Electric Manufacturing

**ISO 9001 / AS9100 Certified Company**

Woodstock, IL 60098 Ph. (815)334-3600 Fax (815)337-0377

Or visit us at our website [www.guardian-electric.com](http://www.guardian-electric.com)

## Model 28 DC Frame Solenoid



Solenoid shown energized and fully seated.

Spring kits are available (consult factory).

Total Weight: 3.5 oz.

Plunger Weight: .5 oz.

| Model No. | Part No.       | Duty Cycle   | Voltage | Resistance (Ω) | Power (W) | Current |
|-----------|----------------|--------------|---------|----------------|-----------|---------|
| 28-I-12D  | A420-065453-00 | Intermittent | 12VDC   | 11.9           | 12.7      | 1.01 A  |
| 28-C-12D  | A420-065452-00 | Continuous   | 12VDC   | 29.8           | 5.1       | 403 mA  |
| 28-I-24D  | A420-065455-00 | Intermittent | 24VDC   | 47.4           | 12.8      | 506 mA  |
| 28-C-24D  | A420-065454-00 | Continuous   | 24VDC   | 116            | 5.2       | 207 mA  |

When ordering, please refer to Part No., as listed above.

Consult factory for custom configurations.

| Pull Force (oz.)  |       |       |       |       |       |       |       |       | Holding Force (oz.) |
|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|---------------------|
| Stroke (in.)      | 0.050 | 0.125 | 0.250 | 0.375 | 0.500 | 0.625 | 0.750 | 1.000 | -                   |
| Continuous Duty   | 25    | 10    | 4     | 2     | 1     | n/a   | n/a   | n/a   | 76                  |
| Intermittent Duty | 40    | 12    | 7     | 4     | 2     | n/a   | n/a   | n/a   | 92                  |

### UL Recognition

Recognized under the   
Component Recognition Program of  
**Underwriters Laboratories, Inc.**

### Continuous Duty

100% 'On' Time

### Intermittent Duty

25% 'On' Time, (100 Seconds 'On' Max.  
Followed By 300 Seconds 'Off' Min.)

### RoHS

These parts comply with **RoHS** Directive 2002/95/EC



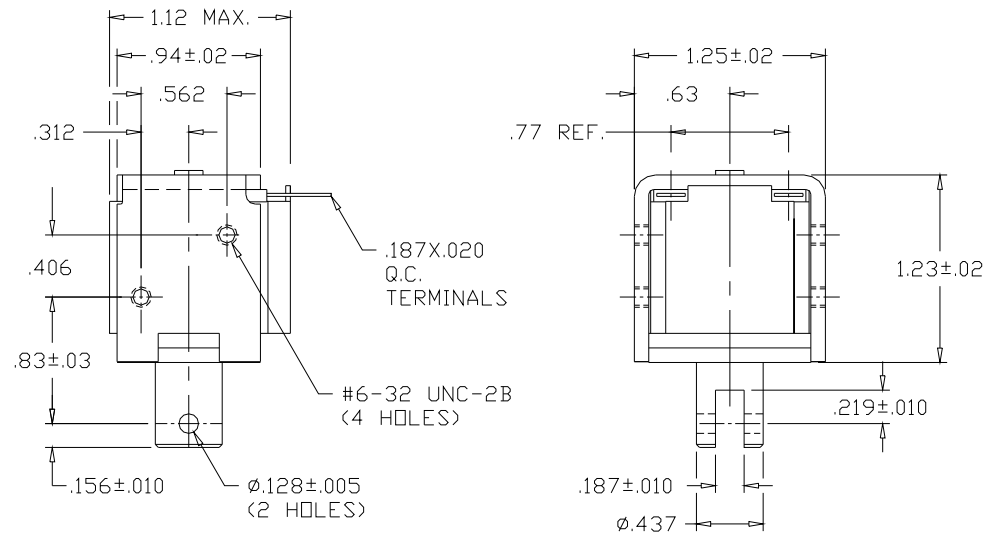
**GUARDIAN**  
Electric Manufacturing

**ISO 9001 / AS9100 Certified Company**

Woodstock, IL 60098 Ph. (815)334-3600 Fax (815)337-0377

Or visit us at our website [www.guardian-electric.com](http://www.guardian-electric.com)

## Model 28HD DC Frame Solenoid



Solenoid shown energized and fully seated.

Spring kits are available (consult factory).

Total Weight: 4.7 oz.

Plunger Weight: .9 oz.

| Model No.  | Part No.       | Duty Cycle   | Voltage | Resistance (Ω) | Power (W) | Current (mA) |
|------------|----------------|--------------|---------|----------------|-----------|--------------|
| 28HD-I-12D | A420-065963-00 | Intermittent | 12VDC   | 12.2           | 12.4      | 984          |
| 28HD-C-12D | A420-065962-00 | Continuous   | 12VDC   | 30.1           | 5         | 399          |
| 28HD-I-24D | A420-065965-00 | Intermittent | 24VDC   | 49             | 12.3      | 490          |
| 28HD-C-24D | A420-065964-00 | Continuous   | 24VDC   | 119            | 5.1       | 202          |

When ordering, please refer to Part No., as listed above.

Consult factory for custom configurations.

| Pull Force (oz.)  |       |       |       |       |       |       |       |       | Holding Force (oz.) |
|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|---------------------|
| Stroke (in.)      | 0.050 | 0.125 | 0.250 | 0.375 | 0.500 | 0.625 | 0.750 | 1.000 | -                   |
| Continuous Duty   | 30    | 12    | 6     | 4     | 1     | n/a   | n/a   | n/a   | 130                 |
| Intermittent Duty | 65    | 30    | 12    | 8     | 5     | n/a   | n/a   | n/a   | 159                 |

### UL Recognition

Recognized under the   
Component Recognition Program of  
**Underwriters Laboratories, Inc.**

### Continuous Duty

100% 'On' Time

### Intermittent Duty

25% 'On' Time, (100 Seconds 'On' Max.  
Followed By 300 Seconds 'Off' Min.)

### RoHS

These parts comply with **RoHS** Directive 2002/95/EC



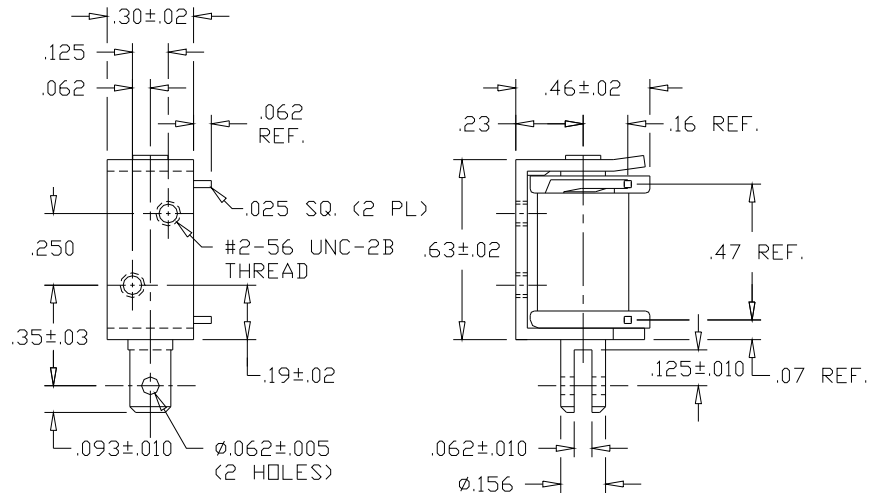
**GUARDIAN**  
Electric Manufacturing

**ISO 9001 / AS9100 Certified Company**

Woodstock, IL 60098 Ph. (815)334-3600 Fax (815)337-0377

Or visit us at our website [www.guardian-electric.com](http://www.guardian-electric.com)

## Model 42 DC Frame Solenoid



Solenoid shown energized and fully seated.

Total Weight: .25 oz.

Plunger Weight: .02 oz.

| Model No. | Part No.       | Duty Cycle   | Voltage | Resistance (Ω) | Power (W) | Current (mA) |
|-----------|----------------|--------------|---------|----------------|-----------|--------------|
| 42-I-12D  | A420-066613-00 | Intermittent | 12VDC   | 83.7           | 1.8       | 143          |
| 42-C-12D  | A420-066612-00 | Continuous   | 12VDC   | 106            | 1.4       | 113          |
| 42-I-24D  | A420-066615-00 | Intermittent | 24VDC   | 297            | 2         | 81           |
| 42-C-24D  | A420-066614-00 | Continuous   | 24VDC   | 412            | 1.5       | 58           |

When ordering, please refer to Part No., as listed above.

Consult factory for custom configurations.

| Pull Force (oz.)  |       |       |       |       |       |       |       |       | Holding Force (oz.) |
|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|---------------------|
| Stroke (in.)      | 0.050 | 0.125 | 0.250 | 0.375 | 0.500 | 0.625 | 0.750 | 1.000 | -                   |
| Continuous Duty   | 0.4   | n/a   | n/a   | n/a   | n/a   | n/a   | n/a   | n/a   | 4                   |
| Intermittent Duty | 0.6   | n/a   | n/a   | n/a   | n/a   | n/a   | n/a   | n/a   | 3.5                 |

### UL Recognition

Recognized under the   
Component Recognition Program of  
**Underwriters Laboratories, Inc.**

### Continuous Duty

100% 'On' Time

### Intermittent Duty

25% 'On' Time, (100 Seconds 'On' Max.  
Followed By 300 Seconds 'Off' Min.)

### RoHS

These parts comply with **RoHS** Directive 2002/95/EC



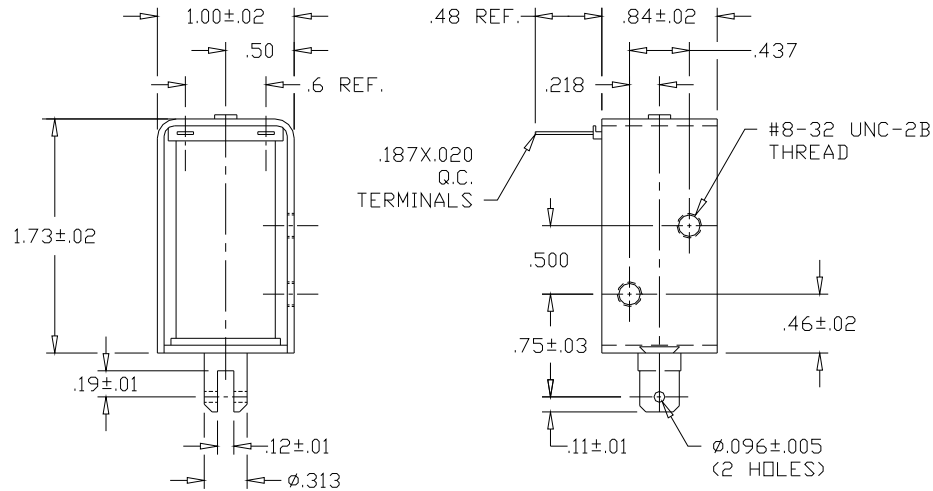
**GUARDIAN**  
Electric Manufacturing

**ISO 9001 / AS9100 Certified Company**

Woodstock, IL 60098 Ph. (815)334-3600 Fax (815)337-0377

Or visit us at our website [www.guardian-electric.com](http://www.guardian-electric.com)

## Model 64 DC Frame Solenoid



Solenoid shown energized and fully seated.

Total Weight: 3.6 oz.

Plunger Weight: .5 oz.

| Model No. | Part No. | Duty Cycle   | Voltage | Resistance ( $\Omega$ ) | Power (W) | Current |
|-----------|----------|--------------|---------|-------------------------|-----------|---------|
| 64-I-12D  | TBA      | Intermittent | 12VDC   | 8.8                     | 17.2      | 1.4 A   |
| 64-C-12D  | TBA      | Continuous   | 12VDC   | 21.3                    | 7.1       | 563 mA  |
| 64-I-24D  | TBA      | Intermittent | 24VDC   | 34.8                    | 17.4      | 690 mA  |
| 64-C-24D  | TBA      | Continuous   | 24VDC   | 83.6                    | 7.2       | 287 mA  |

When ordering, please refer to Part No., as listed above.

Consult factory for custom configurations.

| Pull Force (oz.)  |       |       |       |       |       |       |       |       | Holding Force (oz.) |
|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|---------------------|
| Stroke (in.)      | 0.050 | 0.125 | 0.250 | 0.375 | 0.500 | 0.625 | 0.750 | 1.000 | -                   |
| Continuous Duty   | 17    | 9     | 5     | 2     | n/a   | n/a   | n/a   | n/a   | 85                  |
| Intermittent Duty | 50    | 32    | 18    | 12    | 8     | 4     | 3     | 2     | 95                  |

### UL Recognition

Recognized under the   
Component Recognition Program of  
**Underwriters Laboratories, Inc.**

### Continuous Duty

100% 'On' Time

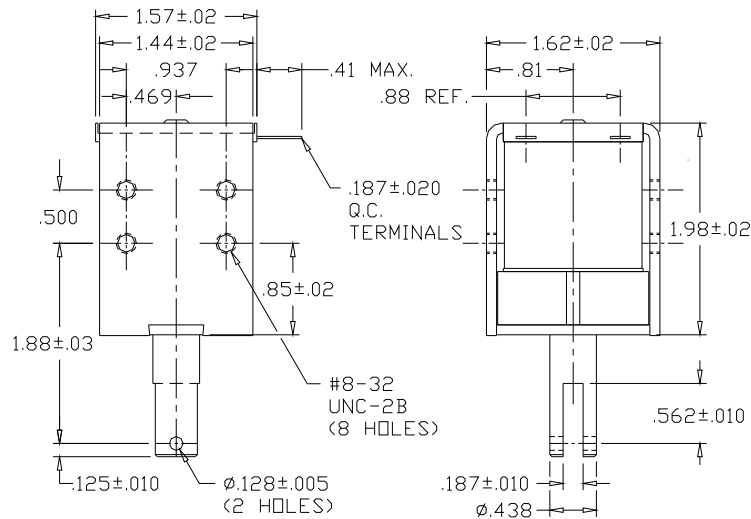
### Intermittent Duty

25% 'On' Time, (100 Seconds 'On' Max.  
Followed By 300 Seconds 'Off' Min.)

### RoHS

These parts comply with **RoHS** Directive 2002/95/EC

## Model 4L Latching DC Frame Solenoid



Solenoid shown energized and fully seated.

Total Weight: 12.50 oz.

Plunger Weight: 1.57 oz.

| Model No. | Part No.       | Duty Cycle | Voltage | Resistance ( $\Omega$ ) | Power (W) | Current (mA) |
|-----------|----------------|------------|---------|-------------------------|-----------|--------------|
| 4L-C-12D  | A420-067897-00 | Continuous | 12VDC   | 25.5                    | 5.9       | 471          |
| 4L-C-24D  | A420-067899-00 | Continuous | 24VDC   | 102                     | 5.9       | 235          |

When ordering, please refer to Part No., as listed above.

Consult factory for custom configurations.

\*At 0 VDC (provided by permanent magnet latch).

| Pull Force (oz.) |       |       |       |       |       |       |       |       | Holding Force (oz.) |
|------------------|-------|-------|-------|-------|-------|-------|-------|-------|---------------------|
| Stroke (in.)     | 0.050 | 0.125 | 0.250 | 0.375 | 0.500 | 0.625 | 0.750 | 1.000 | -                   |
| Continuous Duty  | 108   | 65    | 35    | 20    | 13    | 5     | 3     | 1     | *160                |

## UL Recognition

Recognized under the   
Component Recognition Program of  
**Underwriters Laboratories, Inc.**

## Continuous Duty

## 100% 'On' Time

**RoHS**

These parts comply with **RoHS** Directive 2002/95/EC



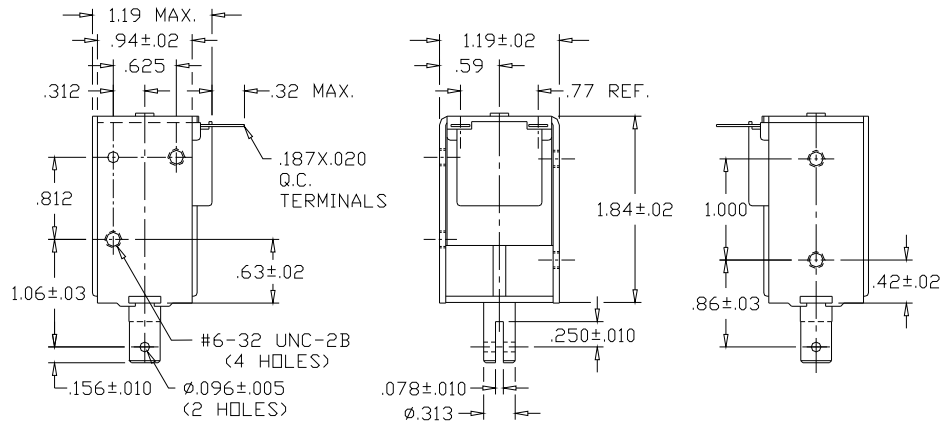
**GUARDIAN**  
Electric Manufacturing

**ISO 9001 / AS9100 Certified Company**

Woodstock, IL 60098 Ph. (815)334-3600 Fax (815)337-0377

Or visit us at our website [www.guardian-electric.com](http://www.guardian-electric.com)

## Model 11L Latching DC Frame Solenoid



Solenoid shown energized and fully seated.

Total Weight: 5.2 oz.

Plunger Weight: .6 oz.

| Model No. | Part No.       | Duty Cycle | Voltage | Resistance ( $\Omega$ ) | Power (W) | Current (mA) |
|-----------|----------------|------------|---------|-------------------------|-----------|--------------|
| 11L-C-12D | A420-067860-00 | Continuous | 12VDC   | 35                      | 4.3       | 343          |
| 11L-C-24D | A420-067862-00 | Continuous | 24VDC   | 146                     | 4.1       | 164          |

When ordering, please refer to Part No., as listed above.

Consult factory for custom configurations.

\* At 0 VDC (provided by permanent magnet latch).

| Pull Force (oz.) |       |       |       |       |       |       |       |       | Holding Force (oz.) |
|------------------|-------|-------|-------|-------|-------|-------|-------|-------|---------------------|
| Stroke (in.)     | 0.050 | 0.125 | 0.250 | 0.375 | 0.500 | 0.625 | 0.750 | 1.000 | -                   |
| Continuous Duty  | 35    | 20    | 14    | 6     | 4     | 2     | 1     | n/a   | *96                 |

### UL Recognition

Recognized under the   
Component Recognition Program of  
**Underwriters Laboratories, Inc.**

### Continuous Duty

100% 'On' Time

### RoHS

These parts comply with **RoHS** Directive 2002/95/EC



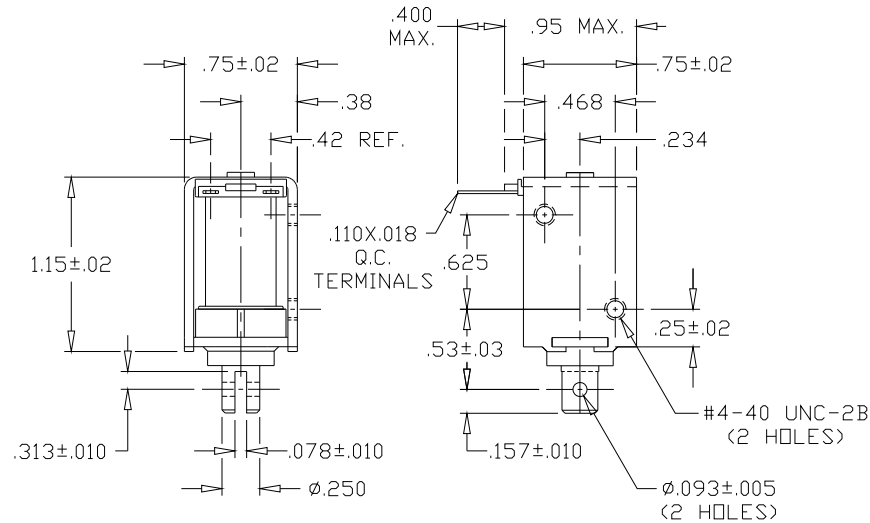
**GUARDIAN**  
Electric Manufacturing

**ISO 9001 / AS9100 Certified Company**

Woodstock, IL 60098 Ph. (815)334-3600 Fax (815)337-0377

Or visit us at our website [www.guardian-electric.com](http://www.guardian-electric.com)

## Model 22L Latching DC Frame Solenoid



Solenoid shown energized and fully seated.

Total Weight: 1.66 oz.

Plunger Weight: .26 oz.

| Model No. | Part No.       | Duty Cycle | Voltage | Resistance ( $\Omega$ ) | Power (W) | Current (mA) |
|-----------|----------------|------------|---------|-------------------------|-----------|--------------|
| 22L-C-12D | A420-067879-00 | Continuous | 12VDC   | 30                      | 5         | 400          |
| 22L-C-24D | A420-067881-00 | Continuous | 24VDC   | 120                     | 5         | 200          |

When ordering, please refer to Part No., as listed above.

Consult factory for custom configurations.

\* At 0 VDC (provided by permanent magnet latch).

| Pull Force (oz.) |       |       |       |       |       |       |       |       | Holding Force (oz.) |
|------------------|-------|-------|-------|-------|-------|-------|-------|-------|---------------------|
| Stroke (in.)     | 0.050 | 0.125 | 0.250 | 0.375 | 0.500 | 0.625 | 0.750 | 1.000 | -                   |
| Continuous Duty  | 13    | 7     | 2     | 1     | n/a   | n/a   | n/a   | n/a   | *48                 |

### UL Recognition

Recognized under the   
Component Recognition Program of  
**Underwriters Laboratories, Inc.**

### Continuous Duty

100% 'On' Time

### RoHS

These parts comply with **RoHS** Directive 2002/95/EC

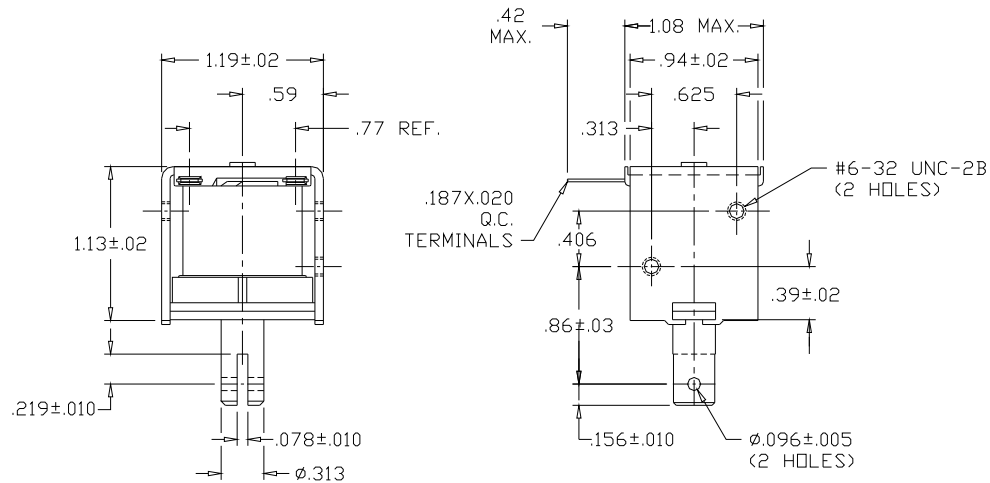


**ISO 9001 / AS9100 Certified Company**

Woodstock, IL 60098 Ph. (815)334-3600 Fax (815)337-0377

Or visit us at our website [www.guardian-electric.com](http://www.guardian-electric.com)

## Model 28L Latching DC Frame Solenoid



Solenoid shown energized and fully seated.

Total Weight: 1.7 oz.

Plunger Weight: .3 oz.

| Model No. | Part No.       | Duty Cycle | Voltage | Resistance ( $\Omega$ ) | Power (W) | Current (mA) |
|-----------|----------------|------------|---------|-------------------------|-----------|--------------|
| 28L-C-12D | A420-067916-00 | Continuous | 12VDC   | 24                      | 6.3       | 500          |
| 28L-C-24D | A420-067918-00 | Continuous | 24VDC   | 96                      | 6.3       | 250          |

When ordering, please refer to Part No., as listed above.

Consult factory for custom configurations.

\* At 0 VDC (provided by permanent magnet latch).

| Pull Force (oz.) |       |       |       |       |       |       |       |       | Holding Force (oz.) |
|------------------|-------|-------|-------|-------|-------|-------|-------|-------|---------------------|
| Stroke (in.)     | 0.050 | 0.125 | 0.250 | 0.375 | 0.500 | 0.625 | 0.750 | 1.000 | -                   |
| Continuous Duty  | 25    | 10    | 4     | 2     | 1     | n/a   | n/a   | n/a   | *48                 |

## UL Recognition

Recognized under the   
Component Recognition Program of  
**Underwriters Laboratories, Inc.**



### Continuous Duty

## 100% 'On' Time

**RoHS**

These parts comply with **RoHS** Directive 2002/95/EC



# GUARDIAN

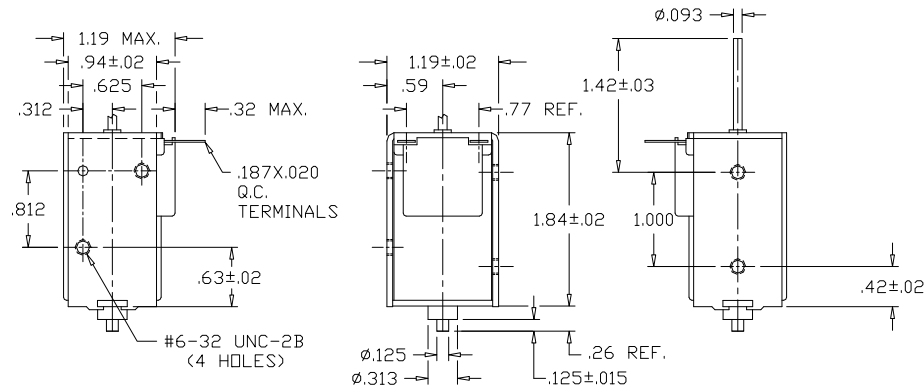
Electric Manufacturing

**ISO 9001 / AS9100 Certified Company**

Woodstock, IL 60098 Ph. (815)334-3600 Fax (815)337-0377

Or visit us at our website [www.guardian-electric.com](http://www.guardian-electric.com)

## Model 11P Push DC Frame Solenoid



Solenoid shown energized and fully seated.

Spring kits are available (consult factory).

Total Weight: 5.4 oz.

Plunger Weight: 1.1 oz.

| Model No. | Part No.       | Duty Cycle   | Voltage | Resistance (Ω) | Power (W) | Current |
|-----------|----------------|--------------|---------|----------------|-----------|---------|
| 11P-I-12D | A420-065713-00 | Intermittent | 12VDC   | 7.5            | 20.2      | 1.6 A   |
| 11P-C-12D | A420-065712-00 | Continuous   | 12VDC   | 18.4           | 8.2       | 652 mA  |
| 11P-I-24D | A420-065715-00 | Intermittent | 24VDC   | 29.1           | 20.8      | 825 mA  |
| 11P-C-24D | A420-065714-00 | Continuous   | 24VDC   | 93.1           | 6.5       | 258 mA  |

When ordering, please refer to Part No., as listed above.

Consult factory for custom configurations.

| Push Force (oz.)  |       |       |       |       |       |       |       |       | Holding Force (oz.) |
|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|---------------------|
| Stroke (in.)      | 0.050 | 0.125 | 0.250 | 0.375 | 0.500 | 0.625 | 0.750 | 1.000 | -                   |
| Continuous Duty   | 35    | 21    | 10    | 6     | 4     | 2     | 1     | n/a   | 82                  |
| Intermittent Duty | 62    | 46    | 27    | 18    | 10    | 8     | 6     | 5     | 93                  |

### UL Recognition

Recognized under the   
Component Recognition Program of  
**Underwriters Laboratories, Inc.**

### Continuous Duty

100% 'On' Time

### Intermittent Duty

25% 'On' Time, (100 Seconds 'On' Max.  
Followed By 300 Seconds 'Off' Min.)

### RoHS

These parts comply with **RoHS** Directive 2002/95/EC



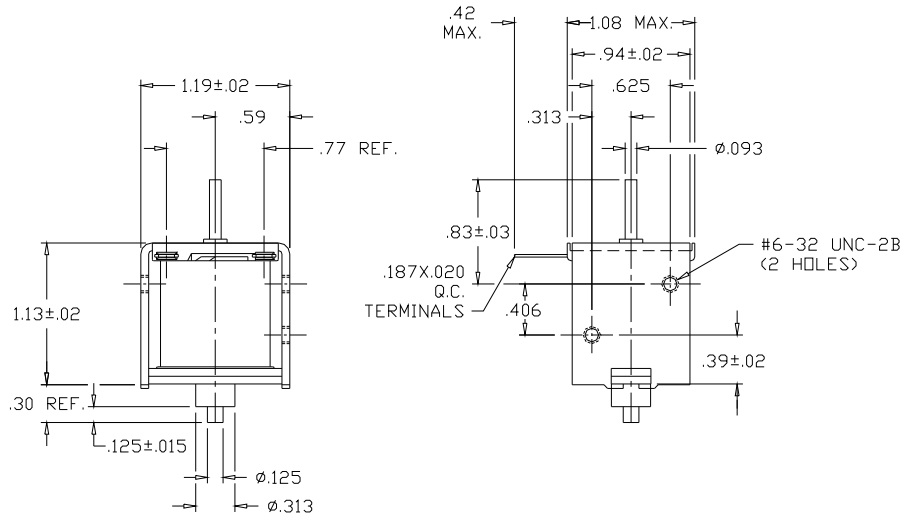
**GUARDIAN**  
Electric Manufacturing

**ISO 9001 / AS9100 Certified Company**

Woodstock, IL 60098 Ph. (815)334-3600 Fax (815)337-0377

Or visit us at our website [www.guardian-electric.com](http://www.guardian-electric.com)

## Model 28P Push DC Frame Solenoid



Solenoid shown energized and fully seated.

Spring kits are available (consult factory).

Total Weight: 3.5 oz.

Plunger Weight: .5 oz.

| Model No. | Part No.       | Duty Cycle   | Voltage | Resistance (Ω) | Power (W) | Current |
|-----------|----------------|--------------|---------|----------------|-----------|---------|
| 28P-I-12D | A420-065593-00 | Intermittent | 12VDC   | 11.9           | 12.7      | 1.01 A  |
| 28P-C-12D | A420-065592-00 | Continuous   | 12VDC   | 29.8           | 5.1       | 403 mA  |
| 28P-I-24D | A420-065595-00 | Intermittent | 24VDC   | 47.4           | 12.8      | 506 mA  |
| 28P-C-24D | A420-065594-00 | Continuous   | 24VDC   | 116            | 5.2       | 207 mA  |

When ordering, please refer to Part No., as listed above.

Consult factory for custom configurations.

| Push Force (oz.)  |       |       |       |       |       |       |       |       | Holding Force (oz.) |
|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|---------------------|
| Stroke (in.)      | 0.050 | 0.125 | 0.250 | 0.375 | 0.500 | 0.625 | 0.750 | 1.000 | -                   |
| Continuous Duty   | 25    | 10    | 4     | 2     | 1     | n/a   | n/a   | n/a   | 76                  |
| Intermittent Duty | 32    | 12    | 7     | 4     | 2     | n/a   | n/a   | n/a   | 92                  |

### UL Recognition

Recognized under the   
Component Recognition Program of  
**Underwriters Laboratories, Inc.**

### Continuous Duty

100% 'On' Time

### Intermittent Duty

25% 'On' Time, (100 Seconds 'On' Max.  
Followed By 300 Seconds 'Off' Min.)

### RoHS

These parts comply with **RoHS** Directive 2002/95/EC



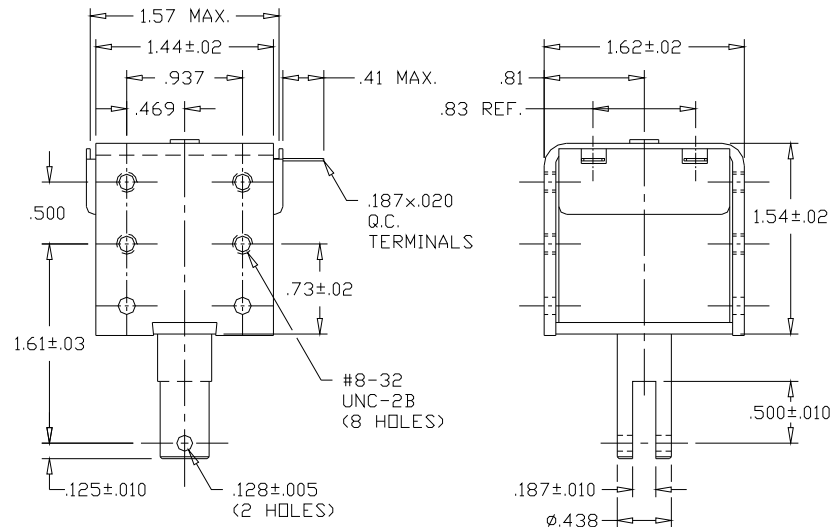
**GUARDIAN**  
Electric Manufacturing

**ISO 9001 / AS9100 Certified Company**

Woodstock, IL 60098 Ph. (815)334-3600 Fax (815)337-0377

Or visit us at our website [www.guardian-electric.com](http://www.guardian-electric.com)

## Model 2 AC Frame Solenoid



Solenoid shown energized and fully seated.

Spring kits are available (consult factory).

Total Weight: 10 oz.

Plunger Weight: 1 oz.

| Model No. | Part No.       | Duty Cycle    | Volts | Res. (Ω) | Power (VA) | Current, Seated (mA) |
|-----------|----------------|---------------|-------|----------|------------|----------------------|
| 2-I-120A  | A420-065507-00 | *Intermittent | 120   | 45       | 44         | 367                  |
| 2-C-120A  | A420-065506-00 | Continuous    | 120   | 140      | 13         | 108                  |
| 2-I-240A  | A420-065509-00 | *Intermittent | 240   | 245      | 44         | 183                  |
| 2-C-240A  | A420-065508-00 | Continuous    | 240   | 650      | 13         | 54                   |

When ordering, please refer to Part No., as listed above.

Consult factory for custom configurations.

| Pull Force (oz.)   |       |       |       |       |       |       |       | Holding Force (oz.) |
|--------------------|-------|-------|-------|-------|-------|-------|-------|---------------------|
| Stroke (in.)       | 0.125 | 0.250 | 0.375 | 0.500 | 0.625 | 0.750 | 1.000 | -                   |
| Continuous Duty    | 20    | 17    | 16    | 14    | 10    | 6     | n/a   | 50                  |
| *Intermittent Duty | 54    | 45    | 42    | 36    | 26    | 15    | n/a   | 80                  |

### UL Recognition

Recognized under the   
Component Recognition Program of  
**Underwriters Laboratories, Inc.**

### Continuous Duty

100% 'On' Time

### \*Intermittent Duty

25% 'On' Time, (300 Seconds 'On' Max.  
Followed By 900 Seconds 'Off' Min.)

### RoHS

These parts comply with **RoHS** Directive 2002/95/EC



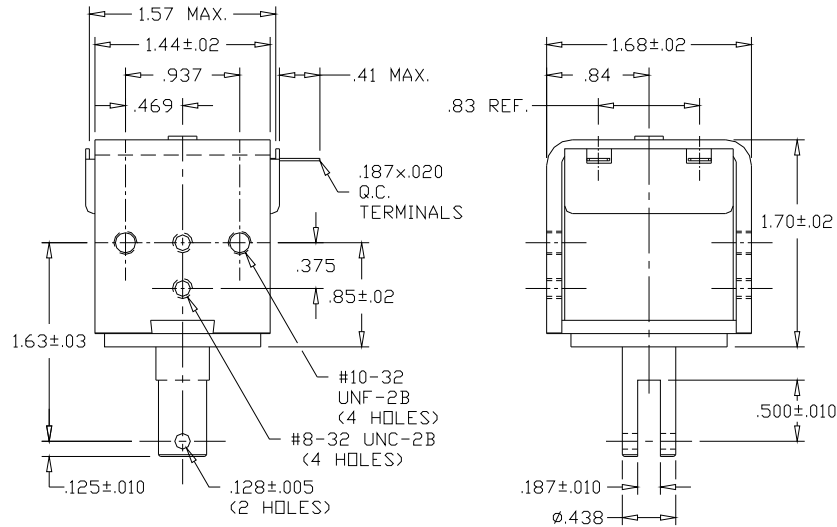
**GUARDIAN**  
Electric Manufacturing

**ISO 9001 / AS9100 Certified Company**

Woodstock, IL 60098 Ph. (815)334-3600 Fax (815)337-0377

Or visit us at our website [www.guardian-electric.com](http://www.guardian-electric.com)

## Model 2HD AC Frame Solenoid



Solenoid shown energized and fully seated.

Spring kits are available (consult factory).

Total Weight: 13.0 oz.

Plunger Weight: 1.5 oz.

| Model No.  | Part No.       | Duty Cycle    | Volts | Res. (Ω) | Power (VA) | Current, Seated (mA) |
|------------|----------------|---------------|-------|----------|------------|----------------------|
| 2HD-I-120A | A420-065487-00 | *Intermittent | 120   | 42       | 66         | 550                  |
| 2HD-C-120A | A420-065486-00 | Continuous    | 120   | 101      | 16.5       | 138                  |
| 2HD-I-240A | A420-065489-00 | *Intermittent | 240   | 140      | 66         | 275                  |
| 2HD-C-240A | A420-065488-00 | Continuous    | 240   | 404      | 16.5       | 69                   |

When ordering, please refer to Part No., as listed above.

Consult factory for custom configurations.

| Pull Force (oz.)   |       |       |       |       |       |       |       | Holding Force (oz.) |
|--------------------|-------|-------|-------|-------|-------|-------|-------|---------------------|
| Stroke (in.)       | 0.125 | 0.250 | 0.375 | 0.500 | 0.625 | 0.750 | 1.000 | -                   |
| Continuous Duty    | 26    | 22    | 20    | 18    | 14    | 9     | n/a   | 55                  |
| *Intermittent Duty | 64    | 52    | 48    | 40    | 32    | 20    | n/a   | 70                  |

### UL Recognition

Recognized under the   
Component Recognition Program of  
**Underwriters Laboratories, Inc.**

### Continuous Duty

100% 'On' Time

### \*Intermittent Duty

25% 'On' Time, (300 Seconds 'On' Max.  
Followed By 900 Seconds 'Off' Min.)

### RoHS

These parts comply with **RoHS** Directive 2002/95/EC



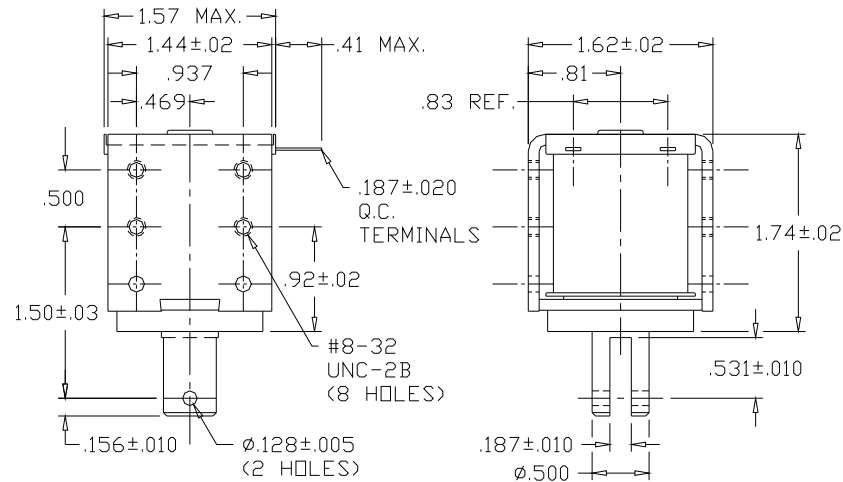
**GUARDIAN**  
Electric Manufacturing

**ISO 9001 / AS9100 Certified Company**

Woodstock, IL 60098 Ph. (815)334-3600 Fax (815)337-0377

Or visit us at our website [www.guardian-electric.com](http://www.guardian-electric.com)

## Model 3HD AC Frame Solenoid



Solenoid shown energized and fully seated.

Spring kits are available (consult factory).

Total Weight: 12.0 oz.

Plunger Weight: 1.4 oz.

| Model No.  | Part No.       | Duty Cycle    | Volts | Res. (Ω) | Power (VA) | Current, Seated (mA) |
|------------|----------------|---------------|-------|----------|------------|----------------------|
| 3HD-I-120A | A420-065917-00 | *Intermittent | 120   | 23       | 103        | 858                  |
| 3HD-C-120A | A420-065916-00 | Continuous    | 120   | 100      | 20         | 167                  |
| 3HD-I-240A | A420-065919-00 | *Intermittent | 240   | 100      | 103        | 429                  |
| 3HD-C-240A | A420-065918-00 | Continuous    | 240   | 400      | 20         | 83                   |

When ordering, please refer to Part No., as listed above.

Consult factory for custom configurations.

| Pull Force (oz.)   |       |       |       |       |       |       |       | Holding Force (oz.) |
|--------------------|-------|-------|-------|-------|-------|-------|-------|---------------------|
| Stroke (in.)       | 0.125 | 0.250 | 0.375 | 0.500 | 0.625 | 0.750 | 1.000 | -                   |
| Continuous Duty    | 26    | 23    | 22    | 21    | 18    | 14    | 7     | 43                  |
| *Intermittent Duty | 88    | 75    | 70    | 66    | 54    | 40    | 8     | 88                  |

### UL Recognition

Recognized under the   
Component Recognition Program of  
**Underwriters Laboratories, Inc.**

### Continuous Duty

100% 'On' Time

### \*Intermittent Duty

25% 'On' Time, (240 Seconds 'On' Max.  
Followed By 720 Seconds 'Off' Min.)

### RoHS

These parts comply with **RoHS** Directive 2002/95/EC



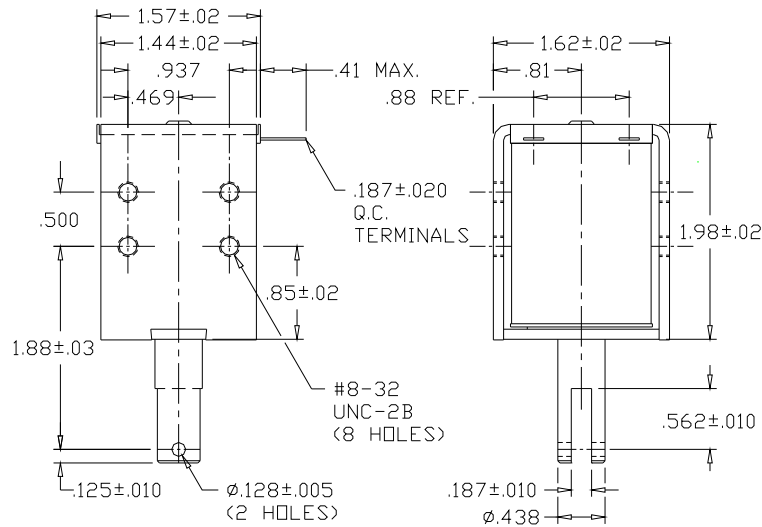
**GUARDIAN**  
Electric Manufacturing

**ISO 9001 / AS9100 Certified Company**

Woodstock, IL 60098 Ph. (815)334-3600 Fax (815)337-0377

Or visit us at our website [www.guardian-electric.com](http://www.guardian-electric.com)

## Model 4 AC Frame Solenoid



Solenoid shown energized and fully seated.

Spring kits are available (consult factory).

Total Weight: 9.5 oz.

Plunger Weight: 1.2 oz.

| Model No. | Part No.       | Duty Cycle    | Volts | Res. ( $\Omega$ ) | Power (VA) | Current, Seated (mA) |
|-----------|----------------|---------------|-------|-------------------|------------|----------------------|
| 4-I-120A  | A420-065937-00 | *Intermittent | 120   | 37                | 60         | 500                  |
| 4-C-120A  | A420-065936-00 | Continuous    | 120   | 133               | 10         | 83                   |
| 4-I-240A  | A420-065939-00 | *Intermittent | 240   | 148               | 60         | 250                  |
| 4-C-240A  | A420-065938-00 | Continuous    | 240   | 561               | 10         | 42                   |

When ordering, please refer to Part No., as listed above.

Consult factory for custom configurations.

| Pull Force (oz.)   |       |       |       |       |       |       |       | Holding Force (oz.) |
|--------------------|-------|-------|-------|-------|-------|-------|-------|---------------------|
| Stroke (in.)       | 0.125 | 0.250 | 0.375 | 0.500 | 0.625 | 0.750 | 1.000 | -                   |
| Continuous Duty    | 10    | 9     | 9     | 10    | 12    | 13    | 12    | 43                  |
| *Intermittent Duty | 38    | 32    | 35    | 38    | 44    | 46    | 46    | 92                  |

### UL Recognition

Recognized under the   
Component Recognition Program of  
**Underwriters Laboratories, Inc.**

### Continuous Duty

100% 'On' Time

### \*Intermittent Duty

25% 'On' Time, (300 Seconds 'On' Max.  
Followed By 900 Seconds 'Off' Min.)

### RoHS

These parts comply with **RoHS** Directive 2002/95/EC



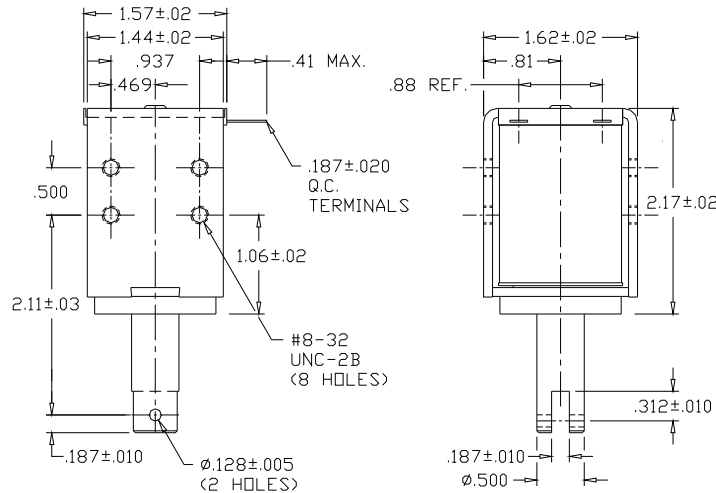
**GUARDIAN**  
Electric Manufacturing

**ISO 9001 / AS9100 Certified Company**

Woodstock, IL 60098 Ph. (815)334-3600 Fax (815)337-0377

Or visit us at our website [www.guardian-electric.com](http://www.guardian-electric.com)

## Model 4HD AC Frame Solenoid



Solenoid shown energized and fully seated.

Spring kits are available (consult factory).

Total Weight: 16 oz.

Plunger Weight: 2 oz.

| Model No.  | Part No.       | Duty Cycle    | Volts | Res. ( $\Omega$ ) | Power (VA) | Current, Seated |
|------------|----------------|---------------|-------|-------------------|------------|-----------------|
| 4HD-I-120A | A420-065427-00 | *Intermittent | 120   | 19.3              | 171        | 1.4 A           |
| 4HD-C-120A | A420-065426-00 | Continuous    | 120   | 73                | 31         | 258 mA          |
| 4HD-I-240A | A420-065429-00 | *Intermittent | 240   | 77                | 171        | 713 mA          |
| 4HD-C-240A | A420-065428-00 | Continuous    | 240   | 292               | 31         | 129 mA          |

When ordering, please refer to Part No., as listed above.

Consult factory for custom configurations.

| Pull Force (oz.)   |       |       |       |       |       |       |       | Holding Force (oz.) |
|--------------------|-------|-------|-------|-------|-------|-------|-------|---------------------|
| Stroke (in.)       | 0.125 | 0.250 | 0.375 | 0.500 | 0.625 | 0.750 | 1.000 | -                   |
| Continuous Duty    | 20    | 18    | 18    | 20    | 22    | 24    | 24    | 80                  |
| *Intermittent Duty | 70    | 60    | 60    | 66    | 75    | 75    | 66    | 135                 |

### UL Recognition

Recognized under the   
Component Recognition Program of  
**Underwriters Laboratories, Inc.**

### Continuous Duty

100% 'On' Time

### \*Intermittent Duty

25% 'On' Time, (300 Seconds 'On' Max.  
Followed By 900 Seconds 'Off' Min.)

### RoHS

These parts comply with **RoHS** Directive 2002/95/EC



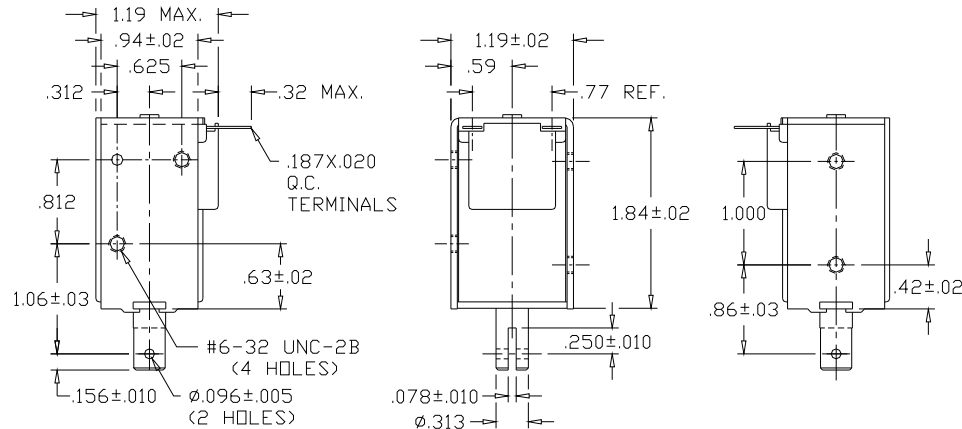
**GUARDIAN**  
Electric Manufacturing

**ISO 9001 / AS9100 Certified Company**

Woodstock, IL 60098 Ph. (815)334-3600 Fax (815)337-0377

Or visit us at our website [www.guardian-electric.com](http://www.guardian-electric.com)

## Model 11 AC Frame Solenoid



Solenoid shown energized and fully seated.

Spring kits are available (consult factory).

Total Weight: 5.0 oz.

Plunger Weight: .6 oz.

| Model No. | Part No.       | Duty Cycle    | Volts | Res. (Ω) | Power (VA) | Current, Seated (mA) |
|-----------|----------------|---------------|-------|----------|------------|----------------------|
| 11-I-120A | A420-065567-00 | *Intermittent | 120   | 85       | 40         | 333                  |
| 11-C-120A | A420-065566-00 | Continuous    | 120   | 225      | 12         | 100                  |
| 11-I-240A | A420-065569-00 | *Intermittent | 240   | 345      | 40         | 167                  |
| 11-C-240A | A420-065568-00 | Continuous    | 240   | 920      | 12         | 50                   |

When ordering, please refer to Part No., as listed above.

Consult factory for custom configurations.

| Pull Force (oz.)   |       |       |       |       |       |       |       | Holding Force (oz.) |
|--------------------|-------|-------|-------|-------|-------|-------|-------|---------------------|
| Stroke (in.)       | 0.125 | 0.250 | 0.375 | 0.500 | 0.625 | 0.750 | 1.000 | -                   |
| Continuous Duty    | 13    | 11    | 10    | 9     | 8     | 7     | 4     | 12                  |
| *Intermittent Duty | 24    | 20    | 19    | 18    | 17    | 16    | 8     | 20                  |

### UL Recognition

Recognized under the   
Component Recognition Program of  
**Underwriters Laboratories, Inc.**

### Continuous Duty

100% 'On' Time

### \*Intermittent Duty

15% 'On' Time, (240 Seconds 'On' Max.  
Followed By 1360 Seconds 'Off' Min.)

### RoHS

These parts comply with **RoHS** Directive 2002/95/EC



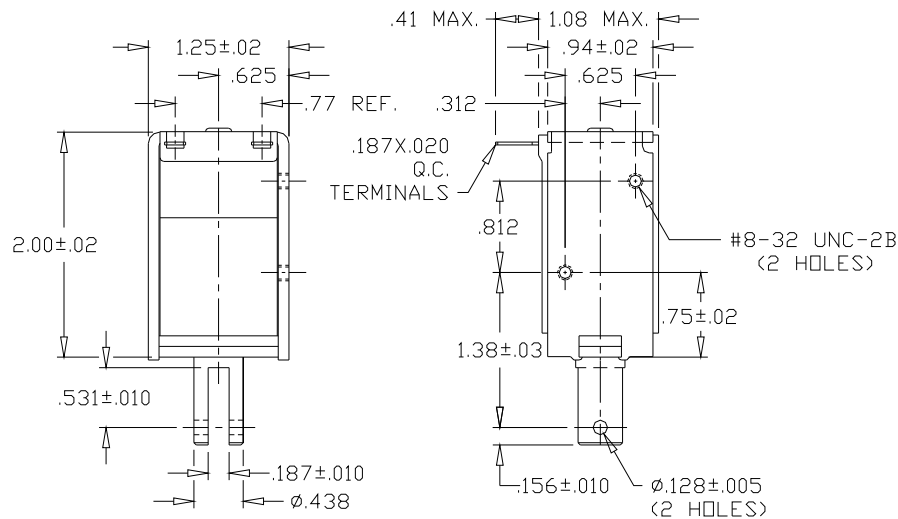
**GUARDIAN**  
Electric Manufacturing

**ISO 9001 / AS9100 Certified Company**

Woodstock, IL 60098 Ph. (815)334-3600 Fax (815)337-0377

Or visit us at our website [www.guardian-electric.com](http://www.guardian-electric.com)

## Model 11HD AC Frame Solenoid



Solenoid shown energized and fully seated.

Spring kits are available (consult factory).

Total Weight: 8.0 oz.

Plunger Weight: 1.0 oz.

| Model No.   | Part No.       | Duty Cycle    | Volts | Res. ( $\Omega$ ) | Power (VA) | Current, Seated (mA) |
|-------------|----------------|---------------|-------|-------------------|------------|----------------------|
| 11HD-I-120A | A420-065757-00 | *Intermittent | 120   | 75                | 40         | 333                  |
| 11HD-C-120A | A420-065756-00 | Continuous    | 120   | 165               | 16         | 133                  |
| 11HD-I-240A | A420-065759-00 | *Intermittent | 240   | 300               | 40         | 167                  |
| 11HD-C-240A | A420-065758-00 | Continuous    | 240   | 660               | 16         | 67                   |

When ordering, please refer to Part No., as listed above.

Consult factory for custom configurations.

| Stroke (in.)       | Pull Force (oz.) |       |       |       |       |       |       | Holding Force (oz.) |
|--------------------|------------------|-------|-------|-------|-------|-------|-------|---------------------|
|                    | 0.125            | 0.250 | 0.375 | 0.500 | 0.625 | 0.750 | 1.000 | -                   |
| Continuous Duty    | 12               | 10    | 10    | 9     | 8     | 7     | 3     | 50                  |
| *Intermittent Duty | 24               | 20    | 19    | 18    | 17    | 16    | 7     | 85                  |

### UL Recognition

Recognized under the   
Component Recognition Program of  
**Underwriters Laboratories, Inc.**

### Continuous Duty

100% 'On' Time

### \*Intermittent Duty

20% 'On' Time, (240 Seconds 'On' Max.  
Followed By 960 Seconds 'Off' Min.)

### RoHS

These parts comply with **RoHS** Directive 2002/95/EC



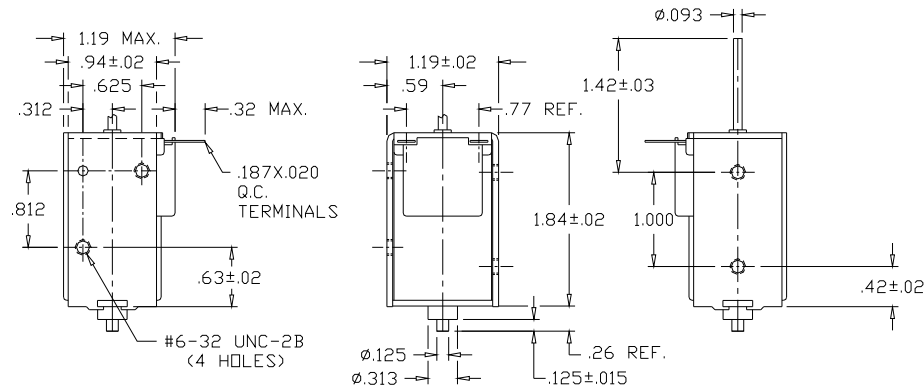
**GUARDIAN**  
Electric Manufacturing

**ISO 9001 / AS9100 Certified Company**

Woodstock, IL 60098 Ph. (815)334-3600 Fax (815)337-0377

Or visit us at our website [www.guardian-electric.com](http://www.guardian-electric.com)

## Model 11P Push AC Frame Solenoid



Solenoid shown energized and fully seated.

Total Weight: 5.0 oz.

Plunger Weight: .6 oz.

| Model No.  | Part No.       | Duty Cycle    | Volts | Res. (Ω) | Power (VA) | Current, Seated (mA) |
|------------|----------------|---------------|-------|----------|------------|----------------------|
| 11P-I-120A | A420-065707-00 | *Intermittent | 120   | 85       | 40         | 333                  |
| 11P-C-120A | A420-065706-00 | Continuous    | 120   | 225      | 12         | 100                  |
| 11P-I-240A | A420-065709-00 | *Intermittent | 240   | 345      | 40         | 167                  |
| 11P-C-240A | A420-065708-00 | Continuous    | 240   | 920      | 12         | 50                   |

When ordering, please refer to Part No., as listed above.

Consult factory for custom configurations.

| Push Force (oz.)   |       |       |       |       |       |       |       | Holding Force (oz.) |
|--------------------|-------|-------|-------|-------|-------|-------|-------|---------------------|
| Stroke (in.)       | 0.125 | 0.250 | 0.375 | 0.500 | 0.625 | 0.750 | 1.000 | -                   |
| Continuous Duty    | 13    | 11    | 10    | 9     | 8     | 7     | 4     | 12                  |
| *Intermittent Duty | 24    | 20    | 19    | 18    | 17    | 16    | 8     | 20                  |

### UL Recognition

Recognized under the   
Component Recognition Program of  
**Underwriters Laboratories, Inc.**

### Continuous Duty

100% 'On' Time

### \*Intermittent Duty

15% 'On' Time, (240 Seconds 'On' Max.  
Followed By 1360 Seconds 'Off' Min.)

### RoHS

These parts comply with **RoHS** Directive 2002/95/EC



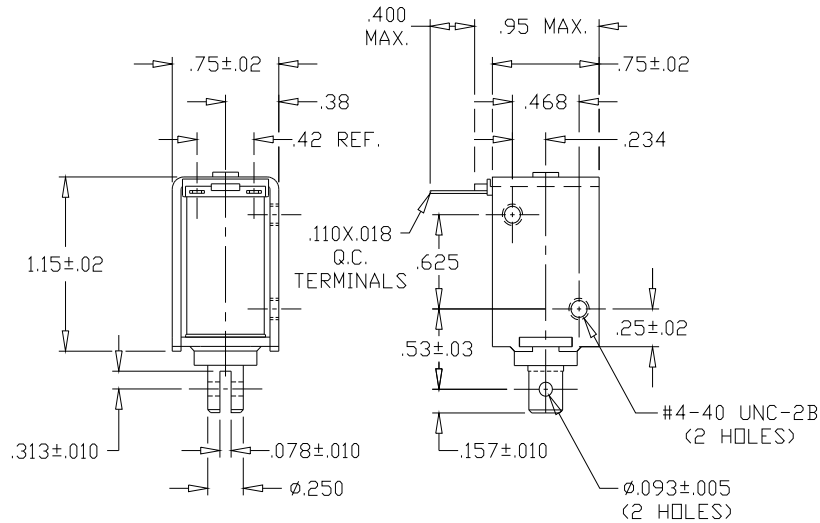
**GUARDIAN**  
Electric Manufacturing

**ISO 9001 / AS9100 Certified Company**

Woodstock, IL 60098 Ph. (815)334-3600 Fax (815)337-0377

Or visit us at our website [www.guardian-electric.com](http://www.guardian-electric.com)

## Model 22 AC Frame Solenoid



Solenoid shown energized and fully seated.

Spring kits are available (consult factory).

Total Weight: 3.0 oz.

Plunger Weight: 1.75 oz.

| Model No. | Part No.       | Duty Cycle    | Volts | Res. (Ω) | Power (VA) | Current, Seated (mA) |
|-----------|----------------|---------------|-------|----------|------------|----------------------|
| 22-I-120A | A420-065797-00 | *Intermittent | 120   | 576      | 9          | 75                   |
| 22-C-120A | A420-065796-00 | Continuous    | 120   | 970      | 5.5        | 46                   |
| 22-I-240A | A420-065799-00 | *Intermittent | 240   | 2360     | 9          | 38                   |
| 22-C-240A | A420-065798-00 | Continuous    | 240   | 3920     | 5.5        | 23                   |

When ordering, please refer to Part No., as listed above.

Consult factory for custom configurations.

| Pull Force (oz.)   |       |       |       |       |       |       |       | Holding Force (oz.) |
|--------------------|-------|-------|-------|-------|-------|-------|-------|---------------------|
| Stroke (in.)       | 0.125 | 0.250 | 0.375 | 0.500 | 0.625 | 0.750 | 1.000 | -                   |
| Continuous Duty    | 7     | 3     | 2     | 1     | n/a   | n/a   | n/a   | 6                   |
| *Intermittent Duty | 8     | 5     | 3     | 2     | n/a   | n/a   | n/a   | 7                   |

### UL Recognition

Recognized under the   
Component Recognition Program of  
**Underwriters Laboratories, Inc.**

### Continuous Duty

100% 'On' Time

### \*Intermittent Duty

20% 'On' Time, (240 Seconds 'On' Max.  
Followed By 960 Seconds 'Off' Min.)

### RoHS

These parts comply with **RoHS** Directive 2002/95/EC



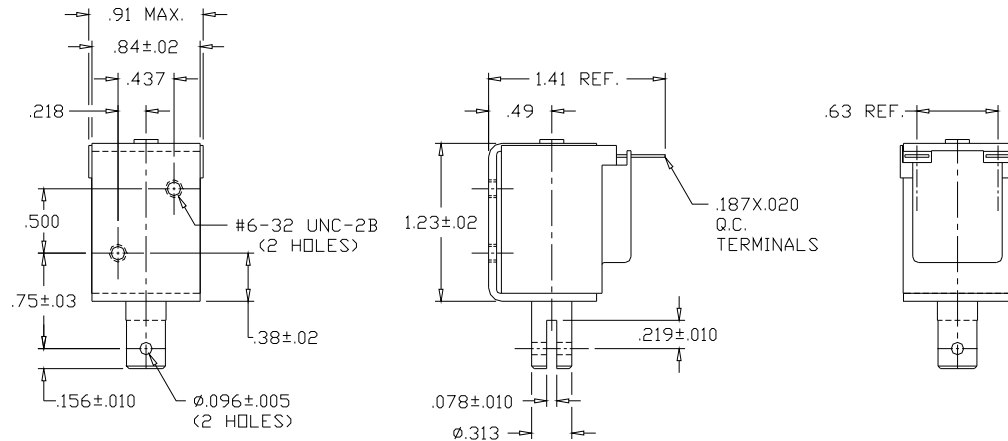
**GUARDIAN**  
Electric Manufacturing

**ISO 9001 / AS9100 Certified Company**

Woodstock, IL 60098 Ph. (815)334-3600 Fax (815)337-0377

Or visit us at our website [www.guardian-electric.com](http://www.guardian-electric.com)

## Model 24 AC Frame Solenoid



Solenoid shown energized and fully seated.

Total Weight: 5.0 oz.

Plunger Weight: .5 oz.

| Model No. | Part No.       | Duty Cycle    | Volts | Res. (Ω) | Power (VA) | Current, Seated (mA) |
|-----------|----------------|---------------|-------|----------|------------|----------------------|
| 24-I-120A | A420-065817-00 | *Intermittent | 120   | 310      | 14         | 117                  |
| 24-C-120A | A420-065816-00 | Continuous    | 120   | 500      | 7.5        | 63                   |
| 24-I-240A | A420-065819-00 | *Intermittent | 240   | 1240     | 14         | 58                   |
| 24-C-240A | A420-065818-00 | Continuous    | 240   | 2000     | 7.5        | 31                   |

When ordering, please refer to Part No., as listed above.

Consult factory for custom configurations.

| Pull Force (oz.)   |       |       |       |       |       |       |       | Holding Force (oz.) |
|--------------------|-------|-------|-------|-------|-------|-------|-------|---------------------|
| Stroke (in.)       | 0.125 | 0.250 | 0.375 | 0.500 | 0.625 | 0.750 | 1.000 | -                   |
| Continuous Duty    | 8     | 6     | 5     | 4     | 2     | 1     | n/a   | 20                  |
| *Intermittent Duty | 14    | 10    | 8     | 6     | 4     | 2     | n/a   | 23                  |

### UL Recognition

Recognized under the   
Component Recognition Program of  
**Underwriters Laboratories, Inc.**

### Continuous Duty

100% 'On' Time

### \*Intermittent Duty

20% 'On' Time, (240 Seconds 'On' Max.  
Followed By 960 Seconds 'Off' Min.)

### RoHS

These parts comply with **RoHS** Directive 2002/95/EC



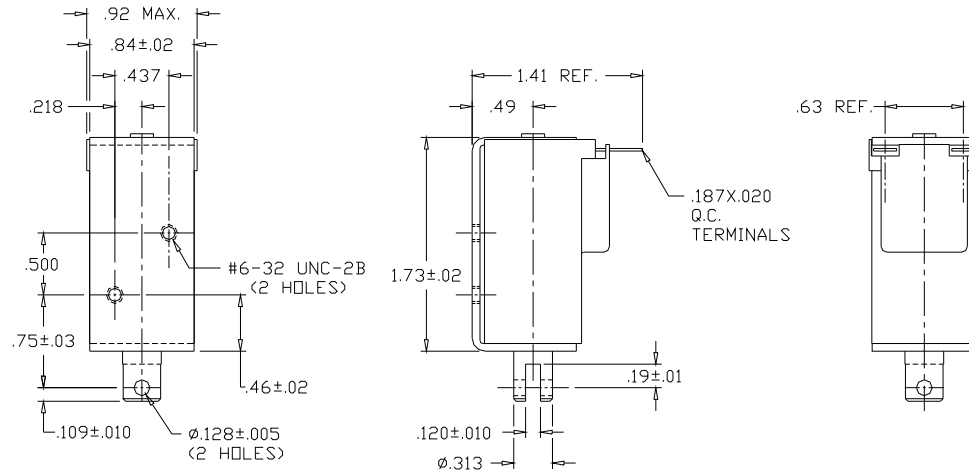
# GUARDIAN Electric Manufacturing

**ISO 9001 / AS9100 Certified Company**

Woodstock, IL 60098 Ph. (815)334-3600 Fax (815)337-0377

Or visit us at our website [www.guardian-electric.com](http://www.guardian-electric.com)

## Model 26 AC Frame Solenoid



Solenoid shown energized and fully seated.

Total Weight: 6.0 oz.

Plunger Weight: .5 oz.

| Model No. | Part No.       | Duty Cycle    | Volts | Res. (Ω) | Power (VA) | Current, Seated (mA) |
|-----------|----------------|---------------|-------|----------|------------|----------------------|
| 26-I-120A | A420-065537-00 | *Intermittent | 120   | 140      | 24         | 200                  |
| 26-C-120A | A420-065536-00 | Continuous    | 120   | 412      | 12         | 100                  |
| 26-I-240A | A420-065539-00 | *Intermittent | 240   | 560      | 24         | 100                  |
| 26-C-240A | A420-065538-00 | Continuous    | 240   | 1000     | 12         | 50                   |

When ordering, please refer to Part No., as listed above.

Consult factory for custom configurations.

| Pull Force (oz.)   |       |       |       |       |       |       |       | Holding Force (oz.) |
|--------------------|-------|-------|-------|-------|-------|-------|-------|---------------------|
| Stroke (in.)       | 0.125 | 0.250 | 0.375 | 0.500 | 0.625 | 0.750 | 1.000 | -                   |
| Continuous Duty    | 10    | 8     | 7     | 7     | 6     | 1     | n/a   | 15                  |
| *Intermittent Duty | 20    | 15    | 14    | 12    | 10    | 8     | 2     | 27                  |

### UL Recognition

Recognized under the   
Component Recognition Program of  
**Underwriters Laboratories, Inc.**

### Continuous Duty

100% 'On' Time

### \*Intermittent Duty

20% 'On' Time, (240 Seconds 'On' Max.  
Followed By 960 Seconds 'Off' Min.)

### RoHS

These parts comply with **RoHS** Directive 2002/95/EC



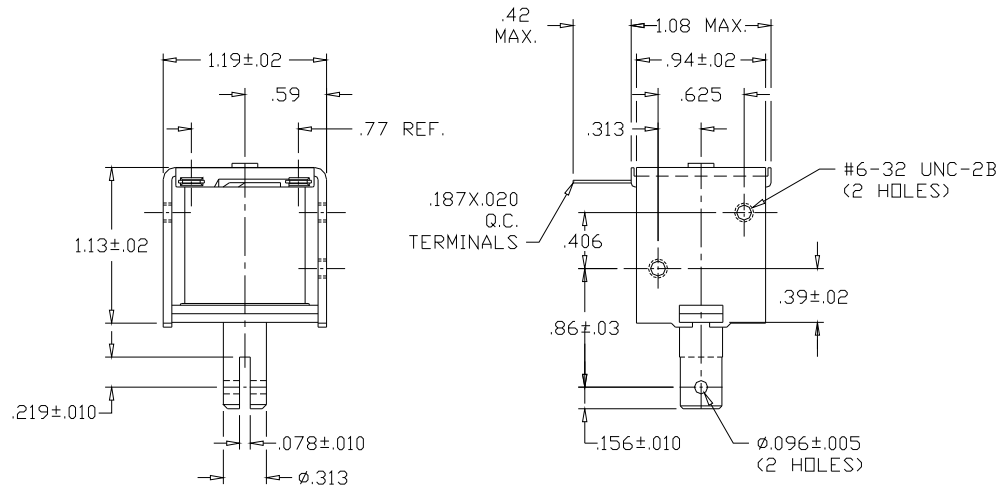
**GUARDIAN**  
Electric Manufacturing

**ISO 9001 / AS9100 Certified Company**

Woodstock, IL 60098 Ph. (815)334-3600 Fax (815)337-0377

Or visit us at our website [www.guardian-electric.com](http://www.guardian-electric.com)

## Model 28 AC Frame Solenoid



Solenoid shown energized and fully seated.

Spring kits are available (consult factory).

Total Weight: 3.5 oz.

Plunger Weight: .5 oz.

| Model No. | Part No.       | Duty Cycle    | Volts | Res. (Ω) | Power (VA) | Current, Seated (mA) |
|-----------|----------------|---------------|-------|----------|------------|----------------------|
| 28-I-120A | A420-065447-00 | *Intermittent | 120   | 220      | 22         | 183                  |
| 28-C-120A | A420-065446-00 | Continuous    | 120   | 400      | 8          | 67                   |
| 28-I-240A | A420-065449-00 | *Intermittent | 240   | 900      | 22         | 92                   |
| 28-C-240A | A420-065448-00 | Continuous    | 240   | 1600     | 8          | 33                   |

When ordering, please refer to Part No., as listed above.

Consult factory for custom configurations.

| Pull Force (oz.)   |       |       |       |       |       |       |       | Holding Force (oz.) |
|--------------------|-------|-------|-------|-------|-------|-------|-------|---------------------|
| Stroke (in.)       | 0.125 | 0.250 | 0.375 | 0.500 | 0.625 | 0.750 | 1.000 | -                   |
| Continuous Duty    | 11    | 8     | 6     | 4     | n/a   | n/a   | n/a   | 13                  |
| *Intermittent Duty | 18    | 14    | 9     | 5     | n/a   | n/a   | n/a   | 15                  |

### UL Recognition

Recognized under the   
Component Recognition Program of  
**Underwriters Laboratories, Inc.**

### Continuous Duty

100% 'On' Time

### \*Intermittent Duty

25% 'On' Time, (240 Seconds 'On' Max.  
Followed By 720 Seconds 'Off' Min.)

### RoHS

These parts comply with **RoHS** Directive 2002/95/EC



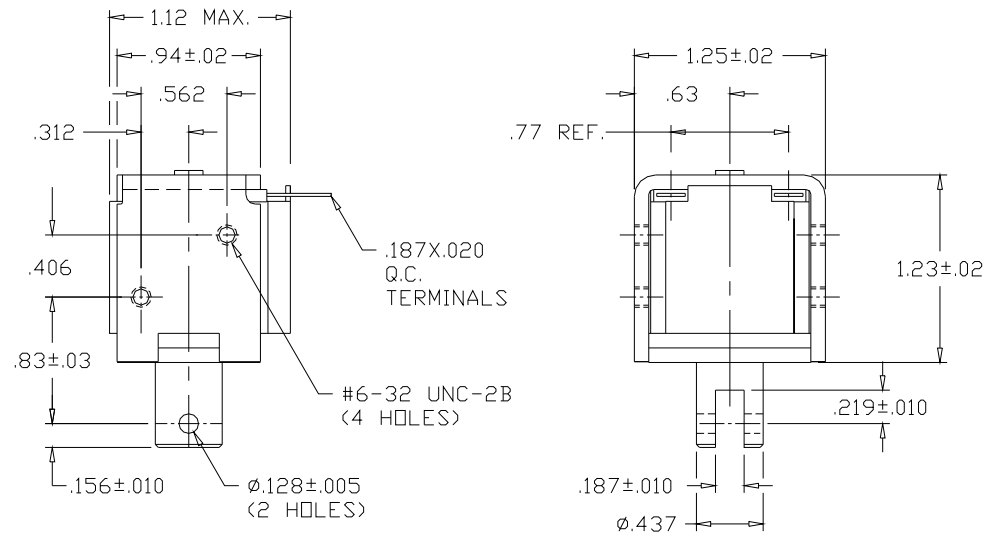
# GUARDIAN Electric Manufacturing

ISO 9001 / AS9100 Certified Company

Woodstock, IL 60098 Ph. (815)334-3600 Fax (815)337-0377

Or visit us at our website [www.guardian-electric.com](http://www.guardian-electric.com)

## Model 28HD AC Frame Solenoid



Solenoid shown energized and fully seated.

Spring kits are available (consult factory).

Total Weight: 6 oz.

Plunger Weight: 1 oz.

| Model No.   | Part No.       | Duty Cycle    | Volts | Res. (Ω) | Power (VA) | Current, Seated (mA) |
|-------------|----------------|---------------|-------|----------|------------|----------------------|
| 28HD-I-120A | A420-065957-00 | *Intermittent | 120   | 173      | 28         | 233                  |
| 28HD-C-120A | A420-065956-00 | Continuous    | 120   | 375      | 9          | 75                   |
| 28HD-I-240A | A420-065959-00 | *Intermittent | 240   | 800      | 28         | 117                  |
| 28HD-C-240A | A420-065958-00 | Continuous    | 240   | 1480     | 9          | 38                   |

When ordering, please refer to Part No., as listed above.

Consult factory for custom configurations.

| Pull Force (oz.)   |       |       |       |       |       |       |       | Holding Force (oz.) |
|--------------------|-------|-------|-------|-------|-------|-------|-------|---------------------|
| Stroke (in.)       | 0.125 | 0.250 | 0.375 | 0.500 | 0.625 | 0.750 | 1.000 | -                   |
| Continuous Duty    | 12    | 9     | 6     | 4     | n/a   | n/a   | n/a   | 35                  |
| *Intermittent Duty | 24    | 18    | 13    | 8     | n/a   | n/a   | n/a   | 61                  |

### UL Recognition

Recognized under the   
Component Recognition Program of  
**Underwriters Laboratories, Inc.**

### Continuous Duty

100% 'On' Time

### \*Intermittent Duty

20% 'On' Time, (240 Seconds 'On' Max.  
Followed By 960 Seconds 'Off' Min.)

### RoHS

These parts comply with **RoHS** Directive 2002/95/EC



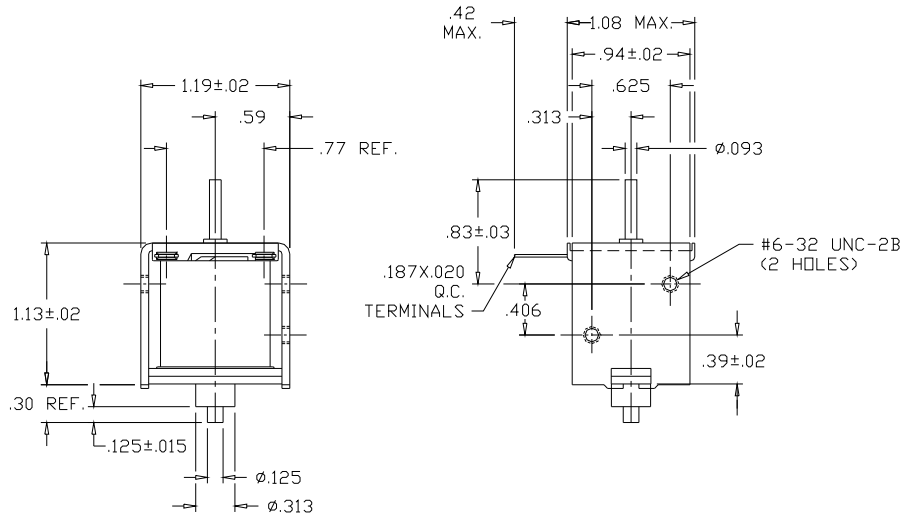
**GUARDIAN**  
Electric Manufacturing

**ISO 9001 / AS9100 Certified Company**

Woodstock, IL 60098 Ph. (815)334-3600 Fax (815)337-0377

Or visit us at our website [www.guardian-electric.com](http://www.guardian-electric.com)

## Model 28P Push AC Frame Solenoid



Solenoid shown energized and fully seated.

Total Weight: 3.5 oz.

Plunger Weight: .5 oz.

| Model No.  | Part No.       | Duty Cycle    | Volts | Res. (Ω) | Power (VA) | Current, Seated (mA) |
|------------|----------------|---------------|-------|----------|------------|----------------------|
| 28P-I-120A | A420-065587-00 | *Intermittent | 120   | 220      | 22         | 183                  |
| 28P-C-120A | A420-065586-00 | Continuous    | 120   | 400      | 8          | 67                   |
| 28P-I-240A | A420-065589-00 | *Intermittent | 240   | 900      | 22         | 92                   |
| 28P-C-240A | A420-065588-00 | Continuous    | 240   | 1600     | 8          | 33                   |

When ordering, please refer to Part No., as listed above.

Consult factory for custom configurations.

| Push Force (oz.)   |       |       |       |       |       |       |       | Holding Force (oz.) |
|--------------------|-------|-------|-------|-------|-------|-------|-------|---------------------|
| Stroke (in.)       | 0.125 | 0.250 | 0.375 | 0.500 | 0.625 | 0.750 | 1.000 | -                   |
| Continuous Duty    | 11    | 8     | 6     | 4     | n/a   | n/a   | n/a   | 13                  |
| *Intermittent Duty | 18    | 14    | 9     | 5     | n/a   | n/a   | n/a   | 15                  |

### UL Recognition

Recognized under the   
Component Recognition Program of  
**Underwriters Laboratories, Inc.**

### Continuous Duty

100% 'On' Time

### \*Intermittent Duty

25% 'On' Time, (240 Seconds 'On' Max.  
Followed By 720 Seconds 'Off' Min.)

### RoHS

These parts comply with **RoHS** Directive 2002/95/EC



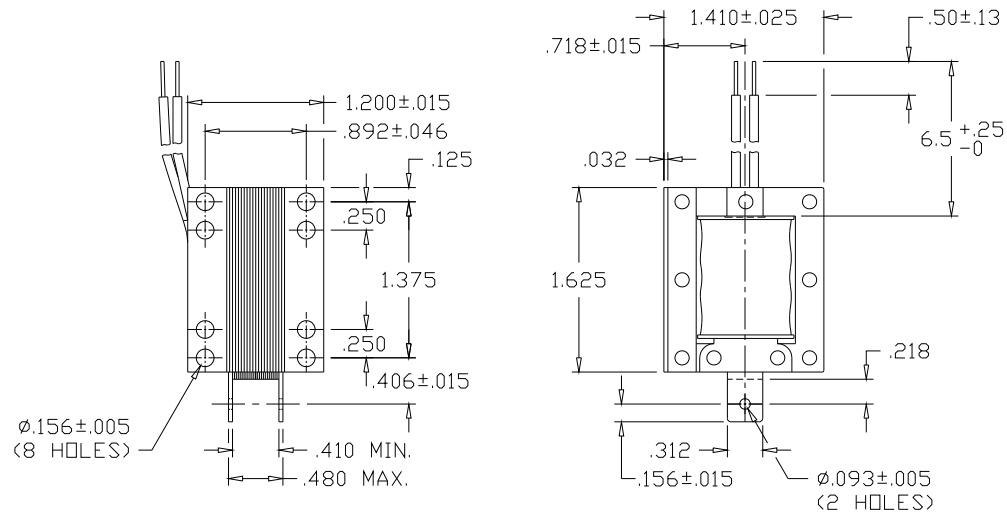
**GUARDIAN**  
Electric Manufacturing

**ISO 9001 / AS9100 Certified Company**

Woodstock, IL 60098 Ph. (815)334-3600 Fax (815)337-0377

Or visit us at our website [www.guardian-electric.com](http://www.guardian-electric.com)

## Model 12 Laminated AC Frame Solenoid



Solenoid shown energized and fully seated.

Total Weight: 5.5 oz.

Plunger Weight: 1.0 oz.

| Model No. | Part No.       | Duty Cycle    | Volts | Res. (Ω) | Power (VA) | Current, Seated (mA) |
|-----------|----------------|---------------|-------|----------|------------|----------------------|
| 12-I-120A | A421-062507-11 | *Intermittent | 120   | 100      | 33         | 275                  |
| 12-C-120A | A421-062507-12 | Continuous    | 120   | 150      | 22         | 183                  |
| 12-I-240A | A421-062507-13 | *Intermittent | 240   | 400      | 33         | 138                  |
| 12-C-240A | A421-062507-14 | Continuous    | 240   | 600      | 22         | 92                   |

When ordering, please refer to Part No., as listed above.

Consult factory for custom configurations.

| Stroke (in.)       | Pull Force (oz.) |       |       |       |       |       |       | Holding Force (oz.) |
|--------------------|------------------|-------|-------|-------|-------|-------|-------|---------------------|
|                    | 0.125            | 0.250 | 0.375 | 0.500 | 0.625 | 0.750 | 1.000 | -                   |
| Continuous Duty    | 30               | 21    | 17    | 16    | 15    | 12    | 5     | 25                  |
| *Intermittent Duty | 48               | 32    | 28    | 24    | 20    | 17    | 8     | 35                  |

### UL Recognition

Recognized under the   
Component Recognition Program of  
**Underwriters Laboratories, Inc.**

### Continuous Duty

100% 'On' Time

### \*Intermittent Duty

20% 'On' Time, (180 Seconds 'On' Max.  
Followed By 720 Seconds 'Off' Min.)

### RoHS

These parts comply with **RoHS** Directive 2002/95/EC



# GUARDIAN

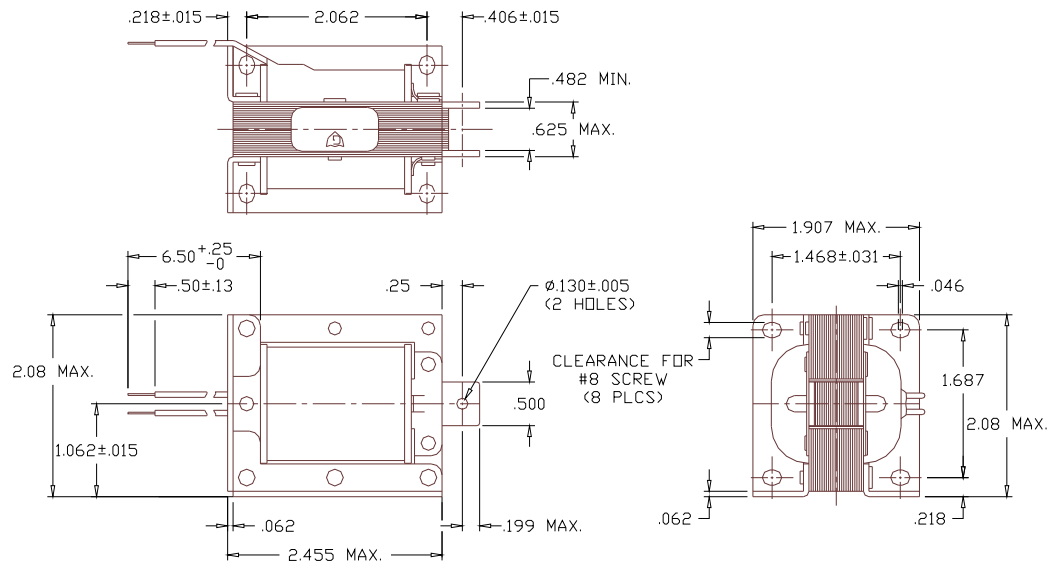
Electric Manufacturing

**ISO 9001 / AS9100 Certified Company**

Woodstock, IL 60098 Ph. (815)334-3600 Fax (815)337-0377

Or visit us at our website [www.guardian-electric.com](http://www.guardian-electric.com)

## Model 14 Laminated AC Frame Solenoid



Solenoid shown energized and fully seated.

Total Weight: 18 oz.

Plunger Weight: 2.6 oz.

| Model No. | Part No.       | Duty Cycle    | Volts | Res. (Ω) | Power (VA) | Current, Seated |
|-----------|----------------|---------------|-------|----------|------------|-----------------|
| 14-I-120A | A421-062508-08 | *Intermittent | 120   | 11       | 180        | 1.5 A           |
| 14-C-120A | A421-062508-09 | Continuous    | 120   | 18       | 63         | 525 mA          |
| 14-I-240A | A421-062508-10 | *Intermittent | 240   | 45       | 180        | 750 mA          |
| 14-C-240A | A421-062508-11 | Continuous    | 240   | 93       | 63         | 263 mA          |

When ordering, please refer to Part No., as listed above.

Consult factory for custom configurations.

| Pull Force (oz.)   |       |       |       |       |       |       |       | Holding Force (oz.) |
|--------------------|-------|-------|-------|-------|-------|-------|-------|---------------------|
| Stroke (in.)       | 0.125 | 0.250 | 0.375 | 0.500 | 0.625 | 0.750 | 1.000 | -                   |
| Continuous Duty    | 96    | 75    | 75    | 96    | 108   | 115   | 115   | 160                 |
| *Intermittent Duty | 130   | 108   | 108   | 110   | 115   | 120   | 120   | 220                 |

### UL Recognition

Recognized under the   
Component Recognition Program of  
**Underwriters Laboratories, Inc.**

### Continuous Duty

100% 'On' Time

### \*Intermittent Duty

20% 'On' Time, (240 Seconds 'On' Max.  
Followed By 960 Seconds 'Off' Min.)

### RoHS

These parts comply with **RoHS** Directive 2002/95/EC



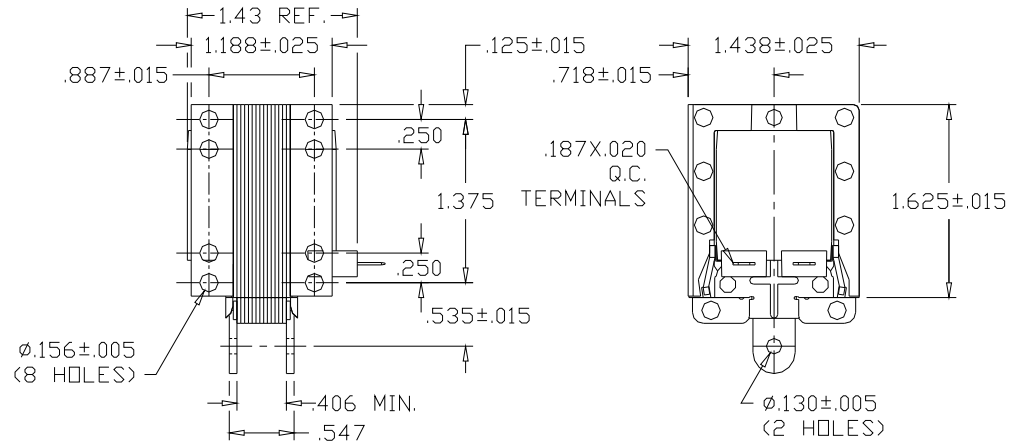
# GUARDIAN Electric Manufacturing

ISO 9001 / AS9100 Certified Company

Woodstock, IL 60098 Ph. (815)334-3600 Fax (815)337-0377

Or visit us at our website [www.guardian-electric.com](http://www.guardian-electric.com)

## Model 16 Laminated AC Frame Solenoid



Solenoid shown energized and fully seated.

Total Weight: 9 oz.

Plunger Weight: 2 oz.

| Model No. | Part No.       | Duty Cycle    | Volts | Res. (Ω) | Power (VA) | Current, Seated (mA) |
|-----------|----------------|---------------|-------|----------|------------|----------------------|
| 16-I-120A | A421-064142-02 | *Intermittent | 120   | 41       | 70         | 583                  |
| 16-C-120A | A421-064142-01 | Continuous    | 120   | 85       | 20         | 167                  |
| 16-I-240A | A421-064142-04 | *Intermittent | 240   | 200      | 70         | 292                  |
| 16-C-240A | A421-064142-03 | Continuous    | 240   | 350      | 20         | 83                   |

When ordering, please refer to Part No., as listed above.

Consult factory for custom configurations.

| Pull Force (oz.)   |       |       |       |       |       |       |       | Holding Force (oz.) |
|--------------------|-------|-------|-------|-------|-------|-------|-------|---------------------|
| Stroke (in.)       | 0.125 | 0.250 | 0.375 | 0.500 | 0.625 | 0.750 | 1.000 | -                   |
| Continuous Duty    | 68    | 43    | 35    | 30    | 23    | 18    | 8     | 70                  |
| *Intermittent Duty | 112   | 80    | 67    | 60    | 50    | 35    | 8     | 130                 |

### UL Recognition

Recognized under the   
Component Recognition Program of  
**Underwriters Laboratories, Inc.**

### Continuous Duty

100% 'On' Time

### \*Intermittent Duty

10% 'On' Time, (150 Seconds 'On' Max.  
Followed By 1350 Seconds 'Off' Min.)

### RoHS

These parts comply with **RoHS** Directive 2002/95/EC



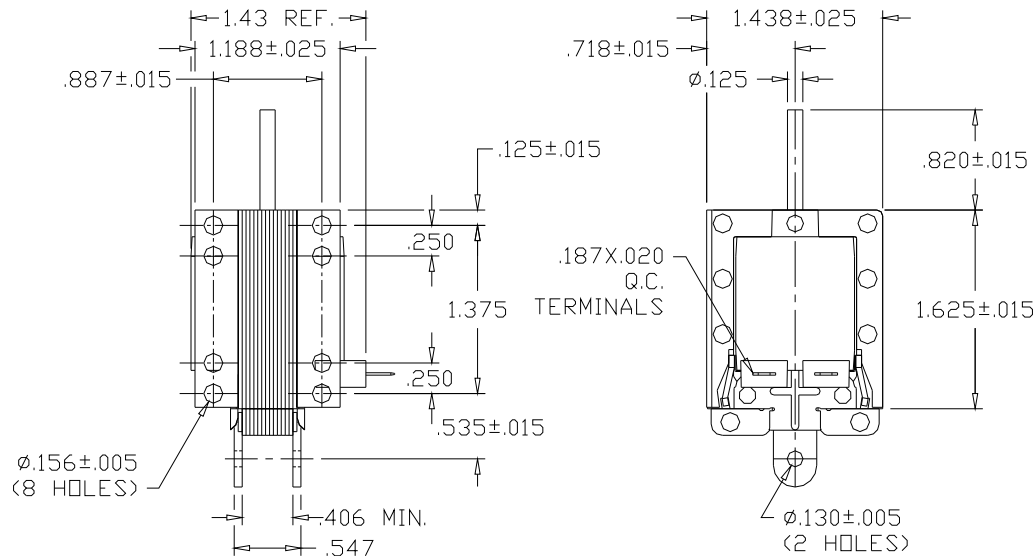
**GUARDIAN**  
Electric Manufacturing

**ISO 9001 / AS9100 Certified Company**

Woodstock, IL 60098 Ph. (815)334-3600 Fax (815)337-0377

Or visit us at our website [www.guardian-electric.com](http://www.guardian-electric.com)

## Model 16P Push Laminated AC Frame Solenoid



Solenoid shown energized and fully seated.

Total Weight: 9.5 oz.

Plunger Weight: 2.5 oz.

| Model No.  | Part No.       | Duty Cycle    | Volts | Res. (Ω) | Power (VA) | Current, Seated (mA) |
|------------|----------------|---------------|-------|----------|------------|----------------------|
| 16P-I-120A | A420-065147-00 | *Intermittent | 120   | 41       | 70         | 583                  |
| 16P-C-120A | A420-065146-00 | Continuous    | 120   | 85       | 20         | 167                  |
| 16P-I-240A | A420-065149-00 | *Intermittent | 240   | 200      | 70         | 292                  |
| 16P-C-240A | A420-065148-00 | Continuous    | 240   | 350      | 20         | 83                   |

When ordering, please refer to Part No., as listed above.

Consult factory for custom configurations.

| Push Force (oz.)   |       |       |       |       |       |       |       | Holding Force (oz.) |
|--------------------|-------|-------|-------|-------|-------|-------|-------|---------------------|
| Stroke (in.)       | 0.125 | 0.250 | 0.375 | 0.500 | 0.625 | 0.750 | 1.000 | -                   |
| Continuous Duty    | 68    | 43    | 35    | 30    | 23    | 18    | 8     | 70                  |
| *Intermittent Duty | 112   | 80    | 67    | 60    | 50    | 35    | 8     | 130                 |

### UL Recognition

Recognized under the   
Component Recognition Program of  
**Underwriters Laboratories, Inc.**

### Continuous Duty

100% 'On' Time

### \*Intermittent Duty

10% 'On' Time, (150 Seconds 'On' Max.  
Followed By 1350 Seconds 'Off' Min.)

### RoHS

These parts comply with **RoHS** Directive 2002/95/EC



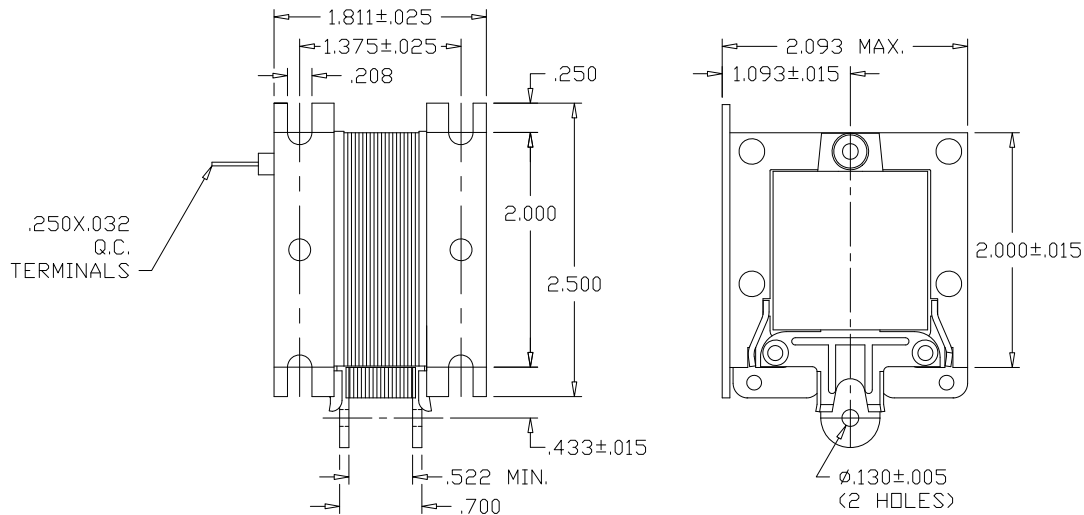
**GUARDIAN**  
Electric Manufacturing

**ISO 9001 / AS9100 Certified Company**

Woodstock, IL 60098 Ph. (815)334-3600 Fax (815)337-0377

Or visit us at our website [www.guardian-electric.com](http://www.guardian-electric.com)

## Model 18 Laminated AC Frame Solenoid



Solenoid shown energized and fully seated.

Total Weight: 17 oz.

Plunger Weight: 4.5 oz.

| Model No. | Part No.       | Duty Cycle    | Volts | Res. (Ω) | Power (VA) | Current, Seated |
|-----------|----------------|---------------|-------|----------|------------|-----------------|
| 18-I-120A | A421-062510-07 | *Intermittent | 120   | 8        | 228        | 1.9 A           |
| 18-C-120A | A421-062510-08 | Continuous    | 120   | 20.3     | 49         | 408 mA          |
| 18-I-240A | A421-062510-09 | *Intermittent | 240   | 46.9     | 228        | 950 mA          |
| 18-C-240A | A421-062510-10 | Continuous    | 240   | 80.7     | 49         | 204 mA          |

When ordering, please refer to Part No., as listed above.

Consult factory for custom configurations.

| Pull Force (oz.)   |       |       |       |       |       |       |       | Holding Force (oz.) |
|--------------------|-------|-------|-------|-------|-------|-------|-------|---------------------|
| Stroke (in.)       | 0.125 | 0.250 | 0.375 | 0.500 | 0.625 | 0.750 | 1.000 | -                   |
| Continuous Duty    | 155   | 115   | 105   | 105   | 105   | 100   | 60    | 245                 |
| *Intermittent Duty | 336   | 240   | 200   | 195   | 200   | 195   | 144   | 430                 |

### UL Recognition

Recognized under the   
Component Recognition Program of  
**Underwriters Laboratories, Inc.**

### Continuous Duty

100% 'On' Time

### \*Intermittent Duty

10% 'On' Time, (180 Seconds 'On' Max.  
Followed By 1620 Seconds 'Off' Min.)

### RoHS

These parts comply with **RoHS** Directive 2002/95/EC



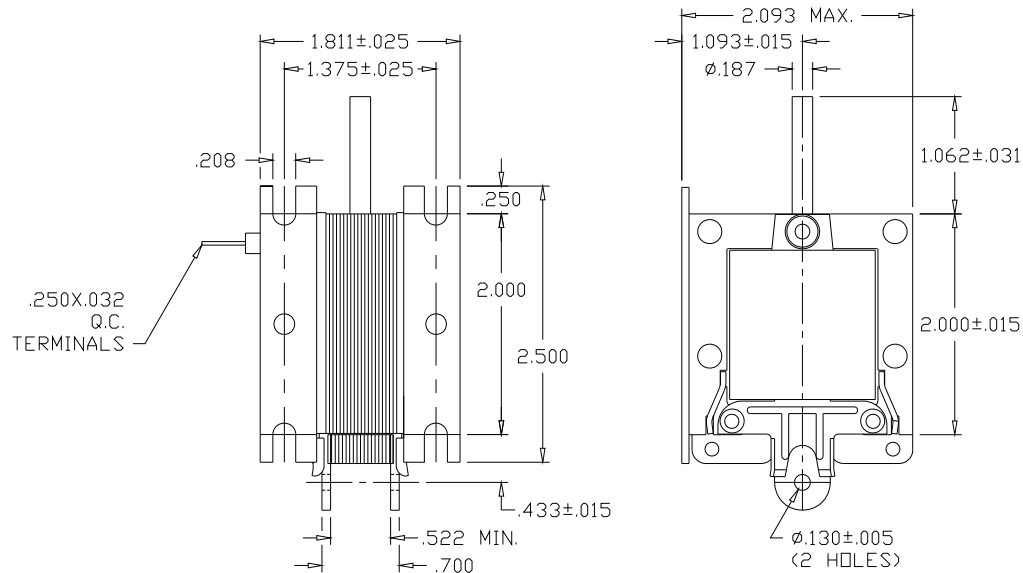
**GUARDIAN**  
Electric Manufacturing

**ISO 9001 / AS9100 Certified Company**

Woodstock, IL 60098 Ph. (815)334-3600 Fax (815)337-0377

Or visit us at our website [www.guardian-electric.com](http://www.guardian-electric.com)

## Model 18P Push Laminated AC Frame Solenoid



Solenoid shown energized and fully seated.

Total Weight: 18 oz.

Plunger Weight: 5 oz.

| Model No.  | Part No.       | Duty Cycle    | Volts | Res. ( $\Omega$ ) | Power (VA) | Current, Seated |
|------------|----------------|---------------|-------|-------------------|------------|-----------------|
| 18P-I-120A | A420-063493-07 | *Intermittent | 120   | 8.8               | 228        | 2.0 A           |
| 18P-C-120A | A420-063493-08 | Continuous    | 120   | 19.7              | 49         | 430 mA          |
| 18P-I-240A | TBA            | *Intermittent | 240   | 45                | 228        | 1.1 A           |
| 18P-C-240A | TBA            | Continuous    | 240   | 78                | 49         | 220 mA          |

When ordering, please refer to Part No., as listed above.

Consult factory for custom configurations.

| Push Force (oz.)   |       |       |       |       |       |       |       | Holding Force (oz.) |
|--------------------|-------|-------|-------|-------|-------|-------|-------|---------------------|
| Stroke (in.)       | 0.125 | 0.250 | 0.375 | 0.500 | 0.625 | 0.750 | 1.000 | -                   |
| Continuous Duty    | 155   | 115   | 105   | 105   | 105   | 100   | 60    | 100                 |
| *Intermittent Duty | 336   | 240   | 200   | 195   | 200   | 195   | 144   | 240                 |

### UL Recognition

Recognized under the   
Component Recognition Program of  
**Underwriters Laboratories, Inc.**

### Continuous Duty

100% 'On' Time

### \*Intermittent Duty

10% 'On' Time, (180 Seconds 'On' Max.  
Followed By 1620 Seconds 'Off' Min.)

### RoHS

These parts comply with **RoHS** Directive 2002/95/EC