



GUARDIAN
Electric Manufacturing

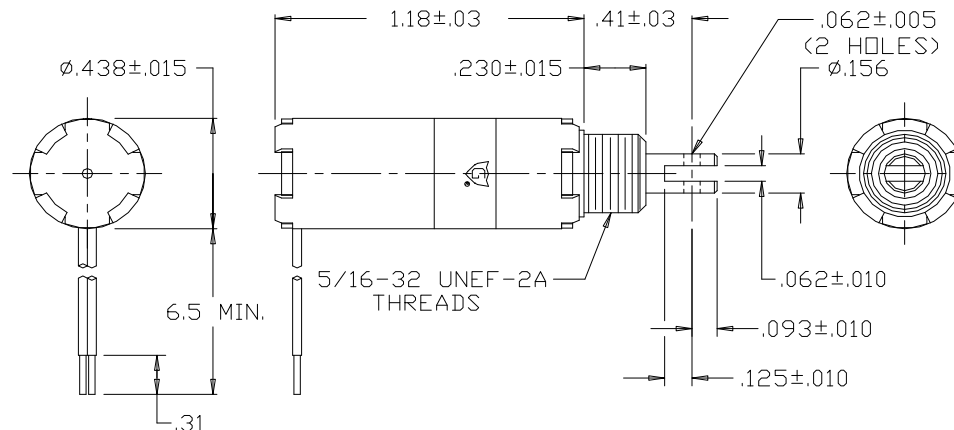
ISO 9001 / AS9100 Certified Company

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

Or visit us at our website www.guardian-electric.com

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
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Continuous Duty

100% 'On' Time

Intermittent Duty

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

RoHS

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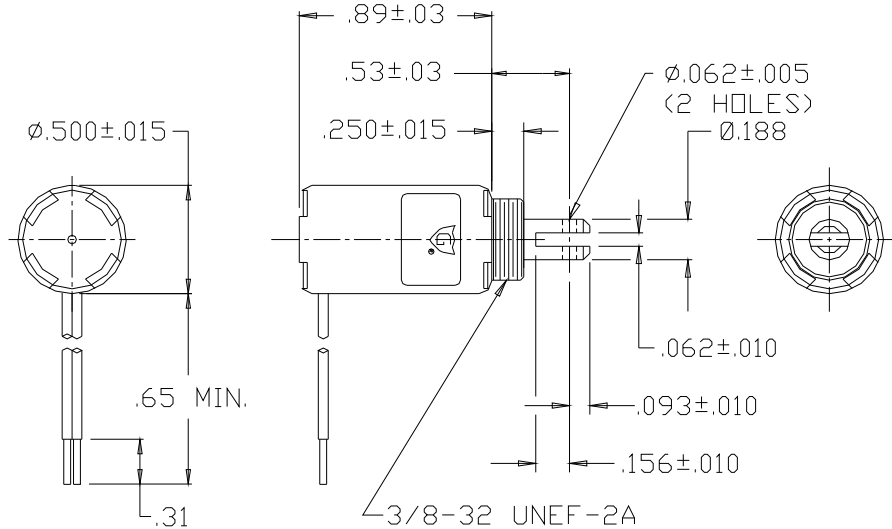
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Model T4 x 7

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

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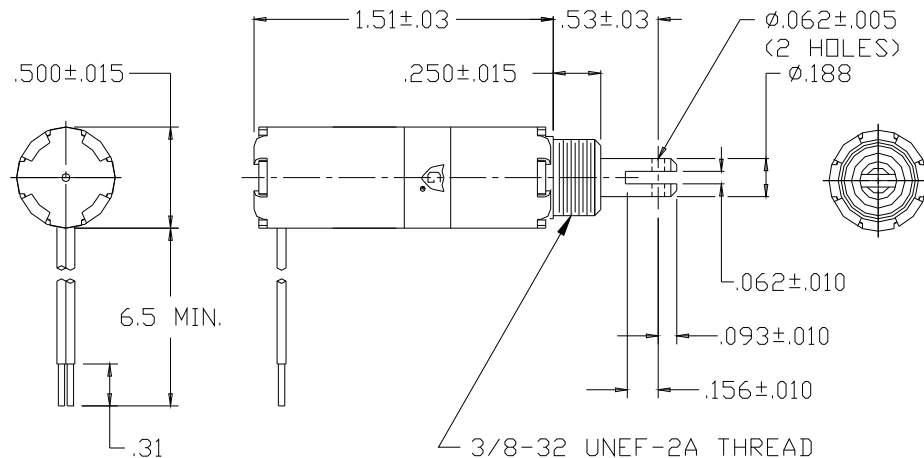
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Model T4 x 12

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

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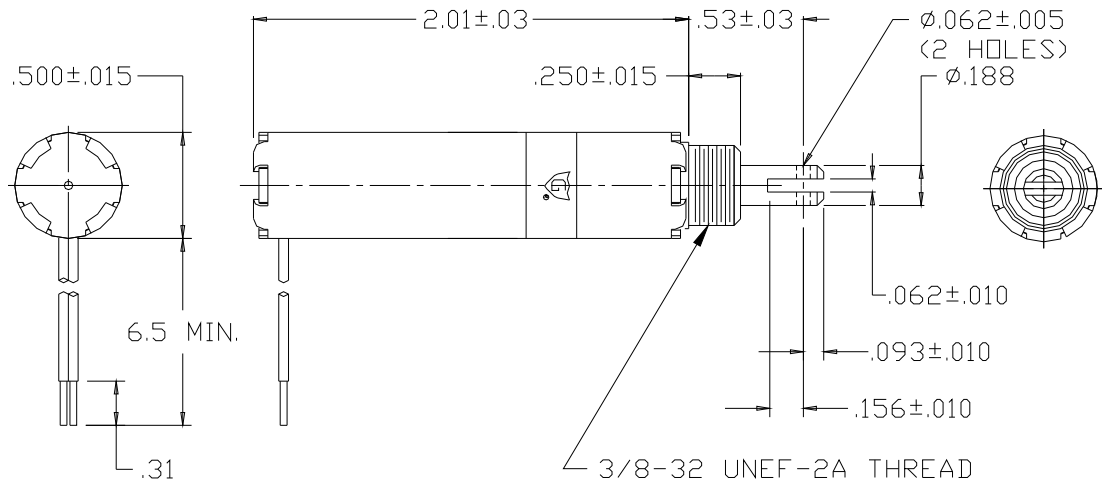
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Model T4 x 16

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

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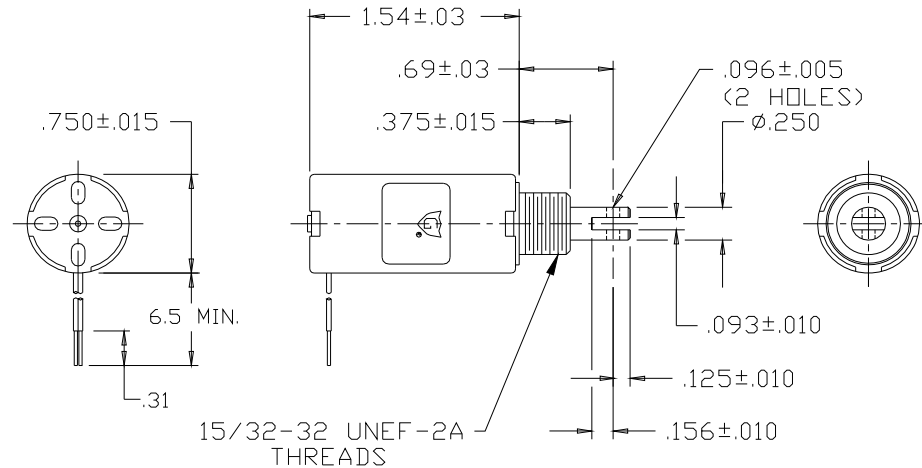
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Model T6 x 12

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

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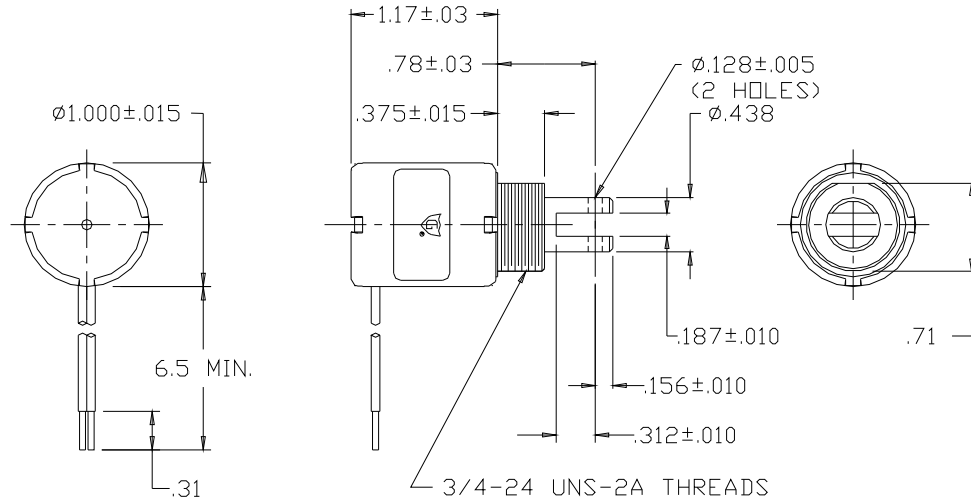
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Model T8 x 9

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

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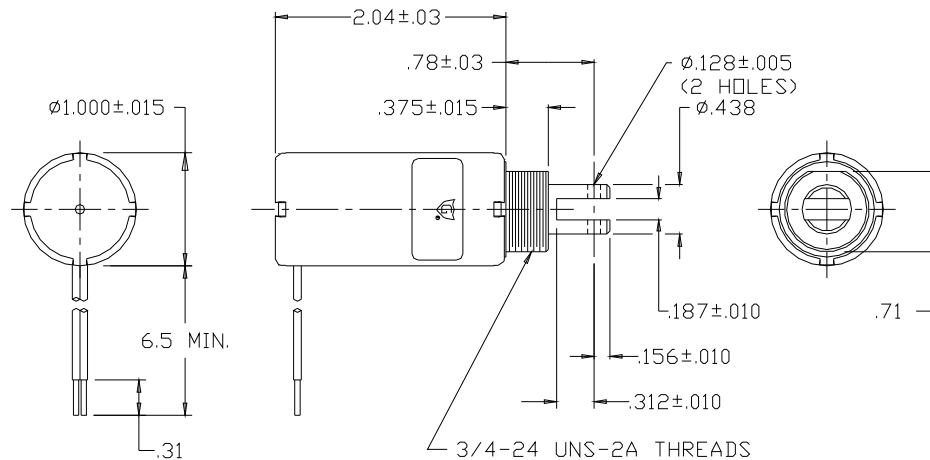
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Model T8 x 16

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

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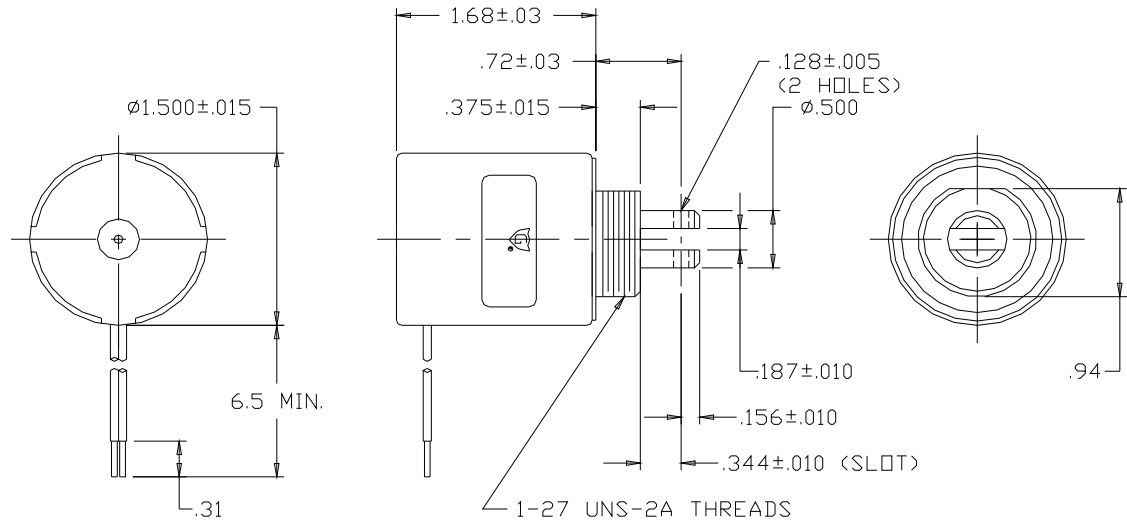
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Model T12 x 13

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

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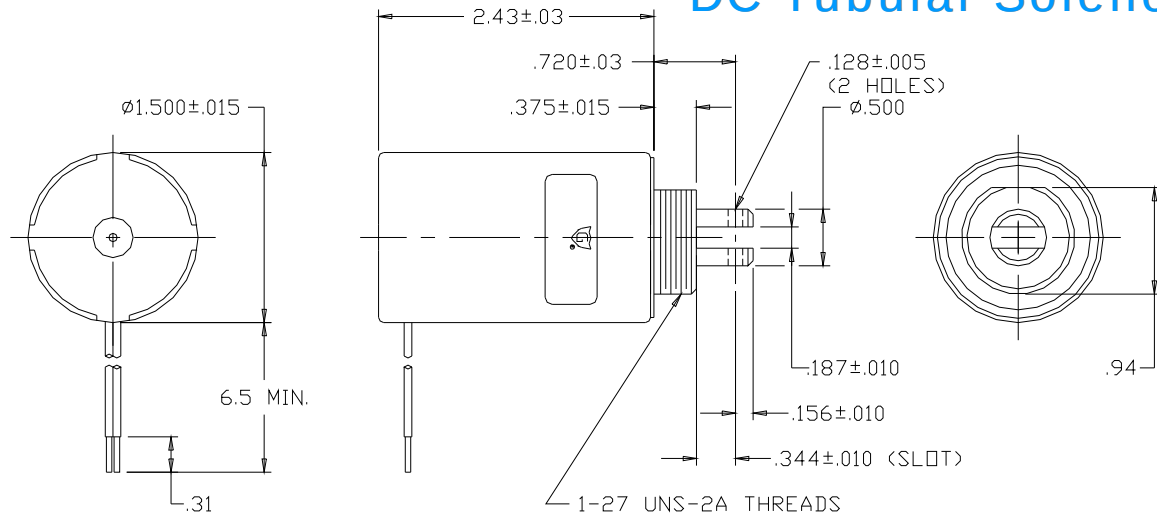
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Model T12 x 19

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

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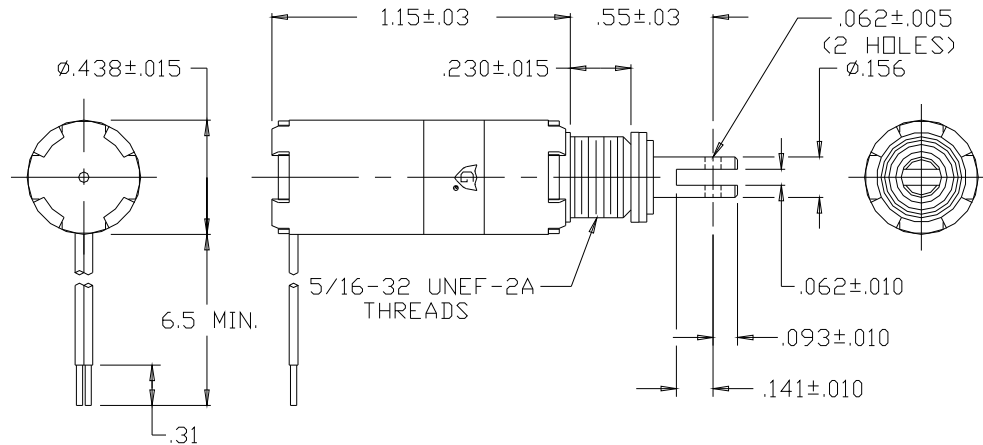
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Model LT3.5 x 9 Long-Life DC Tubular Solenoid



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

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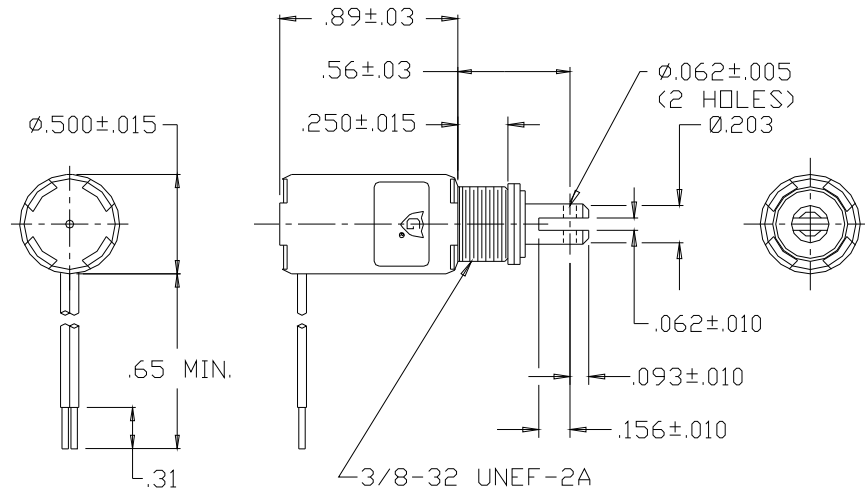
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Model LT4 x 7 Long-Life DC Tubular Solenoid



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

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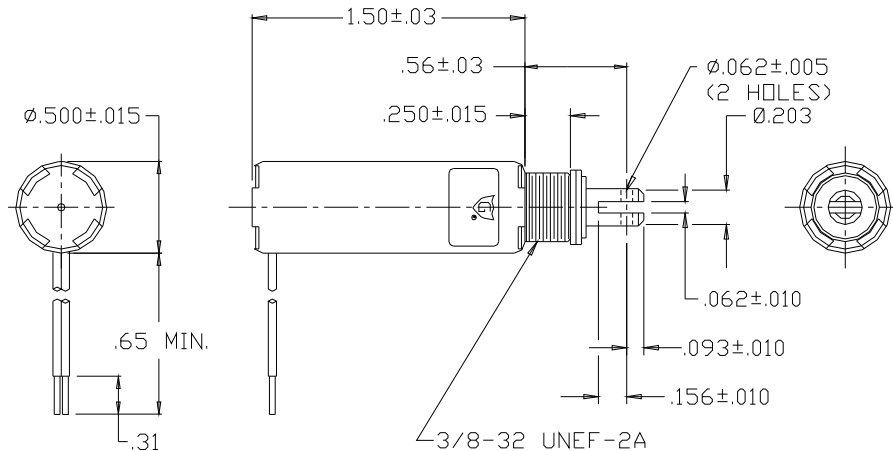
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Model LT4 x 12 Long-Life DC Tubular Solenoid



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

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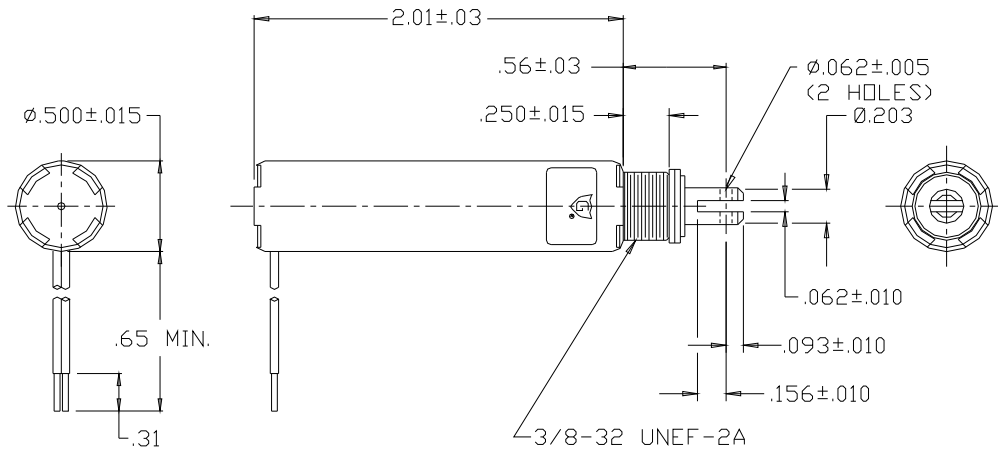
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Model LT4 x 16 Long-Life DC Tubular Solenoid



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

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Continuous Duty

100% 'On' Time

Intermittent Duty

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

RoHS

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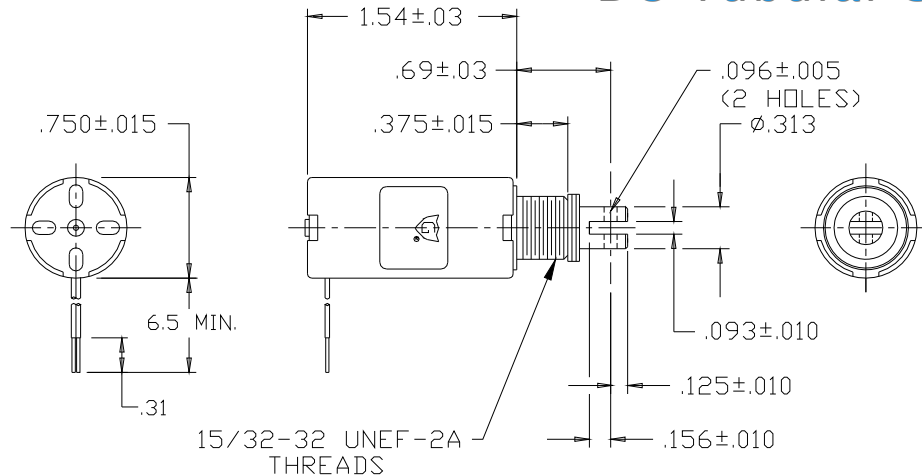
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Electric Manufacturing

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

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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

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Continuous Duty

100% 'On' Time

Intermittent Duty

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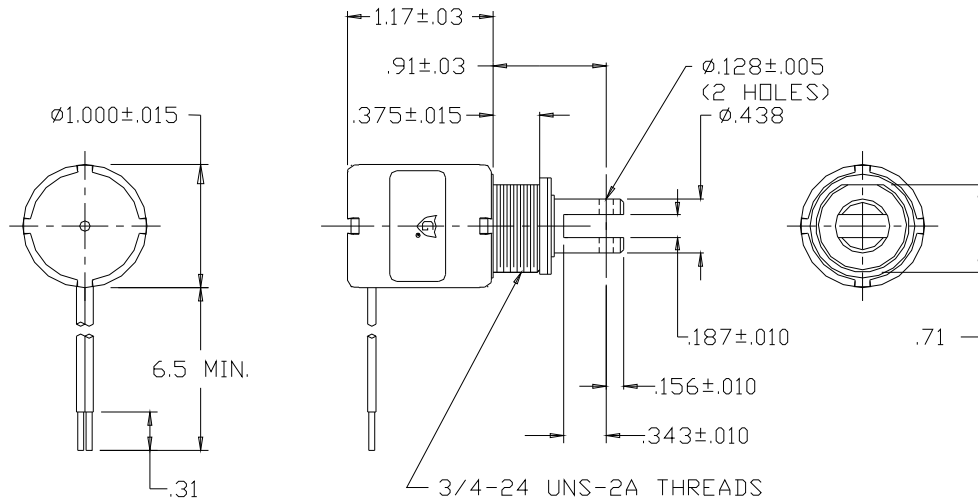
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Model LT8 x 9 Long-Life DC Tubular Solenoid



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

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Continuous Duty

100% 'On' Time

Intermittent Duty

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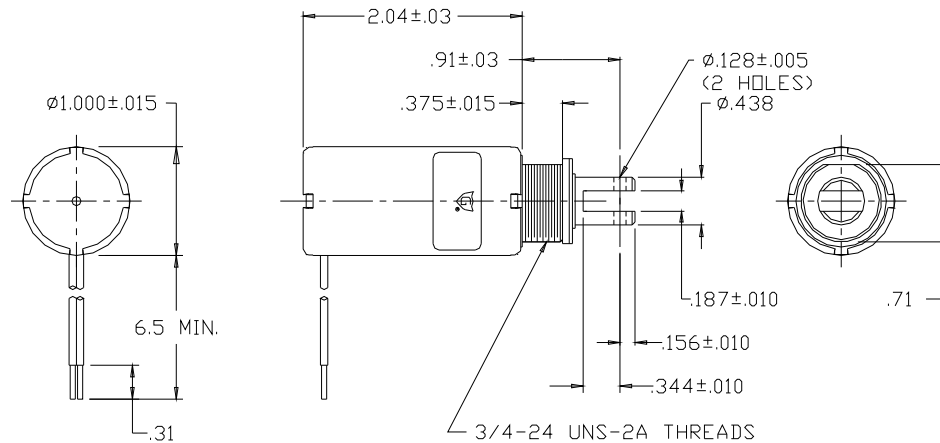
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Model LT8 x 16 Long-Life DC Tubular Solenoid



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

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Continuous Duty

100% 'On' Time

Intermittent Duty

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RoHS

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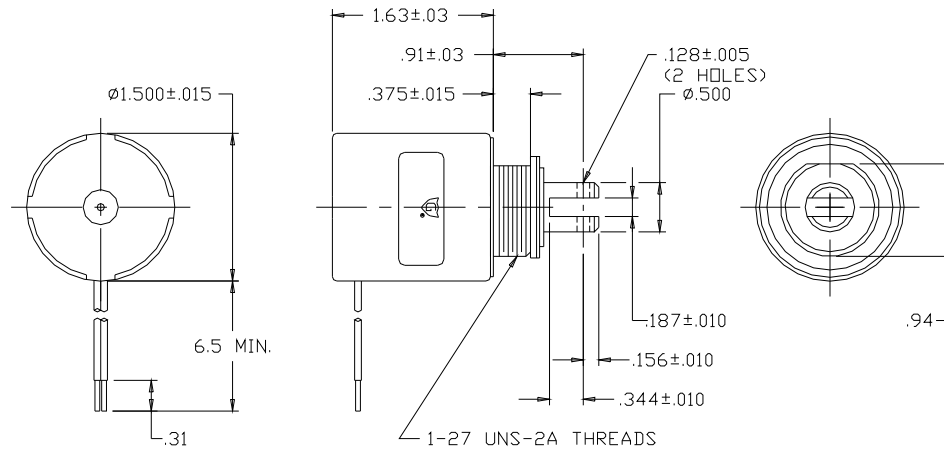
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Model LT12 x 13 Long-Life DC Tubular Solenoid



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

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Continuous Duty

100% 'On' Time

Intermittent Duty

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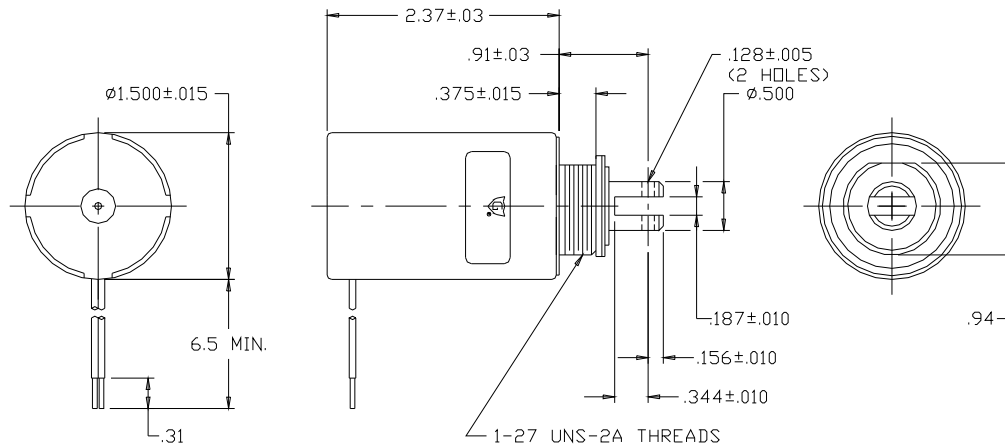
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Model LT12 x 19 Long-Life DC Tubular Solenoid



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

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Continuous Duty

100% 'On' Time

Intermittent Duty

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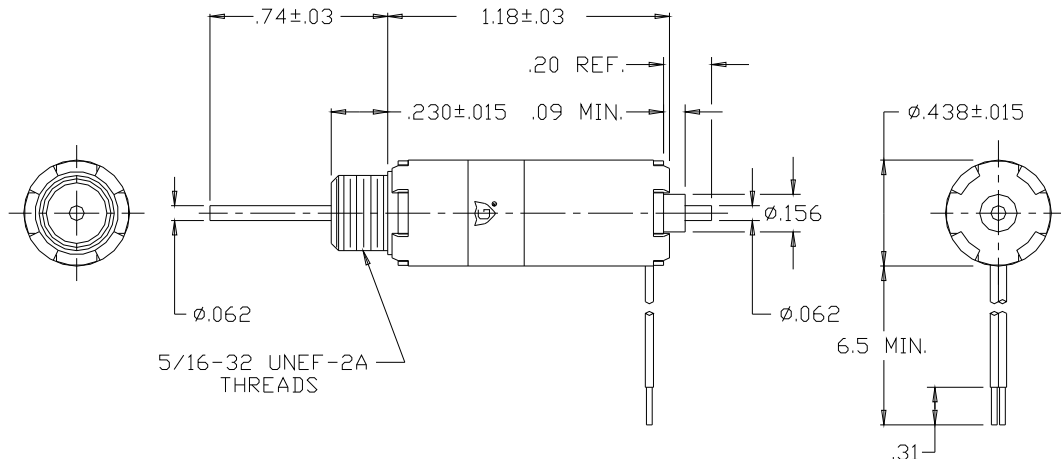
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Model TP3.5 x 9 Push-Type DC Tubular Solenoid



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

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Continuous Duty

100% 'On' Time

Intermittent Duty

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Followed By 300 Seconds 'Off' Min.)

RoHS

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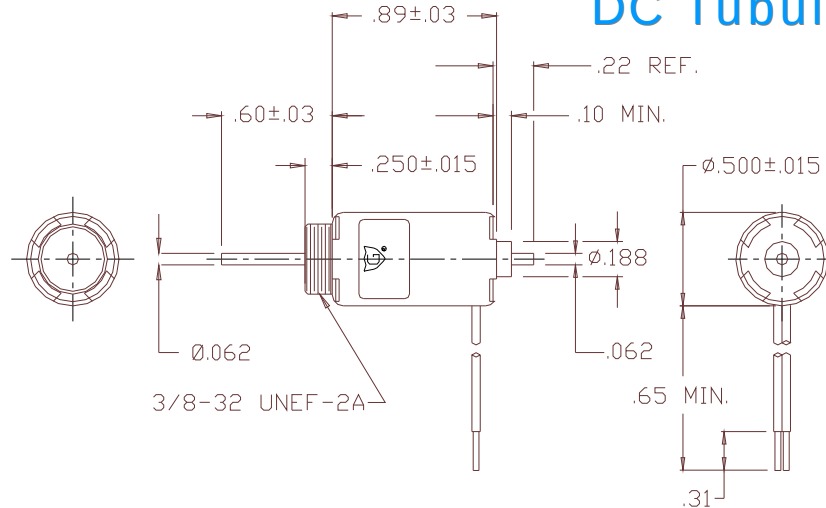
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Model TP4 x 7 Push-Type DC Tubular Solenoid



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

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Continuous Duty

100% 'On' Time

Intermittent Duty

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Followed By 300 Seconds 'Off' Min.)

RoHS

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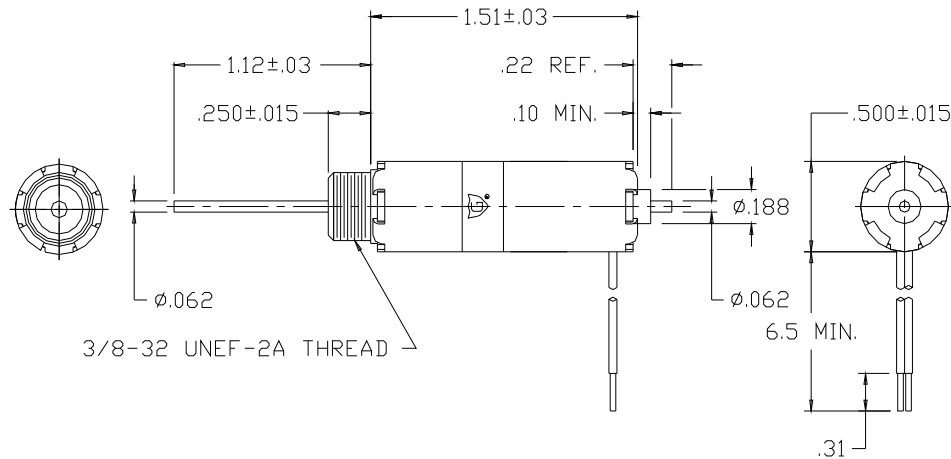
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Model TP4 x 12 Push-Type DC Tubular Solenoid



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

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Continuous Duty

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Intermittent Duty

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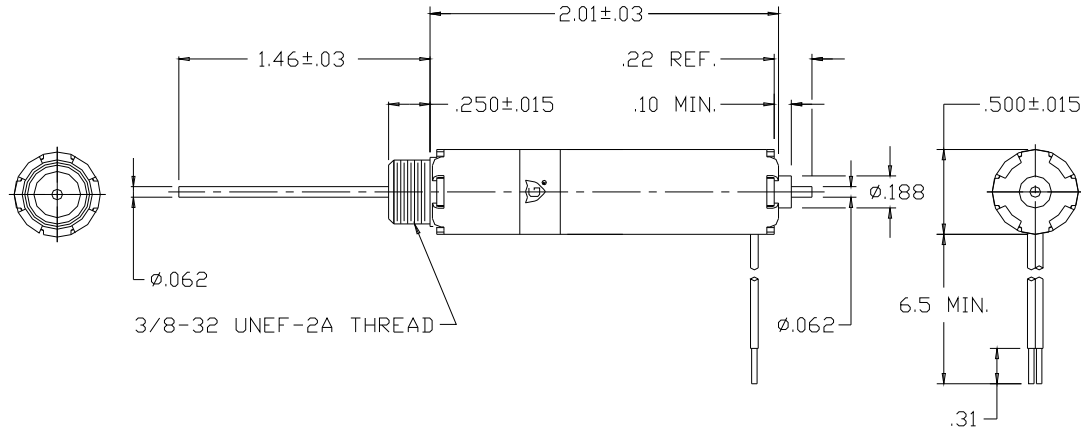
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Model TP4 x 16 Push-Type DC Tubular Solenoid



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

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Continuous Duty

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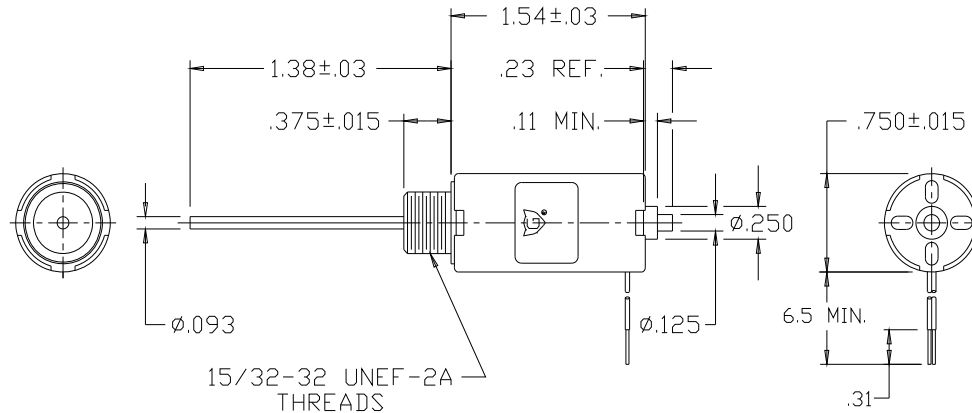
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Model TP6 x 12 Push-Type DC Tubular Solenoid



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

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Continuous Duty

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Intermittent Duty

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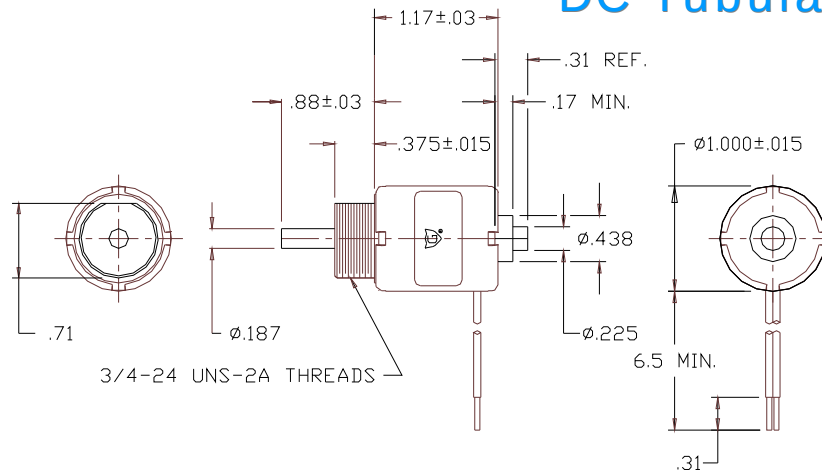
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Model TP8 x 9 Push-Type DC Tubular Solenoid



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

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Continuous Duty

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Intermittent Duty

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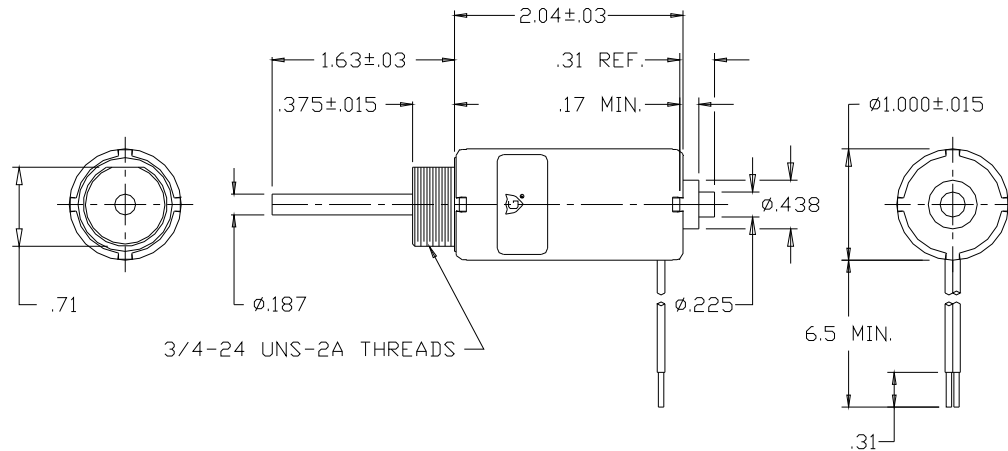
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Model TP8 x 16 Push-Type DC Tubular Solenoid



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

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Intermittent Duty

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Followed By 300 Seconds 'Off' Min.)

RoHS

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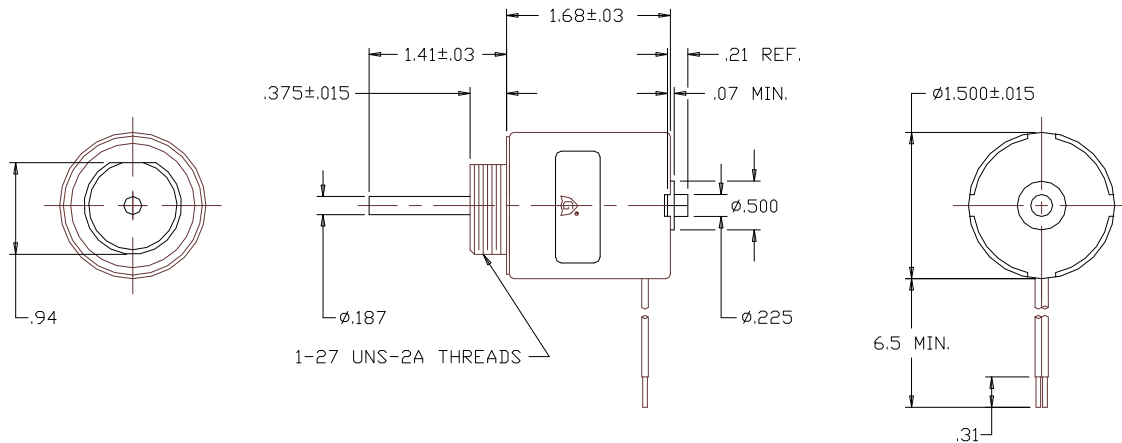
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Electric Manufacturing

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

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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

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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

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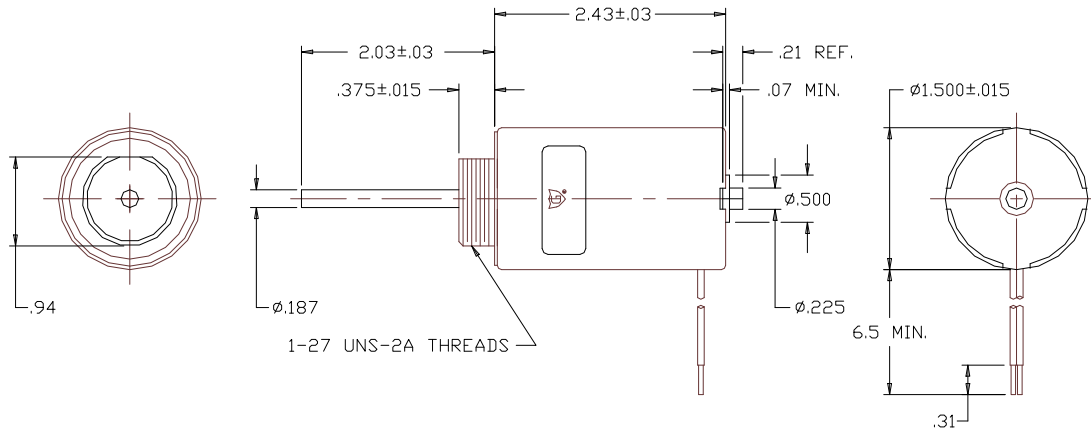
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Model TP12 x 19 Push-Type DC Tubular Solenoid



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

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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.)

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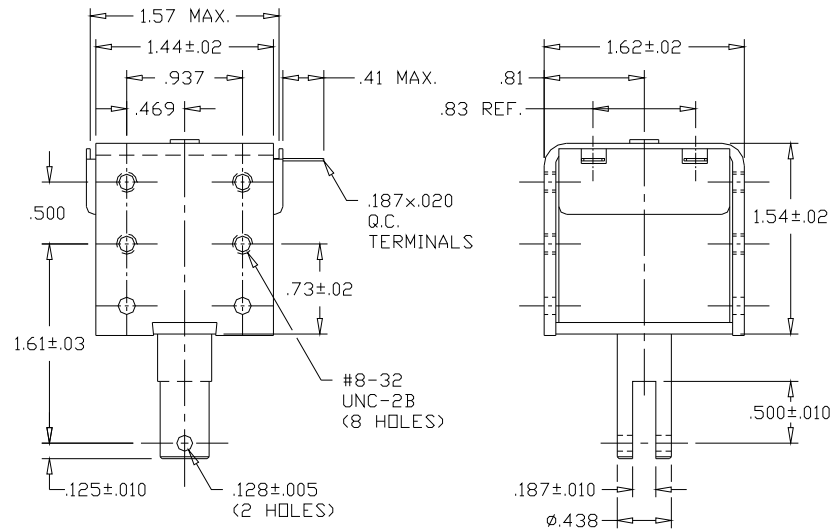
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Model 2 DC Frame Solenoid



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

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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

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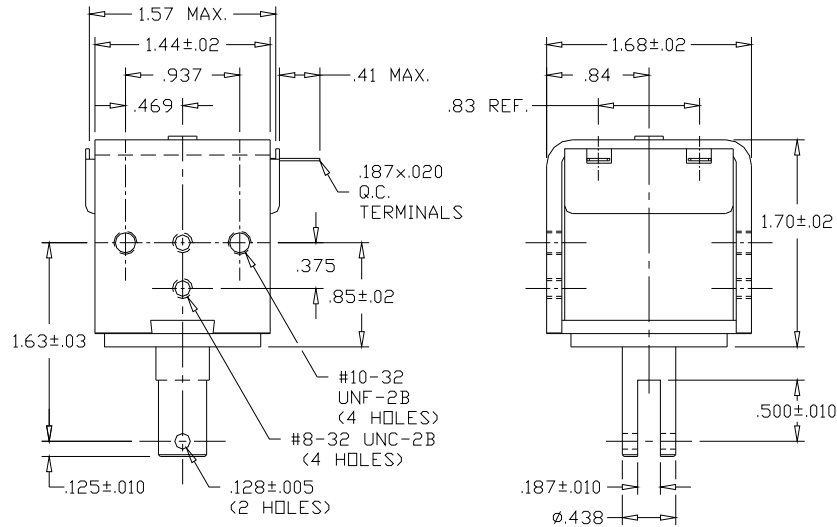
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Model 2HD DC Frame Solenoid



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

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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

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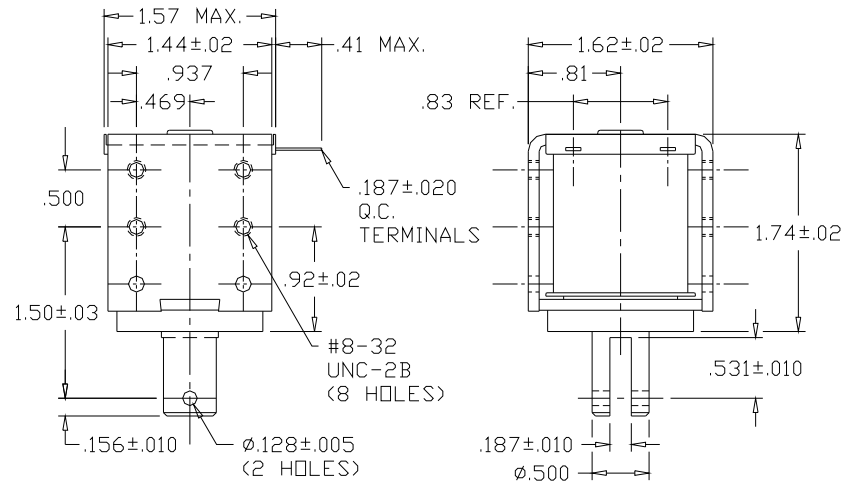
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Model 3HD DC Frame Solenoid



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

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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

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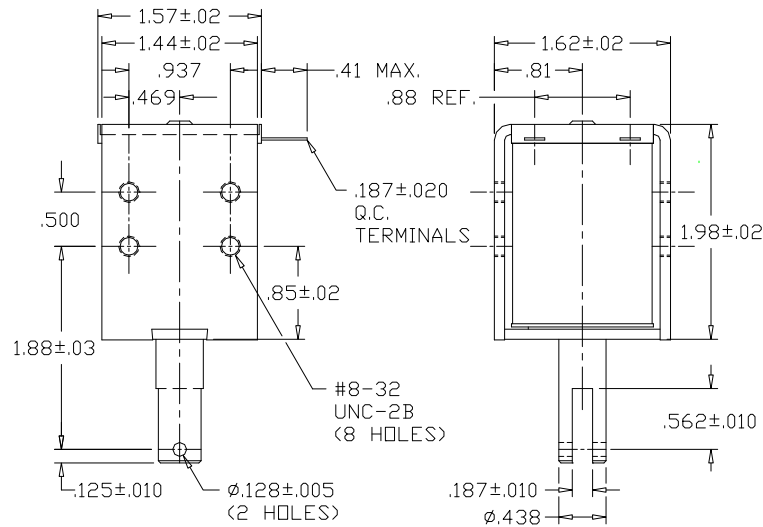
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Model 4 DC Frame Solenoid



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 (Ω)	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

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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

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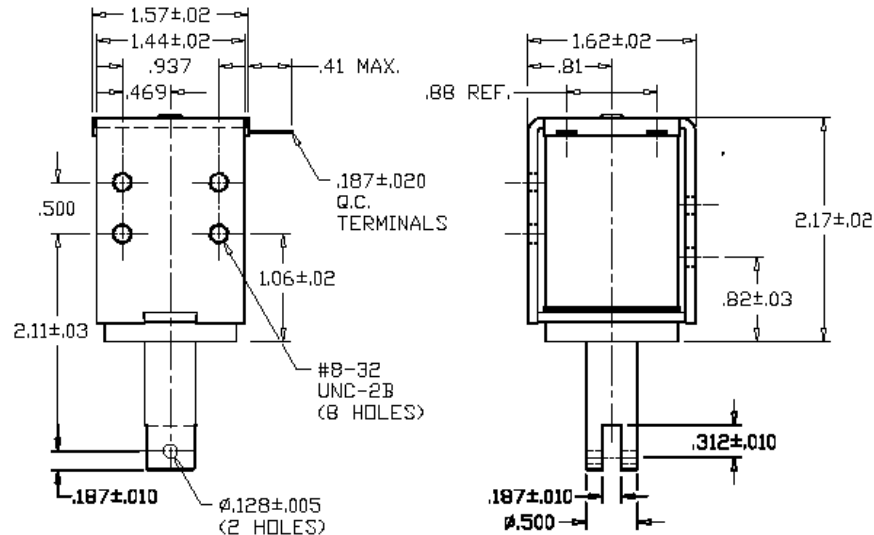
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Model 4HD DC Frame Solenoid



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

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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

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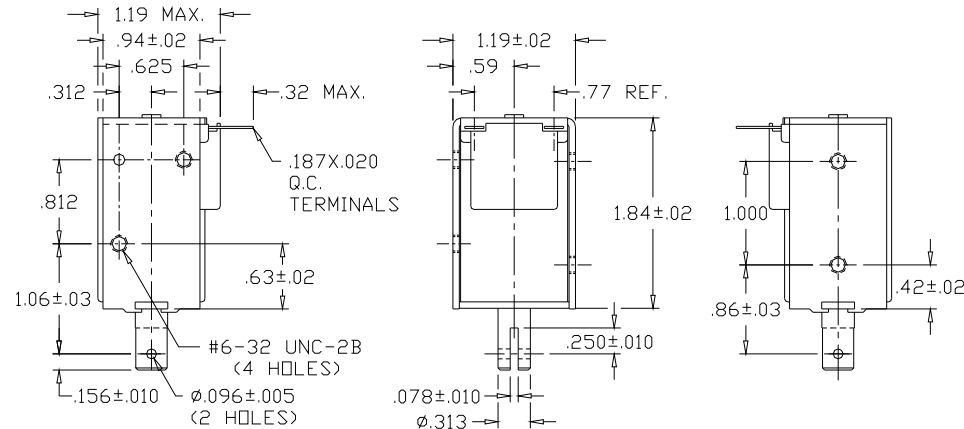
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Model 11 DC Frame Solenoid



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 (Ω)	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

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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

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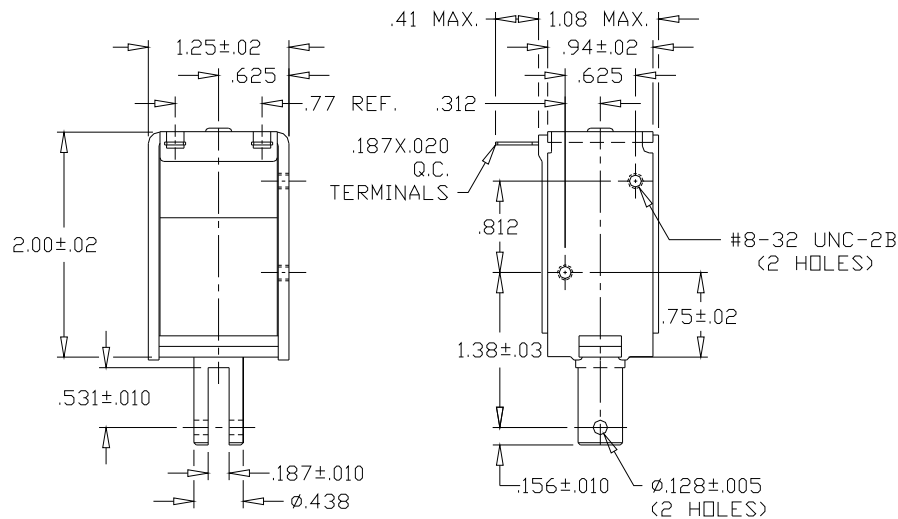
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Model 11HD DC Frame Solenoid



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

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Component Recognition Program of
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Continuous Duty

100% 'On' Time

Intermittent Duty

25% 'On' Time, (100 Seconds 'On' Max.
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RoHS

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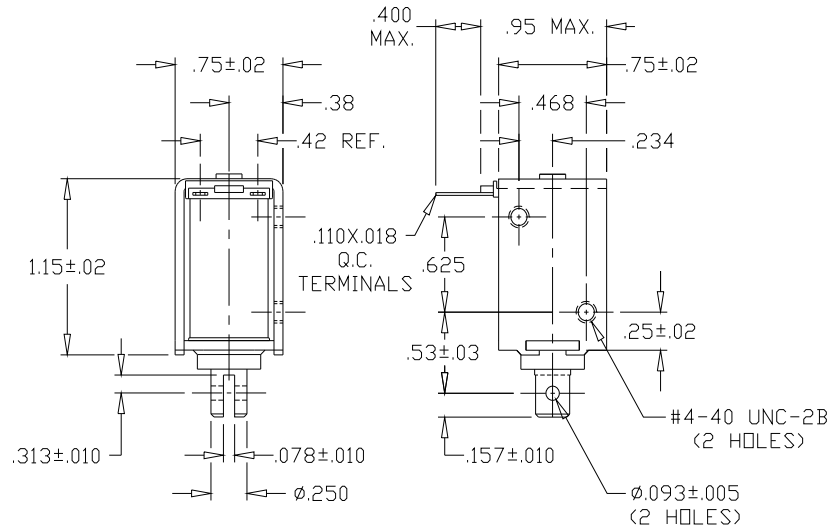
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Model 22 DC Frame Solenoid



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 (Ω)	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

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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

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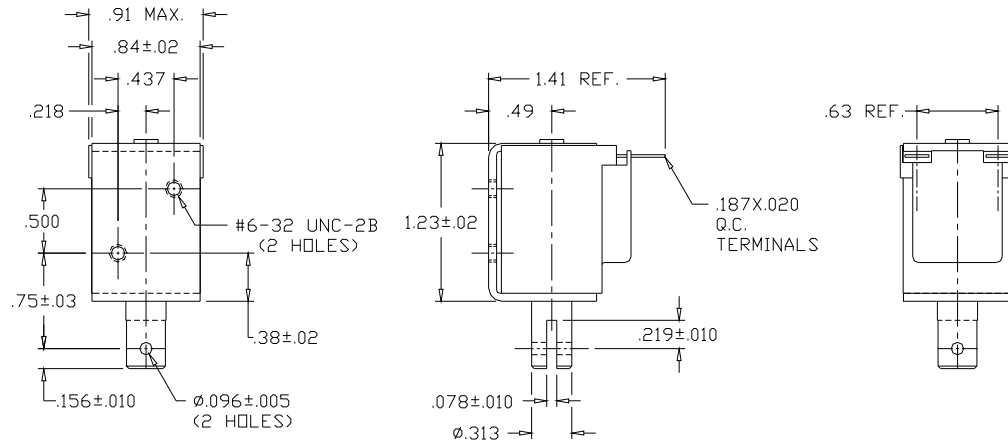
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Model 24 DC Frame Solenoid



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

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Continuous Duty

100% 'On' Time

Intermittent Duty

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

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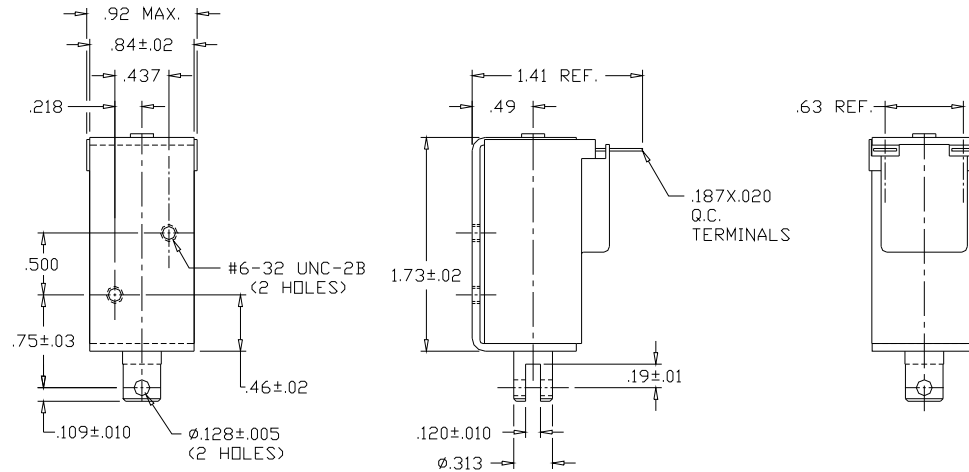
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Model 26 DC Frame Solenoid



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

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Underwriters Laboratories, Inc.

Continuous Duty

100% 'On' Time

Intermittent Duty

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

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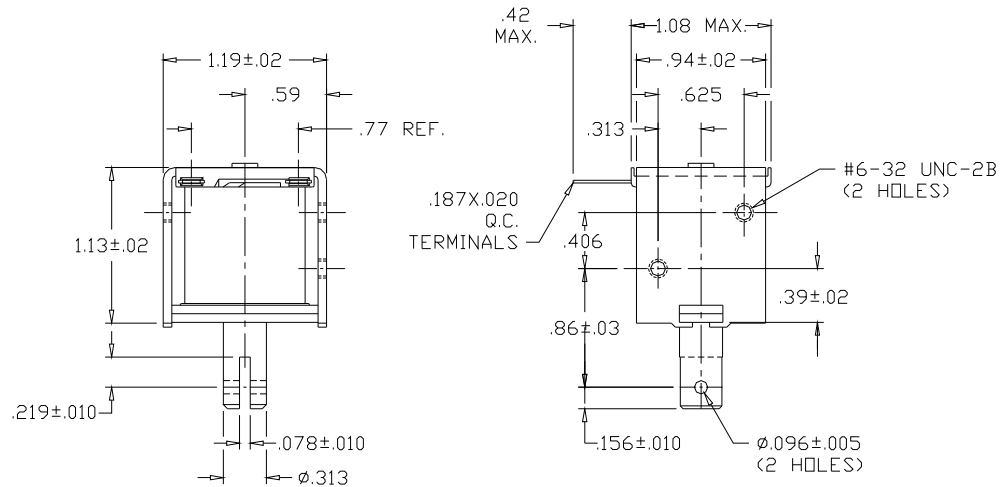
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Model 28 DC Frame Solenoid



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

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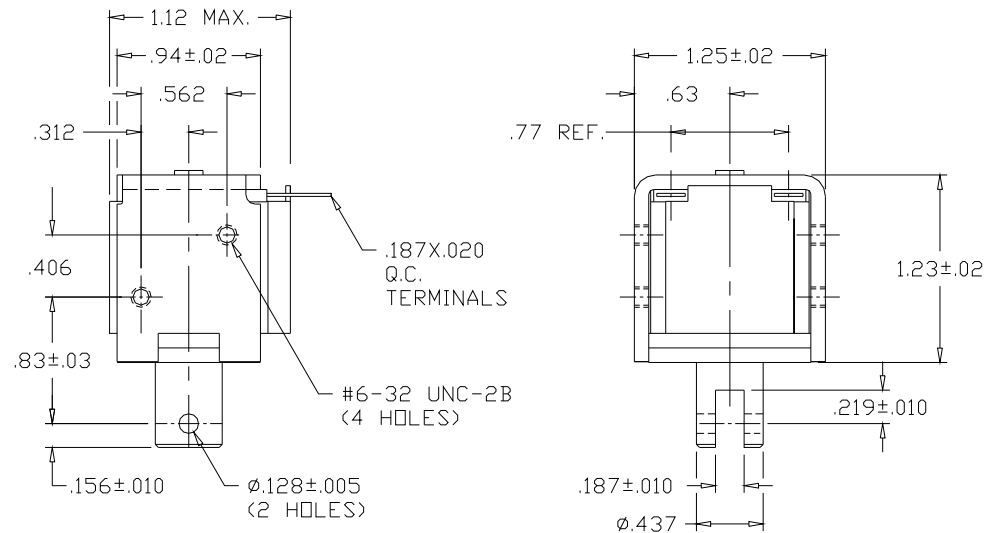
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Or visit us at our website www.guardian-electric.com

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

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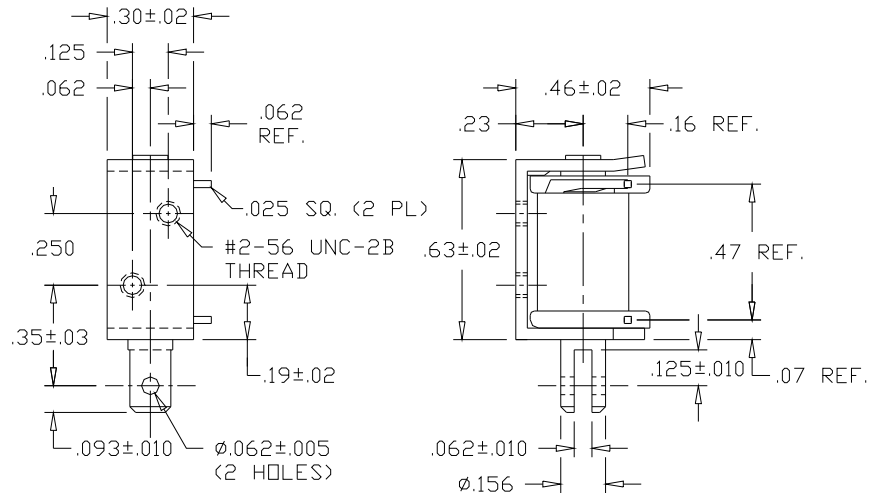
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Model 42 DC Frame Solenoid



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

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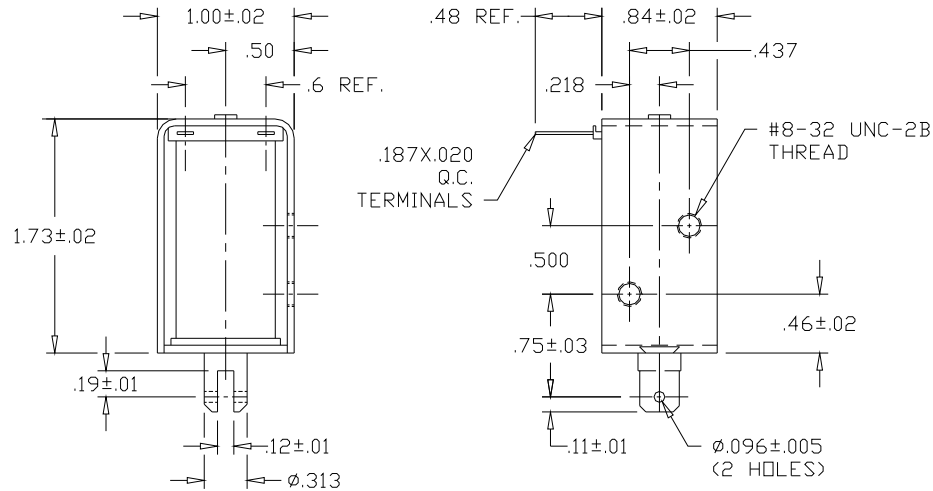
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Model 64 DC Frame Solenoid



Solenoid shown energized and fully seated.

Total Weight: 3.6 oz.

Plunger Weight: .5 oz.

Model No.	Part No.	Duty Cycle	Voltage	Resistance (Ω)	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

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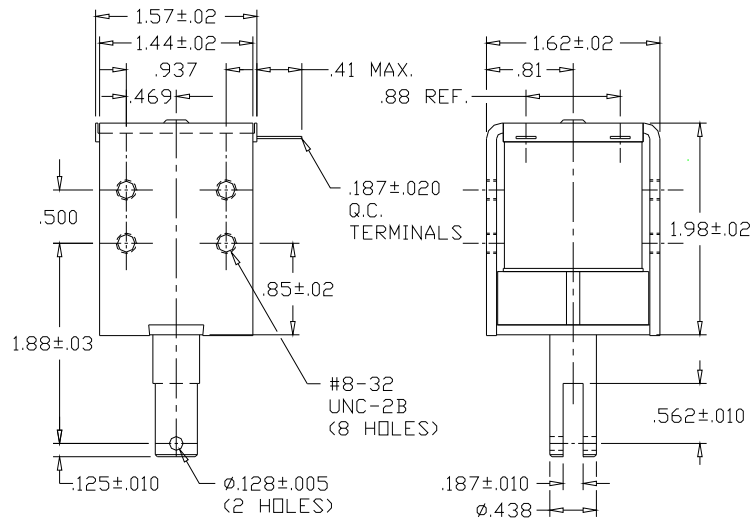
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Model 4L Latching DC Frame Solenoid



Solenoid shown energized and fully seated.

Total Weight: 12.50 oz.

Plunger Weight: 1.57 oz.

Model No.	Part No.	Duty Cycle	Voltage	Resistance (Ω)	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

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Continuous Duty

100% 'On' Time

RoHS

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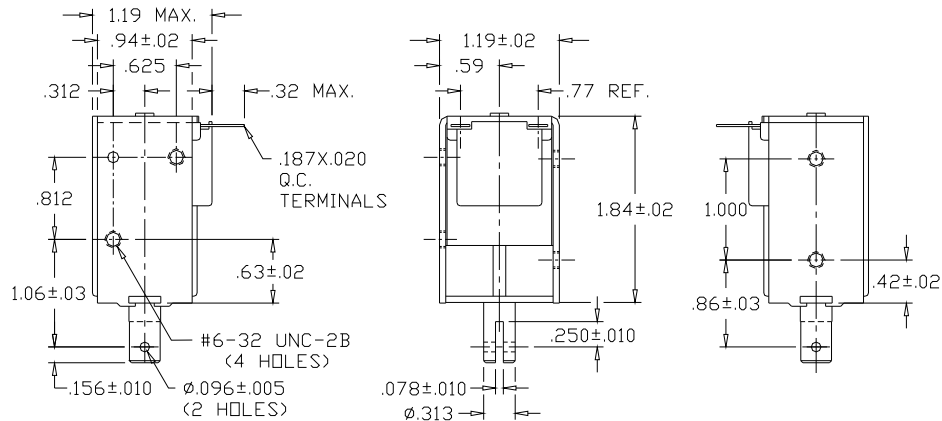
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Model 11L Latching DC Frame Solenoid



Solenoid shown energized and fully seated.

Total Weight: 5.2 oz.

Plunger Weight: .6 oz.

Model No.	Part No.	Duty Cycle	Voltage	Resistance (Ω)	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

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Continuous Duty

100% 'On' Time

RoHS

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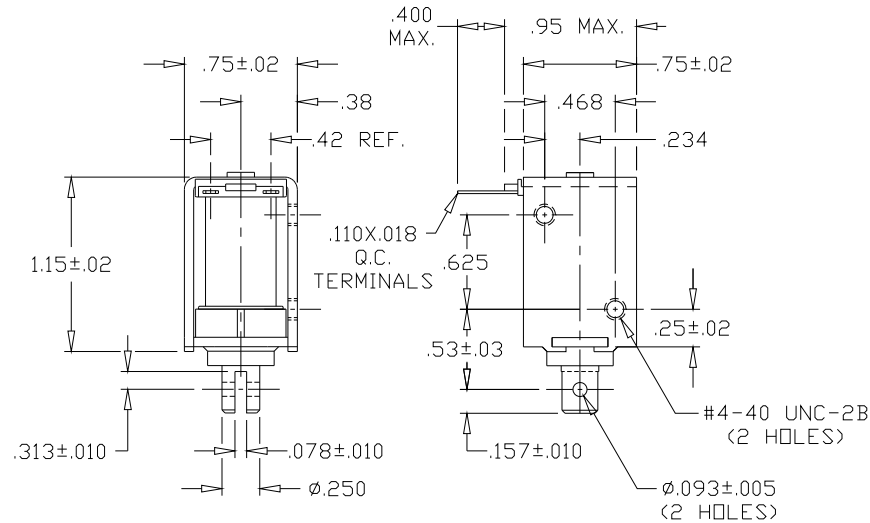
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Model 22L Latching DC Frame Solenoid



Solenoid shown energized and fully seated.

Total Weight: 1.66 oz.

Plunger Weight: .26 oz.

Model No.	Part No.	Duty Cycle	Voltage	Resistance (Ω)	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

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Continuous Duty

100% 'On' Time

RoHS

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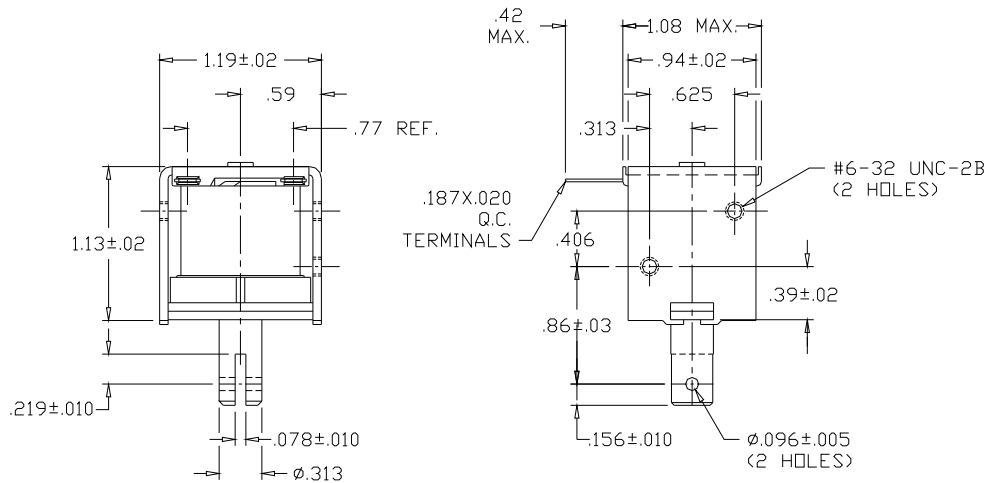
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Model 28L Latching DC Frame Solenoid



Solenoid shown energized and fully seated.

Total Weight: 1.7 oz.

Plunger Weight: .3 oz.

Model No.	Part No.	Duty Cycle	Voltage	Resistance (Ω)	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

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Continuous Duty

100% 'On' Time

RoHS

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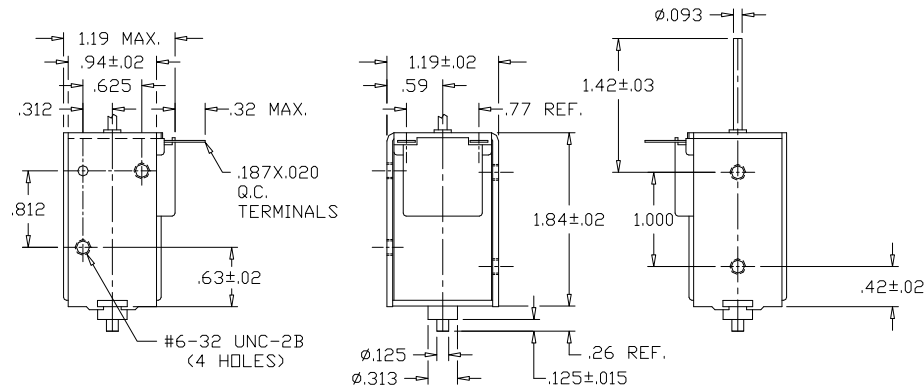
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Model 11P Push DC Frame Solenoid



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 
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Underwriters Laboratories, Inc.

Continuous Duty

100% 'On' Time

Intermittent Duty

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

RoHS

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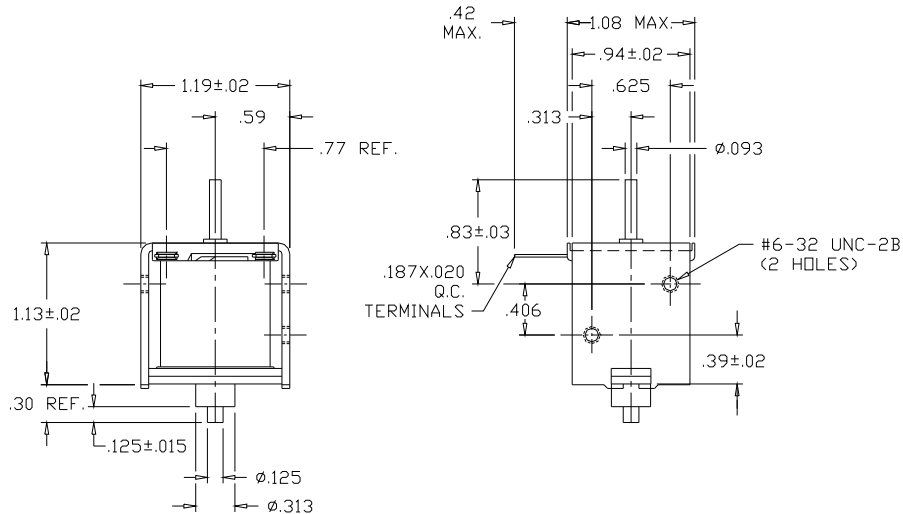
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Model 28P Push DC Frame Solenoid



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

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Continuous Duty

100% 'On' Time

Intermittent Duty

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

RoHS

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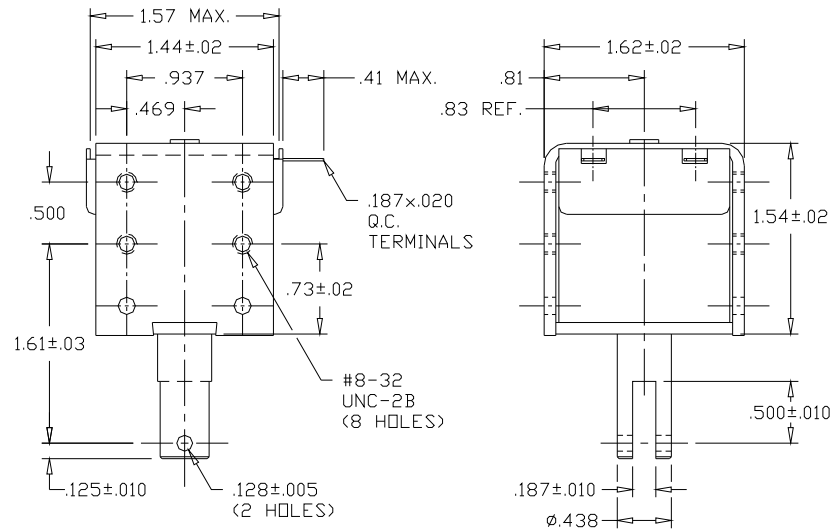
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Model 2 AC Frame Solenoid



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

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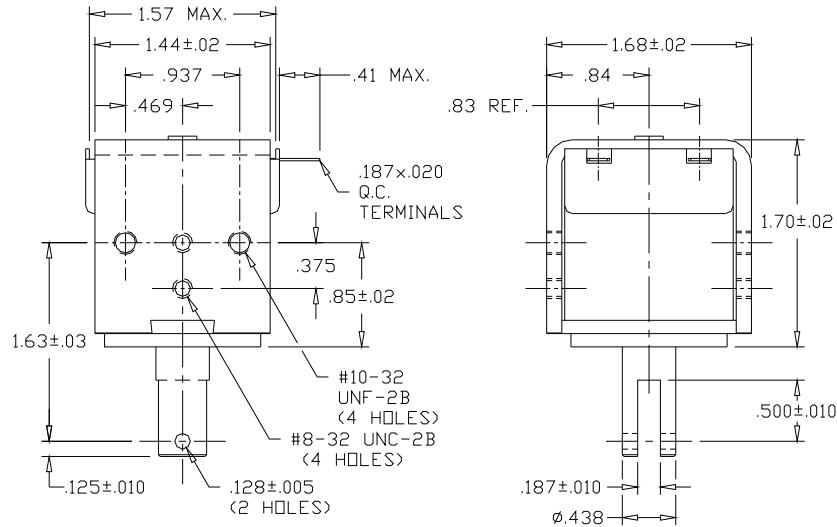
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Model 2HD AC Frame Solenoid



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

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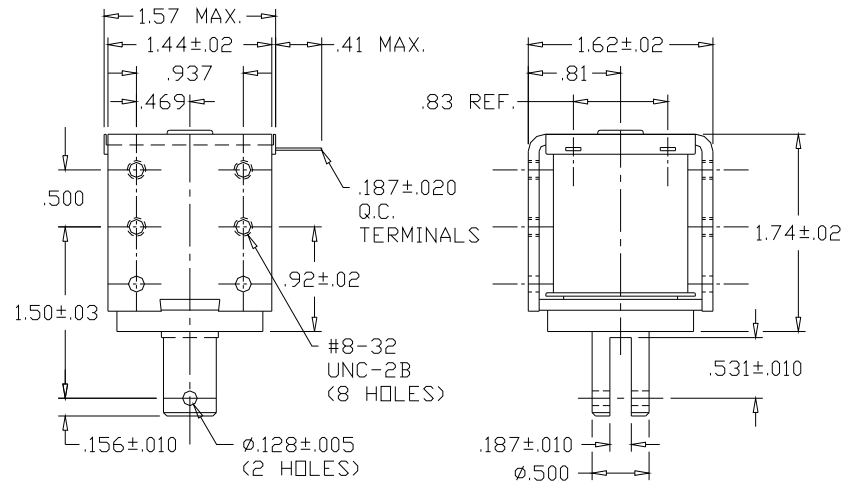
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Model 3HD AC Frame Solenoid



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

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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

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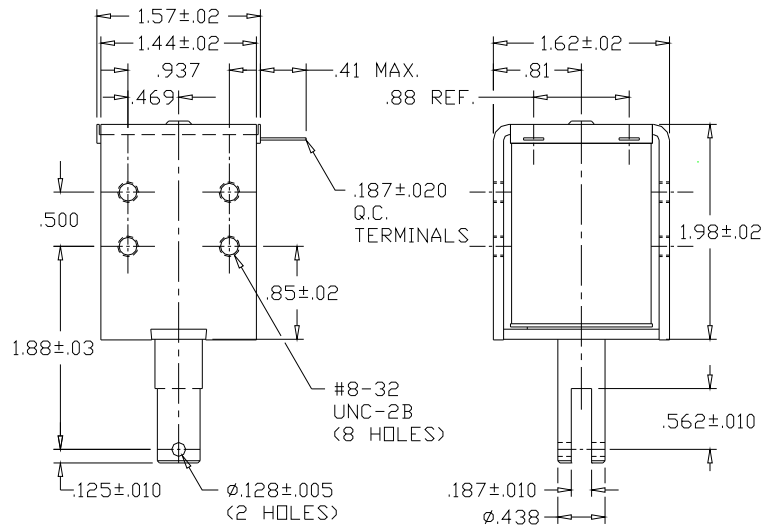
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Model 4 AC Frame Solenoid



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. (Ω)	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

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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

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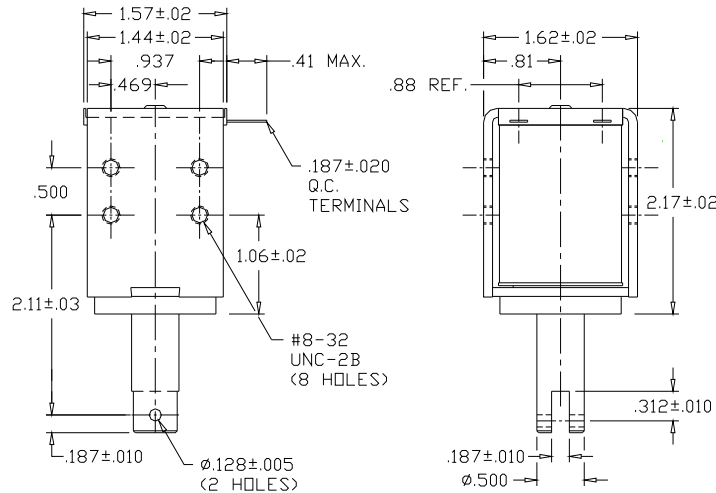
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Model 4HD AC Frame Solenoid



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. (Ω)	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

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Continuous Duty

100% 'On' Time

*Intermittent Duty

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

RoHS

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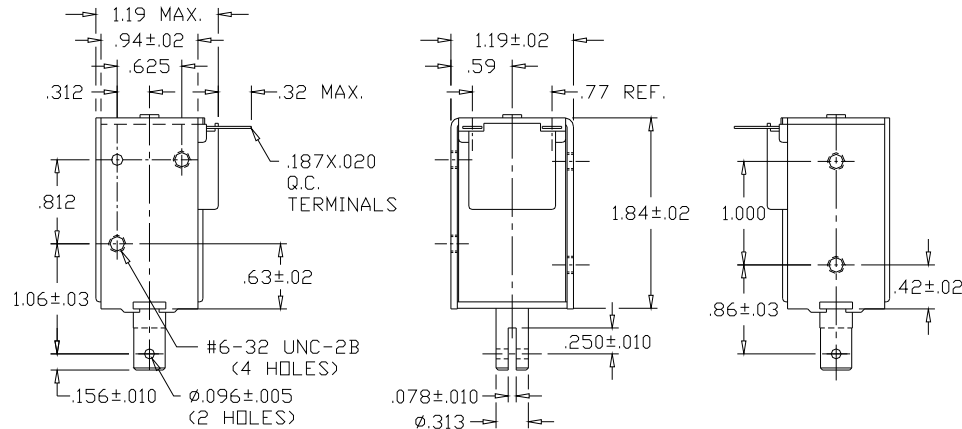
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Model 11 AC Frame Solenoid



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



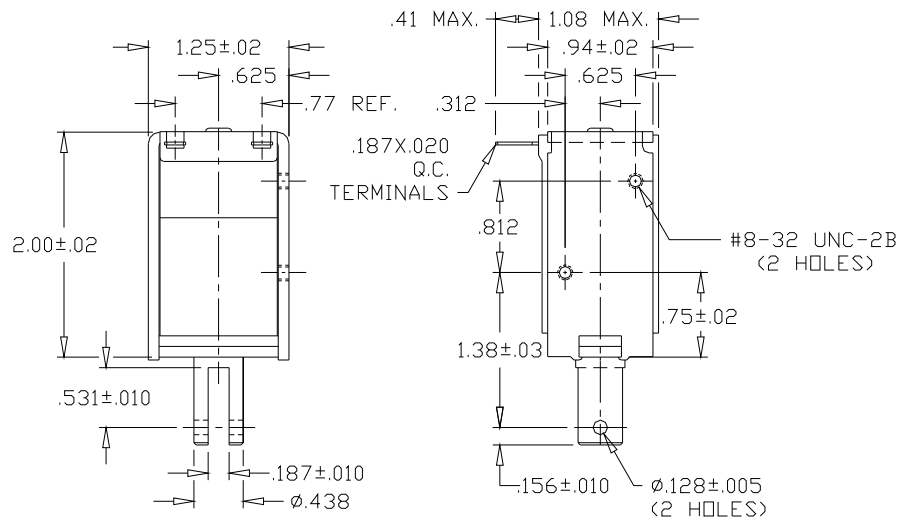
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Model 11HD AC Frame Solenoid



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. (Ω)	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.

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	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



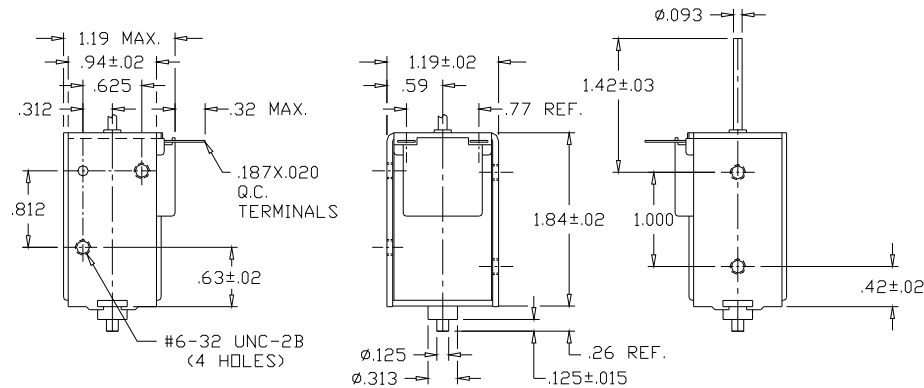
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Model 11P Push AC Frame Solenoid



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



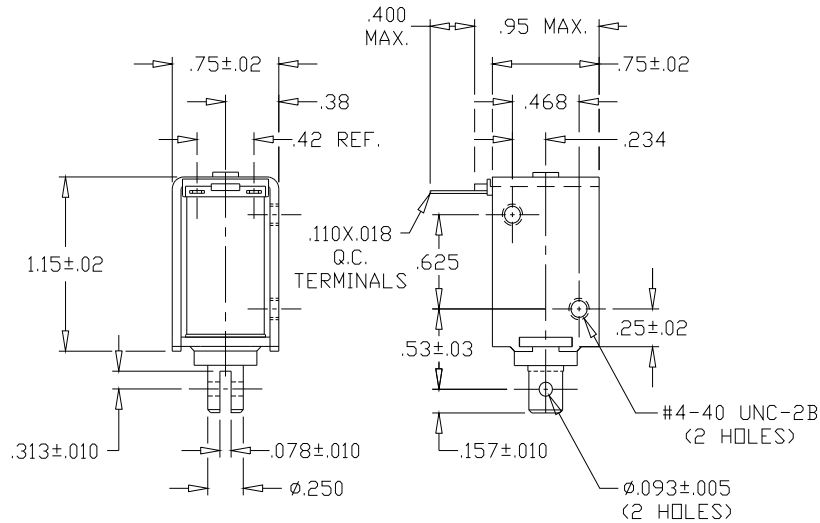
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Model 22 AC Frame Solenoid



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



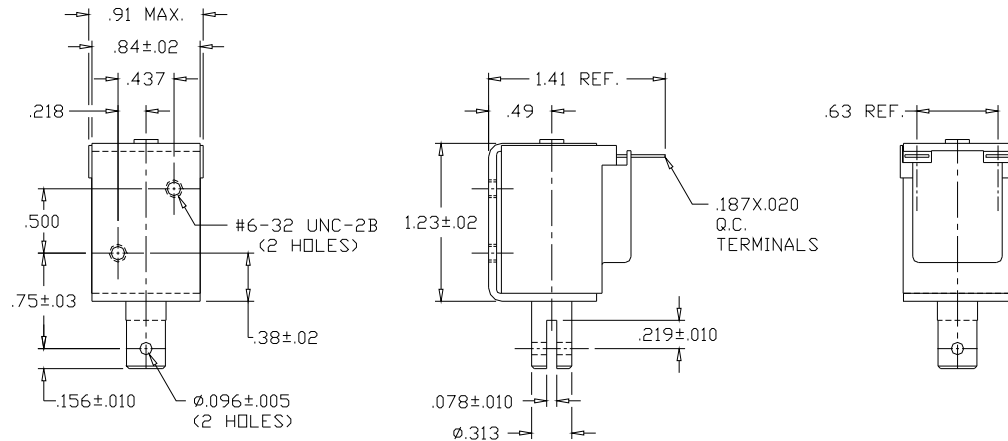
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Model 24 AC Frame Solenoid



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



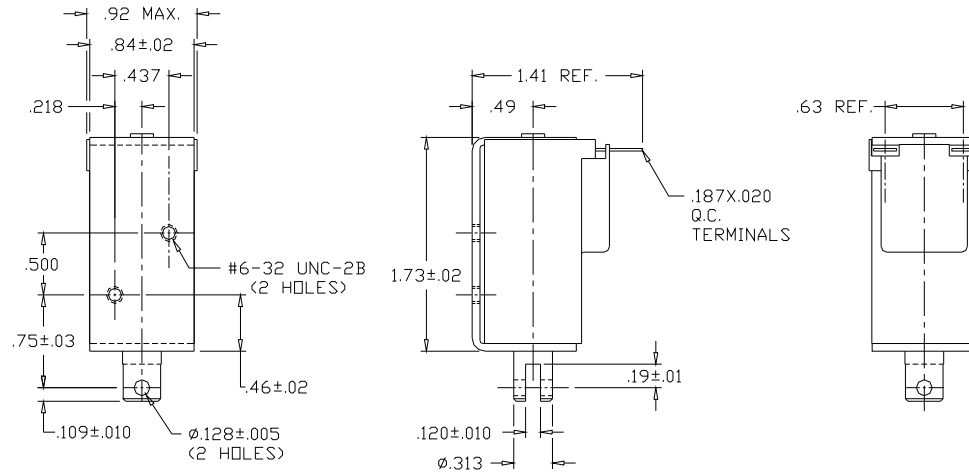
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Model 26 AC Frame Solenoid



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.

Stroke (in.)	Pull Force (oz.)							Holding Force (oz.)
	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

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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

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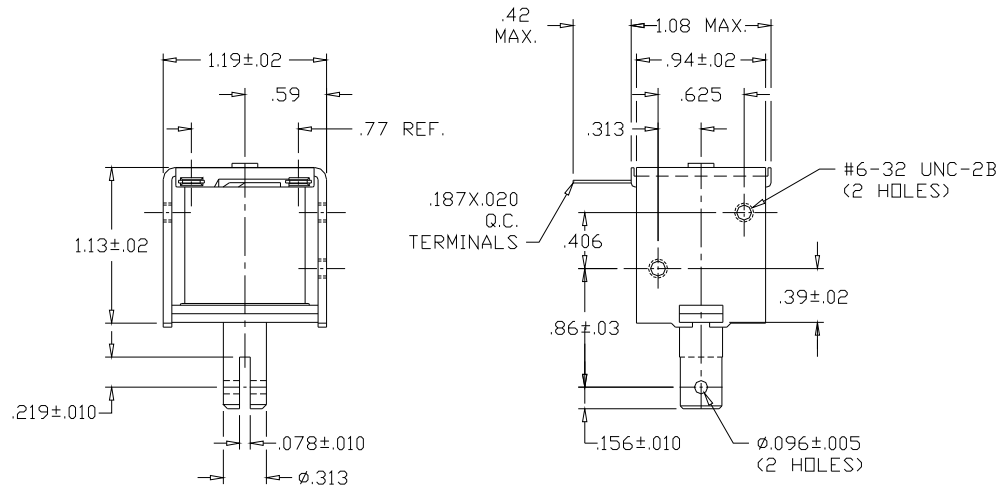
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Model 28 AC Frame Solenoid



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



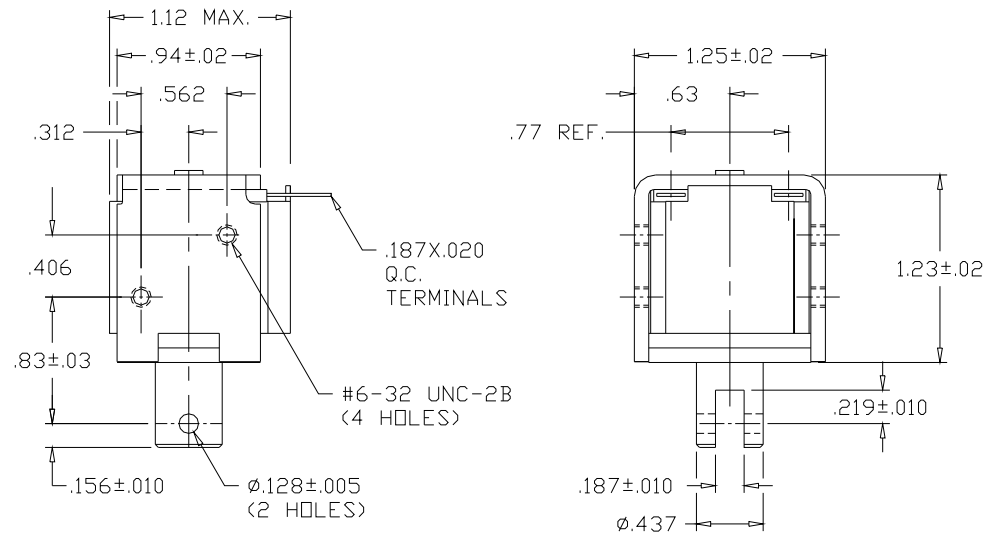
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Model 28HD AC Frame Solenoid



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

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Underwriters Laboratories, Inc.

Continuous Duty

100% 'On' Time

*Intermittent Duty

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

RoHS

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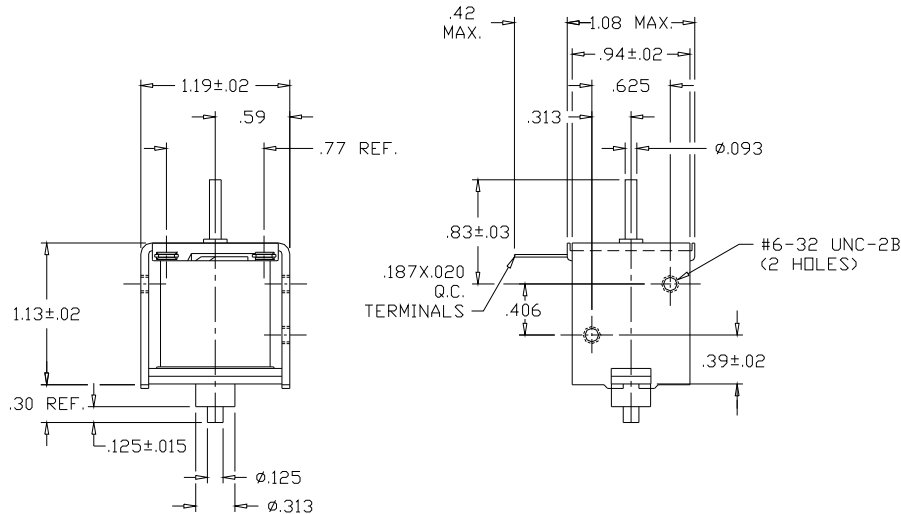
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Model 28P Push AC Frame Solenoid



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

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Continuous Duty

100% 'On' Time

*Intermittent Duty

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

RoHS

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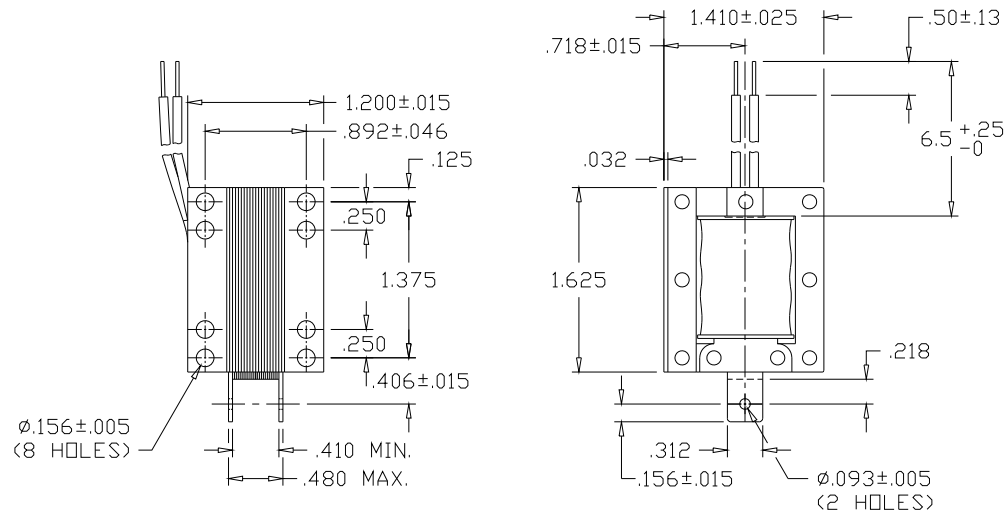
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Model 12 Laminated AC Frame Solenoid



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



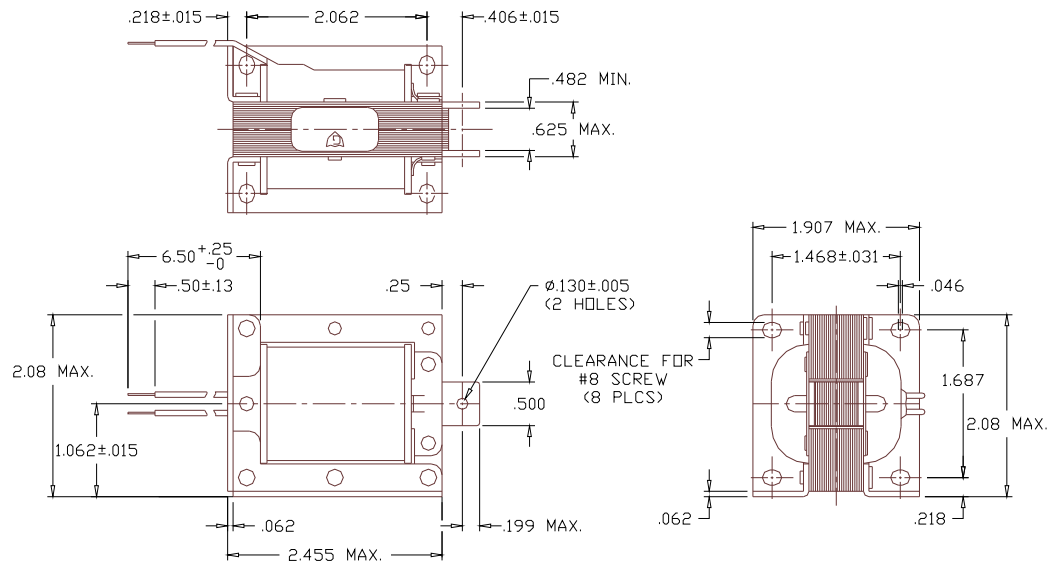
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Model 14 Laminated AC Frame Solenoid



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



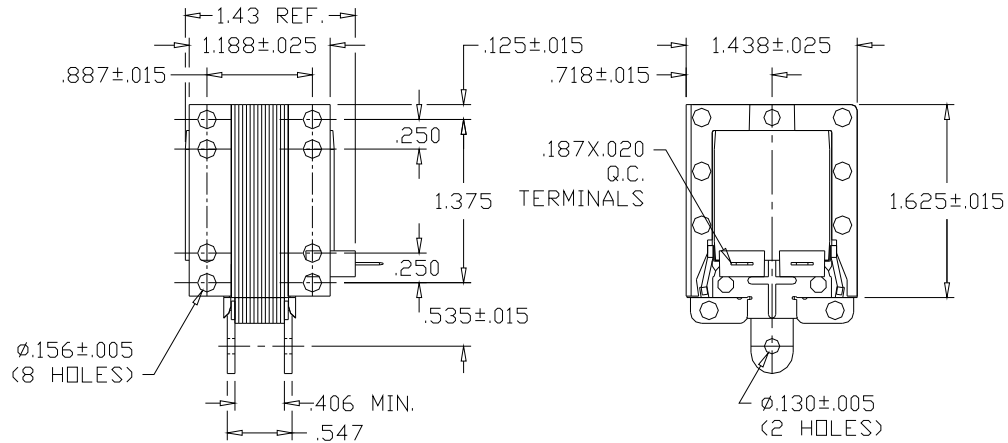
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Model 16 Laminated AC Frame Solenoid



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



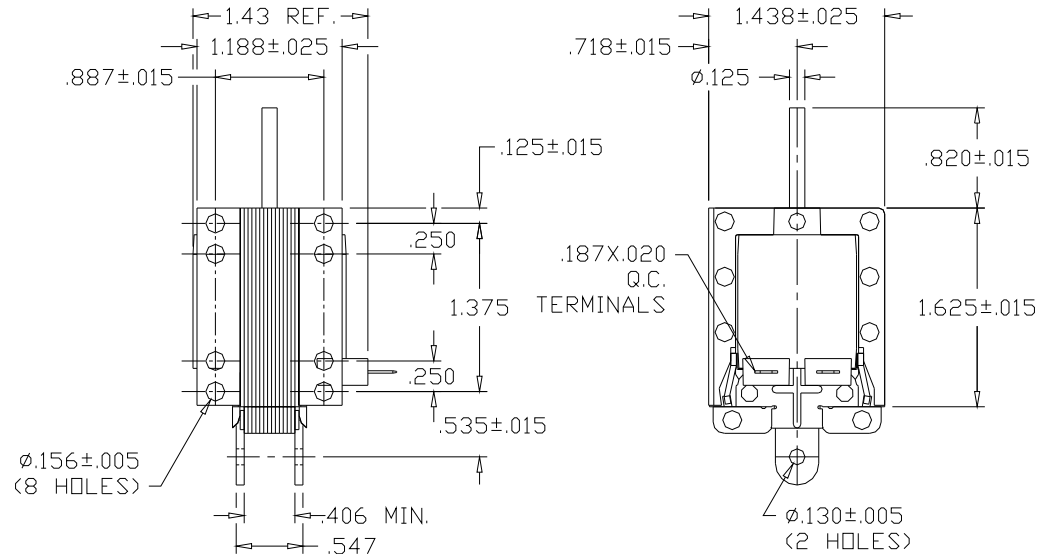
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Model 16P Push Laminated AC Frame Solenoid



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 
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Underwriters Laboratories, Inc.

Continuous Duty

100% 'On' Time

*Intermittent Duty

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

RoHS

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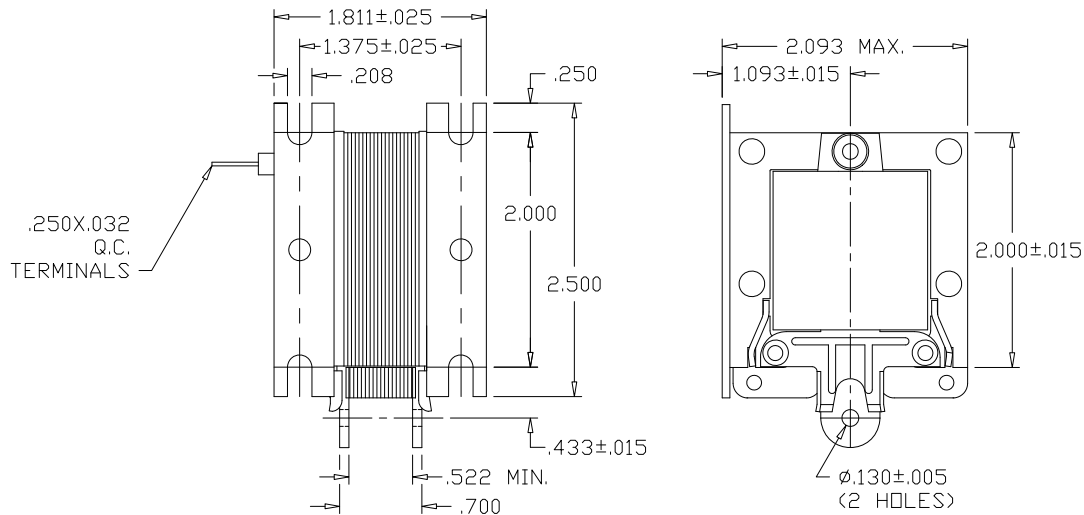
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Model 18 Laminated AC Frame Solenoid



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

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Continuous Duty

100% 'On' Time

*Intermittent Duty

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

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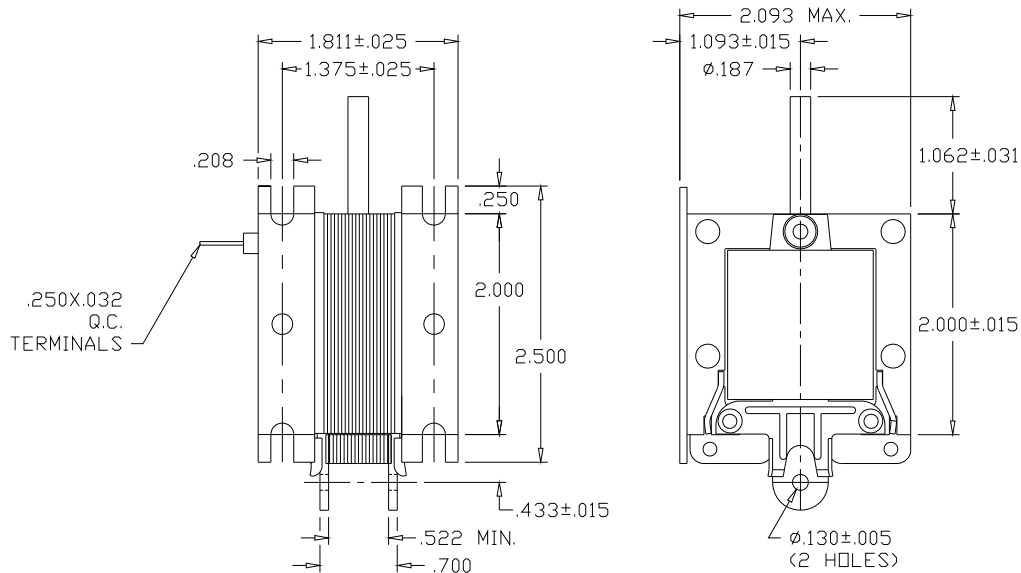
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Model 18P Push Laminated AC Frame Solenoid



Solenoid shown energized and fully seated.

Total Weight: 18 oz.

Plunger Weight: 5 oz.

Model No.	Part No.	Duty Cycle	Volts	Res. (Ω)	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