



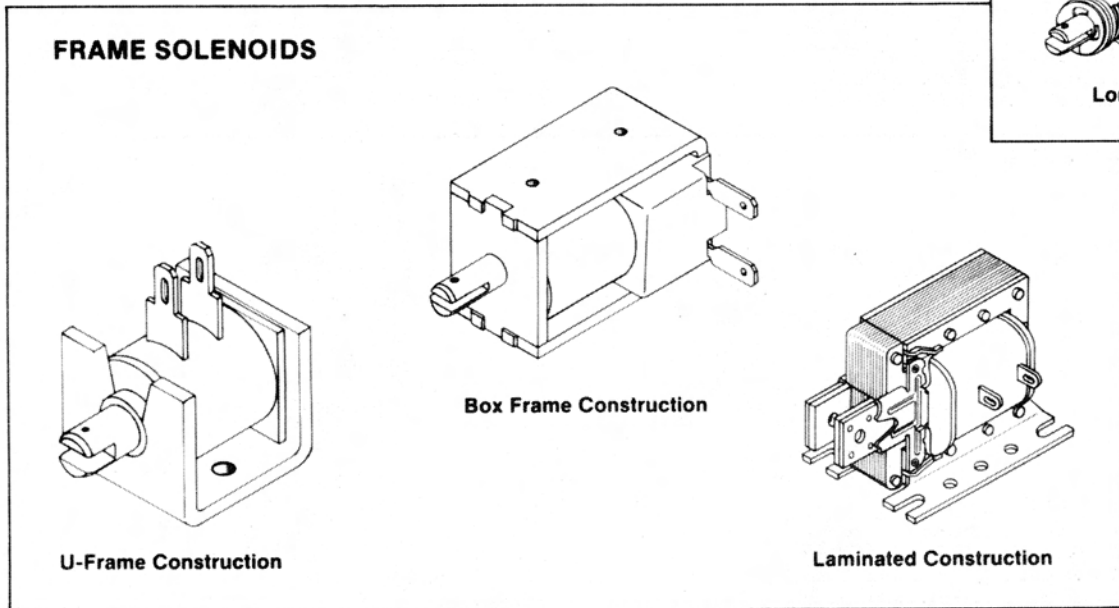
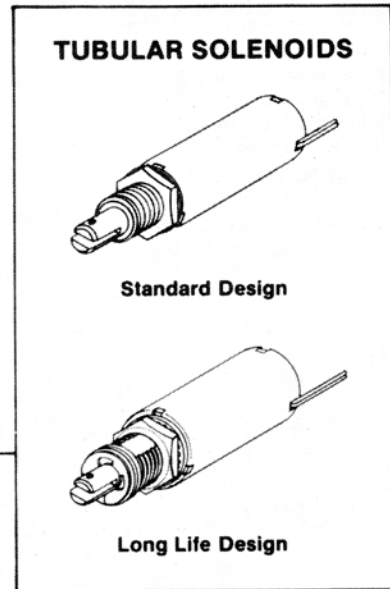
There are two basic types of solenoids, frame and tubular.

These two major groups are then subdivided by construction, as noted in the diagrams.

The products listed in this section are the standard/stock models.

For the purpose of comparison, all the products were measured for pull force at 1/8". The solenoids do function at different lengths. If you require additional information on a particular product, ask your local sales person for a data sheet.

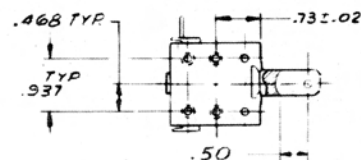
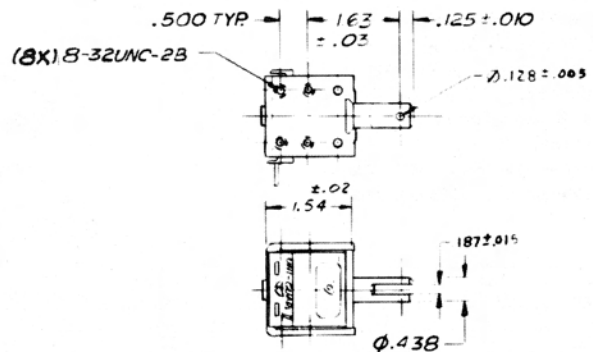
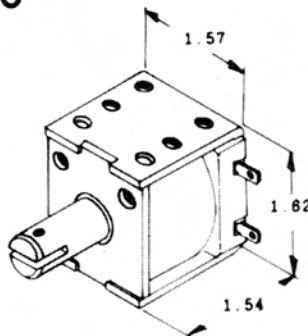
Guardian does produce custom designed solenoids. If you cannot find the right product listed, contact the sales department of Relay Specialties.



FRAME SOLENOIDS

NO. 2 - BOX FRAME - AC & DC

- Uniguard II bobbin and coil cover
- .187" Quick connect lugs
- Standard/stock AC voltage 120
- Standard/stock DC voltage 12, 24
- Class "A" insulation system
- Stroke length 0-3/4"
- Plunger weight 1.1 oz. (31.6 grams)
- Total weight 9.5 oz. (270 grams)

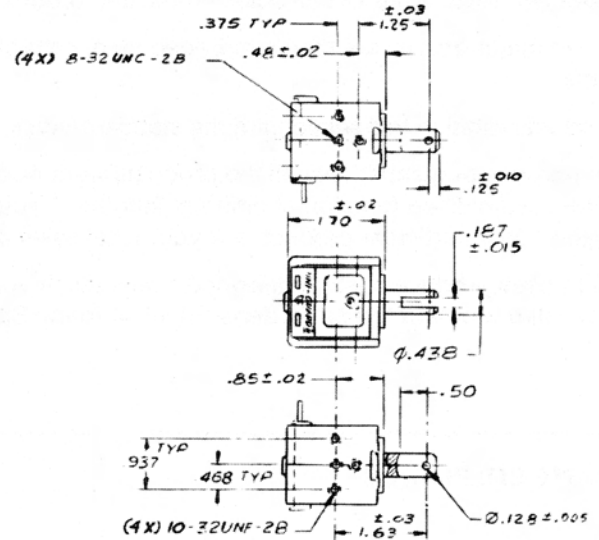
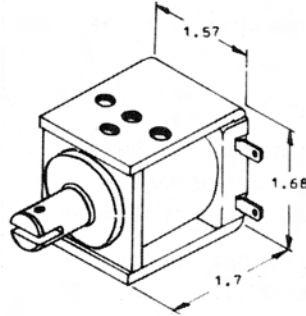


Coil Voltage	Coil Res. Ω	Duty	Pull at 1/8"	Holding Force	PART NUMBERS
120VAC	45	Int.	55 oz.	83 oz.	2-I-120A
120VAC	140	Cont.	20 oz.	57 oz.	2-C-120A
12VDC	5.8	Int.	96 oz.	183 oz.	2-I-12D
12VDC	18.1	Cont.	45 oz.	147 oz.	2-C-12D
24VDC	22.6	Int.	96 oz.	183 oz.	2-I-24D
24VDC	71	Cont.	45 oz.	147 oz.	2-C-24D



NO. 2HD - BOX FRAME - AC & DC

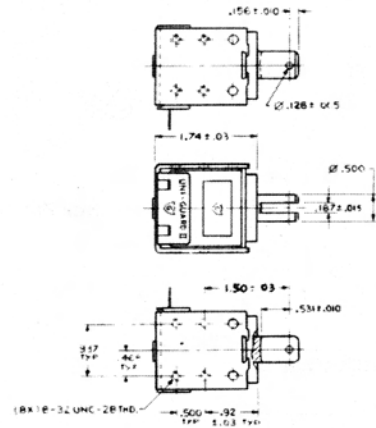
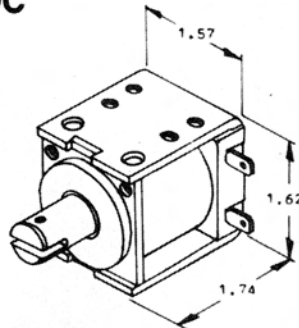
- Heavy Duty Construction
- Uniguard II bobbin and coil cover
- .187" Quick connect lugs
- Standard/stock AC voltage 120
- Standard/stock DC voltage 24
- Class "A" insulation system
- Stroke length 0-3/4"
- Plunger weight 1.18 oz. (33.5 grams)
- Total weight 11.7 oz. (333 grams)



Coil Voltage	Coil Res. Ω	Duty	Pull at 1/8"	Holding Force	PART NUMBERS
120VAC	42	Int.	63 oz.	75 oz.	2HD-I-120A
120VAC	101	Cont.	25 oz.	60 oz.	2HD-C-120A
24VDC	22.6	Int.	96 oz.	193 oz.	2HD-I-24D
24VDC	71	Cont.	48 oz.	155 oz.	2HD-C-24D

NO. 3HD - BOX FRAME - AC & DC

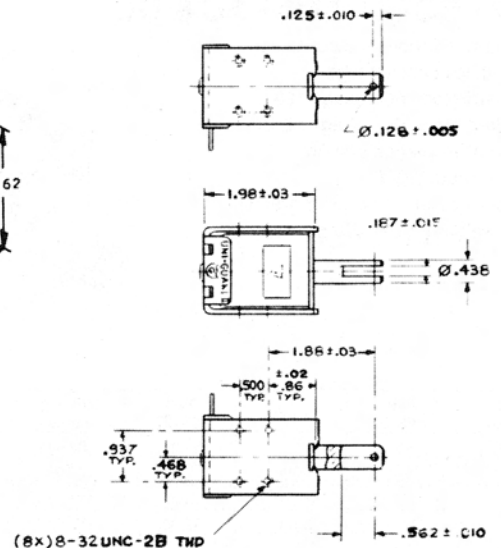
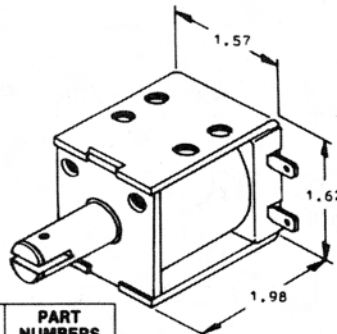
- Heavy Duty Construction
- Uniguard II bobbin and coil cover
- .187" Quick connect lugs
- Standard/stock AC voltage 120
- Standard/stock DC voltage 12, 24
- Class "A" insulation system
- Stroke length 0-1"
- Plunger weight 1.5 oz. (43 grams)
- Total weight 10.7 oz. (303 grams)



Coil Voltage	Coil Res. Ω	Duty	Pull at 1/8"	Holding Force	PART NUMBERS
120VAC	23	Int.	88 oz.	110 oz.	3HD-I-120A
120VAC	100	Cont.	26 oz.	50 oz.	3HD-C-120A
12VDC	5.45	Int.	128 oz.	248 oz.	3HD-I-12D
12VDC	16.7	Cont.	55 oz.	207 oz.	3HD-C-12D
24VDC	21.1	Int.	128 oz.	248 oz.	3HD-I-24D
24VDC	65.8	Cont.	55 oz.	207 oz.	3HD-C-24D

NO. 4 - BOX FRAME - AC & DC

- Uniguard II bobbin and coil cover
- .187" Quick connect lugs
- Standard/stock AC voltage 120
- Standard/stock DC voltage 12, 24 & 110*
- Class "A" insulation system
- Stroke length 0 - 1"
- Plunger weight 1.6 oz. (45 grams)
- Total weight 12.6 oz. (358 grams)



Coil Voltage	Coil Res. Ω	Duty	Pull at 1/8"	Holding Force	PART NUMBERS
120VAC	37	Int.	36 oz.	52 oz.	4-I-120A
120VAC	133	Cont.	10 oz.	20 oz.	4-C-120A
12VDC	3.96	Int.	100 oz.	200 oz.	4-I-12D
12VDC	15.8	Cont.	60 oz.	156 oz.	4-C-12D
24VDC	15.8	Int.	100 oz.	200 oz.	4-I-24D
24VDC	61.3	Cont.	60 oz.	156 oz.	4-C-24D
110VDC*	296	Int.	100 oz.	200 oz.	4-I-110D
110VDC*	1215	Cont.	60 oz.	156 oz.	4-C-110D

*Can be powered with 110VDC or full wave rectified 120 VAC

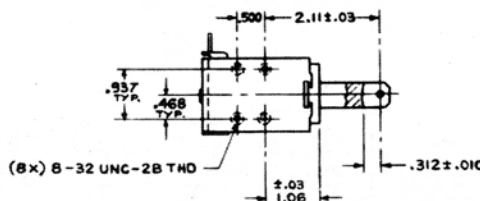
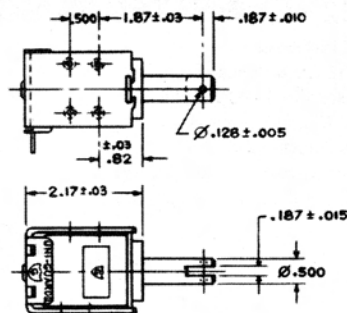
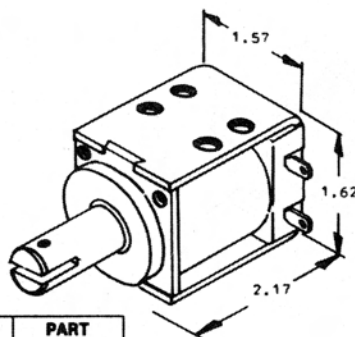


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SOLENOIDS

NO. 4HD - BOX FRAME - AC & DC

- Heavy duty construction
- Uniguard II bobbin and coil cover
- .187" Quick connect lugs
- Standard/stock AC voltage 120
- Standard/stock DC voltage 12, 24 & 110*
- Class "A" insulation system
- Stroke length 0 - 1-1/4"
- Plunger weight 2.4 oz. (68 grams)
- Total weight 14.1 oz. (400 grams)

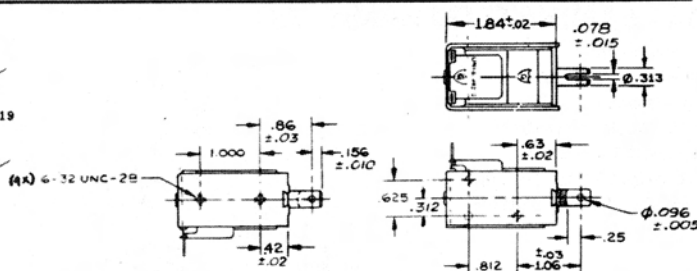
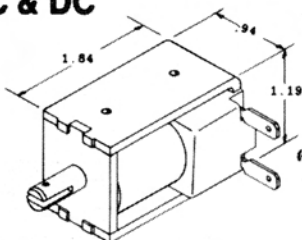


Coil Voltage	Coil Res. Ω	Duty	Pull at 1/8"	Holding Force	PART NUMBERS
120VAC	19.3	Int.	72 oz.	145 oz.	4HD-I-120A
120VAC	73	Cont.	20 oz.	85 oz.	4HD-C-120A
12VDC	4.68	Int.	130 oz.	240 oz.	4HD-I-12D
12VDC	14.8	Cont.	75 oz.	203 oz.	4HD-C-12D
24VDC	18.9	Int.	130 oz.	240 oz.	4HD-I-24D
24VDC	57.5	Cont.	75 oz.	203 oz.	4HD-C-24D
110VDC*	354	Int.	130 oz.	240 oz.	4HD-I-110D
110VDC*	1140	Cont.	75 oz.	203 oz.	4HD-C-110D

*Can be powered with 110VDC or full wave rectified 120 VAC

NO. 11 - BOX FRAME - AC & DC

- Uniguard II bobbin and coil cover
- .187" Quick connect lugs
- Push type available specify 11P
- Standard/stock AC voltage 24, 120
- Standard/stock DC voltage 6, 12, & 24
- Class "A" insulation system
- Stroke length 0-3/4"
- Plunger weight .59 oz. (16.7 grams)
- Total weight 5.23 oz. (148 grams)



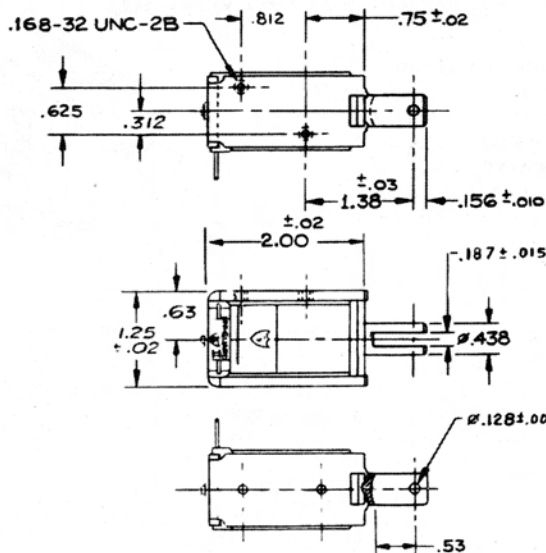
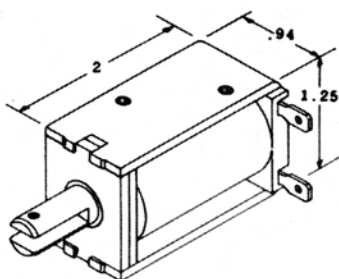
PUSH TYPE

Coil Voltage	Coil Res. Ω	Duty	Pull at 1/8"	Holding Force	PART NUMBERS
24VAC	3.5	Int.	25 oz.	22 oz.	11-I-24A
24VAC	9	Cont.	13 oz.	15 oz.	11-C-24A
120VAC	85	Int.	25 oz.	22 oz.	11-I-120A
120VAC	225	Cont.	13 oz.	15 oz.	11-C-120A
6VDC	1.88	Int.	45 oz.	92 oz.	11-I-6D
6VDC	4.69	Cont.	22 oz.	84 oz.	11-C-6D
12VDC	7.5	Int.	45 oz.	92 oz.	11-I-12D
12VDC	18.4	Cont.	22 oz.	84 oz.	11-C-12D
24VDC	29.1	Int.	45 oz.	92 oz.	11-I-24D
24VDC	93.1	Cont.	22 oz.	84 oz.	11-C-24D

Coil Voltage	Coil Res. Ω	Duty	Push at 1/8"	Holding Force	PART NUMBERS
24VAC	3.5	Int.	22 oz.	20 oz.	11P-I-24A
24VAC	9	Cont.	11 oz.	13 oz.	11P-C-24A
120VAC	85	Int.	22 oz.	20 oz.	11P-I-120A
120VAC	225	Cont.	11 oz.	13 oz.	11P-C-120A
6VDC	1.88	Int.	41 oz.	82 oz.	11P-I-6D
6VDC	4.69	Cont.	17 oz.	75 oz.	11P-C-6D
12VDC	7.5	Int.	41 oz.	82 oz.	11P-I-12D
12VDC	18.4	Cont.	17 oz.	75 oz.	11P-C-12D
24VDC	29.1	Int.	41 oz.	82 oz.	11P-I-24D
24VDC	93.1	Cont.	17 oz.	75 oz.	11P-C-24D

NO. 11HD - BOX FRAME - AC & DC

- Heavy duty construction
- Uniguard II bobbin and coil cover
- .187" Quick connect lugs
- Standard/stock AC voltage 120
- Standard/stock DC voltage 12, 24
- Class "A" insulation system
- Stroke length 0-1"
- Plunger weight 1.3 oz. (37 grams)
- Total weight 6.64 oz. (188 grams)

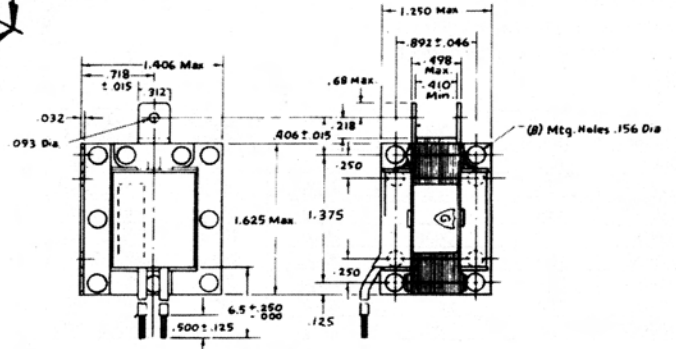
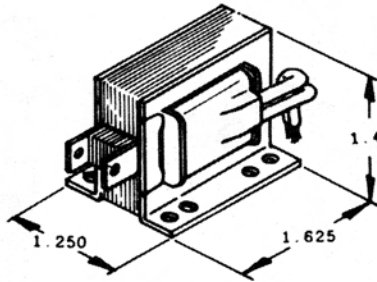


Coil Voltage	Coil Res. Ω	Duty	Pull at 1/8"	Holding Force	PART NUMBERS
120VAC	75	Int.	30 oz.	90 oz.	11HD-I-120A
120VAC	165	Cont.	15 oz.	59 oz.	11HD-C-120A
12VDC	7.78	Int.	70 oz.	174 oz.	11HD-I-12D
12VDC	19.0	Cont.	30 oz.	152 oz.	11HD-C-12D
24VDC	29.3	Int.	70 oz.	174 oz.	11HD-I-24D
24VDC	76.3	Cont.	30 oz.	152 oz.	11HD-C-24D



NO. 12 - LAMINATED FRAME - AC

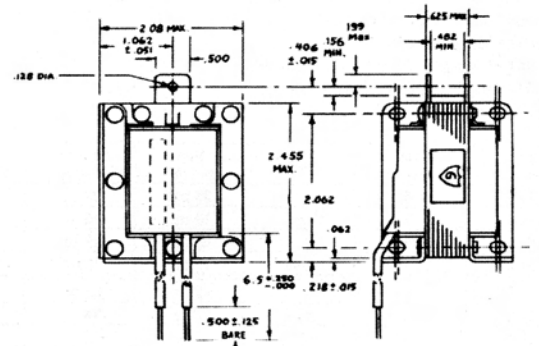
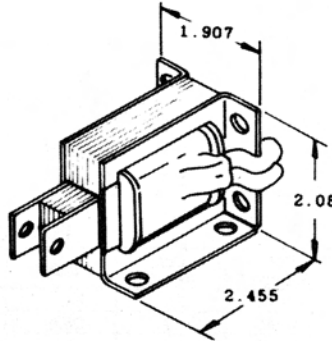
- Taped coil finish
- 22 or 18 Ga. wire leads
- Standard/stock AC voltage 120
- Class "A" insulation system
- Stroke length 0-7/8"
- Plunger weight 1 oz. (28 grams)
- Total weight 5.5 oz. (156 grams)



Coil Voltage	Coil Res. Ω	Duty	Pull at 1/8"	Holding Force	PART NUMBERS
120VAC	100	Int.	49 oz.	38 oz.	12-I-120A
120VAC	150	Cont.	30 oz.	27 oz.	12-C-120A

NO. 14 - LAMINATED FRAME - AC

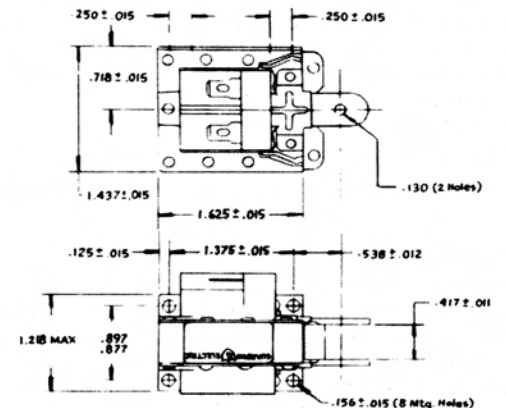
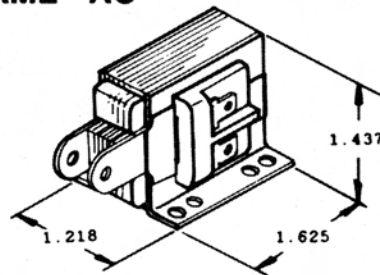
- Taped coil finish
- 22 or 18 Ga. wire leads
- Standard/stock AC voltage 120
- Class "A" insulation system
- Stroke length 0 - 1-1/2"
- Plunger weight 2.6 oz. (74 grams)
- Total weight 18 oz. (510 grams)



Coil Voltage	Coil Res. Ω	Duty	Pull at 1/8"	Holding Force	PART NUMBERS
120VAC	11	Int.	132 oz.	217 oz.	14-I-120A
120VAC	18	Cont.	96 oz.	353 oz.	14-C-120A

NO. 16 - LAMINATED FRAME - AC

- Uniguard II coil finish
- .187" Quick connect lugs
- Standard/stock AC voltage 120, 240
- Class "A" insulation system
- Push type available specify 16P
- Stroke length 0 - 3/4"
- Plunger weight 2 oz. (56 grams)
- Total weight 9 oz. (255 grams)



Coil Voltage	Coil Res. Ω	Duty	Pull at 1/8"	Holding Force	PART NUMBERS
120VAC	41	Int.	110 oz.	150 oz.	16-I-120A
120VAC	85	Cont.	63 oz.	74 oz.	16-C-120A
240VAC	200	Int.	110 oz.	150 oz.	16-I-240A
240VAC	350	Cont.	63 oz.	74 oz.	16-C-240A

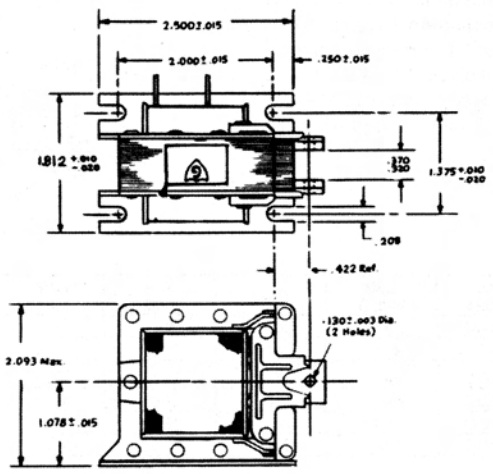
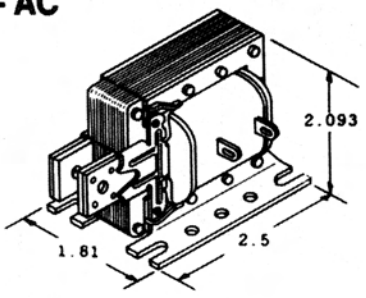
PUSH TYPE

120VAC	41	Int.	88 oz.	142 oz.	16P-I-120A
120VAC	85	Cont.	50.5 oz.	70 oz.	16P-C-120A



NO. 18 - LAMINATED FRAME - AC

- Taped coil finish
- Solder lug termination
- Standard/stock AC voltage 120, 240
- Class "A" insulation system
- Push type available specify 18P
- Stroke length 0 - 7/8"
- Plunger weight 4.5 (127 grams)
- Total weight 17 oz. (482 grams)



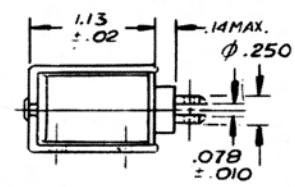
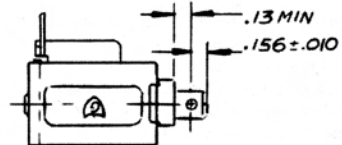
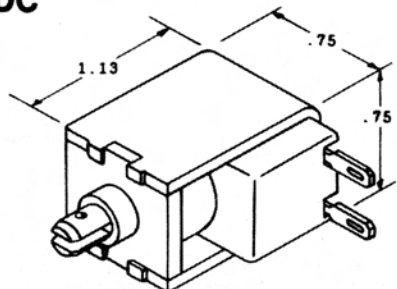
Coil Voltage	Coil Res. Ω	Duty	Pull at 1/8"	Holding Force	PART NUMBERS
120VAC	8.8	Int.	190 oz.	276 oz.	18-I-120A
120VAC	19.7	Cont.	90 oz.	155 oz.	18-C-120A
240VAC	45	Int.	190 oz.	276 oz.	18-I-240A
240VAC	78	Cont.	90 oz.	155 oz.	18-C-240A

PUSH TYPE

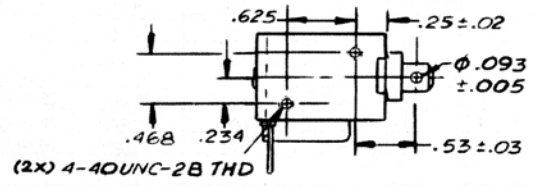
120VAC	8.8	Int.	171 oz.	248 oz.	18P-I-120A
120VAC	19.7	Count.	81 oz.	140 oz.	18P-C-120A

NO. 22 - BOX FRAME - AC & DC

- Uniguard II bobbin & coil cover
- .110" Quick connect lugs
- Standard/stock AC voltage 120
- Standard/stock DC voltage 6, 12, & 24
- Class "A" insulation system
- Stroke length 0 - 1/2"
- Plunger weight .22 oz. (6.3 grams)
- Total weight 1.6 oz. (45.4 grams)

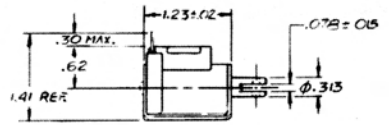
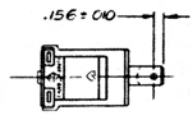
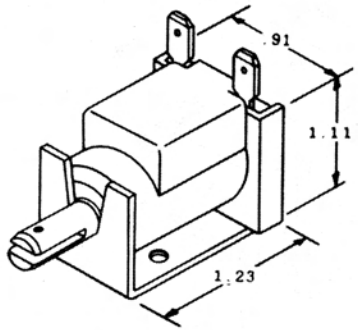


Coil Voltage	Coil Res. Ω	Duty	Pull at 1/8"	Holding Force	PART NUMBERS
120VAC	576	Int.	7.6 oz.	9 oz.	22-I-120A
120VAC	970	Cont.	3.8 oz.	8 oz.	22-C-120A
6VDC	5.8	Int.	8 oz.	45 oz.	22-I-6D
6VDC	11.5	Cont.	4 oz.	40 oz.	22-C-6D
12VDC	22.6	Int.	8 oz.	45 oz.	22-I-12D
12VDC	45.7	Cont.	4 oz.	40 oz.	22-C-12D
24VDC	93.2	Int.	8 oz.	45 oz.	22-I-24D
24VDC	182	Cont.	4 oz.	40 oz.	22-C-24D

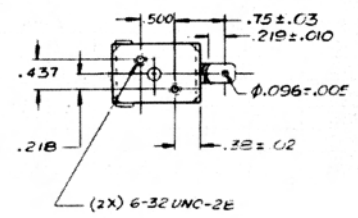


NO. 24 - U-FRAME - AC & DC

- Uniguard II bobbin and coil cover
- .187" Quick connect lugs
- Standard/stock AC voltage 120
- Standard/stock DC voltage 12, 24
- Class "A" insulation system
- Stroke length 0 - 1/2"
- Plunger weight .45 oz. (13 grams)
- Total weight 2.41 oz. (68.3 grams)



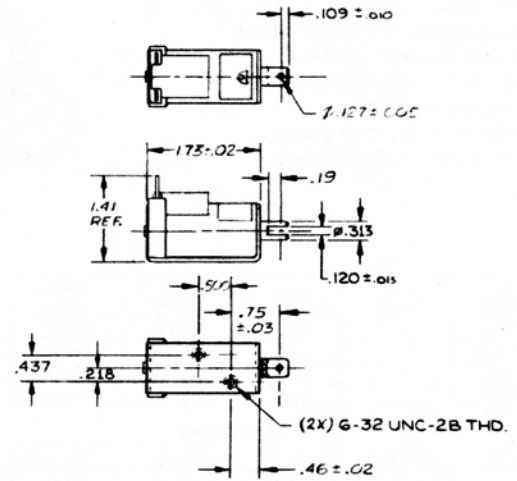
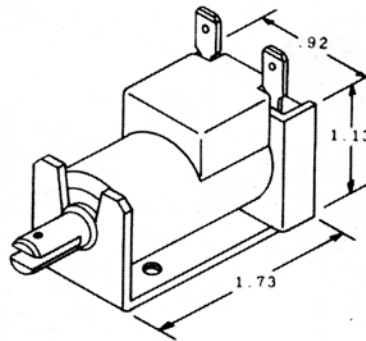
Coil Voltage	Coil Res. Ω	Duty	Pull at 1/8"	Holding Force	PART NUMBERS
120VAC	310	Int.	13 oz.	28 oz.	24-I-120A
120VAC	500	Cont.	8 oz.	24 oz.	24-C-120A
12VDC	13.8	Int.	17 oz.	65 oz.	24-I-12D
12VDC	35.5	Cont.	6 oz.	48 oz.	24-C-12D
24VDC	53.9	Int.	17 oz.	65 oz.	24-I-24D
24VDC	137	Cont.	6 oz.	48 oz.	24-C-24D





NO. 26 - U-FRAME - AC & DC

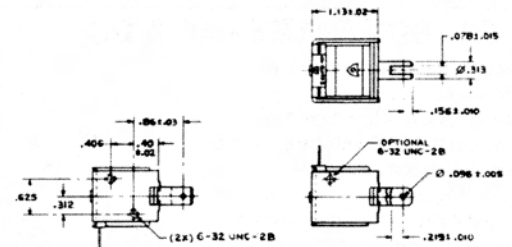
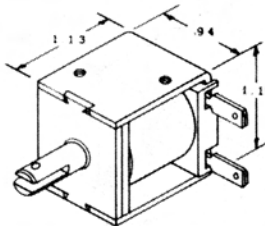
- Uniguard II bobbin and coil cover
- .187" Quick connect lugs
- Standard/stock AC voltage 120
- Standard/stock DC voltage 12, 24
- Class "A" insulation system
- Stroke length 0 - 3/4"
- Plunger weight .5 oz. (14 grams)
- Total weight 3.15 oz. (89 grams)



Coil Voltage	Coil Res. Ω	Duty	Pull at 1/8"	Holding Force	PART NUMBERS
120VAC	140	Int.	20 oz.	31 oz.	26-I-120A
120VAC	412	Cont.	14 oz.	17 oz.	26-C-120A
12VDC	10.7	Int.	22 oz.	77 oz.	26-I-12D
12VDC	26.7	Cont.	11 oz.	57 oz.	26-C-12D
24VDC	41.5	Int.	22 oz.	77 oz.	26-I-24D
24VDC	104	Cont.	11 oz.	57 oz.	26-C-24D

NO. 28 - BOX FRAME - AC & DC

- Uniguard II bobbin and coil cover
- .187" Quick connect lugs
- Push type available specify 28P
- Standard/stock AC voltage 24, 120
- Standard/stock DC voltage 6, 12, & 24
- Class "A" insulation system
- Stroke length 0 - 1/2"
- Plunger weight .46 oz. (13 grams)
- Total weight 3.5 oz. (100 grams)



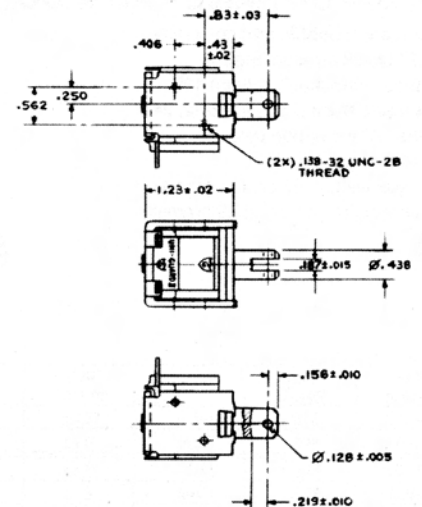
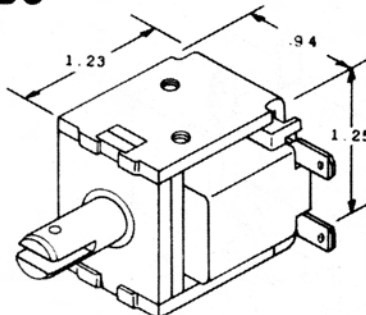
PUSH TYPE

Coil Voltage	Coil Res. Ω	Duty	Pull at 1/8"	Holding Force	PART NUMBERS
24VAC	7.5	Int.	18 oz.	21 oz.	28-I-24A
24VAC	17.4	Cont.	11 oz.	14 oz.	28-C-24A
120VAC	220	Int.	18 oz.	21 oz.	28-I-120A
120VAC	410	Cont.	11 oz.	14 oz.	28-C-120A
6VDC	3.0	Int.	25 oz.	90 oz.	28-I-6D
6VDC	7.5	Cont.	10 oz.	75 oz.	28-C-6D
12VDC	11.9	Int.	25 oz.	90 oz.	28-I-12D
12VDC	29.8	Cont.	10 oz.	75 oz.	28-C-12D
24VDC	47.4	Int.	25 oz.	90 oz.	28-I-24D
24VDC	116	Cont.	10 oz.	75 oz.	28-C-24D

Coil Voltage	Coil Res. Ω	Duty	Push at 1/8"	Holding Force	PART NUMBERS
24VAC	7.5	Int.	16 oz.	19 oz.	28P-I-24A
24VAC	17.4	Cont.	10 oz.	12 oz.	28P-C-24A
120VAC	220	Int.	16 oz.	19 oz.	28P-I-120A
120VAC	410	Cont.	10 oz.	12 oz.	28P-C-120A
6VDC	3.0	Int.	23 oz.	81 oz.	28P-I-6D
6VDC	7.5	Cont.	10 oz.	67 oz.	28P-C-6D
12VDC	11.9	Int.	23 oz.	81 oz.	28P-I-12D
12VDC	29.8	Cont.	10 oz.	67 oz.	28P-C-12D
24VDC	47.4	Int.	23 oz.	81 oz.	28P-I-24D
24VDC	116	Cont.	10 oz.	67 oz.	28P-C-24D

NO. 28HD - BOX FRAME - AC & DC

- Heavy duty construction
- Uniguard II bobbin and coil cover
- .187" Quick connect lugs
- Standard/stock AC voltage 120
- Standard/stock DC voltage 12, 24
- Class "A" insulation system
- Stroke length 0 - 1/2"
- Plunger weight .86 oz. (24 grams)
- Total weight 4.67 oz. (132 grams)



Coil Voltage	Coil Res. Ω	Duty	Pull at 1/8"	Holding Force	PART NUMBERS
120VAC	173	Int.	25 oz.	64 oz.	28HD-I-120A
120VAC	375	Cont.	12 oz.	45 oz.	28HD-C-120A
12VDC	12.2	Int.	26 oz.	160 oz.	28HD-I-12D
12VDC	30.1	Cont.	9 oz.	130 oz.	28HD-C-12D
24VDC	49	Int.	26 oz.	160 oz.	28HD-I-24D
24VDC	119	Cont.	9 oz.	130 oz.	28HD-C-24D

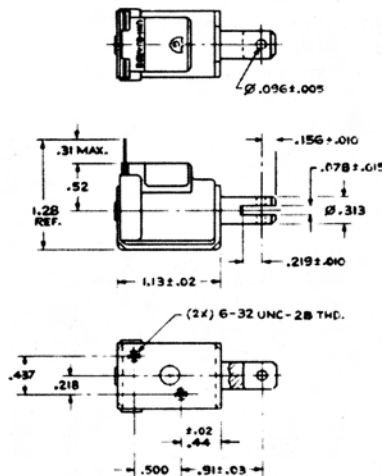
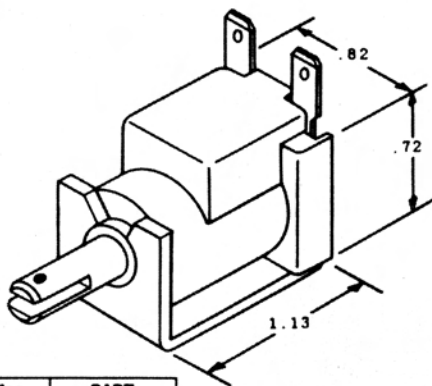


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SOLENOIDS

NO. 34 - U-FRAME - AC & DC

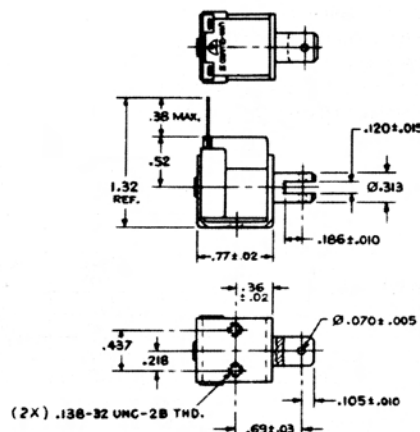
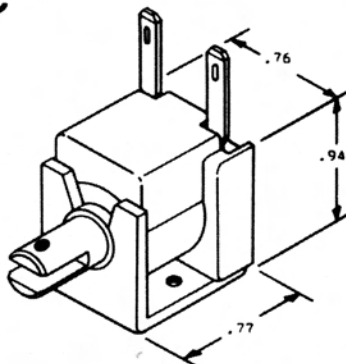
- Uniguard II bobbin and coil cover
- .187" Quick connect lugs
- Standard/stock AC voltage 120
- Standard/stock DC voltage 12, 24
- Class "A" insulation system
- Stroke length 0 - 3/8"
- Plunger weight .44 oz. (12.5 grams)
- Total weight 1.78 oz. (50.4 grams)



Coil Voltage	Coil Res. Ω	Duty	Pull at 1/8"	Holding Force	PART NUMBERS
120VAC	400	Int.	10 oz.	25 oz.	34-I-120A
120VAC	865	Cont.	5.3 oz.	17 oz.	34-C-120A
12VDC	16.7	Int.	11 oz.	62 oz.	34-I-12D
12VDC	42.3	Cont.	4 oz.	47 oz.	34-C-12D
24VDC	67	Int.	11 oz.	62 oz.	34-I-24D
24VDC	168	Cont.	4 oz.	47 oz.	34-C-24D

NO. 38 - U-FRAME - AC & DC

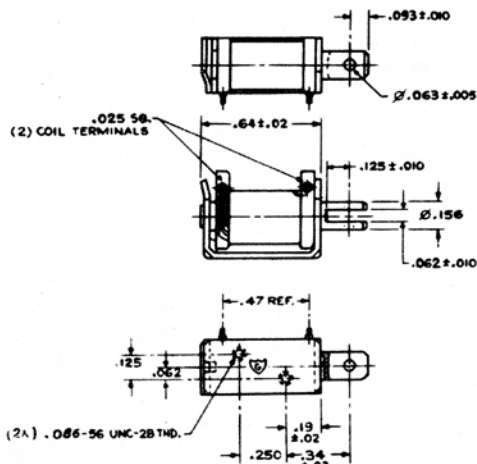
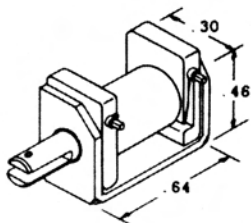
- Uniguard II bobbin and coil cover
- .110" Quick connect lugs
- Standard/stock AC voltage 120
- Standard/stock DC voltage 24
- Class "A" insulation system
- Stroke length 0 - 3/8"
- Plunger weight .23 oz. (6.7 grams)
- Total weight 1.07 oz. (30 grams)



Coil Voltage	Coil Res. Ω	Duty	Pull at 1/8"	Holding Force	PART NUMBERS
120VAC	860	Int.	4.0 oz.	20 oz.	38-I-120A
120VAC	1500	Cont.	2.5 oz.	8 oz.	38-C-120A
24VDC	95	Int.	2.7 oz.	36 oz.	38-I-24D
24VDC	193	Cont.	0.8 oz.	22 oz.	38-C-24D

NO. 42 - U-FRAME - DC

- Taped coil finish
- .025" sq. pin terminals
- Standard/stock DC voltage 12, 24
- Class "A" insulation system
- Stroke length 0 - 1/8"
- Plunger weight .023 oz. (.7 grams)
- Total weight .229 oz. (6.5 grams)

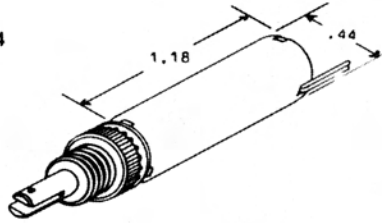


Coil Voltage	Coil Res. Ω	Duty	Pull at 1/8"	Holding Force	PART NUMBERS
12VDC	83.7	Int.	.5 oz.	12 oz.	42-I-12D
12VDC	106	Cont.	.25 oz.	10 oz.	42-C-12D
24VDC	297	Int.	.5 oz.	12 oz.	42-I-24D
24VDC	412	Cont.	.25 oz.	10 oz.	42-C-24D



T3.5X9 - DC

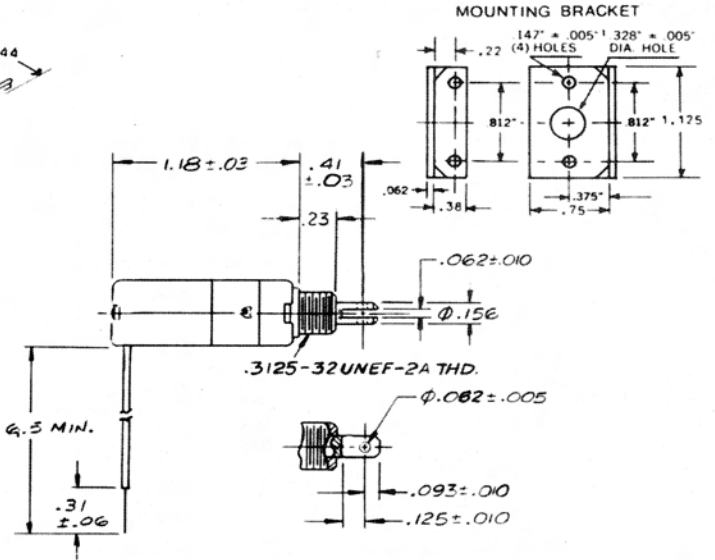
- 28 Ga. wire leads
- Standard/stock DC voltages 12 & 24
- Class "A" insulation
- Push type available specify TP
- Stroke length 0 - 3/8"
- Plunger weight .1 oz. (2.9 grams)
- Total weight .6 oz. (18 grams)



Coil Voltage	Coil Res. Ω	Duty	Pull at 1/8"	Holding Force	PART NUMBERS
12VDC	31.1	Int.	1.8 oz.	22 oz.	T3.5X9-I-12D
12VDC	60.2	Cont.	1.0 oz.	20 oz.	T3.5X9-C-12D
24VDC	122	Int.	1.8 oz.	22 oz.	T3.5X9-I-24D
24VDC	254	Cont.	1.0 oz.	20 oz.	T3.5X9-C-24D

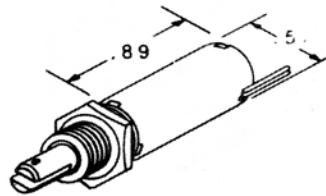
PUSH TYPE

12VDC	31.1	Int.	1.5 oz.	18.7 oz.	TP3.5X9-I-12D
12VDC	60.2	Cont.	.6 oz.	17 oz.	TP3.5X9-C-12D
24VDC	122	Int.	1.5 oz.	18.7 oz.	TP3.5X9-I-24D
24VDC	254	Cont.	.6 oz.	17 oz.	TP3.5X9-C-24D



T4X7 - DC

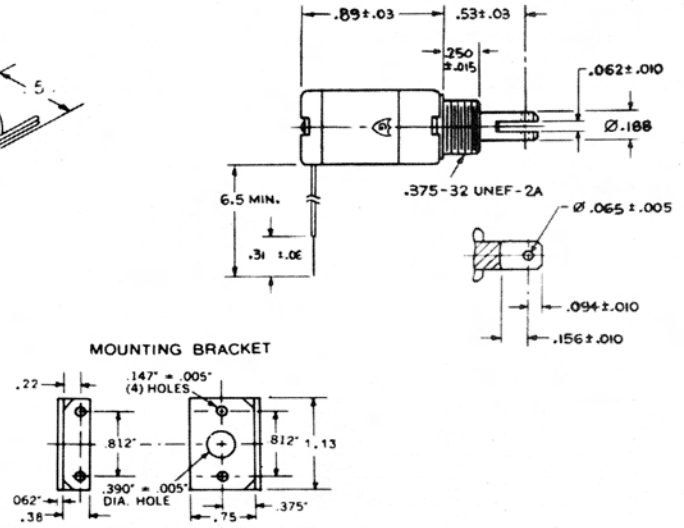
- 26 Ga. wire leads
- Standard/stock DC voltages 12 & 24
- Class "A" insulation
- Push type available specify TP
- Stroke length 0 - 3/8"
- Plunger weight .138 oz. (4.1 grams)
- Total weight .58 oz. (20.1 grams)



Coil Voltage	Coil Res. Ω	Duty	Pull at 1/8"	Holding Force	PART NUMBERS
12VDC	32.3	Int.	2.1 oz.	24 oz.	T4X7-I-12D
12VDC	62.5	Cont.	1.1 oz.	21 oz.	T4X7-C-12D
24VDC	131	Int.	2.1 oz.	24 oz.	T4X7-I-24D
24VDC	270	Cont.	1.1 oz.	21 oz.	T4X7-C-24D

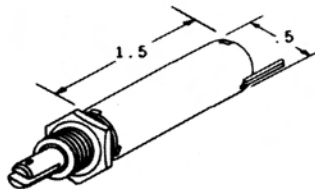
PUSH TYPE

24VDC	131	Int.	1.2 oz.	20 oz.	TP4X7-I-24D
24VDC	270	Cont.	.5 oz.	17 oz.	TP4X7-C-24D



T4X12 - DC

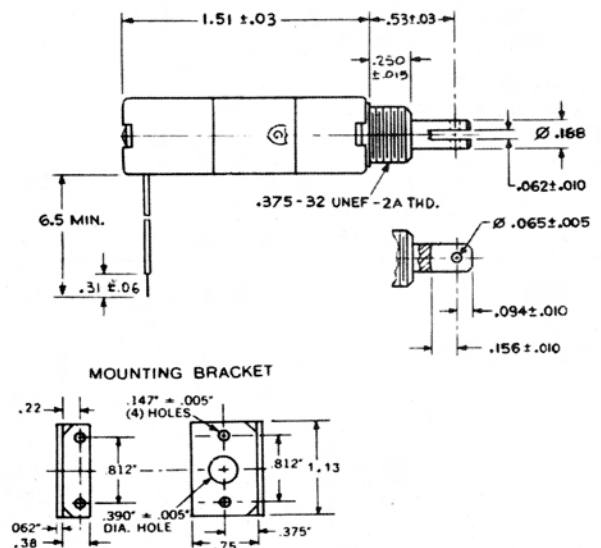
- 26 Ga. wire leads
- Standard/stock DC voltages 12 & 24
- Class "A" insulation
- Push type available specify TP
- Stroke length 0 - 1/2"
- Plunger weight .283 oz. (8 grams)
- Total weight .99 oz. (28 grams)



Coil Voltage	Coil Res. Ω	Duty	Pull at 1/8"	Holding Force	PART NUMBERS
12VDC	27.7	Int.	3.2 oz.	25 oz.	T4X12-I-12D
12VDC	49	Cont.	2.0 oz.	21 oz.	T4X12-C-12D
24VDC	96.7	Int.	3.2 oz.	25 oz.	T4X12-I-24D
24VDC	195	Cont.	2.0 oz.	21 oz.	T4X12-C-24D

PUSH TYPE

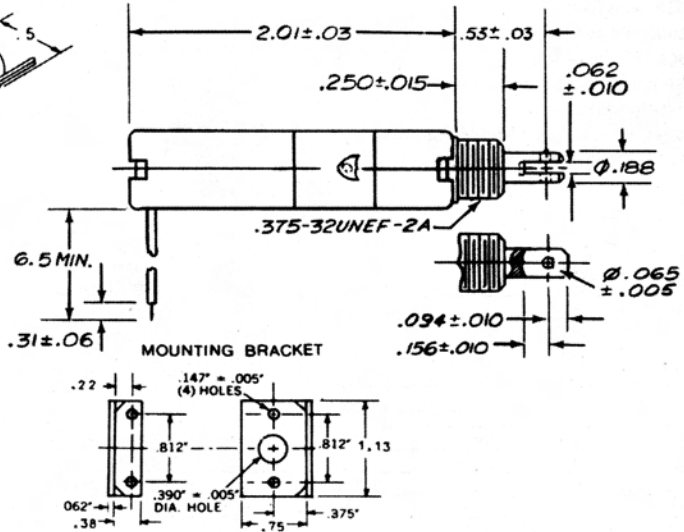
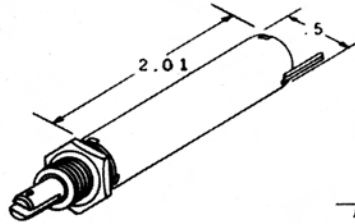
24VDC	96.7	Int.	2.7 oz.	21 oz.	TP4X12-I-24D
24VDC	195	Cont.	1.35 oz.	17 oz.	TP4X12-C-24D





T4X16 DC

- 26 Ga. wire leads
- Standard/stock DC voltages 12 & 24
- Class "A" insulation
- Push type available specify TP
- Stroke length 0 - 5/8"
- Plunger weight .362 oz. (9.2 grams)
- Total weight 1.35 oz. (34 grams)



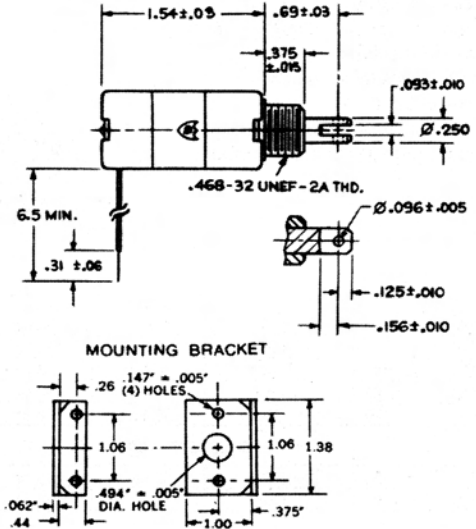
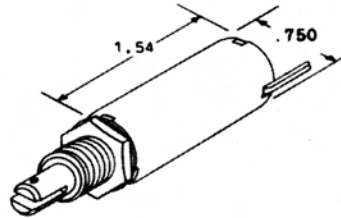
Coil Voltage	Coil Res. Ω	Duty	Pull at 1/8"	Holding Force	PART NUMBERS
12VDC	17.7	Int.	3.75 oz.	28 oz.	T4X16-I-12D
12VDC	45.1	Cont.	2.0 oz.	23 oz.	T4X16-C-12D
24VDC	72.7	Int.	3.75 oz.	28 oz.	T4X16-I-24D
24VDC	173	Cont.	2.0 oz.	23 oz.	T4X16-C-24D

PUSH TYPE

12VDC	17.7	Int.	3.4 oz.	24 oz.	TP4X16-I-12D
12VDC	45.1	Cont.	1.8 oz.	19 oz.	TP4X16-C-12D
24VDC	72.7	Int.	3.4 oz.	24 oz.	TP4X16-I-24D
24VDC	173	Cont.	1.8 oz.	19 oz.	TP4X16-C-24D

T6X12 - DC

- 26 Ga. wire leads
- Standard/stock DC voltages 12 & 24
- Class "A" insulation
- Push type available specify TP
- Stroke length 0 - 3/4"
- Plunger weight .421 oz. (11.9 grams)
- Total weight 2.34 oz. (66.3 grams)



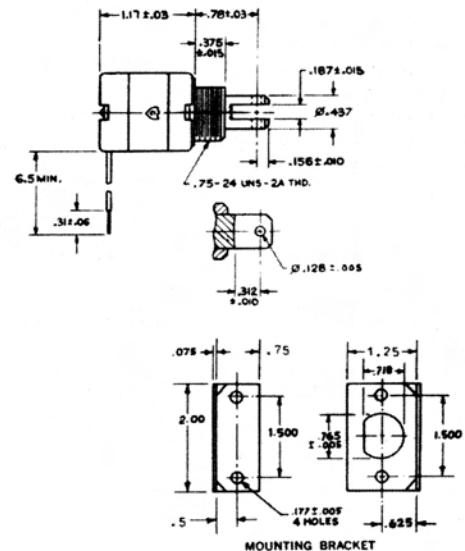
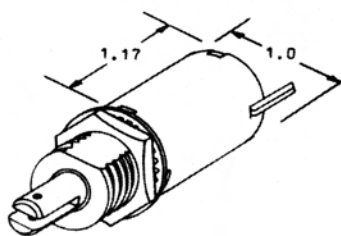
Coil Voltage	Coil Res. Ω	Duty	Pull at 1/8"	Holding Force	PART NUMBERS
12VDC	12.1	Int.	15.0 oz.	54 oz.	T6X12-I-12D
12VDC	31.7	Cont.	8.4 oz.	49 oz.	T6X12-C-12D
24VDC	60.6	Int.	12.8 oz.	52 oz.	T6X12-I-24D
24VDC	121	Cont.	8.4 oz.	49 oz.	T6X12-C-24D

PUSH TYPE

12VDC	12.1	Int.	13.6 oz.	46 oz.	TP6X12-I-12D
12VDC	31.7	Cont.	6.1 oz.	41 oz.	TP6X12-C-12D
24VDC	60.6	Int.	10.8 oz.	44 oz.	TP6X12-I-24D
24VDC	121	Cont.	6.1 oz.	41 oz.	TP6X12-C-24D

T8X9 - DC

- 22 Ga. wire leads
- Standard/stock DC voltages 12 & 24
- Class "A" insulation
- Push type available specify TP
- Stroke length 0 - 5/8"
- Plunger weight 1.1 oz. (31 grams)
- Total weight 3.46 oz. (98.6 grams)



Coil Voltage	Coil Res. Ω	Duty	Pull at 1/8"	Holding Force	PART NUMBERS
12VDC	10.9	Int.	27.5 oz.	122 oz.	T8X9-I-12D
12VDC	35.5	Cont.	8.7 oz.	96 oz.	T8X9-C-12D
24VDC	44	Int.	27.5 oz.	122 oz.	T8X9-I-24D
24VDC	135	Cont.	8.7 oz.	96 oz.	T8X9-C-24D

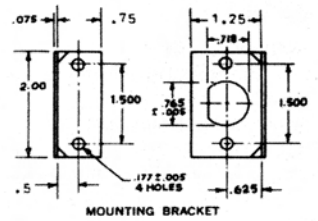
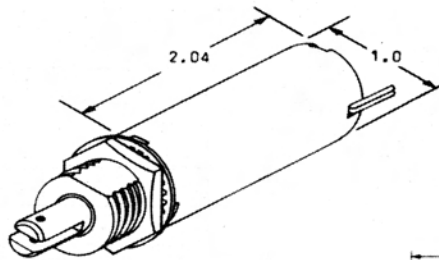
PUSH TYPE

24VDC	44	Int.	23 oz.	103 oz.	TP8X9-I-24D
24VDC	135	Cont.	7.4 oz.	82 oz.	TP8X9-C-24D



T8X16 - DC

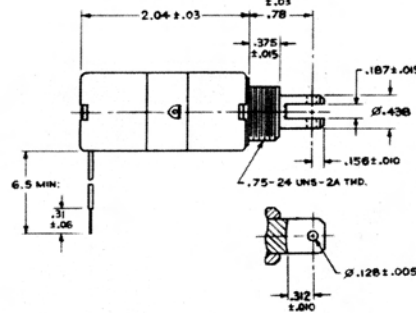
- 22 Ga. wire leads
- Standard/stock DC voltages 12 & 24
- Class "A" insulation
- Push type available specify TP
- Stroke length 0 - 7/8"
- Plunger weight 1.502 oz. (44.5 grams)
- Total weight 5.8 oz. (164 grams)



Coil Voltage	Coil Res. Ω	Duty	Pull at 1/8"	Holding Force	PART NUMBERS
12VDC	9.3	Int.	40.5 oz.	130 oz.	T8X16-I-12D
12VDC	28.3	Cont.	17.7 oz.	105 oz.	T8X16-C-12D
24VDC	36.1	Int.	40.5 oz.	130 oz.	T8X16-I-24D
24VDC	110	Cont.	17.7 oz.	105 oz.	T8X16-C-24D

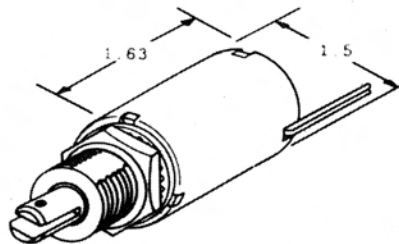
PUSH TYPE

12VDC	9.3	Int.	38.0 oz.	110 oz.	TP8X16-I-12D
12VDC	28.3	Cont.	14.5 oz.	89 oz.	TP8X16-C-12D
24VDC	36.1	Int.	38.0 oz.	110 oz.	TP8X16-I-24D
24VDC	110	Cont.	14.5 oz.	89 oz.	TP8X16-C-24D

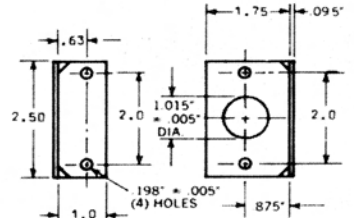


T12X13 - DC

- 22 Ga. wire leads
- Standard/stock DC voltages 12 & 24
- Class "A" insulation
- Push type available specify TP
- Stroke length 0 - 1"
- Plunger weight 1.8 oz. (50 grams)
- Total weight 10.6 oz. (301 grams)



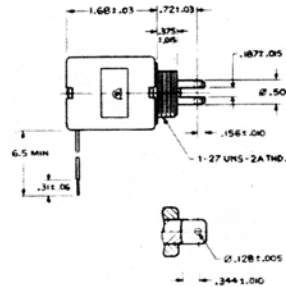
MOUNTING BRACKET



Coil Voltage	Coil Res. Ω	Duty	Pull at 1/8"	Holding Force	PART NUMBERS
12VDC	7.3	Int.	104 oz.	250 oz.	T12X13-I-12D
12VDC	22.8	Cont.	38.4 oz.	183 oz.	T12X13-C-12D
24VDC	28.4	Int.	104 oz.	250 oz.	T12X13-I-24D
24VDC	90.4	Cont.	38.4 oz.	183 oz.	T12X13-C-24D

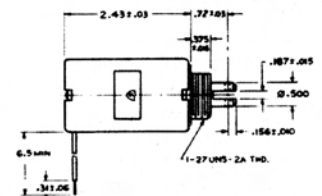
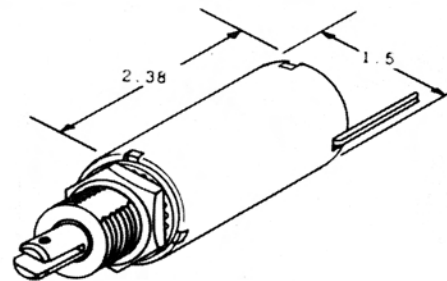
PUSH TYPE

24VDC	28.4	Int.	83 oz.	213 oz.	TP12X13-I-24D
24VDC	90.4	Cont.	30 oz.	155 oz.	TP12X13-C-24D



T12X19 - DC

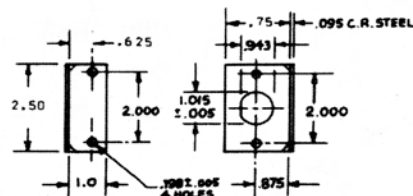
- 22 Ga. wire leads
- Standard/stock DC voltages 12 & 24
- Class "A" insulation
- Push type available specify TP
- Stroke length 0 - 1"
- Plunger weight 2.2 oz. (62 grams)
- Total weight 14.6 oz. (415 grams)



Coil Voltage	Coil Res. Ω	Duty	Pull at 1/8"	Holding Force	PART NUMBERS
12VDC	5.6	Int.	116 oz.	245 oz.	T12X19-I-12D
12VDC	17.5	Cont.	64.5 oz.	185 oz.	T12X19-C-12D
24VDC	22.1	Int.	116 oz.	245 oz.	T12X19-I-24D
24VDC	68	Cont.	64.5 oz.	185 oz.	T12X19-C-24D

PUSH TYPE

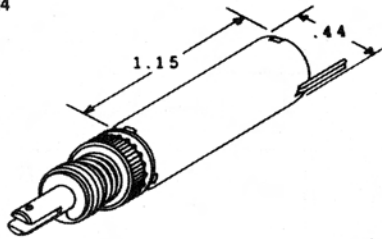
24VDC	22.1	Int.	100 oz.	208 oz.	TP12X19-I-24D
24VDC	68	Cont.	40 oz.	157 oz.	TP12X19-C-24D



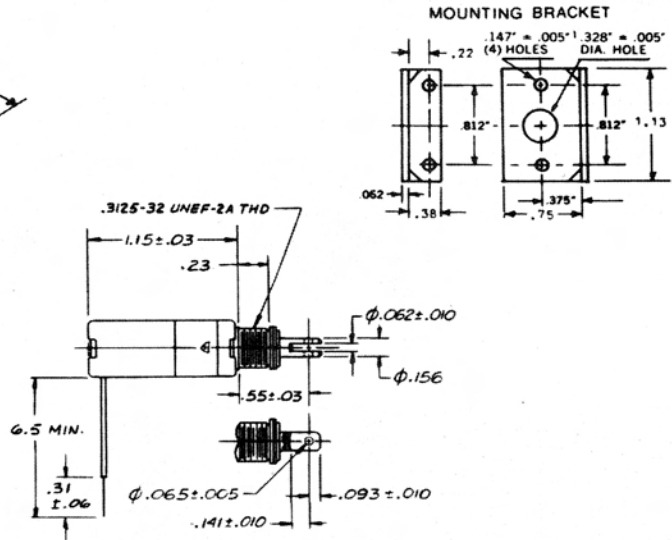


LT3.5X9 - DC

- 26 Ga. wire leads
- Standard/stock DC voltages 12 & 24
- Class "A" insulation
- Stainless steel plunger sleeve
- Anti-bottoming plunger
- Stroke length 0 - 3/8"
- Plunger weight .1 oz. (2.9 grams)
- Total weight .6 oz. (18 grams)

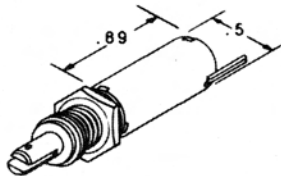


Coil Voltage	Coil Res. Ω	Duty	Pull at 1/8"	Holding Force	PART NUMBERS
12VDC	27	Int.	1.6 oz.	2.1 oz.	LT3.5X9-I-12D
12VDC	52.4	Cont.	.84 oz.	1.5 oz.	LT3.5X9-C-12D
24VDC	105	Int.	1.6 oz.	2.1 oz.	LT3.5X9-I-24D
24VDC	221	Cont.	.84 oz.	1.5 oz.	LT3.5X9-C-24D

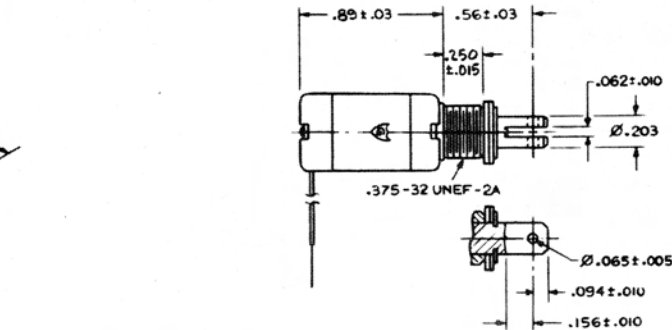


LT4X7 - DC

- 26 Ga. wire leads
- Standard/stock DC voltages 12 & 24
- Class "A" insulation
- Stainless steel plunger sleeve
- Anti-bottoming plunger
- Stroke length 0 - 3/8"
- Plunger weight .145 oz. (4.1 grams)
- Total weight .71 oz. (20.1 grams)

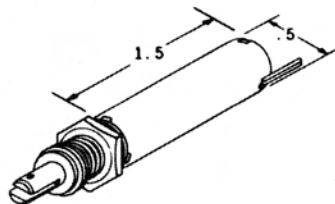


Coil Voltage	Coil Res. Ω	Duty	Pull at 1/8"	Holding Force	PART NUMBERS
12VDC	32.5	Int.	2.8 oz.	9.4 oz.	LT4X7-I-12D
12VDC	63.3	Cont.	1.0 oz.	3.0 oz.	LT4X7-C-12D
24VDC	121	Int.	2.8 oz.	9.4 oz.	LT4X7-I-24D
24VDC	264	Cont.	1.0 oz.	3.0 oz.	LT4X7-C-24D

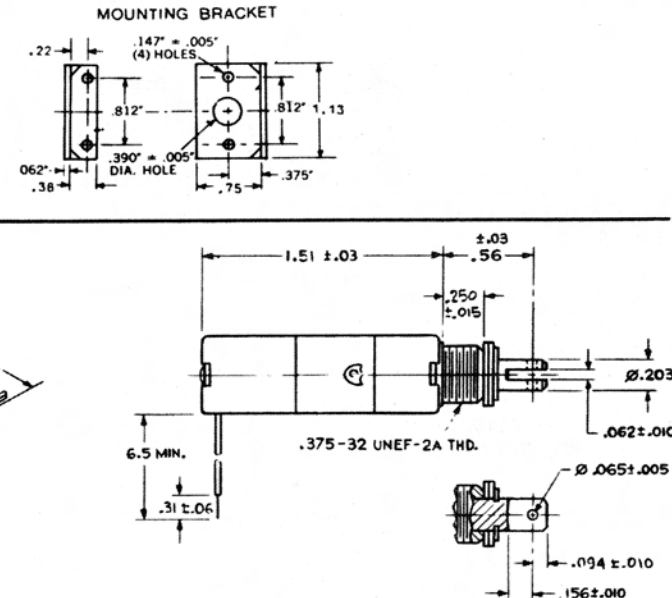


LT4X12 - DC

- 26 Ga. wire leads
- Standard/stock DC voltages 12 & 24
- Class "A" insulation
- Stainless steel plunger sleeve
- Anti-bottoming plunger
- Stroke length 0 - 1/2"
- Plunger weight .2 oz. (5.8 grams)
- Total weight 1.1 oz. (31 grams)



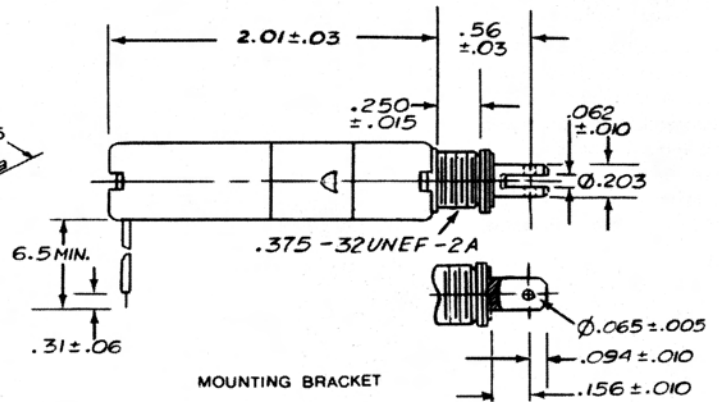
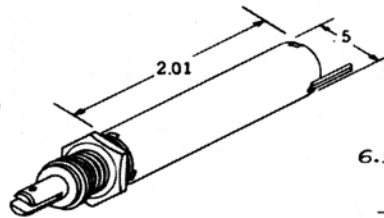
Coil Voltage	Coil Res. Ω	Duty	Pull at 1/8"	Holding Force	PART NUMBERS
12VDC	19.2	Int.	6.25 oz.	19.5 oz.	LT4X12-I-12D
12VDC	49.3	Cont.	1.5 oz.	13.0 oz.	LT4X12-C-12D
24VDC	76.3	Int.	6.25 oz.	19.5 oz.	LT4X12-I-24D
24VDC	192	Cont.	1.5 oz.	13.0 oz.	LT4X12-C-24D



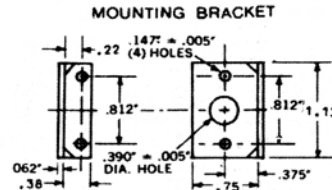


LT4X16 - DC

- 26 Ga. wire leads
- Standard/stock DC voltages 12 & 24
- Class "A" insulation
- Stainless steel plunger sleeve
- Anti-bottoming plunger
- Stroke length 0 - 5/8"
- Plunger weight .28 oz. (8.0 grams)
- Total weight 1.43 oz. (40 grams)

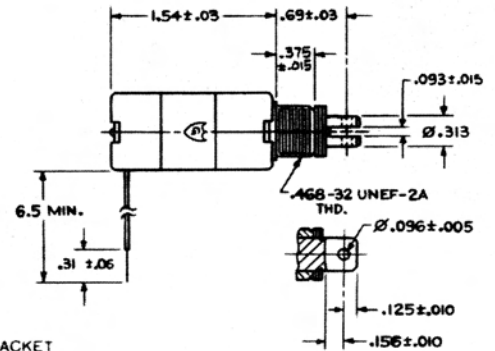
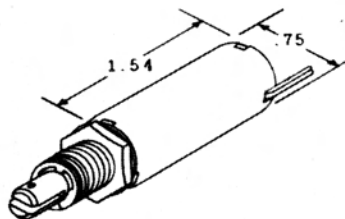


Coil Voltage	Coil Res. Ω	Duty	Pull at 1/8"	Holding Force	PART NUMBERS
12VDC	14	Int.	5.5 oz.	18 oz.	LT4X16-I-12D
12VDC	42.5	Cont.	2.4 oz.	13 oz.	LT4X16-C-12D
24VDC	69.1	Int.	4.8 oz.	16 oz.	LT4X16-I-24D
24VDC	168	Cont.	2.4 oz.	13 oz.	LT4X16-C-24D

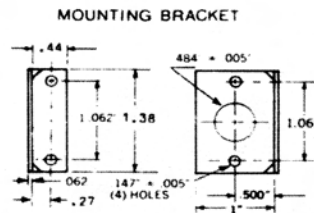


LT6X12 - DC

- 26 Ga. wire leads
- Standard/stock DC voltages 12 & 24
- Class "A" insulation
- Stainless steel plunger sleeve
- Anti-bottoming plunger
- Stroke length 0 - 3/4"
- Plunger weight .57 oz. (16.1 grams)
- Total weight 2.53 oz. (71.5 grams)

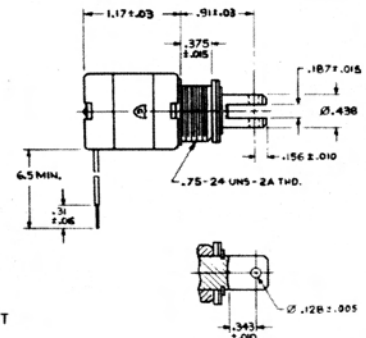
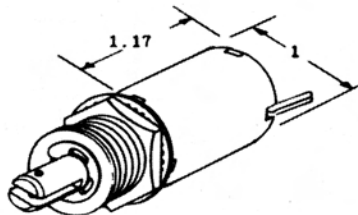


Coil Voltage	Coil Res. Ω	Duty	Pull at 1/8"	Holding Force	PART NUMBERS
12VDC	13.8	Int.	20.0 oz.	39 oz.	LT6X12-I-12D
12VDC	35	Cont.	7.0 oz.	21 oz.	LT6X12-C-12D
24VDC	53.8	Int.	20.0 oz.	39 oz.	LT6X12-I-24D
24VDC	138	Cont.	7.0 oz.	21 oz.	LT6X12-C-24D

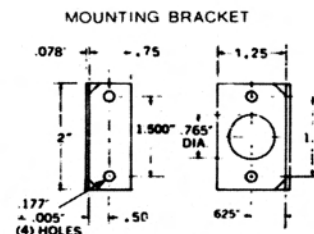


LT8X9 - DC

- 22 Ga. wire leads
- Standard/stock DC voltages 12 & 24
- Class "A" insulation
- Stainless steel plunger sleeve
- Anti-bottoming plunger
- Stroke length 0 - 5/8"
- Plunger weight 1.1 oz. (3 grams)
- Total weight 3.7 oz. (106 grams)



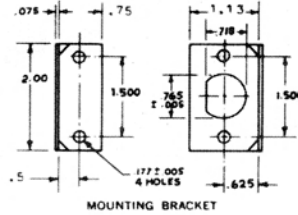
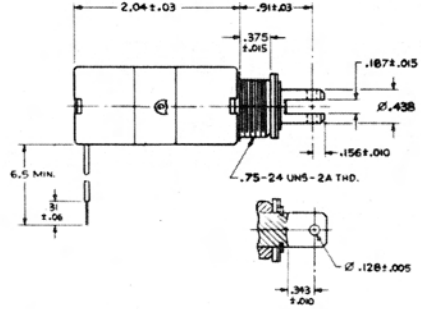
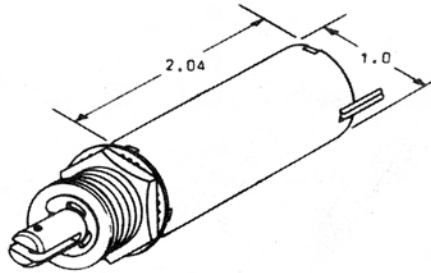
Coil Voltage	Coil Res. Ω	Duty	Pull at 1/8"	Holding Force	PART NUMBERS
12VDC	11.1	Int.	21.0 oz.	67 oz.	LT8X9-I-12D
12VDC	27.6	Cont.	8.0 oz.	31 oz.	LT8X9-C-12D
24VDC	44.6	Int.	21.0 oz.	67 oz.	LT8X9-I-24D
24VDC	109	Cont.	8.0 oz.	31 oz.	LT8X9-C-24D





LT8X16 - DC

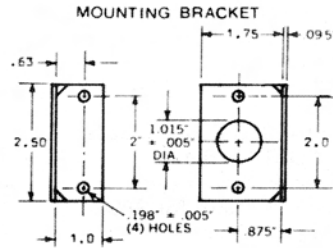
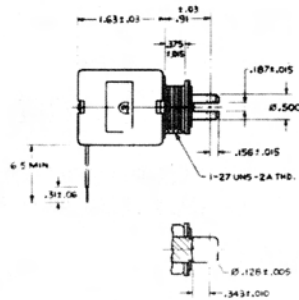
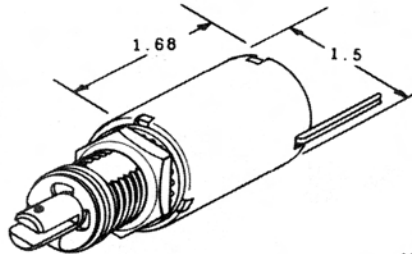
- 22 Ga. wire leads
- Standard/stock DC voltages 12 & 24
- Class "A" insulation
- Stainless steel plunger sleeve
- Anti-bottoming plunger
- Stroke length 0 - 7/8"
- Plunger weight 1.4 oz. (41 grams)
- Total weight 6.4 oz. (181 grams)



Coil Voltage	Coil Res. Ω	Duty	Pull at 1/8"	Holding Force	PART NUMBERS
12VDC	6.2	Int.	55 oz.	68 oz.	LT8X16-I-12D
12VDC	19.3	Cont.	20 oz.	48 oz.	LT8X16-C-12D
24VDC	29.7	Int.	47 oz.	65 oz.	LT8X16-I-24D
24VDC	77.2	Cont.	20 oz.	40 oz.	LT8X16-C-24D

LT12X13 - DC

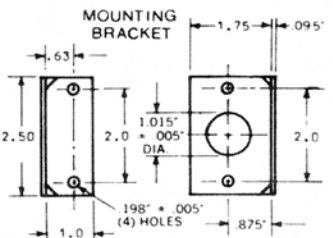
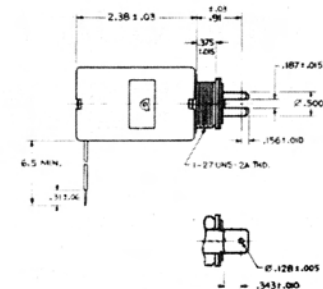
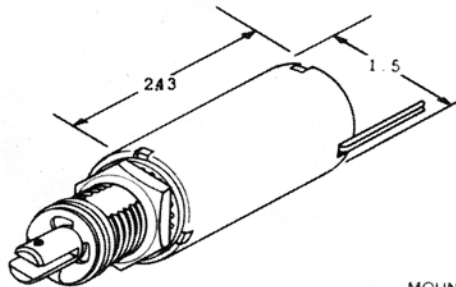
- 22 Ga. wire leads
- Standard/stock DC voltages 12 & 24
- Class "A" insulation
- Stainless steel plunger sleeve
- Anti-bottoming plunger
- Stroke length 0 - 1"
- Plunger weight 2.2 oz. (63 grams)
- Total weight 10.6 oz. (301 grams)



Coil Voltage	Coil Res. Ω	Duty	Pull at 1/8"	Holding Force	PART NUMBERS
12VDC	5.9	Int.	105 oz.	160 oz.	LT12X13-I-12D
12VDC	18.3	Cont.	39 oz.	116 oz.	LT12X13-C-12D
24VDC	22	Int.	105 oz.	160 oz.	LT12X13-I-24D
24VDC	71.2	Cont.	39 oz.	116 oz.	LT12X13-C-24D

LT12X19 - DC

- 22 Ga. wire leads
- Standard/stock DC voltages 12 & 24
- Class "A" insulation
- Stainless steel plunger sleeve
- Anti-bottoming plunger
- Stroke length 0 - 1"
- Plunger weight 2.2 oz. (62 grams)
- Total weight 14.6 oz. (415 grams)



Coil Voltage	Coil Res. Ω	Duty	Pull at 1/8"	Holding Force	PART NUMBERS
12VDC	4.66	Int.	129 oz.	160 oz.	LT12X19-I-12D
12VDC	14.8	Cont.	69 oz.	142 oz.	LT12X19-C-12D
24VDC	18.6	Int.	129 oz.	160 oz.	LT12X19-I-24D
24VDC	71.8	Cont.	55 oz.	125 oz.	LT12X19-C-24D