



#### Application Notes:

101  
102  
103F  
007

- Balanced armature design
- Hermetically sealed

• Contact arrangement **3 PST/NO**

• Qualified to **MS24143  
MS27997**

### PRINCIPLE TECHNICAL CHARACTERISTICS

• Contacts rated at 28 Vdc; 115 Vac, 400 Hz, 1Ø  
115/200 Vac, 400 Hz, 3Ø

• Weight 1.25 lb max

• Dimensions 3.31in x 3.73in x 2.44in

• Special units available upon request including models with auxiliary contacts.

### CONTACT ELECTRICAL CHARACTERISTICS

Contact rating per pole and load type [1]	Load current in Amps				
	28 Vdc	115 Vac 400 Hz	115/200 Vac 400 Hz 3Ø	115/200 Vac 60 Hz [5]	440 Vac 60 Hz DELTA [5]
Resistive	25	25	25	15	12.5
Inductive [6]	25	25	25	15	12.5
Motor	25	25	25	7	10
Intermediate current	2.5	2.5	2.5	-	-

## COIL CHARACTERISTICS (Vdc)

CODE	Vdc	115 Vac 60/400 Hz	Suppressed Vdc [2]
Nominal operating voltage	28	115	28
Maximum operating voltage	29	124	29
<b>Pick-up voltage, max.</b>			
- Nominal	18	90	18
- High temp test	21	100	21
- Continuous current test	22.5	100	22.5
Drop-out voltage, max.	7	40	7
Coil resistance ohms $\pm 10\%$ at +25° C	50	-	50
Coil current max. mA at +25° C	-	200	-

## GENERAL CHARACTERISTICS

Temperature range	-70°C to + 125°C
Minimum operating cycles (life) at rated load	50,000
Minimum operating cycles (life) at 25% rated load	100,000
<b>Dielectric strength at sea level</b>	
- Coil to case	DC 1,250 Vrms AC 1,500 Vrms
- Auxiliary contacts	DC 1,250 Vrms AC 1,500 Vrms
- All other points	DC 1,250 Vrms AC 1,800 Vrms
Dielectric strength at altitude 80,000 ft	700 Vrms (Coil 500 Vrms)
Insulation resistance (at 500 Vdc) minimum	100 M $\Omega$ min
Sinusoidal vibration (55-1500 Hz)	15G
Shock (6-9 millisecond duration)	50G
Maximum contact opening time under shock or vibration	2 ms
<b>Operate time at nominal voltage</b>	
DC	25 ms max
AC	30 ms max
<b>Release time at nominal voltage</b>	
DC	10 ms max
AC	50 ms max
Main contact bounce at nominal voltage	2 ms max [1]

Unless otherwise noted, the specified temperature range applies to all relay characteristics.

## RELAY NUMBERING SYSTEM

LEACH PART NO.	DESCRIPTION	MS NUMBER	MOUNTING STYLE [4]	SCHEMATIC DIAGRAM [4]
9123-C7C4-002	3 PST/NO, 25 AMP, DC COIL	MS27997-D1	1	1
9123-C7D3-002	3 PST/NO, 25 AMP, AC COIL	MS27997-A1	1	1
9123-1Z-C7C4-002	3 PST/NO, 25 AMP, DC COIL, AUX CONTACT	MS27997-D2	1	2
9123-1Z-C7D3-002	3 PST/NO, 25 AMP, AC COIL, AUX CONTACT	MS27997-A2	1	2
9123-8069	3 PST/NO, 25 AMP, DC COIL	MS24143-D1 [3]	2	1
9123-8070	3 PST/NO, 25 AMP, AC COIL	MS24143-A1 [3]	2	1
9123-8071	3 PST/NO, 25 AMP, DC COIL, AUX CONTACT	MS24143-D2 [3]	2	2
9123-8072	3 PST/NO, 25 AMP, AC COIL, AUX CONTACT	MS24143-A2 [3]	2	2
9123-10394	3 PST/NO, 25 AMP, DC SUPPRESSED COIL	-	1	3
9123-10395	3 PST/NO, 25 AMP, DC SUPPRESSED COIL, AUX CONTACT	-	1	4
9123-10396	3 PST/NO, 25 AMP, DC SUPPRESSED COIL	-	2	3
9123-10397	3 PST/NO, 25 AMP, DC SUPPRESSED COIL, AUX CONTACT	-	2	4

Special models available upon request, please contact factory.

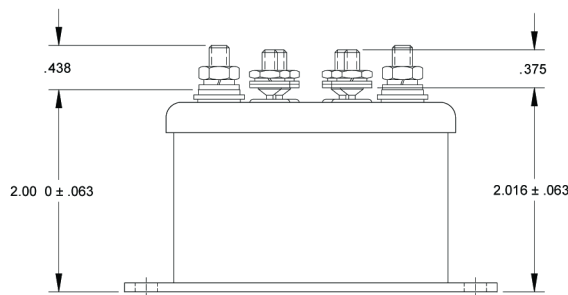
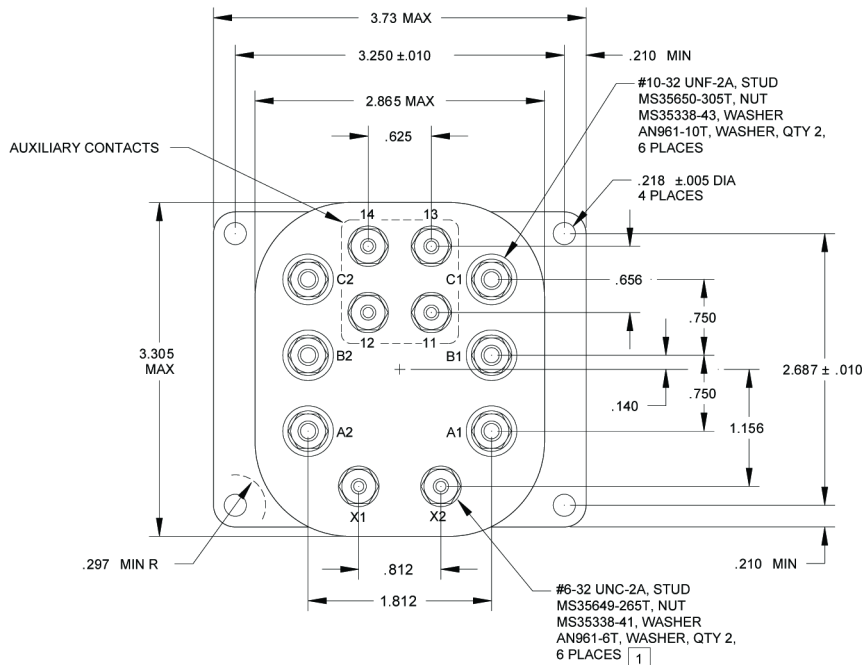
### Notes

- Auxiliary contact rating:  
Resistive and inductive: (28 Vdc or 115 Vac) 5 Amp  
Lamp: (28 Vdc or 115 Vac) 1 Amp  
Bounce at nominal voltage: .004 sec max
- Coils have back EMF suppression to 42 volts.
- MS numbers are for reference only. Relays are electrically and mechanically interchangeable except the height is less on the Leach relays similar to MS24143.
- See the following pages for mounting styles and schematic diagram.
- Ratings beyond MS requirements.
- Inductive life is 20 percent of rated resistive load life

### CONFIGURATION

Dimensions in inches  
Tolerances, unless otherwise specified, XX ± .03, .XXX ± .01

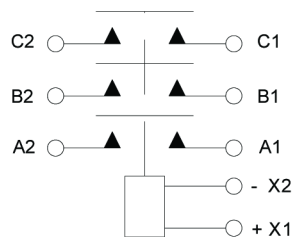
#### MOUNTING STYLE 1



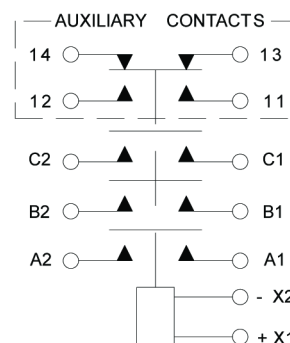
MODEL NUMBER	WEIGHT
9123-C7C4-002	1.10 LB
9123-C7D3-002	1.15 LB
AUXILIARY CONTACT MODELS	
9123-1Z-C7C4-002	1.20 LB
9123-1Z-C7D3-002	1.25 LB
9123-10394	1.15 LB
9123-10395	1.25 LB

1 2 PLACES, FOR NON-AUXILIARY MODELS

#### SCHEMATIC DIAGRAM NO 1

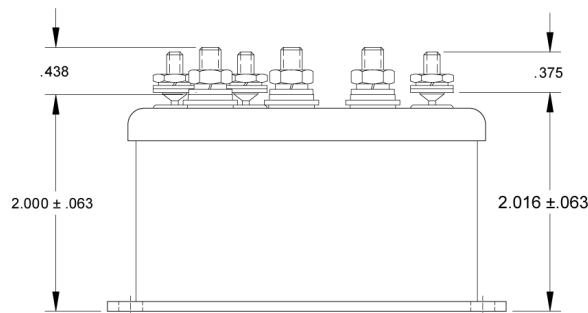
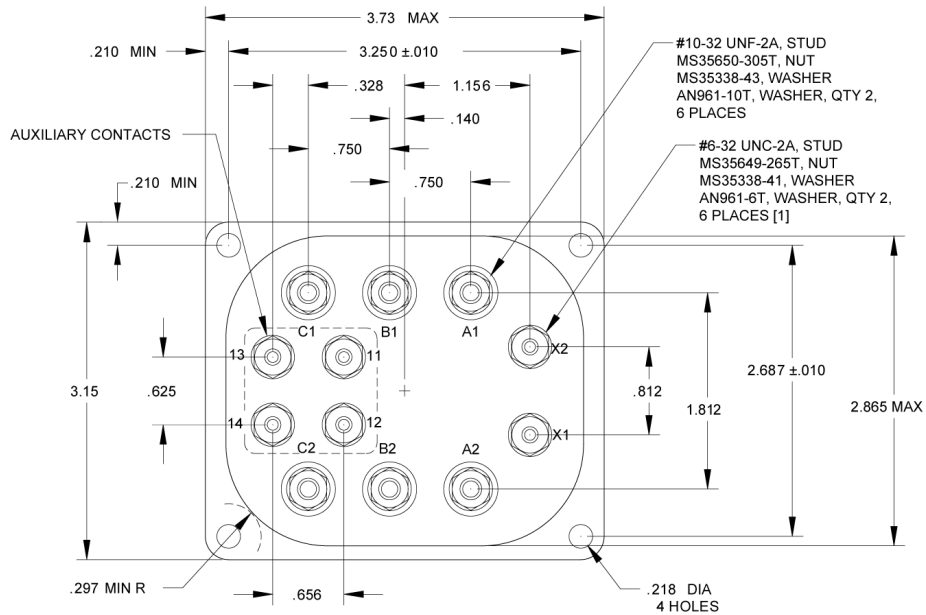


#### SCHEMATIC DIAGRAM NO 2



Dimensions in inches  
Tolerances, unless otherwise specified, XX ± .03, .XXX ± .01

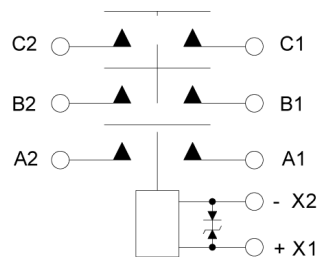
### MOUNTING STYLE 2



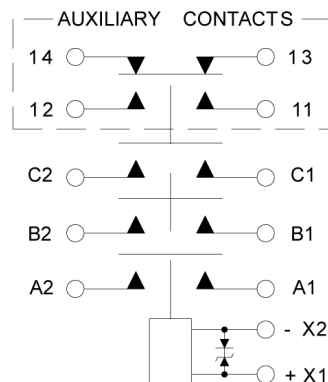
MODEL NUMBER	WEIGHT
9123-8069	1.10 LB
9123-8070	1.15 LB
AUXILIARY CONTACT MODELS	
9123-8071	1.20 LB
9123-8072	1.25 LB
9123-10396	1.15 LB
9123-10397	1.25 LB

[1] 2 PLACES, FOR NON-AUXILIARY MODELS

### SCHEMATIC DIAGRAM NO 3



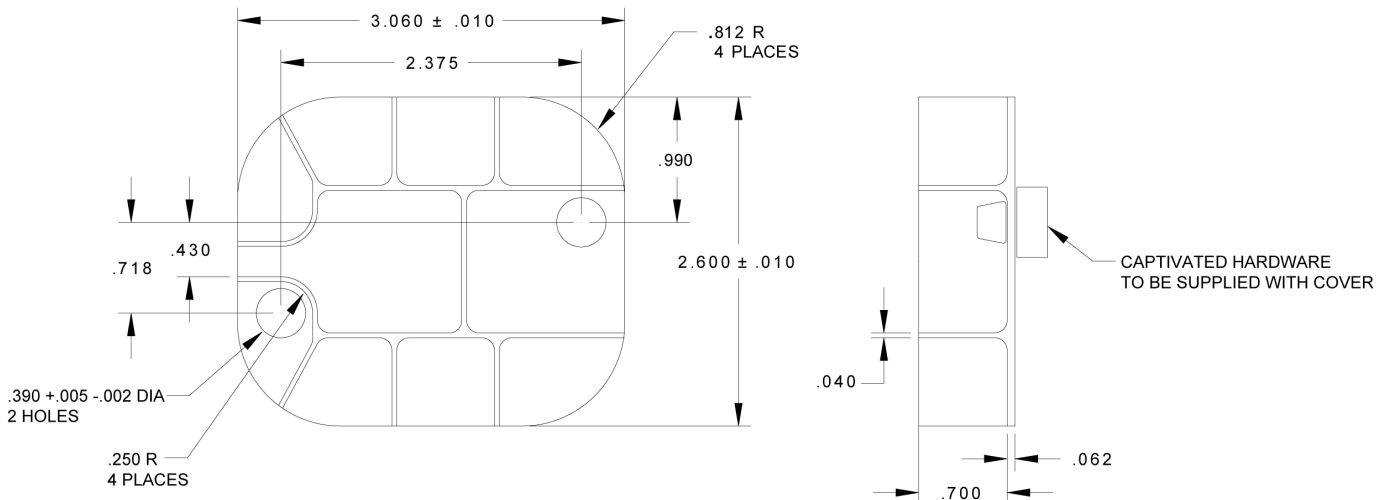
### SCHEMATIC DIAGRAM NO 4



### TERMINAL BARRIERS (OPTIONAL)

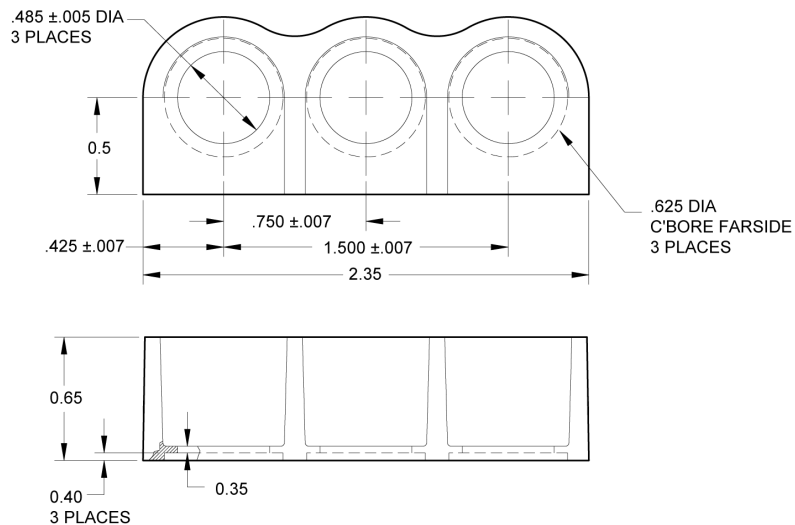
**PART NUMBER: 001-8708-000**

Dimensions in inches  
Tolerances, unless otherwise specified, XX ± .03, .XXX ± .01



1. MATERIAL: 30% GLASS FILLED NYLON  
COLOR, BLACK. MEETS OR EXCEEDS  
FED SPEC NO. LP-395.

**PART NUMBER: 001-1908-000**



1. MATERIALS: DIALL FS-80 (BLACK)  
2. TWO EACH REQUIRED