



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
Pick-up voltage, max.			
- 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
Dielectric strength at sea level	
- 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 Ω min
Sinusoidal vibration (55-1500 Hz)	15G
Shock (6-9 millisecond duration)	50G
Maximum contact opening time under shock or vibration	2 ms
Operate time at nominal voltage	
DC	25 ms max
AC	30 ms max
Release time at nominal voltage	
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.

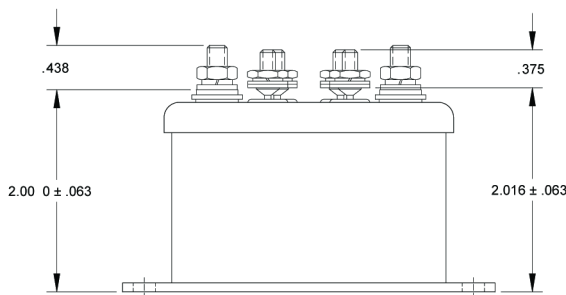
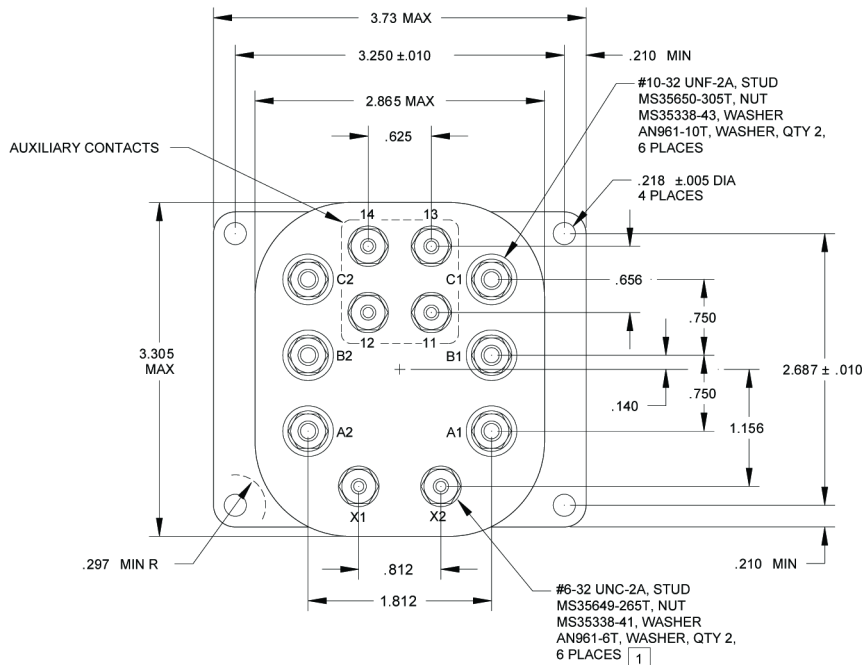
Notes

- 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

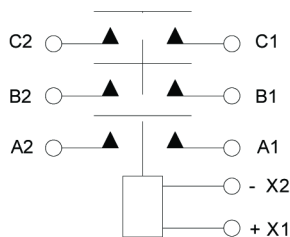
MOUNTING STYLE 1



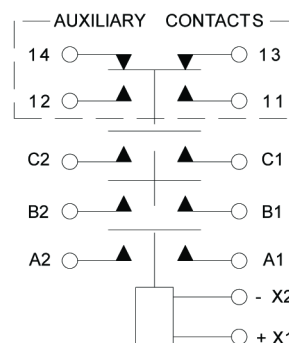
MODEL NUMBER	WEIGHT
9123-C7C4-002	1.10 LB
9123-C7D3-002	1.15 LB
AUXILIARY CONTACT MODELS	
9123-1Z-C7C4-002	1.20 LB
9123-1Z-C7D3-002	1.25 LB
9123-10394	1.15 LB
9123-10395	1.25 LB

1 2 PLACES, FOR NON-AUXILIARY MODELS

SCHEMATIC DIAGRAM NO 1

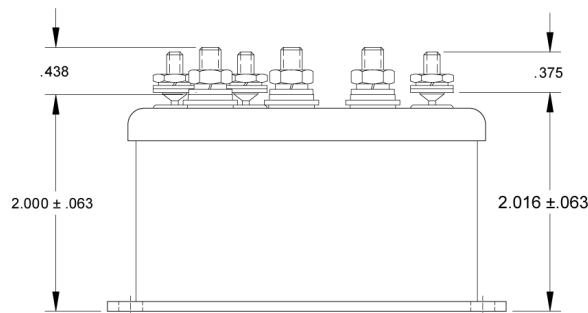
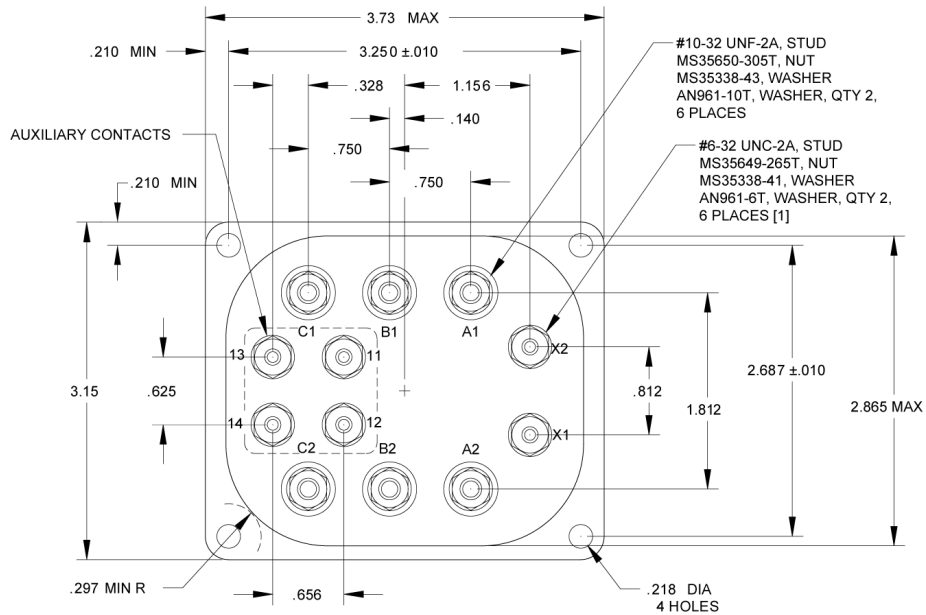


SCHEMATIC DIAGRAM NO 2



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

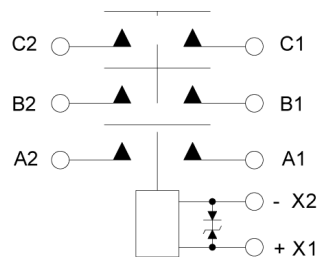
MOUNTING STYLE 2



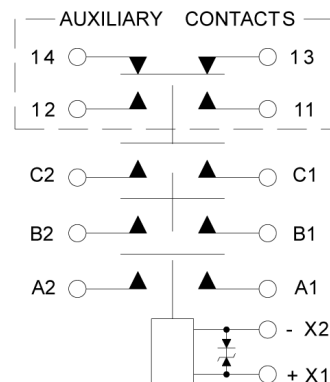
MODEL NUMBER	WEIGHT
9123-8069	1.10 LB
9123-8070	1.15 LB
AUXILIARY CONTACT MODELS	
9123-8071	1.20 LB
9123-8072	1.25 LB
9123-10396	1.15 LB
9123-10397	1.25 LB

[1] 2 PLACES, FOR NON-AUXILIARY MODELS

SCHEMATIC DIAGRAM NO 3



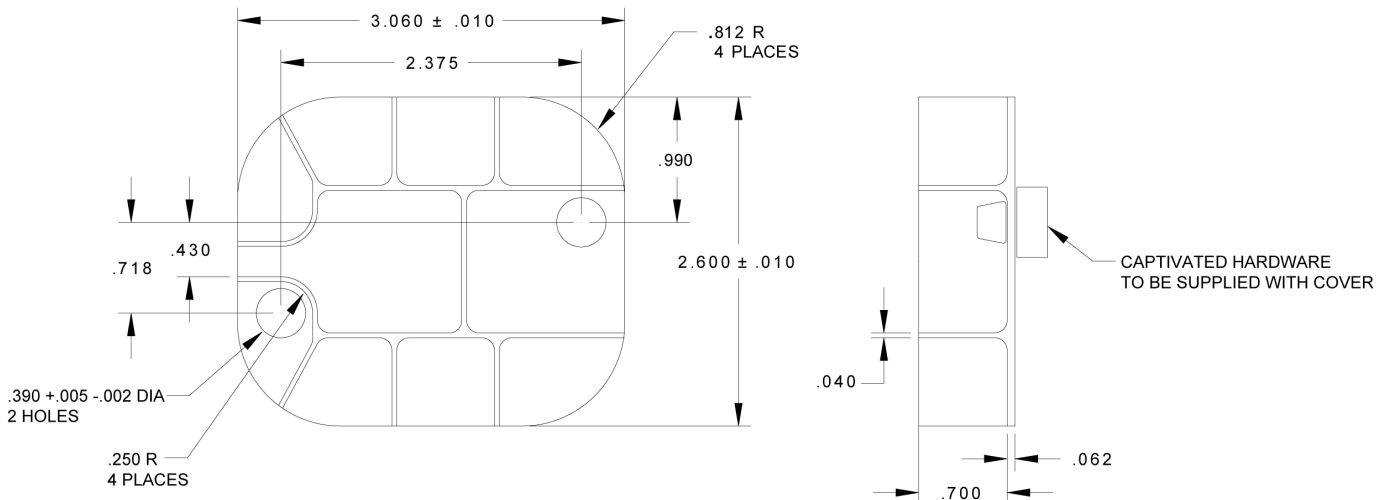
SCHEMATIC DIAGRAM NO 4



TERMINAL BARRIERS (OPTIONAL)

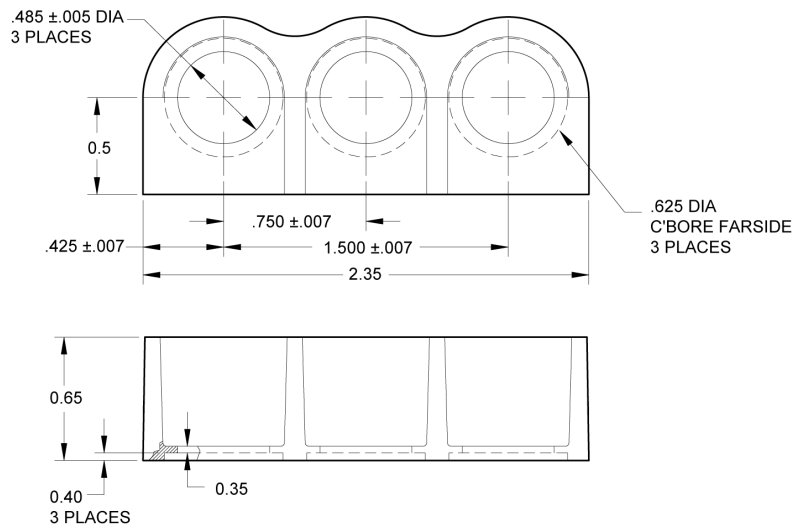
PART NUMBER: 001-8708-000

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