

INCH-POUND

MS24571G

28 May 2004

SUPERSEDING

MS24571F

30 July 1999

MILITARY SPECIFICATION SHEET  
CIRCUIT BREAKERS, AIRCRAFT, TRIP FREE,  
2 1/2 TO 50 AMPERES, 121.1°C AMBIENT

This specification is approved for use by all Departments  
and Agencies of the Department of Defense.

The requirements for acquiring the product described herein  
shall consist of this specification sheet and MIL-DTL-27715.

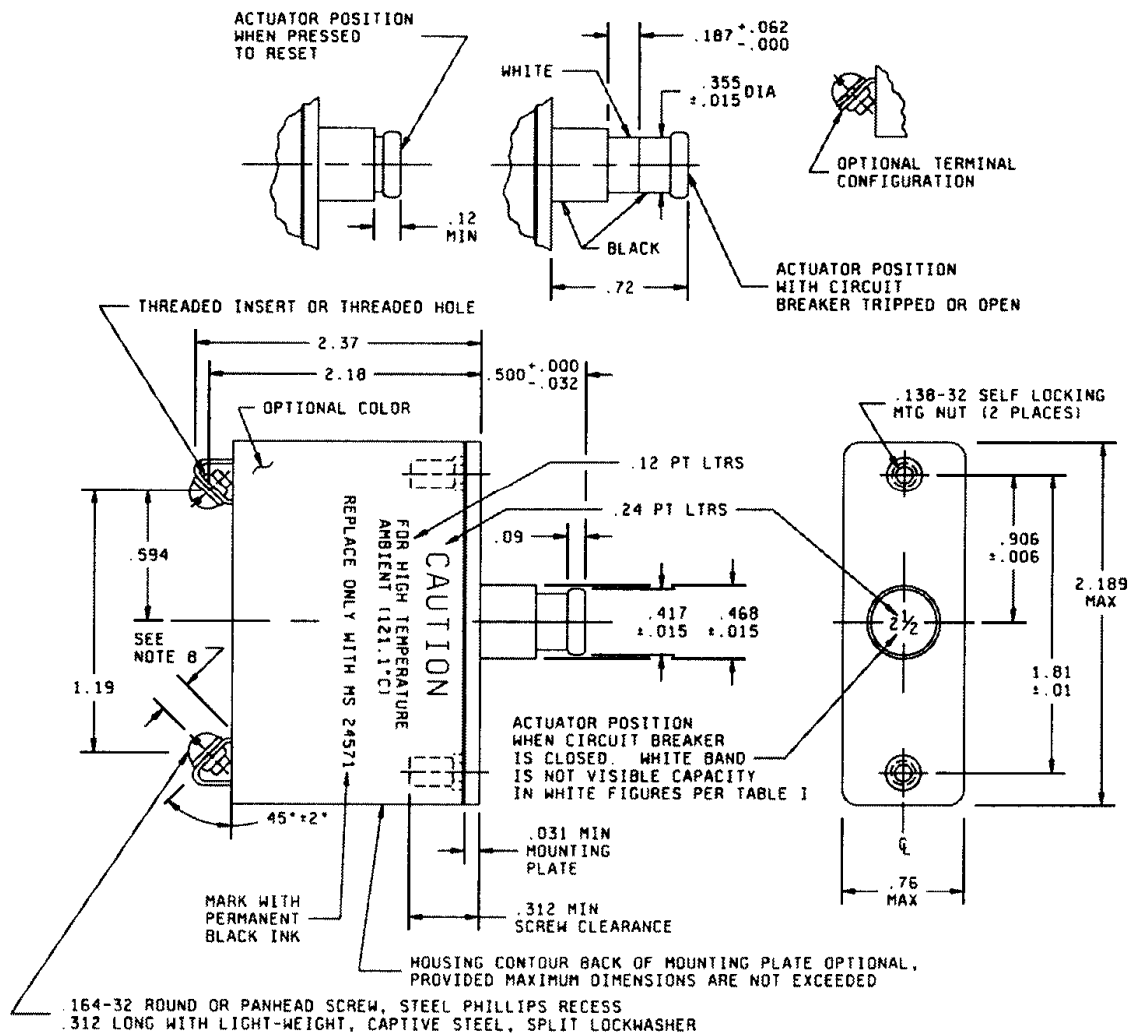


FIGURE 1. Dimensions and configuration.

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Inches	mm	Inches	mm
.006	0.15	.355	9.02
.01	0.25	.417	10.59
.015	0.38	.500	12.70
.031	0.79	.594	15.09
.032	0.81	.72	18.29
.09	2.29	.76	19.30
.12	3.05	.906	23.01
.138	3.51	1.19	30.23
.164	4.17	1.81	45.97
.250	6.35	2.18	55.37
.312	7.92	2.189	55.60
		2.37	60.20

## NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Unless otherwise specified, tolerances are  $\pm 0.005$  (0.13 mm) for three place decimals and  $\pm 0.01$  (0.3 mm) for two place decimals. Angles  $\pm 1^\circ$ .
4. In the event of a conflict between the text of this standard and the references cited herein, the text of this standard shall take precedence.
5. Referenced Government documents of the issue listed in that issue of the Department of Defense Index of Specifications and Standards (DODISS) specified in the solicitation form a part of this standard to the extent specified herein.
6. Part or identifying number:

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MS24571-2V

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MS number      dash number (see table I and note 7)

7. For dash numbers ending with "V", the vibration test methods shall be as follows:

Operating: MIL-STD-202, Method 204, Condition C.

Nonoperating: MIL-STD-202, Method 204, Condition B.

8. .250 Min. Typ. clearance from center line of screw to case.
9. The terminals shall not be moveable with respect to case.
10. The terminals shall not be identified as to "line" or "load".

FIGURE 1. Dimensions and configuration - Continued.

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TABLE I. Electrical and mechanical characteristics.

Dash number		Capacity amperes	Voltage drop Max	Weight Max lbs	Operating force lbs				Endurance cycles		
					Pullout		Reset		Resistive 1/	Inductive 1/	Mech no load
					Max	Min	Max	Min			
-2	-2V	2 ½	0.6	0.2	8	1.5	12	4	5,000 0.95 ±.05 PF	5,000 0.75 Max Lag PF	10,000
-5	-5V	5	0.4	0.2	8	1.5	12	4			
-7	-7V	7 ½	0.3	0.2	8	1.5	12	4			
-10	-10V	10	0.25	0.2	8	1.5	12	4			
-15	-15V	15	0.25	0.2	8	1.5	12	4			
-20	-20V	20	0.25	0.2	8	1.5	12	4			
-25	-25V	25	0.25	0.2	8	1.5	12	4			
-35	-35V	35	0.25	0.2	8	1.5	12	4			
-50	-50V	50	0.25	0.2	8	1.5	12	4			

1/ 400 Hz 115/200 volt system, tested at 120 ±5 volts 380 - 420 Hz.

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Table II Detail calibration requirements.

Dash number		Tripping time from -53.9°C to +93.3°C (time in seconds)							
		Percent rated current							
		200		400		1000		3000	
		Min	Max	Min	Max	Min	Max	Min	Max
-2	-2V	12	32	2.3	6.5	.32	1.1	.04	.155
-5	-5V	14	36	2.5	6.5	.45	1.1	.06	.13
-7	-7V	16	40	2.5	7.0	.34	1.1	.04	.12
-10	-10V	18	42	2.7	7.75	.45	1.2	.05	.125
-15	-15V	20	45	2.7	8.0	.36	1.2	.04	.13
-20	-20V	20	48	2.7	8.0	.36	1.2	.04	.12
-25	-25V	20	50	2.7	9.5	.36	1.2	.04	.12
-35	-35V	20	53	2.7	8.0	.36	1.2	.04	.12
-50	-50V	20	55	2.7	10.0	.36	1.4		

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TABLE III. Detail rupture current performance.

Test Condition	System	Voltage before fault	Calibrated fault current (amperes)	Transient voltage after fault current interruption	Open circuit voltage
L-N	400 Hz 115/200 volts	$120 \pm 5$	6000 amperes during first cycle of fault current decreasing to 3600 amperes within .05 second after initiation		$120 \pm 5$
L-L	400 Hz 115/200 volts	$200 \pm 8$	4200 amperes during first cycle of fault current decreasing to 2500 amperes within .05 second after initiation		$200 \pm 8$
	28 volts dc	$30 \pm 2$	6000 amperes in .01 to .03 second after initiation	28 volts within .002 second after interruption 50 volts max.	$30 \pm 2$

TABLE IV. Coordination test pairs.

Lower rating (amperes)	Higher rating (amperes)
2 ½	5
5	10
7 ½	15
10	20
15	35

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TABLE V. Coordination trip time.

Rating (amperes)	Trip time (seconds) at 2000 percent rated current min.
2 ½	
5	.124
7 ½	.088
10	.112
15	.089
20	.103
25	.102
35	.109
50	

Nominal voltage rating:

28 Vdc or

115 V line to neutral or

200 V line to 400 Hz

- \* Referenced documents. In addition to MIL-DTL-27715, this document references the following:

MIL-STD-202

- \* The margins of this specification are marked with asterisks to indicate where changes from the previous issue were made. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations and relationship to the last previous issue.

Custodians:

Air Force - 11

DLA - CC

Preparing activity:

DLA - CC

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(Project 5925-0373)

- \* NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at [www.dodssp.daps.mil](http://www.dodssp.daps.mil).