

INCH-POUND

MIL-PRF-83383/2D

28 May 1999

SUPERSEDING

MIL-C-83383/2C

30 September 1987

PERFORMANCE SPECIFICATION SHEET

CIRCUIT BREAKERS, REMOTE CONTROL, AC-DC, THERMAL, TRIP-FREE,  
SERIES TRIP, SINGLE POLE, AUXILIARY CONTACTS (5 TO 100 AMPERES)

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 and MIL-PRF-83383.

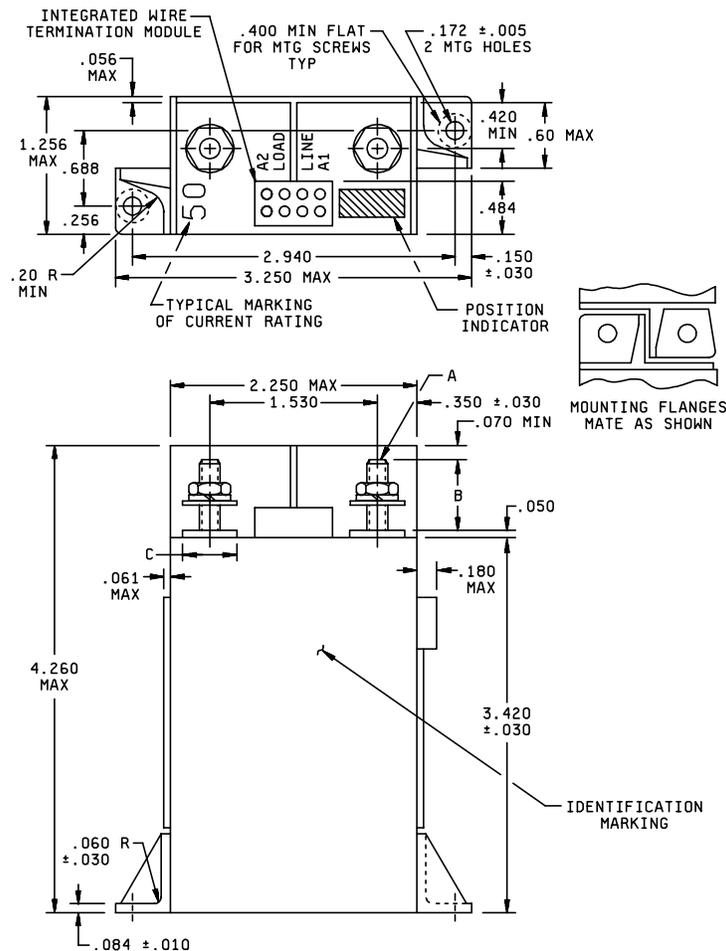


FIGURE 1. Dimensions and configuration.

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Current rating amperes	A	B +.015 -.000	C	Nut	Lock washer	Flat washer
5 to 25	.190-32UNC-2A	.500	.500	AN315-3R	MS35338-43	AN960-10L
35 to 100	.250-28UNF-2A	.610	.610	AN315-4R	MS35338-44	AN960-416

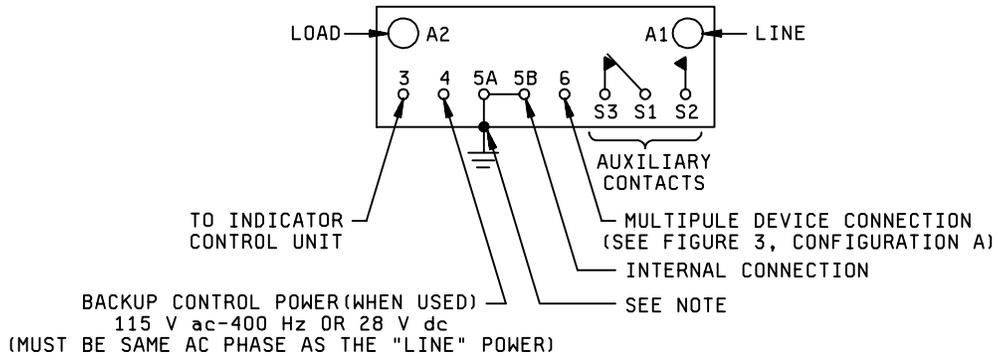
Inches	mm	Inches	mm	Inches	mm
.005	0.13	.172	4.37	.500	12.70
.010	0.25	.180	4.57	.60	15.2
.030	0.76	.190	4.83	.610	15.49
.050	1.27	.20	5.1	.688	17.48
.056	1.42	.250	6.35	1.200	30.48
.060	1.52	.256	6.50	1.530	38.86
.061	1.55	.350	8.89	2.250	57.15
.070	1.78	.400	10.16	2.940	74.68
.084	2.13	.420	10.67	3.250	82.55
.150	3.81	.484	12.29	3.420	86.87
				4.260	108.20

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Unless otherwise specified, tolerance is  $\pm 0.015$  (0.38 mm) for three decimal places and  $\pm 0.03$  (0.76 mm) for two decimal places.
4. Stiffening webs at mounting flanges shown for reference profile as required.
5. Current rating markings may be rotated 90 degrees from the type marking shown in order to accommodate large ampere ratings.

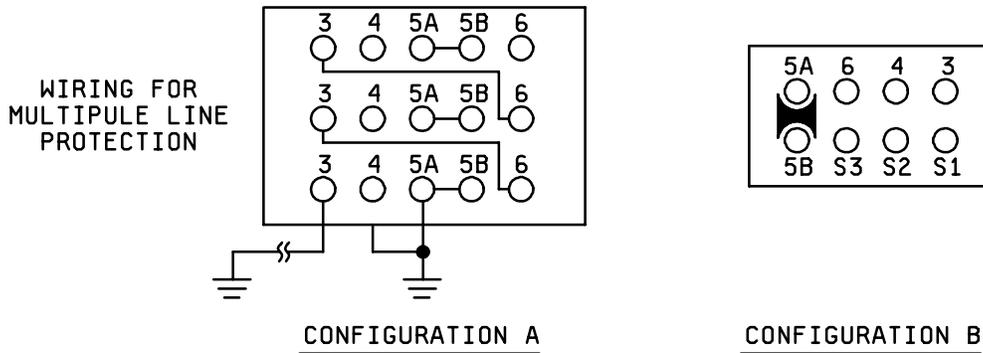
FIGURE 1. Dimensions and configuration – Continued.

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NOTE: Terminals 5A and 5B shall be internally grounded to the mounting flange(s).

FIGURE 2. Schematic.



Note: Terminal junction system (TJS) module shall accept pin contacts P/N M39029/1-100 or -101.

FIGURE 3. Terminal junction system module.

TABLE I. Dash numbers and characteristics.

Dash number	Current rating (amperes)	Tripping times from $-54^{\circ}\text{C} \pm 5^{\circ}\text{C}$ to $+71^{\circ}\text{C} \pm 5^{\circ}\text{C}$ (time in seconds)					
		Percent rated current					
		200		400		1000	
		Min	Max	Min	Max	Min	Max
01	5.0	7	40	1.2	6.4	.3	1.2
02	7.5	11	40	2.4	6.8	.33	1.1
03	10.0	12	42	2.8	8.5	.42	1.05
04	15.0	13	45	1.7	8.3	.35	1.2
05	20.0	14	46	2.9	7.6	.4	1.15
06	25.0	15	50	2.6	8.7	.4	1.3
07	35.0	16	55	2.8	8.3	.35	1.3
08	40.0	16	55	2.9	9.2	.36	1.3
09	50.0	13	55	2.9	10	.4	1.25
10	60.0	13	60	2.6	13	.26	1.8
11	75.0	13	60	2.5	13	.26	1.8
12	80.0	14	60	2.7	12.5	.3	2
13	100.0	17	63	3.5	13	.35	1.9

**REQUIREMENTS:**

Interface and physical dimensions: See figure 1.

**Weight:**

5 to 25 amperes: 0.735 pound (334 grams), maximum.

35 to 50 amperes: 0.750 pound (341 grams), maximum.

60 to 100 amperes: 0.766 pound (348 grams), maximum.

Trip indication: See figure 1.

Terminals: See figures 1 and 2.

**Auxiliary contact terminals:**

Contact capacity at 28 V dc and 115 V ac, 400 Hz shall be 3 amperes resistive, 1.5 amperes inductive, and 0.5 ampere lamp load.

Voltage rating: 28 V dc or 115 V ac, 400 Hz.

Current ratings: See table I.

Tripping times: See table I.

Response time: 25 milliseconds, maximum.

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Power requirements and response time at minimum voltage:

Standby current drain and actuation current:

Test voltage: 28  $\pm$ 0.5 V dc to TJS module, then 115  $\pm$ 2 V ac, 400 Hz to line terminal. Actuating current, 3.5 amperes dc and 11 amperes ac rms maximum.

Maximum operating time at minimum voltage:

Test voltage: 18 V dc then 104 V ac rms, 400 Hz, maximum.

Endurance:

Electrical:

5 to 25 amperes: 50,000 cycles resistive or inductive or motor load or lamp load.

35 to 50 amperes: 50,000 cycles resistive or inductive or motor load or 25,000 cycles lamp load.

60 to 100 amperes: 50,000 cycles resistive or inductive load or 25,000 cycles motor load.

Interrupting capacities:

A - 3,600 amperes.

B - 3,600 amperes.

C - 3,600 amperes.

D - 3,600 amperes.

Other marking:

Current rating: See figure 1.

Line and load terminals: See figure 1.

Terminal junction system (TJS) module: See figure 3.

Position indication: See figure 1. Indication is provided by a lens over "open" and "closed" on red and green background.

Part number: M83383/02- (dash number from table I) (e.g., M83383/02-01).

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Indicator/control unit (I/CU): In order to maintain compatibility between the RCCB and the I/CU, the following must be observed when making an I/CU selection:

- a. The I/CU must be a ½ ampere rated circuit breaker (MS22073-1/2 or MS26574-1/2, or equivalent).
- b. The line impedance (terminal 3 to I/CU) plus the I/CU impedance plus I/CU to ground connection.
- c. The I/CU must respond to a decreasing current pulse of  $I^2t \leq 2$  throughout the temperature range.

CAUTION TO USERS:

Coordination between devices supplied by different manufacturers should be verified by the user.

Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extent of the changes.

Custodians:

Army - CR  
Navy - AS  
Air Force - 11  
DLA - CC

Preparing activity:

DLA - CC

(Project 5925-0272-02)

Review activities:

Army – AT, AV, CR4  
Air Force - 99