

NOT MEASUREMENT SENSITIVE

MIL-C-17587B(SH)
AMENDMENT 4
2 August 1994
SUPERSEDING
AMENDMENT 3
4 March 1994

MILITARY SPECIFICATION

CIRCUIT BREAKERS, LOW VOLTAGE, ELECTRIC POWER, AIR,
OPEN FRAME, REMOVABLE CONSTRUCTION

This amendment forms a part of MIL-C-17587B(SH), dated 18 April 1983, and is approved for use within the Naval Sea Systems Command, Department of the Navy, and is available for use by all Departments and Agencies of the Department of Defense.

PAGE 1

1.2 Add new types: "ACB-904LRC", "ACB-1404LRC", "ACB-1604LRC", "ACB-2603R", "ACB-2801R", "ACB-5001R" and "ACB-2000LRC".

1.2 Delete "ACB-2000HRC" and substitute "ACB-2000HR".

PAGE 2

1.2.1, subparagraph H: Add at end "and the a.c. short time withstand current equal to the interrupting rating".

1.2.1: Add new subparagraph:

"L - This suffix indicates that the circuit breaker has a rated a.c. short-circuit current not less than 50,000 A and a rated a.c. short-time withstand current of not less than 50,000 A, but not greater than the interrupting rating."

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Table I: Delete and substitute:

AMSC N/A FSC 5925
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TABLE I. General ratings of circuit breaker types and attachments.

CIRCUIT BREAKER TYPE	ACB-	900R	901R	902R	904LR C	1404L RC	1604L RC
Rated continuous current (see 6.5.15)	(amperes)	900	900	900	900	1400	1600
Rated maximum voltage ^{1/} and frequency	a.c. (volts) 60 hertz	500	---	500	500	500	500
	d.c. (volts)	---	355	---	---	---	---
Max interrupting rating rated symmetrical short-circuit current (amperes)	a.c. (see 6.5.14) 60 hertz	42,00 0	---	50,00 0	85,00 0	85,00 0	85,00 0
	d.c. (see 6.5.16)	---	50,000	---	---	---	---
Rated short time current ^{2/} (amperes) (see 6.5.17)		25,00 0	25,000	25,00 0	25,00 0	50,00 0	40,00 0 *
Rated short-time current (duration) (seconds)		0.5	0.5	0.5	0.5	0.3	0.3
Operating mechanism ^{3/}	Manual	YES	YES	YES	YES	YES	YES
	Electric	YES	YES	YES	YES	YES	YES
Dimensions	Figure no.	1	2	3	3	3	9A
Number of poles		3	2	3	3	3	3
Number of overcurrent coils or solid-state sensors		2/3	2	2	3	3	3
Overcurrent coils and sensors	Table	IV	IV	IV,V, VI	IVa	IVa	IVa
Time-current characteristics	Figure no.	10	10	10 ^{4/}	14A	14A	14A
	Time band no.	1,2,3	2	1,2,3 ,4	1,2,3 ,4	1,2,3 ,4	1,2,3 ,4
ATTACHMENTS							
Electric closing mechanism (see 3.4.2.2.3.2)		OPTIO N	OPTION	OPTIO N	OPTIO N	OPTIO N	OPTIO N
Auxiliary switches (see 3.4.2.9)	Number of contacts	8	6	10	10	10	10
Lockout device (see 3.4.2.14)		Optional for all circuit breaker types					
Mechanical position indicator (see 3.4.2.2.4)		Required for all circuit breaker types					

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Secondary disconnecting devices (see 3.4.2.7)		Required for all circuit breaker types, unless otherwise specified (see 6.2.1)					
Cell switch (see 3.4.2.10)		Optional for all circuit breaker types					
Indicator light (see 3.4.2.8)		Provision for mounting required for all circuit breaker types; Furnished only when specified (see 6.2.1)					
Hold-closed mechanism (see 3.4.2.11)		Opt	Opt	Not Reqd	Not Reqd	Not Reqd	Not Reqd
Undervoltage trip device (see 3.4.2.12)		Optional for all circuit breaker types (see 6.2.1)					
Shunt trip device (see 3.4.2.13)		Required for electrically-operated breakers (see 3.4.2.2.3.2)					
Operations counter (see 3.4.2.15)		Opt	Opt	Opt	Opt	Opt	Opt
CIRCUIT BREAKER TYPE	ACB-	1600HR C (2000H R)	2000R	2000L RC	2002H R	2601 R	2801R
Rated continuous current (see 6.5.15)	(amperes)	1600 (2000)	2000	2000	2000	2600	2800
Rated maximum voltage $\frac{1}{}$ and frequency	a.c. (volts) 60 hertz	500	500	500	500	---	---
	d.c. (volts)	---	---	---	---	355	355
Max interrupting rating rated symmetrical short-circuit current (amperes)	a.c. (see 6.5.14) 60 hertz	85,000	50,000	85,000	100,000	---	---
	d.c. (see 6.5.16)	---	---	---	---	75,000	75,000
Rated short time current $\frac{2}{}$ (amperes) (see 6.5.17)		85,000	50,000	70,000	100,000	50,000	50,000
Rated short-time current (duration) (seconds)		0.5	0.5	0.5	0.5	0.5	0.5
Operating mechanism $\frac{3}{}$	Manual	---	YES	---	---	---	---
	Electric	YES	YES	YES	YES	YES	YES
Dimensions	Figure no.	4	4	4	5	4	4
Number of poles		3	3	3	3	2	3
Number of overcurrent coils or solid-state sensors		2/3	2/3	2/3	2/3	2	2/3

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Overcurrent coils and sensors	Table	IV	IV	IV	IV	IV	IV
Time-current characteristics	Figure no.	10	10	13A	13	10	10
	Time band no.	1,2,3	1,2,3	1,2,3	1,2,3,4	3	3
ATTACHMENTS							
Electric closing mechanism (see 3.4.2.2.3.2)		STD	OPTION	STD	STD	STD	STD
Auxiliary switches (see 3.4.2.9)	Number of contacts	8	8	8	12	8	8
Lockout device (see 3.4.2.14)		Optional for all circuit breaker types					
Mechanical position indicator (see 3.4.2.2.4)		Required for all circuit breaker types					
Secondary disconnecting devices (see 3.4.2.7)		Required for all circuit breaker types, unless otherwise specified (see 6.2.1)					
Cell switch (see 3.4.2.10)		Optional for all circuit breaker types					
Indicator light (see 3.4.2.8)		Provision for mounting required for all circuit breaker types; Furnished only when specified (see 6.2.1)					
Hold-closed mechanism (see 3.4.2.11)		Opt	Opt	Opt	Opt	Opt	Opt
Undervoltage trip device (see 3.4.2.12)		Optional for all circuit breaker types (see 6.2.1)					
Shunt trip device (see 3.4.2.13)		Required for electrically-operated breakers (see 3.4.2.2.3.2)					
Operations counter (see 3.4.2.15)		Opt	Opt	Opt	Opt	Opt	Opt
CIRCUIT BREAKER TYPE	ACB-	2603R	4000HR (3200HR)	4001R	5001R	6400HR	
Rated continuous current (see 6.5.15)	(amperes)	2600	4000 (3200)	4000	5000	6400	
Rated maximum voltage I_f and frequency	a.c. (volts) 60 hertz	---	500	---	---	500	
	d.c. (volts)	355	---	355	355	---	

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Max interrupting rating rated symmetrical short-circuit current (amperes)	a.c. (see 6.5.14) 60 hertz	---	85,000	---	---	100,000
	d.c. (see 6.5.16)	150,000	---	150,000	150,000	---
Rated short time current I_{sc} (amperes) (see 6.5.17)		50,000	85,000	150,000	150,000	100,000
Rated short-time current (duration) (seconds)		0.5	0.75	0.5	0.75	0.75
Operating mechanism I_{sc}	Manual	---	---	---	---	---
	Electric	YES	YES	YES	YES	YES
Dimensions	Figure no.	4	7	8	7	9
Number of poles		2	3	2	2	3
Number of overcurrent coils or solid-state sensors		2	2	2	2	3
Overcurrent coils and sensors	Table	IV	IV	IV	IV	IV
Time-current characteristics	Figure no.	10	13, 13A	14	14	13
	Time band no.	3	2,3,4	1,2,3,4	1,2,3,4	1,2,3,4
ATTACHMENTS						
Electric closing mechanism (see 3.4.2.2.3.2)		OPTION	OPTION	OPTION	STD	STD
Auxiliary switches (see 3.4.2.9)	Number of contacts	8	8	12	8	12
Lockout device (see 3.4.2.14)		Optional for all circuit breaker types				
Mechanical position indicator (see 3.4.2.2.4)		Required for all circuit breaker types				
Secondary disconnecting devices (see 3.4.2.7)		Required for all circuit breaker types, unless otherwise specified (see 6.2.1)				
Cell switch (see 3.4.2.10)		Optional for all circuit breaker types				
Indicator light (see 3.4.2.8)		Provision for mounting required for all circuit breaker types; Furnished only when specified (see 6.2.1)				
Hold-closed mechanism (see 3.4.2.11)		Opt	Opt	Not Req'd	Opt	Not Req'd

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Undervoltage trip device (see 3.4.2.12)	Optional for all circuit breaker types (see 6.2.1)				
Shunt trip device (see 3.4.2.13)	Required for electrically-operated breakers (see 3.4.2.2.3.2)				
Operations counter (see 3.4.2.15)	Opt	Opt	Opt	Opt	Opt

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3.4.2.1.2, line 1: Delete "Alinement"... "alinement" and substitute "Alignment"... "alignment".

PAGE 10

3.4.2.1.4, line 1: Delete "When specified" and substitute "Unless otherwise specified,".

3.4.2.2.3.2, line 12: Delete "0.1 second" and substitute "0.5 second".

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Table IV: Delete and substitute:

TABLE IV. General ratings and pickup current settings for overcurrent coils and sensors.

Type	Coil or sensor rating <u>1/</u>	Long time pickup setting <u>5/</u>			Short time pickup setting <u>6/</u>						m s /
	Amperes	Amperes			Amperes						s
ACB-900R	320	500	640	840	---	640	840	960	1280	1600	
	400	640	840	960	720	800	960	1280	1800	2100	
	480	720	960	1280	---	960	1280	1600	2100	2800	
	560	840	1120	1400	---	1120	1400	1800	2400	3200	
	640	960	1280	1600	---	1280	1600	2100	2800	3600	
	800	1280	1600	2100	1200	1600	2100	2400	3200	4000	
	900	1320	1800	2340	---	1800	2500	2700	3600	4800	
ACB-901R	400	---	---	---	---	800	---	---	---	---	--0
	480	---	---	---	---	960	---	---	---	---	--0
	640	960	---	---	---	1280	---	---	---	---	--0
	900	1320	---	---	---	---	---	2100	---	---	5400
	3/1200	---	---	---	---	---	---	---	---	---	6000
ACB-902R <u>4/</u>	100	160	200	250	---	200	250	320	400	500	
	160	250	320	400	240	320	400	500	720	840	
	250	400	500	640	570	500	640	840	1120	1400	
	320	500	640	840	---	640	840	960	1280	1600	
	400	640	840	960	---	800	960	1280	1800	2100	
	480	720	960	1280	720	960	1280	1600	2100	2800	
	560	840	1120	1400	---	1120	1400	1800	2400	3200	
	640	960	1280	1600	---	1280	1600	2100	2800	3600	
	800	1280	1600	2100	1200	1600	2100	2400	3200	4000	
	900	1320	1800	2340	---	1800	2500	2700	3600	4800	

See footnotes at end of table.

TABLE IV. General ratings and pickup current settings for overcurrent coils and sensors - Continued.

Type	Coil or sensor rating 1/	Long time pickup setting 5/			Short time pickup setting 6/						Maximum instantaneous trip 2/
	Amperes	Amperes			Amperes						Amperes
ACB-2000R	320	500	640	840	---	640	840	960	1280	1600	16000
	400	640	840	960	---	800	960	1280	1800	2100	20000
	480	720	960	1120	---	960	1280	1600	2100	2800	24000
	560	840	1120	1280	---	1120	1400	1800	2400	3200	28000
	640	960	1280	1600	---	1280	1600	2100	2800	3600	32000
	800	1280	1600	2100	1200	1600	2100	2400	3200	4000	36000
	1000	1600	2100	2400	---	2100	2400	3200	4000	4800	40000
	1200	1800	2400	2800	1800	2400	2800	3600	4800	6000	40000
	1400	2100	2800	3600	---	2800	3200	3600	4800	6000	40000
	1600	2400	3200	4000	2400	3200	4000	4800	6000	8000	40000
	2000	3000	4000	5000	---	---	4000	6000	8000	10000	40000
	ACB-1600HR	800	1280	1600	2100	1200	1600	2100	2400	3200	4000
1000		1600	2100	2400	---	2100	2400	3200	4000	4800	68000
1200		1800	2400	2800	1800	2400	2800	3600	4800	6000	68000
1400		2100	2800	3600	---	2800	3200	3600	4800	6000	68000
1600		2400	3200	4000	2400	3200	4000	4800	6000	8000	68000
ACB-2000LRC ACB-2000HR	2000	3000	4000	5000	---	---	4000	6000	8000	10000	68000
ACB-2002HR	300	450	600	750	600	750	900	1200	1500	---	6000
	500	750	1000	1250	1000	1250	1500	2000	2500	---	10000
	800	1200	1600	2000	1600	2000	2400	3200	4000	---	16000
	1200	1800	2400	3000	2400	3000	3600	4800	6000	---	24000
	1600	2400	3200	4000	3200	4000	4800	6400	8000	---	32000
	2000	3000	4000	5000	4000	5000	6000	8000	10000	---	40000
ACB-2601R	1600	---	---	---	---	3200	---	---	---	---	8000
ACB-2603R	2600	---	---	---	4000	---	---	---	---	---	14000
ACB-2801R	2600	---	---	---	---	---	---	---	10000	12000	22000
ACB-2801R	2800	---	---	---	4000	---	---	---	---	---	14000

See footnotes at end of table.

TABLE IV. General ratings and pickup current settings for overcurrent coils and sensors - Continued.

Type	Coil or sensor rating ^{1/}	Long time pickup setting ^{5/}				Short time pickup setting ^{6/}						Maximum instantaneous trip ^{2/}
	Amperes	Amperes				Amperes						Amperes
ACB-3200HR	2000	3200	4000	4800	---	4000	4800	6000	8000	---	---	68000
	2400	3600	4800	6000	---	4800	6000	8000	---	---	---	68000
	2800	4200	5600	6600	---	5600	7000	8400	---	---	---	68000
	3200	4800	6400	8000	---	6400	8000	9600	---	---	---	68000
ACB-4000HR	4000	6000	8000	10000	---	8000	10000	12000	---	---	---	68000
ACB-4001R	400	600	800	1000	800	1000	1200	1600	2000	---	---	4000
	800	1200	1600	2000	1600	2000	2400	3200	4000	---	---	8000
	1200	1800	2400	3000	2400	3000	3600	4800	6000	---	---	12000
ACB-5001R	2000	3000	4000	5000	4000	5000	6000	8000	10000	---	---	20000
	4000	6000	8000	10000	8000	10000	12000	16000	20000	---	---	40000
	5000	6500	10000	12500	10000	15000	20000	25000	---	---	---	50000
ACB-6400HR	4800	7200	9600	12000	9600	12000	14400	19200	24000	---	---	72000
	5800	8700	11600	14500	11600	14500	17400	23200	29000	---	---	80000
	6400	9600	12800	16000	12800	16000	19200	25600	32000	---	---	80000

1/ Continuous current rating.

2/ The instantaneous trip device shall be set at the place of manufacture from five times the coil or sensor rating to the maximum pickup setting specified for mechanical coils and 20 times sensor rating for solid state sensors with a default at maximum listed rating.

3/ Coil rating is special and in excess of the circuit breaker's rated continuous current. When specified, the temperature rise requirements (see 3.3.8) may exceed each limit of table II by 10°C.

4/ See tables V and VI for pickup current settings of overcurrent coils for circuit breaker type ACB-902R when general purpose motor or special purpose motor application is specified (see 3.4.2.6.2 and 6.2.1).

5/ The long time settings for solid state devices shall be set at 1-1/2, 2 and 2-1/2 times sensor rating.

6/ The short time settings for solid state devices shall be set at 2, 2.5, 3, 4 and 5 times sensor rating.

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Add new table:

TABLE IVa. General ratings and pickup current settings for overcurrent coils and sensors.
(for ACB-904LRC, ACB-1404LRC, and ACB-1604LRC only)

Type and sensor rating (amperes): ACB-904LRC: 150, 275, 500, 900 ACB-1404LRC: 1000, 1200, 1400 ACB-1604LRC: 1600
Long time pickup settings (amperes): adjustable; 0.70, 0.80, 0.90, 1.0, and 1.10 times sensor rating.
Short time pickup settings (amperes): adjustable; 1.0, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0, 5.0, 6.0, 7.0, and 8.0 times sensor rating.
Instantaneous pickup settings (amperes): adjustable; 5.0, 7.5, 10.0, 12.5, 15.0, and 20.0 times sensor rating.

Table V: In column headings, delete "Adjustable long time delay settings" and substitute "Adjustable long time pickup settings", and delete "short time delay settings" and substitute "short time pickup settings".

Table VI: In column headings, delete "Adjustable long time delay settings" and substitute "Adjustable long time pickup settings", and delete "short time delay settings" and substitute "short time pickup settings".

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3.4.2.6.5, line 4: Delete: "from five times the trip coil or sensor rating" and "maximum".

PAGE 18

3.4.2.6.6.2, last sentence: Delete and substitute "The device shall have a provision through a test socket for secondary injection testing to check the overload calibrations. Means shall be provided to recalibrate the devices."

PAGE 19

3.4.2.10: Delete "By-pass" and substitute "Cell".

PAGE 20

Add as new paragraph:

"3.4.2.15 Operations counter. When specified (see 6.2.1), the circuit breakers shall be equipped with a mechanical device which indicates the number of close - open operations. The device may be operated on either the close or open portion of the cycle. The read-out shall be readably visible from the front of the breaker, but is not required to be mounted on the escutcheon plate. The device shall be resettable."

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4.2: Add: "(c) Comparison inspection (see 4.4.2)."

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Table X. In column headings, delete "ACB-902R" and substitute "ACB-902R, ACB-904LRC, ACB-1404LRC"; and delete "ACB-2000HR, ACB-1600HR" and substitute "ACB-2000HR, ACB-1600HR, ACB-1604LRC"; and delete "ACB-2601R" and substitute "ACB-2601R,

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ACB-2801R".

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Sample note 1, line 3: Delete "maximum time" and substitute "minimum time".

Sample note 2: Delete "minimum time" and substitute "maximum time."

Sample note 4, line 3: Delete "minimum time" and substitute "maximum time".

Sample note 5, line 1: Delete "A.c" and substitute "D.c." and delete "3" and substitute
"2".

Sample note 6, line 3: Delete "at maximum time" and substitute "at special maximum time".

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Table XII: Delete and substitute:

TABLE XII. Qualification inspection of attachments.

Inspection	Requirement paragraph	Lock-out mechanism	Electric closing mechanism	Mechanical position indicator	Secondary disconnecting device	Indicator light	Auxiliary switches	Hold-closed mechanism	Under-voltage trip device	Shunt trip device	Operations counter
General examination	3.3.3	4.6.1	4.6.1	4.6.1	4.6.1	4.6.1	4.6.1	4.6.1	4.6.1	4.6.1	4.6.1
Endurance	3.3.4	---	4.6.7	4.6.7	---	---	4.6.7	---	4.6.20	4.6.21	4.6.7
Inclined operation	3.3.5	4.6.3	4.6.3	---	4.6.3	4.6.3	4.6.3	4.6.3	4.6.3	4.6.3	4.6.3
Temperature rise	3.3.8	4.6.6	4.6.6	---	4.6.6	4.6.6	4.6.6	---	4.6.6	4.6.6	---
Shock	3.3.9	4.6.7	4.6.7	4.6.7	4.6.7	4.6.7	4.6.7	4.6.7	4.6.7	4.6.7	4.6.7
Vibration	3.3.10	4.6.8	4.6.8	4.6.8	4.6.8	4.6.8	4.6.8	4.6.8	4.6.8	4.6.8	4.6.8
Dielectric withstanding voltage	3.3.11	4.6.9	4.6.9	---	4.6.9	4.6.9	4.6.9	4.6.9	4.6.9	4.6.9	---
Insulation resistance	3.3.12	4.6.10	4.6.10	---	4.6.10	4.6.10	4.6.10	4.6.10	4.6.10	4.6.10	---
Operation	1/	4.6.14	4.6.15	---	4.6.16	4.6.17	4.6.18	4.6.19	4.6.20	4.6.21	4.6.23
Interrupting performance	3.4.2.9	---	---	---	---	---	4.6.18	---	---	---	---
Voltage range	2/	---	4.6.15	---	---	---	4.6.18	---	4.6.20	4.6.21	---
Closing time	3.4.2.2.3.2	---	4.6.15	---	---	---	---	---	---	---	---

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Add new paragraph:

"4.4.2 Comparison inspection. At intervals of not more than 3 years during which circuit breakers of a type have been acquired under this specification, the manufacturer shall provide sample circuit breakers with all attachments specified in table XII and conduct complete qualification tests specified in table XI. Circuit breakers of a type which have not been supplied within the 3-year period shall be tested as a part of the subsequent order for production line units. Failure of a sample to meet the requirements of this specification shall be cause for removal from the Qualified Products List."

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Table XIV, category 116: Delete "By-pass" and substitute "Cell".

Table XIV, continued: Add under major defects:

Categories	Defects	Applicable paragraph
<u>Major</u>		
121	Operations counter not as specified	3.4.2.15

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*Table XV: Delete and substitute:

TABLE XV. Circuit breaker electrical endurance test cycles of operation.

Circuit breaker type	Total number of close-open cycles	Amperes circuit breaker close	Amperes on circuit breaker open	Maximum a.c. power factor (lagging) X/R or d.c. time constant
ACB-900R	4,000	900	900	1/
ACB-900RC	10,000	6,000	900	1/
ACB-901R	4,000	900	900	0.02 to 0.06
ACB-902R	25,000	5,400	900	1/
ACB-904LRC	25,000	5,400	900	1/
ACB-1404LRC	10,000	7,000	1,400	1/
* ACB-1604LRC	4,000	8,000	1,600	1/
ACB-1600HR	1,000	8,000	1,600	1/
ACB-1600HRC	10,000	8,000	1,600	1/
ACB-2000R	1,000	2,000	2,000	1/
* ACB-2000HR	1,000	8,000	2,000	1/
ACB-2000RC & HRC	10,000	8,000	2,000	0.02 to 0.06
ACB-2002HRC	10,000	8,000	2,000	0.02 to 0.06
ACB-2601R	1,000	2,600	2,600	0.8
ACB-2801R	1,000	2,800	2,800	0.8
ACB-3200HR	1,000	3,200	3,200	0.02 to 0.06
ACB-4000HR	1,000	4,000	4,000	0.8
ACB-4001R	4,000	4,000	4,000	
ACB-6400HR	1,000	6,400	6,400	

1/The lagging power factor for circuit breaker close shall be 0.25 maximum and for circuit breaker open shall be 0.80 maximum.

PAGE 31

4.6.4, line 3: Delete "Temperature rise" and substitute "The temperature rise".

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4.6.5.4: Delete and substitute:

"4.6.5.4 Interrupting current d.c. test circuit. In d.c. test circuits, the test shall be performed on the two poles connected in series. The test circuit shall be so adjusted that the requirements in table XVI are met."

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Add new table:

TABLE XVI. Requirements for d.c. interrupting test.

Short circuit current (amperes)	Time constant L/R (milliseconds)	Maximum initial current rise E/L (at 240 V) (amperes per microsecond)
50,000	16.0	3.1
75,000	15.6	3.3
150,000	12.5	12.5

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Delete table XVI and substitute:

TABLE XVII. Sizes of cables and bus bars for making temperature rise test.

Circuit breaker type	Continuous current rating (amperes)	Cable quantity per terminal	Cable size	Bus bar quantity per phase	Bus bar size (inches) 2/
ACB-900R	900	3	300 MCM	1	2.5 x 1/4
ACB-901R	900	3	300 MCM	1	2.5 x 1/4
ACB-902R	900	3/ 3	300 MCM	2	1.5 x 1/4
ACB-904LRC	900	3	300 MCM	2	1.5 x 1/4
ACB-1404LRC	1400	3	300 MCM	2	1.5 x 1/4
ACB-1604LRC	1600	4	400 MCM	2	3.0 x 1/4
ACB-1600HR	1600	4	400 MCM	2	3.0 x 1/4
ACB-2000HR	2000	5	400 MCM	2	4.0 x 1/4
ACB-2000LRC	2000	5	400 MCM	2	4.0 x 1/4
ACB-2000R	2000	5	400 MCM	2	4.0 x 1/4
ACB-2002HR	2000	5	400 MCM	2	4.0 x 1/4
ACB-2601R	2600	3/ 7	400 MCM	3	3.0 x 1/4
ACB-2603R	2600	3/ 7	400 MCM	3	3.0 x 1/4
ACB-2801R	2800	7	400 MCM	3	3.0 x 1/4
ACB-3200HR	3200	8	400 MCM	2	6.0 x 1/4
ACB-4000HR	4000	3/ 10	400 MCM	4	6.0 x 1/4
ACB-4001R	4000	3/ 10	400 MCM	4	6.0 x 1/4
ACB-5001R	5000	3/ 12	400 MCM	2 pr or 5	6.0 x 1/4
ACB-6400HR	6400	3/ 16	400 MCM	4	8.0 x 1/4

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4.6.7, line 5: Delete "carrying their rated continuous current," and substitute "carrying half their rated continuous current or less,".

4.6.8, lines 8 and 9: Delete "carry their rated continuous current." and substitute "be energized with their rated voltage.".

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Add: "4.6.23 Operations counter. The operations counter shall be monitored during all operational tests to ensure that it is registering a precise count of operations."

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6.2.1(f): Delete.

6.2.1, between items (t) and (u): Add "(t.1) Operations counter (see 3.4.2.15)."

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6.5.1: Delete "By-pass switch. A By-pass" and substitute "Cell switch. A cell".

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- 6.5.23: Add "Three sensors may be required to derive enough energy to actuate the tripper."
- 6.5.24: Add "Multiple sensors may be required to derive enough energy to actuate the tripper."

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- 6.6., line 9, column 2: Delete the word "Deleted" and substitute "ACB 1600HR".
- 6.6, lines 15 and 16: Delete last sentence and substitute: In order for these types to be used as direct replacement, a wiring change must be made."

Figure 1: Delete and substitute:

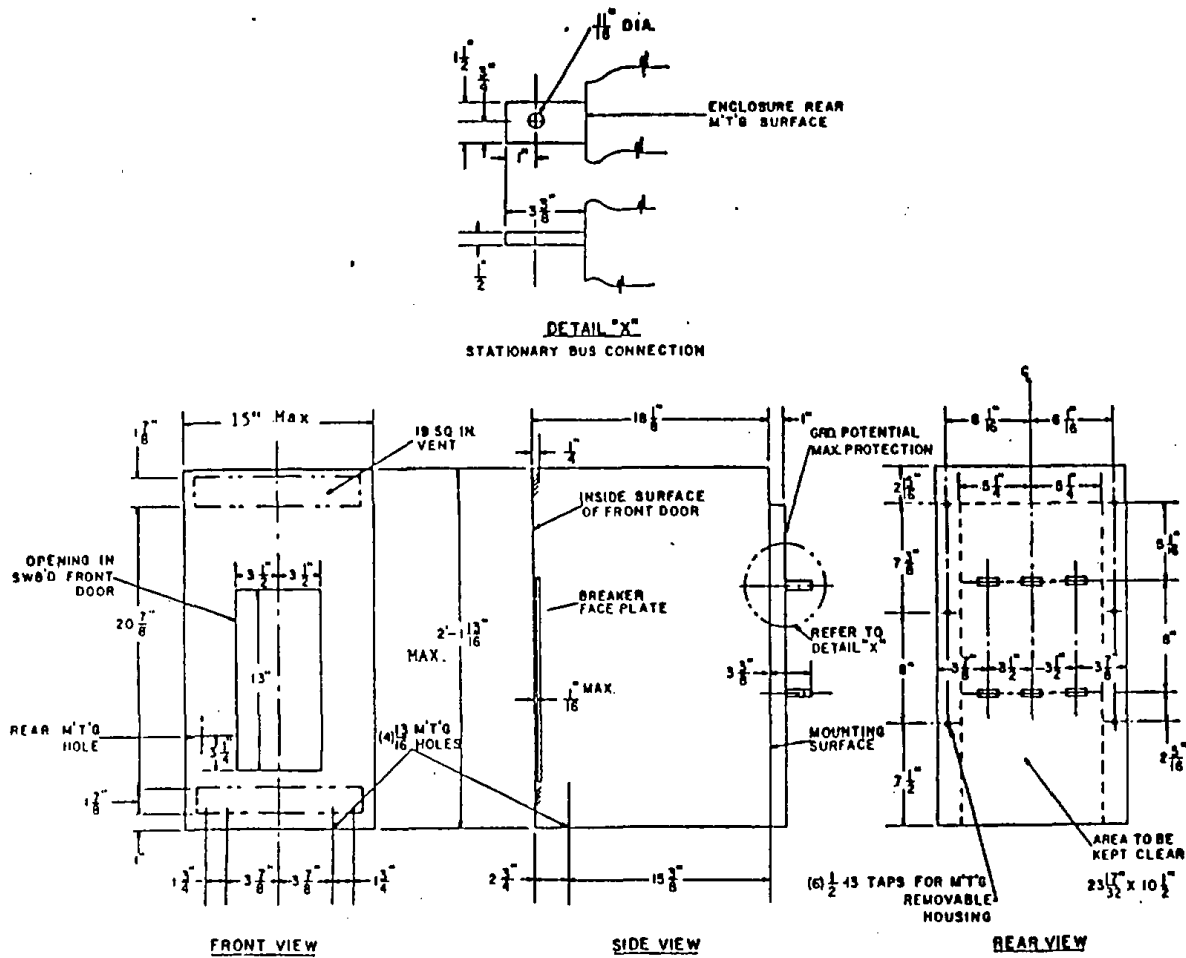
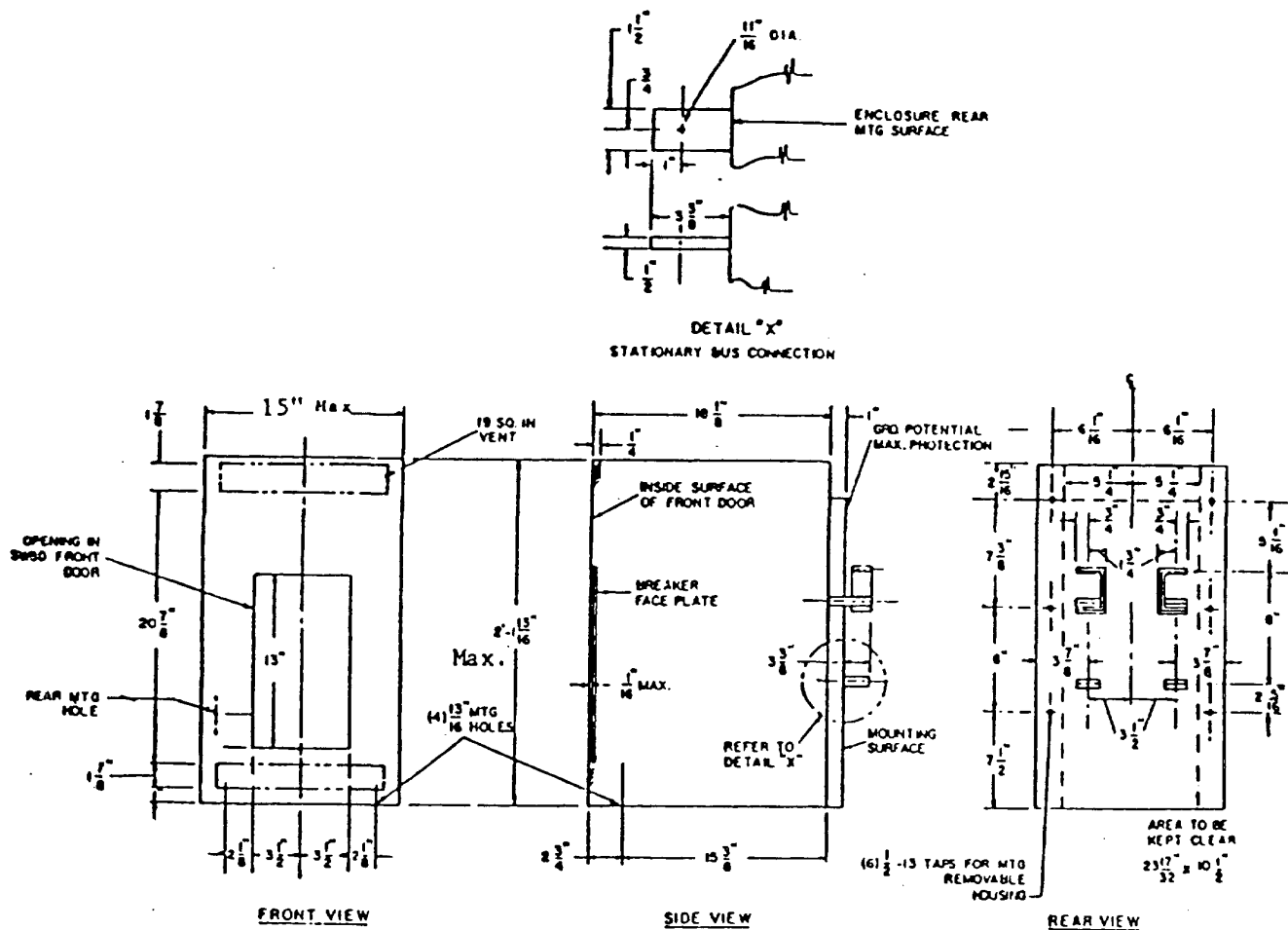


FIGURE 1. Outline and mounting dimensions for circuit breaker type ACB-900R.

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Figure 2: Delete and substitute:



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FIGURE 2. Outline and mounting dimensions for circuit breaker type ACB-901R.

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*Figure 3: Delete title and substitute: "Outline and mounting dimensions for circuit breaker types ACB-902R, ACB-904LRC, ACB-1404LRC".

* FIGURE 4. Outline and mounting dimensions for circuit breaker types ACB-1600HR, ACB-2000R, ACB-2001R, ACB-2601R, and ACB-2801R.

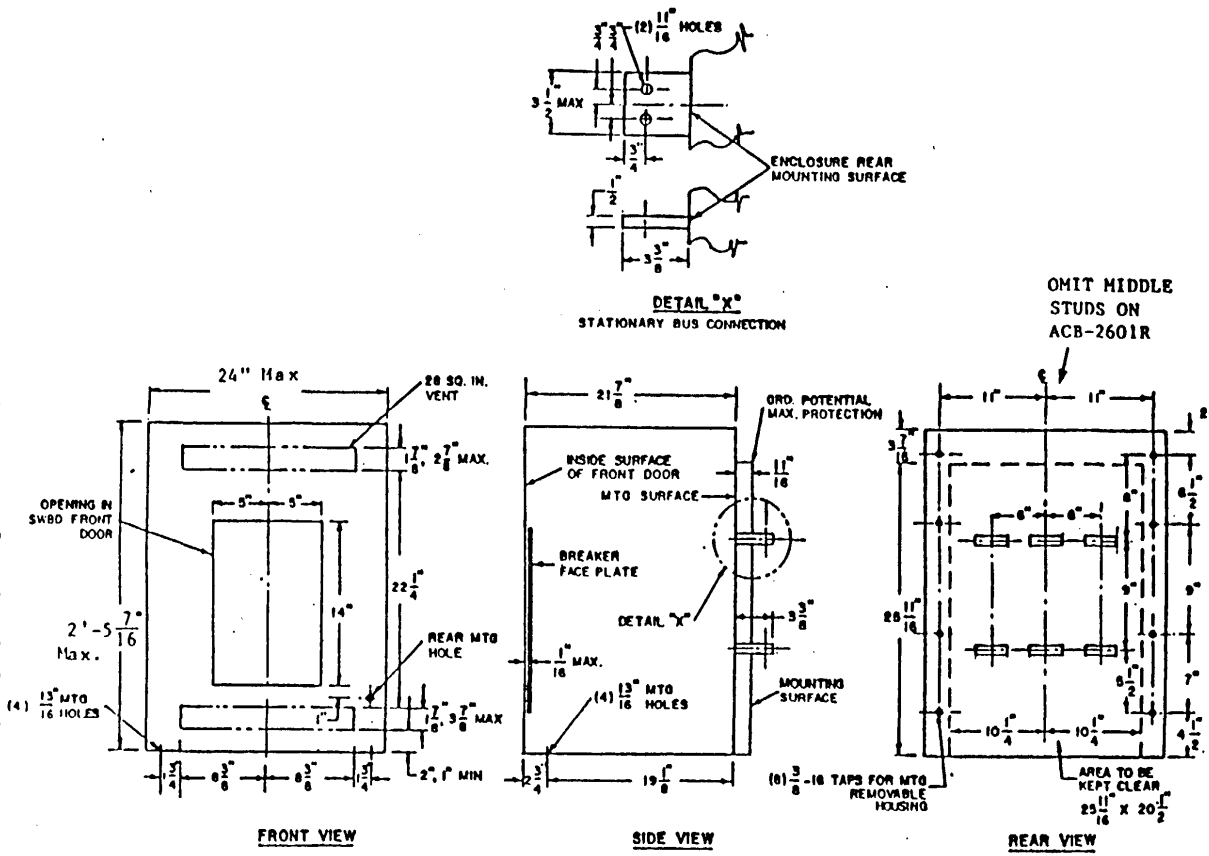
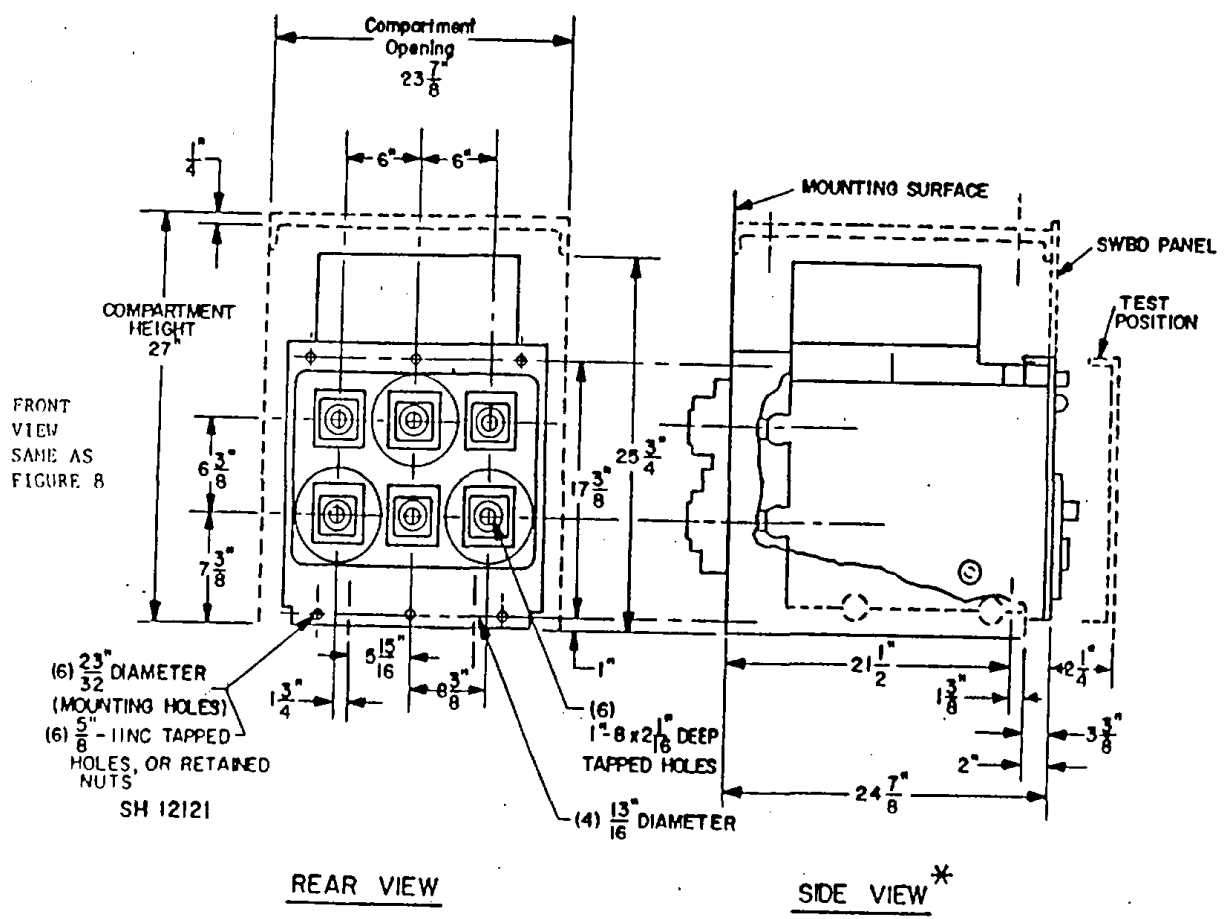


Figure 4: Delete and substitute:

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FIGURE 5. Outline and mounting dimensions for circuit breaker type ACB-2002HR.



* MEASUREMENTS TAKEN FROM OUTSIDE OF FRONT DOOR

Figure 5: Delete and substitute:

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Figure 6: Delete.

Figure 7: Delete and substitute:

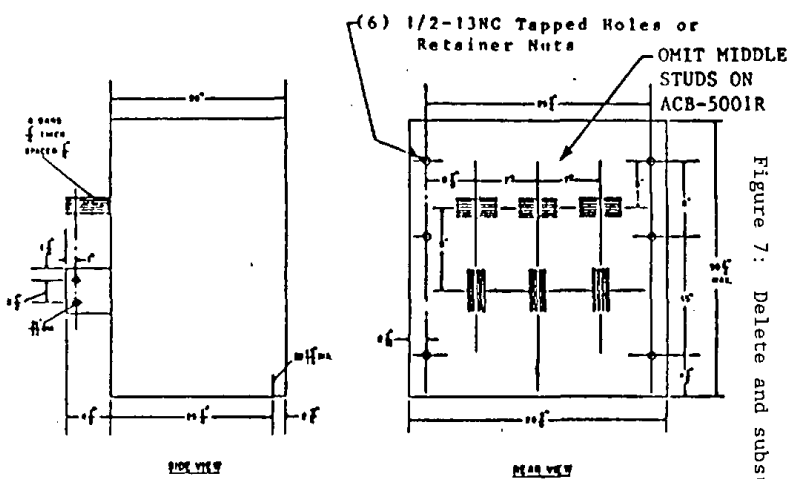
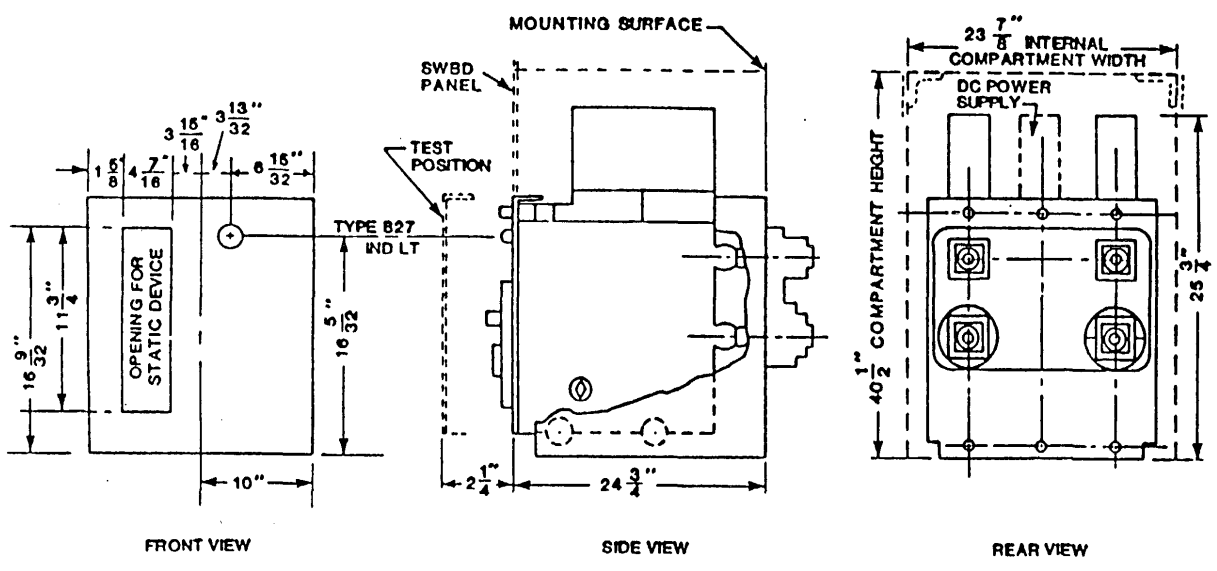


FIGURE 7. Outline and mounting dimensions for circuit breaker types ACB-3200HR, ACB-4000HR and ACB-5001R.

FIGURE 8. Outline and mounting dimensions for circuit breaker type ACB-4001R.



DIMENSIONS SAME AS FIGURE 5

Figure 8: Delete and substitute:

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*Figure 10: Delete title and substitute: "Time-current characteristics curve for circuit breaker types ACB-900R, ACB-901R, ACB-902R, ACB-1600HR, ACB-2000R, ACB-2000HR, ACB-2601R, ACB-2801R, ACB-3200HR, and ACB-4000HR."

Add new figure:

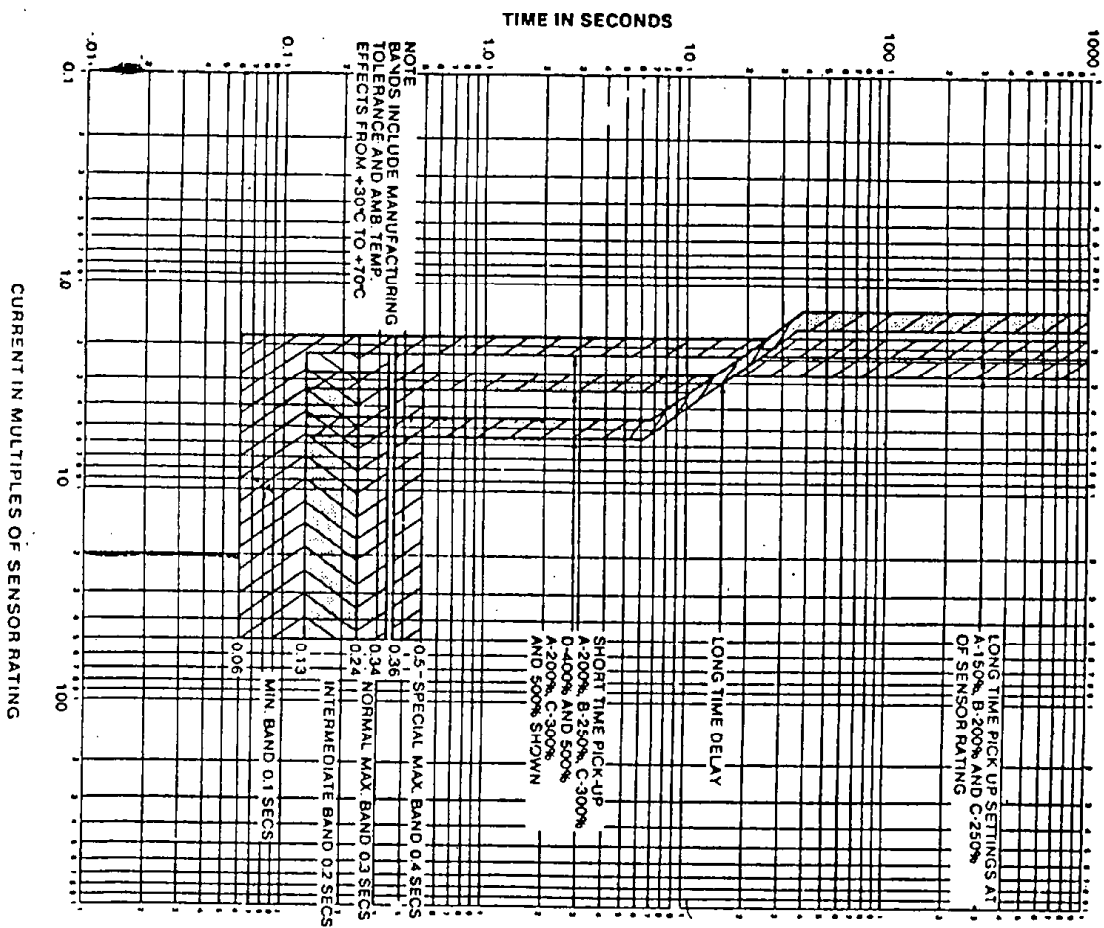
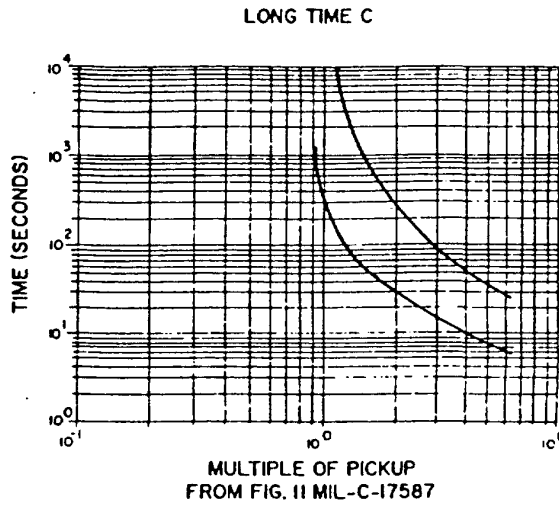
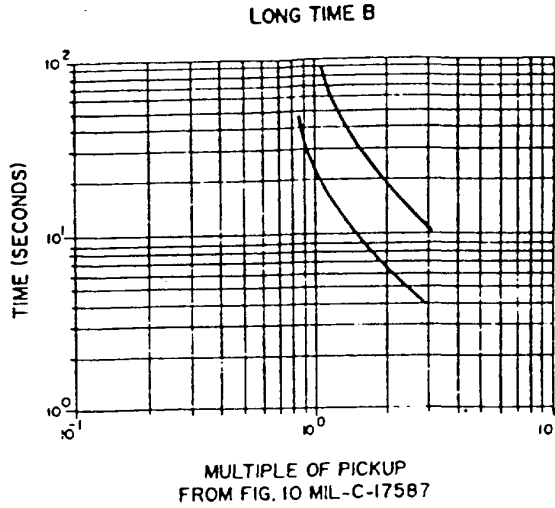
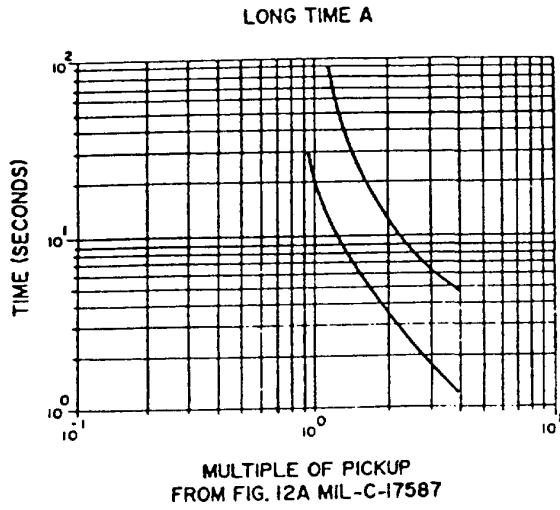


FIGURE 13A. Time-current characteristics curve for circuit breaker types ACB-2000IRC, ACB-3200HR, and ACB-4000HR.

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*Add new figure:



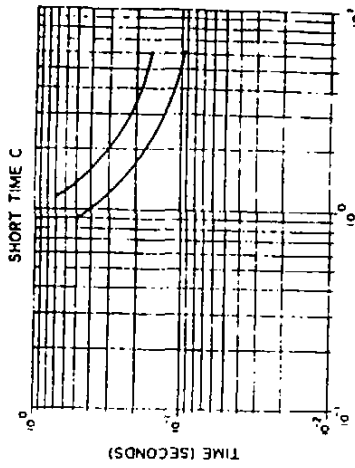
SHEET 1 OF 2

FIGURE 14A. Time-current characteristics curve for circuit breaker types ACB-904LRC, ACB-1404LRC, and ACB-1604LRC.

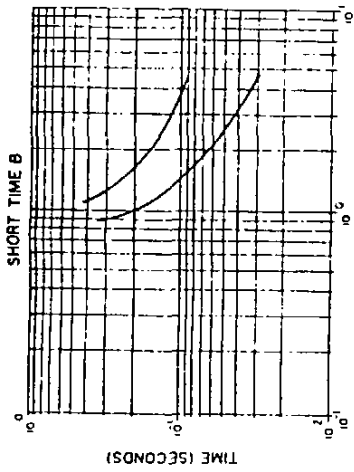
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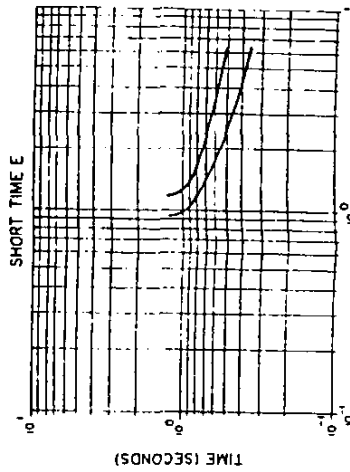
*Add new figure:



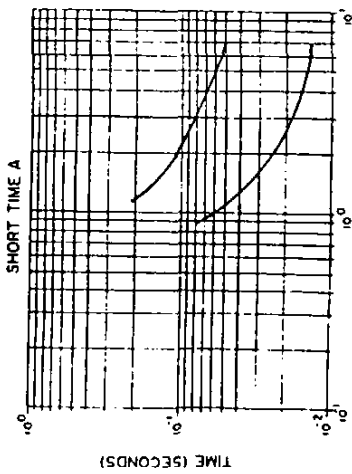
MULTIPLE OF PICKUP
FROM FIG. 10 MIL-C-17587



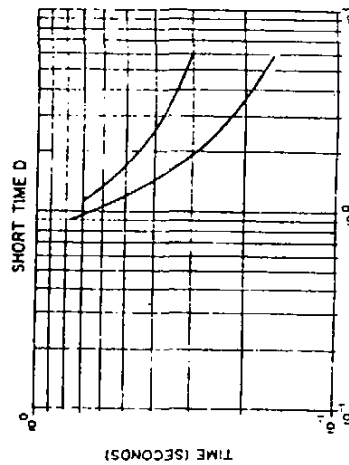
MULTIPLE OF PICKUP
FROM FIG. 11 MIL-C-17587



MULTIPLE OF PICKUP
FROM FIG. 11 MIL-C-17587



MULTIPLE OF PICKUP
FROM FIG. 12A MIL-C-17587



MULTIPLE OF PICKUP
FROM FIG. 10 MIL-C-17587

SHEET 2 OF 2

FIGURE 14A. Time-current characteristics curve for circuit breaker types ACB-904LRC, ACB-1404LRC, and ACB-1604LRC - Continued.

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