

April 1998

AB DE-ION® Circuit Breakers

The curves in this Application Data are to be used in conjunction with Application Data 29-160. Curves for standard and MARK 75® breakers have been combined on the same sheet.

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AB DE-ION Circuit Breakers

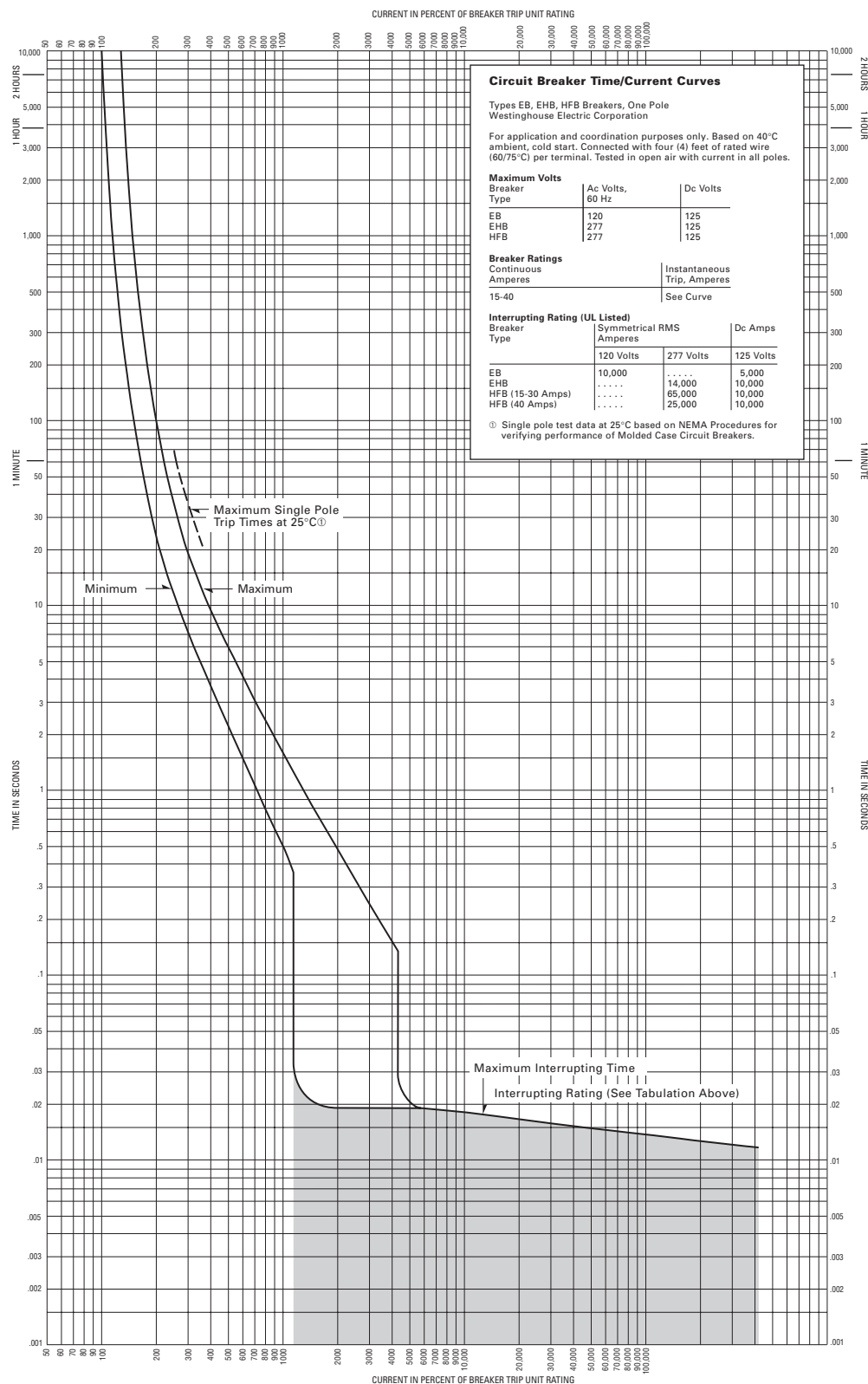
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Individual oversize copies of curves listed above printed on onion-skin paper are available in limited quantity from:
Cutler-Hammer
Customer Support Center
Five Parkway Center
Pittsburgh, PA 15220

When ordering onion-skin curves, use number at bottom of page where curve appears, i.e., SC-3506-77. **Requests for full sets of curves will not be honored.**

AB DE-ION Circuit Breakers

Types EB, EHB; MARK 75 Type HFB; 15-40 Amperes, 1 Pole

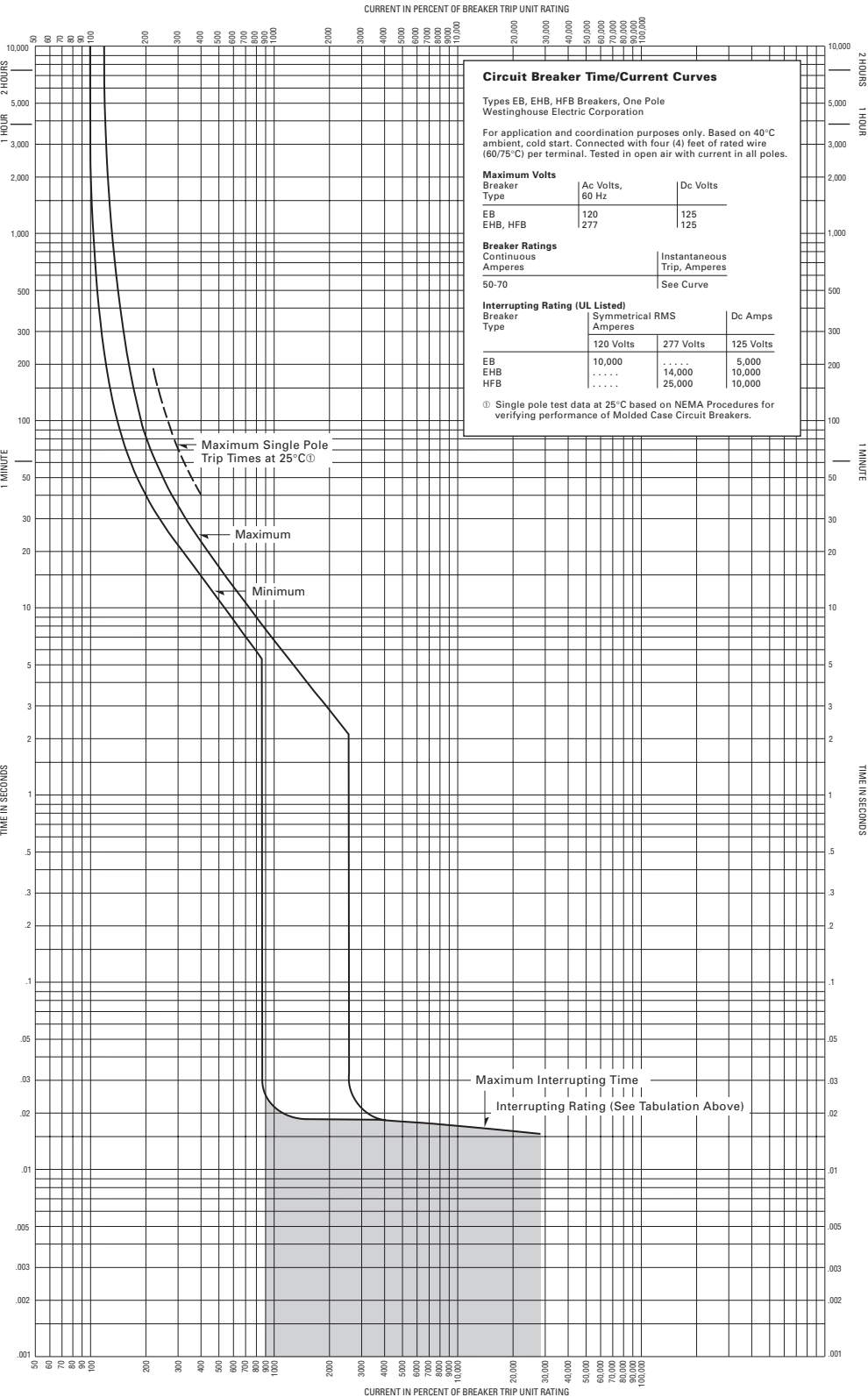


Curve No. SC-3506-77



AB DE-ION Circuit Breakers

Types EB, EHB; MARK 75 Type HFB; 50-70 Amperes, 1 Pole

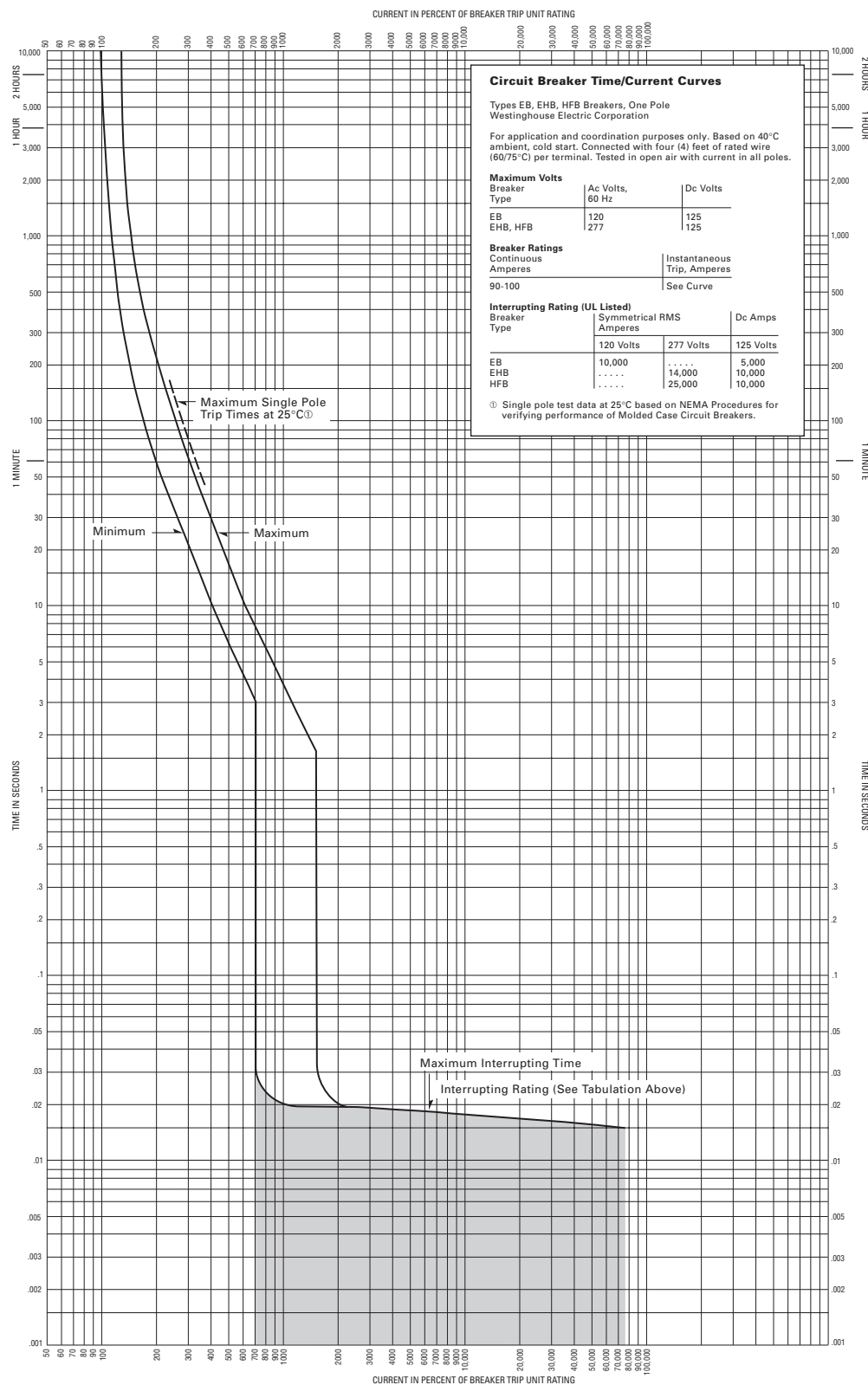


Curve No. SC-3507-77



AB DE-ION Circuit Breakers

Types EB, EHB; MARK 75 Type HFB; 90-100 Amperes, 1 Pole

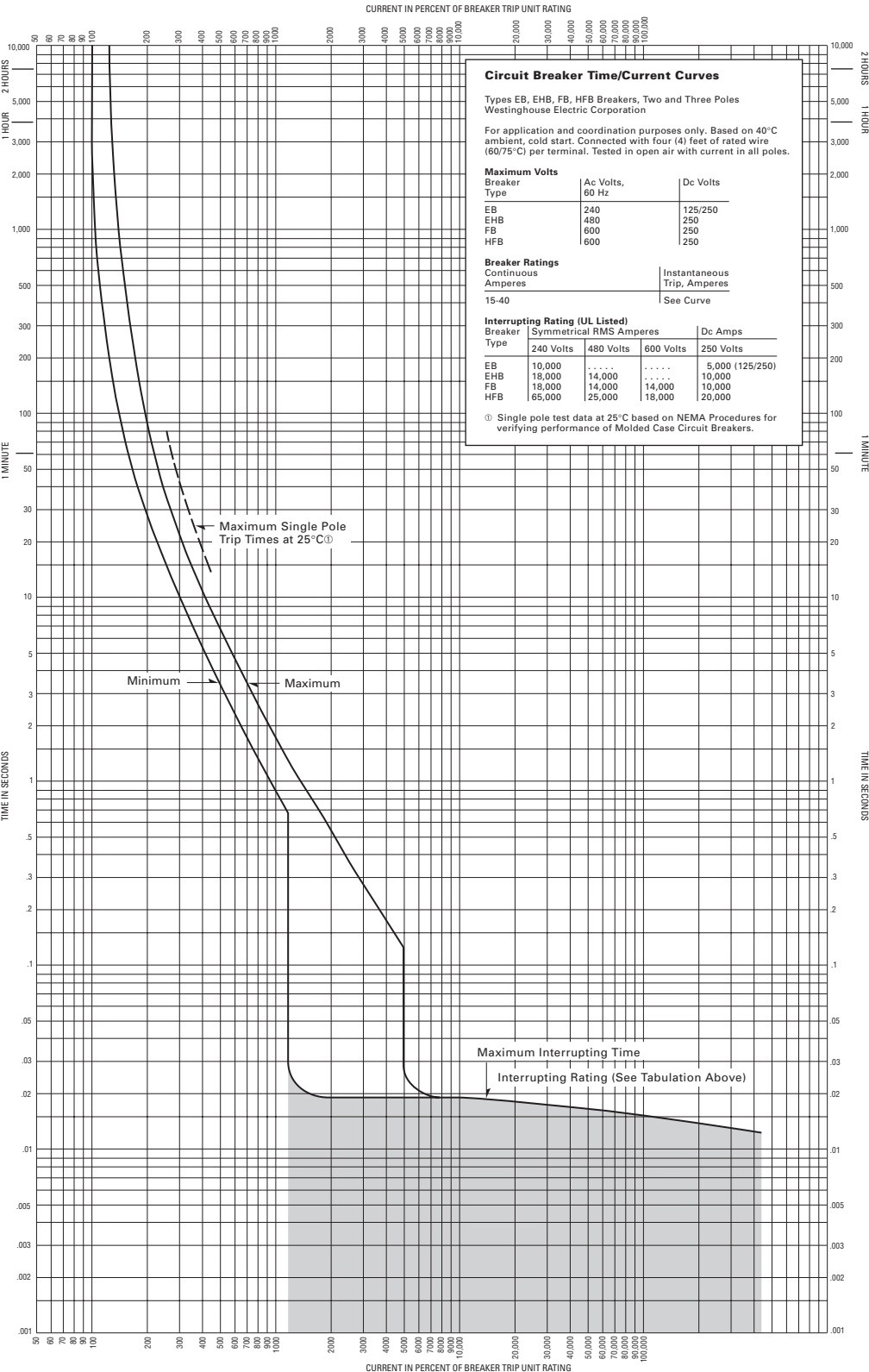


Curve No. SC-3508-77



AB DE-ION Circuit Breakers

Types EB, EHB, FB; MARK 75 Type HFB; 15-40 Amperes, 2, 3 Poles

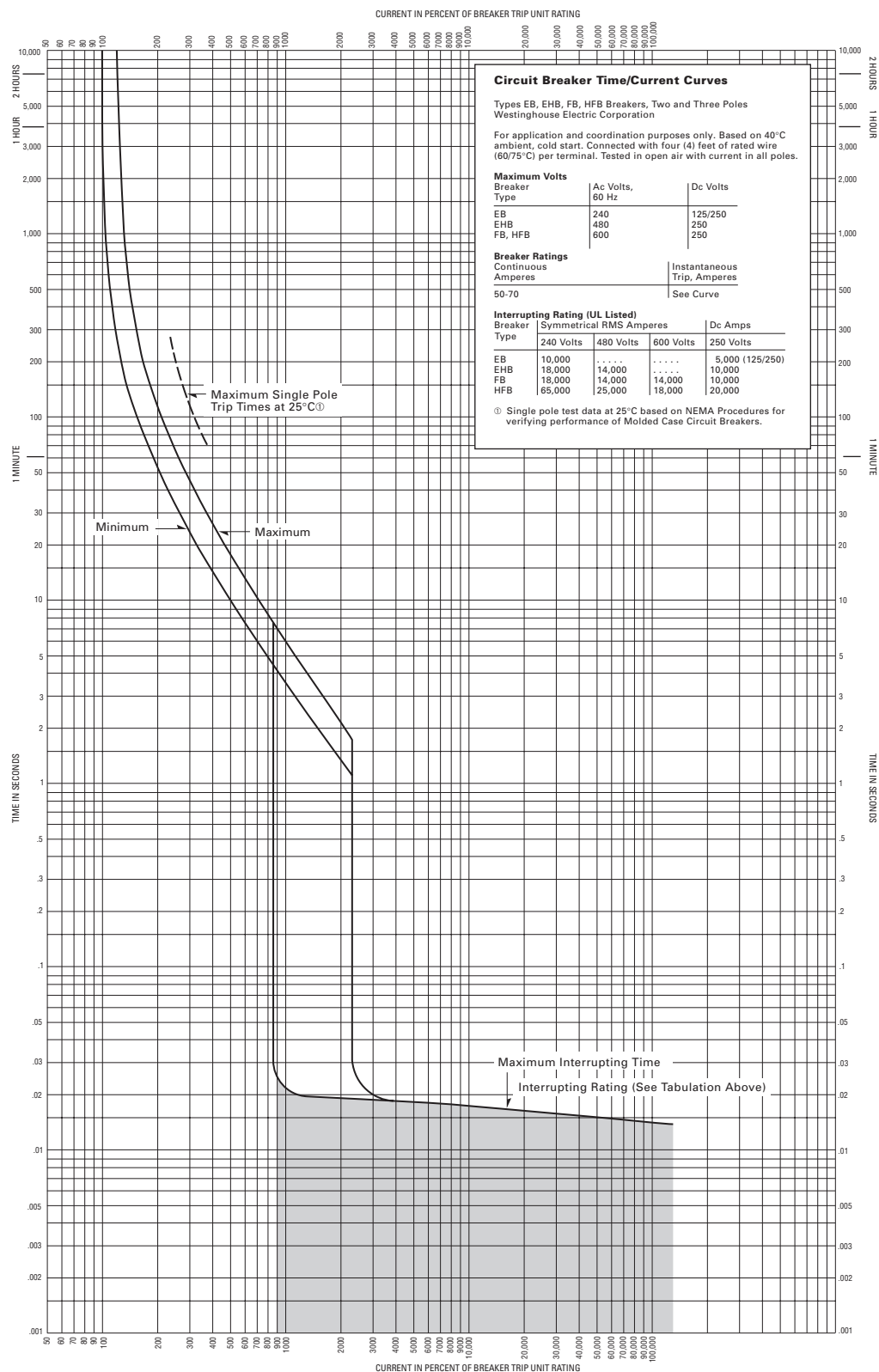


Curve No. SC-3509-77



AB DE-ION Circuit Breakers

Types EB, EHB, FB; MARK 75 Type HFB; 50-70 Amperes, 2, 3 Poles

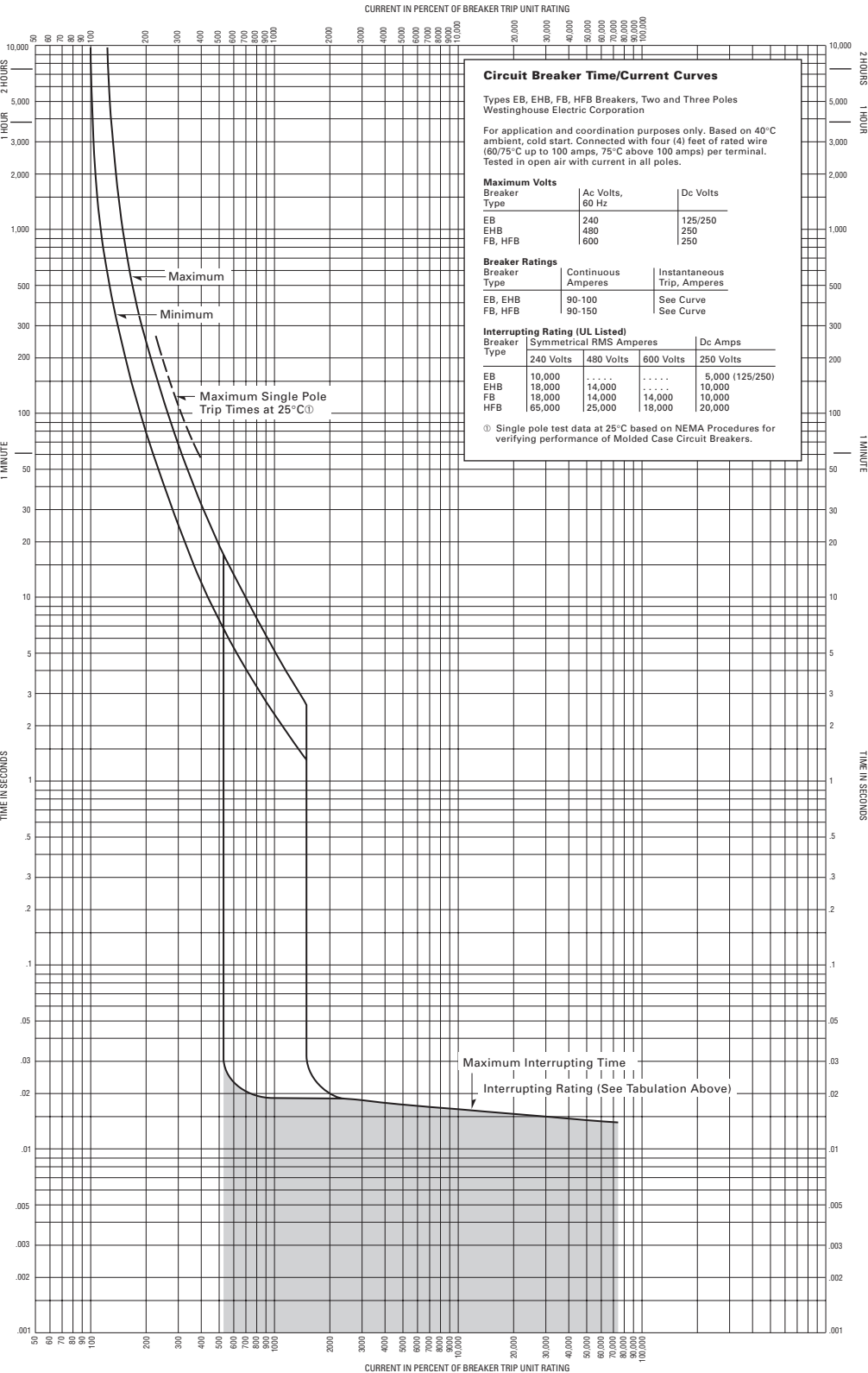


Curve No. SC-3510-77

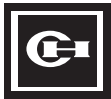


AB DE-ION Circuit Breakers

Types EB, EHB; 90-100 Amperes, 2, 3 Poles Types FB; MARK 75 Type HFB; 90-150 Amperes, 2, 3 Poles

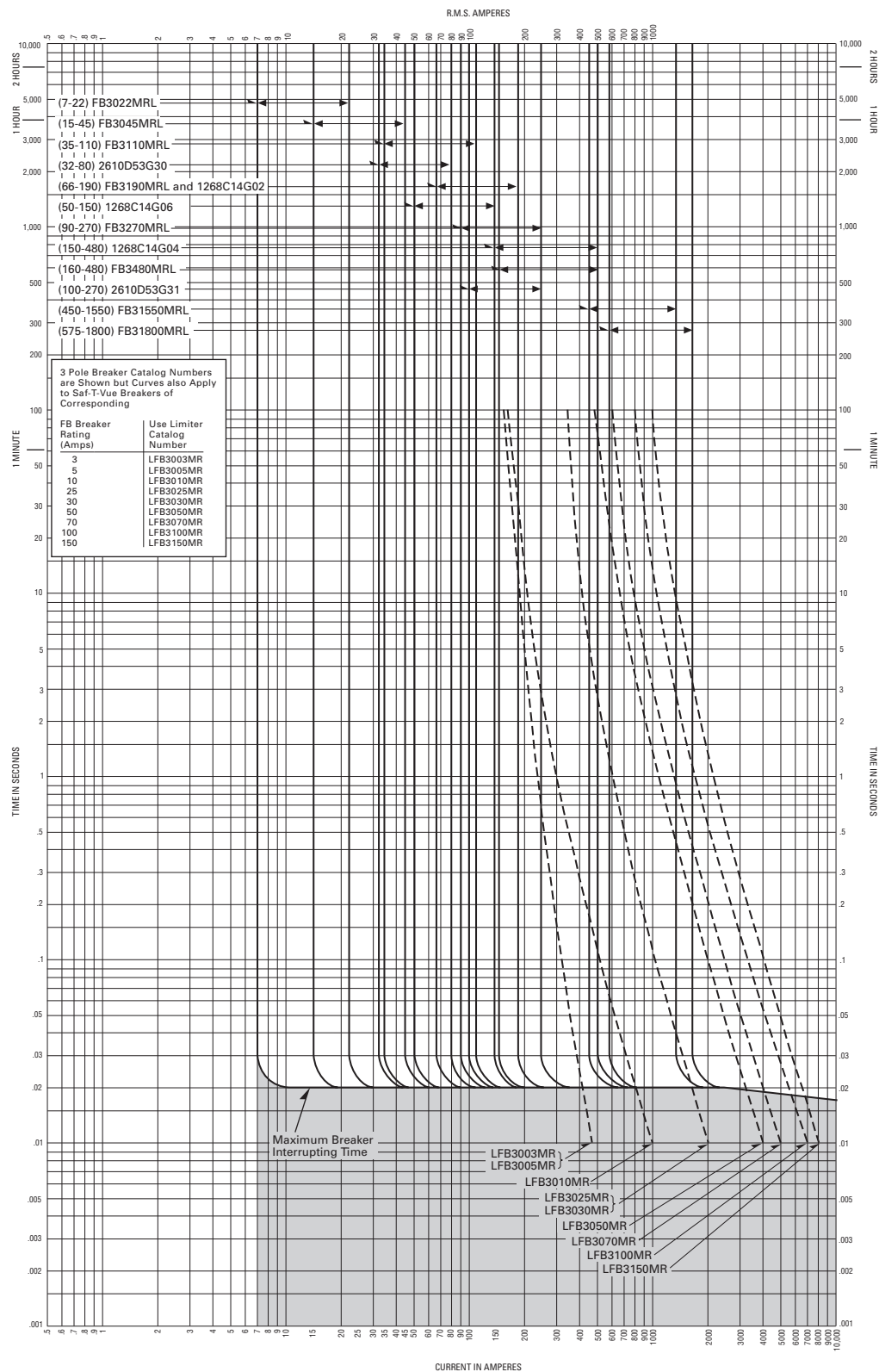


Curve No. SC-3511-77



AB DE-ION Circuit Breakers

Type FB Magnetic Only with Current Limiter; 3-150 Amperes, 3 Poles

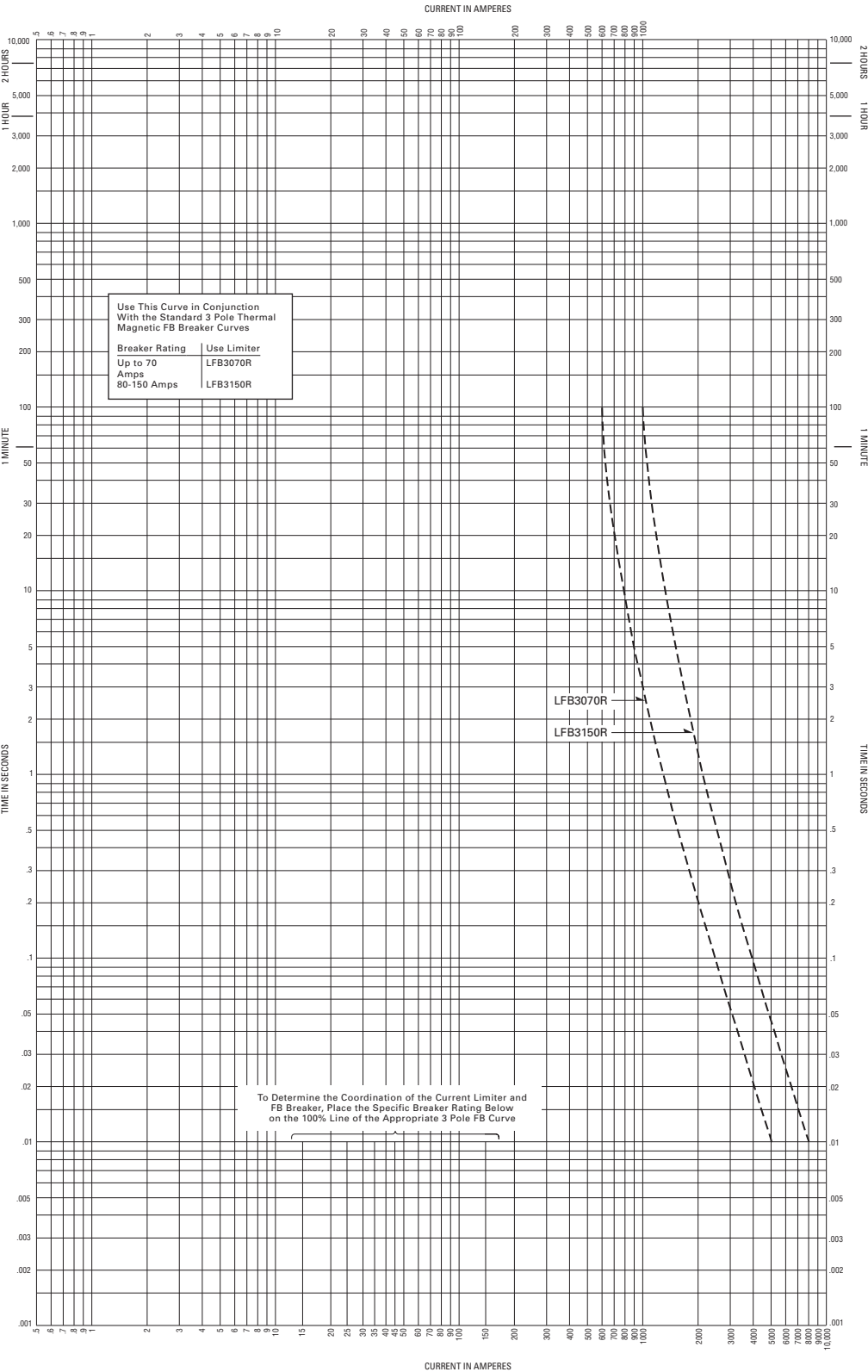


Curve No. SC-3513-77



AB DE-ION Circuit Breakers

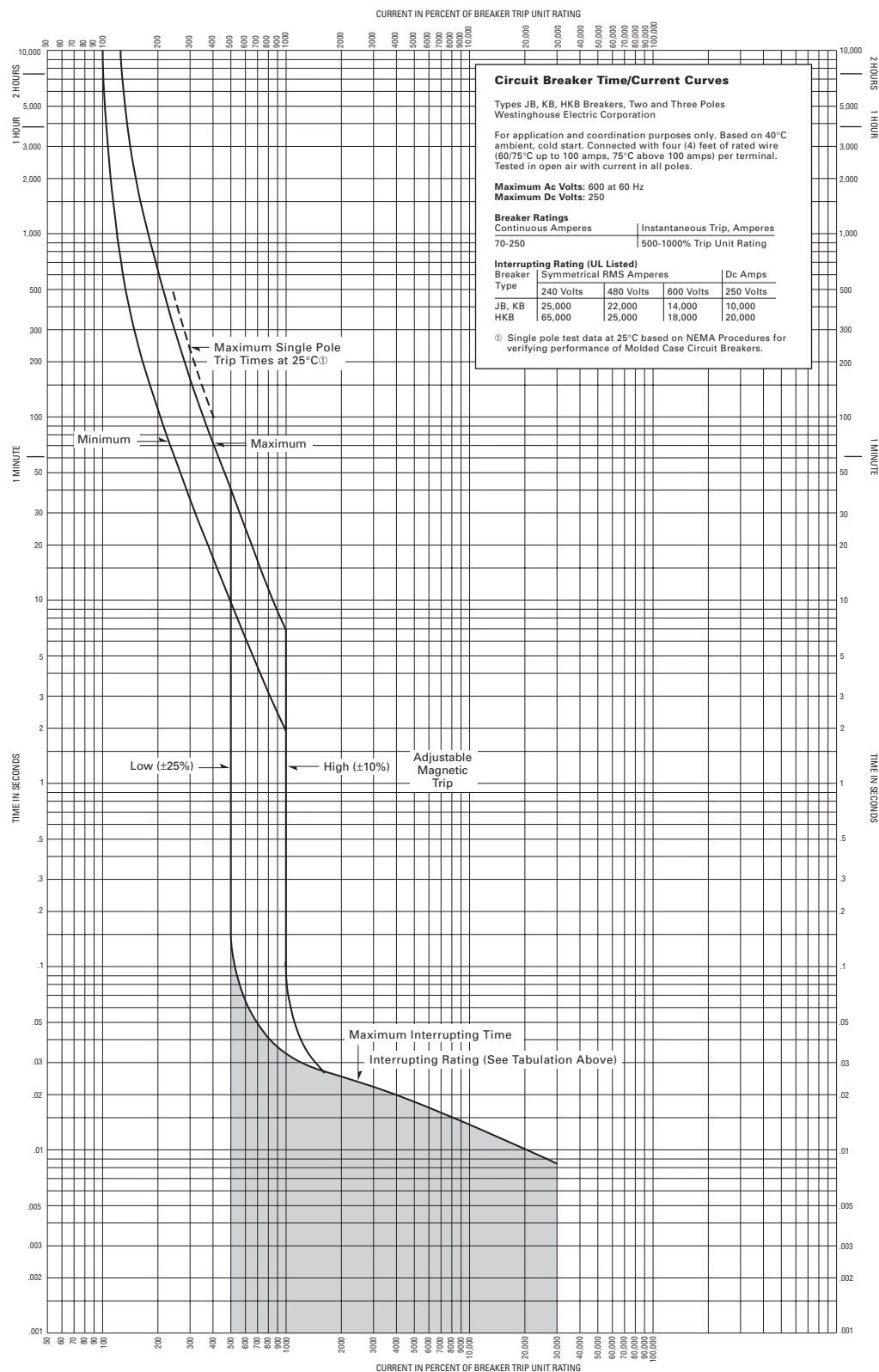
LFB Current Limiter for Type FB, 3 Pole, Thermal Magnetic Breakers





AB DE-ION Circuit Breakers

Types JB, KB; MARK 75 Type HKB; 70-250 Amperes, 2, 3 Poles

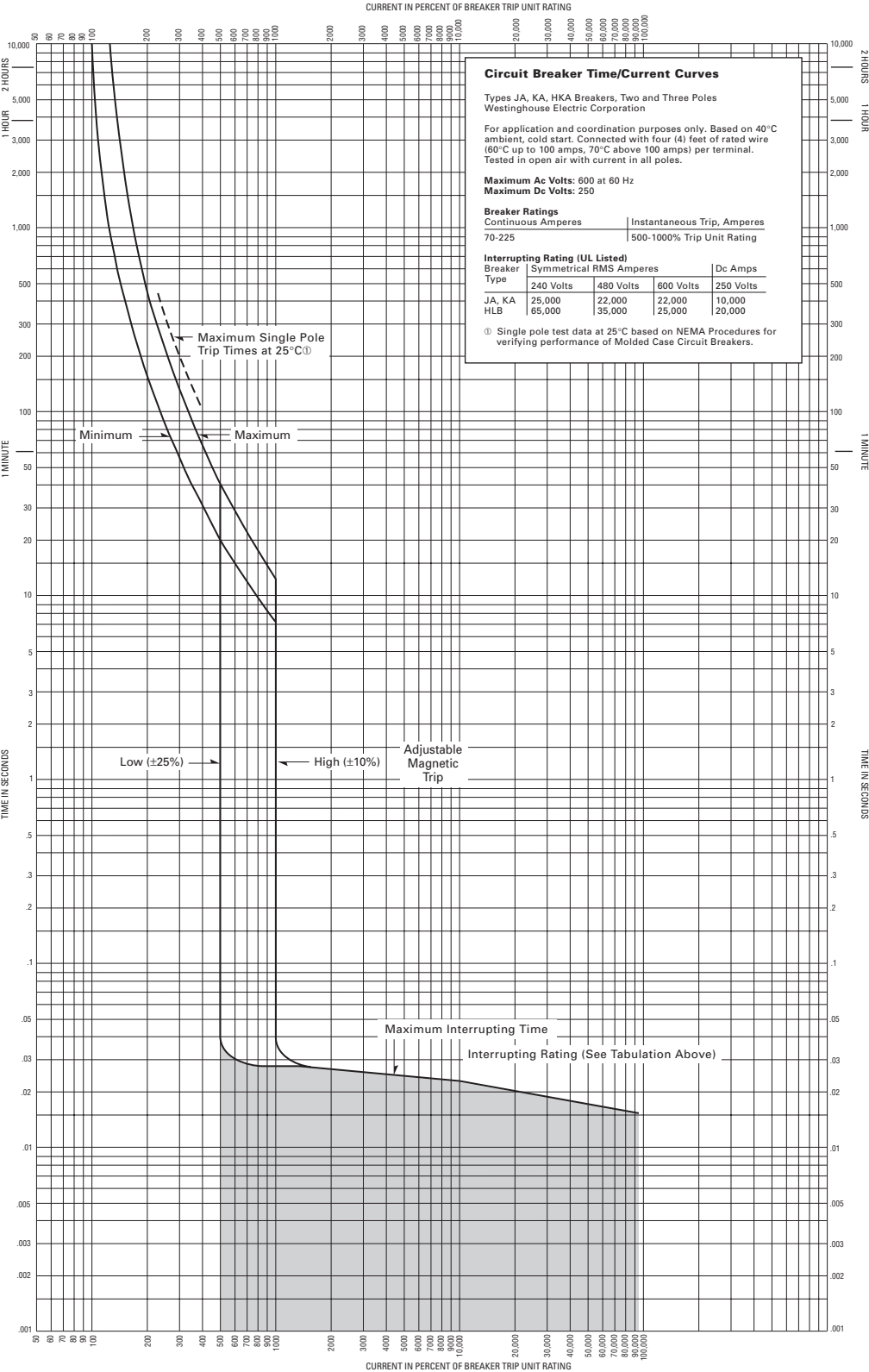


Curve No. SC-4009-77



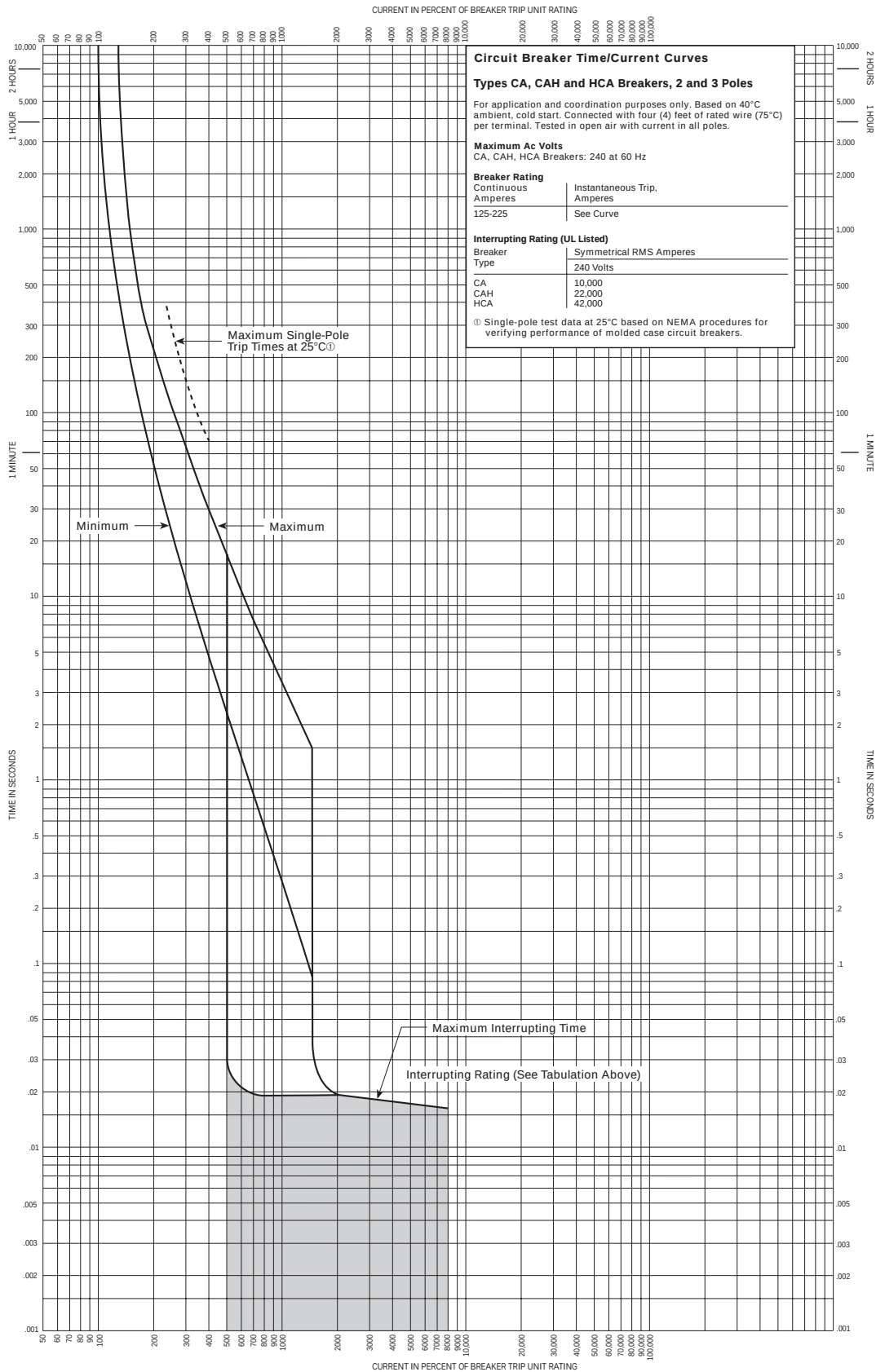
AB DE-ION Circuit Breakers

Types JA, KA; MARK 75 Type HKA; 70-225 Amperes, 2, 3 Poles

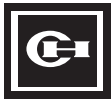


Curve No. SC-3514-77

Types CA, CAH, HCA, 125-225 Amperes, 2 and 3 Poles

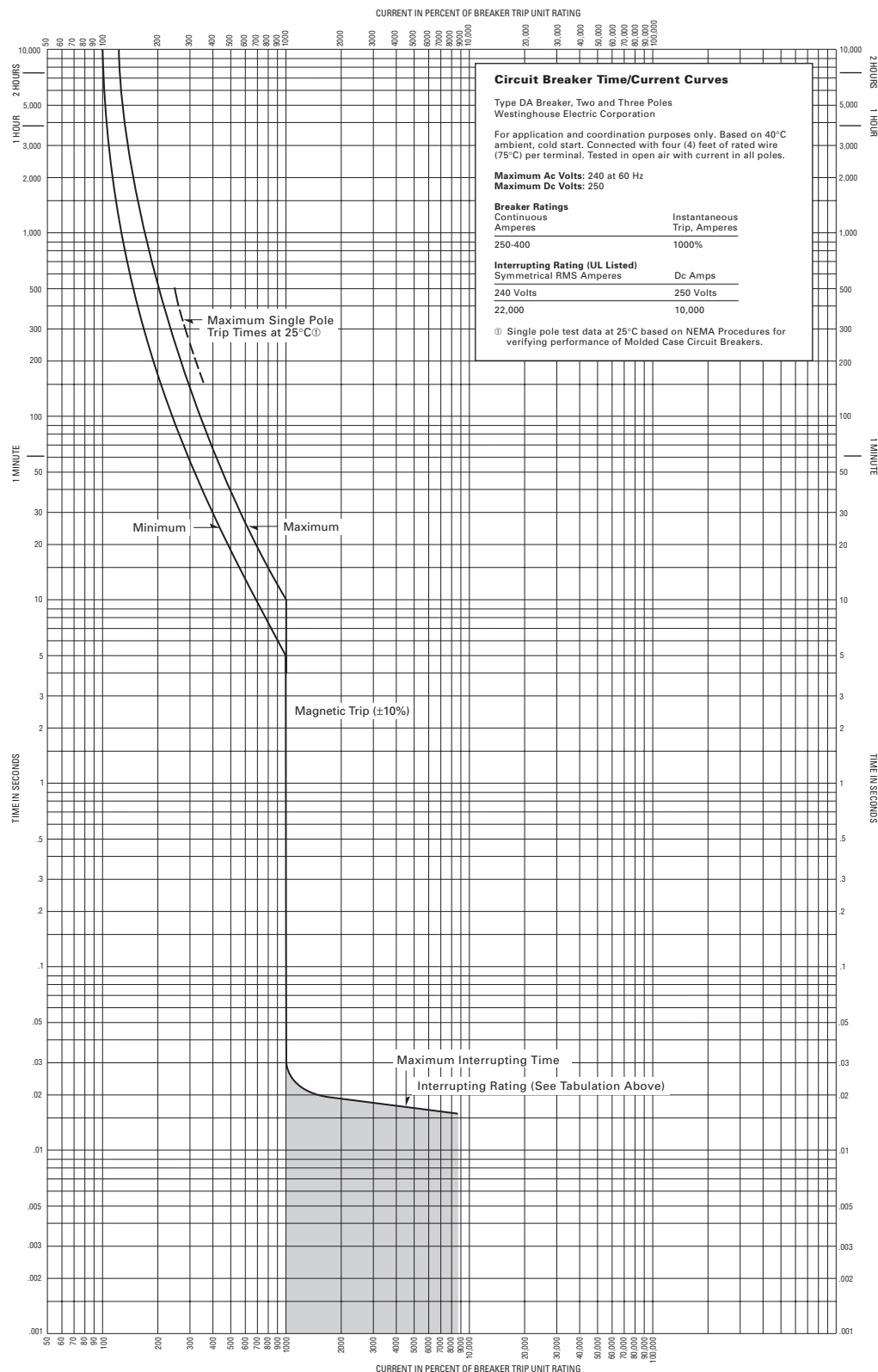


Curve No. SC-3504-77A



AB DE-ION Circuit Breakers

Type DA: 250-400 Amperes, 2 and 3 Poles

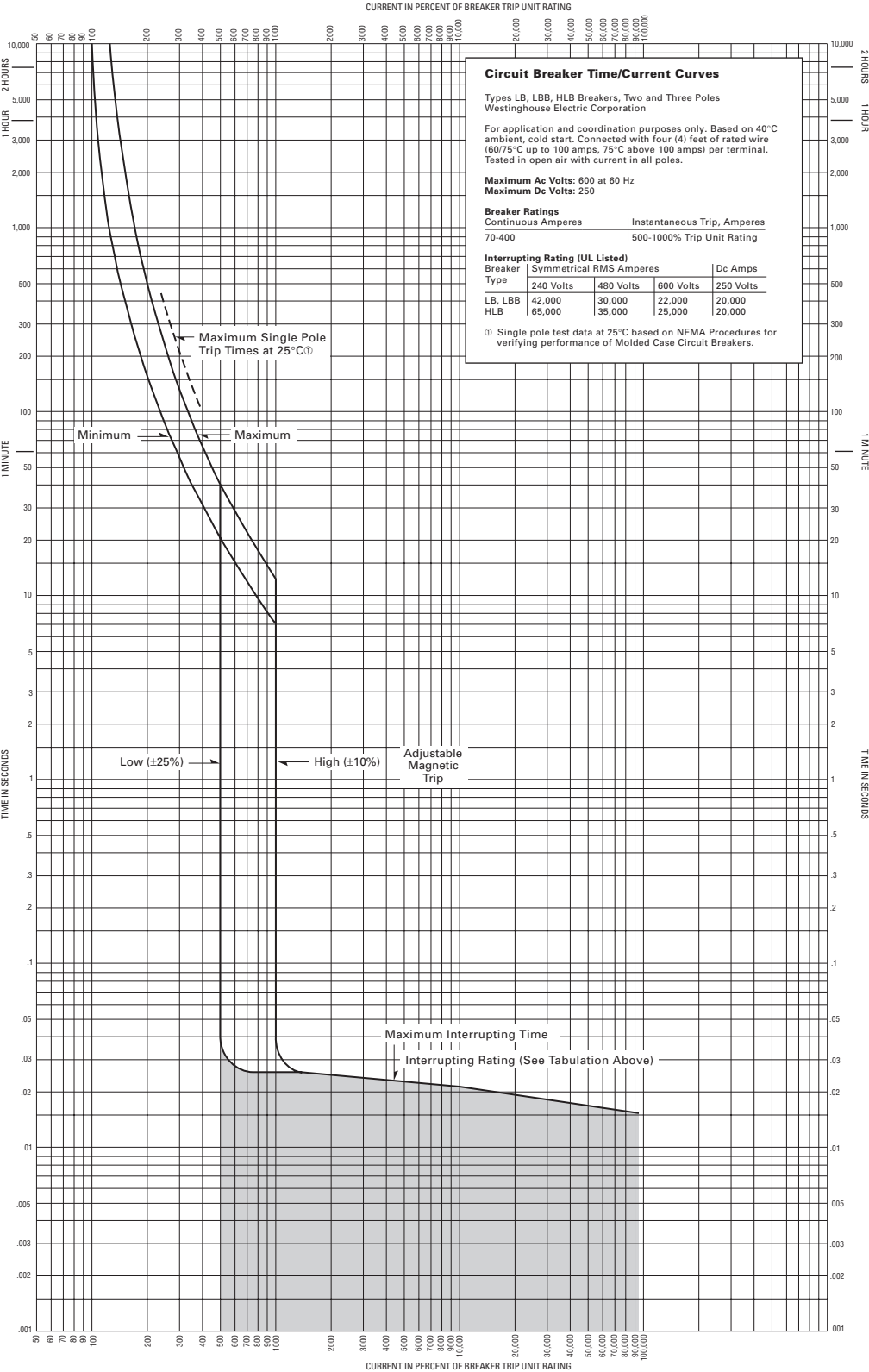


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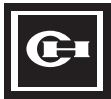


AB DE-ION Circuit Breakers

Types LBB, LB; MARK 75 Type HLB; 70-400 Amperes, 2, 3 Poles

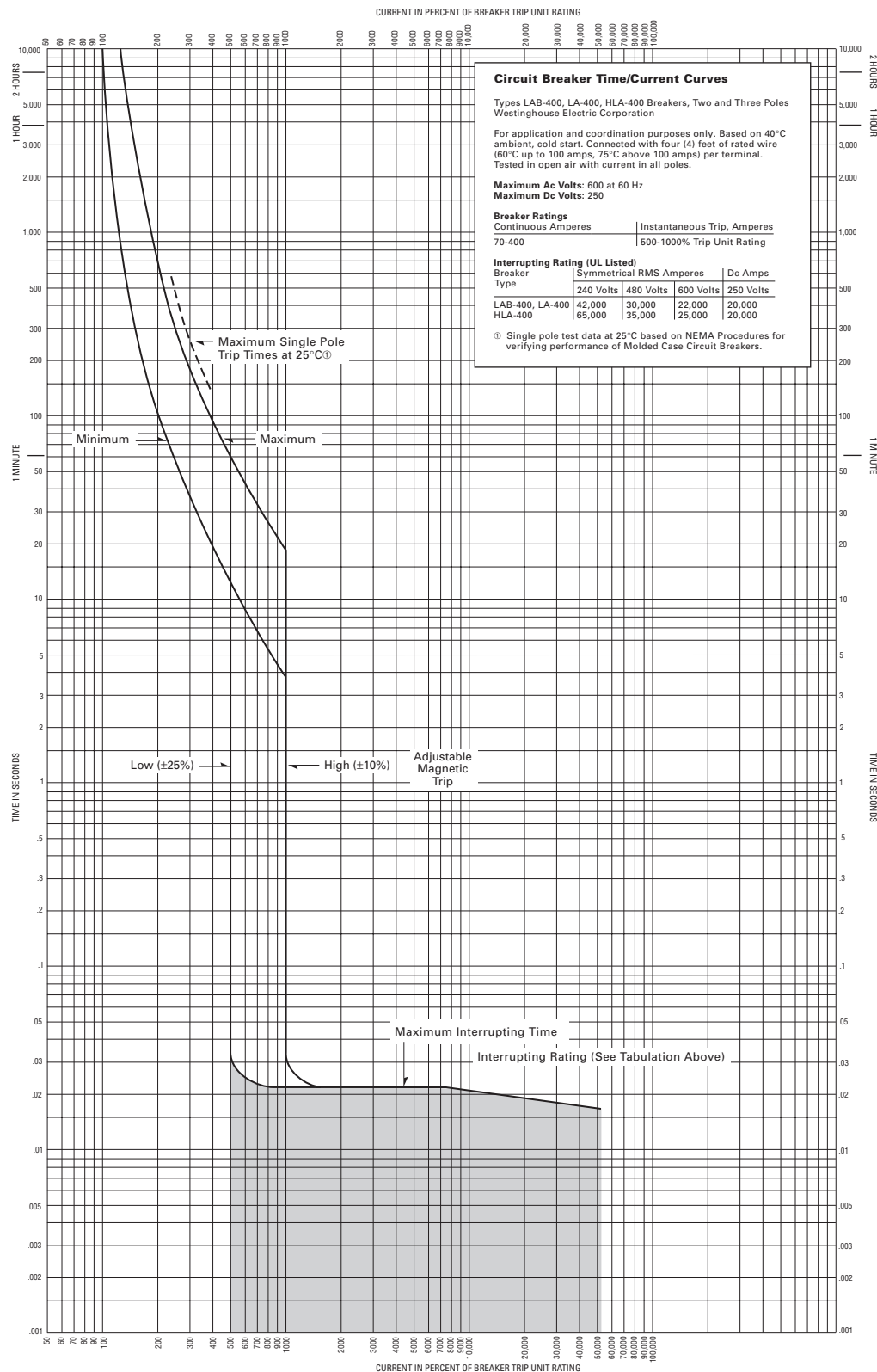


Curve No. SC-3516-77



AB DE-ION Circuit Breakers

Types LAB, LA; MARK 75 Type HLA; 70-400 Amperes, 2, 3 Poles

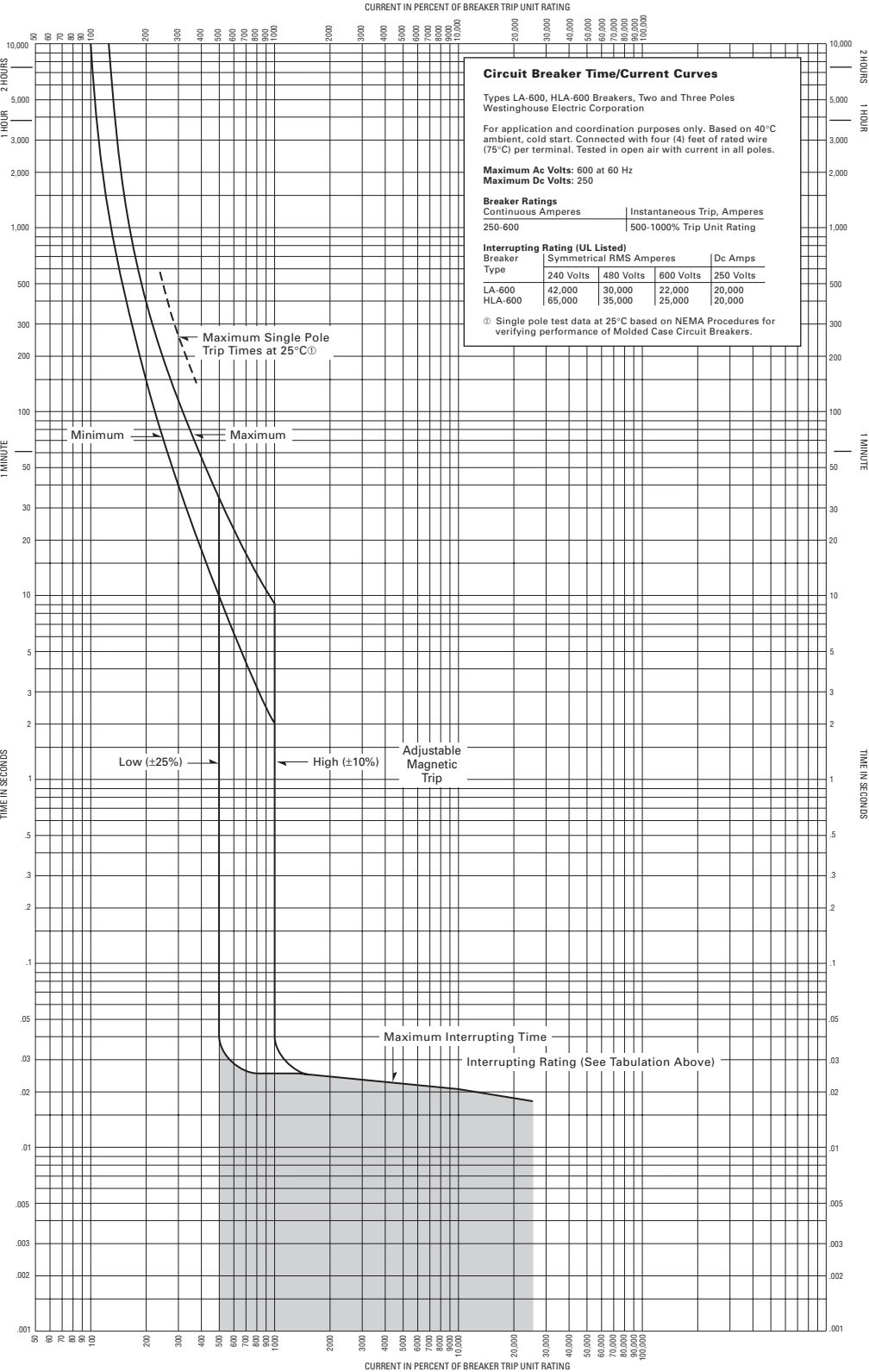


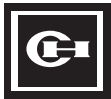
Curve No. SC-3515-77



AB DE-ION Circuit Breakers

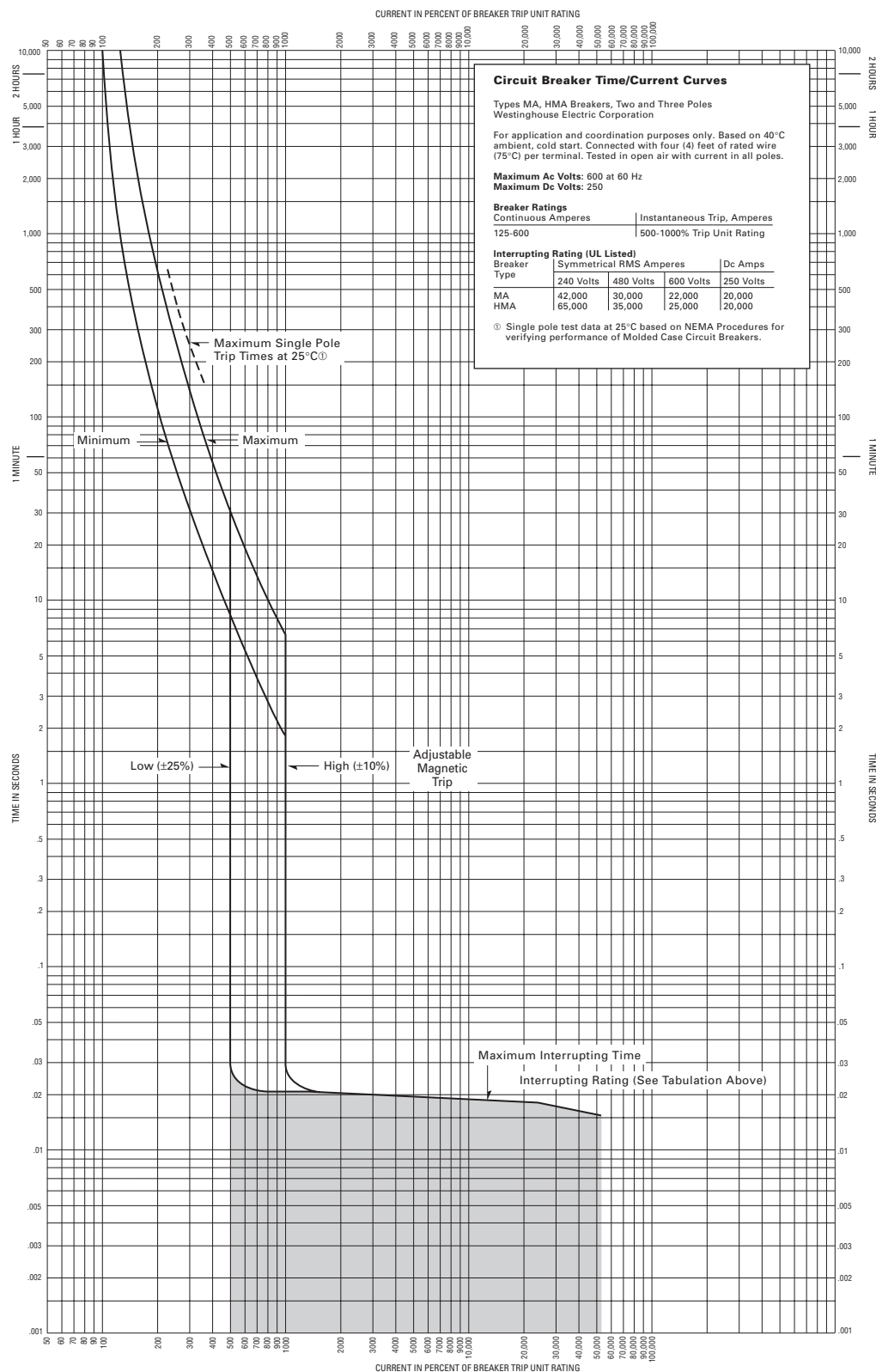
Type LA, MARK 75 Type HLA; 250-600 Amperes, 2, 3 Poles





AB DE-ION Circuit Breakers

Type MA, MARK 75 Type HMA; 125-600 Amperes, 2, 3 Poles

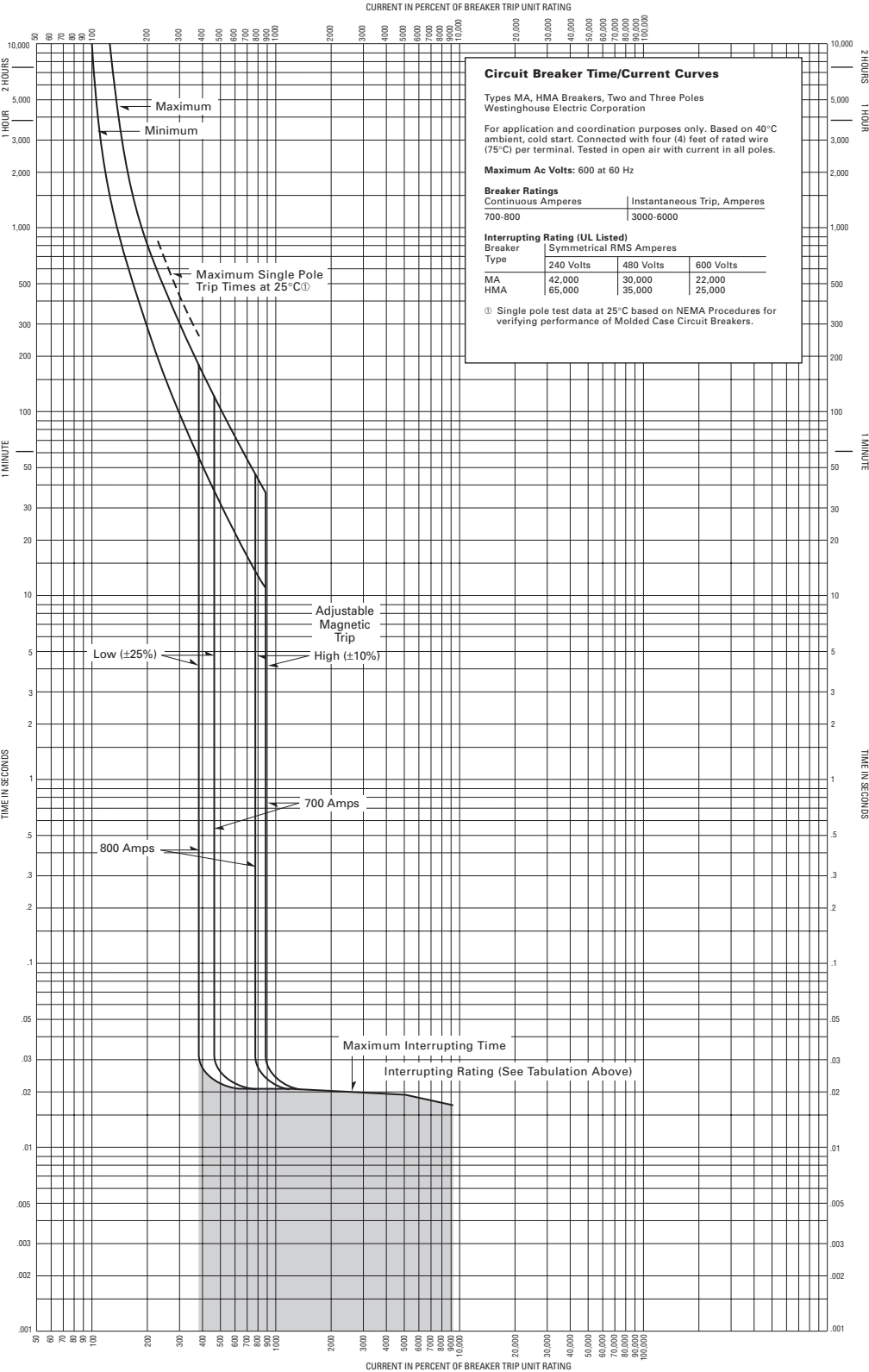


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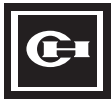


AB DE-ION Circuit Breakers

Type MA, MARK 75 Type HMA; 700-800 Amperes, 2, 3 Poles

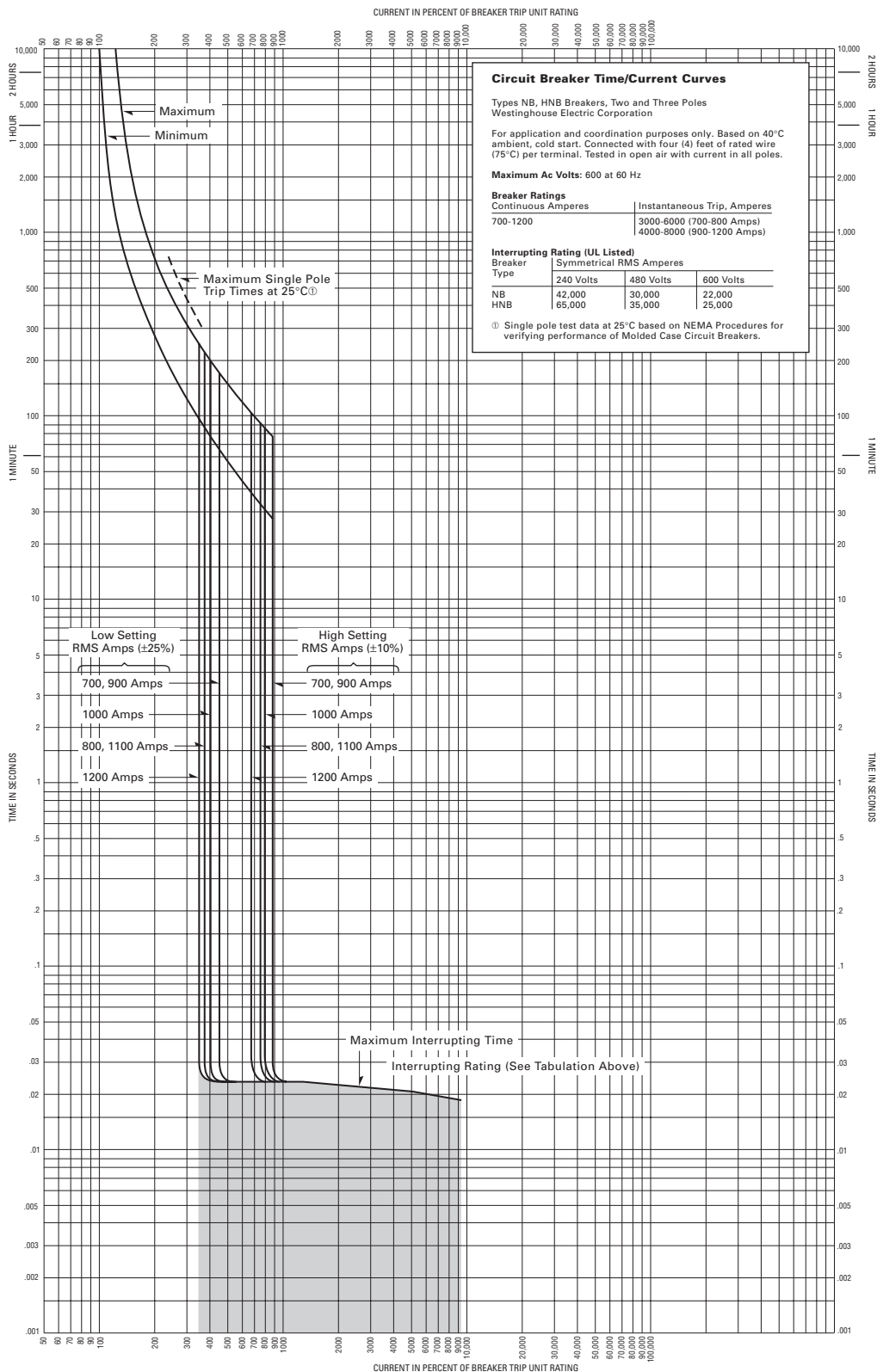


Curve No. SC-3522-77



AB DE-ION Circuit Breakers

Type NB, MARK 75 Type HNB; 800-1200 Amperes, 2, 3 Poles

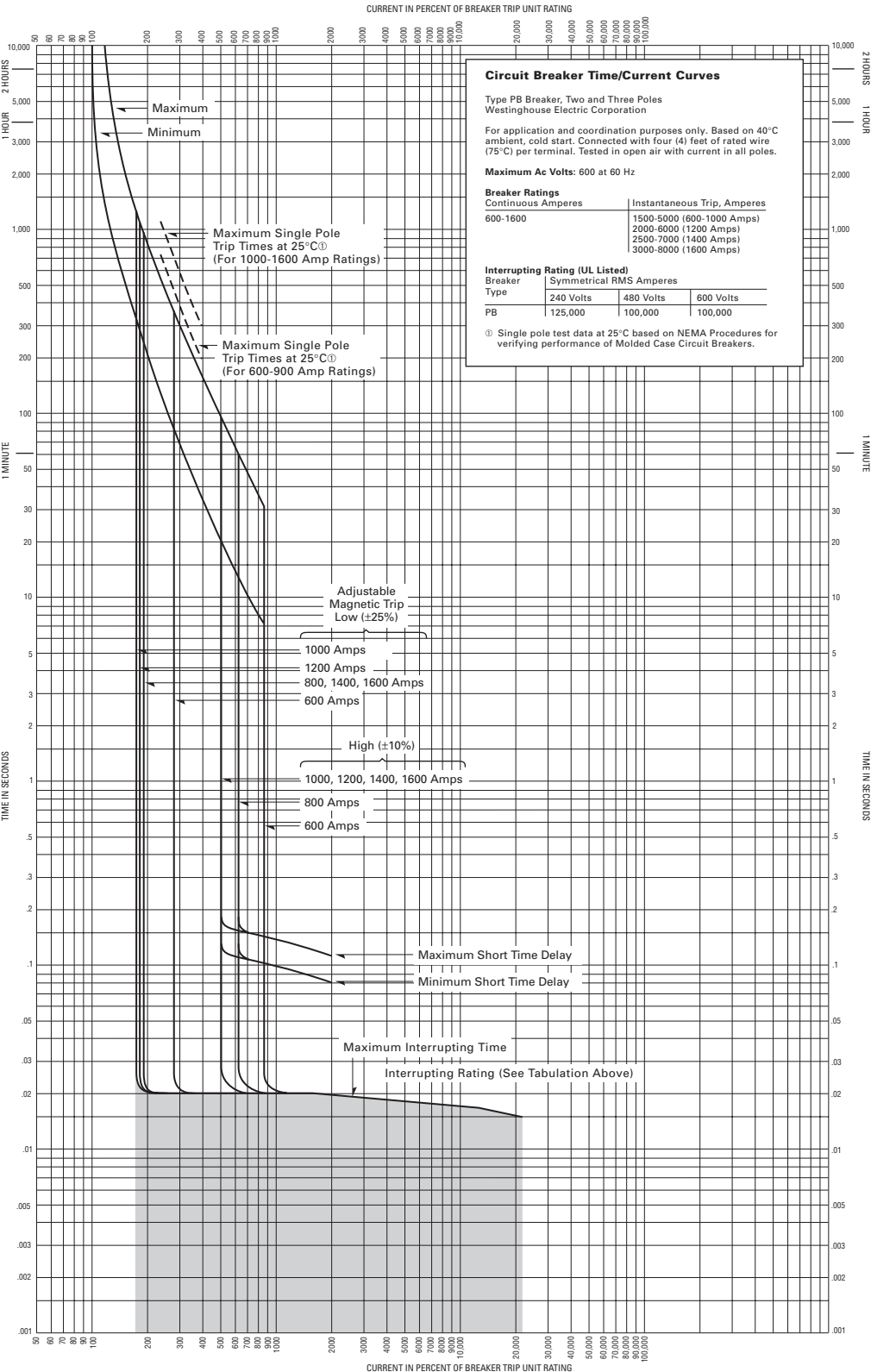


Curve No. SC-3524-77



AB DE-ION Circuit Breakers

Type PB, 600-1600 Amperes, 2, 3 Poles

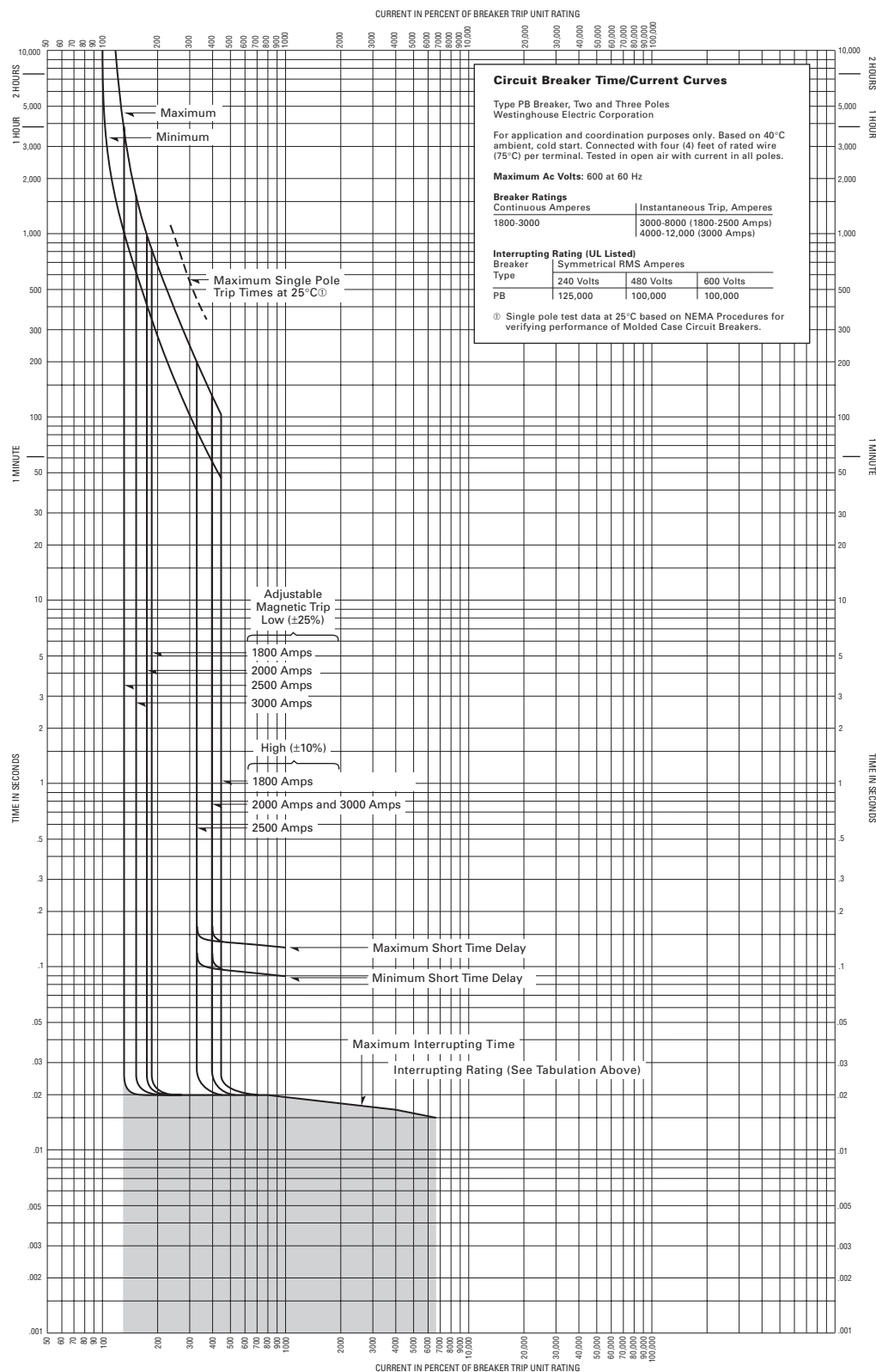


Curve No. SC-3527-77



AB DE-ION Circuit Breakers

Type PB, 1800-3000 Amperes, 2, 3 Poles

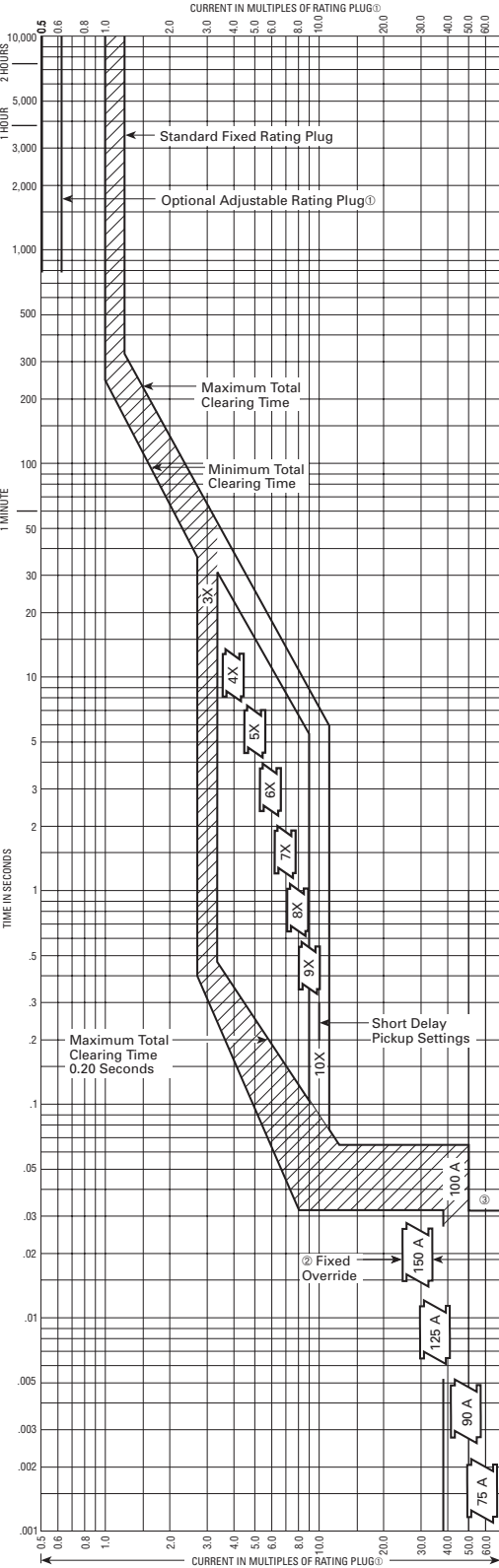


Curve No. SC-3528-77



AB DE-ION Circuit Breakers

Types LC, LCG; MARK 75 Types HLC, HLCG; 75-150 Amperes, 2-3 Poles



Circuit Breaker Time/Current Curves

Types LC, LCG, HLC, HLCG Breakers, Two and Three Poles
Westinghouse Electric Corporation

Curve accuracy applies from -20°C to +55°C ambient. For possible continuous ampere derating for ambients above +40°C refer to Westinghouse.

Breaker Ratings
Maximum Ac Volts 600, 50/60 Hz

Continuous Amperes	Short Delay Pickup Settings
75-150	3x to 10x rating plug value with calibration settings as shown on curve (Tolerance ±10%)

Interrupting Rating (UL/CSA Listed)

Breaker	Symmetrical RMS Amperes
Frame	240 Volts 480 Volts 600 Volts
LC, LCG	42,000 30,000 22,000
HLC, HLCG	65,000 35,000 25,000

Rating Plugs Available

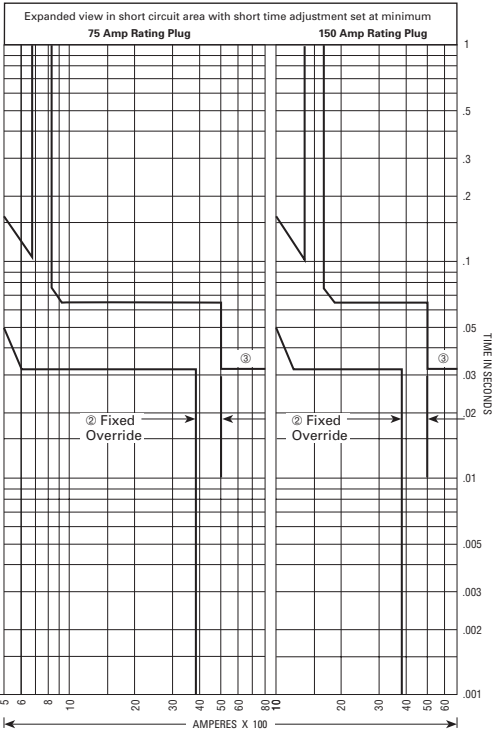
Continuous Amperes	Range of Adjustment
150 Amps	Fixed 100% 50 - 100% ①
125 Amps	Fixed 100% 70 - 100% ①
100 Amps	Fixed 100% 75 - 100% ①
90 Amps	Fixed 100%
75 Amps	Fixed 100%

① When adjustable rating plugs are used, short delay pickup settings track the selected position of the adjustable rating plug. For example, with an adjustable 150 Amp rating plug set at 50%, and the short delay pickup set at 4x, the short delay pickup is 150 x 50% x 4 = 300 Amperes.

② For high fault current levels, a fixed instantaneous override is provided. The trip level for each rating plug is shown. (Tolerance ±15%)

③ The end of the curve is determined by the interrupting rating and/or the specific application.

④ For ground fault time-current characteristics of LCG and HLCG, see curve No. SC-3603-81.

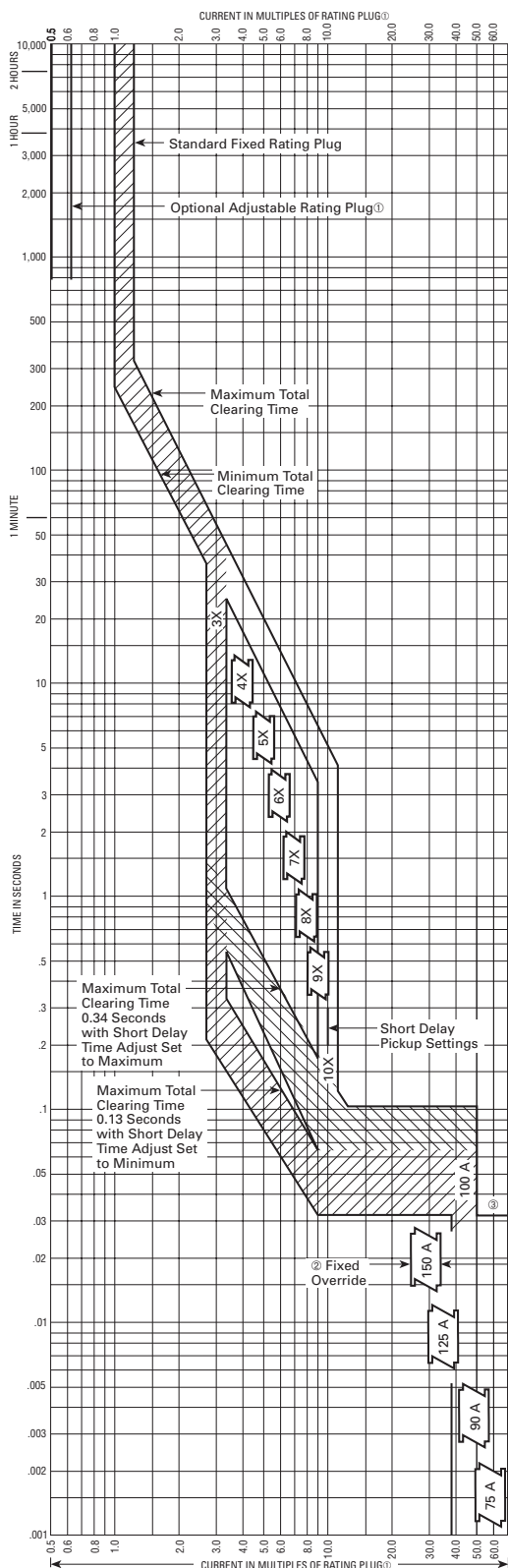


Curve No. SC-3600-81A



AB DE-ION Circuit Breakers

Types LCA, LCGA; MARK 75 Types HLCA, HLCGA; 75-150 Amperes, 2-3 Poles



Circuit Breaker Time/Current Curves

Types LCA, LCGA, HLCA, HLCGA Breakers, Two and Three Poles
Westinghouse Electric Corporation

Curve accuracy applies from -20°C to +55°C ambient. For possible continuous ampere derating for ambients above +40°C refer to Westinghouse.

Breaker Ratings

Maximum Ac Volts 600, 50/60 Hz

Continuous Amperes	Short Delay Pickup Settings
75-150	3x to 10x rating plug value with calibration settings as shown on curve (Tolerance $\pm 10\%$)

Interrupting Rating (UL/CSA Listed)

Breaker	Symmetrical RMS Amperes	480 Volts	600 Volts
Frame	240	480	600
LCA	42,000	30,000	22,000
HLCA	65,000	35,000	25,000

Rating Plugs Available

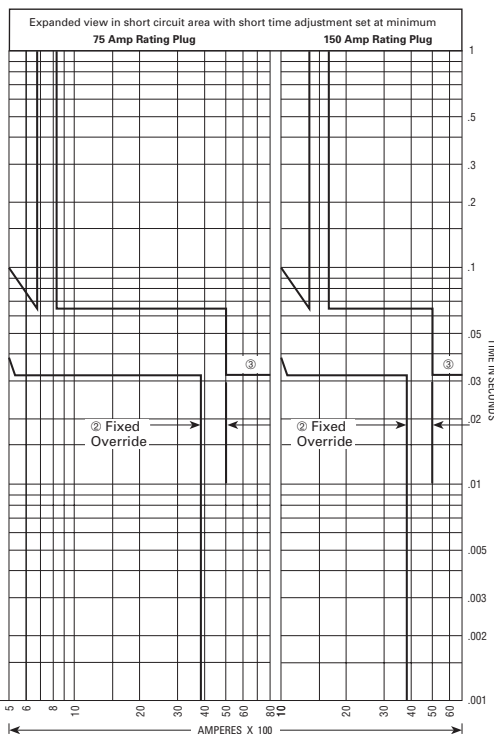
Continuous Amperes	Range of Adjustment
150 Amps	Fixed 100%
125 Amps	50 - 100% ①
100 Amps	Fixed 100%
75 Amps	70 - 100% ①
150 Amps	Fixed 100%
125 Amps	75 - 100% ①
100 Amps	Fixed 100%
75 Amps	Fixed 100%

① When adjustable rating plugs are used, short delay pickup settings track the selected position of the adjustable rating plug. For example, with an adjustable 150 Amp rating plug set at 50%, and the short delay pickup set at 4x, the short delay pickup is $150 \times 50\% \times 4 = 300$ Amps.

② For high fault current levels, a fixed instantaneous override is provided. The trip level for each rating plug is shown. (Tolerance $\pm 15\%$)

③ The end of the curve is determined by the interrupting rating and/or the specific application.

④ For ground fault time-current characteristics of LCGA and HLCGA, see curve No. SC-3603-81.

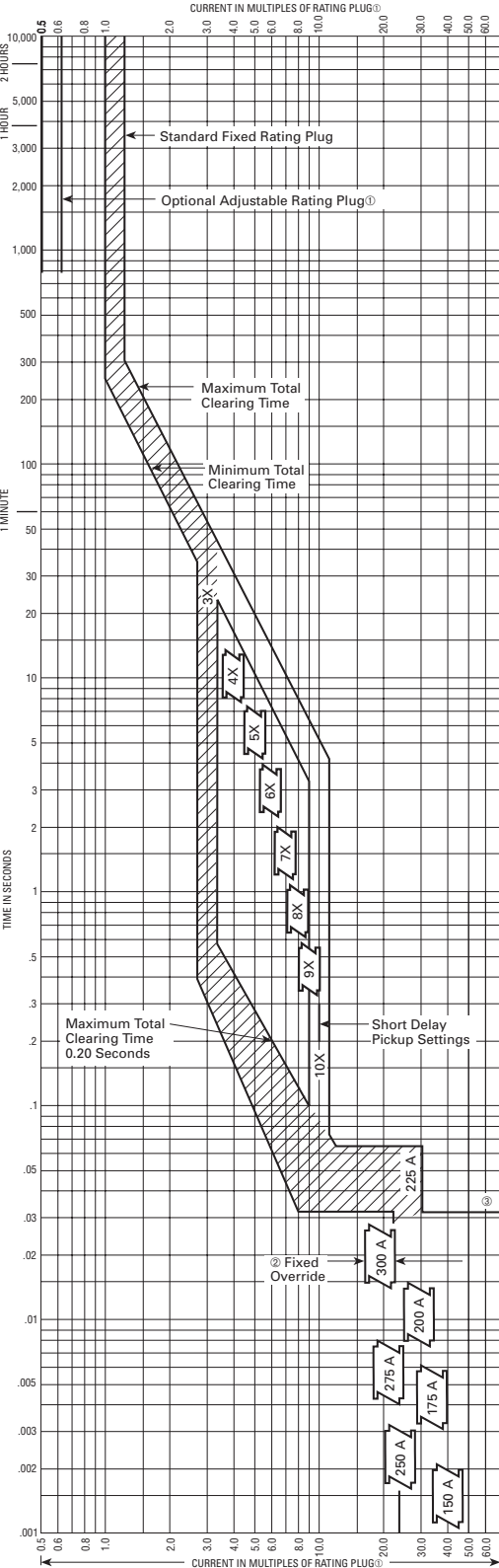


Curve No. SC-3612-81A



AB DE-ION Circuit Breakers

Types LC, LCG; MARK 75 Types HLC, HLCG; 150-300 Amperes, 2-3 Poles



Circuit Breaker Time/Current Curves
Types LC, LCG, HLC, HLCG Breakers, Two and Three Poles
Westinghouse Electric Corporation

Curve accuracy applies from -20°C to +55°C ambient. For possible continuous ampere derating for ambients above +40°C refer to Westinghouse.

Breaker Ratings
Maximum Ac Volts 600, 50/60 Hz

Continuous Amperes	Short Delay Pickup Settings
150-300	3x to 10x rating plug value with calibration settings as shown on curve (Tolerance ±10%)

Interrupting Rating (UL/CSA Listed)

Breaker	Symmetrical RMS Amperes	600 Volts
Frame	240 Volts	480 Volts
LC, LCG	42,000	30,000
HLC, HLCG	65,000	35,000

Rating Plugs Available

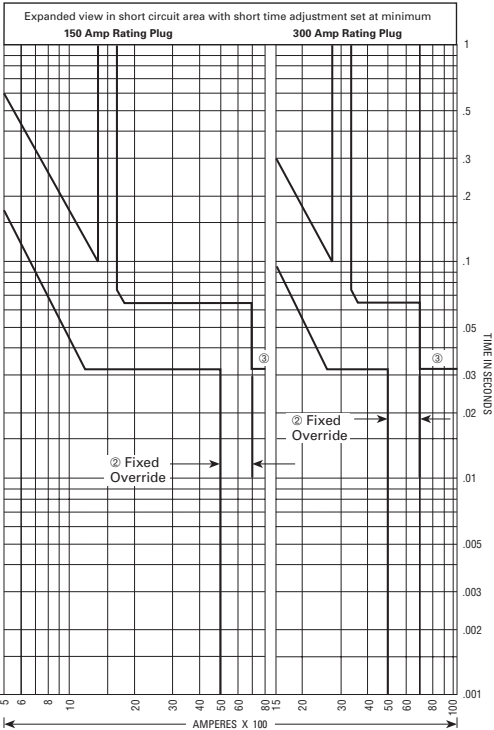
Continuous Amperes	Range of Adjustment
300 Amps	Fixed 100%
300 Amps	50 - 100% ①
275 Amps	Fixed 100%
275 Amps	70 - 100% ①
250 Amps	Fixed 100%
250 Amps	70 - 100% ①
225 Amps	Fixed 100%
225 Amps	70 - 100% ①
200 Amps	Fixed 100%
175 Amps	Fixed 100%
150 Amps	Fixed 100%

① When adjustable rating plugs are used, short delay pickup settings track the selected position of the adjustable rating plug. For example, with an adjustable 300 Amp rating plug set at 50%, and the short delay pickup set at 4x, the short delay pickup is 300 x 50% x 4 = 600 Amperes.

② For high fault current levels, a fixed instantaneous override is provided. The trip level for each rating plug is shown. (Tolerance ±15%)

③ The end of the curve is determined by the interrupting rating and/or the specific application.

④ For ground fault time-current characteristics of LCG and HLCG, see curve No. SC-3603-81.

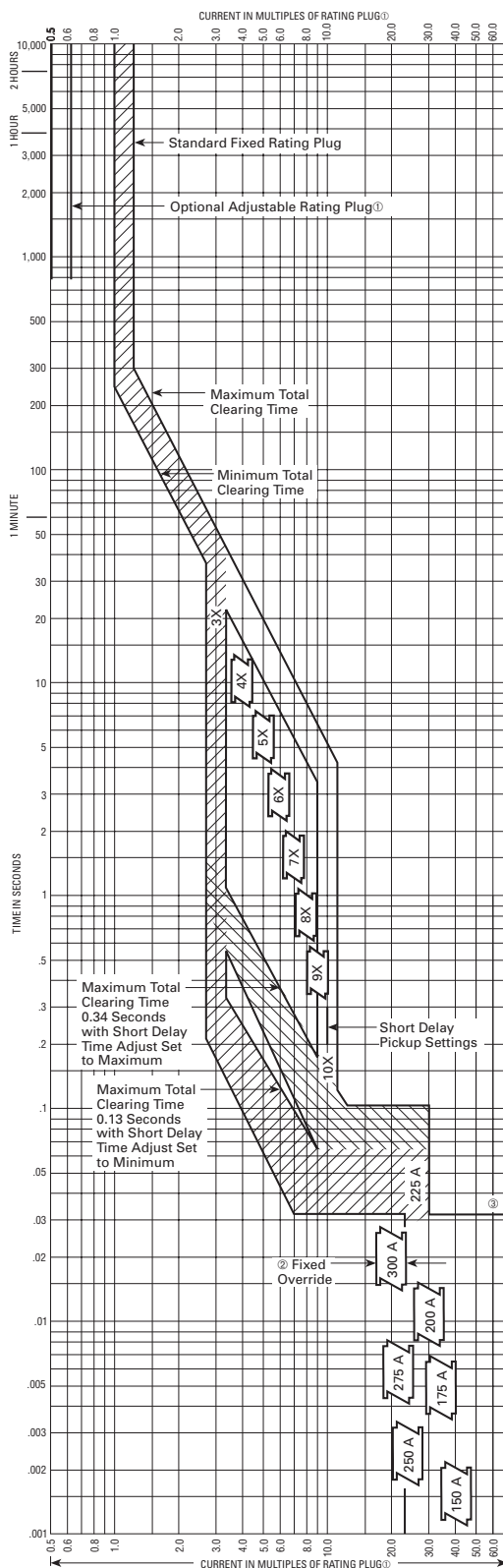


Curve No. SC-3601-81A



AB DE-ION Circuit Breakers

Types LCA, LCGA; MARK 75 Types HLCA, HLCGA; 150-300 Amperes, 2-3 Poles



Circuit Breaker Time/Current Curves

Types LCA, LCGA, HLCA, HLCGA Breakers, Two and Three Poles
Westinghouse Electric Corporation

Curve accuracy applies from -20°C to +55°C ambient. For possible continuous ampere derating for ambients above +40°C refer to Westinghouse.

Breaker Ratings

Maximum Ac Volts 600, 50/60 Hz

Continuous Amperes	Short Delay Pickup Settings
150-300	3x to 10x rating plug value with calibration settings as shown on curve (Tolerance $\pm 10\%$)

Interrupting Rating (UL/CSA Listed)

Breaker	Symmetrical RMS Amperes	480 Volts	600 Volts
Frame	240 Volts	30,000	22,000
LCA	42,000	30,000	22,000
HLCA	65,000	35,000	25,000

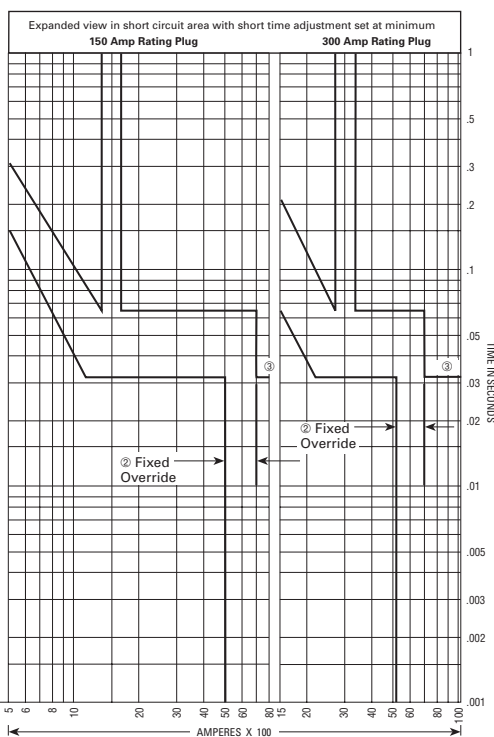
Rating Plugs Available

Continuous Amperes	Range of Adjustment
300 Amps	Fixed 100%
300 Amps	50 - 100% ①
275 Amps	Fixed 100%
275 Amps	70 - 100% ①
250 Amps	Fixed 100%
250 Amps	70 - 100% ①
225 Amps	Fixed 100%
225 Amps	70 - 100% ①
200 Amps	Fixed 100%
175 Amps	Fixed 100%
150 Amps	Fixed 100%

① When adjustable rating plugs are used, short delay pickup settings track the selected position of the adjustable rating plug. For example, with an adjustable 300 Amp rating plug set at 50%, and the short delay pickup set at 4x, the short delay pickup is $300 \times 50\% \times 4 = 600$ Amps.② For high fault current levels, a fixed instantaneous override is provided. The trip level for each rating plug is shown. (Tolerance $\pm 15\%$)

③ The end of the curve is determined by the interrupting rating and/or the specific application.

④ For ground fault time-current characteristics of LCGA and HLCGA, see curve No. SC-3603-81.

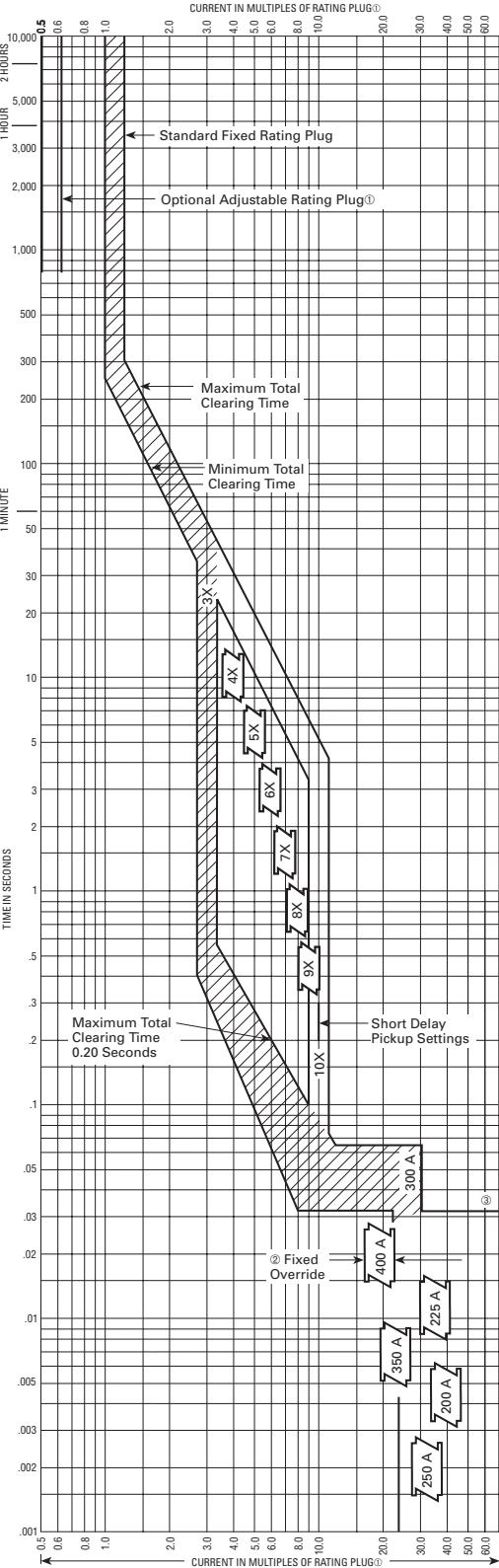


Curve No. SC-3613-81A



AB DE-ION Circuit Breakers

Types LC, LCG; MARK 75 Types HLC, HLCG; 200-400 Amperes, 2-3 Poles



Circuit Breaker Time/Current Curves

Types LC, LCG, HLC, HLCG Breakers, Two and Three Poles
Westinghouse Electric Corporation

Curve accuracy applies from -20°C to +55°C ambient. For possible continuous ampere derating for ambients above +40°C refer to Westinghouse.

Breaker Ratings
Maximum Ac Volts 600, 50/60 Hz

Continuous Amperes	Short Delay Pickup Settings
200-400	3x to 10x rating plug value with calibration settings as shown on curve (Tolerance ±10%)

Interrupting Rating (UL/CSA Listed)

Breaker	Symmetrical RMS Amperes	240 Volts	480 Volts	600 Volts
LC, LCG	42,000	30,000	22,000	
HLC, HLCG	65,000	35,000	25,000	

Rating Plugs Available

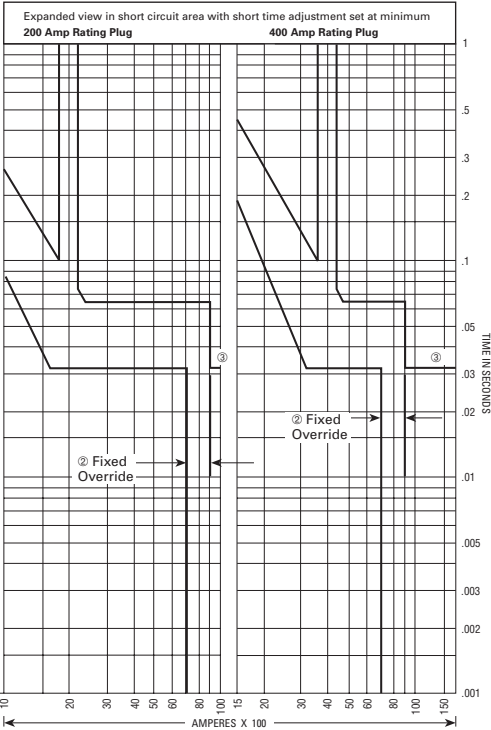
Continuous Amperes	Range of Adjustment
400 Amps	Fixed 100%
400 Amps	50 - 100% ①
350 Amps	Fixed 100%
350 Amps	70 - 100% ①
300 Amps	Fixed 100%
300 Amps	70 - 100% ①
250 Amps	Fixed 100%
225 Amps	Fixed 100%
200 Amps	Fixed 100%

① When adjustable rating plugs are used, short delay pickup settings track the selected position of the adjustable rating plug. For example, with an adjustable 400 Amp rating plug set at 50%, and the short delay pickup set at 4x, the short delay pickup is 400 x 50% x 4 = 800 Amps.

② For high fault current levels, a fixed instantaneous override is provided. The trip level for each rating plug is shown. (Tolerance ±15%)

③ The end of the curve is determined by the interrupting rating and/or the specific application.

④ For ground fault time-current characteristics of LCG and HLCG, see curve No. SC-3603-81.

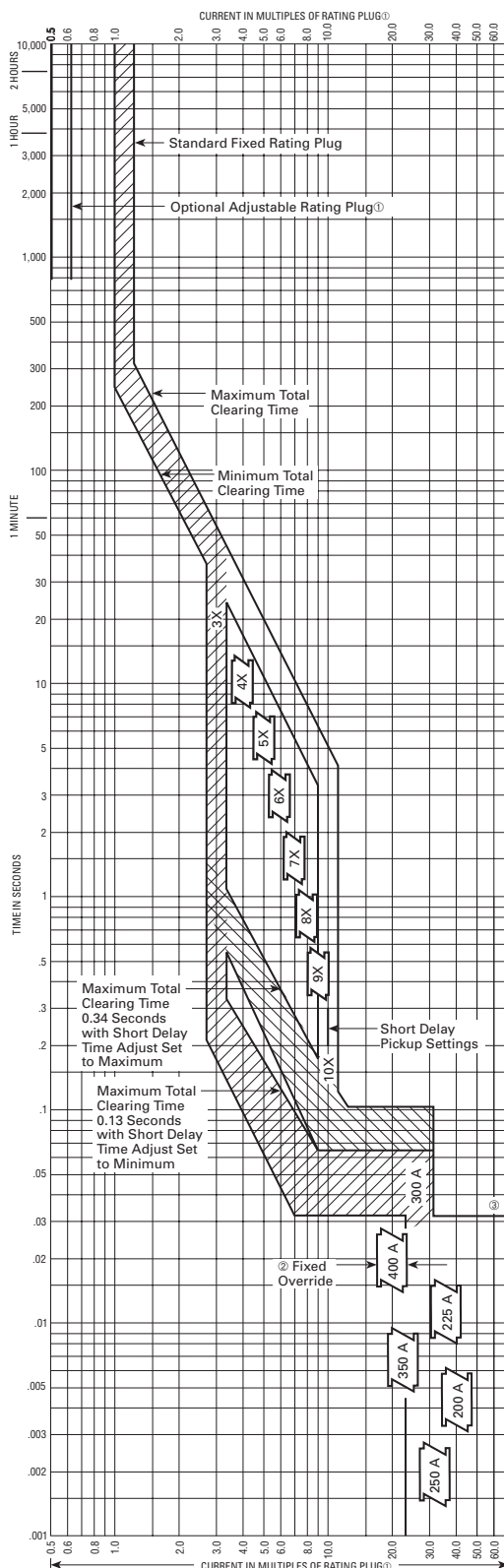


Curve No. SC-3611-81A



AB DE-ION Circuit Breakers

Types LCA, LCGA; MARK 75 Types HLCA, HLCGA; 200-400 Amperes, 2-3 Poles



Circuit Breaker Time/Current Curves

Types LCA, LCGA, HLCA, HLCGA Breakers, Two and Three Poles
Westinghouse Electric Corporation

Curve accuracy applies from -20°C to +55°C ambient. For possible continuous ampere derating for ambients above +40°C refer to Westinghouse.

Breaker Ratings
Maximum Ac Volts 600, 50/60 Hz

Continuous Amperes	Short Delay Pickup Settings
200-400	3x to 10x rating plug value with calibration settings as shown on curve (Tolerance $\pm 10\%$)

Interrupting Rating (UL/CSA Listed)

Breaker	Symmetrical RMS Amperes	600 Volts
Frame	240 Volts	480 Volts
LCA, LCGA	42,000	30,000
HLCA, HLCGA	65,000	35,000

Rating Plugs Available

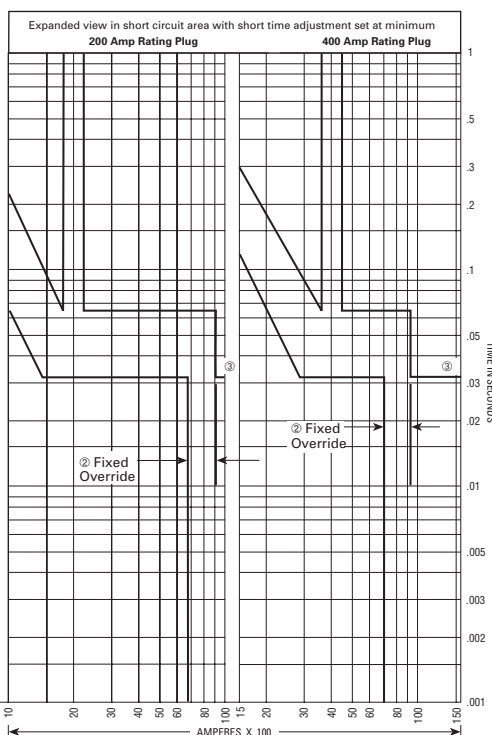
Continuous Amperes	Range of Adjustment
400 Amps	Fixed 100%
400 Amps	50 - 100% ①
350 Amps	Fixed 100%
350 Amps	70 - 100% ①
300 Amps	Fixed 100%
300 Amps	70 - 100% ①
250 Amps	Fixed 100%
225 Amps	Fixed 100%
200 Amps	Fixed 100%

① When adjustable rating plugs are used, short delay pickup settings track the selected position of the adjustable rating plug. For example, with an adjustable 400 Amp rating plug set at 50%, and the short delay pickup set at 4x, the short delay pickup is $400 \times 50\% \times 4 = 800$ Amps.

② For high fault current levels, a fixed instantaneous override is provided. The trip level for each rating plug is shown. (Tolerance $\pm 15\%$)

③ The end of the curve is determined by the interrupting rating and/or the specific application.

④ For ground fault time-current characteristics of LCGA and HLCGA, see curve No. SC-3603-81.

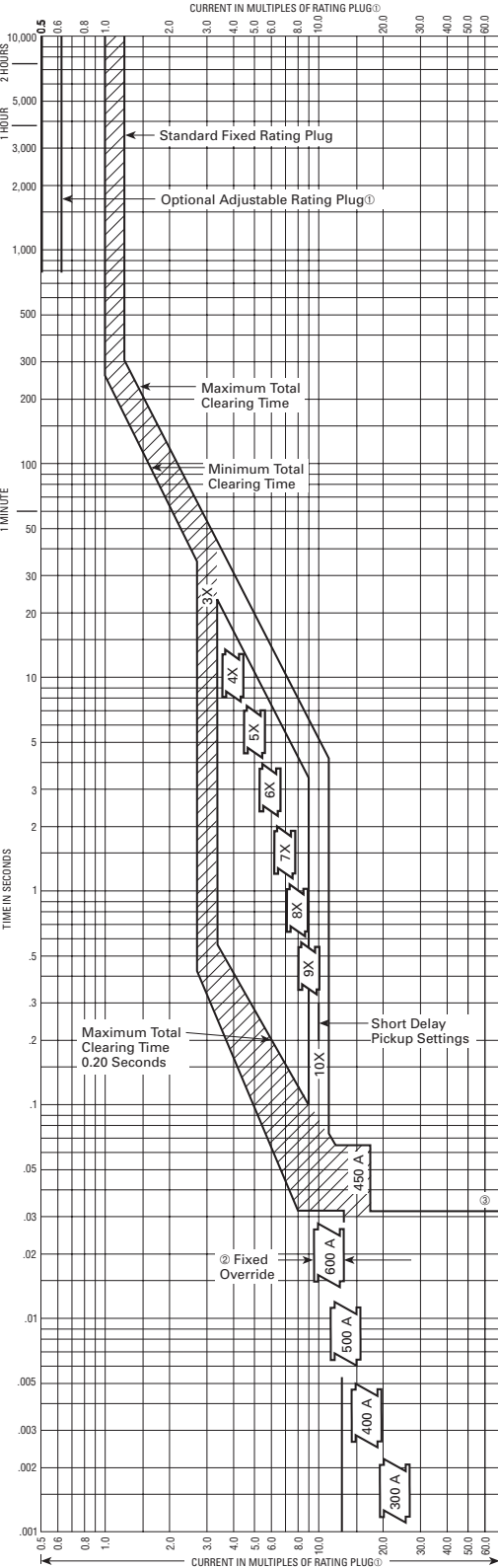


Curve No. SC-3623-81



AB DE-ION Circuit Breakers

Types LCA, LCGA; MARK 75 Types HLCA, HLCGA; 300-600 Amperes, 2-3 Poles



Circuit Breaker Time/Current Curves

Types LC, LCG, HLC, HLCG Breakers, Two and Three Poles
Westinghouse Electric Corporation

Curve accuracy applies from -20°C to +55°C ambient. For possible continuous ampere derating for ambients above +40°C refer to Westinghouse.

Breaker Ratings
Maximum Ac Volts 600, 50/60 Hz

Continuous Amperes	Short Delay Pickup Settings
300-600	3x to 10x rating plug value with calibration settings as shown on curve (Tolerance ±10%)

Interrupting Rating (UL/CSA Listed)

Breaker	Symmetrical RMS Amperes	480 Volts	600 Volts
Frame	240,000	480,000	600,000
LC, LCG	42,000	30,000	22,000
HLC, HLCG	65,000	35,000	25,000

Rating Plugs Available

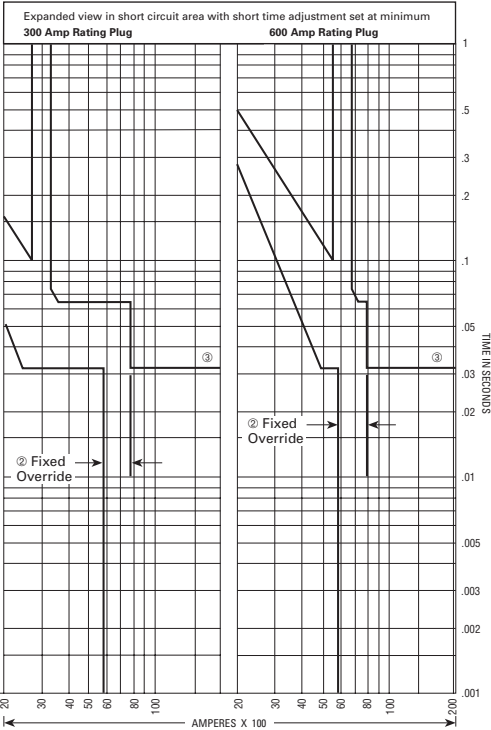
Continuous Amperes	Range of Adjustment
600 Amps	Fixed 100%
600 Amps	50 - 100% ①
500 Amps	Fixed 100%
500 Amps	70 - 100% ①
450 Amps	Fixed 100%
450 Amps	70 - 100% ①
400 Amps	Fixed 100%
400 Amps	75 - 100% ①
350 Amps	Fixed 100%
300 Amps	Fixed 100%

① When adjustable rating plugs are used, short delay pickup settings track the selected position of the adjustable rating plug. For example, with an adjustable 600 Amp rating plug set at 50%, and the short delay pickup set at 4x, the short delay pickup is 600 x 50% x 4 = 1200 Amperes.

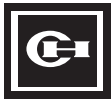
② For high fault current levels, a fixed instantaneous override is provided. The trip level for each rating plug is shown. (Tolerance ±15%)

③ The end of the curve is determined by the interrupting rating and/or the specific application.

④ For ground fault time-current characteristics of LCG and HLCG, see curve No. SC-3603-81.

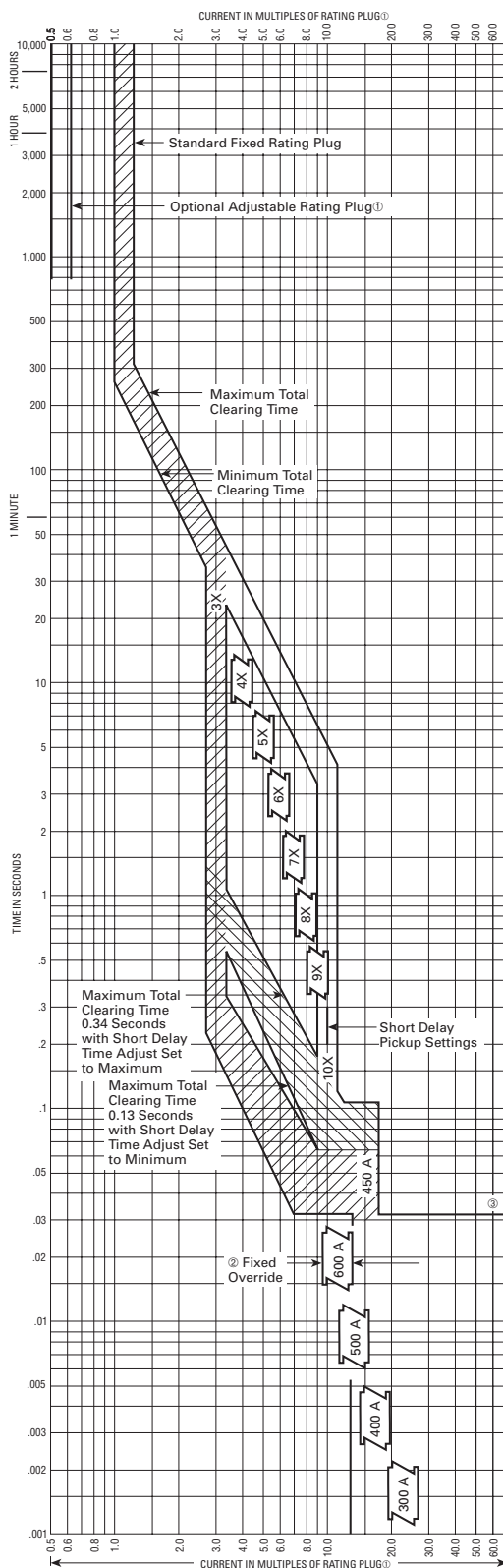


Curve No. SC-3602-81A



AB DE-ION Circuit Breakers

Types LCA, LCGA; MARK 75 Types HLCA, HLCGA; 300-600 Amperes, 2-3 Poles



Circuit Breaker Time/Current Curves

Types LCA, LCGA, HLCA, HLCGA Breakers, Two and Three Poles
Westinghouse Electric Corporation

Curve accuracy applies from -20°C to +55°C ambient. For possible continuous ampere derating for ambients above +40°C refer to Westinghouse.

Breaker Ratings

Maximum Ac Volts 600, 50/60 Hz

Continuous Amperes	Short Delay Pickup Settings
300-600	3x to 10x rating plug value with calibration settings as shown on curve (Tolerance $\pm 10\%$)

Interrupting Rating (UL/CSA Listed)

Breaker	Symmetrical RMS Amperes	600 Volts
Frame	240 Volts	480 Volts
LCA	42,000	30,000
HLCA	65,000	35,000

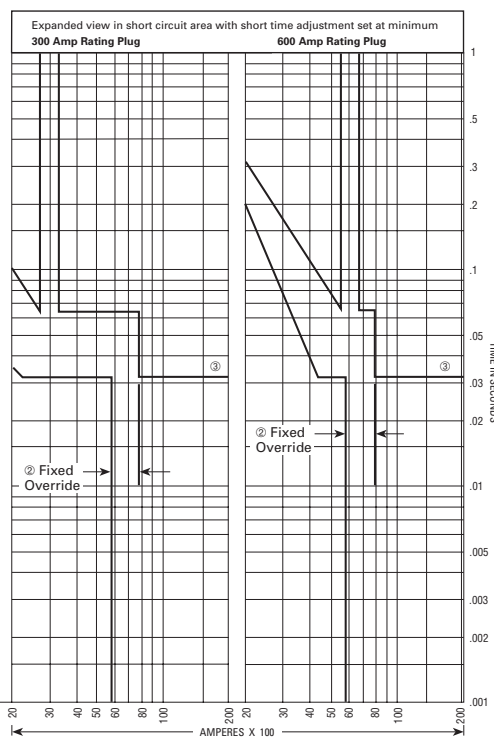
Rating Plugs Available

Continuous Amperes	Range of Adjustment
600 Amps	Fixed 100%
600 Amps	50 - 100% ①
500 Amps	Fixed 100%
500 Amps	70 - 100% ①
450 Amps	Fixed 100%
450 Amps	70 - 100% ①
400 Amps	Fixed 100%
400 Amps	75 - 100% ①
350 Amps	Fixed 100%
300 Amps	Fixed 100%

① When adjustable rating plugs are used, short delay pickup settings track the selected position of the adjustable rating plug. For example, with an adjustable 600 Amp rating plug set at 50%, and the short delay pickup set at 4x, the short delay pickup is $600 \times 50\% \times 4 = 1200$ Amperes.② For high fault current levels, a fixed instantaneous override is provided. The trip level for each rating plug is shown. (Tolerance $\pm 15\%$)

③ The end of the curve is determined by the interrupting rating and/or the specific application.

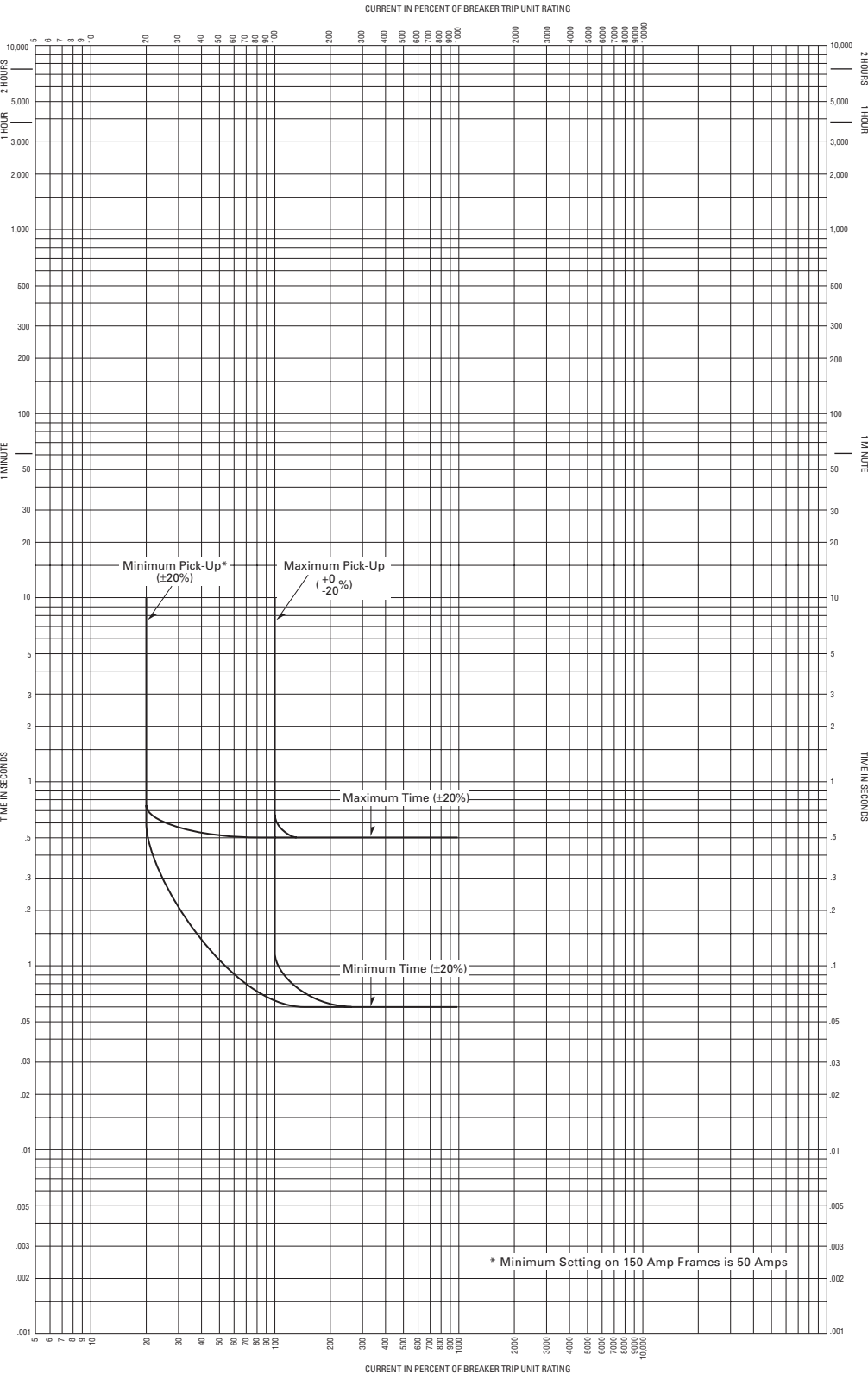
④ For ground fault time-current characteristics of LCGA and HLCGA, see curve No. SC-3603-81.



Curve No. SC-3614-81A



AB DE-ION Circuit Breakers
Types LCG, LCGA, HLCG, HLCGA Ground Fault Pick-up Curves

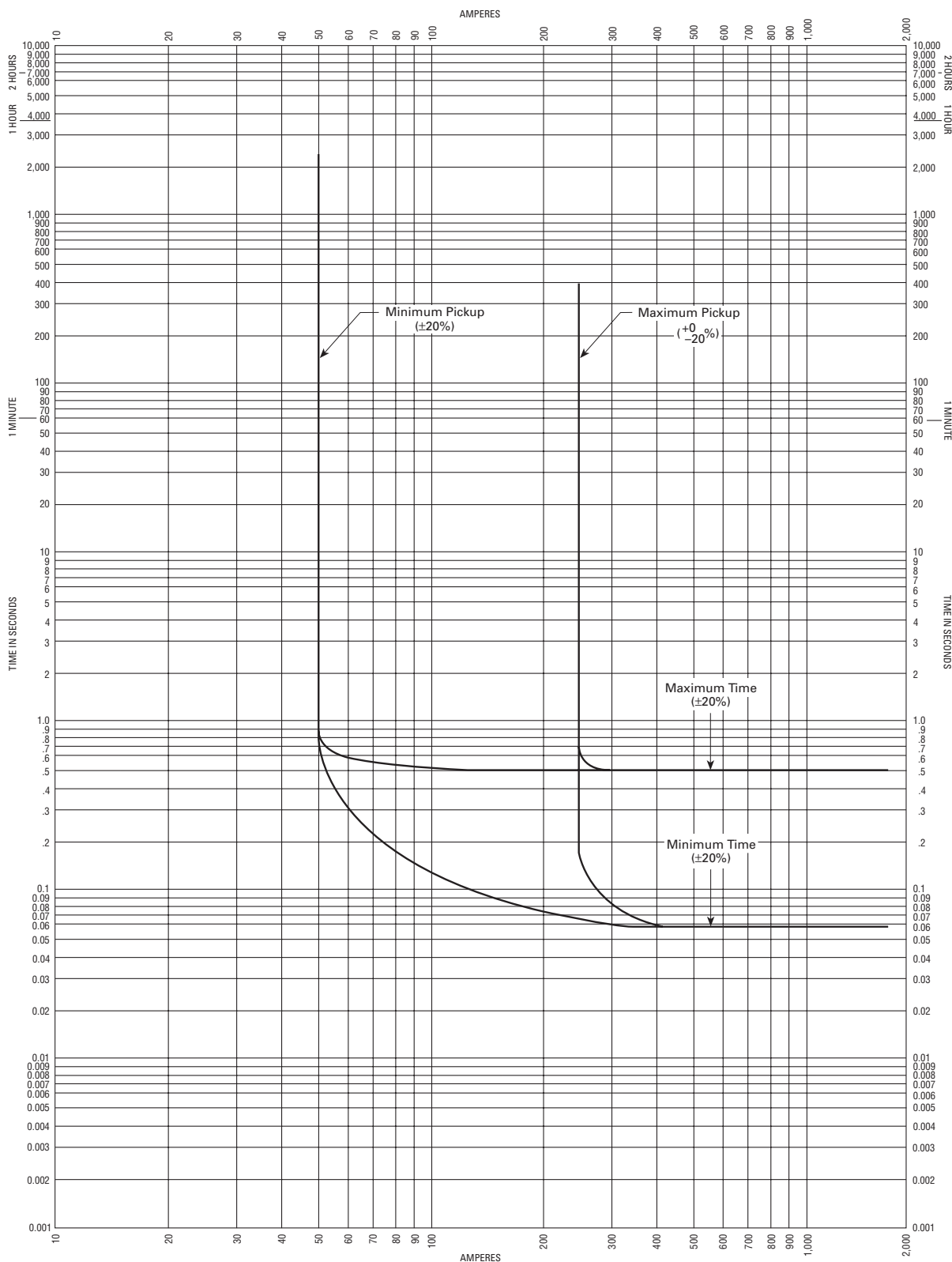


Curve No. SC-3603-81



AB DE-ION Circuit Breakers

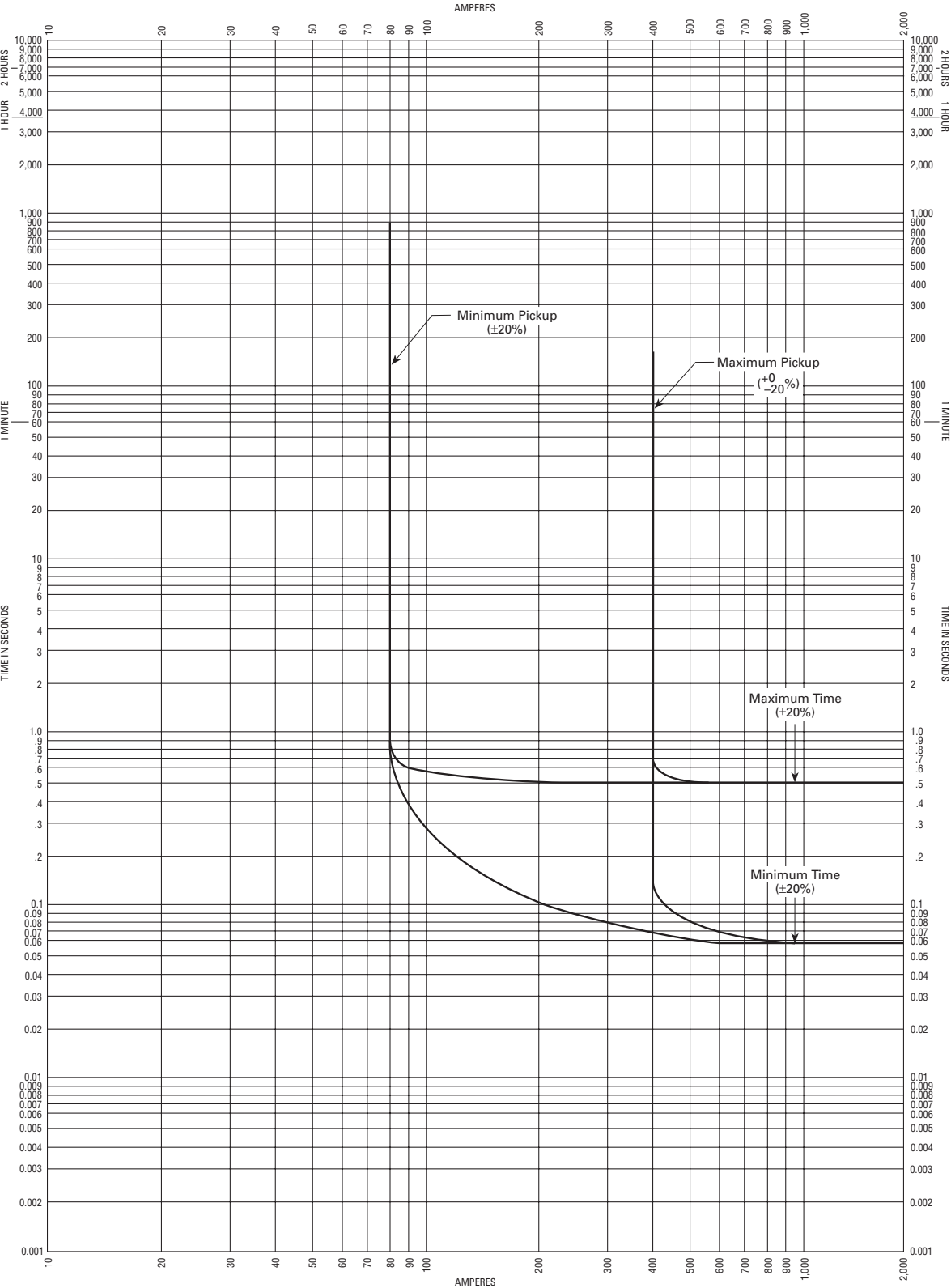
Type LCLG 250 Ground Fault Pick-up Curves



Curve No. SC-4122-87



AB DE-ION Circuit Breakers
Type LCLG 400 Ground Fault Pick-up Curves

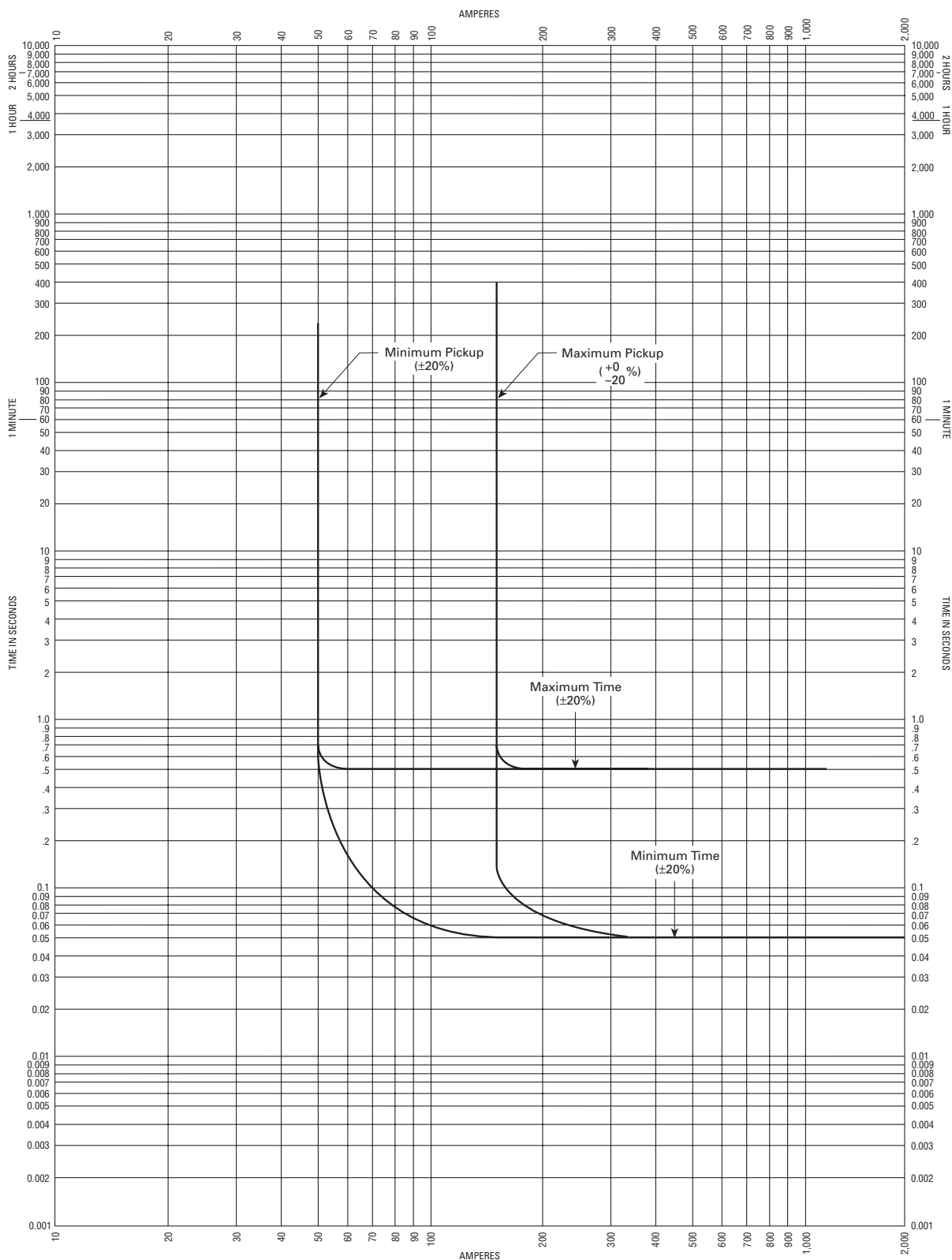


Curve No. SC-4123-87



AB DE-ION Circuit Breakers

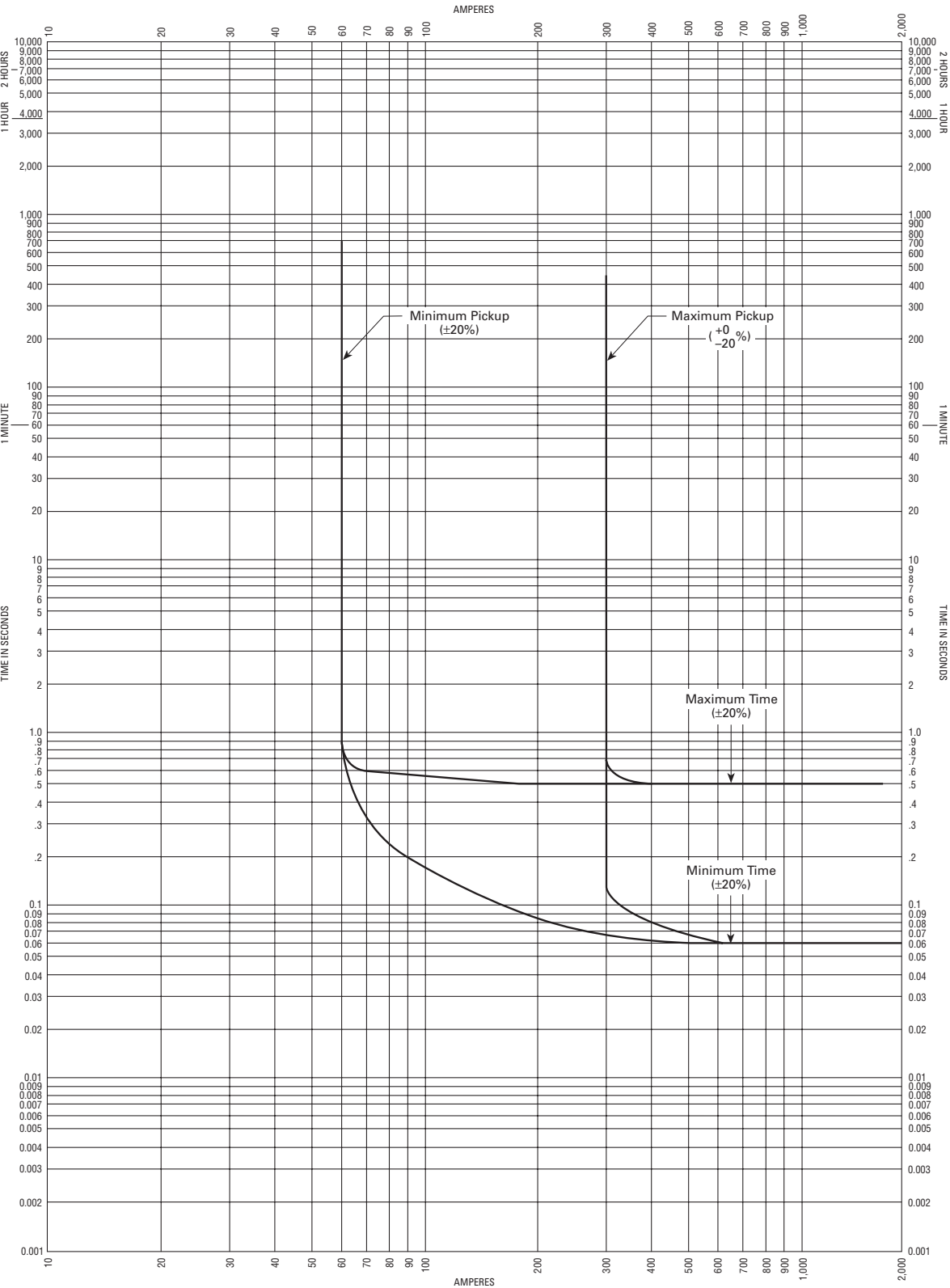
Type LCG 150 Ground Fault Pick-up Curves



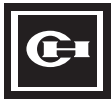
Curve No. SC-4124-87



AB DE-ION Circuit Breakers
Type LCG 300 Ground Fault Pick-up Curves

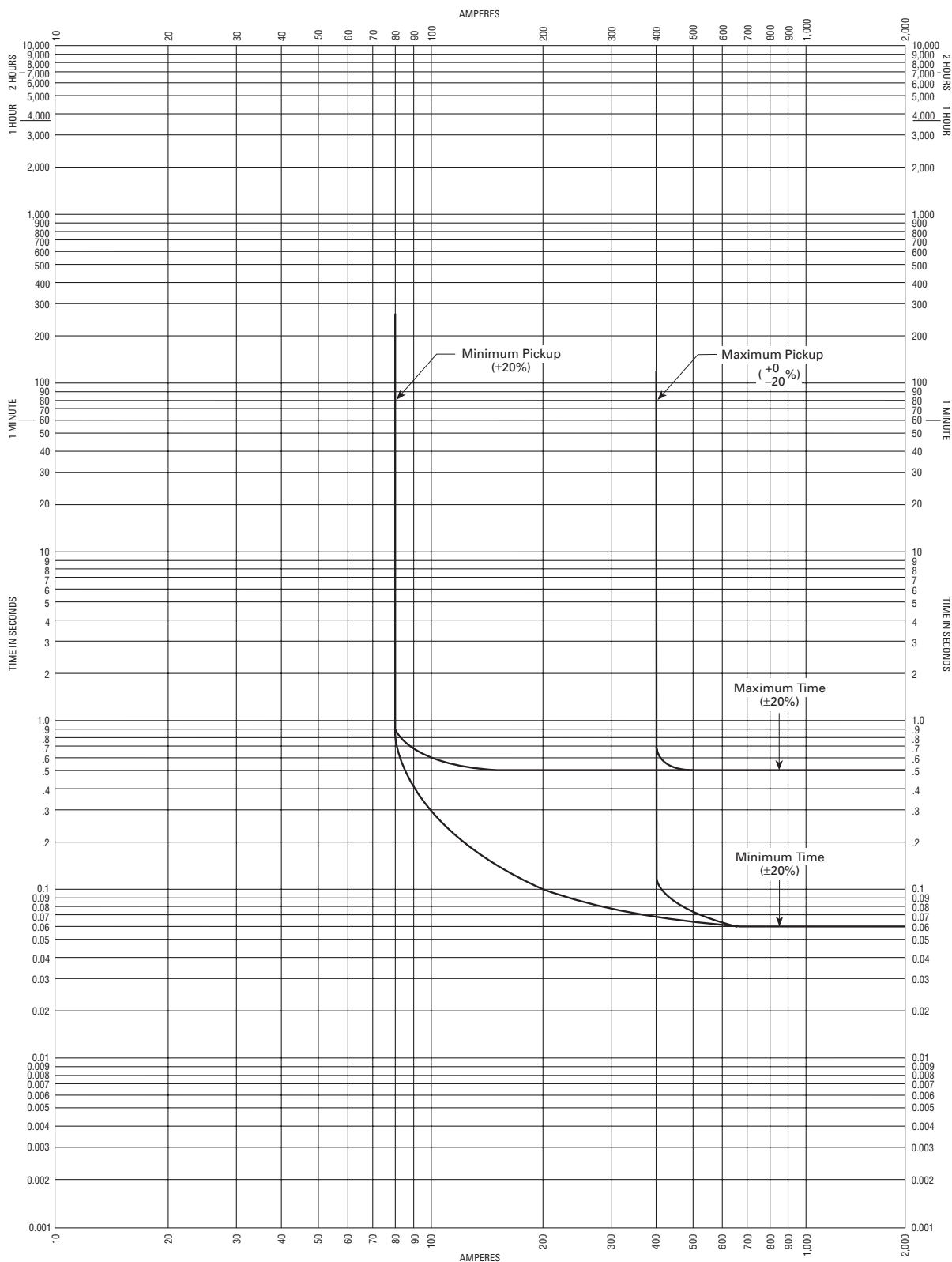


Curve No. SC-4125-87



AB DE-ION Circuit Breakers

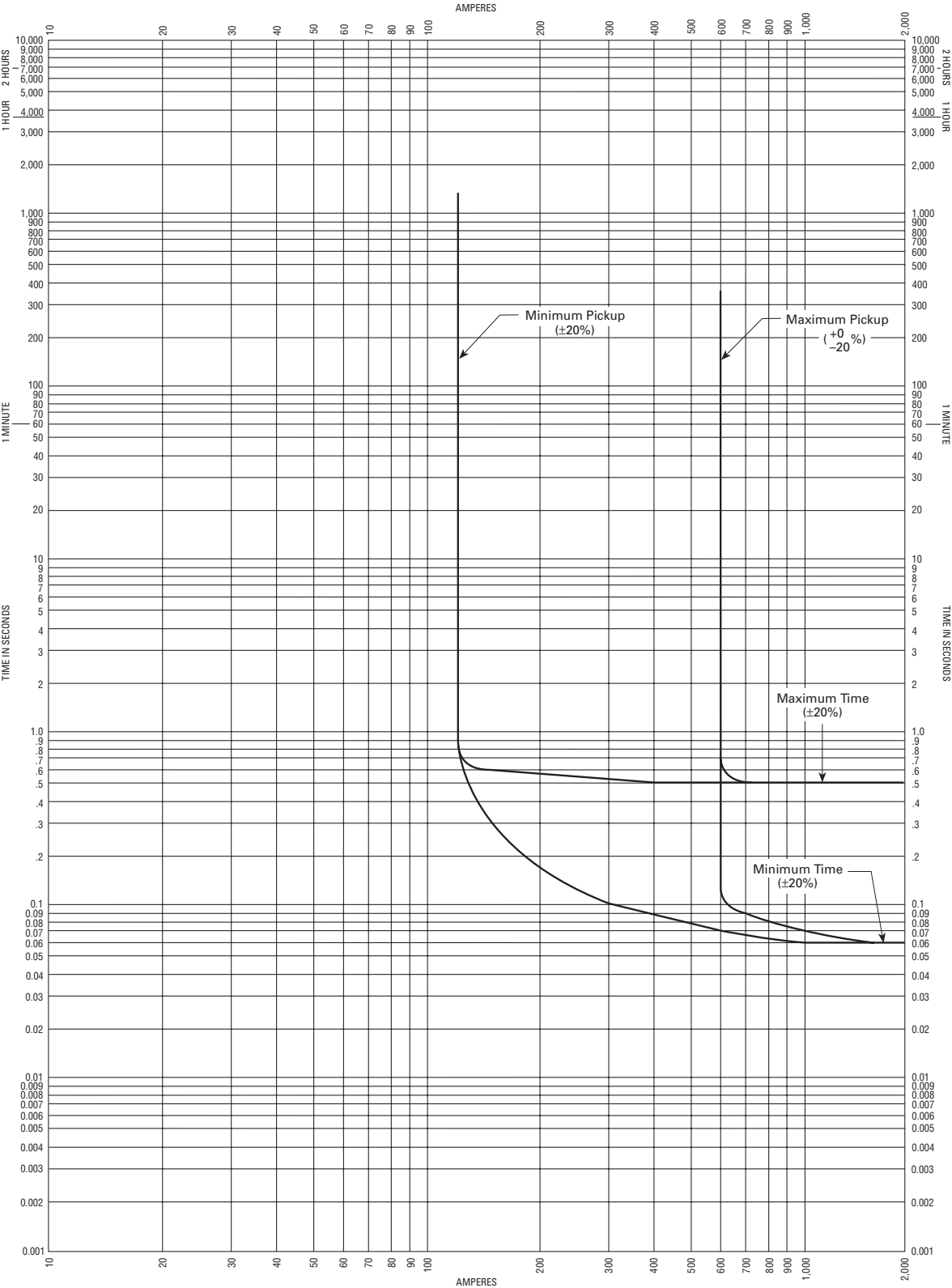
Type LCG 400 Ground Fault Pick-up Curves



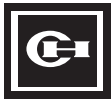
Curve No. SC-4126-87



AB DE-ION Circuit Breakers
Type LCG 600 Ground Fault Pick-up Curves

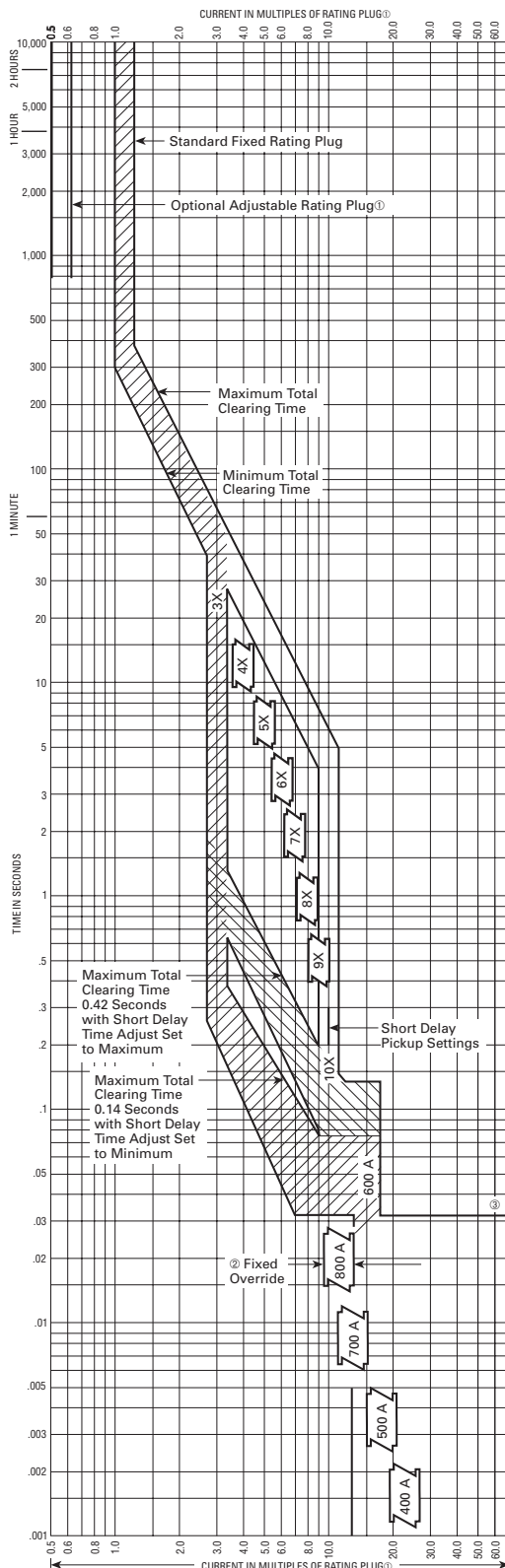


Curve No. SC-4127-87



AB DE-ION Circuit Breakers

Types MCA, MCGA; MARK 75 Types HMCA, HMC GA; 400-800 Amperes, 2-3 Poles



Circuit Breaker Time/Current Curves

Types MCA, MCGA, HMCA, HMC GA Breakers, Two and Three Poles
Westinghouse Electric Corporation

Curve accuracy applies from -20°C to +55°C ambient. For possible continuous ampere derating for ambients above +40°C refer to Westinghouse.

Breaker Ratings
Maximum Ac Volts 600, 50/60 Hz

Continuous Amperes	Short Delay Pickup Settings
400-800	3x to 10x rating plug value with calibration settings as shown on curve (Tolerance $\pm 10\%$)

Interrupting Rating (UL/CSA Listed)

Breaker	Symmetrical RMS Amperes	480 Volts	600 Volts
Frame	240 Volts	480 Volts	600 Volts
MCA	42,000	30,000	22,000
HMCA	65,000	35,000	25,000

Rating Plugs Available

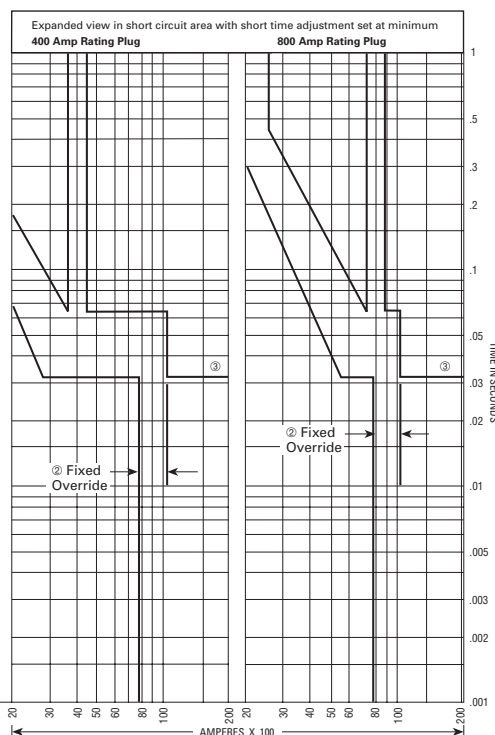
Continuous Amperes	Range of Adjustment
800 Amps	Fixed 100%
800 Amps	50 - 100% ①
700 Amps	Fixed 100%
700 Amps	70 - 100% ①
600 Amps	Fixed 100%
600 Amps	70 - 100% ①
500 Amps	Fixed 100%
500 Amps	80 - 100% ①
400 Amps	Fixed 100%

① When adjustable rating plugs are used, short delay pickup settings track the selected position of the adjustable rating plug. For example, with an adjustable 800 Amp rating plug set at 50%, and the short delay pickup set at 4x, the short delay pickup is $800 \times 50\% \times 4 = 1600$ Amperes.

② For high fault current levels, a fixed instantaneous override is provided. The trip level for each rating plug is shown. (Tolerance $\pm 15\%$)

③ The end of the curve is determined by the interrupting rating and/or the specific application.

④ For ground fault time-current characteristics of MCGA and HMC GA, see curve No. SC-3606-81.

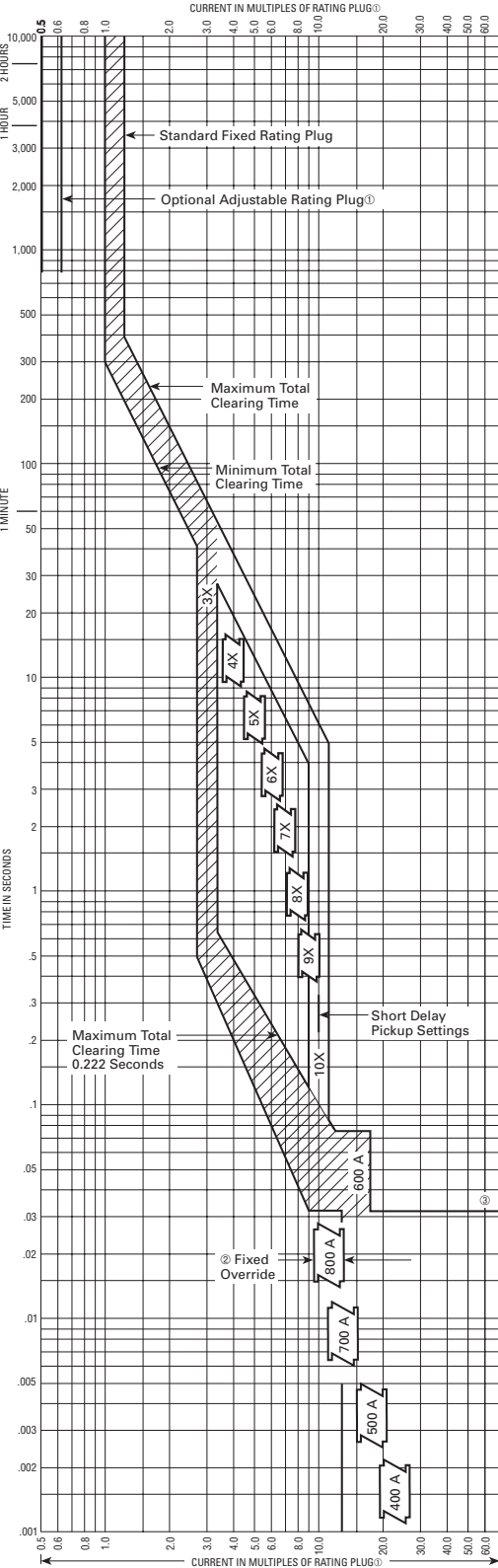


Curve No. SC-3616-81A



AB DE-ION Circuit Breakers

Types MC, MCG; MARK 75 Types HMC, HMCG; 400-800 Amperes, 2-3 Poles



Circuit Breaker Time/Current Curves

Types MC, MCG, HMC, HMCG Breakers, Two and Three Poles
Westinghouse Electric Corporation

Curve accuracy applies from -20°C to +55°C ambient. For possible continuous ampere derating for ambients above +40°C refer to Westinghouse.

Breaker Ratings
Maximum Ac Volts 600, 50/60 Hz

Continuous Amperes	Short Delay Pickup Settings
400-800	3x to 10x rating plug value with calibration settings as shown on curve (Tolerance ±10%)

Interrupting Rating (UL/CSA Listed)

Breaker	Symmetrical RMS Amperes	240 Volts	480 Volts	600 Volts
MC, MCG	42,000	30,000	22,000	
HMC, HMCG	65,000	50,000	25,000	

Rating Plugs Available

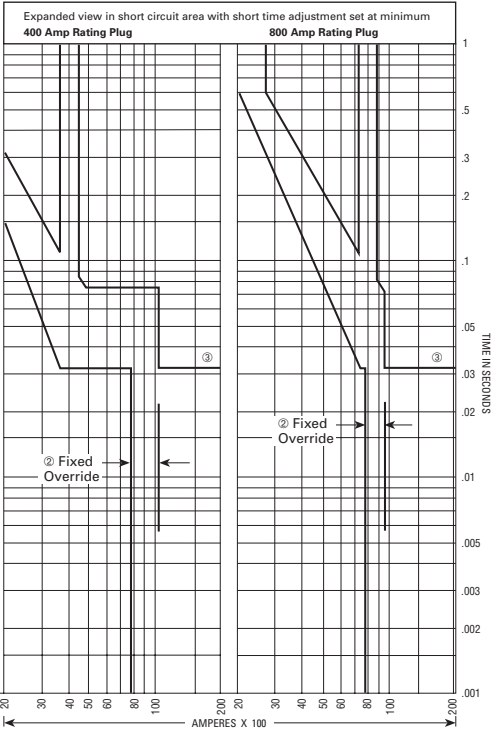
Continuous Amperes	Range of Adjustment
800 Amps	Fixed 100%
800 Amps	50 - 100% ①
700 Amps	Fixed 100%
700 Amps	70 - 100% ①
600 Amps	Fixed 100%
600 Amps	70 - 100% ①
500 Amps	Fixed 100%
500 Amps	80 - 100% ①
400 Amps	Fixed 100%

① When adjustable rating plugs are used, short delay pickup settings track the selected position of the adjustable rating plug. For example, with an adjustable 800 Amp rating plug set at 50%, and the short delay pickup set at 4x, the short delay pickup is 800 x 50% x 4 = 1600 Amps.

② For high fault current levels, a fixed instantaneous override is provided. The trip level for each rating plug is shown. (Tolerance ±15%)

③ The end of the curve is determined by the interrupting rating and/or the specific application.

④ For ground fault time-current characteristics of MCG and HMCG, see curve No. SC-3606-81.

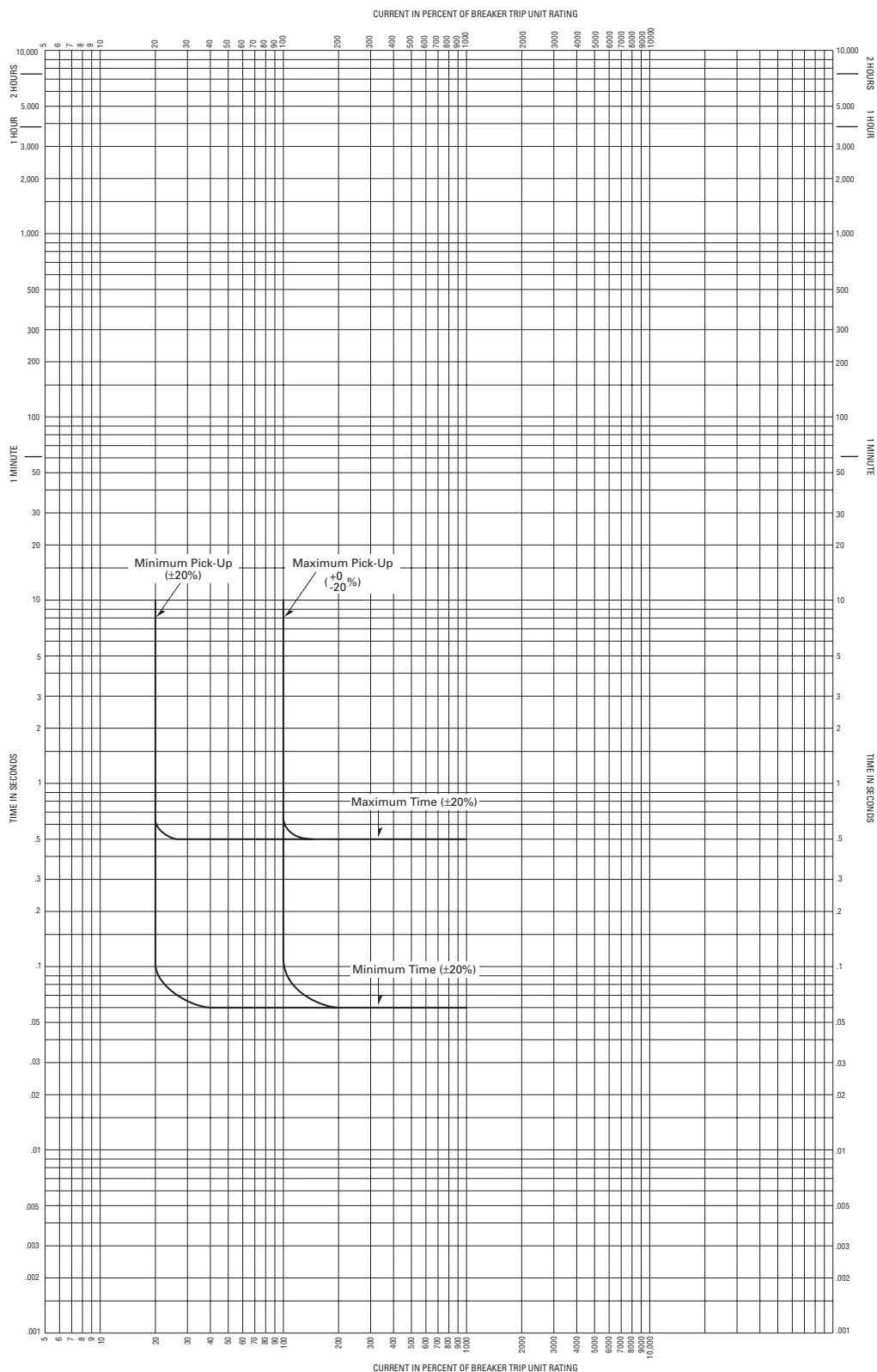


Curve No. SC-3604-81A



AB DE-ION Circuit Breakers

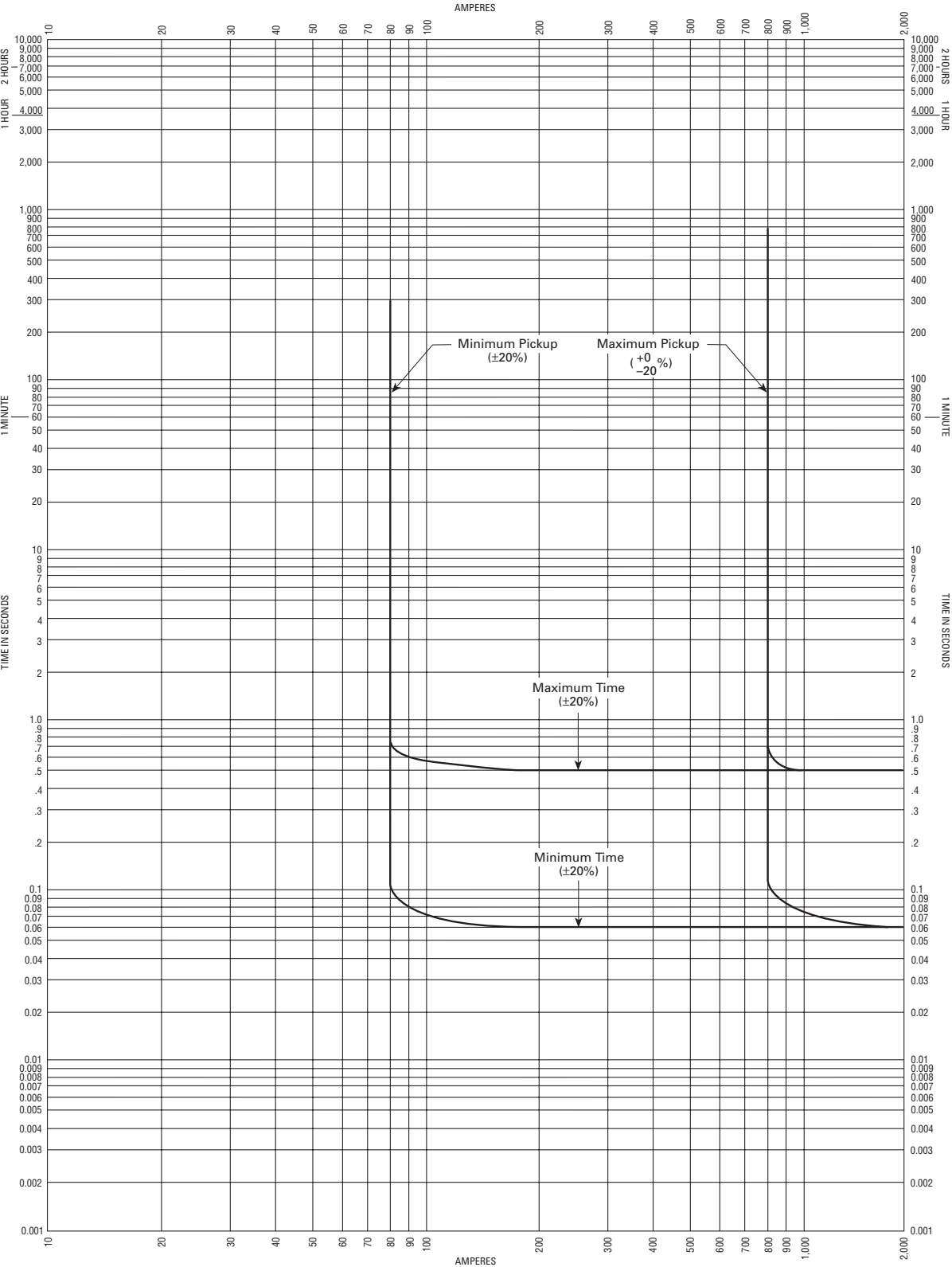
Types MCG, MCGA, HMCg, HMCgA; NCG, NCGA, HNCg, HNCgA Ground Fault Pick-up Curves



Curve No. SC-3606-81



AB DE-ION Circuit Breakers
Type MCG 800 Ground Fault Pick-up Curves

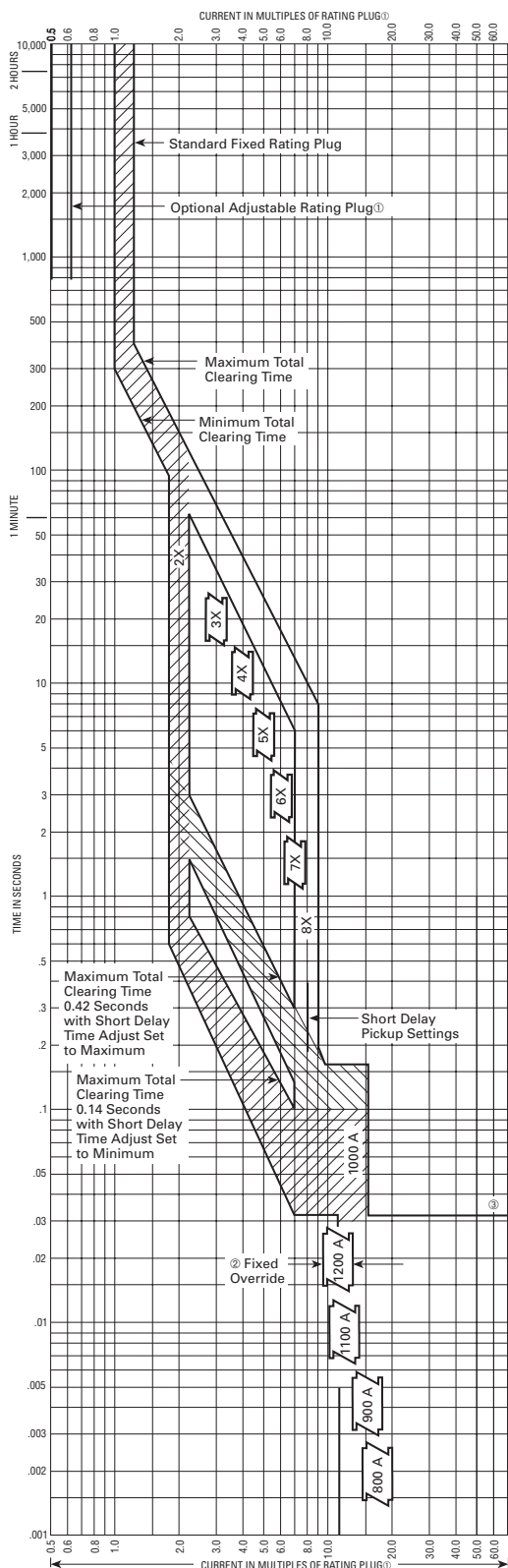


Curve No. SC-4128-87



AB DE-ION Circuit Breakers

Types NCA, NCGA; MARK 75 Types HNCA, HNCGA; 800-1200 Amperes, 2-3 Poles



Circuit Breaker Time/Current Curves

Types NCA, NCGA, HNCA, HNCGA Breakers, Two and Three Poles
Westinghouse Electric Corporation

Curve accuracy applies from -20°C to +55°C ambient. For possible continuous ampere derating for ambients above +40°C refer to Westinghouse.

Breaker Ratings
Maximum Ac Volts 600, 50/60 Hz

Continuous Amperes	Short Delay Pickup Settings
800-1200	2x to 8x rating plug value with calibration settings as shown on curve (Tolerance $\pm 10\%$)

Interrupting Rating (UL/CSA Listed)

Breaker	Symmetrical RMS Amperes	600 Volts
Frame	240 Volts	480 Volts
NCA	42,000	30,000
HNCA	65,000	50,000

Rating Plugs Available

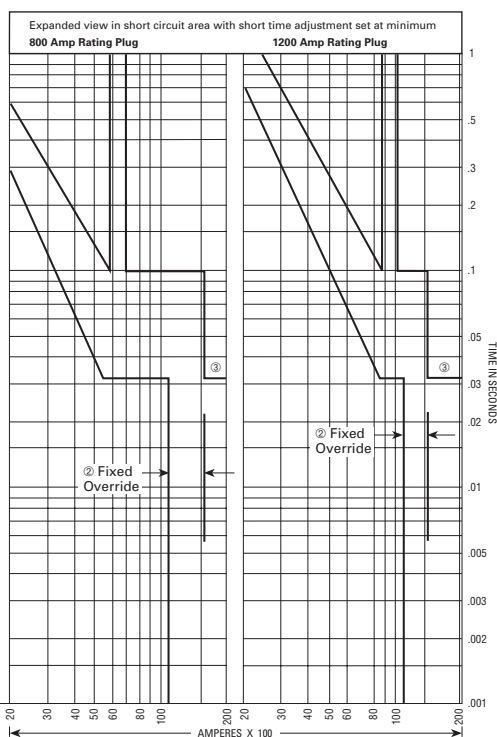
Continuous Amperes	Range of Adjustment
1200 Amps	Fixed 100% ①
1200 Amps	50 - 100% ①
1100 Amps	Fixed 100% ①
1100 Amps	70 - 100% ①
1000 Amps	Fixed 100% ①
1000 Amps	70 - 100% ①
900 Amps	Fixed 100% ①
900 Amps	70 - 100% ①
800 Amps	Fixed 100% ①
800 Amps	75 - 100% ①

① When adjustable rating plugs are used, short delay pickup settings track the selected position of the adjustable rating plug. For example, with an adjustable 1200 Amp rating plug set at 50%, and the short delay pickup set at 4x, the short delay pickup is $1200 \times 50\% \times 4 = 2400$ Amperes.

② For high fault current levels, a fixed instantaneous override is provided. The trip level for each rating plug is shown. (Tolerance $\pm 15\%$)

③ The end of the curve is determined by the interrupting rating and/or the specific application.

④ For ground fault time-current characteristics of NCA and HNCA, see curve No. SC-3606-81.

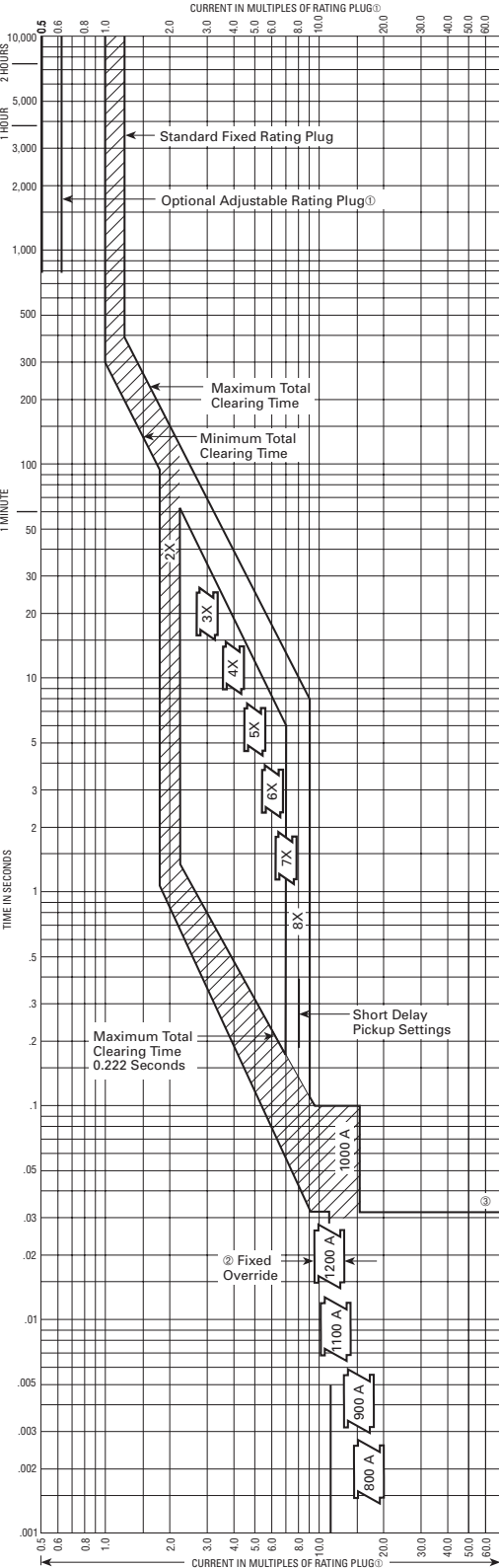


Curve No. SC-3617-81A



AB DE-ION Circuit Breakers

Types NC, NCG; MARK 75 Types HNC, HNCG; 800-1200 Amperes, 2-3 Poles



Circuit Breaker Time/Current Curves

Types NC, NCG, HNC, HNCG Breakers, Two and Three Poles
Westinghouse Electric Corporation

Curve accuracy applies from -20°C to +55°C ambient. For possible continuous ampere derating for ambients above +40°C refer to Westinghouse.

Breaker Ratings
Maximum Ac Volts 600, 50/60 Hz

Continuous Amperes	Short Delay Pickup Settings
800-1200	2x to 8x rating plug value with calibration settings as shown on curve (Tolerance ±10%)

Interrupting Rating (UL/CSA Listed)

Breaker	Symmetrical RMS Amperes	600 Volts
Frame	240 Volts	480 Volts
NC, NCG	42,000	30,000
HNC, HNCG	65,000	50,000

Rating Plugs Available

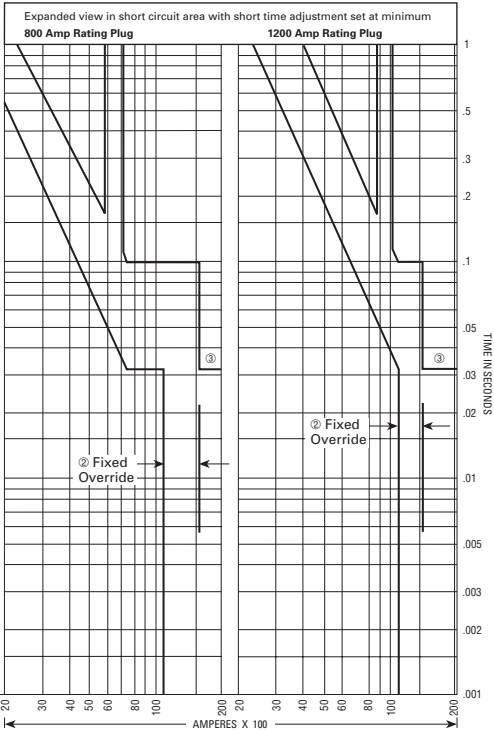
Continuous Amperes	Range of Adjustment
1200 Amps	Fixed 100%
1200 Amps	50 - 100% ①
1100 Amps	Fixed 100%
1100 Amps	70 - 100% ①
1000 Amps	Fixed 100%
1000 Amps	70 - 100% ①
900 Amps	Fixed 100%
900 Amps	70 - 100% ①
800 Amps	Fixed 100%
800 Amps	75 - 100% ①

① When adjustable rating plugs are used, short delay pickup settings track the selected position of the adjustable rating plug. For example, with an adjustable 1200 Amp rating plug set at 50%, and the short delay pickup set at 4x, the short delay pickup is 1200 x 50% x 4 = 2400 Amperes.

② For high fault current levels, a fixed instantaneous override is provided. The trip level for each rating plug is shown. (Tolerance ±15%)

③ The end of the curve is determined by the interrupting rating and/or the specific application.

④ For ground fault time-current characteristics of NCG and HNCG, see curve No. SC-3606-61.

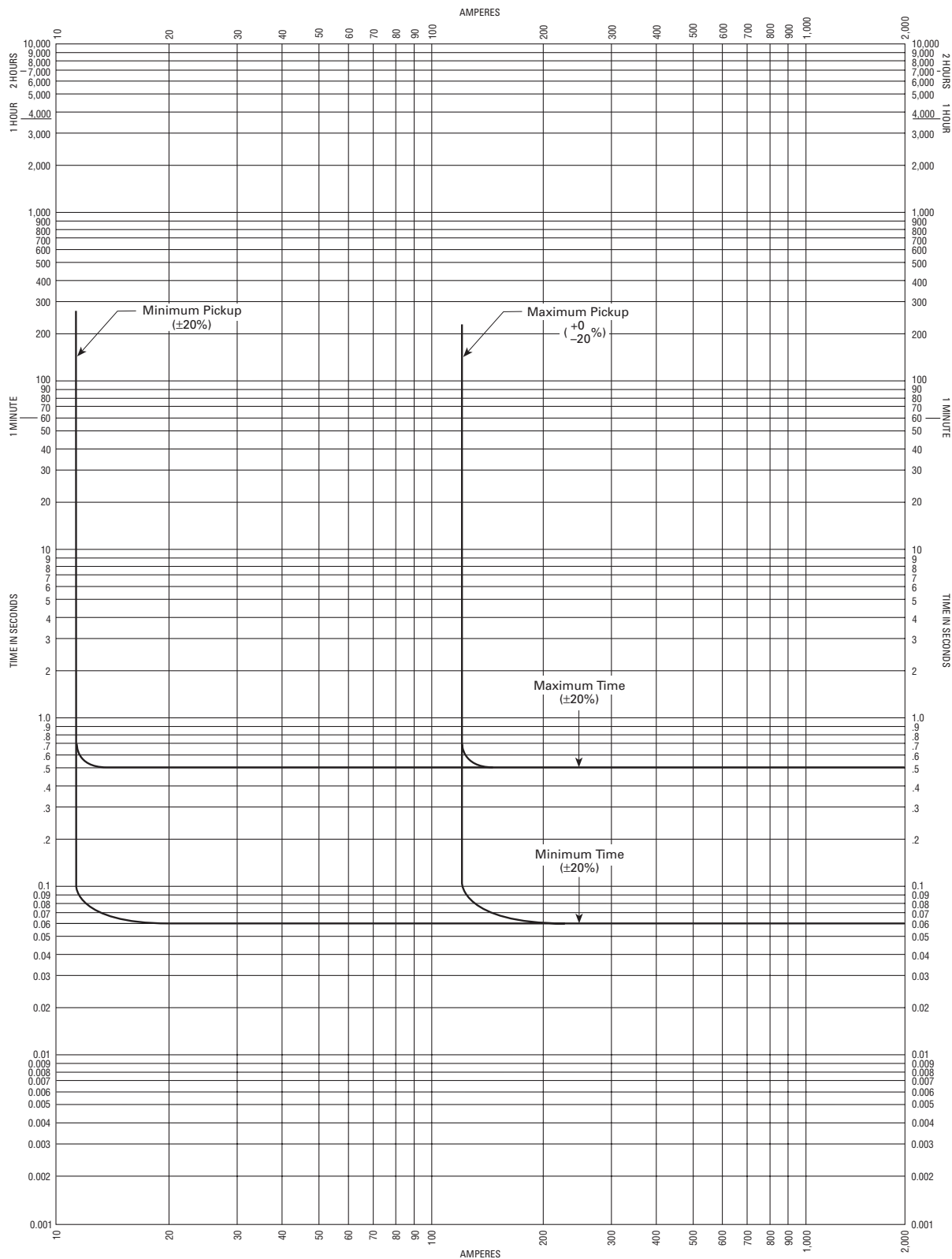


Curve No. SC-3605-81A



AB DE-ION Circuit Breakers

Type NCG 1200 Ground Fault Pick-up Curves

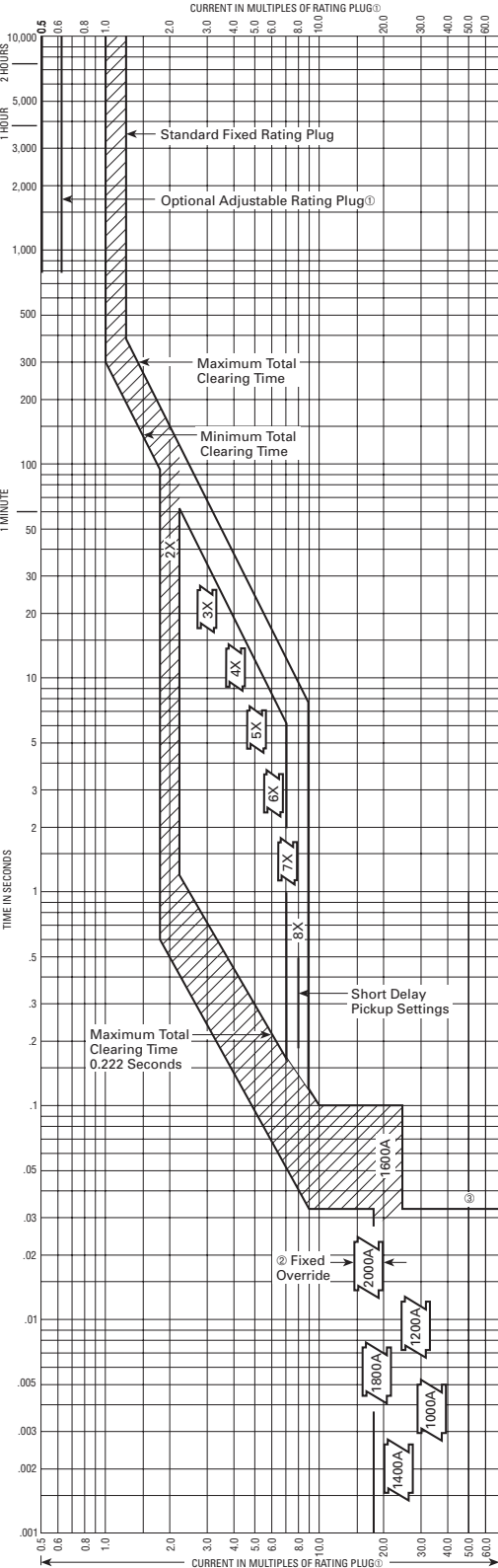


Curve No. SC-4129-87



AB DE-ION Circuit Breakers

Types PC, PCC, PCG, PCCG, PCF, PCCF, PCFG, PCCFG; 1000-2000 Amperes, 2-3 Poles



Circuit Breaker Time/Current Curves

Types PC, PCC, PCG, PCCG, PCF, PCCF, PCFG, PCCFG Breakers, Two and Three Poles
Westinghouse Electric Corporation

Curve accuracy applies from -20°C to +55°C ambient. For possible continuous ampere derating for ambients above +40°C refer to Westinghouse.

Breaker Ratings
Maximum Ac Volts 600, 50/60 Hz

Continuous Amperes	Short Delay Pickup Settings
1000-2000	2x to 8x rating plug value with calibration settings as shown on curve (Tolerance ±10%)

Interrupting Rating (UL/CSA Listed)

Breaker	Symmetrical RMS Amperes		
Frame	240 Volts	480 Volts	600 Volts
All above	125,000	100,000	100,000

Rating Plugs Available

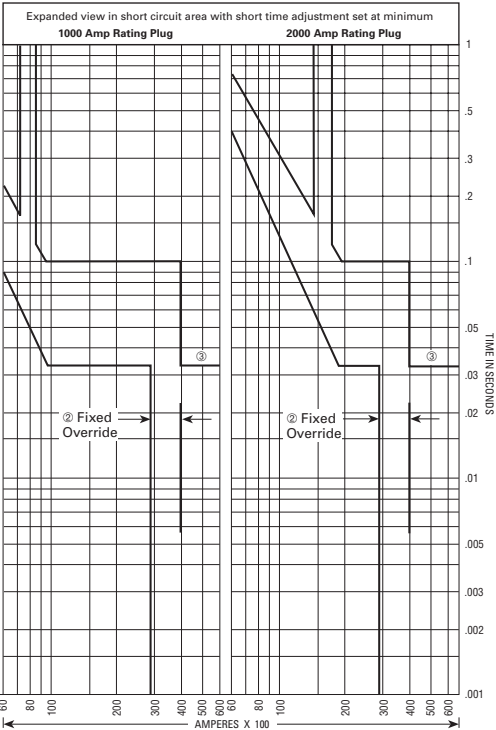
Continuous Amperes	Range of Adjustment
2000 Amps	Fixed 100%
2000 Amps	50 - 100% ①
1800 Amps	Fixed 100%
1800 Amps	70 - 100% ①
1600 Amps	Fixed 100%
1600 Amps	70 - 100% ①
1400 Amps	Fixed 100%
1200 Amps	Fixed 100%
1000 Amps	Fixed 100%

① When adjustable rating plugs are used, short delay pickup settings track the selected position of the adjustable rating plug. For example, with an adjustable 2000 Amp rating plug set at 50%, and the short delay pickup set at 4x, the short delay pickup is 2000 x 50% x 4 = 4000 Amps.

② For high fault current levels, a fixed instantaneous override is provided. The trip level for each rating plug is shown. (Tolerance ±15%)

③ The end of the curve is determined by the interrupting rating and/or the specific application.

④ For ground fault time-current characteristics of PCG, PCCG, PCFG, and PCCFG, see curve No. SC-3610-81.

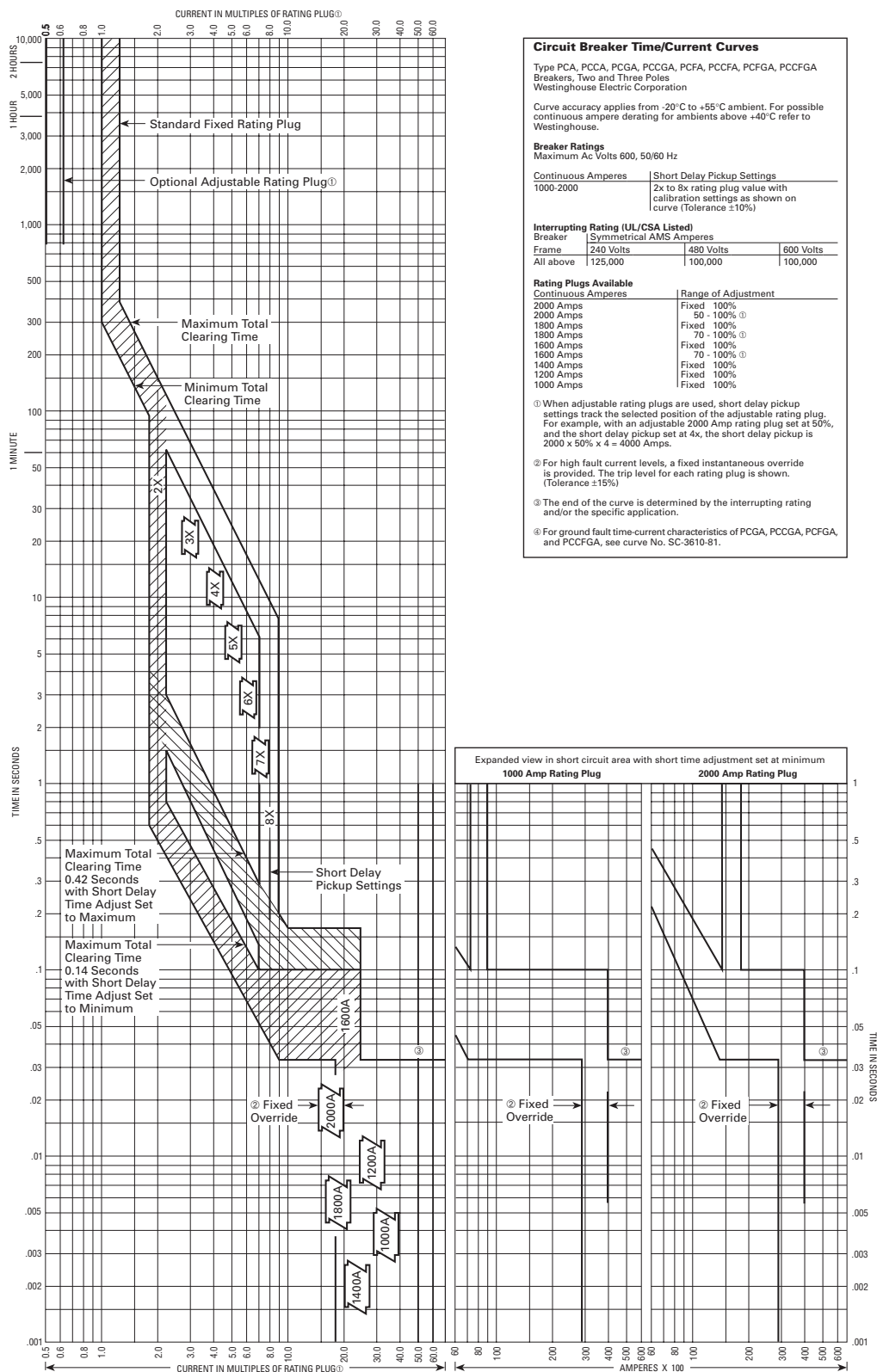


Curve No. SC-3607-81A



AB DE-ION Circuit Breakers

Types PCA, PCCA, PCGA, PCCGA, PCFA, PCCFA, PCFGA, PCCFGA; 1000-2000 Amperes, 2-3 Poles

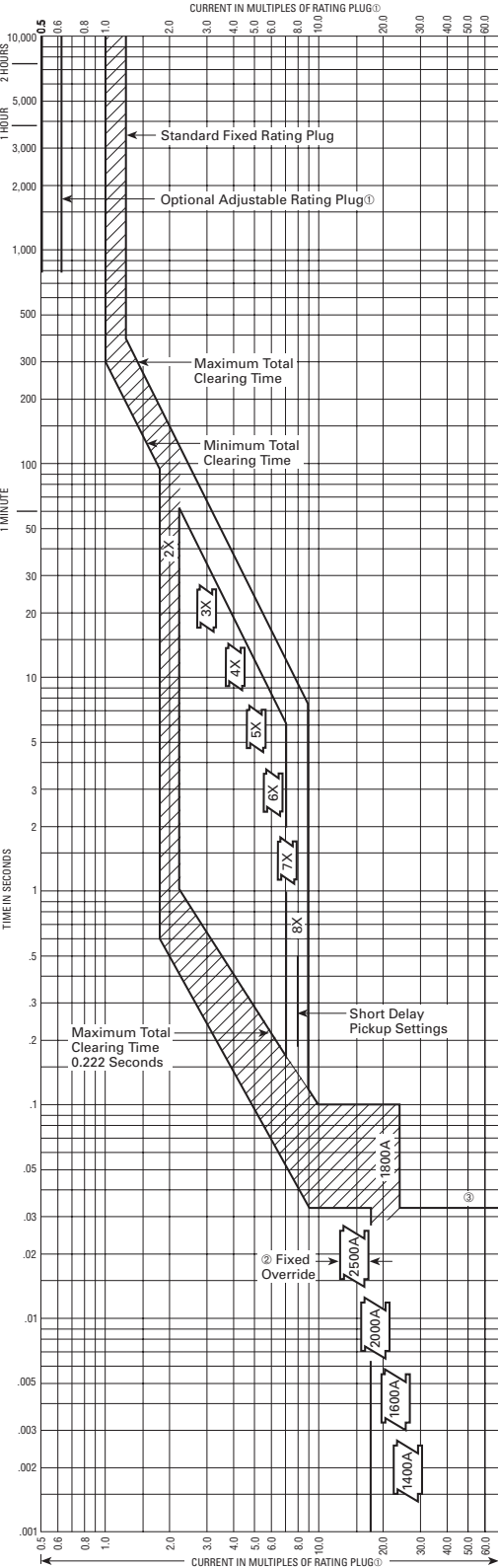


Curve No. SC-3619-81A



AB DE-ION Circuit Breakers

Types PC, PCC, PCG, PCCG, PCF, PCCF, PCFG, PCCFG; 1400-2500 Amperes, 2-3 Poles



Circuit Breaker Time/Current Curves

Types PC, PCC, PCG, PCCG, PCF, PCCF, PCFG, PCCFG Breakers, Two and Three Poles
Westinghouse Electric Corporation

Curve accuracy applies from -20°C to +55°C ambient. For possible continuous ampere derating for ambients above +40°C refer to Westinghouse.

Breaker Ratings
Maximum Ac Volts 600, 50/60 Hz

Continuous Amperes	Short Delay Pickup Settings
1400-2500	2x to 8x rating plug value with calibration settings as shown on curve (Tolerance ±10%)

Interrupting Rating (UL/CSA Listed)

Breaker	Symmetrical RMS Amperes
Frame	240 Volts
All above	125,000
	480 Volts
	100,000
	600 Volts
	100,000

Rating Plugs Available

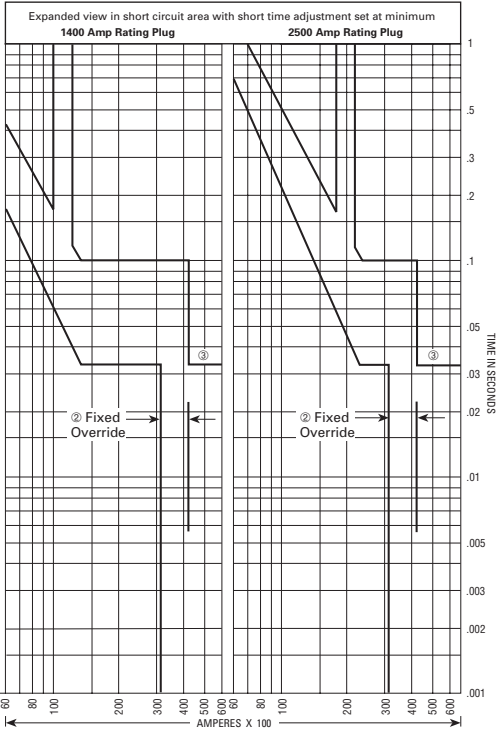
Continuous Amperes	Range of Adjustment
2500 Amps	Fixed 100%
2500 Amps	50 - 100% ①
2000 Amps	Fixed 100%
2000 Amps	70 - 100% ①
1800 Amps	Fixed 100%
1800 Amps	70 - 100% ①
1600 Amps	Fixed 100%
1400 Amps	Fixed 100%

① When adjustable rating plugs are used, short delay pickup settings track the selected position of the adjustable rating plug. For example, with an adjustable 2500 Amp rating plug set at 50%, and the short delay pickup set at 4x, the short delay pickup is 2500 x 50% x 4 = 5000 Amps.

② For high fault current levels, a fixed instantaneous override is provided. The trip level for each rating plug is shown. (Tolerance ±15%)

③ The end of the curve is determined by the interrupting rating and/or the specific application.

④ For ground fault time-current characteristics of PCG, PCCG, PCFG, and PCCFG, see curve No. SC-3610-81.

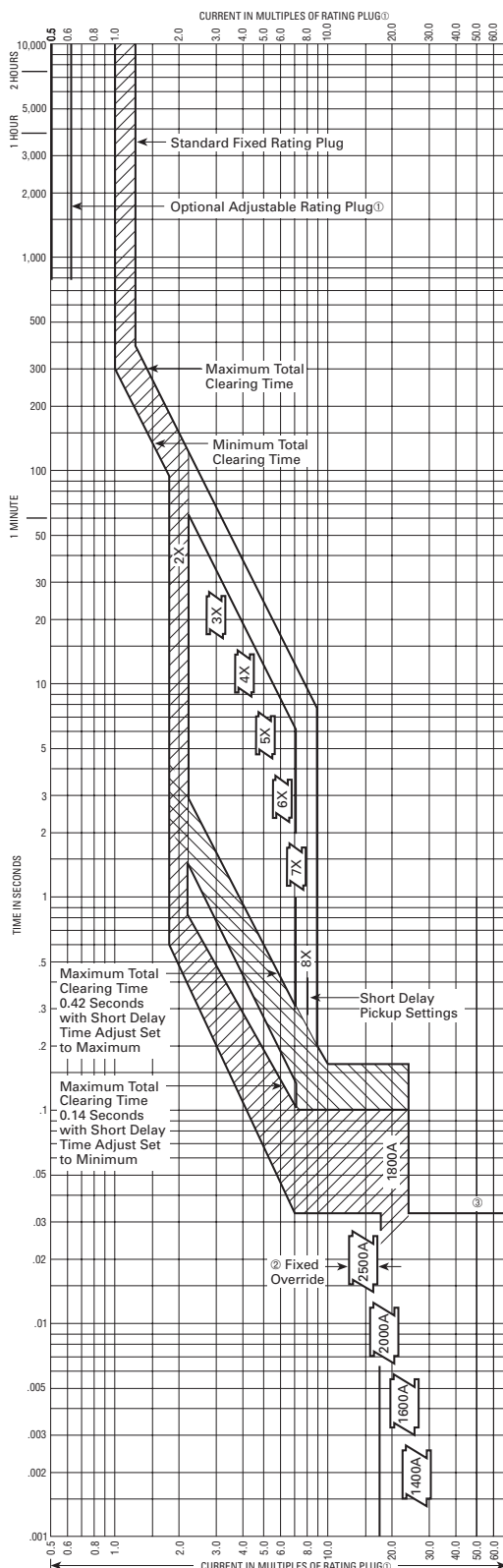


Curve No. SC-3608-81A

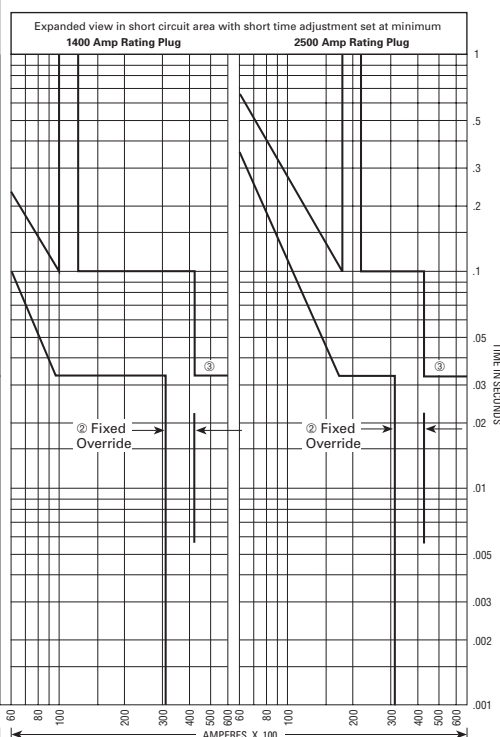


AB DE-ION Circuit Breakers

Types PCA, PCCA, PCGA, PCCGA, PCFA, PCCFA, PCFGA, PCCFGA; 1400-2500 Amperes, 2-3 Poles



Circuit Breaker Time/Current Curves	
Types PCA, PCCA, PCGA, PCCGA, PCFA, PCCFA, PCFGA, PCCFGA Breakers, Two and Three Poles Westinghouse Electric Corporation	
Curve accuracy applies from -20°C to +55°C ambient. For possible continuous ampere derating for ambients above +40°C refer to Westinghouse.	
Breaker Ratings Maximum Ac Volts 600, 50/60 Hz	
Continuous Amperes	Short Delay Pickup Settings
1400-2500	2x to 8x rating plug value with calibration settings as shown on curve (Tolerance ±10%)
Interrupting Rating (UL/CSA Listed)	
Breaker	Symmetrical RMS Amperes
Frame	240 Volts 480 Volts 600 Volts
All above	125,000 100,000 100,000
Rating Plugs Available	
Continuous Amperes	Range of Adjustment
2500 Amps	Fixed 100%
2500 Amps	50 - 100% ①
2000 Amps	Fixed 100%
2000 Amps	70 - 100% ①
1800 Amps	Fixed 100%
1800 Amps	70 - 100% ①
1600 Amps	Fixed 100%
1600 Amps	70 - 100% ①
1400 Amps	Fixed 100%
1400 Amps	70 - 100% ①
① When adjustable rating plugs are used, short delay pickup settings track the selected position of the adjustable rating plug. For example, with an adjustable 2500 Amp rating plug set at 50%, and the short delay pickup set at 4x, the short delay pickup is 2500 x 50% x 4 = 5000 Amps.	
② For high fault current levels, a fixed instantaneous override is provided. The trip level for each rating plug is shown. (Tolerance ±15%)	
③ The end of the curve is determined by the interrupting rating and/or the specific application.	
④ For ground fault time-current characteristics of PCGA, PCCGA, PCFGA, and PCCFGA, see curve No. SC-3610-81.	

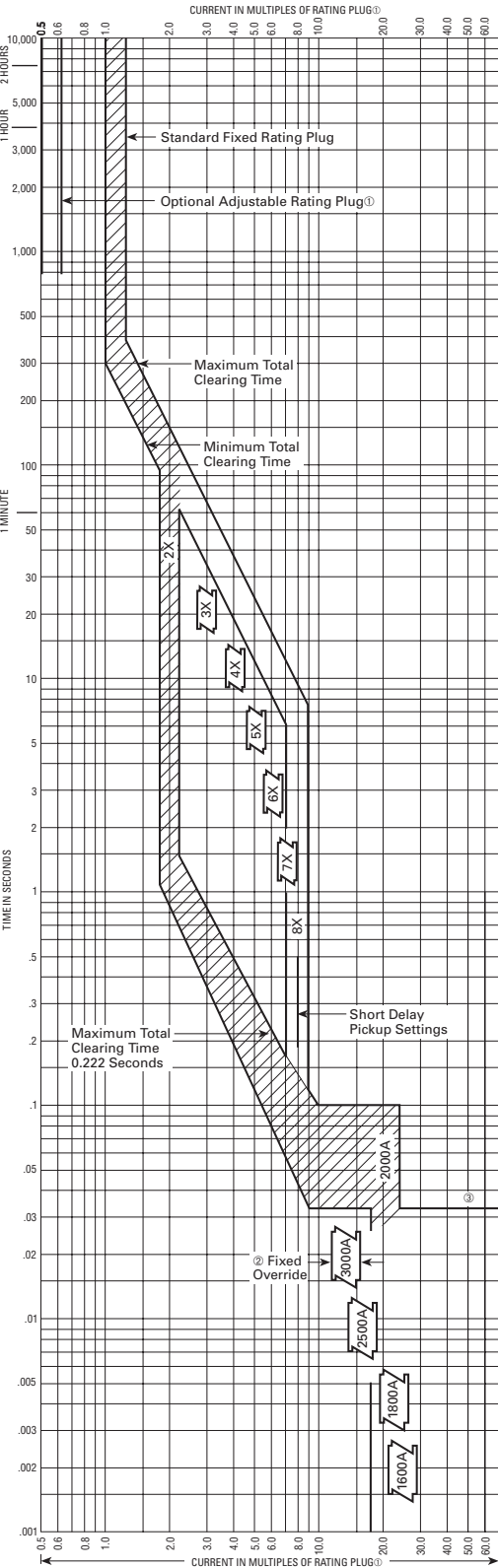


Curve No. SC-3620-81A



AB DE-ION Circuit Breakers

Types PC, PCC, PCG, PCCG; 1600-3000 Amperes, 2-3 Poles



Circuit Breaker Time/Current Curves

Types PC, PCC, PCG, PCCG Breakers, Two and Three Poles
Westinghouse Electric Corporation

Curve accuracy applies from -20°C to +55°C ambient. For possible continuous ampere derating for ambients above +40°C refer to Westinghouse.

Breaker Ratings
Maximum Ac Volts 600, 50/60 Hz

Continuous Amperes	Short Delay Pickup Settings
1600-3000	2x to 8x rating plug value with calibration settings as shown on curve (Tolerance ±10%)

Interrupting Rating (UL/CSA Listed)

Breaker	Symmetrical RMS Amperes	600 Volts	
Frame	240 Volts	480 Volts	600 Volts
All above	125,000	100,000	100,000

Rating Plugs Available

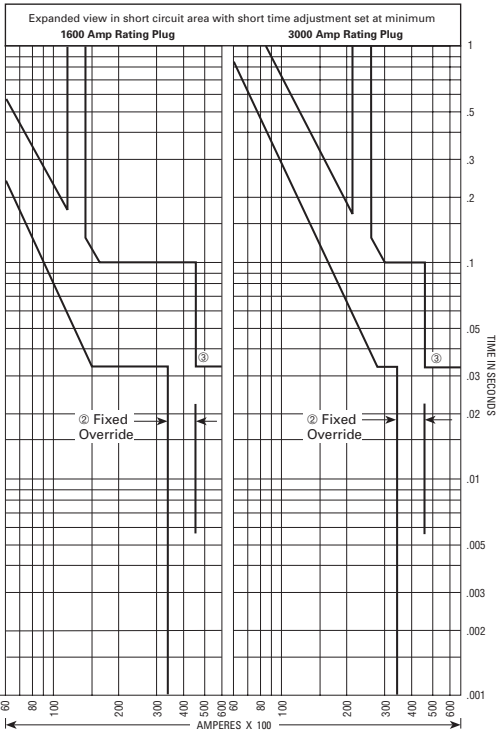
Continuous Amperes	Range of Adjustment
3000 Amps	Fixed 100%
3000 Amps	50 - 100% ①
2500 Amps	Fixed 100%
2500 Amps	70 - 100% ①
2000 Amps	Fixed 100%
1800 Amps	Fixed 100%
1600 Amps	Fixed 100%

① When adjustable rating plugs are used, short delay pickup settings track the selected position of the adjustable rating plug. For example, with an adjustable 3000 Amp rating plug set at 50%, and the short delay pickup set at 4x, the short delay pickup is 3000 x 50% x 4 = 6000 Amps.

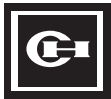
② For high fault current levels, a fixed instantaneous override is provided. The trip level for each rating plug is shown. (Tolerance ±15%)

③ The end of the curve is determined by the interrupting rating and/or the specific application.

④ For ground fault time-current characteristics of PCG and PCCG, see curve No. SC-3610-81.

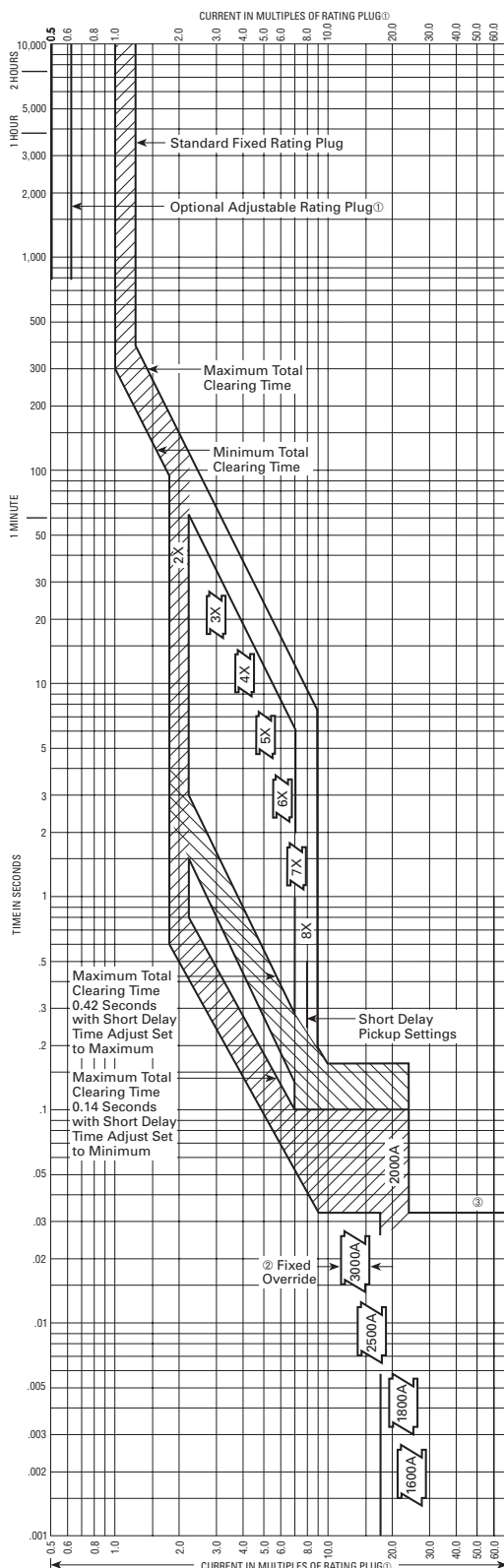


Curve No. SC-3609-81A



AB DE-ION Circuit Breakers

Types PCA, PCCA, PCGA, PCCGA; 1600-3000 Amperes, 2-3 Poles



Circuit Breaker Time/Current Curves
Types PC, PCC, PCG, PCCG Breakers, Two and Three Poles
Westinghouse Electric Corporation

Curve accuracy applies from -20°C to +55°C ambient. For possible continuous ampere derating for ambients above +40°C refer to Westinghouse.

Breaker Ratings
Maximum Ac Volts 600, 50/60 Hz

Continuous Amperes	Short Delay Pickup Settings
1600-3000	2x to 8x rating plug value with calibration settings as shown on curve (Tolerance ±10%)

Interrupting Rating (UL/CSA Listed)

Breaker	Symmetrical RMS Amperes
Frame	240 Volts 480 Volts 600 Volts
All above	125,000 100,000 100,000

Rating Plugs Available

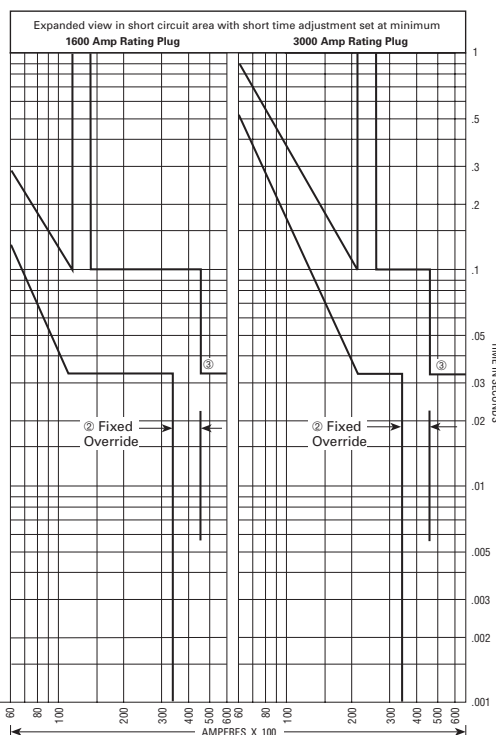
Continuous Amperes	Range of Adjustment
3000 Amps	Fixed 100%
3000 Amps	50 - 100% ①
2500 Amps	Fixed 100%
2500 Amps	70 - 100% ①
2000 Amps	Fixed 100%
1800 Amps	Fixed 100%
1600 Amps	Fixed 100%

① When adjustable rating plugs are used, short delay pickup settings track the selected position of the adjustable rating plug. For example, with an adjustable 3000 Amp rating plug set at 50%, and the short delay pickup set at 4x, the short delay pickup is 3000 x 50% x 4 = 6000 Amps.

② For high fault current levels, a fixed instantaneous override is provided. The trip level for each rating plug is shown. (Tolerance ±15%)

③ The end of the curve is determined by the interrupting rating and/or the specific application.

④ For ground fault time-current characteristics of PCGA, PCCGA, PCFGA, and PCCFGA, see curve No. SC-3610-81.

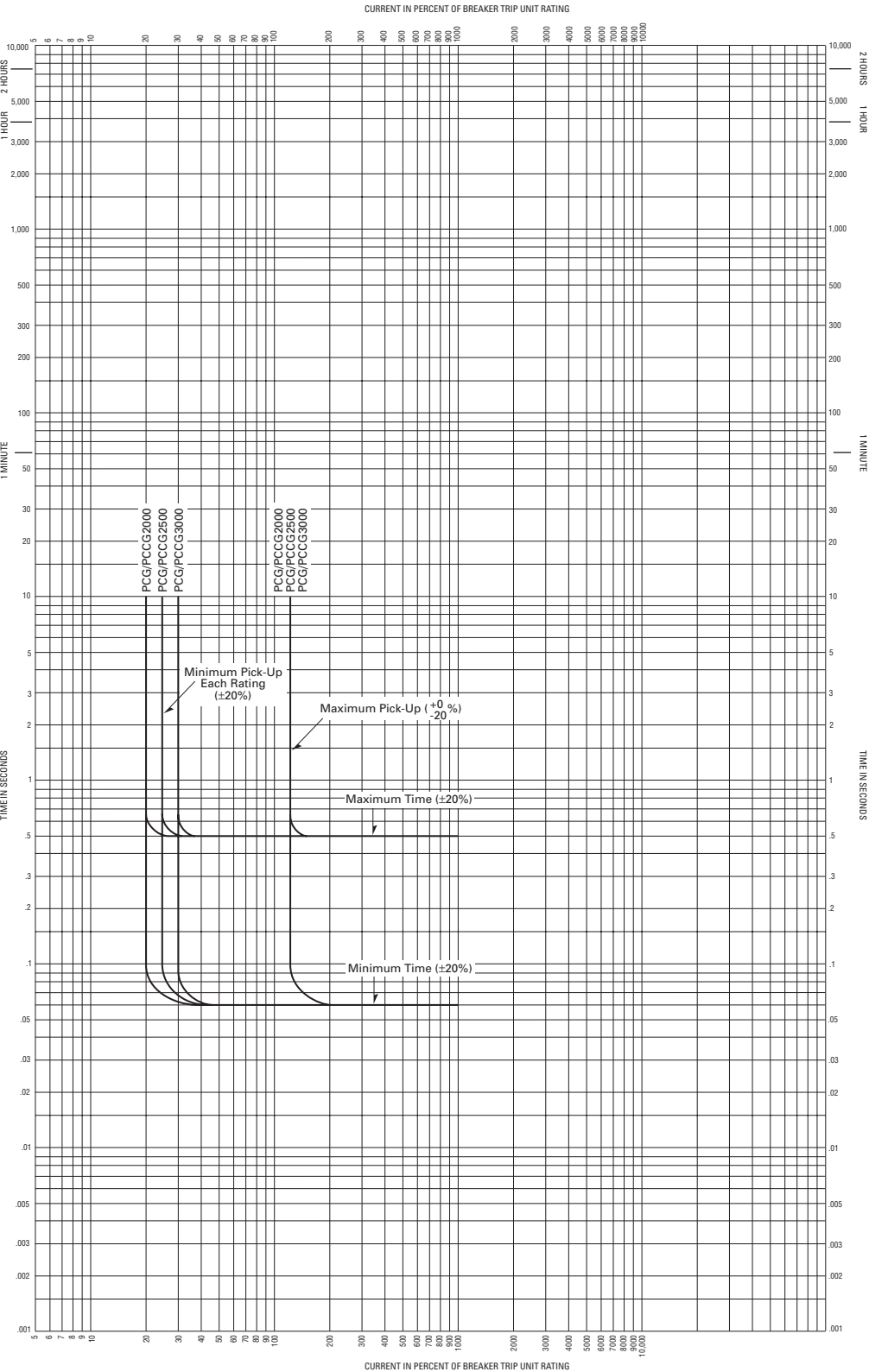


Curve No. SC-3621-81A



AB DE-ION Circuit Breakers

Types PCG, PCGA, PCCG, PCCGA, PCFG, PCFGA, PCCFG, PCCFGA Ground Fault Pick-up Curves

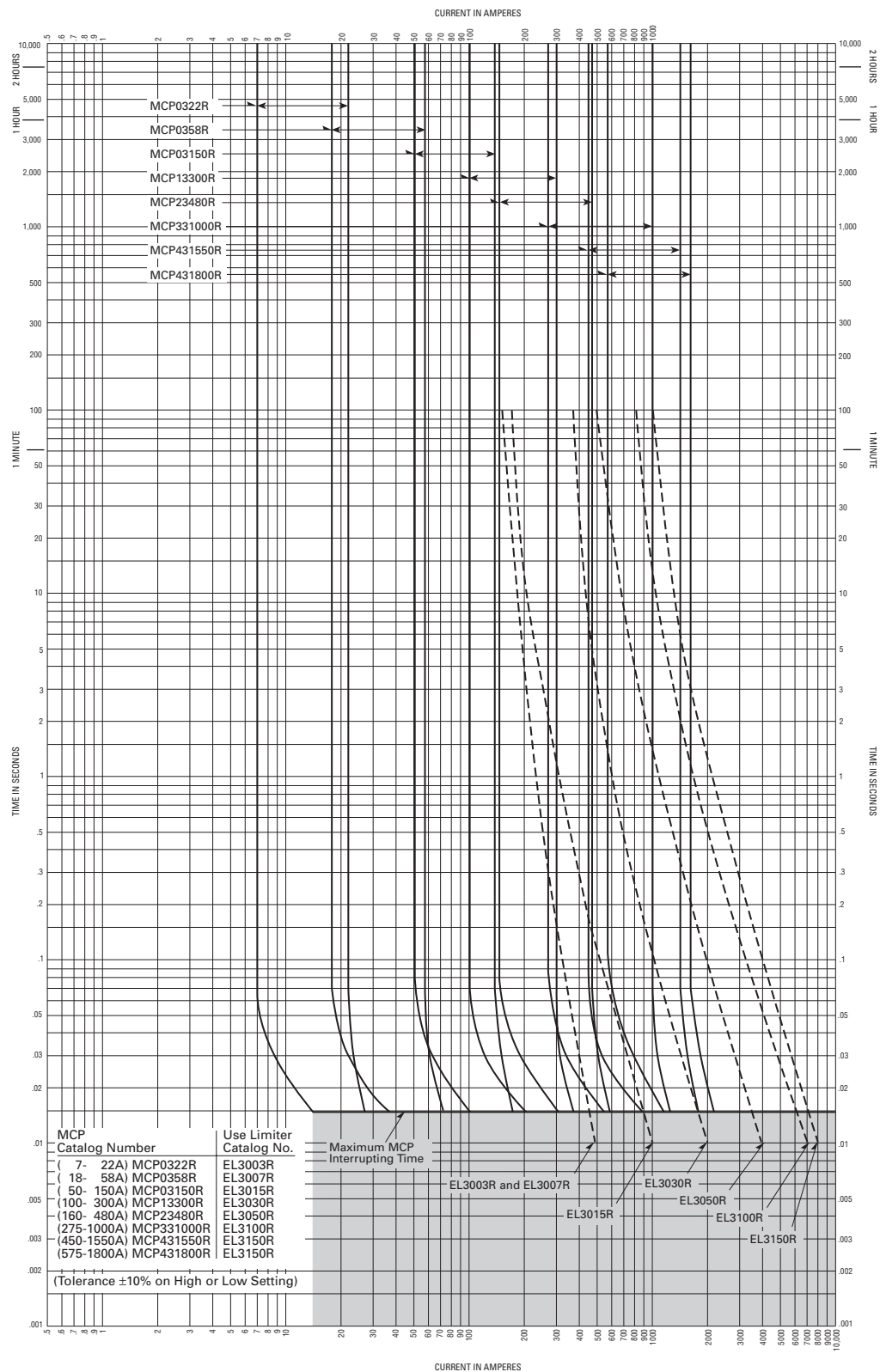


Curve No. SC-3610-81



AB DE-ION Circuit Breakers

MCP Motor Circuit Protector, 3-150 Amperes, 600 Volts AC with Current Limiter Attachment

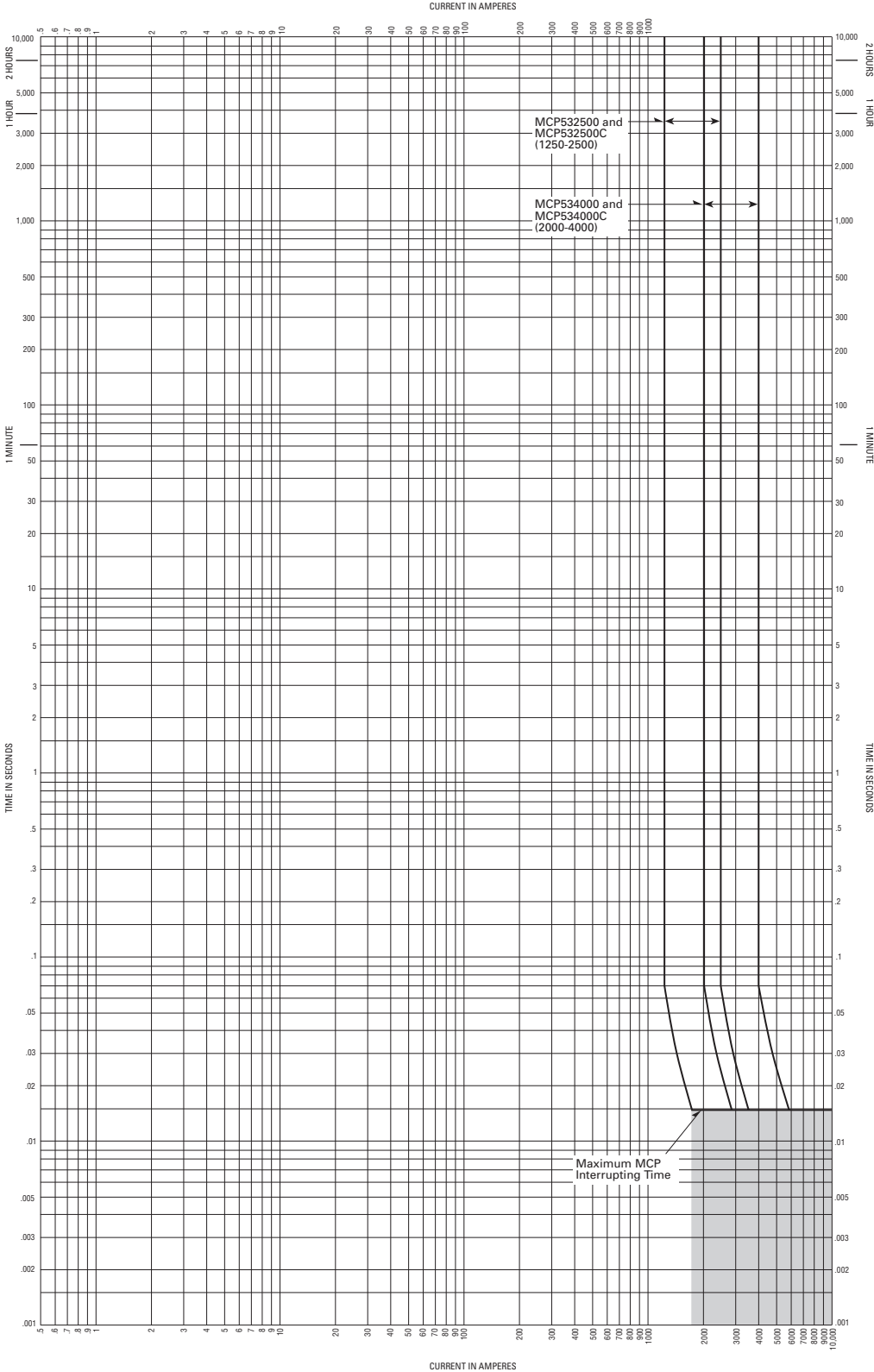


Curve No. SC-3505-76



AB DE-ION Circuit Breakers

MCP Motor Circuit Protector, 250 and 400 Amperes, 600 Volts AC



Curve No. SC-3637-76