Time/Current Characteristic Curves for
Westinghouse Series C® M-Frame
Circuit Breakers

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Additional copies of this application data may be ordered from the Westinghouse Printing Division, Trafford, PA 15085. Order Application Data 29-167M.

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

When ordering onion-skin curves, use number at bottom of page where curve appears, i.e., SC-5702-94. **Requests for full sets of curves will not be honored.**
AB DE-ION Circuit Breakers
Type MD, 125-600 Amperes

Circuit Breaker Time/Current Curves
Series CT M-Frame Circuit Breakers
Catalog Type MD Circuit Breakers, 125-600 Amperes, 2 and 3 Poles, 480 Volts Ac Max., 250 Volts Dc
For application and coordination purposes only. Based on 40°F ambient, cold start. Connected with four (4) feet of rated wire (75°C) per terminal. Terminal in open air with currents in all poles.
Maximum Ac Voltage: 690 at 60 Hz
Maximum Dc Voltage: 250

Breaker Ratings
Continuous Amperes
Intermittent Trip Amperes
125-800 500-1000% of Trip Unit Rating

Interrupting Rating (UL Listed)
Breaker Symmetrical RMS Amperes
Dc-Amps
Type 240 Volts 480 Volts 600 Volts 290 Volts
MD 42,000 30,000 22,000 20,000

Maximum Single Pole Trip Times at 29°C (°C)

Low (125%) High (100%)

Adjustable Magnetic Trip

Maximum Interrupting Time

Interrupting Rating (See Tabulation Above)
Type MD, 700-800 Amperes

AB DE-ION Circuit Breakers

Circuit Breaker Time/Current Curves
Series C II M-Frame Circuit Breakers
Casting Type MD Circuit Breakers, 700-800 Amperes, 2 and 3 Poles, 600 Volts Ac Max.
For application and coordination purposes only. Based on 40°C ambient, cold arc, Connected with four 6 ft of rated wire (7% C).
Maximum interrupting current in all poles.
Maximum Air Volts: 600 at 60 Hz

Breaker Ratings
Continuous Amperes
Instantaneous Trip Amperes
700-800
3000-6000

Interrupting Ratings (UL Listed):
Breaker Symmetrical RMS Amperes
Type
240 Volts
600 Volts
600 Volts
ACD
43,000
35,000
22,000

(1) Single pole test at 3°C based on NEMA procedures for verifying performance of molded case circuit breakers.

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Curve No. SC-5703-94
AB DE-ION Circuit Breakers
Type MDS, 400-800 Amperes

Circuit Breaker Time/Current Curves
Series M F-Frame Circuit Breakers
Catalog Type MDS Circuit Breakers, 400-800 Amperes, 2 and 3 Poles
Curve accuracy applies from -30° to +60°C ambient. For possible continuous ampere setting for amperes above +60°C refer to Cutler-Hammer.

Maximum As Values: 600, at 5000A Hz

Breaker Ratings
Continuous Amperes | Short Delay Pickup Settings
400-800 | 3x to 7x Rating Plug Value
90% of Nominal Setting as Shown on Curve (60°C, ±10%)

Interrupting Rating (UL/CSA Listed)
Breaker Symmetrical ANSI Ampere
Frame 240 Volts 480 Volts 600 Volts
MDS 42,000 39,000 22,000

Rating Plugs Available
Continuous Amperes Range Adjustment
300 Amp fixed 100% fixed
150 Amp fixed 100% fixed
100 Amp fixed 100% fixed
60 Amp fixed 100% fixed
30 Amp fixed 100% fixed
15 Amp fixed 100% fixed

a) 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.
b) For high fault current levels, a fixed instantaneous override is provided. The trip level for each rating plug is as shown. (Tolerance ±10%)
c) The end of the curve is determined by the interrupting rating and/or the specific application.
d) For ground fault time-current characteristics of MDS see Curve No. SC-799-94

Expanded view in short circuit area with short time adjustment set at minimum
400 Amp Rating Plug
800 Amp Rating Plug

May 1994
Circuit Breaker Time/Current Curves
Series C M-Frame Circuit Breakers

- Standard Fixed Rating Plug
- Optional Adjustable Rating Plug

Maximum Total Clearing Time
Minimum Total Clearing Time

Series C Circuit Breakers
- Fixed 99%
- 90 Amp
- 70 Amp
- 50 Amp
- 30 Amp
- 15 Amp
- Fixed 30 Amp
- Fixed 15 Amp
- Fixed 5 Amp
- Fixed 2 Amp
- Fixed 1 Amp
- Fixed 0.5 Amp
- Fixed 0.3 Amp

Rating Plugs Available
- Standard Fixed Rating Plug
- Optional Adjustable Rating Plug

Maximum Total Clearing Time
- 0.42 Seconds
With Short Delay Time Adjust Set
To Maximum

Minimum Total Clearing Time
- 0.14 Seconds
With Short Delay Time Adjust Set
To Minimum

400 Amp Rating Plug
800 Amp Rating Plug

Curve No. SC-5705-94

May 1994

AB DE-ION Circuit Breakers
AB DE-ION Circuit Breakers
Types MDSG, MDSGA Ground Fault Pick-up Curves

Curve No. SC-5706-94
May 1994