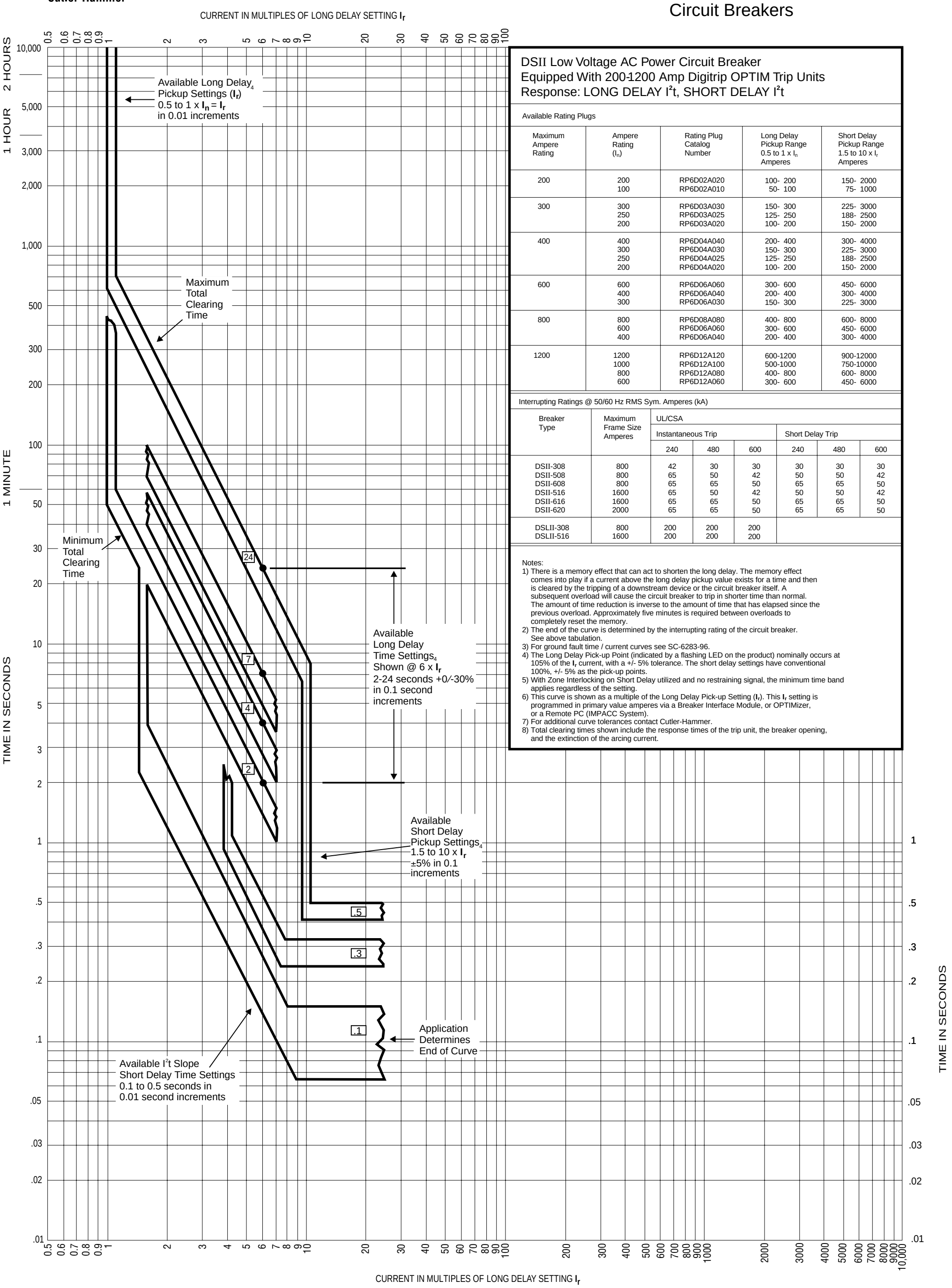
Application Data 32 - 880 Characteristic Curves for Types DSII and DSLII Circuit Breakers

Cutler-Hammer



DSII Low Voltage AC Power Circuit Breaker Equipped With 200-1200 Amp Digitrip OPTIM Trip Units Response: LONG DELAY I^2t, SHORT DELAY I^2t

Available Rating Plugs

Maximum Ampere Rating	Ampere Rating (I_n)	Rating Plug Catalog Number	Long Delay Pickup Range 0.5 to 1 x I_n Amperes	Short Delay Pickup Range 1.5 to 10 x I_r Amperes
200	200 100	RP6D02A020 RP6D02A010	100- 200 50- 100	150- 2000 75- 1000
300	300 250 200	RP6D03A030 RP6D03A025 RP6D03A020	150- 300 125- 250 100- 200	225- 3000 188- 2500 150- 2000
400	400 300 250 200	RP6D04A040 RP6D04A030 RP6D04A025 RP6D04A020	200- 400 150- 300 125- 250 100- 200	300- 4000 225- 3000 188- 2500 150- 2000
600	600 400 300	RP6D06A060 RP6D06A040 RP6D06A030	300- 600 200- 400 150- 300	450- 6000 300- 4000 225- 3000
800	800 600 400	RP6D08A080 RP6D06A060 RP6D06A040	400- 800 300- 600 200- 400	600- 8000 450- 6000 300- 4000
1200	1200 1000 800 600	RP6D12A120 RP6D12A100 RP6D12A080 RP6D12A060	600-1200 500-1000 400- 800 300- 600	900-12000 750-10000 600- 8000 450- 6000

Interrupting Ratings @ 50/60 Hz RMS Sym. Amperes (kA)

Breaker Type	Maximum Frame Size Amperes	UL/CSA					
		Instantaneous Trip			Short Delay Trip		
		240	480	600	240	480	600
DSII-308	800	42	30	30	30	30	30
DSII-508	800	65	50	42	50	50	42
DSII-608	800	65	65	50	65	65	50
DSII-516	1600	65	50	42	50	50	42
DSII-616	1600	65	65	50	65	65	50
DSII-620	2000	65	65	50	65	65	50
DSLII-308	800	200	200	200			
DSLII-516	1600	200	200	200			

Notes:
1) There is a memory effect that can act to shorten the long delay. The memory effect comes into play if a current above the long delay pickup value exists for a time and then is cleared by the tripping of a downstream device or the circuit breaker itself. A subsequent overload will cause the circuit breaker to trip in shorter time than normal. The amount of time reduction is inverse to the amount of time that has elapsed since the previous overload. Approximately five minutes is required between overloads to completely reset the memory.
2) The end of the curve is determined by the interrupting rating of the circuit breaker. See above tabulation.
3) For ground fault time / current curves see SC-6283-96.
4) The Long Delay Pick-up Point (indicated by a flashing LED on the product) nominally occurs at 105% of the I_r current, with a +/- 5% tolerance. The short delay settings have conventional 100%, +/- 5% as the pick-up points.
5) With Zone Interlocking on Short Delay utilized and no restraining signal, the minimum time band applies regardless of the setting.
6) This curve is shown as a multiple of the Long Delay Pick-up Setting (I_r). This I_r setting is programmed in primary value amperes via a Breaker Interface Module, or OPTIMizer, or a Remote PC (IMPACC System).
7) For additional curve tolerances contact Cutler-Hammer.
8) Total clearing times shown include the response times of the trip unit, the breaker opening, and the extinction of the arcing current.

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