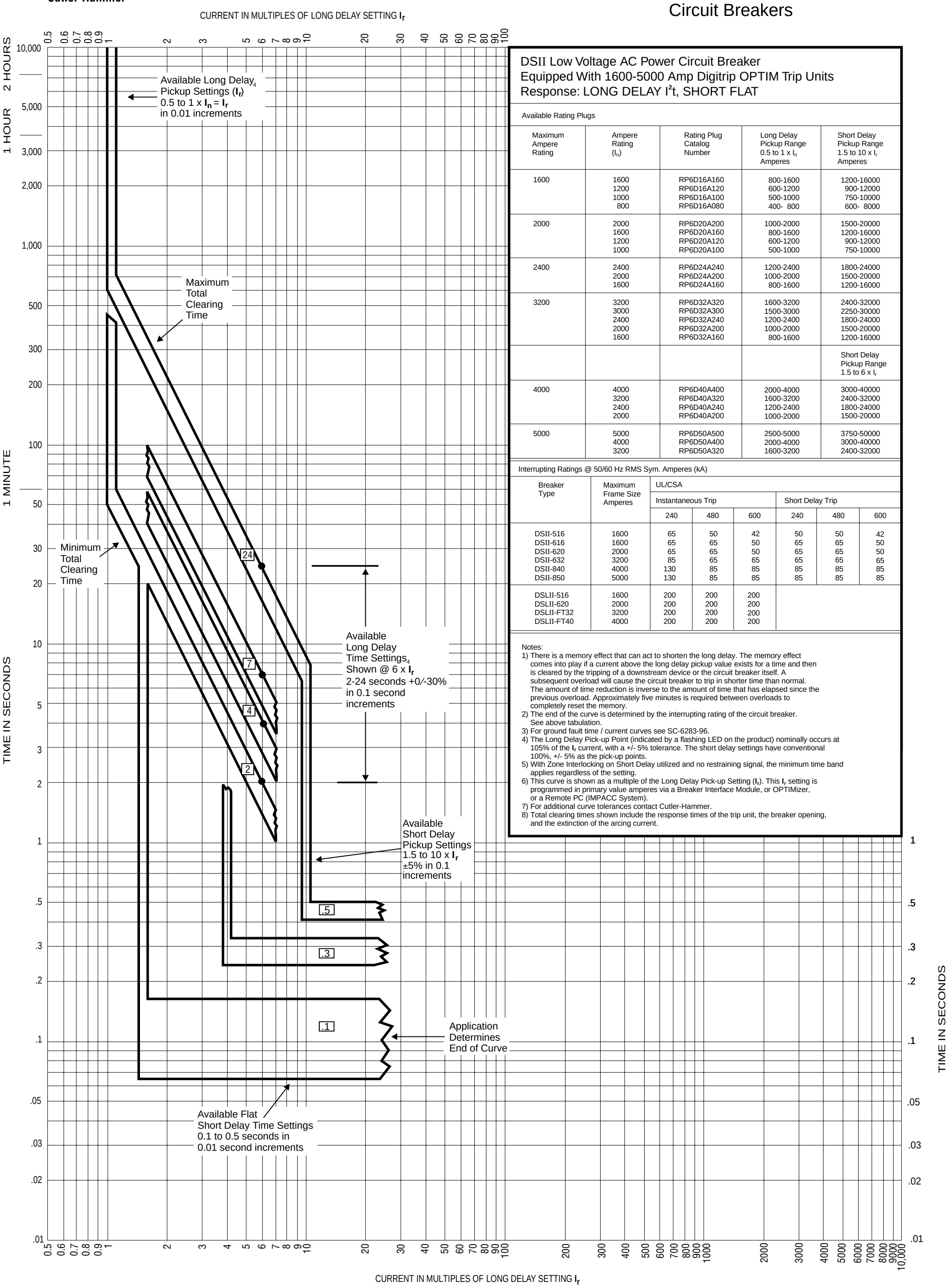
Application Data 32 - 880 Characteristic Curves for Types DSII and DSLII Circuit Breakers

Cutler-Hammer



DSII Low Voltage AC Power Circuit Breaker Equipped With 1600-5000 Amp Digitrip OPTIM Trip Units Response: LONG DELAY I^2t, SHORT FLAT

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
1600	1600	RP6D16A160	800-1600	1200-16000
	1200	RP6D16A120	600-1200	900-12000
	1000	RP6D16A100	500-1000	750-10000
	800	RP6D16A080	400- 800	600- 8000
2000	2000	RP6D20A200	1000-2000	1500-20000
	1600	RP6D20A160	800-1600	1200-16000
	1200	RP6D20A120	600-1200	900-12000
	1000	RP6D20A100	500-1000	750-10000
2400	2400	RP6D24A240	1200-2400	1800-24000
	2000	RP6D24A200	1000-2000	1500-20000
	1600	RP6D24A160	800-1600	1200-16000
3200	3200	RP6D32A320	1600-3200	2400-32000
	3000	RP6D32A300	1500-3000	2250-30000
	2400	RP6D32A240	1200-2400	1800-24000
	2000	RP6D32A200	1000-2000	1500-20000
	1600	RP6D32A160	800-1600	1200-16000
				Short Delay Pickup Range 1.5 to 6 x I_r
4000	4000	RP6D40A400	2000-4000	3000-40000
	3200	RP6D40A320	1600-3200	2400-32000
	2400	RP6D40A240	1200-2400	1800-24000
	2000	RP6D40A200	1000-2000	1500-20000
5000	5000	RP6D50A500	2500-5000	3750-50000
	4000	RP6D50A400	2000-4000	3000-40000
	3200	RP6D50A320	1600-3200	2400-32000

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-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
DSII-632	3200	85	65	65	65	65	65
DSII-840	4000	130	85	85	85	85	85
DSII-850	5000	130	85	85	85	85	85
DSLII-516	1600	200	200	200			
DSLII-620	2000	200	200	200			
DSLII-FT32	3200	200	200	200			
DSLII-FT40	4000	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.

Cutler-Hammer
Westinghouse &
Cutler-Hammer Products
Dwg. No. 1C97344

Curve No. SC-6279-95
Printed in U. S. A. January 1997