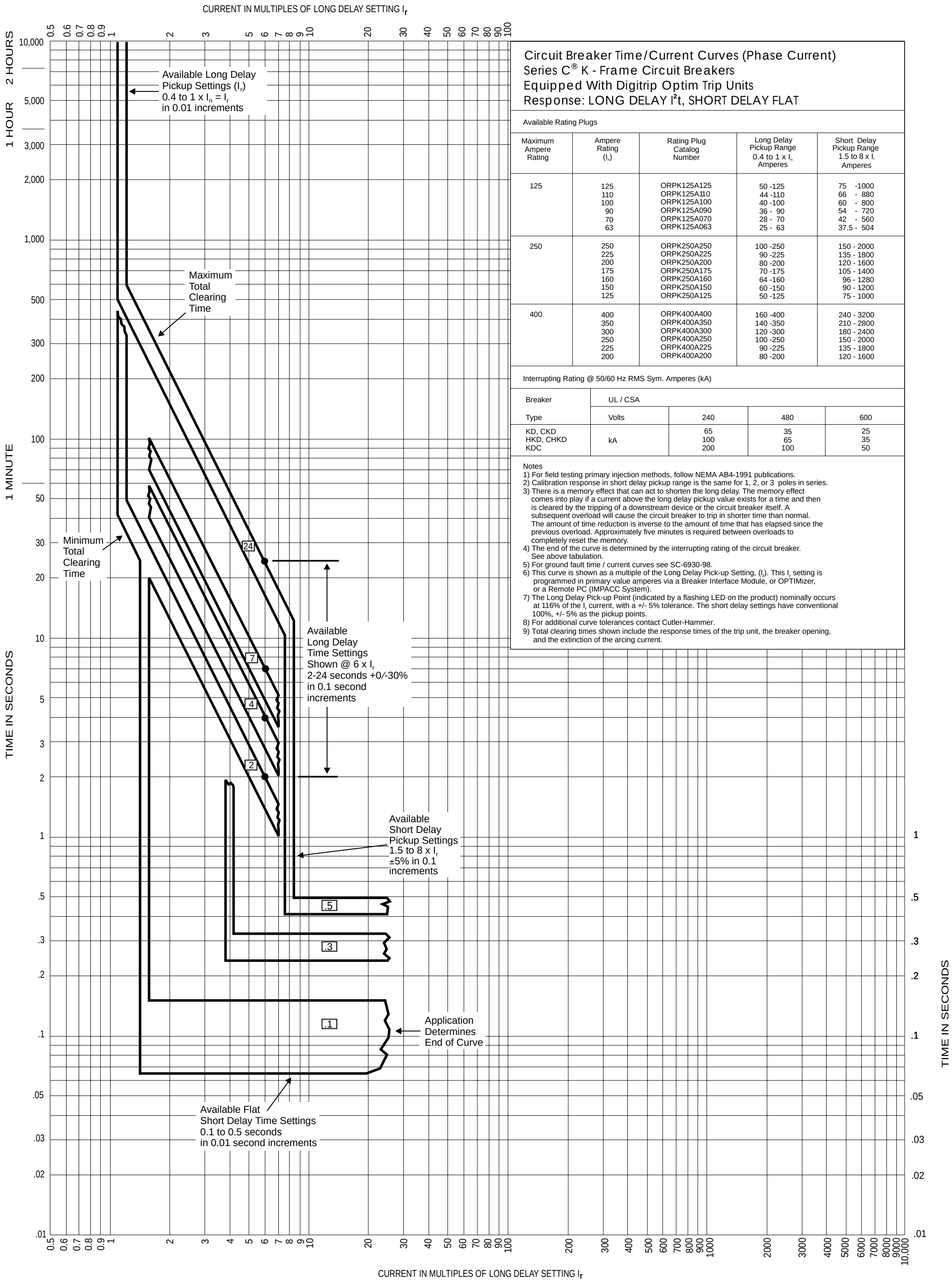
Cutler-Hammer



Circuit Breaker Time/Current Curves (Phase Current)
Series C® K - Frame Circuit Breakers
Equipped With Digitrip Optim Trip Units
Response: LONG DELAY I^2t, SHORT DELAY FLAT

Available Rating Plugs

Maximum Ampere Rating	Ampere Rating (I_n)	Rating Plug Catalog Number	Long Delay Pickup Range 0.4 to 1 x I_n Amperes	Short Delay Pickup Range 1.5 to 8 x I_r Amperes
125	125	ORPK125A125	50 -125	75 -1000
	110	ORPK125A110	44 -110	66 - 880
	100	ORPK125A100	40 -100	60 - 800
	90	ORPK125A090	36 - 90	54 - 720
	70	ORPK125A070	28 - 70	42 - 560
	63	ORPK125A063	25 - 63	37.5 - 504
250	250	ORPK250A250	100 -250	150 - 2000
	225	ORPK250A225	90 -225	135 - 1800
	200	ORPK250A200	80 -200	120 - 1600
	175	ORPK250A175	70 -175	105 - 1400
	160	ORPK250A160	64 -160	96 - 1280
	150	ORPK250A150	60 -150	90 - 1200
	125	ORPK250A125	50 -125	75 - 1000
400	400	ORPK400A400	160 -400	240 - 3200
	350	ORPK400A350	140 -350	210 - 2800
	300	ORPK400A300	120 -300	180 - 2400
	250	ORPK400A250	100 -250	150 - 2000
	225	ORPK400A225	90 -225	135 - 1800
	200	ORPK400A200	80 -200	120 - 1600

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

Breaker	UL / CSA			
Type	Volts	240	480	600
KD, CKD	kA	65	35	25
HKD, CHKD		100	65	35
KDC		200	100	50

Notes
1) For field testing primary injection methods, follow NEMA AB4-1991 publications.
2) Calibration response in short delay pickup range is the same for 1, 2, or 3 poles in series.
3) 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.
4) The end of the curve is determined by the interrupting rating of the circuit breaker. See above tabulation.
5) For ground fault time / current curves see SC-6930-98.
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) The Long Delay Pick-up Point (indicated by a flashing LED on the product) nominally occurs at 116% of the I_r current, with a +/- 5% tolerance. The short delay settings have conventional 100%, +/- 5% as the pickup points.
8) For additional curve tolerances contact Cutler-Hammer.
9) Total clearing times shown include the response times of the trip unit, the breaker opening, and the extinction of the arcing current.