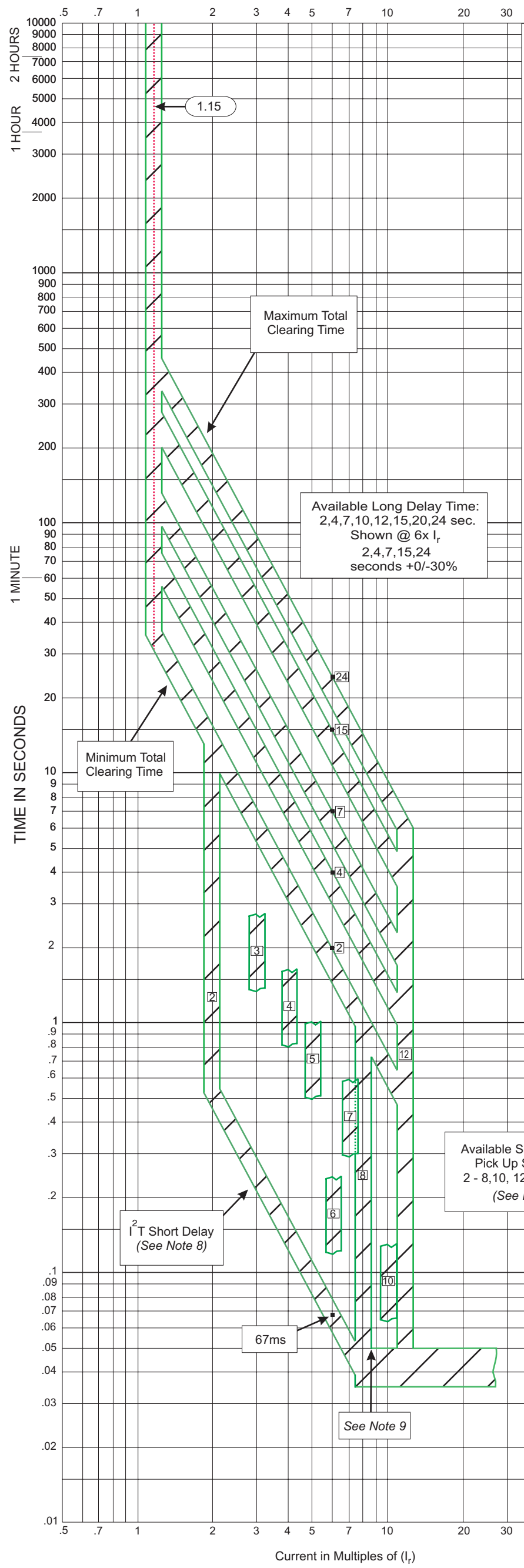
Cutler-Hammer

Long Delay Response & Short Delay with I^2T Response Curve



JG

Circuit Breaker Time/Current Curves (Phase Current)

Series G: Types J250E, J250S, J250H, JGE, JGS, JGH, JGK Circuit Breakers

Long Delay (LD) & Short Delay (SD) with I^2T Response

Available Sensors (I_n):

50A
100A
160A
250A

Ir \ In	50A	100A	160A	250A
A	20A	40A	63A	100A
B	20A	45A	80A	125A
C	25A	50A	90A	150A
D	30A	63A	100A	160A
E	32A	70A	110A	175A
F	40A	80A	125A	200A
G	45A	90A	150A	225A
H	50A	100A	160A	250A

Notes:

1. Curve accuracy applies from -20°C to +55°C ambient. Temperatures above +85°C cause an over temperature protection trip. For possible continuous ampere derating for ambient above 40°C, refer to Cutler-Hammer.

2. Application frequency is 50/60 Hertz.

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 circuit breaker itself. A subsequent overload will cause the circuit breaker to trip in shorter time than normal. The amount of time delay 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 memory.

4. The right portion of the curve is determined by the interrupting rating of the circuit breaker.

5. The left portion of the curve is shown as a multiple of the Long Delay Setting (Long Delay Pick Up = 115% of I_r). Range is 110% - 120%.

6. Total clearing times shown include the response times of the trip unit, the breaker opening, and the interruption of the current.

7. The Short Delay Pick Up has 9 settings/positions: 2 - 8 & 10, 12.

8. Short Delay I^2T band has a tolerance of ±15%.

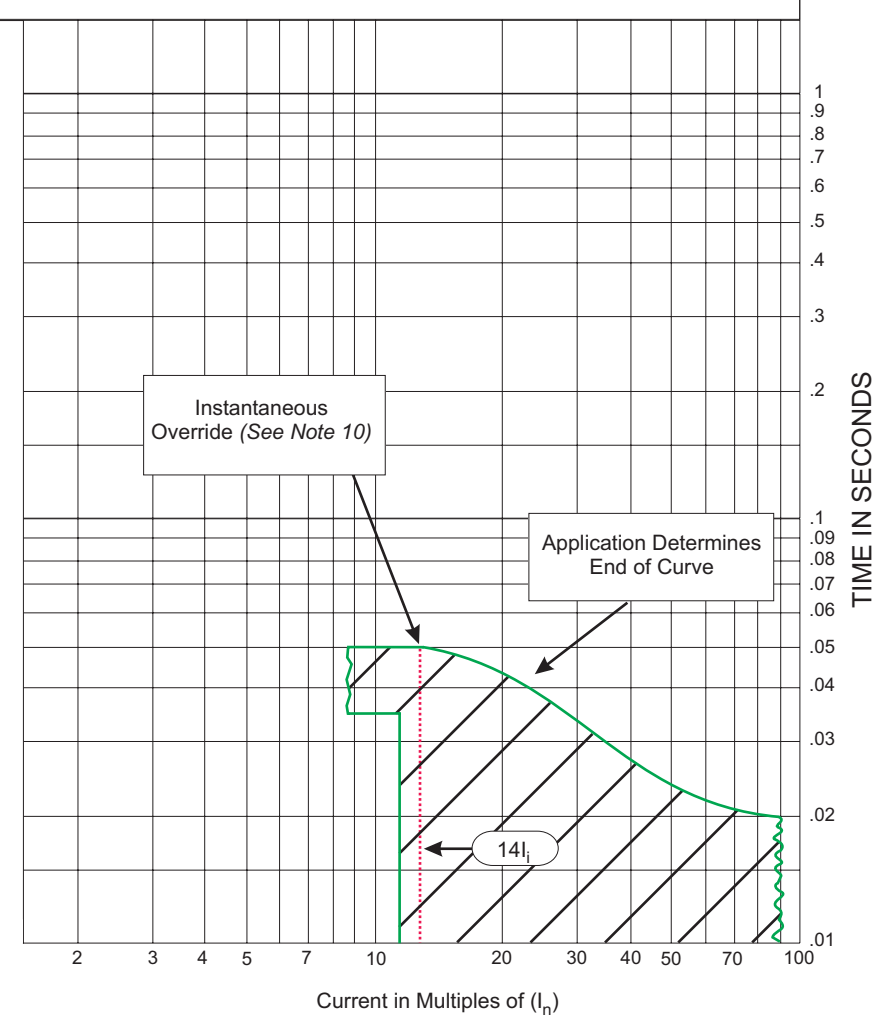
9. Breakpoint back to FLAT response occurs @ 8x I_r for upper line of the I^2T curve.

10. For high fault current levels, an additional fixed instantaneous hardware override is provided *(corresponding to SDPU position 9)* at 14x (I_n) and designated as 14 I_i. The Instantaneous tolerance is ±20%.

11. For LD Response & SD with Flat Response curve, see: TC01201001E

12. For LD Response & SD with I^2T Response (this curve): TC01201002E

13. For Ground Fault Delay Response curve, see: TC01203004E



I^2T Trip Style

Long Delay Response & Short Delay with I^2T Response Curve

Curve Number: TC01201002E

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