Current in multiples of \( Ir \) (\( Ir = \) Long-time setting \( \times \) in)

**Notes:**

1. There is a thermal-imaging effect that can act to shorten the long-time delay. The thermal-imaging effect comes into play if a current above the long-time 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 a 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 20 minutes is required between overloads to completely reset thermal-imaging.

2. The end of the curve is determined by the interrupting rating of the circuit breaker.

3. With zone-selective interlocking on, short-time delay utilized and no restraining signal, the maximum unrestrained short-time delay time band applies regardless of the setting.

4. Total clearing times shown include the response times of the trip unit, the circuit breaker opening, and the extinction of the current.

5. For a withstand circuit breaker, instantaneous can be turned OFF. See 613-7 for instantaneous trip curve. See 613-10 for instantaneous override values.

6. Overload indicator illuminates at 100%.