Series G JG-Frame 310+ circuit breaker time current curves

Contents

<table>
<thead>
<tr>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Long delay response (LD) and short delay (SD) with flat response curve</td>
<td>2</td>
</tr>
<tr>
<td>Long delay response and short delay with I²T response curve</td>
<td>3</td>
</tr>
<tr>
<td>Ground fault delay response curve</td>
<td>4</td>
</tr>
</tbody>
</table>
Long delay response (LD) and short delay (SD) with flat response curve

Figure 1. Long Delay Response and Short Delay with Flat Response Curve—Curve Number TC01201001E
Long delay response (LD) and short delay (SD) with $I^2T$ response curve

Circuit breaker time/current curves (phase current)
Series G: Type J250E, J250S, J250H, JGE, JGS, JGH, JGK circuit breakers
Long Delay (LD) and Short Delay (SD) with $I^2T$ response

Available Sensors ($I_s$):
- A: 20A, 40A, 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 overtemperature protection trip. For possible continuous ampere derating for ambient above 40°C, refer to Eaton.
2. Application frequency is 50/60 Hz.
3. There is a memory effect that can act to shorten the Long Delay. The memory effect comes into play if a current is 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 Pickup = 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 Pickup has 9 settings/positions, 2–8 and 10, 12.
8. Short Delay $I^2T$ band has a tolerance of ±15%.
9. Breakpoint back to FLAT response occurs at 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 $I_i$. Instantaneous tolerance is ±20%.
11. For LD Response and SD with Flat Response curve, see TC01201001E.
12. For LD Response and SD with $I^2T$ Response (this curve), see TC01201002E.
13. For Ground Fault Delay Response curve, see TC01203004E.

---

Figure 2. Long Delay Response and Short Delay with $I^2T$ Response Curve—Curve Number TC01201002E
Ground fault delay response curve

Circuit breaker time/current curves (ground current)
Series G: Type J250E, J250S, J250H, JGE, JGS, JGH, JGK circuit breakers

Ground Fault Delay response

Notes:
1. Curve accuracy applies from –20°C to +55°C ambient. Temperatures above +85°C cause an overtemperature protection trip. For possible continuous ampere derating for ambient above 40°C, refer to Eaton.
2. Application frequency is 50/60 Hz.
3. Trip units are suitable for functional field testing with test kit style no. 70C1056G52.
4. For LD Response and SD with Flat Response curve, see TC01201001E.
5. For LD Response and SD with I^2T Response curve, see TC01201002E.
6. For Ground Fault Delay Response (this curve), see TC01203004E.

Figure 3. Ground Fault Delay Response Curve—Curve Number TC01203004E