Notes:
1. Delay Curves 12, 14, 22, 24, 32, 34, 62, 64, 72, 74, 92, 94: Breakers to hold 100% and must trip at 135% of rated current and greater within the time limit shown in this curve.
2. Delay Curves 10, 20, 30: Breakers to hold 100% and must trip at 150% of rated current and greater within the time limit shown in this curve.
3. All Curves: Curve data shown represents breaker response at ambient temperature of 77°F (25°C) with no preloading. Breakers are mounted in standard wall-mount position.
4. The minimum inrush pulse tolerance handling capability is 12 times the rated current on standard delays and 18 times the rated current on high inrush delays. These values are based on a 60 Hz 1/2 cycle, 8.33 ms pulse. High inrush delays should be specified for applications with high initial surge currents of short duration, such as switching power supplies, highly capacitive loads and transformer loads.

**Instantaneous**

**Short**

**Short D2**

**Medium**

**Medium D4**

**Dual Rated AC/DC**
Notes:
UL489 C-Series Breakers available with Delay Curves 11, 12, 14, 16, 21, 22, 24, 26, 42, 44, 46.
Delay Curves 11,12,14,16,21,22,24,26,32,34,36: Breakers to hold 100% and must trip at 125% of rated current and greater within the time limit shown in this curve.
Delay Curves 10,20: Breakers to hold 100% and must trip at 135% of rated current and greater within the time limit shown in this curve.
All Curves: Curve data shown represents breaker response at ambient temperature of 77°F (25°C) with no preloading. Breakers are mounted in standard wall-mount position.
On 50 amp and less current ratings, the minimum inrush pulse tolerance handling capability is 12 times the rated current on standard delays and 25 times the rated current on high inrush delays. These values are based on a 60 Hz 1/2 cycle, 8.33 ms pulse. High inrush delays should be specified for applications with high initial surge currents of short duration such as switching power supplies, highly capacitive loads and transformer loads.
### Time Delay Values - A, B, C, CX, D, G, H, J, L, N-Series Circuit Breakers

#### Medium

- **AC**
- **DC**

#### Long

- **AC**
- **DC**

#### Short

- **High Inrush AC**
- **High Inrush DC**

#### Medium

- **AC**
- **DC**

#### Long

- **AC**
- **DC**

---

[TRIP TIME IN SECONDS]

[PERCENT OF RATED CURRENT]
Time Delay Values - A, B, C, CX, D, G, H, J, L, N-Series Circuit Breakers

**AC/DC**

### Short

### Medium

### Long
### E-SERIES TIME DELAY VALUES

<table>
<thead>
<tr>
<th>TRIP TIME (SECONDS)</th>
<th>100%</th>
<th>125%</th>
<th>150%</th>
<th>200%</th>
<th>400%</th>
<th>600%</th>
<th>800%</th>
<th>1000%</th>
<th>1200%</th>
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</thead>
<tbody>
<tr>
<td>10</td>
<td>No Trip</td>
<td>May Trip</td>
<td>---</td>
<td>.001 - .038</td>
<td>.001 - .032</td>
<td>.001 - .021</td>
<td>.001 - .019</td>
<td>.001 - .019</td>
<td>.001 - .018</td>
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<tr>
<td>12, 72</td>
<td>No Trip</td>
<td>.600 - 7.00</td>
<td>---</td>
<td>.001 - .040</td>
<td>.001 - .031</td>
<td>.001 - .020</td>
<td>.001 - .020</td>
<td>.001 - .020</td>
<td>.001 - .020</td>
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<tr>
<td>14, 76</td>
<td>No Trip</td>
<td>7.0 - 110</td>
<td>---</td>
<td>.001 - .040</td>
<td>.001 - .031</td>
<td>.001 - .020</td>
<td>.001 - .020</td>
<td>.001 - .020</td>
<td>.001 - .020</td>
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<tr>
<td>15, 76</td>
<td>No Trip</td>
<td>100 - 800</td>
<td>---</td>
<td>.000 - .380</td>
<td>.000 - .230</td>
<td>.000 - .120</td>
<td>.000 - .100</td>
<td>.000 - .090</td>
<td>.000 - .080</td>
</tr>
<tr>
<td>20</td>
<td>No Trip</td>
<td>May Trip</td>
<td>---</td>
<td>.001 - .040</td>
<td>.001 - .031</td>
<td>.001 - .020</td>
<td>.001 - .020</td>
<td>.001 - .020</td>
<td>.001 - .020</td>
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<tr>
<td>22, 62</td>
<td>No Trip</td>
<td>.800 - 5.00</td>
<td>---</td>
<td>.000 - .340</td>
<td>.000 - .230</td>
<td>.000 - .120</td>
<td>.000 - .100</td>
<td>.000 - .090</td>
<td>.000 - .080</td>
</tr>
<tr>
<td>24, 64</td>
<td>No Trip</td>
<td>7.20 - 90.0</td>
<td>---</td>
<td>.000 - .340</td>
<td>.000 - .230</td>
<td>.000 - .120</td>
<td>.000 - .100</td>
<td>.000 - .090</td>
<td>.000 - .080</td>
</tr>
<tr>
<td>26, 96</td>
<td>No Trip</td>
<td>50.0 - 000</td>
<td>---</td>
<td>.000 - .340</td>
<td>.000 - .230</td>
<td>.000 - .120</td>
<td>.000 - .100</td>
<td>.000 - .090</td>
<td>.000 - .080</td>
</tr>
<tr>
<td>30</td>
<td>No Trip</td>
<td>May Trip</td>
<td>---</td>
<td>.000 - .400</td>
<td>.000 - .320</td>
<td>.000 - .230</td>
<td>.000 - .120</td>
<td>.000 - .100</td>
<td>.000 - .090</td>
</tr>
<tr>
<td>32, 92</td>
<td>No Trip</td>
<td>800 - 5.00</td>
<td>---</td>
<td>.000 - .340</td>
<td>.000 - .230</td>
<td>.000 - .120</td>
<td>.000 - .100</td>
<td>.000 - .090</td>
<td>.000 - .080</td>
</tr>
<tr>
<td>34, 94</td>
<td>No Trip</td>
<td>May Trip</td>
<td>---</td>
<td>.000 - .340</td>
<td>.000 - .230</td>
<td>.000 - .120</td>
<td>.000 - .100</td>
<td>.000 - .090</td>
<td>.000 - .080</td>
</tr>
<tr>
<td>36, 96</td>
<td>No Trip</td>
<td>50.0 - 000</td>
<td>---</td>
<td>.000 - .340</td>
<td>.000 - .230</td>
<td>.000 - .120</td>
<td>.000 - .100</td>
<td>.000 - .090</td>
<td>.000 - .080</td>
</tr>
</tbody>
</table>

**NOTES**

Delay Curves 10,20,30: Breakers to hold 100% and must trip at 150% of rated current and greater within the time limit shown in these curves.

Delay Curves 12,14,16,22,24,26,28,32,74,76: Breakers to hold 100% and must trip at 125% of rated current and greater within the time limit shown in these curves.

All curves shown represent breaker response at ambient temperature of 77°F (25°C) with no preloading. Breakers are mounted in standard wall-mount position.

The minimum inrush pulse tolerance handling capacity on the above standard delays is 16 times rated current @20 times rated current for high inrush delays based on a 60Hz 1/2 cycle, 8.33 ms pulse.

**Instantaneous**

**AC**

**DC**

**Short**

**Medium**

**Long**
Time Delay Values - E-Series Circuit Breaker

AC/DC

Instantaneous

Short

Medium

Long