Form 4A, Form 4C, Form 4D, Form 5, Form 5/TS, Form 6, Form 6-TS, FX, FXA, FXB, and SPEAR recloser controls time-current curves

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Form 4A, Form 4C, Form 4D, Form 5, Form 5/TS, Form 6, Form 6-TS, FX, FXA, FXB, and SPEAR recloser controls time-current curves

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### Maximum Short Time Recloser Limits

### Time-Current Curve Cross Reference Form 3A to Form 4A, Form 4C, Form 4D, Form 5, Form 5/TS, Form 6, Form 6-TS, Types FX, FXA, FXB, and SPEAR

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### Recloser Clearing Time
Add the following recloser interrupting time in seconds to the control response time to obtain average recloser clearing time; variations ±0.01 second:

<table>
<thead>
<tr>
<th>Recloser Type</th>
<th>Interrupting Time</th>
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<tbody>
<tr>
<td>NOVA (ACT II)</td>
<td>0.025</td>
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<td>NOVA-TS, NOVA-STS, SPEAR</td>
<td>0.032</td>
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<tr>
<td>VWE, WVVE27, WVVE38, PWE, PWVE, WVVE38X</td>
<td>0.034</td>
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<tr>
<td>VSA12, VSA16, VSA20, VSA20A, VSA20B, VSAT, VSO12, VSO16, NOVA (ACT I)</td>
<td>0.042</td>
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<tr>
<td>RXE, RVE, WE, WVE, WVVE38X</td>
<td>0.045</td>
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</table>

www.eaton.com/cooperpowerseries
Phase Trip or Ground Trip Control Response Time

Curve 101: Maximum response time for one operation, variations negative
Curve 138: Average response time for one operation; variations ±10%
Curves 133 & 104: Average response time for one operation; variations ±10% or ±.008 second, whichever is greater
Tests conducted at 25°C
Phase Trip or Ground Trip Control Response Time

Curves 135 & 140: Average response time or one operation; variations ±10%
Curves 105 & 117: Average response time for one operation; variations ±10% or ±.008 second, whichever is greater
Tests conducted at 25°C
Phase Trip or Ground Trip Control Response Time

Curves 111, 116, & 139: Average response time for one operation; variations ±10% or ±.008 second, whichever is greater
Tests conducted at 25 C
Phase Trip or Ground Trip
Control Response Time

Curve 102: Maximum response time for one operation, variations negative
Curves 163, 164, & 122: Average response time for one operation, variations ±10% or ±.008 second, whichever is greater
Tests conducted at 25 C
Trip Curves TC280001EN
Effective September 2016

Phase Trip or Ground Trip
Control Response Time

Curve 137: Average response time for one operation; variations ±10%
Curves 121, 136, & 142: Average response time for one operation, variations ±10% or ±0.008 second, whichever is greater
Tests conducted at 25°C

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Phase Trip or Ground Trip
Control Response Time

Curve 151: Average response time for one operation; variations ±10%
Curves 115 & 132: Average response time for one operation, variations ±10% or ±.008 second, whichever is greater
Tests conducted at 25 C
Phase Trip or Ground Trip Control Response Time

Curves 120 & 134: Average response time for one operation; variations ±10%
Curve 114 & 165: Average response time for one operation, variations ±10% or ±0.008 second, whichever is greater
Tests conducted at 25 C

Curve 165 starts at 100% minimum trip at 90 seconds.
Phase Trip or Ground Trip Control Response Time

Curves 103, 118, 161, & 162: Average response time for one operation, variations ±10% or ±.008 second, whichever is greater
Tests conducted at 25 C
Curves 119, 131, & 141: Average response time for one operation; variations ±10%
Curve 106: Average response time for one operation, variations ±10% or ±.008 second, whichever is greater
Tests conducted at 25 C
Phase Trip or Ground Trip
Control Response Time

Curves 113 & 152: Average response time for one operation; variations ±10%
Curves 107 & 112: Average response time for one operation, variations ±10% or ±.008 second, whichever is greater
Tests conducted at 25 C

Curve 152 starts at 100% minimum trip at 74 seconds.

Current Curves
TC280001EN
Form 4A, Form 4C, Form 4D, Form 5, Form 5/TS, Form 6, Form 6-TS, FX, FXA, FXB, and SPEAR recloser controls time-current curves

Effective September 2016
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Curves 200, 201, & 202: Average response time for one operation; variations ±10% or ±0.008 second, whichever is greater.
Tests conducted at 25°C.

Curves 200, 201, & 202 start at 100% minimum trip. Timing is indeterminate at currents less than 110%. 

Phase Trip or Ground Trip
Control Response Time
NOTE: When modifying Form 4A, Form 4C, Form 4D, Form 5, Form 5/TS, Form 6, Form 6-TS, Type FX, FXA, FXB, and SPEAR time-current curves, timing of modified phase trip curve must not exceed recloser short time limit for a single timing operation.

### Maximum Short Time Recloser Limits

<table>
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<tr>
<th>Recloser Type</th>
<th>Maximum Interrupting Rating (sym A)</th>
<th>Curve*</th>
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<tr>
<td>WVE, WV38X, WVE38X</td>
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<tr>
<td>WE</td>
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<td>3</td>
</tr>
<tr>
<td>VWE, VSA12, VWVE27, VWVE38, VWV38X, VWE38X, VSAT, VSO12, PWE, PWVE</td>
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<td>VSA16, VSO16</td>
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<tr>
<td>VSA20, VSA20A</td>
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<tr>
<td>NOVA, NOVA-TS, NOVA STS, SPEAR</td>
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<td>NOVA</td>
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*Curves are recloser short time currents for a single trip operation.