Type 79M
Multiple Shot
Reclosing Relay

Application

The Circuit-Shield Reclosing Relay is used to automatically reclose a circuit breaker one or more times after it has been tripped by its protective relay. These relays are used on power lines which are subject to temporary faults caused by lightning or tree branches which burn free, leaving the line clear.

The reclosing relay provides for the selection of a desired number of reclosures. An adjustable time delay is also provided before each reclosure signal to allow line conditions to stabilize.

A successful reclose is determined by a preset time delay initiated each time the breaker recloses. If the breaker remains closed for this time period, the reclosing relay resets to reinstitute the entire program of reclosures.

If after the preset number of reclosures the breaker trips before the reset time elapses, the reclosing signal ceases and the relay indicates lockout.

Features

- Front-accessible settings
- Magnetic memory logic
- Shockproof design
- Lockout indication
- No cams — no maintenance
- Flexible programming — both time and instantaneous
- Reset indication
- 2 year warranty

C — CLOSE CONTACT
Closes on trip count after reclose delay. Remains closed until (52/5) opens.

I — INST. CUTOUT CONTACT
Opens on a selected trip count.
Closes on reset or lockout.

T — TAP CHANGER CUTOUT CONTACT
Opens on first trip.
Closes on reset or lockout.

L — LOCKOUT CONTACT FOR REMOTE INDICATION
Closes on lockout.
Opens when (52/6) opens and/or on reset.
Specifications

Number of Reclosures: Tap selected 1, 2, or 3
Number of Inst. Trips: Tap selected 1, 2, 3 or 4
Reclose Time: (continuously adjustable) Inst. to 15 sec.; Inst. to 60 sec.
1st open interval: 2 to 30 sec.; 2 to 60 sec.
2nd open interval: 4 to 60 sec.; 15 to 120 sec.
3rd open interval: 
Reset Time: (continuously adjustable) 2 to 30 sec.; 4 to 60 sec.; 4 to 120 sec.
Output Rating: Each Contact
30 amps, closing
5 amps, continuous
1 amp, opening resistive
0.3 amp, opening inductive

Available Power Supply Module:
32Vdc, 48Vdc, 125Vdc, 120Vac, 240Vac, 50/60 Hz.
Operating Temperature: Minus 20°C to plus 70°C
Transient Immunity: More than 2500V, 1MHz bursts
at 400 Hz repetition rate continuous. (ANSI C37.90 SWC) fast transient test; EMI test
Magnetic Memory: Conserves sequence on loss of control power.
Weight: Unboxed - 4.0 lbs (1.8 kg)
Boxed - 4.7 lbs (2.1 kg)
Volume - 0.25 cubic feet

Flexible Programming, Front Accessible
(1) Select desired number of reclosures to a maximum of 3 (4 shots to lockout).
(2) Reset indicator lights when the relay is in the reset mode and control power is available.
(3) Lockout Indicator - Solid-state light emitting diode indicates completion of program and lockout.
(4) Select number of instantaneous trips to a maximum of four (4).
(5) Select desired open-interval times:
First — Inst. to 60 seconds.
Second — 2 to 60 seconds,
Third — 2 to 60 seconds.
(Other times also available)
(6) Select reset time, continuously adjustable from 4 to 120 seconds.
Reset timer is independently initiated after each closure (other times also available).
(7) Two pull knobs are provided for ease of drawing out the relay.

How to Specify
Relay shall be Asea Brown Boveri Type 79M or equal, and shall provide front-accessible adjustments of: (1) the number of reclosures, (2) the number of instantaneous trips, (3) the open-time interval for each reclosure, and (4) the reset time, which shall be independently initiated after each closure. The reclosing relay shall provide lockout after a selection of one to three reclosures.

Further Information
List Prices: PL 41-020
Technical Data: TD 41-025
Instruction Book: IB 7.3.1.7-2①
Other Protective Relays:
Application Selector Guide, TD 41-016
① Available upon request, only from Allentown Plant.

How to Order
For each reclosing breaker order:
1 — Type ITE-79M Reclosing Relay, and
1 — Power Supply Module (Surface Mounted)
For a complete listing of available reclosing relays, including internal connection diagrams and dimensions, see TD 41-025.
To place an order, or for further information, contact the nearest District Office.

November, 1990
<table>
<thead>
<tr>
<th>Type</th>
<th>Function</th>
<th>Internal Connections</th>
<th>Open Interval Time</th>
<th>Reset Time</th>
<th>Catalog Numbers Drawn Test Case</th>
</tr>
</thead>
<tbody>
<tr>
<td>799M</td>
<td>Multi-shot</td>
<td>16D248B</td>
<td>1 - 15 secs.</td>
<td>2 - 30 secs.</td>
<td>44BG3613</td>
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<td></td>
<td></td>
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<td>1 - 15 secs.</td>
<td>2 - 30 secs.</td>
<td>4 - 60 secs.</td>
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<td></td>
<td></td>
<td></td>
<td>1 - 15 secs.</td>
<td>2 - 30 secs.</td>
<td>4 - 60 secs.</td>
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<td></td>
<td></td>
<td></td>
<td>1 - 60 secs.</td>
<td>2 - 60 secs.</td>
<td>2 - 30 secs.</td>
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<td></td>
<td></td>
<td></td>
<td>1 - 15 secs.</td>
<td>2 - 30 secs.</td>
<td>15 - 120 secs.</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>1 - 15 secs.</td>
<td>2 - 30 secs.</td>
<td>15 - 120 secs.</td>
</tr>
<tr>
<td>799S</td>
<td>Single-shot</td>
<td>16D248E</td>
<td>1 - 15 secs.</td>
<td>2 - 30 secs.</td>
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<td></td>
<td>1 - 15 secs.</td>
<td>2 - 30 secs.</td>
<td>15 - 120 secs.</td>
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<tr>
<th>Type</th>
<th>Control Voltage</th>
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<tbody>
<tr>
<td>79PS</td>
<td>32 Vdc</td>
<td>79PS022M</td>
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<td>48 Vdc</td>
<td>79PS042M</td>
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<td>110 Vdc</td>
<td>79PS112M</td>
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<td>125 Vdc</td>
<td>79PS125M</td>
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<td></td>
<td>240 Vdc</td>
<td>79PS240M</td>
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</tbody>
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Note: The Type 799S is a separately mounted device and is supplied at no additional charge.

Use Type 79PS Power Supply Module with each relay.
Internal Connection Diagrams

16D248B Type 79M
Reclosing Relay
Drawout Test Case

16D248E Type 79M
Reclosing Relay
Drawout Test Case

16D248D Type 79S
Standard Case and Test Case

Legend
C – Close Contact
I – Instantaneous Cutout Contact
L – Lockout Alarm Contact
T – Tap Changer Cutout Contact
43 – Reclosure Cutout Switch
52/a – Circuit Breaker Auxiliary Contact
52/b – Circuit Breaker Auxiliary Contact
101 – Control Switch Contact, Closed only after CLOSE.

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