SM36 - Series Earth Leakages

The SM36 is a three phase heavy duty industrial earth leakage circuit breaker available as a surface mount and CBI Mini Rail mount device. This earth leakage circuit breaker is available with earth leakage sensitivity of 30, 50, 100, 250, 375, 500 and 1000 mA.

Features
- Hydraulic-magnetic technology
- 100% rating capability, independent of ambient temperature
- AS/NZS 3111 and AS/NZS 3910 approved
- Precision tripping characteristics
- Ratings 15 to 80 A
- Earth Leakage sensitivity 50 mA, 100 mA, 250 mA, 375 mA, 500 mA, 1000 mA
- Three pole plus switched neutral earth leakage protection
  Switches all active and neutral poles.
- Immune to pulsating DC load current
- Reset immediately after overload
- Suitable to use for electrical isolation

Applications
- Mining, heavy industrial and commercial applications requiring different sensitivities for earth leakage protections from electrical shock and fire hazards
- Mobile power generation equipment
- Railway signalling and infrastructure

Approvals
- AS/NZS 3111
- AS/NZS 3190
## Technical Data

<table>
<thead>
<tr>
<th>Product Type</th>
<th>SM36</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approvals</td>
<td>AS/NZS 3111, AS/NZS 3190</td>
</tr>
<tr>
<td>Number of Poles</td>
<td>3 + N</td>
</tr>
<tr>
<td>Standard Ampere Ratings</td>
<td>15, 16, 20, 32, 40, 63, 80 A</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>30 mA, 50 mA, 375 mA, 100 mA, 250 mA, 500 mA, 1000 mA</td>
</tr>
<tr>
<td>Rated Voltage</td>
<td>110 V / 415 V</td>
</tr>
<tr>
<td>Rated Interrupting</td>
<td>6 kA</td>
</tr>
<tr>
<td>Time Delay Curves</td>
<td>2</td>
</tr>
</tbody>
</table>

| Operating Temperature Range    | -40 °C to +85 °C            |
| Mounting Options               | Surface mount              |
| Time Delay Curves              | 2                           |
| Endurance                      | 1500 electrical operations (AS/NZS 3111, AS/NZS 3190) |
| Dielectric Strength            | 1480 V (single pole) / 1830 V (multi pole), 50 Hz for one minute after testing |
| Weight                         | 960 g (unpacked)            |
| Humidity                       | 35 to 85% relative          |
| Altitude                       | Certification tests done at altitude ≈ 2000 metres. Will operate at higher altitudes. |
| Shock                          | 16 G (IEC 600068-2-27)      |
| Vibration                      | 2 G (IEC 600068-2-27) (sinusoidal wave) |
| Flammability                   | I3 - Ignition does not persist at 850 °C after glow wire is withdrawn with an oxygen index of ≥ 28 |
| Toxicity                       | F1 - Smoke index of ≤ 20 which determines the fume class |
| Pollution Degree               | PD2 - Normally only non-conductive pollution occurs. Temporary conductivity caused by condensation is to be expected. |

<table>
<thead>
<tr>
<th>Earth Leakage</th>
<th>Wire Size mm² (IEC)</th>
<th>Torque (IEC)</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>3+N</td>
<td>0.75 - 35 mm²</td>
<td>2.5 Nm</td>
<td>Pozidriv #2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Combi head</td>
</tr>
</tbody>
</table>
### Ordering Information

**Example Code:** S-M-36-A-2-80A-500mA-415V-

<table>
<thead>
<tr>
<th>Group</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Requirement</td>
<td>S Frame</td>
<td>Type M</td>
<td>3 pole + N Overload</td>
<td>No Auxiliary</td>
<td>Medium delay curve 2</td>
<td>Current Rating 80 A</td>
<td>Sensitivity 500 mA</td>
<td>Voltage 415V AC</td>
<td>No special termination</td>
<td></td>
</tr>
<tr>
<td>Long Code</td>
<td>S</td>
<td>M</td>
<td>36</td>
<td>A</td>
<td>-</td>
<td>2</td>
<td>80A</td>
<td>500mA</td>
<td>415V</td>
<td>-</td>
</tr>
</tbody>
</table>

#### Group 1: Frame Type
- **Code:** S
- **Description:** 117 mm wide earth leakage

#### Group 2: Product Type
- **Code:** M
  - **Description:** 110 V AC, 6 kA
- **Code:** N
  - **Description:** 415 V AC, 6 kA

#### Group 3: No of Poles
- **Code:** 36
  - **Description:** Three pole plus switched neutral (3+N)
  - **Comment:** SM36

#### Group 4: E-L Type
- **Code:** A
  - **Description:** Overload (auto tripping)
  - **Comment:** White and green handle

#### Group 5: Auxiliary / Additional Pole
- **Code:** -
  - **Description:** Not applicable
  - **Comment:** Use this code if no auxiliary used

#### Group 6: Time Delays
- **Code:** 2
  - **Description:** Medium time delay

#### Group 7: Current Ratings
- **Code / Description:** 15, 16, 20, 32, 40, 63, 80 A
  - **Comment:** SM36
  - **Notes:** Ratings available vary depending on certification
  - **Other Notes:** Other ratings are available as special orders. Check availability.

#### Group 8: Sensitivity
- **Code:** L
  - **Description:** 50 mA
  - **Comment:** Standard
- **Code:** M
  - **Description:** 100 mA
  - **Comment:** Standard
- **Code:** N
  - **Description:** 200 mA
  - **Comment:** Standard
- **Code:** P
  - **Description:** 375 mA
  - **Comment:** Standard
- **Code:** Q
  - **Description:** 500 mA
  - **Comment:** Standard
- **Code:** R
  - **Description:** 1000 mA
  - **Comment:** Standard

#### Group 9: Voltage
- **Code:** 110V
  - **Description:** 110V AC
- **Code:** 415V
  - **Description:** 415V AC

#### Group 10: Special Termination
- **Code:** -
  - **Description:** No special termination

*For options not listed, please contact CBI*
* The published time delay curves are generated at 30°C ambient temperature with the Circuit Breaker mounted in the up-right position. The “must hold”, “must trip” and “instantaneous trip” current values are not affected by temperature, although delay time for the other operating current values may have to be adjusted using the temperature compensation curve which is available on request.
SM36 - Series Earth Leakages

Outline Dimensions: Surface Mount

Please review our Customer Terms and Conditions on www.cbi-lowvoltage.co.za

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JAN 2017
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