Miniature Circuit Breaker Migration Guide

1489-M
1492-SPM
1492-D
188-J, -K
1492-RCDA
1489-M Circuit Breakers

- Dual terminals provide wiring/bus bar flexibility and clamp from both sides to improve connection reliability.
- Suitable for DIN Rail mounting.
- Indicator window reflects contact state: red: closed, green: open.
- Approval marks are easily visible on dome.
- Terminal design helps prevent wiring misses.
- Scratch and solvent resistant printing.
- Accepts right-mounted shunt trips, auxiliary and signal contacts.
- IP20 finger-safe design (all sides).
- Terminal design helps prevent wiring misses.
- Suitable for DIN Rail mounting.
- Indicator window reflects contact state: red: closed, green: open.
- Approval marks are easily visible on dome.
- Scratch and solvent resistant printing.
- Accepts right-mounted shunt trips, auxiliary and signal contacts.
- IP20 finger-safe design (all sides).
1492-D Miniature Circuit Breaker

- Dual terminals provide wiring/bus bar flexibility and clamp from both sides to improve connection reliability
- Terminal design helps prevent wiring misses
- Approval marks are easily visible on dome
- Scratch- and solvent-resistant printing
- Suitable for DIN Rail mounting
- Indicator window reflects contact state: red: closed; green: open
- IP20 finger-safe design (all sides)
- Accepts a wide variety of right, left, and space saving bottom-mounted accessories

188-J, -K Regional Circuit Breakers

- Approval marks are easily visible on dome
- Suitable for DIN Rail mounting
- Scratch- and solvent-resistant printing
- IP20 finger-safe design (all sides)
- Accepts a wide variety of right, left, and space saving bottom-mounted accessories
1492-RCDA Residual Current Devices

- Dual terminals provide wiring/bus bar flexibility and clamp from both sides to improve connection reliability.
- Approval marks are easily visible on dome.
- Terminal design helps prevent wiring misses.
- Test push button to verify device functionality.
- Indicator window reflects contact state: red: closed, green: open.
- Accepts right-mounted auxiliary and signal contacts.
- Suitable for DIN Rail mounting.
- Scratch and solvent resistant printing.
- IP20 finger-safe design (all sides).
- Terminal design helps prevent wiring misses.
The new offering of Allen-Bradley UL 489 miniature circuit breakers has an increased current range, durable laser printing and longer mechanical life.

New product specification differences are noted in bold

<table>
<thead>
<tr>
<th>1489-A</th>
<th>Approximate Dimensions (mm)</th>
<th>1489-M</th>
</tr>
</thead>
<tbody>
<tr>
<td>1489-A (1P)</td>
<td>1489-M (1P)</td>
<td></td>
</tr>
<tr>
<td>W</td>
<td>17.5</td>
<td>17.5</td>
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<tr>
<td>H</td>
<td>105</td>
<td>111</td>
</tr>
<tr>
<td>D</td>
<td>70</td>
<td>69</td>
</tr>
</tbody>
</table>

### Ratings, Certifications and Feature Comparisons

**1489-A**

- Current rated for 0.5…40 A
- Trip Curves – C, D
- Interrupting capacity
  - UL: 14 kA – C curve: 15-25 A; D curve: 13-20 A
  - 10 kA all other current ratings
  - IEC: 15 kA

#### UL Ratings

- 1P: 277V AC (0.5…32 A); 240V AC (35…40 A);
- 2P, 3P: 480Y/277V AC (0.5…32 A); 240V AC (35…40 A)
- 1P: 48V DC; 2P: 96V DC

#### IEC Ratings

- 1P: 240V AC; 2P, 3P: 415V AC

**1489-M**

- Current rated for 0.5…63 A
- Trip Curves – C, D
- Interrupting capacity
  - UL: 10 kA; IEC: 15 kA

#### UL Ratings

- 1P: 277V AC (0.5…40 A – C curve/0.5…35 A – D curve);
- 240V AC (50…63 A – C curve/40…63 A – D curve);
- 2P, 3P: 480Y/277V AC (0.5…40 A – C curve/0.5…35 A – D curve);
- 240V AC (50…63 A – C curve/40…63 A D curve)
- 1P: 48V DC; 2P: 96V DC

#### IEC Ratings

- 1P: 230V AC; 2P, 3P: 400V AC

**UL 489 / CSA C22.2 No. 5.1 / EN 60947-2**

- UL Listed / CSA Certified / CE Marked / VDE Certified
- Ring terminals – available
- UL rated for 2 wires
- IP20 Front

**Optional Accessories**

- Auxiliary/Signal Contact & Shunt Trip: Left mounted
- Lock Out Attachment: one design
- Bus Bars: non-cuttable, series A

**UL 489 / CSA C22.2 No. 5.1 / EN 60947-2 / GB 14048.2**

- UL Listed / CSA Certified / CE Marked / VDE Certified / CCC Certified / RoHS Compliant
- Ring terminals – not available at launch
- 1 wire AWG 18…4; 2-4 wires AWG 18…10 max. 2 wires per slot
- IP20 All sides

**Auxiliary Contact, Signal Contact & Shunt Trip: Right mounted**

- Lock Out Attachment: 1-pole and multi-pole designs
- Bus Bars: non-cuttable, series D (catalog number change)

**Note:** Old accessories and bus bars cannot be mixed with new accessories and bus bars.
The new offering of Allen-Bradley UL 1077 supplemental circuit breakers provide a broader range of accessories, durable laser printing and longer mechanical life.

**New product specification differences are noted in bold**

### Approximate Dimensions (mm)

<table>
<thead>
<tr>
<th>1492-SP</th>
<th>1492-SPM</th>
</tr>
</thead>
<tbody>
<tr>
<td>W</td>
<td>17.5</td>
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<tr>
<td>H</td>
<td>80</td>
</tr>
<tr>
<td>D</td>
<td>70</td>
</tr>
</tbody>
</table>

### Ratings, Certifications and Feature Comparisons

(Remember: New product specification differences are noted in bold)

**Current rated for 0.5…63 A (D Curve 50 & 63 A IEC only)**

- Trip Curves – B, C, D
- Interrupting capacity
  - UL: 5/10 kA; IEC: 10/15 kA
  - UL 1077 / CSA 22.2 No. 235 / EN 60947-2 / GB 14048.2
- UL Recognized / CSA Certified / CE Marked / GL (Marine) / CCC Certified

**Current rated for 0.5…63 A**

- Trip Curves – B, C, D
- Interrupting capacity
  - UL: 5/10 kA; IEC: 15 kA
  - UL 1077 / CSA 22.2 No. 235 / EN 60947-2 / GB 14048.2
- UL Recognized / CSA Certified / CE Marked / CCC Certified / VDE Certified / RoHS Compliant

**UL Ratings**

- 1P(+N): 277V AC
- 2P, 3P(+N): 480Y/277V AC
- 1P: 48V DC; 2P: 96V DC

**IEC Ratings**

- 1P(+N): 240V AC; 48V DC
- 2P, 3P(+N): 240/415V AC
- 2P: 96V DC

**UL 1077 / CSA 22.2 No. 235 / EN 60947-2 / GB 10963**

**UL Recognized / CSA Certified / CE Marked / GL (Marine) / CCC Certified**

**Single cage terminal design**

- Tightening Torque
  - AWG 18…12: 21 in•lb
  - AWG 10…8: 25 in•lb
  - AWG 6: 36 in•lb
  - 1 wire AWG 18…6; 2 wires AWG 18…10
- Calibration Temperature 30°C

**Dual cage terminal with bi-directional tightening**

- Tightening Torque
  - AWG 18…16: 13.3 in•lb
  - AWG 14…10: 17.7 in•lb
  - AWG 8…4: 39.8 in•lb
  - 1 wire AWG 18…4; 2-4 wires AWG 18…10 max. 2 wires per slot
- Calibration Temperature 40°C

**IP20 Front**

**IP20 All sides**

**Optional Accessories**

- Auxiliary/Signal Contact & Shunt Trip: Left mounted
- Lock Out Attachment: one design
- Bus Bars: cuttable, 1m, series A

- Auxiliary Contact, Signal Contact & Shunt Trip: Right, left and bottom mounted
- Lock Out Attachment: 1-pole and multi-pole designs
- Bus Bars: cuttable, 1m, series A

**Note:** Old accessories cannot be mixed with new accessories
The new offering of Allen-Bradley UL 1077 miniature circuit breakers provide overcurrent and short circuit protection in higher voltage DC circuits.

New product specification differences are noted in bold

<table>
<thead>
<tr>
<th>1489-D</th>
<th>Approximate Dimensions (mm)</th>
<th>1492-D</th>
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</thead>
<tbody>
<tr>
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<td>1489-D (1P)</td>
<td>1492-D (1P)</td>
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<td>17.5</td>
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<tr>
<td>H</td>
<td>105</td>
<td>88</td>
</tr>
<tr>
<td>D</td>
<td>70</td>
<td>69</td>
</tr>
</tbody>
</table>

Ratings, Certifications and Feature Comparisons
(New product specification differences are noted in bold)

<table>
<thead>
<tr>
<th>Current rated for 2…40 A</th>
<th>Current rated for 0.5…63 A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trip Curves – C</td>
<td>Trip Curves – C</td>
</tr>
<tr>
<td>Interrupting capacity</td>
<td>Interrupting capacity</td>
</tr>
<tr>
<td>UL: 10 kA; IEC: 10 kA</td>
<td>UL: 10 kA; IEC: 10 kA</td>
</tr>
</tbody>
</table>

UL Listed / CSA Certified / VDE Certified / CE Marked / RoHS Compliant

Single cage terminal design

<table>
<thead>
<tr>
<th>Tightening Torque</th>
<th>Tightening Torque</th>
</tr>
</thead>
<tbody>
<tr>
<td>AWG 18…12: 21 in-lb</td>
<td>AWG 18…16: 13.3 in-lb</td>
</tr>
<tr>
<td>AWG 10…8: 25 in-lb</td>
<td>AWG 14…10: 17.7 in-lb</td>
</tr>
<tr>
<td>AWG 6: 36 in-lb</td>
<td>AWG 8…4: 39.8 in-lb</td>
</tr>
<tr>
<td>1 wire AWG 18…6; 2 wires AWG 18…10</td>
<td>1 wire AWG 18…4; 2-4 wires AWG 18…10 max. 2 wires per slot</td>
</tr>
<tr>
<td>UL Calibration Temperature: 40˚C</td>
<td>UL Calibration Temperature: 25˚C</td>
</tr>
<tr>
<td>EN/IEC Calibration Temperature: 30˚C</td>
<td>EN/IEC Calibration Temperature: 55˚C</td>
</tr>
</tbody>
</table>

IP20 Front

Optional Accessories

<table>
<thead>
<tr>
<th>Auxiliary/Signal Contact &amp; Shunt Trip: Left mounted</th>
<th>Auxiliary Contact, Signal Contact &amp; Shunt Trip: Right, left and bottom mounted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lock Out Attachment: one design</td>
<td>Lock Out Attachment: 1-pole and multi-pole designs</td>
</tr>
<tr>
<td>Bus Bars: cuttable, 1m, series A</td>
<td>Bus Bars: cuttable, 1m, series A</td>
</tr>
</tbody>
</table>

Note: Old accessories cannot be mixed with new accessories
The new offering of Allen-Bradley Regional Circuit Breakers* provides two interrupting capacity options, a broader range of accessories, and longer mechanical life.

*New product specification differences are noted in bold.
*Available in China and Europe only

<table>
<thead>
<tr>
<th>188-A, -B</th>
<th>Approximate Dimensions (mm)</th>
<th>188-J, -K</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="188-A" /></td>
<td></td>
<td><img src="image" alt="188-J" /></td>
</tr>
<tr>
<td>188-A (1P)</td>
<td>188-J (1P)</td>
<td></td>
</tr>
<tr>
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<td>17.5</td>
<td>17.5</td>
</tr>
<tr>
<td>H</td>
<td>80</td>
<td>85</td>
</tr>
<tr>
<td>D</td>
<td>70</td>
<td>69</td>
</tr>
</tbody>
</table>

Ratings, Certifications and Feature Comparisons
(New product specification differences are noted in bold)

<table>
<thead>
<tr>
<th>188-A</th>
<th>188-J</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current rated for 0.16…63 A</td>
<td>Current rated for 0.5…63 A</td>
</tr>
<tr>
<td>Trip Curves – B, C, D</td>
<td>Trip Curves – B, C, D</td>
</tr>
<tr>
<td>Interrupting capacity ($I_{cn}$) 188-A: 10 kA</td>
<td>Interrupting capacity ($I_{cn}$) 188-J: 10 kA</td>
</tr>
<tr>
<td>Interrupting capacity ($I_{cn}$) 188-B: 6 kA</td>
<td>Interrupting capacity ($I_{cn}$) 188-K: 6 kA</td>
</tr>
<tr>
<td>Rated operational voltage ($U_e$) 1P(+N): 230V AC</td>
<td>Rated operational voltage ($U_e$) 1P(+N): 230V AC</td>
</tr>
<tr>
<td>2P, 3P(+N), 4P: 400V AC</td>
<td>2P, 3P(+N), 4P: 400V AC</td>
</tr>
<tr>
<td>Standards: EN 60898-1, GB 10963</td>
<td>Standards: EN 60898-1, GB 10963</td>
</tr>
<tr>
<td>CE Marked / CCC Certified / RoHS Compliant</td>
<td>CE Marked / CCC Certified / VDE Certified / RoHS Compliant</td>
</tr>
<tr>
<td>Calibration temperature 30°C</td>
<td>Calibration temperature 30°C</td>
</tr>
<tr>
<td>Single cage terminal design</td>
<td>Single cage terminal design</td>
</tr>
<tr>
<td>IP20 Front</td>
<td>IP20 All sides</td>
</tr>
</tbody>
</table>

Optional Accessories

- Auxiliary/Signal Contact & Shunt Trip: Left mounted
- Lock Out Attachment: one design
- Bus Bars: cuttable, various lengths, series C

- Auxiliary Contact, Signal Contact & Shunt Trip: Right, left and bottom mounted
- Lock Out Attachment: 1-pole and multi-pole designs
- Bus Bars: cuttable, various lengths, series D (catalog number change)

Note: Old accessories cannot be mixed with new accessories

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Shunt Trip | Aux/Signal Contact | Lock Out | Bus Bar
---|---|---|---

9 • Miniature Circuit Breaker Migration
The new offering of Allen-Bradley UL 1053 residual current devices are used in conjunction with MCBs for circuit protection from undetected ground faults.

### New product specification differences are noted in bold

<table>
<thead>
<tr>
<th><strong>1492-RCD</strong></th>
<th><strong>1492-RCDA</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Approximate Dimensions (mm)</strong></td>
<td><strong>Approximate Dimensions (mm)</strong></td>
</tr>
<tr>
<td>1492-RCD (2P)</td>
<td>1492-RCDA (2P)</td>
</tr>
<tr>
<td>W</td>
<td>35</td>
</tr>
<tr>
<td>H</td>
<td>80</td>
</tr>
<tr>
<td>D</td>
<td>60</td>
</tr>
</tbody>
</table>

### Ratings, Certifications and Feature Comparisons

(New product specification differences are noted in bold)

<table>
<thead>
<tr>
<th><strong>1492-RCD</strong></th>
<th><strong>1492-RCDA</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Current rated for 16…80 A</td>
<td>Current rated for 25…80 A</td>
</tr>
<tr>
<td>Sensitivity 30…500 mA</td>
<td>Sensitivity 30…500 mA</td>
</tr>
</tbody>
</table>
IEC/EN 230/400V AC |
| EN 61008 | UL 1053 / ANSI/NFPA 70 / EN 61008  
CSA C22.2 No. 144 / GB 16916  
cURus Recognized / CE Marked / CCC Certified / VDE Certified / RoHS Compliant |
| VDE Certified | IP2X – Front |
| Aux/Signal Contact | Aux/Signal Contact – Right Side mount |
| Indicator window on 4P version | Indicator window on 2P and 4P versions |
| Single cage terminal design | Dual cage terminal with bi-directional tightening |

### Optional Accessories

<table>
<thead>
<tr>
<th><strong>1492-RCD</strong></th>
<th><strong>1492-RCDA</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Auxiliary/Signal Contact: Right mounted</td>
<td>Auxiliary Contact &amp; Signal Contact: Right mounted</td>
</tr>
<tr>
<td>Bus Bars: none</td>
<td>Bus Bars: cuttable, 1m (for connecting RCD to 188-J, -K MCB)</td>
</tr>
</tbody>
</table>

*Note: Old accessories cannot be mixed with new accessories*
Frequently Asked Questions

**Why did we change the miniature circuit breakers?**
The new MCBs offer increased mechanical operating life, higher current ratings and a unique dual-terminal design that provides better connection of multiple conductors (bus bar and wire). In addition, there are more options for accessories, including an innovative auxiliary contact that mounts at the bottom of the 1492-SPM, 1492-D and 188-J, -K requiring no additional DIN Rail space.

**Are the new breakers similar in size?**
Yes, the new breakers are equal in pole width to the old and have only minor variations in height and depth.

**Can I mix new breakers with existing breakers?**
Yes, although bus bar compatibility, if used, must be evaluated.

**Can I use the same bus bars as before?**
The 1489-M and 188-J, -K products require the use of a new bus bar series. The 1492-SPM and 1492-D bus bars are unchanged. In both cases, it will not be possible to connect old and new breakers with the same bus bar.

**Can I use the same accessories?**
These are newly designed breakers and must be used with the new offering of accessories. Most of the new accessories are right side mounted.
Selection Tools

Rockwell Automation provides a wide range of selection tools for the new circuit breakers to assist you in choosing the right product for your needs. You can access these tools on-line or through your local distributor.

On-Line Product Directory
Our extensive product portfolio is designed to improve your processes through every stage of your manufacturing cycle.  

Product Selection Toolbox
Our powerful range of product selection and system configuration tools assist you in choosing and applying our products. 
www.rockwellautomation.com/en/e-tools

Local Distributor
Visit our website to find your local Distributor.  
www.rockwellautomation.com/distributor

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www.rockwellautomation.com

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