



In today's very competitive marketplace you need reliability, so you need to use circuit breakers that are high quality and technically correct for your application. Altech is a US leader in DIN rail mounted breakers with ratings up to 63A. Only Altech offers DIN rail mounted breakers that meet UL489, UL508 or UL1077 approvals with a short circuit interrupt capacity of up to 10kA.

### Overview of Physical Attributes of Our Lines

#### UL (AC), DL (DC), UM (V-EA) and UR Series

- Hinged terminal cover design allows easy access to terminal screws with a broad range of screwdrivers!
- Individual Part Number is shown on each circuit breaker and is legible when installed in the panel.
- A clear-hinged cover protects designated marking area.
- DIN Clip can be released when necessary.
- Flexible replaceable terminal barriers reduce the possibility of breakage if accidentally dropped!

**Unique Standard Dual Connection Terminals**

- A** Box terminal for solid conductors or flexible conductors with or without cable lug.
- B** Screw terminal for forked cable lug.
- C** Screw terminal for ring tongue connection.

#### L, M and R Series

- Strong thermoplast housing.
- Strong terminal barriers.
- Spring action DIN Rail clips for both top and bottom.
- Removable circuit identification tag.
- Indicator window.
  - ON (Red)
  - OFF (Green)
- Trip curve (D) and amperage (15A) window display.

### Ordering Part Builder

#### UL (AC), DL (DC), UM (V-EA) and UR Series

EXAMPLE

1	C	25	UL
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- Series  
UL 489 AC = UL / UL 489 DC = DL  
UL 508 = UM / UL 1077 = UR
- Current Rating  
0.3 – 63A
- Trip Curve\*  
B, C, D, E, G, Z
- No. of Poles  
1, 2, 3, 4

#### L, M and R Series

EXAMPLE

DC	1	CU	25	L
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- Series  
UL 489 = L / UL 508 = M / UL 1077 = R
- Current Rating  
0.3 – 63A
- Trip Curve\*  
B, C, D, G, Z
- No. of Poles  
1, 2, 3, 4
- Current Type  
DC = DC / Blank = AC

\* Trip curves available depend on circuit breaker series.

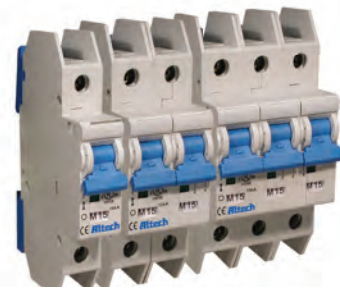
# Miniature Molded Case Circuit Breakers

**UL 489**

## UL (AC), DL (DC) Series UL489



## L Series, AC or DC UL489



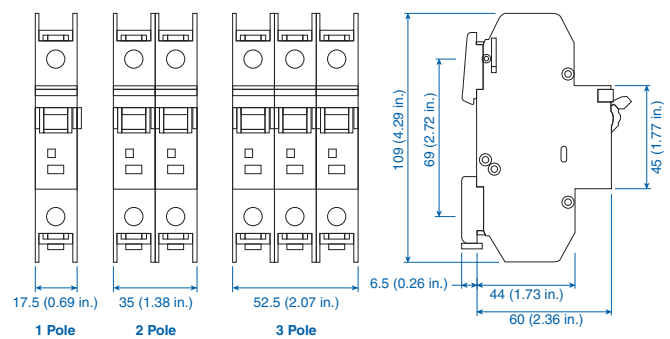
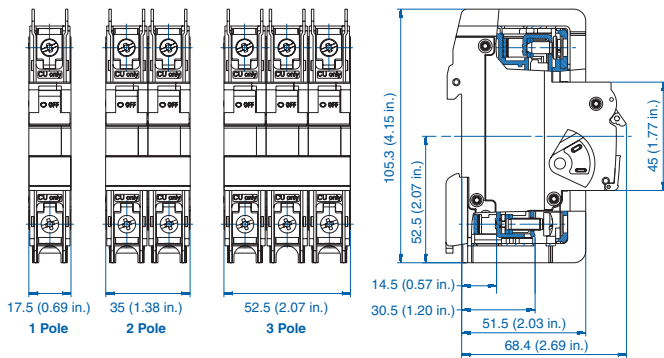
### Current/ Voltage Rating

<b>AC Version</b> (one device - dual voltage ratings)	0.3 - 63A/ 240V AC, 0.3-32A/ 480Y/277V AC	0.2-63A/ 240V AC, 0.2-32A/ 480Y/277VAC
<b>DC Version</b>	0.3 - 63A/ 125/ 250V DC	0.2-63A/ 125/ 250V DC
<b>Poles</b>	1, 2, 3 (4 poles available upon request.)	1, 2, 3 (4 poles available upon request.)
<b>Trip Characteristics</b>	C, D; AC and DC	C, D; AC and DC
<b>Interrupting Capacity</b>	10kA	10kA
<b>Calibration Temperature</b>	40°C (104°F)	40°C (104°F)
<b>Ambient Temperature</b>	-25°C to 55°C (-13°F to 131°F)	-25°C to 60°C (-13°F to 140°F)
<b>Storage Temperature</b>	-40°C to 70°C (-40°F to 158°F)	-25°C to 75°C (-13°F to 167°F)
<b>Terminal Size Acceptability and Terminal Torque</b>	Top: 18-3 AWG; Bottom: 18-2 AWG 2.0 Nm (17.7 lb.in.)(min) / 2.5Nm (22.2 lb.in.)(max)	14-3 AWG: 17.7 lb-in. (2.0 Nm) 18-16 AWG: 25 lb-in.(2.8 Nm)
<b>Electrical Life</b>	6,000 switching cycles ON/ OFF	6,000 switching cycles ON/ OFF
<b>Mechanical Life</b>	10,000 switching cycles ON/ OFF	10,000 switching cycles ON/ OFF
<b>Terminal Protection Degree</b>	IP20	IP20 at front
<b>Mounting Orientation</b>	In any plane	In any plane
<b>Accessories</b>	<ul style="list-style-type: none"> <li>• Auxiliary Contact, Alarm Switch</li> <li>• Shunt Trip</li> <li>• Neutral Pole</li> <li>• Lock-out Adapter</li> <li>• Touch Protection Caps</li> <li>• Cooling Spacer</li> <li>• Mounting Screw 34mm</li> </ul>	<ul style="list-style-type: none"> <li>• Auxiliary Contact</li> <li>• Shunt Trip</li> <li>• Neutral Pole</li> <li>• Undervoltage Trip</li> <li>• Front Mounting Kit with hardware</li> <li>• Lock-out Adapter</li> </ul>

### Dimensions

#### UL (AC), DL (DC) Series

#### L Series



**Altech Corp.®**

**UL 489**

# Manual Motor Controllers “Suitable as Motor Disconnect”

UL 508

## UM (V-EA) Series UL508



## M Series UL508

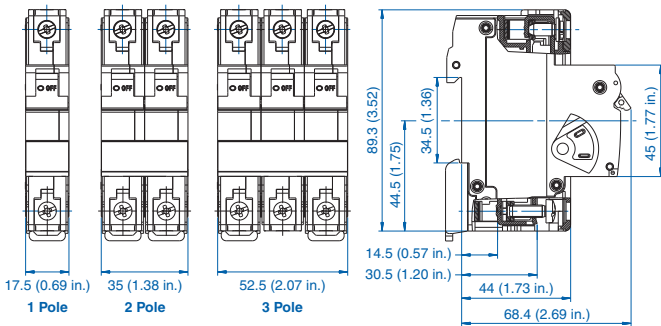


### Current/ Voltage Rating

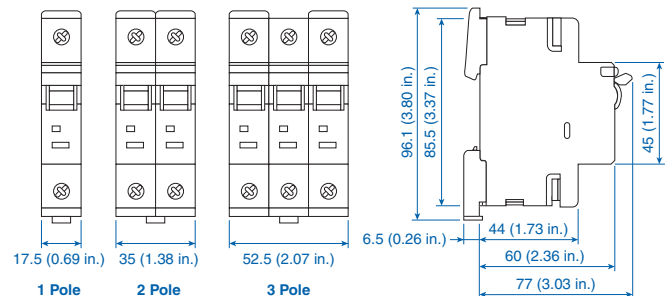
<b>AC Version</b>	0.3-60A/ 480Y/ 277V AC	0.5-63A / 480Y/ 277V AC
<b>DC Rating</b>	0.3-25A: 1 pole - 42V DC; 2 Pole - 80V DC 30-60A: 1 pole - 24V DC; 2 Pole - 60V DC	
<b>Poles</b>	1, 2, 3 (4 poles available upon request.)	1, 2, 3 (4 poles available upon request.)
<b>Trip Characteristics</b>	B, C, D, E, G, Z	B, C, D, (G & Z Pending)
<b>Short Circuit Withstand Rating (UL/CSA - Ratings)</b>	0.3-60A (RC): 10kA with UL-listed RK5 back-up fuse or MCCB	0.5-6A (RC): 10kA with no back-up fuse 8-63A (RC): 10kA with UL-listed Class J back-up fuse; 5kA with no back-up fuse
<b>Calibration Temperature</b>	40°C (104°F)	30°C (86°F)
<b>Ambient Temperature</b>	-25°C to 55°C (-13°F to 131°F)	-25°C to 60°C (-13°C to 140°F)
<b>Storage Temperature</b>	-40°C to 70°C (-40°F to 158°F)	-25°C to 75°C (-13°C to 167°F)
<b>Terminal Size Acceptability and Terminal Torque</b>	Top: 18-3 AWG; Bottom: 18-2 AWG 2.0 Nm (17.7 lb.in.)(min) / 2.5Nm (22.2 lb.in.)(max)	14-3 AWG: 17.7 lb-in. (2.0 Nm) 18-16 AWG: 25 lb-in. (2.8 Nm)
<b>Terminal Protection Degree</b>	IP20	IP20
<b>Mounting Orientation</b>	In any plane	In any plane
<b>Horsepower Ratings</b>	see catalog	see catalog
<b>Accessories</b>	<ul style="list-style-type: none"> <li>• Auxiliary Contact, Alarm Switch</li> <li>• Shunt Trip</li> <li>• Neutral Pole</li> <li>• Lock-out Adapter</li> <li>• Touch Protection Caps</li> <li>• Cooling Spacer</li> <li>• Mounting Screw 34mm</li> </ul>	<ul style="list-style-type: none"> <li>• Auxiliary Contact</li> <li>• Shunt Trip</li> <li>• Neutral Pole</li> <li>• Lock-out Adapter</li> <li>• Front Mounting Kit with hardware</li> </ul>

### Dimensions

#### UM (V-EA) Series



#### M Series



UL 508

**Altech Corp.**<sup>®</sup>

# Supplementary Protector

UL 1077

## UR Series UL1077

## R Series UL1077



UL US  
E137915



UL US  
E301611

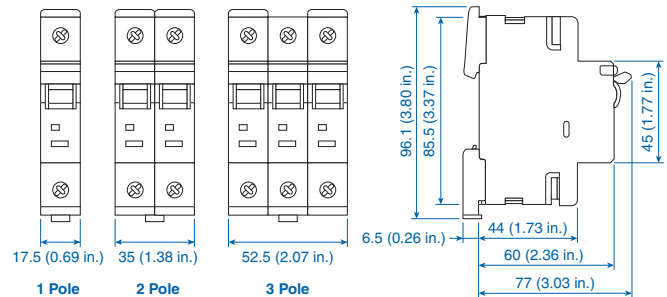
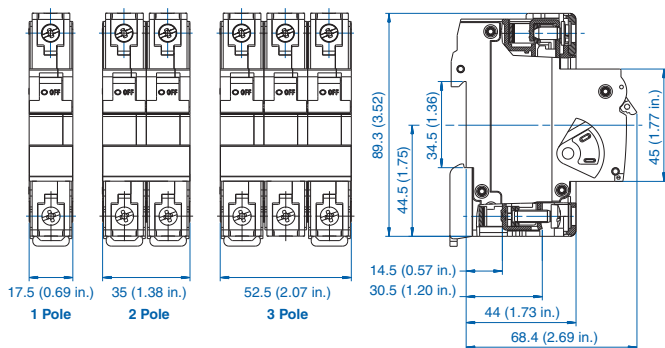
### Current/ Voltage Rating

<b>AC Version</b>	0.5-60A / 480Y/ 277V AC	0.5-63A / 480Y/ 277V AC
<b>Poles</b>	1, 2, 3 (4 poles available upon request.)	1, 2, 3 (4 poles available upon request.)
<b>Trip Characteristics</b>	B, C, D	B, C, D
<b>Short Circuit Withstand Rating</b>	0.3-60A (RC): 10kA with UL-listed RK5 back-up fuse or MCCB	0.5-6A (RC): 10kA with no back-up fuse 8-63A (RC): 10kA with UL-listed Class J back-up fuse; 5kA with no back-up fuse
<b>Calibration Temperature</b>	30°C (86°F)	30°C (86°F)
<b>Ambient Temperature</b>	-25°C to +55°C (-13°F to 131°F)	-25°C to 60°C (-13° to 140°F)
<b>Storage Temperature</b>	-40°C to +70°C (-40°F to 158°F)	-25°C to 75°C (-13° to 167°F)
<b>Terminal Size Acceptability and Torque</b>	Top: 18-3 AWG; Bottom: 18-2 AWG 2.0 Nm (17.7 lb.in.)(min) / 2.5Nm (22.2 lb.in.)(max)	14-3 AWG: 17.5 lb-in. (2.0 Nm) 18-16 AWG / 25 lb-in.(2.8 Nm)
<b>Electrical Life</b>	6,000 switching cycles ON/ OFF	6,000 switching cycles ON/ OFF
<b>Mechanical Life</b>	10,000 switching cycles ON/ OFF	10,000 switching cycles ON/ OFF
<b>Terminal Protection Degree</b>	IP20	IP20 at front
<b>Mounting Orientation</b>	In any plane	In any plane
<b>Accessories</b>	<ul style="list-style-type: none"> <li>Auxiliary Contact, Alarm Switch</li> <li>Shunt Trip</li> <li>Neutral Pole</li> <li>Lock-out Adapter</li> <li>Touch Protection Caps</li> <li>Cooling Spacer</li> <li>Mounting Screw 34mm</li> </ul>	<ul style="list-style-type: none"> <li>Auxiliary Contact</li> <li>Shunt Trip</li> <li>Neutral Pole</li> <li>Lock-out Adapter</li> </ul>

### Dimensions

#### UR Series

#### R Series



UL 1077

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Cat. No. 346