

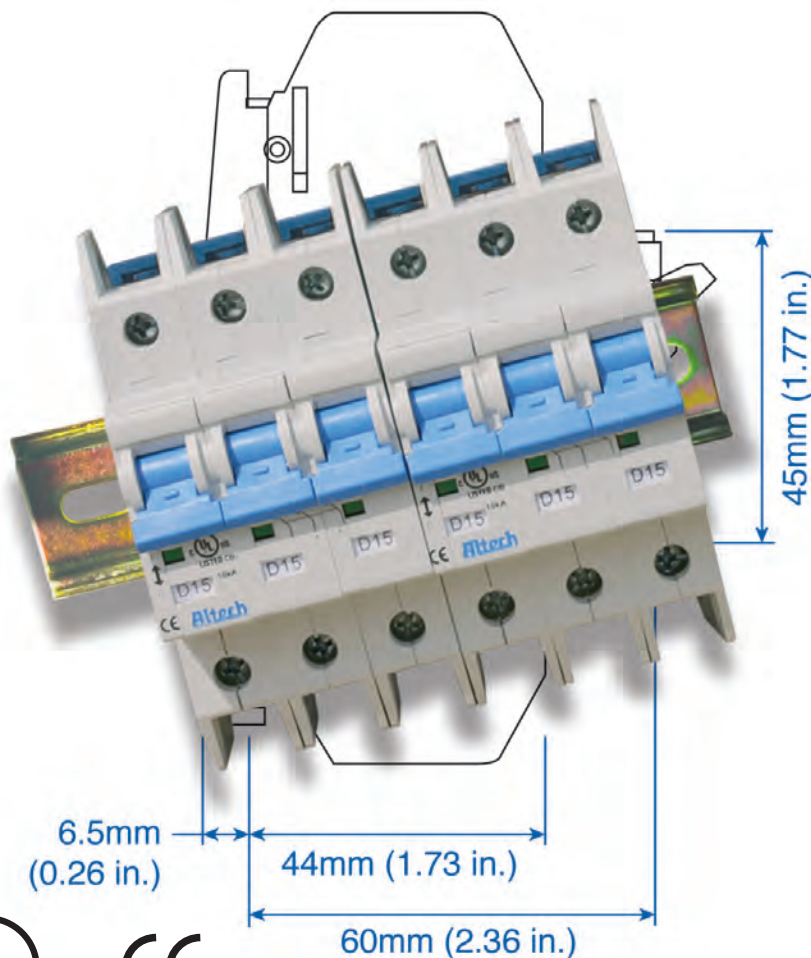
# L-Series

## AC or DC

### Miniature Molded Case Circuit Breakers

#### UL489 Listed Circuit Breakers

- Available in AC and DC models
- DIN Rail Mounted
- 17.5mm width
- Thermal Magnetic
- 240V, 480Y/277V AC, 50/60Hz
- 125VDC (1 pole); 250VDC (2 pole)
- 10kA Short Circuit Interrupting Capacity
- Positive Trip indicator (Green - off/tripped, Red - on)
- HACR Type 40°C
- Line/Load reversible



|                                        |                                                                 |
|----------------------------------------|-----------------------------------------------------------------|
| AC Version Current/ Voltage Rating     | 0.2-63A/240VAC, 0.2-32A/480Y/277VAC*                            |
| DC Version Current/ Voltage Rating     | 0.2-63A/125/250VDC                                              |
| Calibration Temperature                | 40°C (104°F)                                                    |
| Operating Temperature                  | -25° to 60°C (-13° to 140°F)                                    |
| Storage Temperature                    | -25° to 75°C (-13° to 167°F)                                    |
| Terminal Size Acceptability and Torque | 14-3 AWG: 17.5 lb-in. (2.0 Nm)<br>18-16 AWG: 25 lb-in. (2.8 Nm) |
| Terminal Protection Degree             | IP20 at front                                                   |
| Electrical Life                        | 6,000 cycles on/off                                             |
| Mechanical Life                        | 10,000 cycles on/off                                            |
| Wire Connection                        | copper wire only 60/75°C                                        |
| Vibration Resistance                   | 3g (18-50Hz)                                                    |
| Mounting Orientation                   | In any plane                                                    |

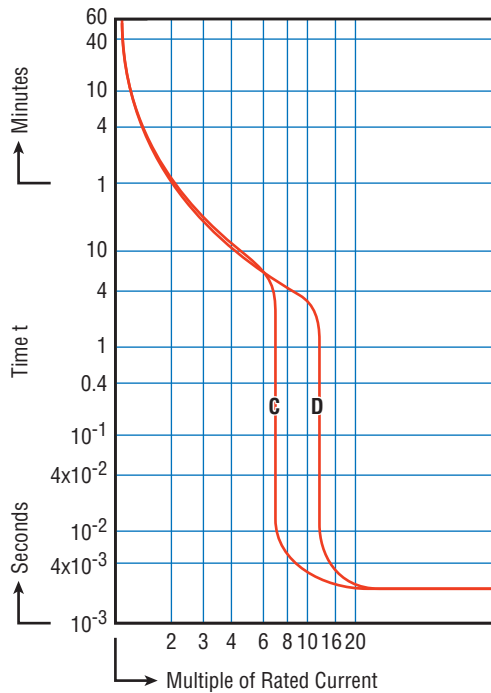
\*One device dual voltage ratings.

#### AC - SHORT CIRCUIT INTERRUPTING RATING

| No. Poles | Type | 0.2-32A                   | 33-63A         |
|-----------|------|---------------------------|----------------|
| 1         | AC   | 10kA@120, 240, 277V       | 10kA@120, 240V |
| 2-4       | AC   | 10kA@120, 240V, 480Y/277V | 10kA@120, 240V |

#### DC - SHORT CIRCUIT INTERRUPTING RATING

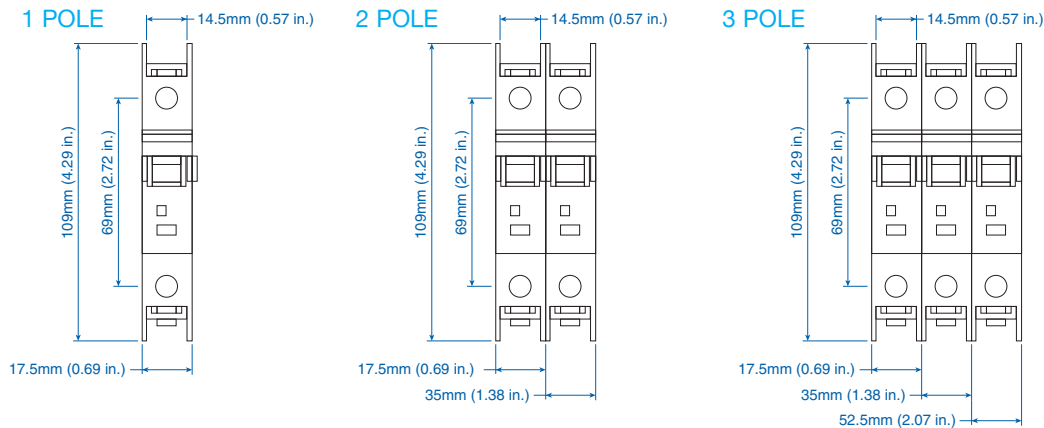
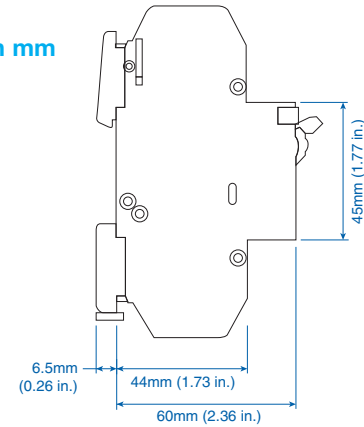
| No. Poles | Type | 0.2-32A   | 33-63A    |
|-----------|------|-----------|-----------|
| 1         | DC   | 10kA@125V | 10kA@125V |
| 2         | DC   | 10kA@250V | 10kA@250V |



## Time versus Current Trip Curve

For the exact trip curve, please refer to page 25.

Dimensions in mm side view



| Trip-Characteristics*          |                   |                        |                       | Type | Applications                                                                        |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
|--------------------------------|-------------------|------------------------|-----------------------|------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Characteristic Trip Boundaries |                   |                        |                       |      | Lighting<br>Wiring<br>Protection<br>Control<br>Circuits                             | Business<br>Equipment<br>Appliances                                                   | Transformers                                                                          | Power<br>Supplies<br>Heaters                                                          | Motors                                                                                |                                                                                       | Reactive<br>Load                                                                      |
| Thermal Trip                   |                   | Magnetic Trip          |                       |      |                                                                                     |                                                                                       |                                                                                       |                                                                                       | Low<br>Inrush                                                                         | High<br>Inrush                                                                        |                                                                                       |
| Must not<br>Trip>100ms         | Must Trip<br><1hr | Must not<br>Trip>100ms | Must Trip<br>at 100ms |      |                                                                                     |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| C-Characteristics              |                   |                        |                       |      |                                                                                     |    |    |                                                                                       |                                                                                       |  |                                                                                       |
| 1.05xRC                        | 1.3xRC            | 5xRC                   | 10xRC                 | AC   |                                                                                     |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| 1.05xRC                        | 1.3xRC            | 5xRC                   | 10xRC                 | DC   |                                                                                     |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| D-Characteristics              |                   |                        |                       |      |  |  |  |  |  |  |  |
| 1.05xRC                        | 1.3xRC            | 10xRC                  | 16xRC                 | AC   |                                                                                     |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| 1.05xRC                        | 1.3xRC            | 10xRC                  | 16xRC                 | DC   |                                                                                     |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |

\*The value of each characteristic is shown vertically beneath its corresponding heading.



### Warning!

This information should only be used as a selection guide. The use of a Miniature Circuit Breaker in an application with a certain Trip-Characteristic always requires prototype testing! It is the responsibility of the circuit design engineer to select the appropriate Miniature Circuit Breaker for his specific application.

# AC C-Trip Characteristics



LISTED  
E305318



## Application Examples:

Low inrush motors, resistive loads, wiring protection, receptacles, lighting, and control circuit applications. Relatively short thermal trip delay and medium magnetic trip point.



**One Pole**

| Rated Current | Type/<br>Cat. No. |
|---------------|-------------------|
| 0.2A          | 1CU02L            |
| 0.5A          | 1CU05L            |
| 1.0A          | 1CU1L             |
| 1.6A          | 1CU1.6L           |
| 2.0A          | 1CU2L             |
| 3.0A          | 1CU3L             |
| 4.0A          | 1CU4L             |
| 5.0A          | 1CU5L             |
| 6.0A          | 1CU6L             |
| 8.0A          | 1CU8L             |
| 10A           | 1CU10L            |
| 12A           | 1CU12L            |
| 13A           | 1CU13L            |
| 15A           | 1CU15L            |
| 16A           | 1CU16L            |
| 20A           | 1CU20L            |
| 25A           | 1CU25L            |
| 30A           | 1CU30L            |
| 32A           | 1CU32L            |
| 40A           | 1CU40L            |
| 50A           | 1CU50L            |
| 60A           | 1CU60L            |
| 63A           | 1CU63L            |

Standard Pack: 12

Weight: 1.7kg (3.74 lb.)



**Two Pole**

| Rated Current | Type/<br>Cat. No. |
|---------------|-------------------|
| 0.2A          | 2CU02L            |
| 0.5A          | 2CU05L            |
| 1.0A          | 2CU1L             |
| 1.6A          | 2CU1.6L           |
| 2.0A          | 2CU2L             |
| 3.0A          | 2CU3L             |
| 4.0A          | 2CU4L             |
| 5.0A          | 2CU5L             |
| 6.0A          | 2CU6L             |
| 8.0A          | 2CU8L             |
| 10A           | 2CU10L            |
| 12A           | 2CU12L            |
| 13A           | 2CU13L            |
| 15A           | 2CU15L            |
| 16A           | 2CU16L            |
| 20A           | 2CU20L            |
| 25A           | 2CU25L            |
| 30A           | 2CU30L            |
| 32A           | 2CU32L            |
| 40A           | 2CU40L            |
| 50A           | 2CU50L            |
| 60A           | 2CU60L            |
| 63A           | 2CU63L            |

Standard Pack: 6

Weight: 1.7kg (3.74 lb.)



**Three Pole**

| Rated Current | Type/<br>Cat. No. |
|---------------|-------------------|
| 0.2A          | 3CU02L            |
| 0.5A          | 3CU05L            |
| 1.0A          | 3CU1L             |
| 1.6A          | 3CU1.6L           |
| 2.0A          | 3CU2L             |
| 3.0A          | 3CU3L             |
| 4.0A          | 3CU4L             |
| 5.0A          | 3CU5L             |
| 6.0A          | 3CU6L             |
| 8.0A          | 3CU8L             |
| 10A           | 3CU10L            |
| 12A           | 3CU12L            |
| 13A           | 3CU13L            |
| 15A           | 3CU15L            |
| 16A           | 3CU16L            |
| 20A           | 3CU20L            |
| 25A           | 3CU25L            |
| 30A           | 3CU30L            |
| 32A           | 3CU32L            |
| 40A           | 3CU40L            |
| 50A           | 3CU50L            |
| 60A           | 3CU60L            |
| 63A           | 3CU63L            |

Standard Pack: 4

Weight: 1.7kg (3.74 lb.)



**Four Pole**  
Please contact  
Altech.



For ring tongue terminal version, replace "U" with "R" in part number. For example **1CR20L** instead of **1CU20L**.

## AC D-Trip Characteristics



### Application Examples:

High inrush motors, transformers, power supplies, heaters and reactive loads.  
Relatively long thermal trip delay and very high magnetic trip point.



One Pole

| Rated Current | Type/<br>Cat. No. |
|---------------|-------------------|
| 0.2A          | 1DU02L            |
| 0.5A          | 1DU05L            |
| 1.0A          | 1DU1L             |
| 1.6A          | 1DU1.6L           |
| 2.0A          | 1DU2L             |
| 3.0A          | 1DU3L             |
| 4.0A          | 1DU4L             |
| 5.0A          | 1DU5L             |
| 6.0A          | 1DU6L             |
| 8.0A          | 1DU8L             |
| 10A           | 1DU10L            |
| 12A           | 1DU12L            |
| 13A           | 1DU13L            |
| 15A           | 1DU15L            |
| 16A           | 1DU16L            |
| 20A           | 1DU20L            |
| 25A           | 1DU25L            |
| 30A           | 1DU30L            |
| 32A           | 1DU32L            |
| 40A           | 1DU40L            |
| 50A           | 1DU50L            |
| 60A           | 1DU60L            |
| 63A           | 1DU63L            |

Standard Pack: 12

Weight: 1.7kg (3.74 lb.)



Two Pole

| Rated Current | Type/<br>Cat. No. |
|---------------|-------------------|
| 0.2A          | 2DU02L            |
| 0.5A          | 2DU05L            |
| 1.0A          | 2DU1L             |
| 1.6A          | 2DU1.6L           |
| 2.0A          | 2DU2L             |
| 3.0A          | 2DU3L             |
| 4.0A          | 2DU4L             |
| 5.0A          | 2DU5L             |
| 6.0A          | 2DU6L             |
| 8.0A          | 2DU8L             |
| 10A           | 2DU10L            |
| 12A           | 2DU12L            |
| 13A           | 2DU13L            |
| 15A           | 2DU15L            |
| 16A           | 2DU16L            |
| 20A           | 2DU20L            |
| 25A           | 2DU25L            |
| 30A           | 2DU30L            |
| 32A           | 2DU32L            |
| 40A           | 2DU40L            |
| 50A           | 2DU50L            |
| 60A           | 2DU60L            |
| 63A           | 2DU63L            |

Standard Pack: 6

Weight: 1.7kg (3.74 lb.)



Three Pole

| Rated Current | Type/<br>Cat. No. |
|---------------|-------------------|
| 0.2A          | 3DU02L            |
| 0.5A          | 3DU05L            |
| 1.0A          | 3DU1L             |
| 1.6A          | 3DU1.6L           |
| 2.0A          | 3DU2L             |
| 3.0A          | 3DU3L             |
| 4.0A          | 3DU4L             |
| 5.0A          | 3DU5L             |
| 6.0A          | 3DU6L             |
| 8.0A          | 3DU8L             |
| 10A           | 3DU10L            |
| 12A           | 3DU12L            |
| 13A           | 3DU13L            |
| 15A           | 3DU15L            |
| 16A           | 3DU16L            |
| 20A           | 3DU20L            |
| 25A           | 3DU25L            |
| 30A           | 3DU30L            |
| 32A           | 3DU32L            |
| 40A           | 3DU40L            |
| 50A           | 3DU50L            |
| 60A           | 3DU60L            |
| 63A           | 3DU63L            |

Standard Pack: 4

Weight: 1.7kg (3.74 lb.)



Four Pole  
Please contact  
Altech.



For ring tongue terminal version, replace "U" with "R" in part number. For example **1CR20L** instead of **1CU20L**.

# DC C- & D-Trip Characteristics

## Application Examples:

Telecommunication equipment,  
computer equipment, uninterruptable  
power supplies.



LISTED  
E305318



### C-Trip



One Pole

| Rated Current | Type/<br>Cat. No. |
|---------------|-------------------|
| 0.2A          | DC1CU02L          |
| 0.5A          | DC1CU05L          |
| 1.0A          | DC1CU1L           |
| 1.6A          | DC1CU1.6L         |
| 2.0A          | DC1CU2L           |
| 3.0A          | DC1CU3L           |
| 4.0A          | DC1CU4L           |
| 5.0A          | DC1CU5L           |
| 6.0A          | DC1CU6L           |
| 8.0A          | DC1CU8L           |
| 10A           | DC1CU10L          |
| 12A           | DC1CU12L          |
| 13A           | DC1CU13L          |
| 15A           | DC1CU15L          |
| 16A           | DC1CU16L          |
| 20A           | DC1CU20L          |
| 25A           | DC1CU25L          |
| 30A           | DC1CU30L          |
| 32A           | DC1CU32L          |
| 40A           | DC1CU40L          |
| 50A           | DC1CU50L          |
| 60A           | DC1CU60L          |
| 63A           | DC1CU63L          |

Standard Pack: 12

Weight: 1.7kg (3.74 lb.)



Two Pole

| Rated Current | Type/<br>Cat. No. |
|---------------|-------------------|
| 0.2A          | DC2CU02L          |
| 0.5A          | DC2CU05L          |
| 1.0A          | DC2CU1L           |
| 1.6A          | DC2CU1.6L         |
| 2.0A          | DC2CU2L           |
| 3.0A          | DC2CU3L           |
| 4.0A          | DC2CU4L           |
| 5.0A          | DC2CU5L           |
| 6.0A          | DC2CU6L           |
| 8.0A          | DC2CU8L           |
| 10A           | DC2CU10L          |
| 12A           | DC2CU12L          |
| 13A           | DC2CU13L          |
| 15A           | DC2CU15L          |
| 16A           | DC2CU16L          |
| 20A           | DC2CU20L          |
| 25A           | DC2CU25L          |
| 30A           | DC2CU30L          |
| 32A           | DC2CU32L          |
| 40A           | DC2CU40L          |
| 50A           | DC2CU50L          |
| 60A           | DC2CU60L          |
| 63A           | DC2CU63L          |

Standard Pack: 6

Weight: 1.7kg (3.74 lb.)

### D-Trip



One Pole

| Rated Current | Type/<br>Cat. No. |
|---------------|-------------------|
| 0.2A          | DC1DU02L          |
| 0.5A          | DC1DU05L          |
| 1.0A          | DC1DU1L           |
| 1.6A          | DC1DU1.6L         |
| 2.0A          | DC1DU2L           |
| 3.0A          | DC1DU3L           |
| 4.0A          | DC1DU4L           |
| 5.0A          | DC1DU5L           |
| 6.0A          | DC1DU6L           |
| 8.0A          | DC1DU8L           |
| 10A           | DC1DU10L          |
| 12A           | DC1DU12L          |
| 13A           | DC1DU13L          |
| 15A           | DC1DU15L          |
| 16A           | DC1DU16L          |
| 20A           | DC1DU20L          |
| 25A           | DC1DU25L          |
| 30A           | DC1DU30L          |
| 32A           | DC1DU32L          |
| 40A           | DC1DU40L          |
| 50A           | DC1DU50L          |
| 60A           | DC1DU60L          |
| 63A           | DC1DU63L          |

Standard Pack: 12

Weight: 1.7kg (3.74 lb.)



Two Pole

| Rated Current | Type/<br>Cat. No. |
|---------------|-------------------|
| 0.2A          | DC2DU02L          |
| 0.5A          | DC2DU05L          |
| 1.0A          | DC2DU1L           |
| 1.6A          | DC2DU1.6L         |
| 2.0A          | DC2DU2L           |
| 3.0A          | DC2DU3L           |
| 4.0A          | DC2DU4L           |
| 5.0A          | DC2DU5L           |
| 6.0A          | DC2DU6L           |
| 8.0A          | DC2DU8L           |
| 10A           | DC2DU10L          |
| 12A           | DC2DU12L          |
| 13A           | DC2DU13L          |
| 15A           | DC2DU15L          |
| 16A           | DC2DU16L          |
| 20A           | DC2DU20L          |
| 25A           | DC2DU25L          |
| 30A           | DC2DU30L          |
| 32A           | DC2DU32L          |
| 40A           | DC2DU40L          |
| 50A           | DC2DU50L          |
| 60A           | DC2DU60L          |
| 63A           | DC2DU63L          |

Standard Pack: 6

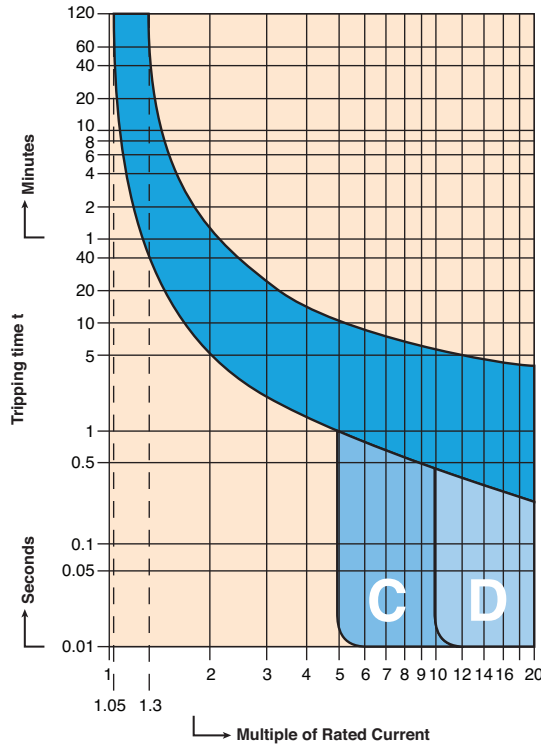
Weight: 1.7kg (3.74 lb.)



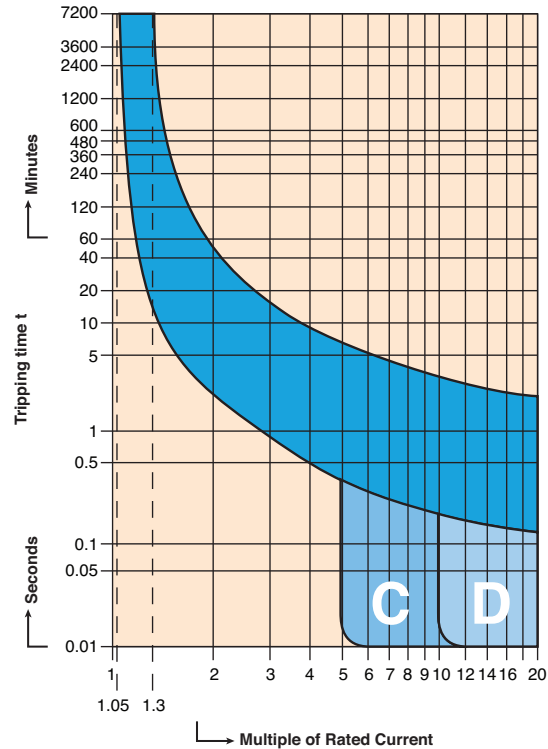
For ring tongue terminal version, replace "U" with "R" in part number. For example **1CR20L** instead of **1CU20L**.

# L-Series Trip Curves

C and D Trip  
Less than 10A



C and D Trip  
10A and higher



## Temperature and Power Loss Specifications

| Rated<br>current<br>I <sub>n</sub> (A) | Effective rated current allowing for ambient temperature<br>I <sub>cor</sub> (A) |      |      |      |      |      |      |      |      | Internal<br>impedance<br>Z (m Ω)<br>char. B, C, D, K | Power Loss<br>B, C, D, K<br>P (W) |
|----------------------------------------|----------------------------------------------------------------------------------|------|------|------|------|------|------|------|------|------------------------------------------------------|-----------------------------------|
|                                        | -20                                                                              | -10  | 0    | 10   | 20   | 30   | 40   | 50   | 60   |                                                      |                                   |
| 0.2                                    | 0.24                                                                             | 0.24 | 0.23 | 0.22 | 0.21 | 0.2  | 0.19 | 0.18 | 0.17 | 45100.0                                              | 1.80                              |
| 0.5                                    | 0.61                                                                             | 0.59 | 0.57 | 0.55 | 0.53 | 0.5  | 0.47 | 0.44 | 0.42 | 8000.0                                               | 2.00                              |
| 1                                      | 1.21                                                                             | 1.18 | 1.14 | 1.1  | 1.05 | 1.0  | 0.93 | 0.88 | 0.83 | 2000.0                                               | 2.00                              |
| 2                                      | 2.42                                                                             | 2.36 | 2.28 | 2.2  | 2.1  | 2.0  | 1.86 | 1.76 | 1.67 | 490.0                                                | 1.96                              |
| 3                                      | 3.63                                                                             | 3.54 | 3.42 | 3.3  | 3.15 | 3.0  | 2.79 | 2.64 | 2.5  | 230.0                                                | 2.07                              |
| 4                                      | 4.84                                                                             | 4.72 | 4.56 | 4.4  | 4.2  | 4.0  | 3.72 | 3.52 | 3.33 | 150.0                                                | 2.40                              |
| 5                                      | 6.1                                                                              | 5.9  | 5.7  | 5.5  | 5.3  | 5.0  | 4.7  | 4.4  | 4.2  | 95.0                                                 | 2.38                              |
| 6                                      | 7.3                                                                              | 7.1  | 6.8  | 6.6  | 6.3  | 6.0  | 5.6  | 5.3  | 5.0  | 69.0                                                 | 2.48                              |
| 7                                      | 8.5                                                                              | 8.2  | 8.0  | 7.7  | 7.4  | 7.0  | 6.5  | 6.2  | 5.8  | 52.0                                                 | 2.55                              |
| 8                                      | 9.7                                                                              | 9.4  | 9.1  | 8.8  | 8.4  | 8.0  | 7.4  | 7.0  | 6.7  | 35.0                                                 | 2.24                              |
| 10                                     | 12.1                                                                             | 11.8 | 11.4 | 11.0 | 10.5 | 10.0 | 9.3  | 8.8  | 8.3  | 23.5                                                 | 2.35                              |
| 12                                     | 14.5                                                                             | 14.2 | 13.7 | 13.2 | 12.6 | 12.0 | 11.2 | 10.6 | 10.0 | 18.7                                                 | 2.69                              |
| 13                                     | 15.7                                                                             | 15.3 | 14.8 | 14.3 | 13.7 | 13.0 | 12.1 | 11.5 | 10.8 | 14.3                                                 | 2.42                              |
| 14                                     | 16.9                                                                             | 16.5 | 16.0 | 15.4 | 14.7 | 14.0 | 13.0 | 12.3 | 11.7 | 12.4                                                 | 2.43                              |
| 15                                     | 18.2                                                                             | 17.7 | 17.1 | 16.5 | 15.8 | 15.0 | 14.0 | 13.2 | 12.5 | 10.1                                                 | 2.27                              |
| 16                                     | 19.4                                                                             | 18.9 | 18.2 | 17.6 | 16.8 | 16.0 | 14.9 | 14.1 | 13.3 | 7.5                                                  | 1.92                              |
| 20                                     | 24.2                                                                             | 23.6 | 22.8 | 22.0 | 21.0 | 20.0 | 18.6 | 17.6 | 16.7 | 6.3                                                  | 2.52                              |
| 25                                     | 30.3                                                                             | 29.5 | 28.5 | 27.5 | 26.3 | 25.0 | 23.3 | 22.0 | 20.8 | 4.6                                                  | 2.88                              |
| 30                                     | 36.3                                                                             | 35.4 | 34.2 | 33.0 | 31.5 | 30.0 | 27.9 | 26.5 | 25.0 | 3.6                                                  | 3.24                              |
| 32                                     | 38.7                                                                             | 37.8 | 36.5 | 35.2 | 33.6 | 32.0 | 29.8 | 28.2 | 26.7 | 3.6                                                  | 3.69                              |
| 35                                     | 42.3                                                                             | 41.3 | 39.9 | 38.5 | 36.8 | 35.0 | 32.6 | 30.8 | 29.2 | 3.6                                                  | 4.41                              |
| 40                                     | 48.4                                                                             | 47.2 | 45.6 | 44.0 | 42.0 | 40.0 | 37.2 | 35.2 | 33.3 | 3.0                                                  | 4.80                              |
| 50                                     | 60.5                                                                             | 59.0 | 57.0 | 55.0 | 52.5 | 50.0 | 46.5 | 44.1 | 41.7 | 2.4                                                  | 6.00                              |
| 60                                     | 72.6                                                                             | 70.9 | 68.4 | 66.0 | 63.0 | 60.0 | 55.9 | 52.9 | 50.1 | 1.8                                                  | 6.48                              |

UL 489

UL 508

UL 1077

UL 1077  
Equipment Breakers

Earth Leakage  
Circuit Breakers

ANNEX

# Accessories

## L-Series Circuit Breakers



Accessories can be factory or field mounted on L-Series miniature molded case circuit breakers for enhanced control and monitoring capabilities. Field mounting kits include all necessary parts and instructions. Accessories can be gang mounted on a single controller (the Auxiliary Switch in the outside position). The mounting arrangement links the internal latch-pins for the tripping mechanisms, ensuring simultaneous trips. Handles are linked to simplify manual resetting.



### Neutral Pole

(63A/240VAC; 32A/480Y/277VAC)

| Description | Type/<br>Cat. No. | Cable<br>Max               | Cable<br>Min                 | Torque<br>Max     | Torque<br>Min     |
|-------------|-------------------|----------------------------|------------------------------|-------------------|-------------------|
| Neutral     | ALTN2L            | 25mm <sup>2</sup><br>3 AWG | 2.5mm <sup>2</sup><br>12 AWG | 2Nm<br>17.5 lb-in | 1.5Nm<br>12 lb-in |

Standard Pack: 10

Weight: 1.2kg (2.64 lb.)



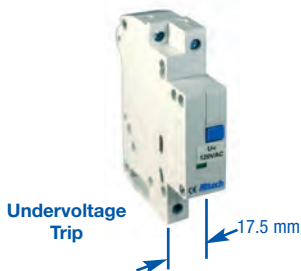
### Shunt Trip and Undervoltage Trip

| Description     | Shunt Trip<br>Type/Cat. No. | Operational<br>Voltage | Rated<br>Coil Current | Undervoltage Trip*<br>Type/Cat. No. |
|-----------------|-----------------------------|------------------------|-----------------------|-------------------------------------|
| <b>AC Coil:</b> |                             |                        |                       |                                     |
| 12V AC          | FA12ACL                     | 8.4 - 13.2V            | 6A                    | UV12ACL                             |
| 24V AC          | FA24ACL                     | 16.8 - 26.4V           | 2.8A                  | UV24ACL                             |
| 48V AC          | FA48ACL                     | 33.6 - 52.8V           | 0.8A                  | UV48ACL                             |
| 60V AC          | FA60ACL                     | 42 - 66V               | ~0.7A                 | UV60ACL                             |
| 110V AC         | FA110ACL                    | 77 - 121V              | 0.5A                  | UV110ACL                            |
| 120V AC         | FA120ACL                    | 84 - 132V              | ~0.5A                 | UV120ACL                            |
| 230V AC         | FA230ACL                    | 161 - 253V             | 0.6A                  | UV230ACL                            |
| 277V AC         | FA277ACL                    | 194 - 305V             | ~0.5A                 | UV277ACL                            |
| 400V AC         | FA400ACL                    | 280 - 440V             | 0.5A                  | UV400ACL                            |
| <b>DC Coil:</b> |                             |                        |                       |                                     |
| 12V DC          | FA12DCL                     | 8.4 - 13.2V            | ~6A                   | UV12DCL                             |
| 24V DC          | FA24DCL                     | 16.8 - 26.4V           | 3A                    | UV24DCL                             |
| 48V DC          | FA48DCL                     | 33.6 - 52.8V           | 2A                    | UV48DCL                             |
| 110V DC         | FA110DCL                    | 77 - 121V              | 0.6A                  | UV110DCL                            |

\* Reset-Hold Voltage =  $0.85 \times V_E$ ; Drop-Out Voltage =  $0.2 \times V_E$

Standard Pack: 10

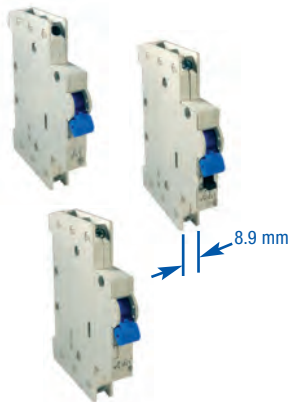
Weight: 1.1kg (2.43 lb.)



|                           |                                                          |
|---------------------------|----------------------------------------------------------|
| Terminal Size - min/max   | 2.5 mm <sup>2</sup> (12 AWG) / 25mm <sup>2</sup> (3 AWG) |
| Terminal Torque - min/max | 1.5 Nm (12 lb. in.) / 2 Nm (17.5 lb. in.)                |

Accessories

L-Series  
Circuit Breakers

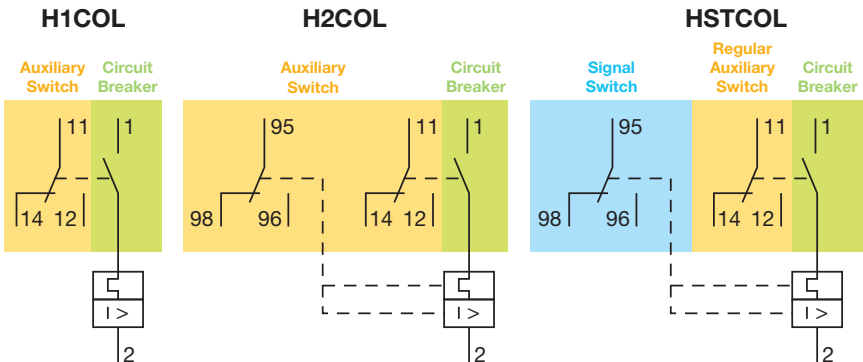


**Auxiliary Contact** (6A/120V AC; 3A/240V AC; 6A/24V DC; 0.5A/125V DC)

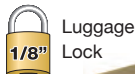
| Description                       | Type/<br>Cat. No. | Cable<br>Max                 | Cable<br>Min                 | Torque<br>Max    | Torque<br>Min     |
|-----------------------------------|-------------------|------------------------------|------------------------------|------------------|-------------------|
| 1 x CO                            | H1COL             | 2.5mm <sup>2</sup><br>12 AWG | 0.5mm <sup>2</sup><br>20 AWG | 0.5Nm<br>4 lb-in | 0.33Nm<br>3 lb-in |
| 2 x CO                            | H2COL             |                              |                              |                  |                   |
| 1 x CO, 1 Signal<br>& Test Button | HSTCOL            |                              |                              |                  |                   |

Standard Pack: 15  
Weight: 0.5kg (1.32 lb.)

**Wiring  
Diagram**



**Lock-out Adapter**



| Description | Type/<br>Cat. No. |
|-------------|-------------------|
| Yellow      | EASS2L            |

Standard Pack: 10  
Weight: 50g (1.76 oz.)



**Front Mounting Kit** with hardware

| Description | Type/<br>Cat. No. | Weight         |
|-------------|-------------------|----------------|
| 1 Pole      | FMA1PL            | 40g (1.41 oz.) |
| 2 Pole      | FMA2PL            | 45g (1.59 oz.) |
| 3 Pole      | FMA3PL            | 50g (1.76 oz.) |

Standard Pack: 1

UL 489

UL 508

UL 1077

UL 1077  
Equipment Breakers

Earth Leakage  
Circuit Breakers

ANNEX

Компания «Океан Электроники» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Поставка оригинальных импортных электронных компонентов напрямую с производств Америки, Европы и Азии, а так же с крупнейших складов мира;
- Широкая линейка поставок активных и пассивных импортных электронных компонентов (более 30 млн. наименований);
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Помощь Конструкторского Отдела и консультации квалифицированных инженеров;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Поставка электронных компонентов под контролем ВП;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- При необходимости вся продукция военного и аэрокосмического назначения проходит испытания и сертификацию в лаборатории (по согласованию с заказчиком);
- Поставка специализированных компонентов военного и аэрокосмического уровня качества (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Actel, Aeroflex, Peregrine, VPT, Syfer, Eurofarad, Texas Instruments, MS Kennedy, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Компания «Океан Электроники» является официальным дистрибьютором и эксклюзивным представителем в России одного из крупнейших производителей разъемов военного и аэрокосмического назначения «JONHON», а так же официальным дистрибьютором и эксклюзивным представителем в России производителя высокотехнологичных и надежных решений для передачи СВЧ сигналов «FORSTAR».



## JONHON

«JONHON» (основан в 1970 г.)

Разъемы специального, военного и аэрокосмического назначения:

(Применяются в военной, авиационной, аэрокосмической, морской, железнодорожной, горно- и нефтедобывающей отраслях промышленности)

«FORSTAR» (основан в 1998 г.)

ВЧ соединители, коаксиальные кабели,  
кабельные сборки и микроволновые компоненты:

(Применяются в телекоммуникациях гражданского и специального назначения, в средствах связи, РЛС, а так же военной, авиационной и аэрокосмической отраслях промышленности).



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