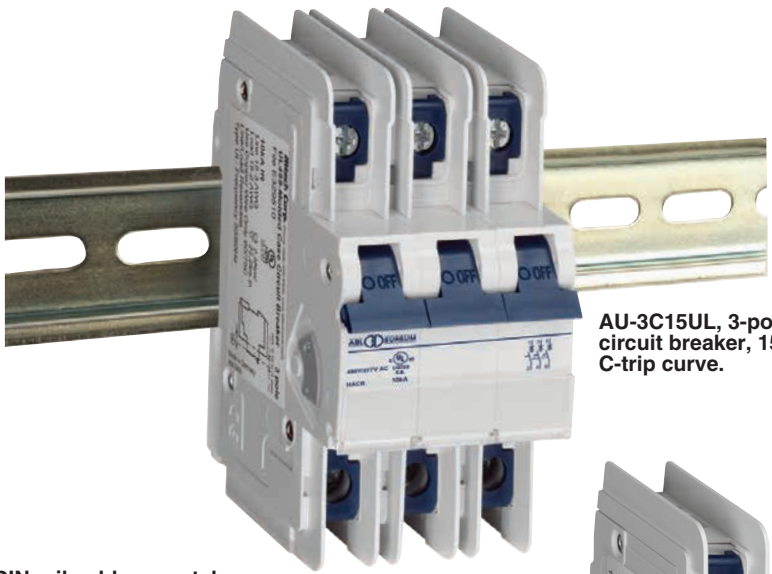
CIRCUIT BREAKERS FOR BRANCH CIRCUIT PROTECTION

UL 489 AC & DC CIRCUIT BREAKERS MINIATURE MCCB, CIRCUIT BREAKERS

UL Series

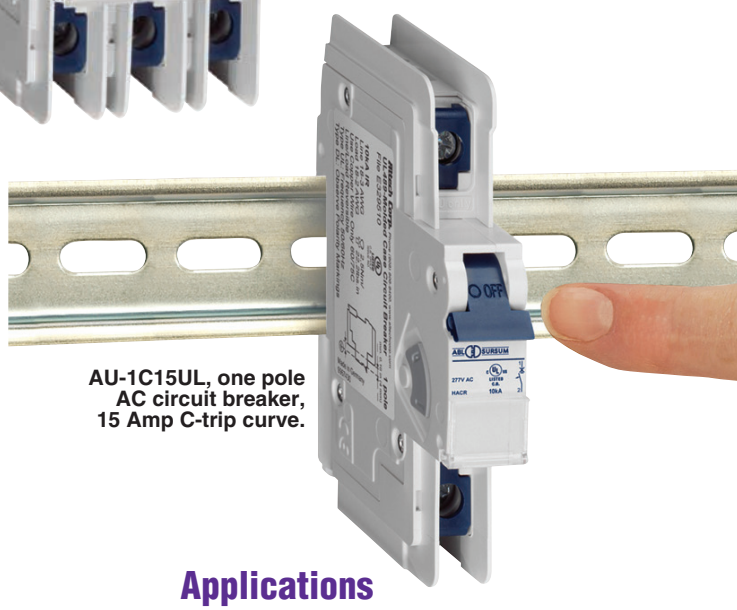
E301611 Pending

- DIN Rail Mounted
- Disconnect and Switching Function
- 17.5 mm (0.69") Width per Pole
- Thermal Magnetic and Curent Limiting
- Available in AC and DC
- 240V, 480Y/277 Vac, 50/60Hz
- 125 Vdc (1-Pole), 250 Vdc (2-Pole)
- 10kA Short Circuit Interrupting Capacity
- HACR Type 40°C (104°F)
- Line/Load Reversible



AU-3C15UL, 3-pole circuit breaker, 15 Amp C-trip curve.

DIN rail sold separately. Visit omega.com/drtb-rail



AU-1C15UL, one pole AC circuit breaker, 15 Amp C-trip curve.

For Terminal Blocks and Enclosures. Visit omega.com/auto

The UL 489 Series miniature molded case circuit breakers are DIN rail mountable and provide feeder and branch circuit protection per UL 489. Circuit breakers can be reset and reused over and over again, when compared with a standard fuse that must be replaced and discarded in compliance with special disposal procedures. Typical uses include convenience receptacles, motor controls, load circuits leaving equipment, and heating and air conditioning.

UL 489 Series miniature circuit breakers are available in one-, two-, three- and four-pole configurations and up to 23 different current ratings from 0.3A to 63A and can safely be used in applications up to 480Y/277 Vac with a 10kA short circuit withstand rating. Two levels of circuit protection available, one for medium inrush startup currents to provide protection for small transformers, pilot devices, etc., and one with a magnetic range to allow for higher inrush levels during startup usually seen with motors. These molded case circuit breakers are Din rail mounted and, at only 17.5 mm wide, they are extremely compact and reduce panel size.

Accessories are field mounted on the UL 489 series 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. Accessories include neutral pole, shunt and undervoltage trip and auxiliary contacts.

Applications

AC C-Trip Curve

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

AC D-Trip Curve

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

DC C and D-Trip Curves

Telecommunication equipment, computer equipment, uninterruptable power supplies.

SPECIFICATIONS

Current/Voltage Rating:
- **AC:** 0.3-63A – 240 Vac
- **AC:** 0.3-32A 480Y/277 Vac
- **DC:** 0.3-63A 125 Vdc 1-pole - 250 Vdc 2-pole

Electrical Life: 6000 cycles on/off
Mechanical Life: 10,000 cycles on/off
Calibration Temperature: 40°C (104°F)
Operating Temperature: -25 to 55°C (-13 to 131°F)
Storage Temperature: -25° to 70°C (-13° to 158°F)
Wire Connection: Copper wire only, 60/75°C

Short Circuit Interrupt Rating

NO. POLES	TYPE	0.3-32 AMPS	40-63 AMPS
1	AC	10kA@120, 240, 277 V	10kA @120, 240V
2-3	AC	10kA@120, 240, 480Y/277 V	10kA @120, 240V
1	DC	10kA @ 125V	10kA @ 125V
2	DC	10kA @ 250V	10kA @ 250V

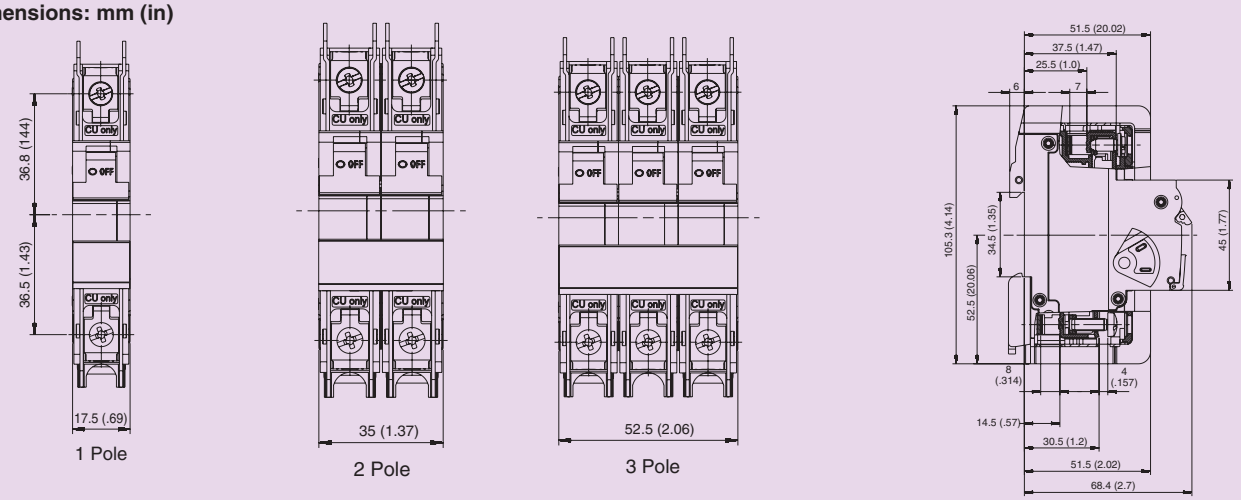
Short Circuit Interrupt Rating according to IEC 60947-2, DIN EN 60947-2

NO. POLES	TYPE	0.3 - 32 AMPS	40-63 AMPS
1	AC	15kA @ 240V	15kA @ 240V
2-3	AC	15kA @ 415V	10kA @ 415V

Terminal Size Acceptability: Top 18-3 AWG, Bottom18-2 AWG
Tightening Torque Minimum/Maximum: 17.7/ 22lb-in. (2/2.2 Nm)
Terminal Protection Degree: IP20

Dimensions:
Height: 105.3mm (4.15")
Width: One Pole 17.5mm (0.69"), 2 Pole 35mm (1.38"), 3 Pole 52.5 mm (2.07")
Depth: From Din rail 68.4 mm (2.69")

Dimensions: mm (in)

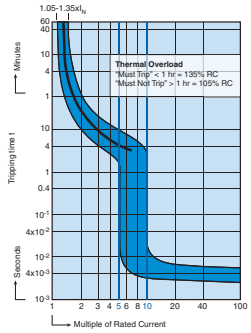


Trip-Characteristics*				Applications									
Characteristic Trip Boundaries				Lighting Wiring Protection Control Circuits	Business Equipment Appliances	Transformers	Power Supplies Heaters	Motors		Reactive Load	Telecommu-nications/ Computer Equipment	Power Supplies
Thermal Trip		Magnetic Trip						Low Inrush	High Inrush			
Must not Trip>100ms	Must Trip <1hr	Must not Trip>100ms	Must Trip at 100ms									
C-Characteristics AC												
1.05xRC	1.35xRC	5xRC	10xRC									
C-Characteristics DC												
1.05xRC	1.35xRC	7xRC	14xRC									
D-Characteristics AC												
1.05xRC	1.35xRC	10xRC	16xRC									
D-Characteristics DC												
1.05xRC	1.35xRC	14xRC	22.4xRC									

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

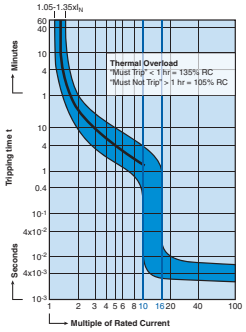
Warning!
This information should only be used as a selection guide. The use of a Miniature Circuit Breaker in an application with a certain Trip-Characteristic always requires prototype testing. It is the responsibility of the circuit design engineer to select the appropriate Miniature Circuit Breaker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

C (AC) Trip Curve



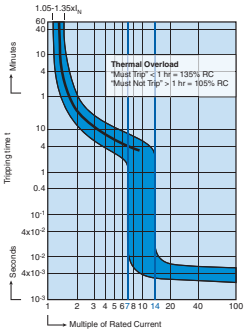
0.3A Through 10A Rated Current

D (AC) Trip Curve



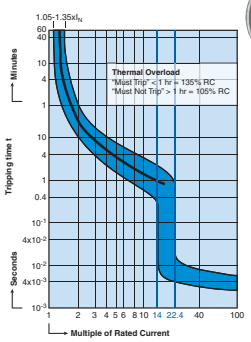
0.3A Through 10A Rated Current

C (DC) Trip Curve



0.3A Through 10A Rated Current

D (DC) Trip Curve



0.3A Through 10A Rated Current



Accessories

Accessories can be field mounted on UL 489 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.

MODEL NUMBER	DESCRIPTION
AU-N32UL	Neutral pole for circuit breaker, 0.3 to 32a
AU-N63UL	Neutral pole for circuit breaker, 40 to 63A
AU-H10UL	1 Auxiliary contact, normally open
AU-H11UL	2 Auxiliary contact, 1 NO and 1 NC
AU-H12UL	3 Auxiliary contact, 1 NO and 2 NC
AU-FA12UL	12 V AC/DC shunt trip, 1.3A
AU-FA24UL	24 V AC/DC shunt trip, 0.6A
AU-FA48UL	48 V AC/DC shunt trip, 0.2A
AU-FA110UL	Shunt trip, 110 to 240 Vac/Vdc, 277 Vac, 0.25A @ 110V 0.5A @ 240V 0.58A @ 277V
AU-UA120UL	Undervoltage Trip, 120 Vac, 60 Hz (UL Pending)

To Order *Visit omega.com/ul489_Series for Pricing and Details*

MODEL NUMBERS

ONE POLE AC	TWO POLE AC	THREE POLE AC	ONE POLE DC	TWO POLE DC	RATED CURRENT
AU-1(*)03UL	**AU-3(*)03UL**	**AU-3(*)03UL**	**AU-1(*)03DL**	**AU-3(*)03DL**	0.3A
AU-1(*)05UL	**AU-2(*)05UL**	**AU-3(*)05UL**	**AU-1(*)05DL**	**AU-2(*)05DL**	0.5A
AU-1(*)1UL	**AU-2(*)1UL**	**AU-3(*)1UL**	**AU-1(*)1DL**	**AU-2(*)1DL**	1.0A
AU-1(*)1.6UL	**AU-2(*)1.6UL**	**AU-3(*)1.6UL**	**AU-1(*)1.6DL**	**AU-2(*)1.6DL**	1.6A
AU-1(*)2UL	**AU-2(*)2UL**	**AU-3(*)2UL**	**AU-1(*)2DL**	**AU-2(*)2DL**	2.0A
AU-1(*)3UL	**AU-2(*)3UL**	**AU-3(*)3UL**	**AU-1(*)3DL**	**AU-2(*)3DL**	3.0A
AU-1(*)4UL	**AU-2(*)4UL**	**AU-3(*)4UL**	**AU-1(*)4DL**	**AU-2(*)4DL**	4.0A
AU-1(*)5UL	**AU-2(*)5UL**	**AU-3(*)5UL**	**AU-1(*)5DL**	**AU-2(*)5DL**	5.0A
AU-1(*)6UL	**AU-2(*)6UL**	**AU-3(*)6UL**	**AU-1(*)6DL**	**AU-2(*)6DL**	6.0A
AU-1(*)8UL	**AU-2(*)8UL**	**AU-3(*)8UL**	**AU-1(*)8DL**	**AU-2(*)8DL**	8.0A
AU-1(*)10UL	**AU-2(*)10UL**	**AU-3(*)10UL**	**AU-1(*)10DL**	**AU-2(*)10DL**	10A
AU-1(*)12UL	**AU-2(*)12UL**	**AU-3(*)12UL**	**AU-1(*)12DL**	**AU-2(*)12DL**	12A
AU-1(*)13UL	**AU-2(*)13UL**	**AU-3(*)13UL**	**AU-1(*)13DL**	**AU-2(*)13DL**	13A
AU-1(*)15UL	**AU-2(*)15UL**	**AU-3(*)15UL**	**AU-1(*)15DL**	**AU-2(*)15DL**	15A
AU-1(*)16UL	**AU-2(*)16UL**	**AU-3(*)16UL**	**AU-1(*)16DL**	**AU-2(*)16DL**	16A
AU-1(*)20UL	**AU-2(*)20UL**	**AU-3(*)20UL**	**AU-1(*)20DL**	**AU-2(*)20DL**	20A
AU-1(*)25UL	**AU-2(*)25UL**	**AU-3(*)25UL**	**AU-1(*)25DL**	**AU-2(*)25DL**	25A
AU-1(*)30UL	**AU-2(*)30UL**	**AU-3(*)30UL**	**AU-1(*)30DL**	**AU-2(*)30DL**	30A
AU-1(*)32UL	**AU-2(*)32UL**	**AU-3(*)32UL**	**AU-1(*)32DL**	**AU-2(*)32DL**	32A
AU-1(*)40UL	**AU-2(*)40UL**	**AU-3(*)40UL**	**AU-1(*)40DL**	**AU-2(*)40DL**	40A
AU-1(*)50UL	**AU-2(*)50UL**	**AU-3(*)50UL**	**AU-1(*)50DL**	**AU-2(*)50DL**	50A
AU-1(*)60UL	**AU-2(*)60UL**	**AU-3(*)60UL**	**AU-1(*)60DL**	**AU-2(*)60DL**	60A
AU-1(*)63UL	**AU-2(*)63UL**	**AU-3(*)63UL**	**AU-1(*)63DL**	**AU-2(*)63DL**	63A

Note: *(*)= "C" for C-curve and "D" for d-curve.*
Ordering Example: AU-1C05UL *1-pole minature MCCB, AC circuit breaker rated for 0.5 A C-trip curve*
AU-2D2UL *2-pole minature MCCB, AC circuit breaker rated for 2 A D-trip curve*