

# Product Details and Certifications

## Cross Reference RA Part Number: 1489-A1C005 A

 **Product: 1489-A1C005**

Description: Bulletin 1489 Miniature Circuit Breaker, Standard Configuration,  
AC, 1 Pole Configuration, Trip C, 0.5 Amps



Representative Photo Only (actual product may vary based on configuration sections)

### ***CIRCUIT BREAKER DATA***

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Bulletin Number	1489 Miniature Circuit Breaker
Voltage Type	Standard Configuration, AC
Number of Poles	1 Pole Configuration
Trip Curve	Trip Curve C
Rated Current (A)	0.5 Amps

### ***OPTIONS***

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Terminal Configuration	Standard Terminal
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### ***CERTIFICATIONS AND APPROVALS***

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UL  
CSA  
EN IEC  
CE  
VDE

For UL Certifications Directory:

<http://database.ul.com/cgi-bin/XYV/template/LISEXT/IFRAME/index.htm>

# Control Circuit and Load Protection

## Product Overview

										
Bulletin	1489-A		1489-D		1492-FB			140F		
Type	480Y/ 277V AC	240V AC	1 Pole: 125V DC	2 Pole: 250V DC	For Class CC Fuse	For Class J Fuse		For Midget Fuse	For Class CC Fuse or Midget Fuse	For IEC 10 x 38 mm Fuse
	0.5...25 A	0.5...40 A	2...40 A		30 A	30 A	60 A	30 A	30 A	32 A
Features	<ul style="list-style-type: none"> <li>• True IP2X finger-safe design (front)</li> <li>• 10 000 A interrupt</li> <li>• A positively trip-free mechanism (breaker operation cannot be defeated by holding the handle in the ON position)</li> <li>• Superior shock and vibration resistance capabilities</li> <li>• Mounts on DIN Rail</li> <li>• IEC 60947-2</li> <li>- 0.5...40 A @ 240, 415V AC</li> <li>- 15 000 A interrupting</li> <li>• Field-mountable options</li> <li>• Optional terminal for ring lugs</li> </ul>		<ul style="list-style-type: none"> <li>• True IP2X finger-safe design (front)</li> <li>• A positively trip-free mechanism (breaker operation cannot be defeated by holding the handle in the ON position)</li> <li>• Superior shock and vibration resistance capabilities</li> <li>• Mounts on DIN Rail</li> <li>• IEC 60947-2</li> <li>• Field-mountable options</li> <li>• Optional terminal for ring lugs</li> </ul>		<ul style="list-style-type: none"> <li>• EN/IEC 60529 Front Finger Protection — Dead front construction</li> <li>• Handle isolates the fuse from line power when it is opened for fuse insertion or removal</li> <li>• Compact size requiring less panel space than open style fuse folders</li> <li>• Optional blown fuse indicators - allow for easy troubleshooting of electrical circuits</li> <li>• Type M holder - accepts 0...30 A midget fuses (1-1/2 in. x 13/32 in.)</li> <li>• Type C holder - accepts 0...30 A Class CC fuses</li> <li>• Type J 30 &amp; 60 A holders - accepts Class J fuses</li> <li>• Silver-plated fuse clips</li> <li>• Mounts on DIN Rail, marker-ready and increased heat dissipation</li> </ul>			<ul style="list-style-type: none"> <li>• Lockable in the open position</li> <li>• Compatible with Bulletin 140M accessories</li> <li>• Compact busbar and connectors for Bulletin 100-C and 100-K contactors</li> <li>• 1 N.O./1 N.C auxiliary contact— late make N.O., early break N.C.</li> </ul>		
Certifications	UL 489 Listed (CSA C22.2 No. 5), UL File Number E197878 VDE (IEC 60 947-2)				UL 512, CSA C22.2 No. 39, CE, EN/IEC 60947-3			UR, CSA	UL 512, CSA C22.2 No. 39, CE, EN/IEC 60947-3	
Maximum Voltage Rating	480Y/277V AC		480Y/ 277V AC	UL 250V DC IEC 500V DC	600V AC/DC Type M, IEC - 690V AC			600V AC	690V AC	
Shock	25 G half sine wave for 11 ms (three axes)									
Tripping Characteristic Reference Temperature	UL/CSA: 104 ° F (40 °C) IEC: 86 ° F (30 °C)				NA			NA		
Tripping Characteristic	C Curve: 5...10 D Curve: 10...20		C Curve: 5...10 In		NA			NA		
Vibration	100...500 Hz for 1 hour Amplitude — 10...57 Hz; 0.030 inches peak to peak; 57...500 Hz; 5 G peak				5 G peak or 0.030 in. peak-to-peak displacement for 2 hours in each perpendicular direction. Vibration sweep 10 to 2000 to 10 Hz (15 minutes long)			—		
Operating Temperature	-13...+140 °F (-25...+55 °C), non-condensing				-4...+130 °F (-20...+55 °C)			-4...+130 °F (-20...+55 °C)		
Housing Material	Nylon				Nylon			—		
Working Voltage	—		—		110...600V AC/DC or 12...72V AC/DC	110...600V AC/DC		110...600V AC/DC or 12...72V AC/DC	—	
Leakage Current with Indicator LED	—				2.0 mA			—		
Wire Size	0.8...13 mm <sup>2</sup> /#18...6 AWG Cu				#16...4 AWG Cu	#14...1 AWG Cu	#10...1 AWG Cu	#16...4 AWG Cu	#16...10 AWG Cu (1...4 mm <sup>2</sup> )	
Interrupt Rating	UL/CSA: up to 14 kA		10 kA		200 kA			50 kA		200 kA - Class CC 100 kA - Midget
	IEC: up to 15 kA									
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### Bulletin 1489-A Circuit Breakers

- Energy-limiting design — protects downstream components better than conventional breakers during short circuits
- Field-mountable options for selective applications
- IP2x Finger-Protection (Front)
- North America certifications: UL 489, CSA C22.2 No. 5
- International standards: CE Marked, and IEC (VDE) standards for worldwide acceptance
- Ratings: UL/CSA — max. 480Y/277V AC – up to 14 kA interrupt rating; IEC — max. 240/415V AC – 15 000 A interrupt rating
- 48V DC rating, 96V DC — 2-pole series
- A positively trip-free mechanism (breaker operation cannot be defeated by holding the handle in the ON position)
- Trip curves: C and D
- Time delay (D Characteristic) for high inrush currents during inductive start-ups such as motors, transformers and power supplies
- Superior shock and vibration resistance capabilities — helps to prevent nuisance tripping
- Mounts on DIN Rail
- Wire connect, line and load (reversible)
- Optional terminals for ring lug terminals

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### Industrial Circuit Breakers for North American Applications

- Energy limiting design - protects downstream components better than conventional breakers during short circuits
- Field mountable options for selective applications
- IP2x Finger-Protection (Front)
- North America certifications: UL 489, CSA 22.2 No. 5
- International standards: CE Marked, and IEC (VDE) standards for worldwide acceptance
- Ratings: UL/CSA — max. 480Y/277V AC – up to 14 kA interrupt rating; IEC — max. 240/415V AC – 15 000 A interrupt rating
- 48V DC rating, 96V DC — 2-pole series
- A positively trip-free mechanism (breaker operation cannot be defeated by holding the handle in the ON position)
- Trip curves: C and D
- Time delay (D Characteristic) for high inrush currents during inductive start-ups such as motors, transformers and power supplies
- Superior shock and vibration resistance capabilities — helps to prevent nuisance tripping
- Mounts on DIN Rail
- Wire connect, line and load (reversible)
- Optional terminals for ring lug terminals.

The Bulletin 1489-A line includes:

- UL 489, CSA C22.2 No. 5
- 240V AC 0.5...40 A
- 480V/277V AC 0.5...32 A
- Miniature Circuit Breaker for EN/IEC Applications EN/IEC 60947-2 415V AC 0.5...40 A
- SWD (0.5...20 A) Switching Duty for fluorescent lighting applications
- HACR
- 1-pole 48V DC 0.5...40 A
- 2-pole (series) 96V DC 0.5...40 A
- 48V DC 0.5...40 A

### Miniature Circuit Breaker for IEC Applications: 415V AC 0.5...40 A Standards Compliance

UL 489  
 CSA C22.2 No. 5  
 EN/IEC 60947-2

### Certifications

UL Listed  
 CSA Certified  
 CE Marked  
 VDE Certified

### Features

- Designed manufactured and listed to UL 489 (CSA 22.2 No. 5)
- Thermal-magnetic protection
- All ratings are HACR rated
- up to 14 kA Interrupting rating
- Finger-safe design (front)
- DIN Rail mounting
- Line and load wire connections
- Optional ring terminal connections (convertible)

### Description

Bulletin 1489-A Circuit Breakers for Branch Circuit protection are available in 1-, 2-, and 3-pole construction and are rated 0.5...40 A at 240V AC and 0.5...32 A at 480Y/277V AC for North American applications (UL 489 and CSA C22.2 No. 5). The circuit breakers also have a 1-pole 48V DC, 2-pole (series) 96V DC rating. For EN/IEC applications the products are rated 415V AC, 48V AC 0.5...40 A.

### Thermal Magnetic Circuit Breakers

The Bulletin 1489-A Thermal Magnetic Circuit Breakers are general-purpose devices suitable for the majority of industrial, inverse time circuit breaker applications.

They combine thermal and magnetic trip actions and provide accurate overload and short-circuit protection for conductors and connected equipment.



**Bulletin 1489 Cat. No. Explanation**

Examples given in this section are for reference purposes. This basic explanation should not be used for product selection; not all combinations will produce a valid catalog number.

**1489 - A 1 C 005**

*a*
*b*
*c*
*d*
*e*

<i>a</i>	
Body Style	
Code	Description
<b>A</b>	Standard configuration, AC Device
D	Standard configuration, DC Device

<i>b</i>	
Poles	
Code	Description
<b>1</b>	1-Pole
2	2-Pole
3	3-Pole

<i>c</i>	
Trip Curve	
Code	Trip Curve
B	Trip Curve B
<b>C</b>	Trip Curve C
D	Trip Curve D

<i>d</i>	
Rated Current ( $I_n$ )	
Code	Current [A]
<b>005</b>	<b>0.5</b>
010	1
015	1.5
020	2
030	3
040	4
050	5
060	6
070	7
080	8
100	10
130	13
150	15
160	16
200	20
250	25
300	30
320	32
350	35
400	40

<i>e</i>	
Factory Modifications	
Code	Description
blank	Standard Terminal
R	Ring Terminal

Product Selection

Bulletin 1489-A AC Miniature Circuit Breakers

Bulletin 1489 1-Pole AC Miniature Circuit Breakers

No. of Poles	EN/IEC Maximum Voltage	Trip Curve	UL/CSA Max. Volt.	Rated Current [A]	Standard Wire Configuration Cat. No.	Ring Terminal Configuration Cat. No.
1	415V AC, 48V DC	C	277V AC, 48V DC	0.5	1489-A1C005	1489-A1C005R
				1	1489-A1C010	1489-A1C010R
				1.5	1489-A1C015	1489-A1C015R
				2	1489-A1C020	1489-A1C020R
				3	1489-A1C030	1489-A1C030R
				4	1489-A1C040	1489-A1C040R
				5	1489-A1C050	1489-A1C050R
				6	1489-A1C060	1489-A1C060R
				7	1489-A1C070	1489-A1C070R
				8	1489-A1C080	1489-A1C080R
				10	1489-A1C100	1489-A1C100R
				13	1489-A1C130	1489-A1C130R
				15	1489-A1C150	1489-A1C150R
				16	1489-A1C160	1489-A1C160R
				20	1489-A1C200	1489-A1C200R
				25	1489-A1C250	1489-A1C250R
				30	1489-A1C300	1489-A1C300R
				32	1489-A1C320	1489-A1C320R
				35	1489-A1C350	1489-A1C350R
				40	1489-A1C400	1489-A1C400R
		0.5	1489-A1D005	1489-A1D005R		
		1	1489-A1D010	1489-A1D010R		
		1.5	1489-A1D015	1489-A1D015R		
		2	1489-A1D020	1489-A1D020R		
		3	1489-A1D030	1489-A1D030R		
		4	1489-A1D040	1489-A1D040R		
		5	1489-A1D050	1489-A1D050R		
		6	1489-A1D060	1489-A1D060R		
		7	1489-A1D070	1489-A1D070R		
		8	1489-A1D080	1489-A1D080R		
		10	1489-A1D100	1489-A1D100R		
		13	1489-A1D130	1489-A1D130R		
		15	1489-A1D150	1489-A1D150R		
		16	1489-A1D160	1489-A1D160R		
		20	1489-A1D200	1489-A1D200R		
		25	1489-A1D250	1489-A1D250R		
		30	1489-A1D300	1489-A1D300R		
		32	1489-A1D320	1489-A1D320R		
		35	1489-A1D350	1489-A1D350R		
		40	1489-A1D400	1489-A1D400R		
		D	277V AC, 48V DC	0.5	1489-A1D005	1489-A1D005R
				1	1489-A1D010	1489-A1D010R
				1.5	1489-A1D015	1489-A1D015R
				2	1489-A1D020	1489-A1D020R
				3	1489-A1D030	1489-A1D030R
				4	1489-A1D040	1489-A1D040R
				5	1489-A1D050	1489-A1D050R
				6	1489-A1D060	1489-A1D060R
				7	1489-A1D070	1489-A1D070R
				8	1489-A1D080	1489-A1D080R
				10	1489-A1D100	1489-A1D100R
				13	1489-A1D130	1489-A1D130R
				15	1489-A1D150	1489-A1D150R
				16	1489-A1D160	1489-A1D160R
				20	1489-A1D200	1489-A1D200R
				25	1489-A1D250	1489-A1D250R
				30	1489-A1D300	1489-A1D300R
				32	1489-A1D320	1489-A1D320R
				35	1489-A1D350	1489-A1D350R
				40	1489-A1D400	1489-A1D400R
			240V AC, 48V DC	0.5	1489-A1C005	1489-A1C005R
			240V AC, 48V DC	1	1489-A1C010	1489-A1C010R
			240V AC, 48V DC	1.5	1489-A1C015	1489-A1C015R
			240V AC, 48V DC	2	1489-A1C020	1489-A1C020R
			240V AC, 48V DC	3	1489-A1C030	1489-A1C030R
			240V AC, 48V DC	4	1489-A1C040	1489-A1C040R
			240V AC, 48V DC	5	1489-A1C050	1489-A1C050R
			240V AC, 48V DC	6	1489-A1C060	1489-A1C060R
			240V AC, 48V DC	7	1489-A1C070	1489-A1C070R
			240V AC, 48V DC	8	1489-A1C080	1489-A1C080R
			240V AC, 48V DC	10	1489-A1C100	1489-A1C100R
			240V AC, 48V DC	13	1489-A1C130	1489-A1C130R
			240V AC, 48V DC	15	1489-A1C150	1489-A1C150R
			240V AC, 48V DC	16	1489-A1C160	1489-A1C160R
			240V AC, 48V DC	20	1489-A1C200	1489-A1C200R
			240V AC, 48V DC	25	1489-A1C250	1489-A1C250R
			240V AC, 48V DC	30	1489-A1C300	1489-A1C300R
			240V AC, 48V DC	32	1489-A1C320	1489-A1C320R
			240V AC, 48V DC	35	1489-A1C350	1489-A1C350R
			240V AC, 48V DC	40	1489-A1C400	1489-A1C400R





**Bulletin 1489-A Specifications**

Number of Poles	1, 2, and 3		
Standards	UL 489 CSA C22.2 No. 5 EN/IEC 60947-2		
Certifications	UL Listed Circuit Breaker (File Number E197878) CSA Certified, VDE Certified, MCB, CE Marked		
HACR Rating (USA/Canada)	Yes		
SWD Rating (USA/Canada)	Yes (0.5...20 A)		
Calibration Temperature	UL/CSA: 40 °C EN/IEC: 30 °C		
Rated Interrupting Capacity	EN/IEC - Icu: 15 000 A		
	UL/CSA (See Below)		
	Trip Curve	Rated Current (In)	Interrupt Rating (UL/CSA)
	C Curve	0.5...13 A	10,000 A
		15...25 A	14,000 A
		30...40 A	10,000 A
D Curve	0.5...10 A	10,000 A	
	13...20 A	14,000 A	
	25...40 A	10,000 A	
Rated Tripping Current	UL/CSA: 0.5...32 A, 480Y/277V AC 0.5...40 A, 240V AC 0.5...40 A 48V DC 1-pole 0.5...40 A 96V DC 2-pole EN/IEC: 0.5...40 A, 415V AC 48V DC		
Degree of Protection	Finger-safe from front: -IP20 per IEC 529 from front -IP00 at wire terminals		
Dielectric Strength	1960V AC		
Shock	25 G Half sine wave for 11 ms (3 axes)		
Vibration	Frequency range: 10...200 Hz Max. amplitude (p-p) = 0.030 in. Max. acceleration = 5 G 2 hours each of 3 axes		
Normal Operating Environment	-30...+60 °C (-22... 140 °F) (non-condensing)		
Trip Curves	C curve (Inductive) 5...10 $I_N$ D curve (Highly Inductive) 10...20 $I_N$		
Shipment and Short-Term Storage Limits	-40...+85 °C (-40...+185 °F)		
Wire Size	1 wire: #18...6 AWG 2 wires: #18...10 AWG		
Terminal Torque	#18...12 AWG: 21 lb•in #10...8 AWG: 25 lb•in #6 AWG: 36 lb•in #2 PoziDriv		
Recommended Wire Strip Length	0.5 in.		

Time Current Curve – 1-, 2-, and 3-Pole Circuit Breaker

# Time-Current Characteristic Bulletin 1489

## Type C and D

Ambient Temperature 40 °C

