General Information

Allen-Bradley offers two lines of Miniature Circuit Breakers with UL 489 (CSA 22.2 No. 5) certification, four different lines of Supplementary Protectors (Miniature Circuit Breakers), and a line of fuse holders for branch circuit fuses and supplementary fuses.

Product Selection

Bulletin 1492-FB Fuse Holders

- EN/IEC 60529 finger protection — dead front construction
- Compact size requiring less panel space than open-style fuse holders
- Optional blown fuse indicator
- Branch circuit protection with Class CC and J fuses
- UL Listed, CSA Certified
- DIN Rail (35 mm), mounted

Bulletin 1492 Circuit Breakers

Potential applications include protection of:

- Solenoids
- Transformers
- Computers
- Power Supplies
- Relay/contactor coils
- PLCs
- Medical Equipment
- PLC I/O Points

UL1077, CSA C22.2 No. 235 — In North America, miniature circuit breakers are recognized as supplementary protectors and are intended for use as overcurrent protection within an appliance or other electrical equipment where branch circuit protection is already provided or not required. Internationally, these products are rated to IEC standards as miniature circuit breakers or circuit breakers for equipment.
UL508, CSA 22.2 No.14 — In North America, some miniature circuit breakers, meeting specific requirements, may be used as Manual Motor Controllers for direct control of motors connected across-the-line equipment where branch circuit protection is already provided or not required. Internationally, these products are rated to IEC standards as miniature circuit breakers and applied for motor controller applications within those standards.
UL489, CSA 22.2 No. 5.1 — In North America, some miniature circuit breakers, meeting specific requirements, may be used as Branch Circuit Protection devices for the protection of electric wiring as well as load protection.

Type		1492-GH	1492-GS	1492-SP	1492-MC	1489
Certifications	UL	1077	1077	1077	489	489
	CSA	22.2 No. 235	22.2 No. 235	22.2 No. 235	22.2 No. 5	22.2 No. 5
	EN/IEC	IEC 60934	IEC 60934	IEC 60898 IEC 60947-2	—	IEC 60947-2
	CE Marked	Yes	Yes	Yes	No	Yes
No. of Poles		1	1, 2, 3	1, 2, 3 – 1+N, 3+N	1, 2, 3	1, 2, 3
Volts AC		250 V	480Y/277 V	480Y/277 V	120/240V AC 240V AC	480Y/277 V
Volts DC		65 V	65 V	1p 48V 2p (series) 125V	—	up to 500V DC
Current Range		0.2…15A	0.2…25A	0.5…63A	15…100 A	0.5…40 A
Trip Characteristics (*In*)		G 6…12	G 6…10	B 3…5 C 5…10 D 10…20	UL 489 Standard (CSA 22.2 No. 5.1)	B 3…5 C, 5…10 D 10…20
Energy Limiting		No	No	Yes	No	Yes
No. of Pole/foot		24	24	17	Varies	17
Mounting Method		DIN Rail & A-B Rail	DIN Rail & A-B Rail	DIN Rail	DIN Rail	DIN Rail
IEC 529 and 60947 Finger Protection		Yes	Yes	Yes	Varies	Yes
Optional	Auxiliary Contacts	No	Yes	Yes	No	Yes
	Shunt Trip	No	No	Yes	No	Yes
	Undervoltage Trip	No	No	Yes	No	Yes

Bulletin 1492-GH and 1492-GS — Supplementary Protectors (Miniature Circuit Breakers)

- High density design allows 24 one-pole breakers per foot
- Wide range of currents for precise circuit requirements
- International approvals — meet UL, CSA, and EN/IEC standards for worldwide acceptance
- CE Marked
- AC and DC voltage ratings — in one convenient device
- A positively trip free mechanism (breaker operation cannot be defeated by holding the handle in the ON position)
- Superior shock and vibration resistance capabilities — helps prevent nuisance tripping
- Universal mounting foot for a variety of mounting channels, including Cat. No. 1492-N1 and various 35 mm DIN (e.g., Cat. No. 199-DR1)

Table of Contents

Standards Compliance

UL 1077
CSA C22.2 No 235
EN/IEC 60934

Certifications

UL Recognized Component
CSA Recognized Component
CE Marked

Bulletin 1492 high density miniature circuit breakers are thermal magnetic type supplementary overcurrent protective devices. Bulletin 1492-GH miniature circuit breakers are available in one-pole units. Bulletin 1492-GS are available in one-, two-, and three-pole. These breakers are often used when panel space (width) is a premium. These products include a high density design. Up to 24 one-pole breakers can be mounted per foot. The Bulletin 1492-GS breaker can be ordered with auxiliary contacts that do not add any additional space. Wire termination is achieved by a clamping style, self-lifting box lug.

One-Pole Style Bulletin 1492-GH

This single-pole, high-density miniature circuit breaker incorporates a thermal portion and a magnetic trip function for the combined advantages of two sensing systems. The Bulletin 1492-GH breaker style uses a push-to-set mechanism for circuit actuation and comes with a manual trip button for manually opening the circuit. Voltage range is 250V AC, and this breaker has a 65V DC rating.

One-, Two-, and Three-Pole Style Bulletin 1492-GS

These high-density miniature circuit breakers incorporate a thermal portion and a magnetic trip function for the combined advantages of two sensing systems. The Bulletin 1492-GS style of breakers uses a toggle style handle mechanism for circuit actuation. Voltage range is 277V AC for the one-pole and 480Y/277V AC for the multiple pole. These breakers have a 65V DC rating.

Applications

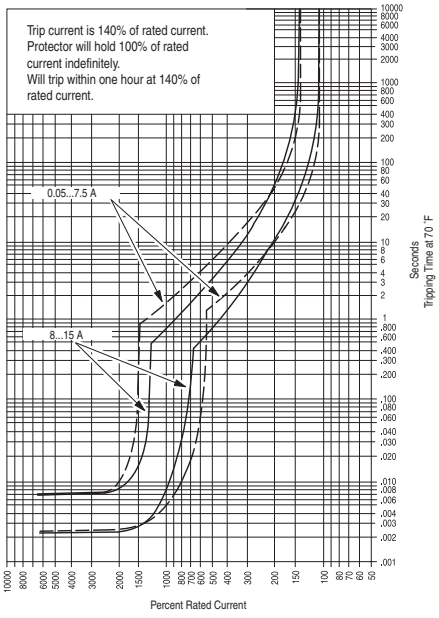
The high-density miniature circuit breaker appliations include, but not limited to, the protection of test equipment, control instrumentation, solenoids, and power supplies. The wide range of current values and the use of a thermal magnetic trip system allows for a variety of applications where a very accurate and compact breaker is required.

UL1077, CSA C22.2 #235

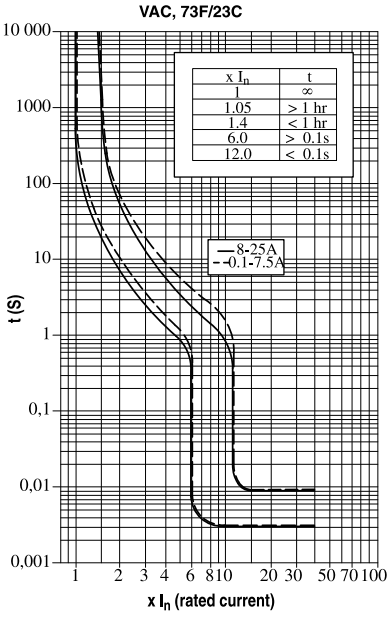
In North America, miniature circuit breakers are recognized as supplementary protectors and are intended for use as overcurrent protection within an appliance or other electrical equipment where branch circuit protection is already provided or not required. Internationally, these products are rated to IEC standards as circuit breakers for equipment (CBE).

Product Selection

1492-GH



1492-GS



High Density Supplementary Protectors

Product Selection

Using selection table on this page select Bulletin 1492-GH/GS that allows full load current nearest without exceeding application current. Also, check that inrush current is less than trip range of 6…10 *I*n.

1492-GH/GS

To select a miniature circuit breaker, use the following procedure:
1. Determine the inrush correction factor from the following table.

Inrush Ratio Correction Table

Inrush Ratio	1:1 to 1:4	1:5	1:6	1:7	1:8
Factor	1.3	1.4	1.5	1.6	1.7

Note: For resistive loads use inrush correction factor of 1.0.

2. Determine the temperature correction factor from the following table.

Ambient Temperature Correction Table

Ambient Temperature	70 °F (21.1 °C)	100 °F (37.8 °C)	120 °F (48.9 °C)	140 °F (60 °C)	160 °F (71.1 °C)	180 °F (82.2 °C)	200 °F (93.3 °C)
Factor	1.0	1.1	1.2	1.3	1.4	1.5	1.6

3. Determine the sealed current of the load being protected.

4. Multiply the sealed current by the two correction factors and select the closest higher ampere rating.

Example — For a solenoid with sealed current of 0.5 A, an inrush ratio of 1:8, and an ambient temperature of +110 °F (43.7 °C), (0.5 x 1.7 x 1.15 = 0.9775), select the 1.0 A miniature circuit breaker. Tripping time of the miniature circuit breaker is determined from the table below. Divide the miniature circuit breaker value by the temperature correction factor from the Ambient Temperature Correction Table above to determine the actual rated current referenced in the table below.

Tripping Times in Seconds at 70 °F (21.1 °C)

Percent Rated Current	100%	200%	300%	400%	500%	600%	1000%	2000% Greater
Tripping Times (Seconds)	No Trip	10…40	3…18	1.5…9	0.8…6	0.003…4	0.009…2	Max. 0.02

Note: When several breakers are rail mounted adjacent to each other, the no-trip current will be 80% of rated current at 70 °F (21.1 °C).

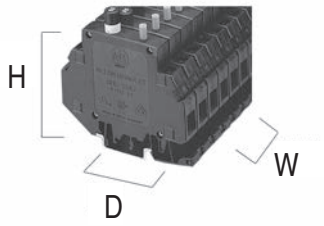
	1492-GH	1492-GS		
	1-Pole	1-Pole	2-Pole	3-Pole
Amperage [A]	Cat. No.	Cat. No.	Cat. No.	Cat. No.
0.2	**1492-GH002**	1492-GS1G002	1492-GS2G002	1492-GS3G002
0.5	**1492-GH005**	**1492-GS1G005**	1492-GS2G005	1492-GS3G005
0.8	**1492-GH008**	1492-GS1G008	1492-GS2G008	1492-GS3G008
1.0	**1492-GH010**	**1492-GS1G010**	**1492-GS2G010**	1492-GS3G010
1.2	**1492-GH012**	1492-GS1G012	1492-GS2G012	1492-GS3G012
1.5	**1492-GH015**	1492-GS1G015	1492-GS2G015	1492-GS3G015
2.0	**1492-GH020**	**1492-GS1G020**	**1492-GS2G020**	1492-GS3G020
2.5	**1492-GH025**	1492-GS1G025	1492-GS2G025	1492-GS3G025
3.0	**1492-GH030**	**1492-GS1G030**	**1492-GS2G030**	1492-GS3G030
4.0	**1492-GH040**	**1492-GS1G040**	**1492-GS2G040**	1492-GS3G040
5.0	**1492-GH050**	**1492-GS1G050**	**1492-GS2G050**	1492-GS3G050
6.0	—	1492-GS1G060	1492-GS2G060	1492-GS3G060
7.0	**1492-GH070**	1492-GS1G070	1492-GS2G070	1492-GS3G070
8.0	—	**1492-GS1G080**	1492-GS2G080	1492-GS3G080
10.0	**1492-GH100**	**1492-GS1G100**	**1492-GS2G100**	1492-GS3G100
12.0	—	1492-GS1G120	1492-GS2G120	1492-GS3G120
15.0	**1492-GH150**	**1492-GS1G150**	**1492-GS2G150**	1492-GS3G150
16.0	—	**1492-GS1G160**	1492-GS2G160	1492-GS3G160
20.0	—	**1492-GS1G200**	**1492-GS2G200**	1492-GS3G200
25.0	—	**1492-GS1G250**	1492-GS2G250	1492-GS3G250
Adding Auxiliary Contact	—	Add suffix — H1 for N.O. aux. One aux. may be installed in all devices.		
Pieces Per Carton	1			

Specifications

	1492-GH	1492-GS		
	1-Pole	1-Pole	2-Pole	3-Pole
UL/CSA	200 A (Not to exceed 100 x rated A)	0.2…16 A	5 kA C1 (2 kA C1 for 65V DC — 1-pole)	
		18…25 A	2 kA C1	
EN/IEC 60934 (CBE)		0.2…5 A	400 A	
		6…25 A	800 A	
Maximum Voltage Ratings	250V AC 50/60 Hz 65V DC	480Y/277V AC 50/60 Hz 65V DC		
Temperature Range	–40…+149 °F (–40…+65 °C) non-condensing			
Operating Life	6000 operations @ rated current			
Housing Material	Glass-filled Polyamide 6.6			
Shock	25 G, 11 ms duration			
Vibration	5 G (10…500 Hz)			
Dielectric Strength	1500V AC	1600V AC		
Insulation Resistance	100 M Ω @ 500V DC			
Terminal Type	Tubular Screw with self-lifting box lug			
Wire Size	#22…10 AWG			
Recommended Wire Strip Length	0.44 in. (11.2 mm)	Main Term — 0.51 in. (13 mm) Aux Term — 0.41 in. (10.4 mm)		
Terminal Torque	1.3…1.4 N•m (10…12 lb•in)	0.656 N•m (5 lb•in)		
Auxiliary Contact rating (N.O. or N.C.)		1.0 A AC or DC (Resistive Load)		

Approximate Dimensions

Dimensions are in inches (millimeters). Dimensions are not intended for manufacturing purposes.



	1492-GH	1492-GS		
	1-Pole	1-Pole	2-Pole	3-Pole
Height	3.15 in. (80 mm)	3.15 in. (80 mm)		
Depth	2.89 in. (73.4 mm)	3.48 in. (88.5 mm)		
Width	0.49 in. (12.4 mm)	0.49 in. (12.5 mm)	0.98 in. (25 mm)	1.47 in. (37.5 mm)