

1492-GH, Continued

UL, CSA, and IEC Rated

Selection Guide — To select a miniature circuit breaker, use the following procedure:

- Determine the inrush correction factor from Table 1.

- Determine the temperature correction factor from Table 2.
- Determine the sealed current of the load being protected.
- Multiply the sealed current by the two correction factors and select the closest higher ampere rating.

Example — What size miniature circuit breaker should be selected 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)?
 $0.5 \times 1.7 \times 1.15 = 0.9775$
 Select the 1.0 A miniature circuit breaker.

Table 1.

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.

Table 2.

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

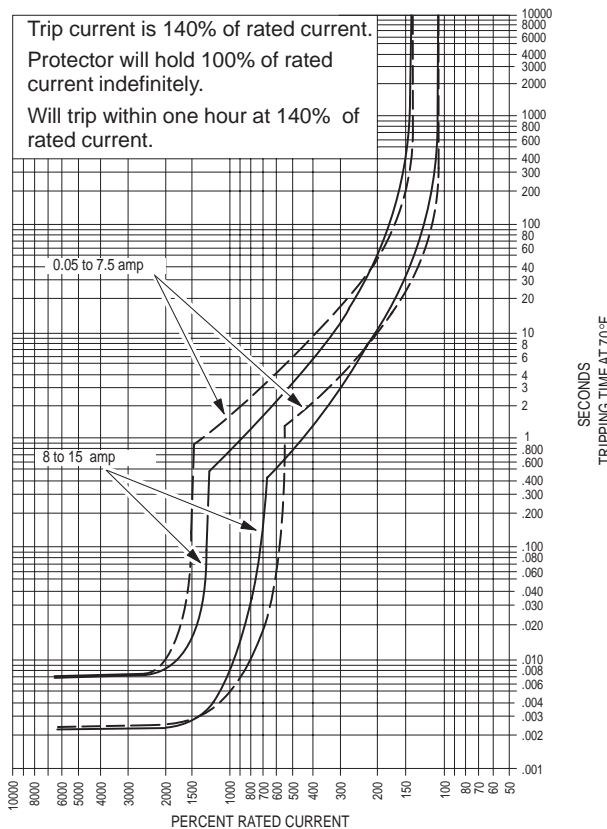
Tripping time of the miniature circuit breaker is determined from Table 3 below. Divide the miniature circuit breaker value by the temperature correction factor from Table 2 above to determine the actual rated current referenced in Table 3.

Table 3.

Tripping Time								
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	0.003...2	Maximum 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).

Trip Current



1492-GH, Continued

Specifications ❶

Cat. No.	1492-GH Series B														
Description	1-pole with universal mounting foot for Allen-Bradley and DIN Rail mounting														
Maximum Voltage Ratings	250V AC 50/60 Hz 65V DC														
Standard Current Ratings	A	0.2	0.5	0.8	1.0	1.2	1.5	2.0	2.5	3.0	4.0	5.0	7.0	10.0	15.0
Internal Resistance per Pole	Ω	44	6.6	2.55	1.97	1.22	0.86	0.49	0.313	0.205	0.104	0.082	0.034	<0.20	<0.20
Dielectric Strength	1500V AC														
Shock and Vibration Specifications	Shock: 25 G, 11 ms duration Vibration: 5 G (10...500 Hz)														
Insulation Resistance	100 MΩ @ 500V DC														
Operating Life	6000 cycles @ rated current (UL 1077) 4000 cycles @ 200% rated current														
Temperature Range	-40...+149°F (-40...+65°C)														
Housing Material	Glass-filled Polyamide 6.6														
Wire Size	#22...#10 AWG (0.5...6 mm ²)														
Recommended Wire Strip Length	0.44" (11.2 mm)														
Terminals	Tubular screw with self-lifting box lug														
Recommended Tightening Torque	10...12 lb-in. (1.13...1.4 Nm)														

❶ Performance Data — See Publication A113, page Important-2.

Approvals

- UL 1077
- CSA 22.2 NO. 235
- VDE 0631 (IEC 60934)

In North America, the Cat. No. 1492-GH miniature circuit breaker is rated as a Supplementary Protector with a short-circuit current rating. Internationally, it is rated by IEC as a Circuit Breaker for Equipment with an interrupt rating.

Electrical Characteristics

Poles	Rated Current (A)	Voltage Rating		Short-Circuit Current Rating ❶ Interrupt Rating <i>I_{cn}</i> (IEC only)
		AC	DC	
UL 1077/CSA 22.2 #235 Supplementary Protector Rating				
1	0.2...15	250	—	1 kA, U1
1	0.2...15	—	80	1 kA, U1
1	9...14	250	—	2 kA, C1
VDE 0631 (IEC 60934) Circuit Breaker for Equipment Ratings				
1	0.2...15	250	65	0.2 kA, but not to exceed 100 x <i>I_n</i>

❶ The short-circuit current rating is followed by a letter and number designating the test conditions and any calibrations and dielectric tests following the short-circuit test. These designations are defined as follows (see ❷ also):

- C — Indicates that the short-circuit test was conducted with series overcurrent protection
- U — Indicates that the short-circuit test was conducted without series overcurrent protection
- 1 — Indicates that a recalibration and dielectric test was not conducted as part of the short-circuit test
- 2 — Indicates that a recalibration and dielectric test was conducted as part of the short-circuit test

❷ These alphanumeric designations were established by UL. CSA has not yet adopted them; however, the test conditions are equivalent to UL and the coding is appropriate.