

# Product Details and Certifications

**Cross Reference RA Part Number: 1492-SP1C160-N C**

**Product: 1492-SP1C160-N**

Description: 1492 Supplementary Protectors, 1 pole, Magnetic Trip Range 5..10 x Rated Current (Inductive Loads), 16.0 A, Switched Neutral Module: 277V-65A



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

## ***RESIDUAL CURRENT DEVICES***

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Bulletin Number	1492 Supplementary Protectors
Number of Poles	1 Pole
Magnetic Trip Range	Trip Curve C
Amp Rating	16.0 Amps
Switched Neutral Module	277V-65A

## ***CERTIFICATIONS AND APPROVALS***

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UL

CSA

VDE/IEC

For UL Certifications Directory:

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

# Control Circuit and Load Protection

## Product Overview

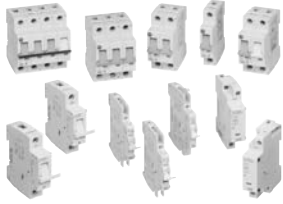


Bulletin	1492-MC	1492-MCGA, -MCEA	1492-SP
Type	Branch Circuit Breaker	Ground Fault Detection	Miniature Circuit Breaker Supplementary Protector
Features	<ul style="list-style-type: none"> <li>120/240V, 240V &amp; 480Y/277V rating</li> <li>1/2 in. per pole wide 10...60 A @ 120/240V AC &amp; 15...30 A @ 240V AC</li> <li>IP2X finger-safe, built-in with 1/2 in. wide, add protectors for 1 in. wide</li> <li>Ratings to 480Y/277V AC, 10 000 A interrupt ratings</li> <li>Mounts on DIN Rail</li> </ul>	<ul style="list-style-type: none"> <li>10 000 A interrupt</li> <li>UL 489 Circuit breaker with ground fault circuit interrupter and ground fault equipment protector</li> <li>Mounts on DIN Rail or panel mount</li> </ul>	<ul style="list-style-type: none"> <li>True IP2X finger-safe design (front)</li> <li>Field mountable options for selective applications</li> <li>AC and DC voltage ratings in one convenient device</li> <li>Superior shock and vibration resistance capabilities</li> <li>Mounts on DIN Rail</li> </ul>
Number of Poles	1-, 2-, 3-pole	1- and 2-pole with Neutral	1-, 2-, 3-pole 1-pole + neutral, 3-pole + neutral
Maximum Voltage	120/240V AC 240V AC	120/240V AC 60 Hz	480Y/277V AC 1-pole — 48V DC 2-pole — 96V DC
Tripping Characteristic Reference Temperature	104 °F (40 °C)	104 °F (40 °C)	86 °F (30 °C)
Tripping Characteristic	UL 489 Standard (CSA 22.2 No. 5.1)	UL/CSA Standard	B Curve 3...5 In C Curve 5...10 In D Curve 10...20 In
Certifications	UL 489 Listed Circuit Breaker (CSA 22.2 No. 5.1) UL File Number E197878	UL 489, 943 and 1053 CSA 22.2 No. 5.1	UL 1077 CSA 22.2 No. 235 VDE (IEC 60898) GL (60 947-2)
Dielectric Strength	1960V AC	1960V AC	1960V AC
Shock	25 G half sine wave for 11 ms (3 axes)		
Vibration	100...500 Hz for 1 hour	100...500 Hz for 1 hour	100...500 Hz for 1 hour
Wire Size	#14...1/0 AWG	#14...4 AWG 75°C (Cu only)	#18...4 AWG (1.0...25 mm <sup>2</sup> )
Electromechanical Life	UL 489 specifications	UL 489 specifications	≥6000 operations
Interrupt Rating	10 kA @ 240V AC	10 kA @ 120/240V AC	IEC 60898 10 kA @ 415V AC IEC 60947-2 15 kA @ 415V AC UL/CSA 10 kA U2
Operating Temperature (non-condensing)	32...140 °F (0...+60 °C)	32...140 °F (0...+60 °C)	-22...+158 °F (-30...+70 °C)
Product Selection	Page 7-6	Page 7-11	Page 7-46



# Supplementary Protector/Miniature Circuit Breaker

## Product Overview



### Bulletin 1492-SP — Supplementary Protector/Miniature Circuit Breaker

- Energy limiting design — protects downstream components better than conventional breakers during short circuits
- Field-mountable options for selective applications
- True IP2X finger-safe design (front)
- International approvals — CE Marked, and meets UL, CSA, and IEC (VDE, GL) standards for worldwide acceptance
- Ratings to 480Y/277V AC @ 240/415V AC — 10 000 A interrupt rating
- 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)
- 3 trip curves: B, C, and D
- Time delay (D characteristic) for high inrush currents during inductive start-ups such as transformers and power supplies
- Superior shock and vibration resistance capabilities — helps to prevent nuisance tripping

### Table of Contents

Product Selection ..... 7-47

Specifications..... 7-52  
Approximate Dimensions..... 7-53

### Standards Compliance

UL 1077  
CSA C22.2 No. 235  
IEC/EN 60898, 60947-2  
UL File Number E65138  
CCC GB10963

### Certifications

UL Recognized  
CSA Certified  
CE Marked  
Germanischer Lloyd (Marine)  
CCC

Bulletin 1492-SP series C devices are energy limiting, thermal magnetic type overcurrent protectors meeting UL 1077/CSA C22.2 No. 235, IEC/EN 60898. These devices are designed for the protection of a wide variety of products including:

- Solenoids
- Test equipment
- Controller I/O points
- Relay and contractor coils
- Computers
- Transformers
- Automotive systems
- Power supplies
- Medical equipment
- Control instrumentation

The Bulletin 1492-SP supplementary protectors/miniature circuit breakers are available in one-, one-pole plus neutral, two-, three-, and three-pole plus neutral units. One- and two-pole AC units also have limited DC ratings. Two- and three pole units are connected at the handle for simultaneous operation. Screw termination is standard on all Bulletin 1492-SP units. Both line and load side terminals accept #18...4 AWG (1.0.. 25 mm<sup>2</sup>) copper wire.

7

### Ordering Information

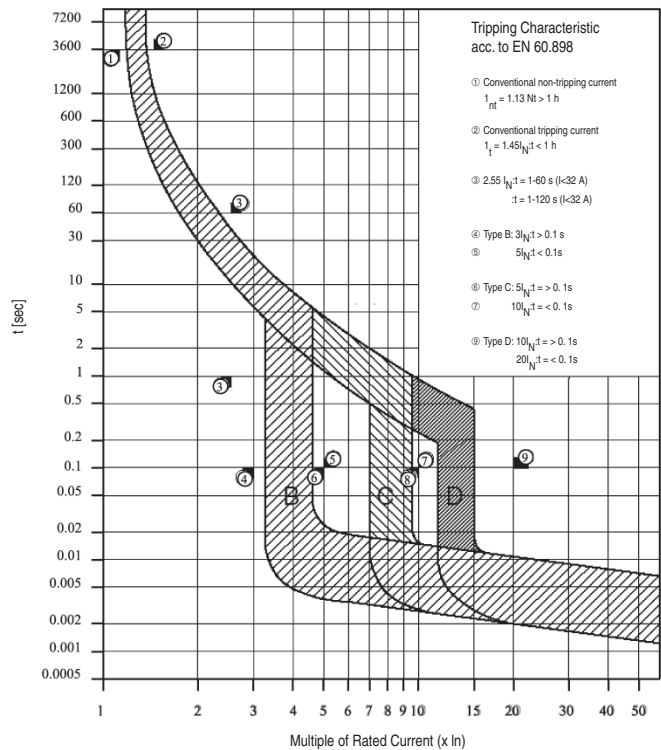
To order the proper device, you need to know the:

- Maximum rated current of equipment to be protected
- System phase of 1-, 2-, or 3
- Maximum startup (inrush) current
- Accessories that are required

Use the product selection tables on the following pages to determine the catalog number.

1. Select a 1-, 2-, or 3-pole device.
2. If needed, select the Switched Neutral Module. The Switched Neutral Module is mounted on the right side of the breaker. This module must be mounted at the factory. It cannot be installed in the field.
3. If applicable, consider the derating factors listed in the Determining Ratings section of Publication 1492-TD010\*
4. Order accessory contacts or modules as separate items. Accessory modules are always mounted on the left side of the supplemental protector/miniature circuit breaker. A maximum of two accessory modules can be mounted on a single device.



Refer to the Accessories table on page 7-49 for possible combinations.



**Tripping Characteristics**  
Bul 1492-SP at 30 °C



Product Selection

Tripping Characteristics		Trip Curve B Resistive or Slightly Inductive	Trip Curve C Inductive	Trip Curve D Highly Inductive
		3...5 $I_n$	<b>5...10 <math>I_n</math></b>	10...20 $I_n$
Number of Poles	Continuous Current Rating ( $I_n$ ) [A]	Cat. No.	Cat. No.	Cat. No.
<b>1-Pole</b>    IEC 240/415V AC UL/CSA 277V AC 48V DC  	0.5	—	1492-SP1C005	1492-SP1D005
	1	1492-SP1B010	1492-SP1C010	1492-SP1D010
	2	1492-SP1B020	1492-SP1C020	1492-SP1D020
	3	1492-SP1B030	1492-SP1C030	1492-SP1D030
	4	1492-SP1B040	1492-SP1C040	1492-SP1D040
	5	1492-SP1B050	1492-SP1C050	1492-SP1D050
	6	1492-SP1B060	1492-SP1C060	1492-SP1D060
	7	1492-SP1B070	1492-SP1C070	1492-SP1D070
	8	1492-SP1B080	1492-SP1C080	1492-SP1D080
	10	1492-SP1B100	1492-SP1C100	1492-SP1D100
	13	1492-SP1B130	1492-SP1C130	1492-SP1D130
	15	1492-SP1B150	1492-SP1C150	1492-SP1D150
	<b>16</b>	1492-SP1B160	<b>1492-SP1C160</b>	1492-SP1D160
	20	1492-SP1B200	1492-SP1C200	1492-SP1D200
	25	1492-SP1B250	1492-SP1C250	1492-SP1D250
	30	1492-SP1B300	1492-SP1C300	1492-SP1D300
	32	1492-SP1B320	1492-SP1C320	1492-SP1D320
	40	1492-SP1B400	1492-SP1C400	1492-SP1D400
	50	1492-SP1B500	1492-SP1C500	* 1492-SP1D500
	63	1492-SP1B630	1492-SP1C630	* 1492-SP1D630

**Note:** Bulletin 1492-SP 1- and 3-pole circuit breakers are also available with neutral. Add a suffix of -N to the cat. no.

\* IEC only, does not have CCC, UR, or CSA certifications

## Supplementary Protector/Miniature Circuit Breaker

## Specifications

## Specifications

## 1492-SP Series C

Description	B Curve	C Curve	D Curve
Tripping Characteristics	Resistive or Slightly-Inductive Loads	Inductive Loads	Highly-Inductive Loads
Current Range	3...5 I <sub>n</sub>	5...10 I <sub>n</sub>	10...20 I <sub>n</sub>
Poles (18 mm width per pole)	1...63 A	0.5...63 A	0.5...40 A
Dielectric Strength	1960V AC		
Shock	25 G Half Sine Wave for 11 ms (3 axes)		
Vibration	Frequency Range: 10...2000 Hz Max. Amplitude (p-p) = 0.030 in. Max. Acceleration = 5 G 2 hours each of 3 axes		
Operating Temperature Range	23...104 °F (-5...+40 °C) non-condensing		
Shipment and Short-Term Temperature Limits	-22...+158 °F (-30...+70 °C)		
Housing Material	Nylon		
Wire Size	#18...8 AWG (1.0...10 mm <sup>2</sup> ) Tightening Torque — 2.4 N•m (21 lb•in) #6...4 AWG (16...25 mm <sup>2</sup> ) Tightening Torque — 3.1 N•m (27 lb•in)		
Recommended Wire Strip Length	0.51 in. (13 mm)		
Electromechanical Life	6000 operations (1 operation = 2 switching events) ON/OFF		
Switched Neutral Rating	277V AC		
<b>Supplementary Protector</b>			
Certifications	UL 1077 - Recognized Component QVNU2 - E65138 CSA C22.2 No. 235 Certified Component		
Use Group (UG)	UG A - General Industrial		
Terminals (FW)	FW 3 Line and Load evaluated for field wiring		
Overload Rating (OL)	OL 0 (general use)		
<b>1-Pole, 1-Pole + N</b>			
Maximum Volts	277V AC		48V DC
Tripping Current (TC)	TC 1, 40 °C		TC 1, 40 °C
Short-Circuit Current Rating (SC)	SC U2		SC U1
	< 35 A	10 kA @ 277V AC; B and C Curve 5 kA @ 277V AC; D Curve	10 kA @ 48V DC; B, C, and D Curve
	40, 50, 63 A	5 kA @ 277V AC; B, C, and D Curve	
<b>2-Pole, 3-Pole, 3-Pole + N</b>			
Maximum Volts	480Y/277V AC		96V DC (2-pole - series)
Tripping Current	TC 2, 40 °C		TC 2, 40 °C
Short-Circuit Current Rating (SC)	SC U2		SC U1
	< 35 A	10 kA @ 480Y/277V AC; B and C Curve 5 kA @ 480Y/277V AC; D Curve	10 kA @ 96V DC; B, C, and D Curve
	40, 50, 63 A	5 kA @ 480Y/277V AC; B, C, and D Curve	
<b>Miniature Circuit Breaker</b>			
Certifications	IEC/EN 60898 (VDE) IEC/EN 60947-2 (GL) (not including D50 and D63) CQC (GB-10963) (not including D50 and D63)		
Rated Voltage U <sub>n</sub>	240/415VAC 48V DC (CE 60747-2)		
Rated Insulation Voltage U <sub>i</sub>	440 VAC		
Rated Impulse Withstand Voltage U <sub>imp</sub>	4 kV (1.2/50) μsec		
Conventional Non-Tripping Current	int = 1.13 I <sub>n</sub>		
Conventional Tripping Current	it = 1/45 I <sub>n</sub>		
Reference Temperature	30 °C		
Temperature Factor	0.5% /K		
Maximum Back-Up Fuse	125 A gL/gG		
Selectivity Class	3		
Rated Short-Circuit Capacity	I <sub>cn</sub> (IEC 60 898) = 10 kA I <sub>cu</sub> (IEC 60 947-2) = 15 kA		
Service Short-Circuit Capacity	I <sub>cs</sub> = 7.5 kA		
Climatic Conditions	Acc to IEC 68-2 (25...55 °C/ 90...95% RH)		