

# Product Details and Certifications

Cross Reference RA Part Number: 1492-SP2B400 C

 **Product: 1492-SP2B400**

Description: 1492 Supplementary Protectors, 2 poles, Magnetic Trip Range 3..5  
x Rated Current (Resistive or Slightly Inductive Loads), 40.0 A



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         | 2 Poles                       |
| Magnetic Trip Range     | Trip Curve B                  |
| Amp Rating              | 40.0 Amps                     |
| Switched Neutral Module | No Module                     |

## ***CERTIFICATIONS AND APPROVALS***

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UL

CSA

VDE/IEC

For UL Certifications Directory:

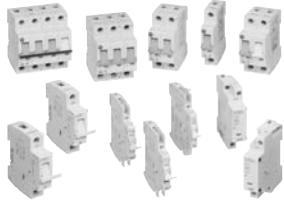
<http://database.ul.com/cgi-bin/XYV/template/LISEXT/IFRAME/index.htm>

| 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<br>1-pole + neutral,<br>3-pole + neutral  |
| Maximum Voltage                               | 120/240V AC<br>240V AC   | 120/240V AC 60 Hz  | 480Y/277V AC<br>1-pole — 48V DC<br>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<br>C Curve 5...10 In<br>D Curve 10...20 In  |
| Certifications                                | UL 489 Listed Circuit Breaker (CSA 22.2 No. 5.1)<br>UL File Number E197878   | UL 489, 943 and 1053<br>CSA 22.2 No. 5.1   | UL 1077<br>CSA 22.2 No. 235<br>VDE (IEC 60898)<br>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<br>10 kA @ 415V AC<br>IEC 60947-2<br>15 kA @ 415V AC<br>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

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### 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.

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### Ordering Information

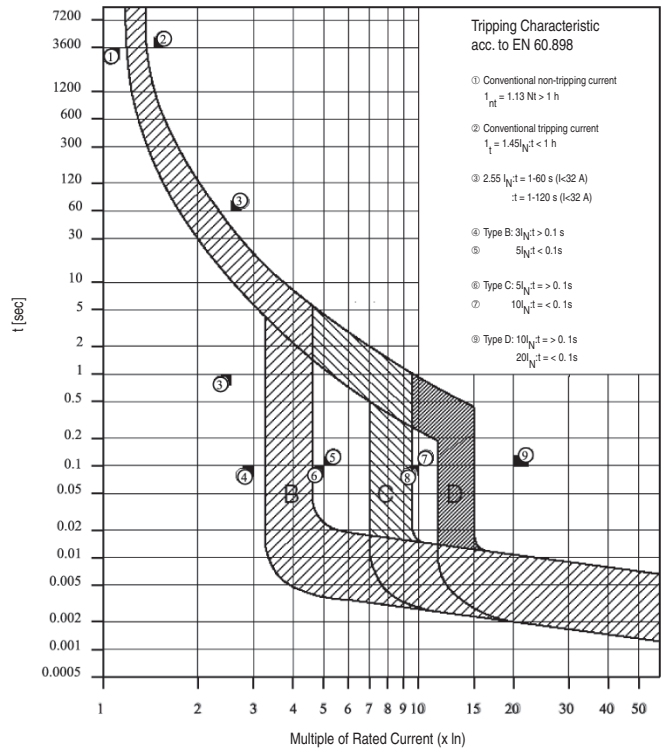
To order the proper device, you need to know the:

- 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**



# Supplementary Protector/Miniature Circuit Breaker

## Product Selection

| Tripping Characteristics   |   | Trip Curve B<br>Resistive or Slightly<br>Inductive | Trip Curve C<br>Inductive | Trip Curve D<br>Highly Inductive |
|--|---|--|---------------------------|----------------------------------|
|  |   | 3...5 I <sub>n</sub>                               | 5...10 I <sub>n</sub>     | 10...20 I <sub>n</sub>           |
| Number of Poles  | Continuous Current Rating (I <sub>n</sub> ) [A] | Cat. No.   | Cat. No.                  | Cat. No.                         |
| <b>2-Pole</b><br><br>IEC<br>415V AC<br>UL/CSA<br>480Y/277V AC<br>96V DC | 0.5   | —  | 1492-SP2C005              | 1492-SP2D005                     |
|  | 1   | <b>1492-SP2B010</b>                                | 1492-SP2C010              | 1492-SP2D010                     |
|  | 2   | <b>1492-SP2B020</b>                                | 1492-SP2C020              | 1492-SP2D020                     |
|  | 3   | <b>1492-SP2B030</b>                                | 1492-SP2C030              | 1492-SP2D030                     |
|  | 4   | <b>1492-SP2B040</b>                                | 1492-SP2C040              | 1492-SP2D040                     |
|  | 5   | <b>1492-SP2B050</b>                                | 1492-SP2C050              | 1492-SP2D050                     |
|  | 6   | <b>1492-SP2B060</b>                                | 1492-SP2C060              | 1492-SP2D060                     |
|  | 7   | 1492-SP2B070                                       | 1492-SP2C070              | 1492-SP2D070                     |
|  | 8   | 1492-SP2B080                                       | 1492-SP2C080              | 1492-SP2D080                     |
|  | 10  | <b>1492-SP2B100</b>                                | 1492-SP2C100              | 1492-SP2D100                     |
|  | 13  | 1492-SP2B130                                       | 1492-SP2C130              | 1492-SP2D130                     |
|  | 15  | <b>1492-SP2B150</b>                                | 1492-SP2C150              | 1492-SP2D150                     |
|  | 16  | <b>1492-SP2B160</b>                                | 1492-SP2C160              | 1492-SP2D160                     |
|  | 20  | <b>1492-SP2B200</b>                                | 1492-SP2C200              | 1492-SP2D200                     |
|  | 25  | <b>1492-SP2B250</b>                                | 1492-SP2C250              | 1492-SP2D250                     |
|  | 30  | <b>1492-SP2B300</b>                                | 1492-SP2C300              | 1492-SP2D300                     |
|  | 32  | 1492-SP2B320                                       | 1492-SP2C320              | 1492-SP2D320                     |
|  | 40  | <b>1492-SP2B400</b>                                | <b>1492-SP2C400</b>       | 1492-SP2D400                     |
|  | 50  | 1492-SP2B500                                       | 1492-SP2C500              | * 1492-SP2D500                   |
|  | 63  | <b>1492-SP2B630</b>                                | 1492-SP2C630              | * 1492-SP2D630                   |
| <b>3-Pole</b><br><br>IEC<br>415V AC<br>UL/CSA<br>480Y/277V AC         | 0.5   | —  | 1492-SP3C005              | 1492-SP3D005                     |
|  | 1   | 1492-SP3B010                                       | 1492-SP3C010              | 1492-SP3D010                     |
|  | 2   | <b>1492-SP3B020</b>                                | 1492-SP3C020              | 1492-SP3D020                     |
|  | 3   | 1492-SP3B030                                       | 1492-SP3C030              | 1492-SP3D030                     |
|  | 4   | <b>1492-SP3B040</b>                                | 1492-SP3C040              | 1492-SP3D040                     |
|  | 5   | <b>1492-SP3B050</b>                                | 1492-SP3C050              | 1492-SP3D050                     |
|  | 6   | <b>1492-SP3B060</b>                                | 1492-SP3C060              | 1492-SP3D060                     |
|  | 7   | 1492-SP3B070                                       | 1492-SP3C070              | 1492-SP3D070                     |
|  | 8   | 1492-SP3B080                                       | 1492-SP3C080              | 1492-SP3D080                     |
|  | 10  | <b>1492-SP3B100</b>                                | 1492-SP3C100              | 1492-SP3D100                     |
|  | 13  | 1492-SP3B130                                       | 1492-SP3C130              | 1492-SP3D130                     |
|  | 15  | <b>1492-SP3B150</b>                                | 1492-SP3C150              | 1492-SP3D150                     |
|  | 16  | 1492-SP3B160                                       | 1492-SP3C160              | 1492-SP3D160                     |
|  | 20  | <b>1492-SP3B200</b>                                | 1492-SP3C200              | 1492-SP3D200                     |
|  | 25  | 1492-SP3B250                                       | 1492-SP3C250              | 1492-SP3D250                     |
|  | 30  | <b>1492-SP3B300</b>                                | 1492-SP3C300              | 1492-SP3D300                     |
|  | 32  | 1492-SP3B320                                       | 1492-SP3C320              | 1492-SP3D320                     |
|  | 40  | <b>1492-SP3B400</b>                                | 1492-SP3C400              | 1492-SP3D400                     |
|  | 50  | 1492-SP3B500                                       | 1492-SP3C500              | * 1492-SP3D500                   |
|  | 63  | <b>1492-SP3B630</b>                                | 1492-SP3C630              | * 1492-SP3D630                   |

Note: 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            |
|  |                                       | 3...5 $I_n$      | 5...10 $I_n$   | 10...20 $I_n$                     |
| Current Range                              | 1...63 A                              |                  | 0.5...63 A   | 0.5...40 A                        |
| Poles (18 mm width per pole)               |                                       |                  | 1, 2, 3, 1 +N, 3 + N   |                                   |
| Dielectric Strength                        |                                       |                  | 1960V AC   |                                   |
| Shock                                      |                                       |                  | 25 G Half Sine Wave for 11 ms (3 axes)   |                                   |
| Vibration                                  |                                       |                  | Frequency Range: 10...2000 Hz<br>Max. Amplitude (p-p) = 0.030 in.<br>Max. Acceleration = 5 G<br>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> )<br>Tightening Torque — 2.4 N•m (21 lb•in)                                      |                                   |
|  |                                       |                  | #6...4 AWG (16...25 mm <sup>2</sup> )<br>Tightening Torque — 3.1 N•m (27 lb•in)  |                                   |
| Recommended Wire Strip Length              |                                       |                  | 0.51 in. (13 mm)   |                                   |
| Electromechanical Life                     |                                       |                  | 6000 operations<br>(1 operation = 2 switching events) ON/OFF   |                                   |
| Switched Neutral Rating                    |                                       |                  | 277V AC  |                                   |
| <b>Supplementary Protector</b>             |                                       |                  |  |                                   |
| Certifications                             |                                       |                  | UL 1077 - Recognized Component QVNU2 - E65138<br>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)          | < 35 A                                |                  | 10 kA @ 277V AC; B and C Curve<br>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)          | < 35 A                                |                  | 10 kA @ 480Y/277V AC; B and C Curve<br>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)<br>IEC/EN 60947-2 (GL) (not including D50 and D63)<br>CQC (GB-10963) (not including D50 and D63)    |                                   |
| Rated Voltage $U_n$                        |                                       |                  | 240/415VAC 48V DC (CE 60747-2)   |                                   |
| Rated Insulation Voltage $U_i$             |                                       |                  | 440 VAC  |                                   |
| Rated Impulse Withstand Voltage $U_{imp}$  |                                       |                  | 4 kV (1.2/50) $\mu$ sec  |                                   |
| Conventional Non-Tripping Current          |                                       |                  | int = 1.13 $I_n$   |                                   |
| Conventional Tripping Current              |                                       |                  | it = 1/45 $I_n$  |                                   |
| Reference Temperature                      |                                       |                  | 30 °C  |                                   |
| Temperature Factor                         |                                       |                  | 0.5% /K  |                                   |
| Maximum Back-Up Fuse                       |                                       |                  | 125 A gL/gG  |                                   |
| Selectivity Class                          |                                       |                  | 3  |                                   |
| Rated Short-Circuit Capacity               |                                       |                  | $I_{cn}$ (IEC 60 898) = 10 kA<br>$I_{cu}$ (IEC 60 947-2) = 15 kA   |                                   |
| Service Short-Circuit Capacity             |                                       |                  | $I_{cs}$ = 7.5 kA  |                                   |
| Climatic Conditions                        |                                       |                  | Acc to IEC 68-2 (25...55 °C/ 90...95% RH)  |                                   |