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 mm²) copper wire.

Ordering Information

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

- Maximum rated current of equipment to be protected
- Sytem 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.

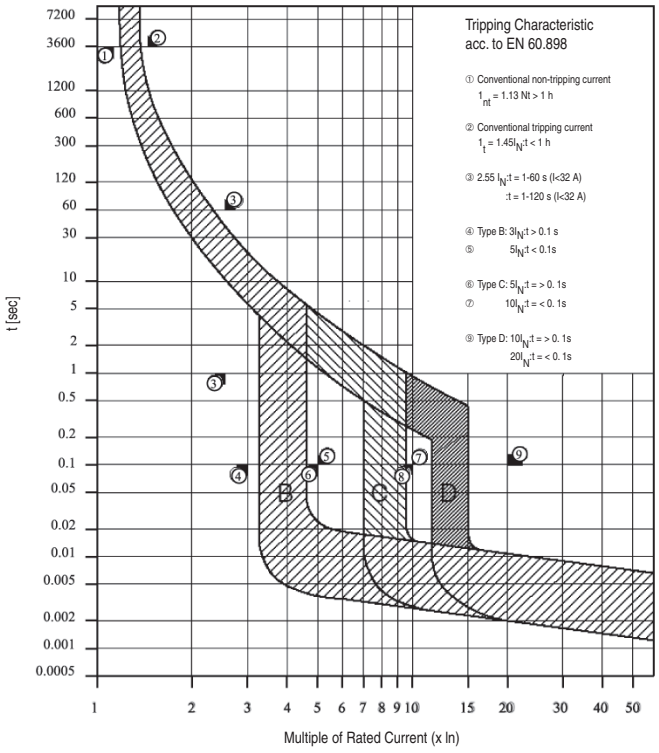
1. Select a 1-, 2-, or 3-pole device.

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	5…10 I_n	10…20 I_n
Number of Poles	Continuous Current Rating (I_n) [A]	Cat. No.	Cat. No.	Cat. No.
1-Pole	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**
	16	**1492-SP1B160**	**1492-SP1C160**	**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**

IEC 240/415V AC
UL/CSA 277V AC 48V DC

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

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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 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 mm²) Tightening Torque — 2.4 N•m (21 lb•in)		
		#6…4 AWG (16…25 mm²) 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		
Supplementary Protector				
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)		
1-Pole, 1-Pole + N				
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		
2-Pole, 3-Pole, 3-Pole + N				
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		
Miniature Circuit Breaker				
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 Un		240/415VAC 48V DC (CE 60747-2)		
Rated Insulation Voltage Ui		440 VAC		
Rated Impulse Withstand Voltage Uimp		4 kV (1.2/50) µsec		
Conventional Non-Tripping Current		int = 1.13 In		
Conventional Tripping Current		it = 1/45 In		
Reference Temperature		30 °C		
Temperature Factor		0.5% /K		
Maximum Back-Up Fuse		125 A gL/gG		
Selectivity Class		3		
Rated Short-Circuit Capacity		Icn (IEC 60 898) = 10 kA Icu (IEC 60 947-2) = 15 kA		
Service Short-Circuit Capacity		Ics = 7.5 kA		
Climatic Conditions		Acc to IEC 68-2 (25...55 °C/ 90...95% RH)		

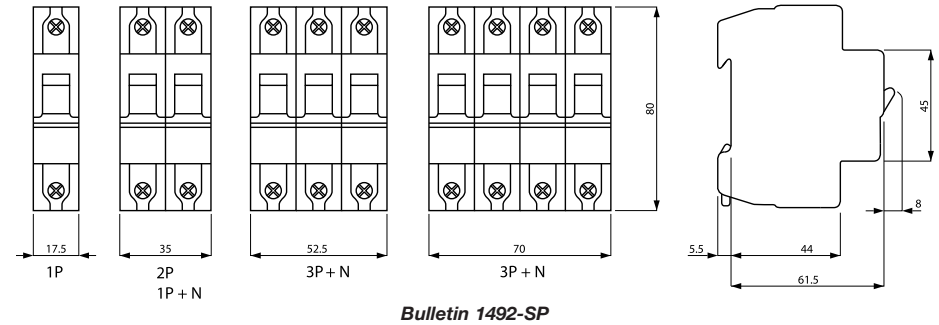
Auxiliary Specifications

		Auxiliary Contact Module Dual Auxiliary Contact Module Auxiliary/Signal Alarm Module Cat. Nos. 1492-ASPH3, 1492-ASPHH3, 1492-ASPHS3	Undervoltage Release Module Cat. Nos. 1492-ASPU115 1492-ASPU230	Shunt Trip Module Cat. Nos. 1492-ASPA1 1492-ASPA2
Degree of Protection		IP20 (IP00)		
Dimensions		See below		
Weight		0.045 kg	0.155 kg	0.155 kg
Mechanical Lifespan		6000 operations	10 000 operations	4000 operations
Minimum Impulse Duration		—	—	> 15 ms
Operating Voltage		—	1492-ASPU115: U_n-115V AC, U_{min}-50V AC	1492-ASPA1: 110…415V AC, 110…230V AC
		—	1492-ASPU230: U_n-230/240V AC, U_{min}-110V AC	1492-ASPA2: 12…110V AC, 12…60V AC
Inrush Current		—	3.6/44 mA (AC/DC)	25/12 mA (AC) 15/2 mA (DC)
Dropout		—	0.7…0.35 x U_s	—
Voltage Range		—	—	0.7…1.1 x U_s
EN/IEC	Max. Operating Current	AC 13 @ 250V AC 3 A AC 15 @ 250V AC 0.5 A DC 12 @ 110V DC 0.5 A U_{min}-5V AC	—	—
	Terminal Capacity IEC Rigid, CU	0.5…2.5 mm² 2 x 0.5…2 x 2.5 mm²	0.5…4.0 mm² 2 x 0.5…2 x 2.5 mm²	1.0…25 mm² 2 x 1.0…2 x 4.0 mm²
	Tightening Torque	0.8 N•m	1.1 N•m	2.4 N•m
UL 1077 CSA C22.2 No. 235	Max. Operating Current	@ 230V AC 2 A @ 110V DC 0.5 A U_{min}-5V CDC	—	—
	Terminal Capacity CU	#18…14 AWG 2 x #18…2 x #14 AWG	#18…14 AWG 2 x #18…2 x #14 AWG	#18…8 AWG 2 x 18…2 x #12 AWG
	Tightening Torque	7 lb•in	10 lb•in	21 lb•in

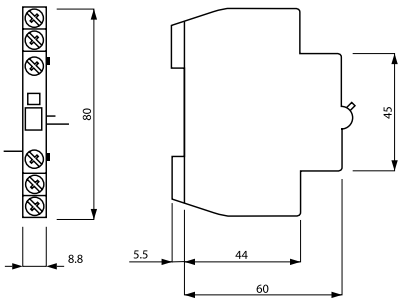
Approximate Dimensions

Dimensions are shown in millimeters. Dimensions are not intended for manufacturing purposes.

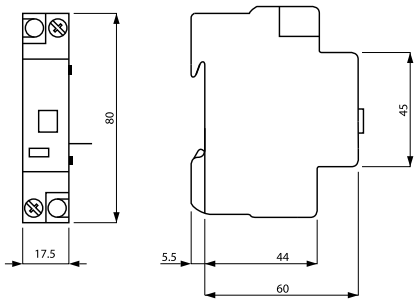
Bulletin 1492-SP Series C



Bulletin 1492-SP



Cat. No.
1492-ASPHH3
1492-ASPHS3
1492-ASPH3



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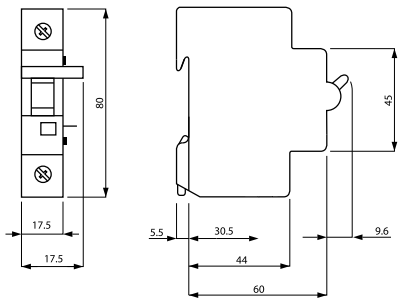

*Cat. No. 1492-ASPA_*