



Bulletin 1492-D DC Circuit Breaker

Electrical Ratings		
Poles	1, 2	
Tripping characteristics	C	
Rated current (I_n)	0.5...63 A	
Rated frequency (f)	0 Hz (DC only)	
Rated insulation voltage U_i per IEC/EN 60664-1	250 V AC (phase to ground), 440V AC (phase to phase)	
Overvoltage category	III	
Pollution degree	3	
Data per UL/CSA		
Rated voltage	1-pole	250V DC
	2-pole	500V DC
Rated interrupting capacity per UL 1077	10 kA	
Application	Supplementary Protector for DC application use; application codes: TC0; OLO 250V DC, SC: 10kA; U1 250V DC; FWO	
Reference temperature for tripping characteristics	25 °C	
Electrical endurance	6,000 ops	
Data per IEC/EN 60947-2		
Rated operational voltage (U_e)	1-pole	220V DC
	2-pole	440V DC
Highest supply or utilization voltage (U_{max})	1-pole	250V DC
	2-pole	500V DC
Min. operating voltage	12V DC	
Rated ultimate short-circuit breaking capacity (I_{cu})	10 kA	
Rated service short-circuit breaking capacity (I_{cs})	10 kA	
Rated impulse withstand voltage U_{imp} . (1.2/50 μ s)	4 kV (test voltage 6.2kV at sea level, 5kV at 2,000m)	
Dielectric test voltage	2 kV (50/60Hz, 1 min.)	
Reference temperature for tripping characteristics	55 °C	
Electrical endurance 1 cycle (2s - ON, 13s - OFF, $I_n \leq 32A$), 1 cycle (2s - ON, 28s - OFF, $I_n > 32A$)	1,500 ops.	

Mechanical Data	
Housing	Insulation group II, RAL 7035
Indicator window	red ON/green OFF
Protection degree per EN 60529	IP20, IP40 in enclosure with cover
Mechanical endurance	20,000 operations
Shock resistance per IEC/EN 60068-2-27	25 g - 2 shocks - 13 ms
Vibration resistance per IEC/EN 60068-2-6	5g - 20 cycles at 5...150...5 Hz with load 0.8In
Environmental	
Environmental conditions (damp heat) per IEC/EN 60068-2-30	28 cycles with 55°C/90-96% and 25°C/95-100%
Ambient temperature Δ	-25...+55 °C
Storage temperature	-40...+70 °C
Installation	
Terminal	Dual terminal
Cross-section of wire \blacklozenge - solid, stranded (front/back terminal slot)	35/35 mm ²
	18...4/18...10 AWG
Cross-section of wire - flexible (front/back terminal slot)	25/10 mm ²
Multi-wire rating per UL, CSA	1 wire, 18...4 AWG
	2-4 wires \ddagger , 18...10 AWG
Cross-section of bus bars (back terminal slot)	10 mm ²
Tightening torque	IEC 2.8 N•m
	UL/CSA AWG 18...16: 13.3 in•lb. AWG 14...10:17.7 in•lb. AWG 8...4: 39.8 in•lb.
Screwdriver	No. 2 Pozidrive
Mounting	DIN rail (EN 60715, 35mm) with fast clip
Mounting position	Any
Supply	Note polarity of device
Approximate Dimensions and Weight	
Pole dimension (H x D x W)	88 x 69 x 17.5 mm
Pole weight	125 g (4.5 oz.)
Combination with Auxiliary Elements	
Auxiliary contact	Yes
Signal contact	Yes
Shunt trip	Yes

\blacklozenge 35mm² self-declared, not included in IEC/EN approval.

Δ Refer to the ambient temperature derating tables.

\ddagger Wires must be of like size and stranding. Up to two wires per terminal slot.

Power Loss Due to Current

Rated Current [A]	Power Loss Per Pole [W]	Rated Current [A]	Power Loss Per Pole [W]
0.5	1.4	13	2.3
1	1.4	15	2.4
2	1.8	16	2.5
3	1.6	20	2.5
4	1.8	25	3.2
5	1.9	30	3.5
6	2.0	32	3.7
7	1.1	40	4.5
8	1.5	50	4.5
10	2.1	63	5.4

Zero-stack Derating

The installation of several miniature circuit breaker side by side with rated current on all poles requires a correction factor to the rated current (not required if spacers are used).

No. of Adjacent Devices	Factor
1	1
2, 3	0.9
4, 5	0.8
≥ 6	0.75

Ambient Temperature Graphs

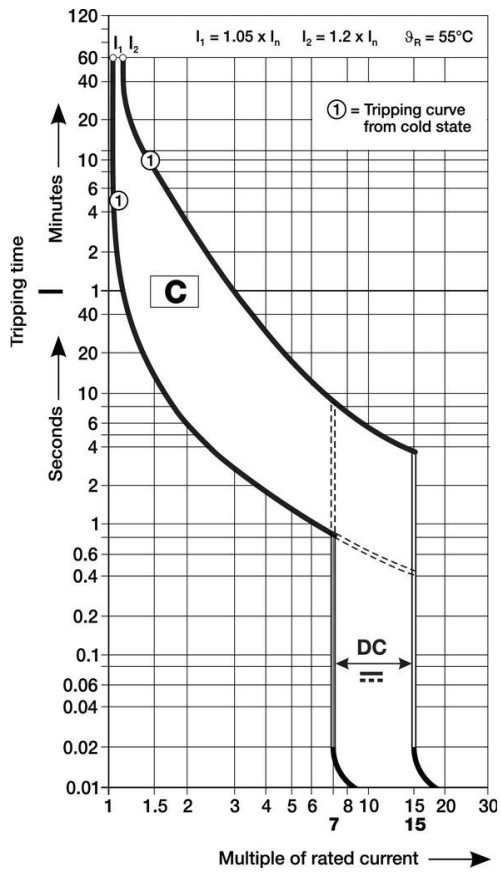
Bulletin 1492-D
Temperature Derating, UL
Reference temperature = 25 °C

Current Rating (A)	Ambient temperature (°C)										
	-25	-20	-10	0	10	20	25	30	40	50	55
0.5	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5
1	1.2	1.2	1.2	1.2	1.1	0.9	1	1.0	1.0	0.9	0.9
1.6	1.8	1.8	1.8	1.8	1.8	1.5	1.6	1.6	1.5	1.5	1.5
2	2.3	2.3	2.3	2.3	2.3	1.9	2	2.0	1.9	1.9	1.8
3	3.5	3.5	3.5	3.5	3.4	2.8	3	3.0	2.9	2.8	2.7
4	4.6	4.6	4.6	4.6	4.5	3.8	4	3.9	3.8	3.7	3.6
6	6.9	6.9	6.9	6.9	6.8	5.6	6	5.9	5.7	5.6	5.5
8	9.2	9.2	9.2	9.2	9.1	7.5	8	7.9	7.6	7.4	7.3
10	11.5	11.5	11.5	11.5	11.4	9.4	10	9.9	9.6	9.3	9.1
13	15.0	15.0	15.0	15.0	14.8	12.2	13	12.8	12.4	12.0	11.8
16	18.4	18.4	18.4	18.4	18.2	15.0	16	15.8	15.3	14.8	14.6
20	23.0	23.0	23.0	23.0	22.7	18.8	20	19.7	19.1	18.5	18.2
25	28.8	28.8	28.8	28.8	28.4	23.5	25	24.6	23.9	23.1	22.8
32	36.8	36.8	36.8	36.8	36.3	30.1	32	31.5	30.6	29.6	29.1
40	46.0	46.0	46.0	46.0	45.4	37.6	40	39.4	38.2	37.0	36.4
50	57.5	57.5	57.5	57.5	56.8	47.0	50	49.3	47.8	46.3	45.5
63	72.5	72.5	72.5	72.5	71.5	59.2	63	62.1	60.2	58.3	57.3

Bulletin 1492-D
Temperature Derating, IEC
Reference temperature = 55 °C

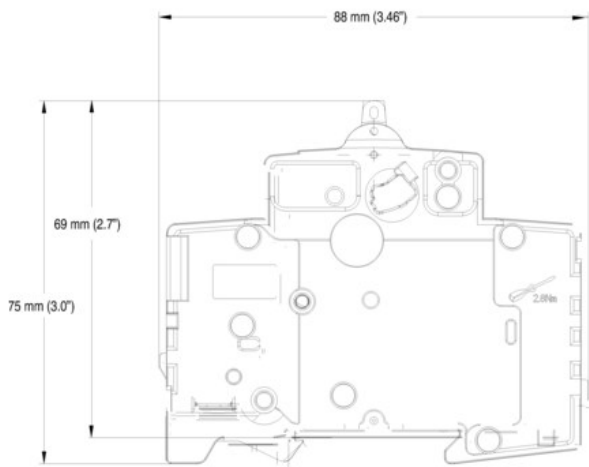
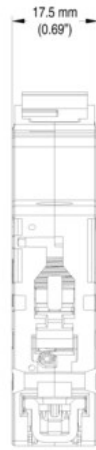
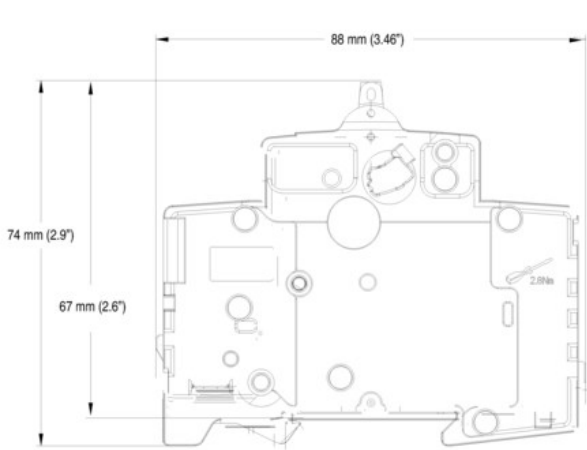
Current Rating (A)	Ambient temperature (°C)										
	-25	-20	-10	0	10	20	30	40	50	55	
0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5	
1	1.2	1.2	1.2	1.2	1.1	1.1	1.1	1.0	1.0	1	
1.6	2.0	2.0	1.9	1.9	1.8	1.8	1.7	1.7	1.6	1.6	
2	2.5	2.5	2.4	2.3	2.3	2.2	2.2	2.1	2.0	2	
3	3.7	3.7	3.6	3.5	3.4	3.3	3.2	3.1	3.0	3	
4	5.0	4.9	4.8	4.7	4.5	4.4	4.3	4.2	4.1	4	
6	7.4	7.4	7.2	7.0	6.8	6.6	6.5	6.3	6.1	6	
8	9.9	9.8	9.6	9.3	9.1	8.8	8.6	8.4	8.1	8	
10	12.4	12.3	12.0	11.7	11.4	11.1	10.8	10.5	10.2	10	
13	16.1	15.9	15.5	15.1	14.8	14.4	14.0	13.6	13.2	13	
16	19.8	19.6	19.1	18.6	18.2	17.7	17.2	16.7	16.2	16	
20	24.8	24.5	23.9	23.3	22.7	22.1	21.5	20.9	20.3	20	
25	31.0	30.6	29.9	29.1	28.4	27.6	26.9	26.1	25.4	25	
32	39.7	39.2	38.2	37.3	36.3	35.4	34.4	33.4	32.5	32	
40	49.6	49.0	47.8	46.6	45.4	44.2	43.0	41.8	40.6	40	
50	62.0	61.3	59.8	58.3	56.8	55.3	53.8	52.3	50.8	50	
63	78.1	77.2	75.3	73.4	71.5	69.6	67.7	65.8	63.9	63	

Tripping Characteristics



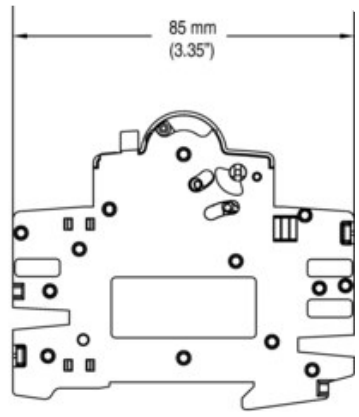
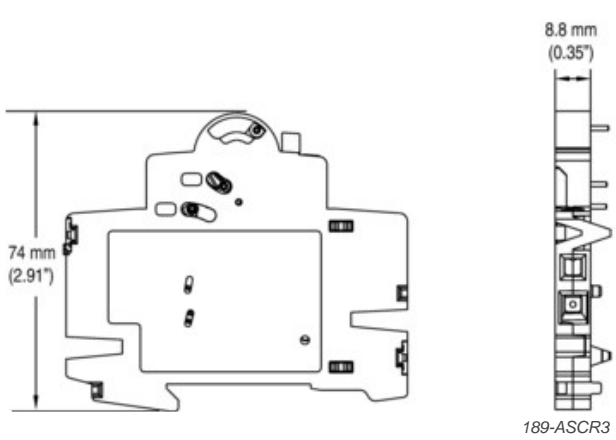
Approximate Dimensions

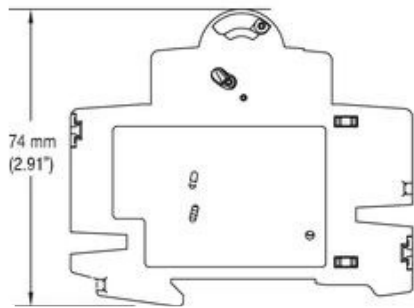
Note: Dimensions are shown in millimeters (inches). Dimensions are not intended for manufacturing purposes.



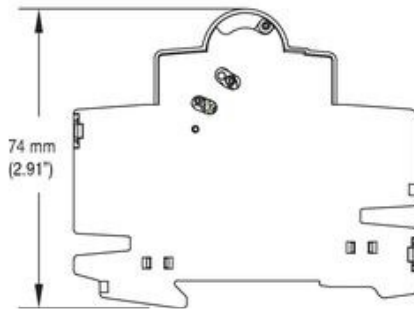
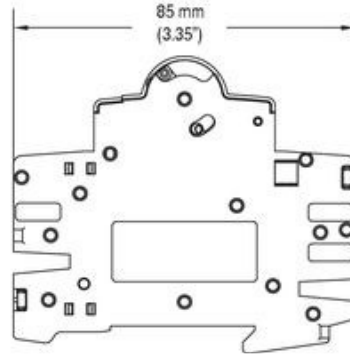
Circuit Breaker Accessory Approximate Dimensions

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

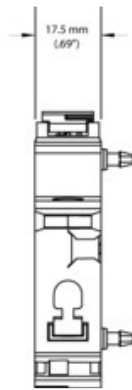
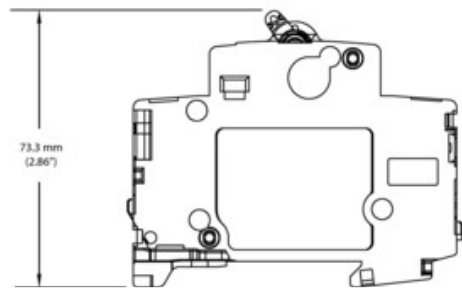




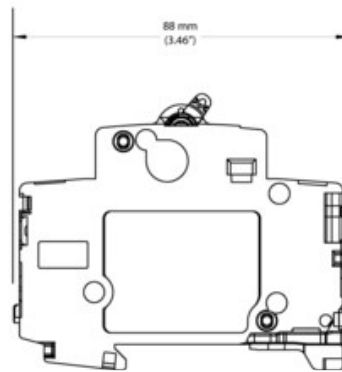
189-AR3

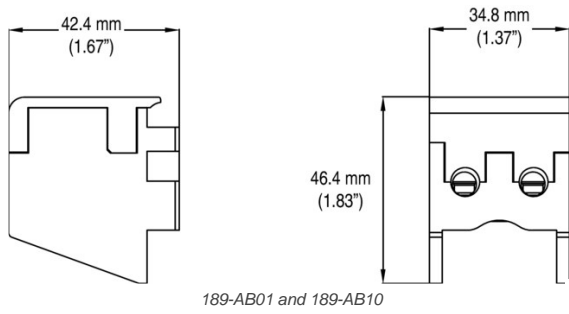
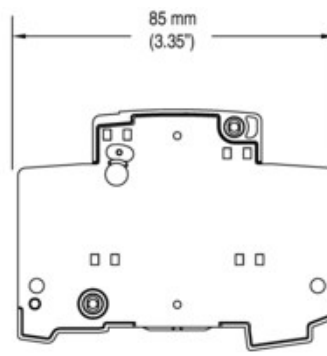
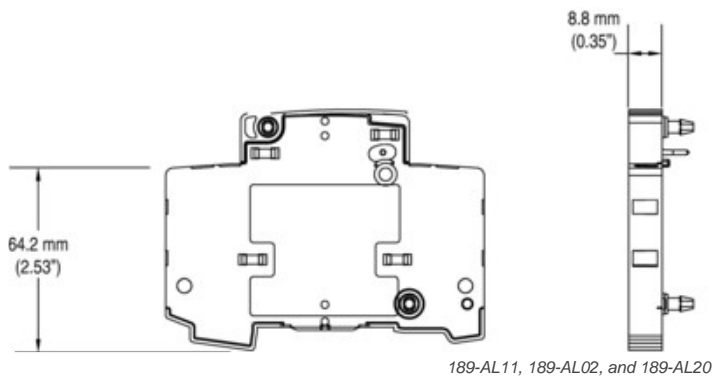


189-AR11, 189-AR02, 189-AR20



189-AST1 and 189-AST2

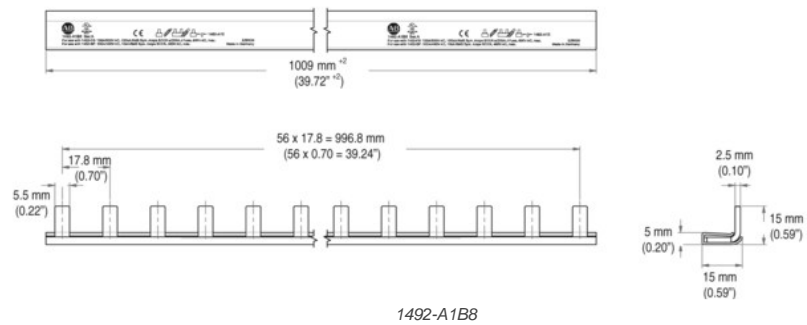
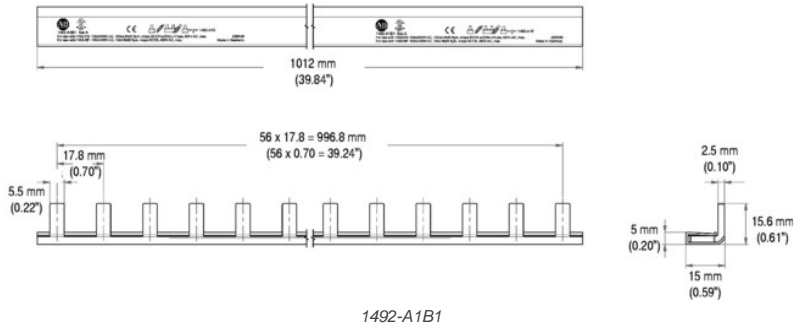




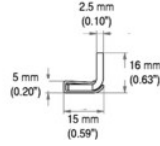
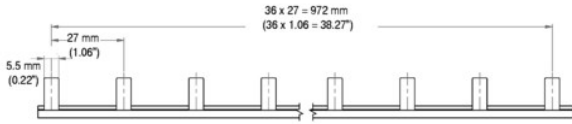
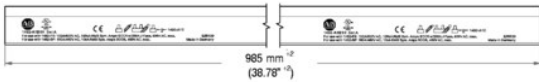
Bus Bar Approximate Dimensions

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

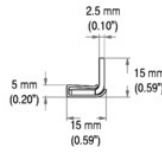
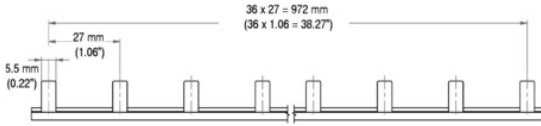
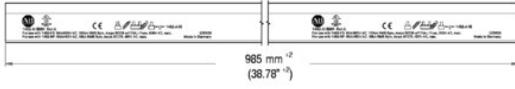
1-Phase Bus Bars



1-Phase Bus Bars, with Auxiliary Contact

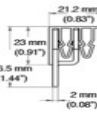
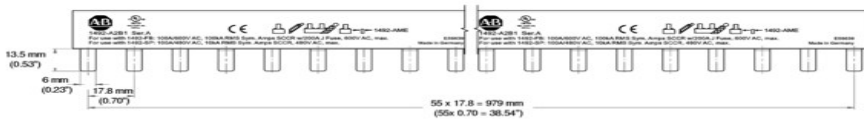


1492-A1B1H

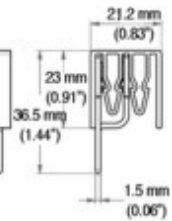
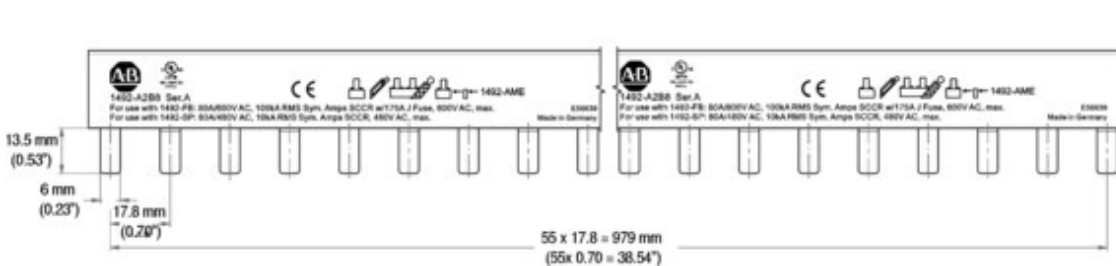
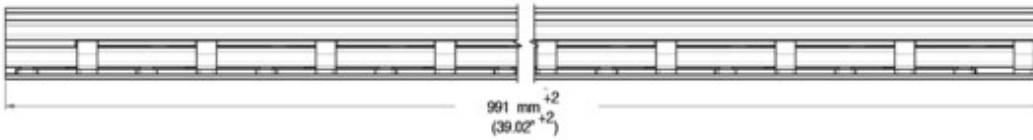


1492-A1B8H

2-Phase Bus Bars

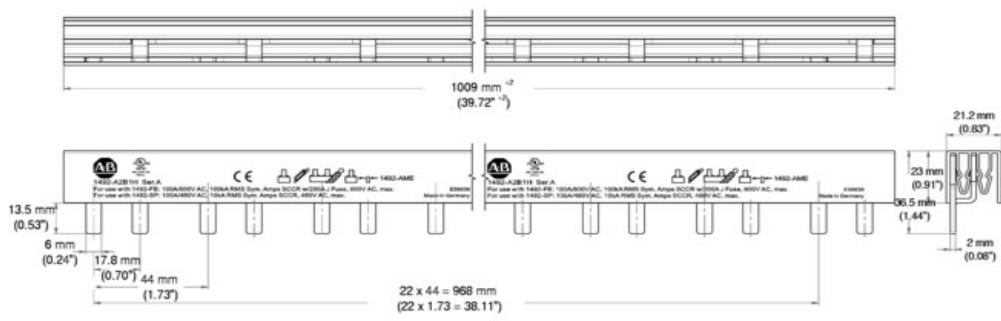


1492-A2B1

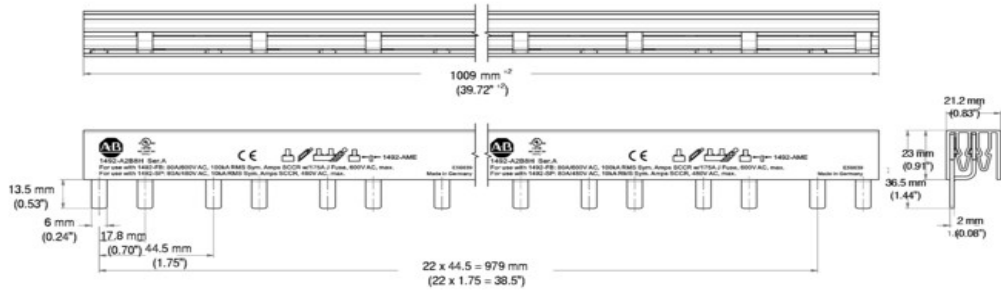


1492-A2B8

2-Phase Bus Bars, with Auxiliary Contact



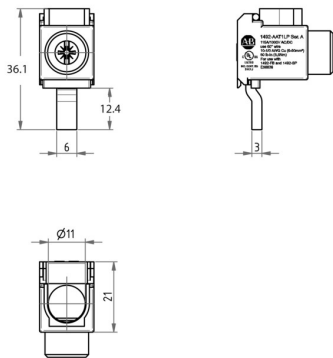
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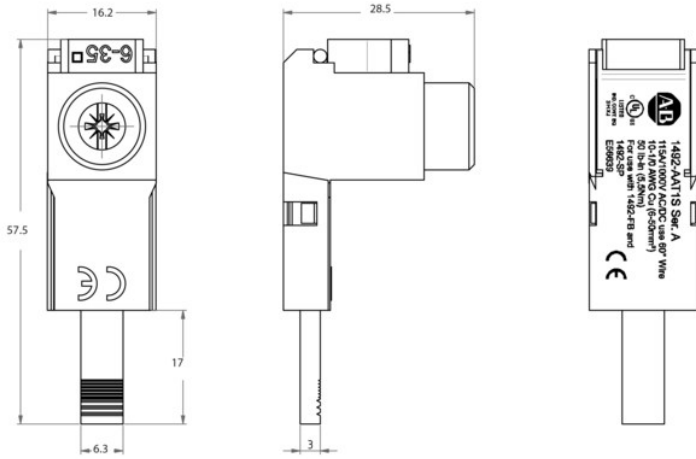
1492-A2B8H

Bus Bar Accessory Approximate Dimensions

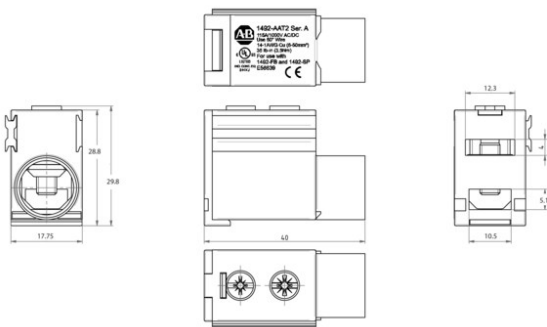
Note: Dimensions are shown in millimeters. Dimensions are not intended for manufacturing purposes.



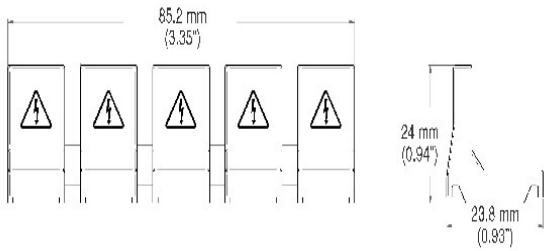
1492-AAT1LP



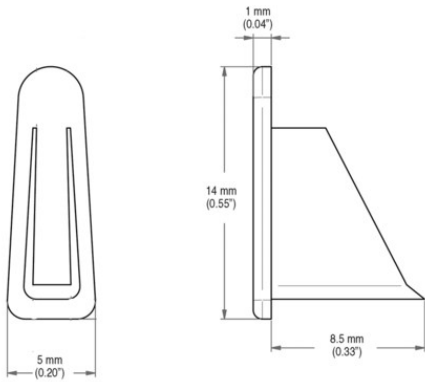
1492-AAT1S



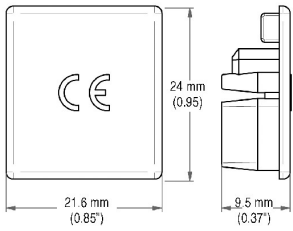
1492-AAT2



1492-AAP



1492-A1E



1492-AME