

EV Fuse 10 x 38 mm, up to 1000 VDC, up to 63 A

new



Bolt-on A & Z



Bolt-on B



PCB mounting

500/750/850/1000VDC · EV Fuse

See below:

[Approvals and Compliances](#)

Description

- High breaking capacity of 20 kA @ 1000 VDC
- Bolt-on mounting and PCB / THT mounting for vehicle applications

Unique Selling Proposition

- Compact size
- High temperature resistance
- Mechanical vibration and shock resistance
- Chemical load resistance

Applications

- Battery Management System
- On-Board Battery Charger
- DC/DC Converters
- Air-Conditioning Compressor
- PTC Heater
- PDU: Motor Control Unit / Controller

Weblinks

[pdf data sheet](#), [html datasheet](#), [General Product Information](#), [Distributor-Stock-Check](#), [Detailed request for product](#)

Technical Data

Rated Voltage	500/750/850/1000VDC
Rated current	10 - 63A
Breaking Capacity	up to 50kA
Characteristic	EV Fuse
Mounting	PCB/THT, Bolt-on
Admissible Ambient Temp.	-40 °C to 125 °C
Material: Terminals	Copper alloy, tin or nickel plated
Material: Tube	Ceramic
Material: Endcaps	Copper Alloy
Storage Conditions	-40 °C to 70 °C, max. 70% r.h.
Product Marking	 Type, Rated current, Rated Voltage, Breaking Capacity, Approvals

Soldering Methods	Reflow, Wave, * Soldering profile available on request
Resistance to Vibration	acc. to IEC 60068-2-64, test Fc
Mechanical Shock	IEC 60068-2-27 Test Ea

Approvals and Compliances

Detailed information on product approvals, code requirements, usage instructions and detailed test conditions can be looked up in [Details about Approvals](#)

SCHURTER products are designed for use in industrial environments. They have approvals from independent testing bodies according to national and international standards. Products with specific characteristics and requirements such as required in the automotive sector according to IATF 16949, medical technology according to ISO 13485 or in the aerospace industry can be offered exclusively with customer-specific, individual agreements by SCHURTER.

Approvals

The approval mark is used by the testing authorities to certify compliance with the safety requirements placed on electronic products.

Approval Reference Type: ADO

Approval Logo	Certificates	Certification Body	Description
	UL Approvals	UL	UR File Number: E548130

Product standards

Product standards that are referenced

Organization	Design	Standard	Description
	Designed according to	UL 248-20	Low-Voltage Fuses - Part 20: Electric Vehicle (EV) Fuses
	Designed according to	ISO 8820-8	High-voltage fuses for vehicles - Part 8: Fuse-links with bolt-in contacts (Type H and J) with rated voltage of 450V
	Designed according to	GB/T31465.6	Road vehicles - Fuse-link - Part 6: Fuse-links with bolt-in contacts with high voltage
	Designed according to	JASO D622	Automotive parts - Bolt-in type high-voltage fuse-links

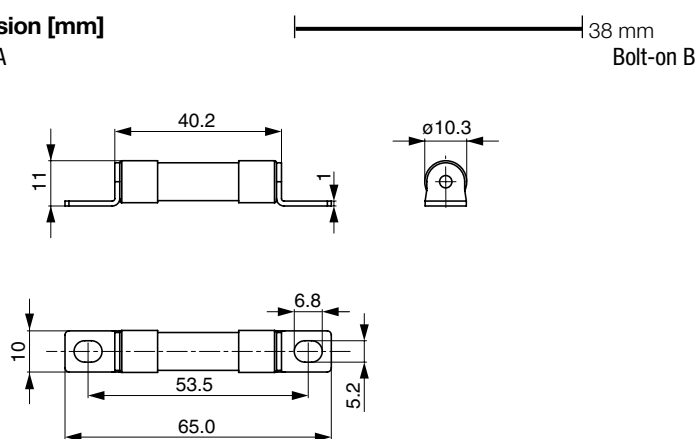
Compliances

The product complies with following Guide Lines

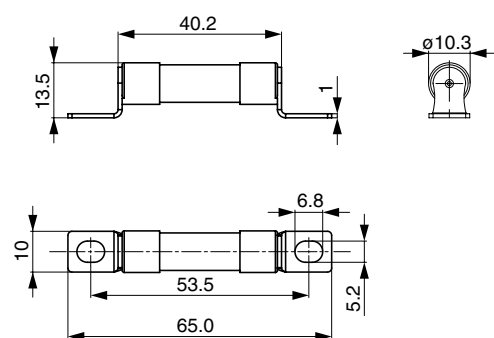
Identification	Details	Initiator	Description
	CE declaration of conformity	SCHURTER AG	The CE marking declares that the product complies with the applicable requirements laid down in the harmonisation of Community legislation on its affixing in accordance with EU Regulation 765/2008.
	RoHS	SCHURTER AG	Directive RoHS 2011/65/EU, Amendment (EU) 2015/863
	China RoHS	SCHURTER AG	The law SJ / T 11363-2006 (China RoHS) has been in force since 1 March 2007. It is similar to the EU directive RoHS.
	REACH	SCHURTER AG	On 1 June 2007, Regulation (EC) No 1907/2006 on the Registration, Evaluation, Authorization and Restriction of Chemicals 1 (abbreviated as "REACH") entered into force.

Dimension [mm]

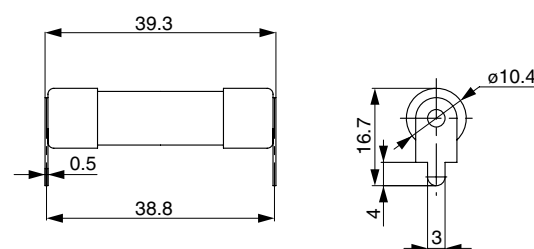
Bolt-on A



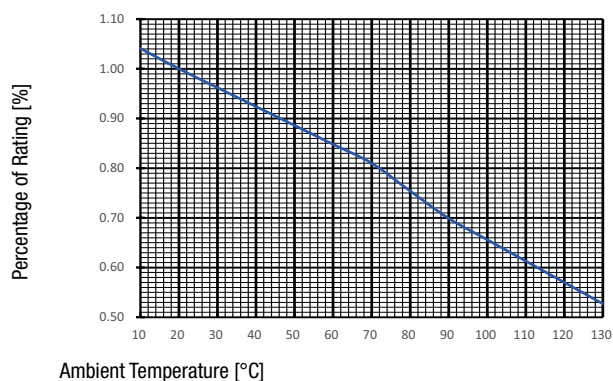
Bolt-on Z



PCB version



Derating Curves

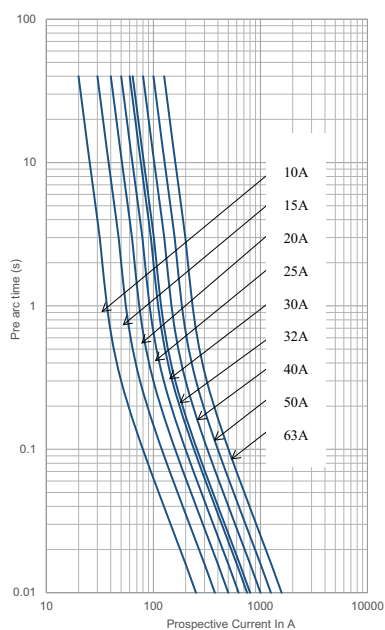


Pre-Arcing Time

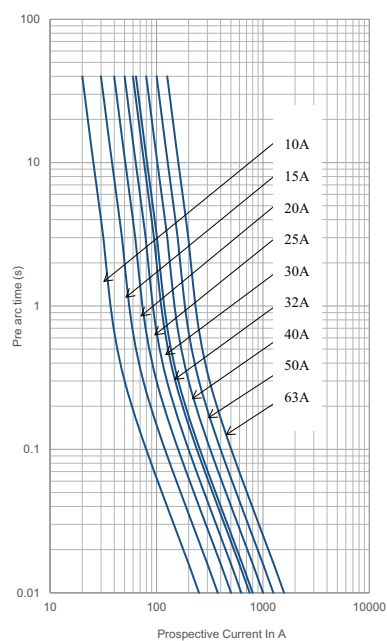
Rated Current I_n	1.1 x I_n min.	2.0 x I_n min.	2.0 x I_n max.	3.0 x I_n min.	3.0 x I_n max.	5.0 x I_n min.	5.0 x I_n max.
10 A - 63 A	4 h	0.5 s	100 s	100 ms	15 s	50 ms	1 s

Time-Current-Curves

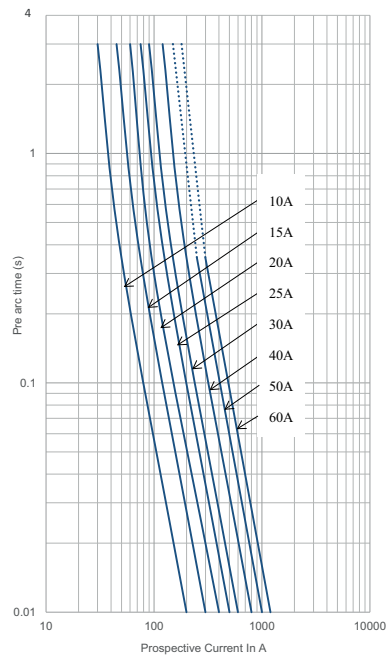
AD011 Bolt-on Z, 500 VDC



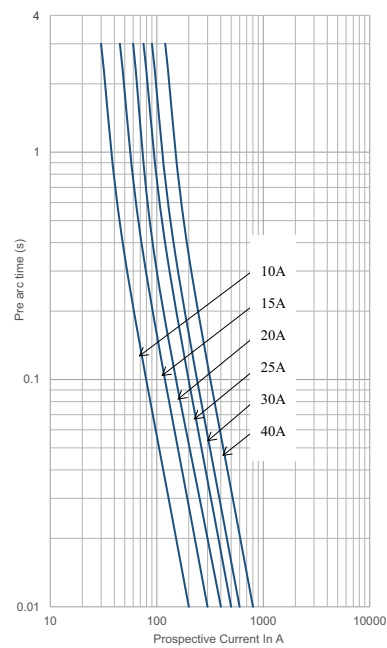
AD012 Bolt-on B, 500 VDC



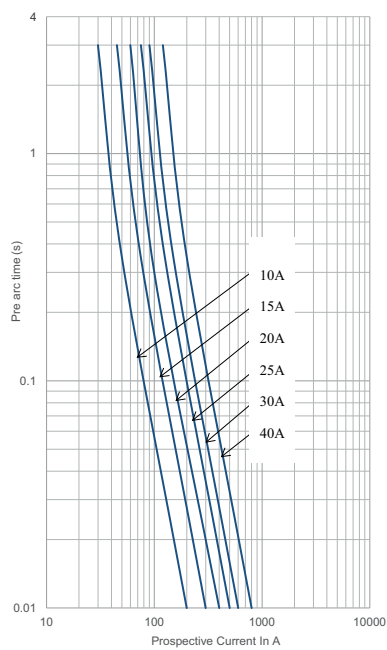
AD013 Bolt-on A, 750 VDC



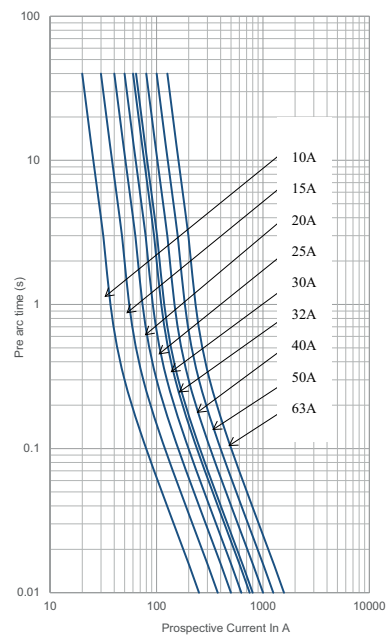
AD014 Bolt-on Z, 1000 VDC



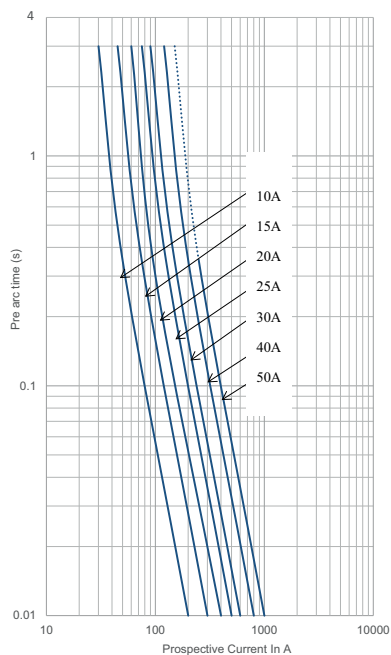
AD015 Bolt-on A, 1000 VDC



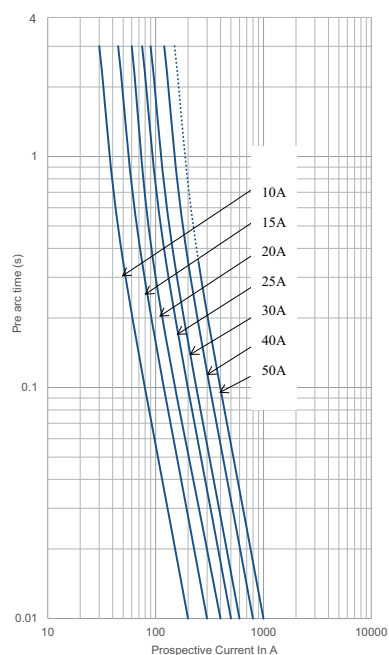
AD016 PCB version, 500 VDC



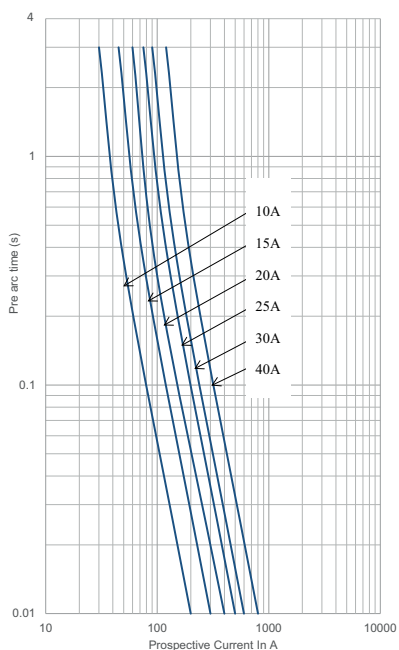
AD017 PCB version, 750 VDC



AD018 PCB version, 850 VDC



AD019 PCB version, 1000 VDC



Variants

Product Series	Rated Current [A]	Rated Voltage [VDC]	Mounting	Terminal Plating	Breaking Capacity	Pre-arcing I ² t typ. [kA ² s]	Melting I ² t typ. [kA ² s]	Power Dissipation 1.0 I _n typ. [W]		Order Number
ADO11	10	500	Bolt-on Z	Copper alloy, tin-plated	1)	0.005	0.03	2		3-156-001
ADO11	15	500	Bolt-on Z	Copper alloy, tin-plated	1)	0.02	0.04	2.5	●	3-156-012
ADO11	20	500	Bolt-on Z	Copper alloy, tin-plated	1)	0.03	0.05	3.9	●	3-156-013
ADO11	25	500	Bolt-on Z	Copper alloy, tin-plated	1)	0.045	0.08	5.1	●	3-156-014
ADO11	30	500	Bolt-on Z	Copper alloy, tin-plated	1)	0.095	0.16	5.8	●	3-156-015
ADO11	32	500	Bolt-on Z	Copper alloy, tin-plated	1)	0.125	0.24	6		3-156-016
ADO11	40	500	Bolt-on Z	Copper alloy, tin-plated	1)	0.18	0.32	7.8	●	3-156-017
ADO11	50	500	Bolt-on Z	Copper alloy, tin-plated	1)	0.34	0.54	8.7	●	3-156-018
ADO11	63	500	Bolt-on Z	Copper alloy, tin-plated	1)	0.45	1.69	14	●	3-156-019
ADO12	10	500	Bolt-on B	Copper alloy, nickel-plated	1)	0.005	0.03	2		3-156-020
ADO12	15	500	Bolt-on B	Copper alloy, nickel-plated	1)	0.02	0.04	2.5	●	3-156-021
ADO12	20	500	Bolt-on B	Copper alloy, nickel-plated	1)	0.025	0.07	3.9	●	3-156-022
ADO12	25	500	Bolt-on B	Copper alloy, nickel-plated	1)	0.04	0.12	5.1	●	3-156-023
ADO12	30	500	Bolt-on B	Copper alloy, nickel-plated	1)	0.053	0.16	5.8	●	3-156-024
ADO12	32	500	Bolt-on B	Copper alloy, nickel-plated	1)	0.07	0.21	6		3-156-025
ADO12	40	500	Bolt-on B	Copper alloy, nickel-plated	1)	0.16	0.32	7.8	●	3-156-026
ADO12	50	500	Bolt-on B	Copper alloy, nickel-plated	1)	0.222	0.65	8.7	●	3-156-027
ADO12	63	500	Bolt-on B	Copper alloy, nickel-plated	1)	0.431	1.26	14	●	3-156-028
ADO13	10	750	Bolt-on A	Copper alloy, tin-plated	2)	0.004	0.014	2		3-156-029
ADO13	15	750	Bolt-on A	Copper alloy, tin-plated	2)	0.012	0.033	2.5		3-156-030
ADO13	20	750	Bolt-on A	Copper alloy, tin-plated	2)	0.016	0.054	3.9		3-156-031
ADO13	25	750	Bolt-on A	Copper alloy, tin-plated	2)	0.041	0.144	5.1		3-156-032
ADO13	30	750	Bolt-on A	Copper alloy, tin-plated	2)	0.069	0.248	5.8		3-156-033
ADO13	40	750	Bolt-on A	Copper alloy, tin-plated	2)	0.123	0.449	7.8		3-156-034
ADO13	50	750	Bolt-on A	Copper alloy, tin-plated	2)	0.224	0.828	11		3-156-035
ADO13	60	750	Bolt-on A	Copper alloy, tin-plated	2)	0.288	1.08	14		3-156-036
ADO14	10	1000	Bolt-on Z	Copper alloy, tin-plated	4)	0.07	0.23	2		3-156-037
ADO14	15	1000	Bolt-on Z	Copper alloy, tin-plated	4)	0.09	0.29	2.6		3-156-038
ADO14	20	1000	Bolt-on Z	Copper alloy, tin-plated	4)	0.12	0.39	3.5		3-156-039
ADO14	25	1000	Bolt-on Z	Copper alloy, tin-plated	4)	0.15	0.49	4.1		3-156-040
ADO14	30	1000	Bolt-on Z	Copper alloy, tin-plated	4)	0.21	0.68	4.8		3-156-041
ADO14	40	1000	Bolt-on Z	Copper alloy, tin-plated	4)	0.31	1.01	6.5		3-156-042
ADO15	10	1000	Bolt-on A	Copper alloy, tin-plated	4)	0.07	0.23	2		3-156-044
ADO15	15	1000	Bolt-on A	Copper alloy, tin-plated	4)	0.09	0.29	2.6		3-156-045
ADO15	20	1000	Bolt-on A	Copper alloy, tin-plated	4)	0.12	0.39	3.5		3-156-046
ADO15	25	1000	Bolt-on A	Copper alloy, tin-plated	4)	0.15	0.49	4.1		3-156-047
ADO15	30	1000	Bolt-on A	Copper alloy, tin-plated	4)	0.21	0.68	4.8		3-156-048
ADO15	40	1000	Bolt-on A	Copper alloy, tin-plated	4)	0.31	1.01	6.5		3-156-049
ADO16	10	500	PCB	Copper alloy, tin-plated	1)	0.005	0.03	2		3-156-051
ADO16	15	500	PCB	Copper alloy, tin-plated	1)	0.02	0.04	2.5		3-156-052
ADO16	20	500	PCB	Copper alloy, tin-plated	1)	0.025	0.07	3.9		3-156-053
ADO16	25	500	PCB	Copper alloy, tin-plated	1)	0.04	0.12	5.1		3-156-054
ADO16	30	500	PCB	Copper alloy, tin-plated	1)	0.053	0.16	5.8		3-156-055
ADO16	32	500	PCB	Copper alloy, tin-plated	1)	0.07	0.21	6		3-156-056
ADO16	40	500	PCB	Copper alloy, tin-plated	1)	0.16	0.32	7.8		3-156-057
ADO16	50	500	PCB	Copper alloy, tin-plated	1)	0.222	0.65	8.7		3-156-058
ADO16	63	500	PCB	Copper alloy, tin-plated	1)	0.431	1.26	14		3-156-059
ADO17	10	750	PCB	Copper alloy, tin-plated	2)	0.004	0.014	2		3-156-060
ADO17	15	750	PCB	Copper alloy, tin-plated	2)	0.012	0.033	2.5		3-156-061
ADO17	20	750	PCB	Copper alloy, tin-plated	2)	0.016	0.054	3.9		3-156-062
ADO17	25	750	PCB	Copper alloy, tin-plated	2)	0.041	0.144	5.1		3-156-063
ADO17	30	750	PCB	Copper alloy, tin-plated	2)	0.069	0.248	5.8		3-156-064
ADO17	40	750	PCB	Copper alloy, tin-plated	2)	0.123	0.449	7.8		3-156-065

Product Series	Rated Current [A]	Rated Voltage [VDC]	Mounting	Terminal Plating	Breaking Capacity	Pre-arcing I ² t typ. [kA²s]	Melting I ² t typ. [kA²s]	Power Dissipation 1.0 I _n typ. [W]		Order Number
AD017	50	750	PCB	Copper alloy, tin-plated	2)	0.224	0.828	14		3-156-066
AD018	10	850	PCB	Copper alloy, tin-plated	3)	0.07	0.23	2		3-156-067
AD018	15	850	PCB	Copper alloy, tin-plated	3)	0.09	0.29	2.6		3-156-068
AD018	20	850	PCB	Copper alloy, tin-plated	3)	0.12	0.39	3.5		3-156-069
AD018	25	850	PCB	Copper alloy, tin-plated	3)	0.15	0.49	4.1		3-156-070
AD018	30	850	PCB	Copper alloy, tin-plated	3)	0.21	0.68	4.8		3-156-071
AD018	40	850	PCB	Copper alloy, tin-plated	3)	0.31	1.01	6.5		3-156-072
AD018	50	850	PCB	Copper alloy, tin-plated	3)	0.45	1.47	7.2		3-156-073
AD019	10	1000	PCB	Copper alloy, tin-plated	4)	0.07	0.23	2		3-156-074
AD019	15	1000	PCB	Copper alloy, tin-plated	4)	0.09	0.29	2.6		3-156-075
AD019	20	1000	PCB	Copper alloy, tin-plated	4)	0.12	0.39	3.5		3-156-076
AD019	25	1000	PCB	Copper alloy, tin-plated	4)	0.15	0.49	4.1		3-156-077
AD019	30	1000	PCB	Copper alloy, tin-plated	4)	0.21	0.68	4.8		3-156-078
AD019	40	1000	PCB	Copper alloy, tin-plated	4)	0.31	1.01	6.5		3-156-079

Availability for all products can be searched real-time: <https://www.schurter.com/en/info-center/support-tools/stock-check-distributors>

Breaking Capacity

- 1) 20 kA @ 500 VDC, L/R 2 ms
- 2) 20 kA @ 750 VDC, L/R 2 ms
- 3) 50 kA @ 850 VDC, L/R 2 ms
- 4) 20 kA @ 1000 VDC, L/R 1 ms

Measurement Parameters: Pre-Arcing and Melting

- 500 VDC: I²t [kA²s] @20 kA
- 750 VDC: I²t [kA²s] @20 kA
- 850 VDC: I²t [kA²s] @50 kA
- 1000 VDC: I²t [kA²s] @20 kA

Packaging Unit	Bulk (60 pcs.)
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