

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

new



Bolt-on A & Z



Bolt-on B



PCB mounting

500/750/850/1000 VDC · 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	500/750/850/1000 VDC
Rated current	10 - 63 A
Breaking Capacity	up to 50 kA
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	Ceramics
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 IEC60068-2-64, test Fc
Mechanical Shock	IEC 60068-2-27

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

Application standards

Application standards where the product can be used

Organization	Design	Standard	Description
	Suitable for applications acc.	IEC 60269-4	Low-voltage fuses - Part 4: Supplementary requirements for fuse-links for the protection of semiconductor devices

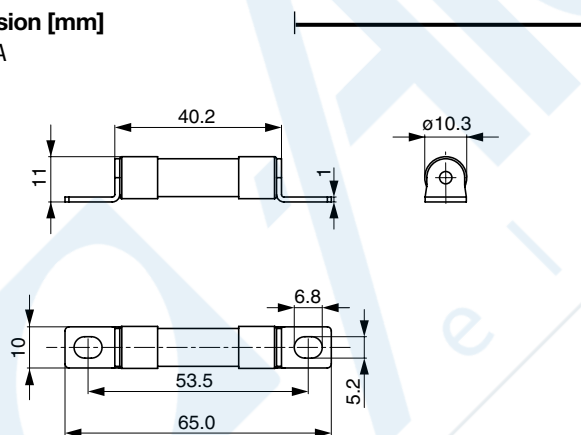
Compliances

The product complies with following Guide Lines

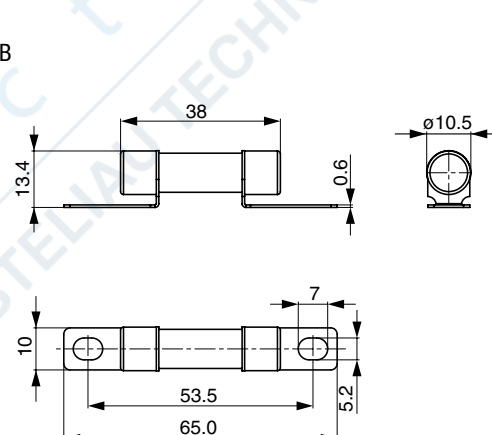
Identification	Details	Initiator	Description
	CE declaration of conformity	SCHURTER AG	The CE marking declares that the product complies with the applicable requirements laid down in the harmonisation of Community legislation on its affixing in accordance with EU Regulation 765/2008.
	RoHS	SCHURTER AG	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]

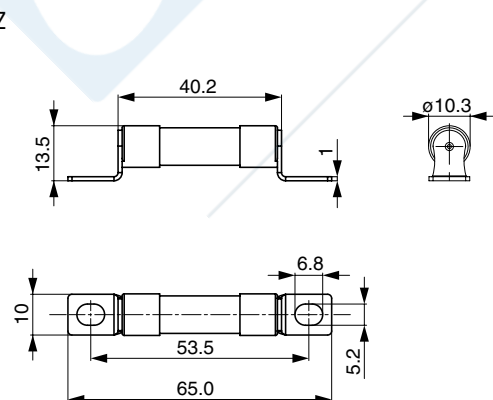
Bolt-on A



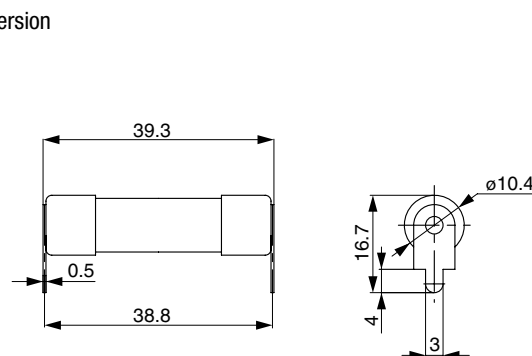
Bolt-on B



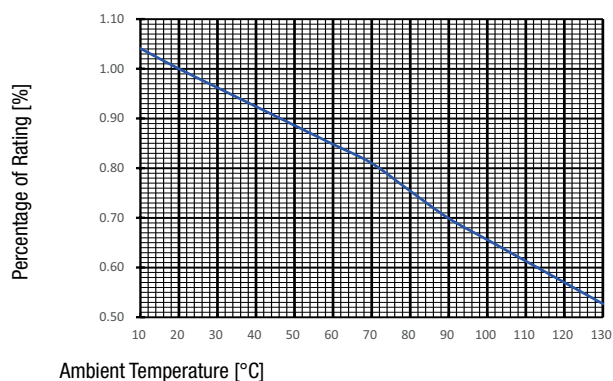
Bolt-on Z



PCB version



Derating Curves

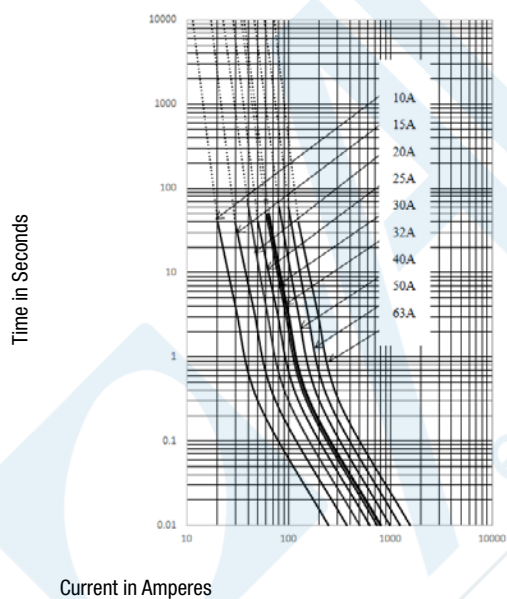


Pre-Arcing Time

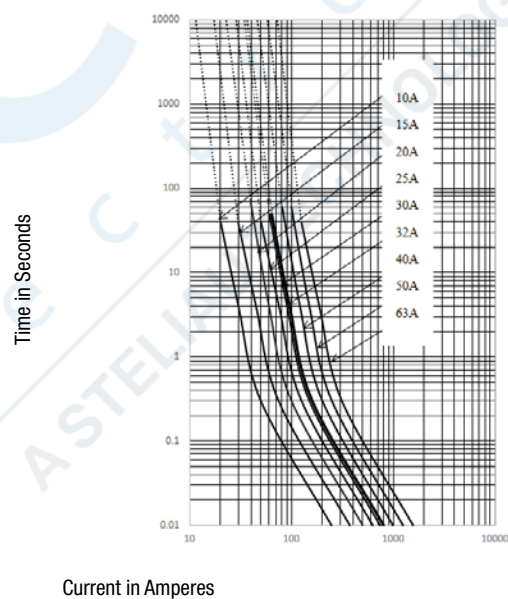
Rated Current I_n	1.1 x I_n min.	2.0 x I_n min.	2.0 x I_n max.	3.0 x I_n min.	3.0 x I_n max.	5.0 x I_n min.	5.0 x I_n max.
10 A - 63 A	4 h	0.5 s	100 s	100 ms	15 s	50 ms	1 s

Time-Current-Curves

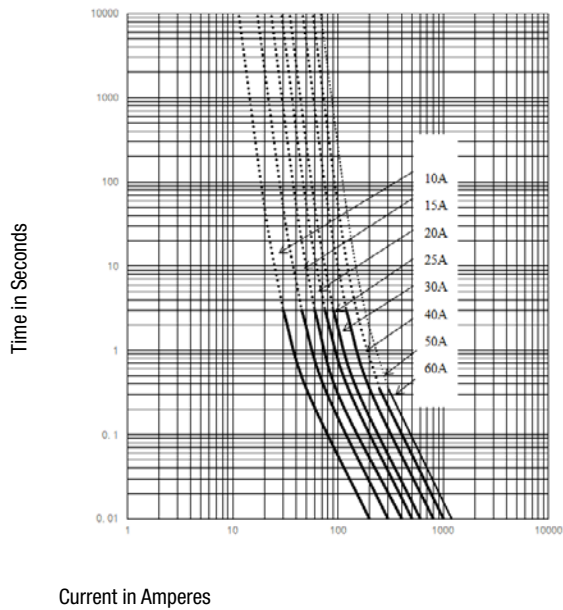
ADO Bolt-on B, 500 VDC



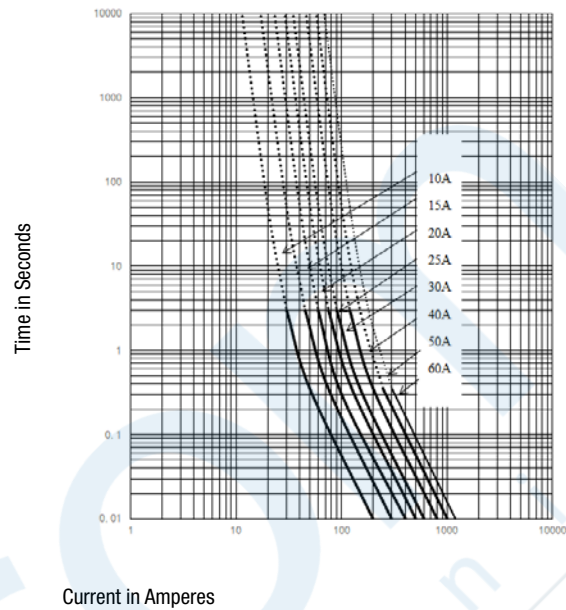
ADO Bolt-on Z, 500 VDC



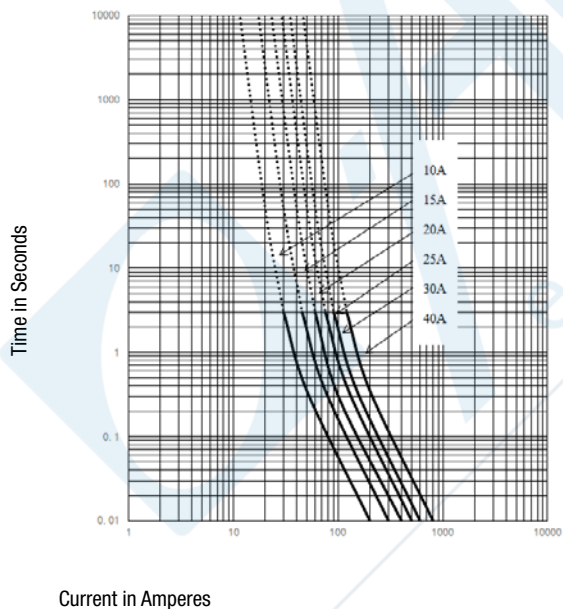
ADO Bolt-on A, 750 VDC



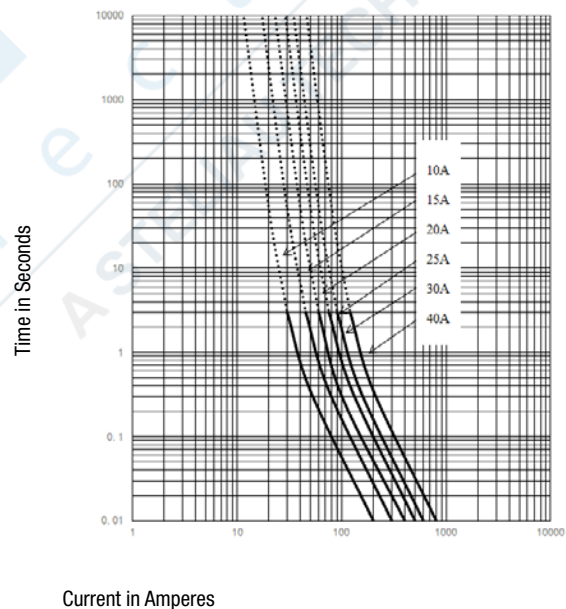
ADO Bolt-on Z, 750 VDC



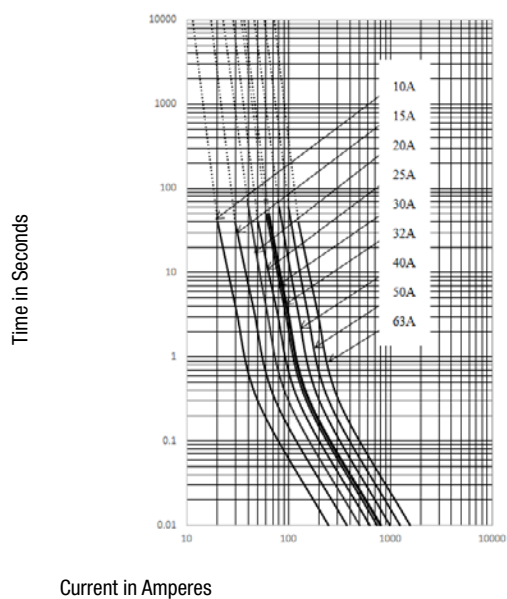
ADO Bolt-on A, 1000 VDC



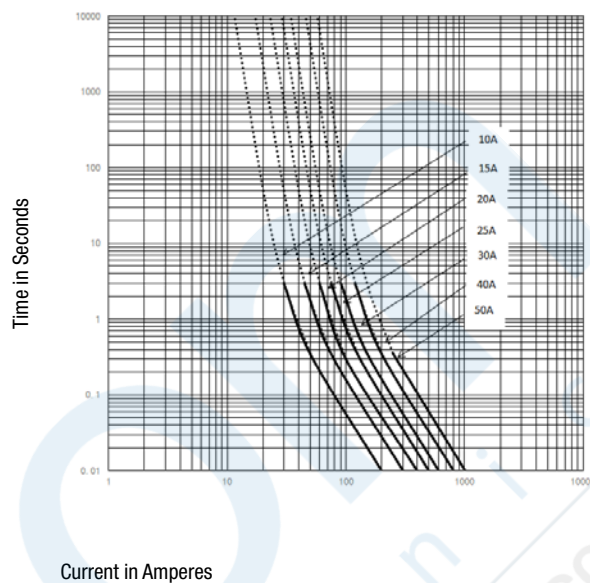
ADO Bolt-on Z, 1000 VDC



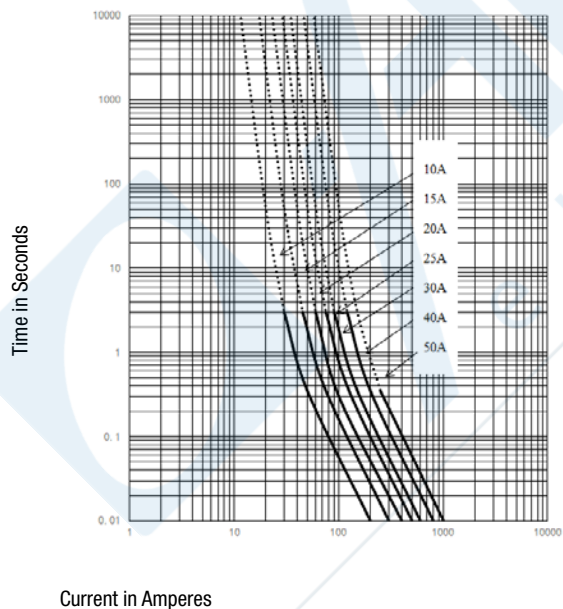
ADO PCB version, 500 VDC



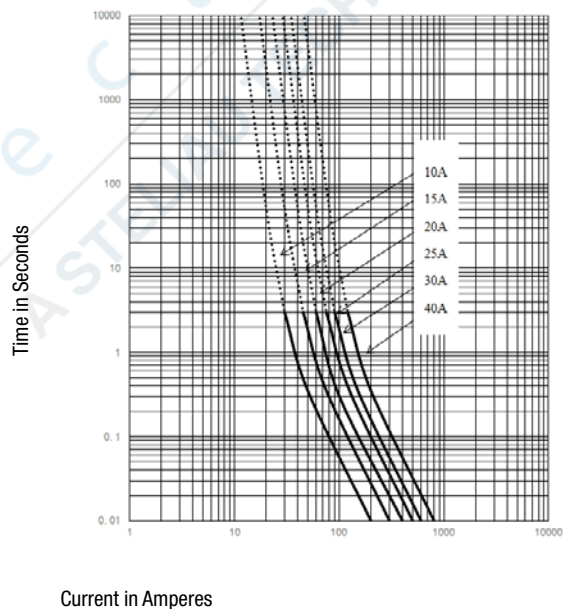
ADO PCB version, 750 VDC



ADO PCB version, 850 VDC



ADO PCB version, 1000 VDC



Variants

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
10	500	Bolt-on Z	Copper alloy, tin-plated	1)	0.005	0.03	2	●	3-156-001
15	500	Bolt-on Z	Copper alloy, tin-plated	1)	0.02	0.04	2.5	●	3-156-012
20	500	Bolt-on Z	Copper alloy, tin-plated	1)	0.03	0.05	3.9	●	3-156-013
25	500	Bolt-on Z	Copper alloy, tin-plated	1)	0.045	0.08	5.1	●	3-156-014
30	500	Bolt-on Z	Copper alloy, tin-plated	1)	0.095	0.16	5.8	●	3-156-015

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
32	500	Bolt-on Z	Copper alloy, tin-plated	1)	0.125	0.24	6	●	3-156-016
40	500	Bolt-on Z	Copper alloy, tin-plated	1)	0.18	0.32	7.8	●	3-156-017
50	500	Bolt-on Z	Copper alloy, tin-plated	1)	0.34	0.54	8.7	●	3-156-018
63	500	Bolt-on Z	Copper alloy, tin-plated	1)	0.45	1.69	14	●	3-156-019
10	500	Bolt-on B	Copper alloy, nickel-plated	1)	0.005	0.03	2	●	3-156-020
15	500	Bolt-on B	Copper alloy, nickel-plated	1)	0.02	0.04	2.5	●	3-156-021
20	500	Bolt-on B	Copper alloy, nickel-plated	1)	0.025	0.07	3.9	●	3-156-022
25	500	Bolt-on B	Copper alloy, nickel-plated	1)	0.04	0.12	5.1	●	3-156-023
30	500	Bolt-on B	Copper alloy, nickel-plated	1)	0.053	0.16	5.8	●	3-156-024
32	500	Bolt-on B	Copper alloy, nickel-plated	1)	0.07	0.21	6	●	3-156-025
40	500	Bolt-on B	Copper alloy, nickel-plated	1)	0.16	0.32	7.8	●	3-156-026
50	500	Bolt-on B	Copper alloy, nickel-plated	1)	0.222	0.65	8.7	●	3-156-027
63	500	Bolt-on B	Copper alloy, nickel-plated	1)	0.431	1.26	14	●	3-156-028
10	750	Bolt-on A	Copper alloy, tin-plated	2)	0.004	0.014	2		3-156-029
15	750	Bolt-on A	Copper alloy, tin-plated	2)	0.012	0.033	2.5		3-156-030
20	750	Bolt-on A	Copper alloy, tin-plated	2)	0.016	0.054	3.9		3-156-031
25	750	Bolt-on A	Copper alloy, tin-plated	2)	0.041	0.144	5.1		3-156-032
30	750	Bolt-on A	Copper alloy, tin-plated	2)	0.069	0.248	5.8		3-156-033
40	750	Bolt-on A	Copper alloy, tin-plated	2)	0.123	0.449	7.8		3-156-034
50	750	Bolt-on A	Copper alloy, tin-plated	2)	0.224	0.828	11		3-156-035
60	750	Bolt-on A	Copper alloy, tin-plated	2)	0.288	1.08	14		3-156-036
10	1000	Bolt-on Z	Copper alloy, tin-plated	4)	0.07	0.23	2		3-156-037
15	1000	Bolt-on Z	Copper alloy, tin-plated	4)	0.09	0.29	2.6		3-156-038
20	1000	Bolt-on Z	Copper alloy, tin-plated	4)	0.12	0.39	3.5		3-156-039
25	1000	Bolt-on Z	Copper alloy, tin-plated	4)	0.15	0.49	4.1		3-156-040
30	1000	Bolt-on Z	Copper alloy, tin-plated	4)	0.21	0.68	4.8		3-156-041
40	1000	Bolt-on Z	Copper alloy, tin-plated	4)	0.31	1.01	6.5		3-156-042
10	1000	Bolt-on A	Copper alloy, tin-plated	4)	0.07	0.23	2		3-156-044
15	1000	Bolt-on A	Copper alloy, tin-plated	4)	0.09	0.29	2.6		3-156-045
20	1000	Bolt-on A	Copper alloy, tin-plated	4)	0.12	0.39	3.5		3-156-046
25	1000	Bolt-on A	Copper alloy, tin-plated	4)	0.15	0.49	4.1		3-156-047
30	1000	Bolt-on A	Copper alloy, tin-plated	4)	0.21	0.68	4.8		3-156-048
40	1000	Bolt-on A	Copper alloy, tin-plated	4)	0.31	1.01	6.5		3-156-049
10	500	PCB	Copper alloy, tin-plated	1)	0.005	0.03	2		3-156-051
15	500	PCB	Copper alloy, tin-plated	1)	0.02	0.04	2.5		3-156-052
20	500	PCB	Copper alloy, tin-plated	1)	0.025	0.07	3.9		3-156-053
25	500	PCB	Copper alloy, tin-plated	1)	0.04	0.12	5.1		3-156-054
30	500	PCB	Copper alloy, tin-plated	1)	0.053	0.16	5.8		3-156-055
32	500	PCB	Copper alloy, tin-plated	1)	0.07	0.21	6		3-156-056
40	500	PCB	Copper alloy, tin-plated	1)	0.16	0.32	7.8		3-156-057
50	500	PCB	Copper alloy, tin-plated	1)	0.222	0.65	8.7		3-156-058
63	500	PCB	Copper alloy, tin-plated	1)	0.431	1.26	14		3-156-059
10	750	PCB	Copper alloy, tin-plated	2)	0.004	0.014	2		3-156-060
15	750	PCB	Copper alloy, tin-plated	2)	0.012	0.033	2.5		3-156-061
20	750	PCB	Copper alloy, tin-plated	2)	0.016	0.054	3.9		3-156-062
25	750	PCB	Copper alloy, tin-plated	2)	0.041	0.144	5.1		3-156-063
30	750	PCB	Copper alloy, tin-plated	2)	0.069	0.248	5.8		3-156-064
40	750	PCB	Copper alloy, tin-plated	2)	0.123	0.449	7.8		3-156-065
50	750	PCB	Copper alloy, tin-plated	2)	0.224	0.828	14		3-156-066
10	850	PCB	Copper alloy, tin-plated	3)	0.07	0.23	2		3-156-067
15	850	PCB	Copper alloy, tin-plated	3)	0.09	0.29	2.6		3-156-068
20	850	PCB	Copper alloy, tin-plated	3)	0.12	0.39	3.5		3-156-069
25	850	PCB	Copper alloy, tin-plated	3)	0.15	0.49	4.1		3-156-070
30	850	PCB	Copper alloy, tin-plated	3)	0.21	0.68	4.8		3-156-071

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
40	850	PCB	Copper alloy, tin-plated	3)	0.31	1.01	6.5		3-156-072
50	850	PCB	Copper alloy, tin-plated	3)	0.45	1.47	7.2		3-156-073
10	1000	PCB	Copper alloy, tin-plated	4)	0.07	0.23	2		3-156-074
15	1000	PCB	Copper alloy, tin-plated	4)	0.09	0.29	2.6		3-156-075
20	1000	PCB	Copper alloy, tin-plated	4)	0.12	0.39	3.5		3-156-076
25	1000	PCB	Copper alloy, tin-plated	4)	0.15	0.49	4.1		3-156-077
30	1000	PCB	Copper alloy, tin-plated	4)	0.21	0.68	4.8		3-156-078
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.)