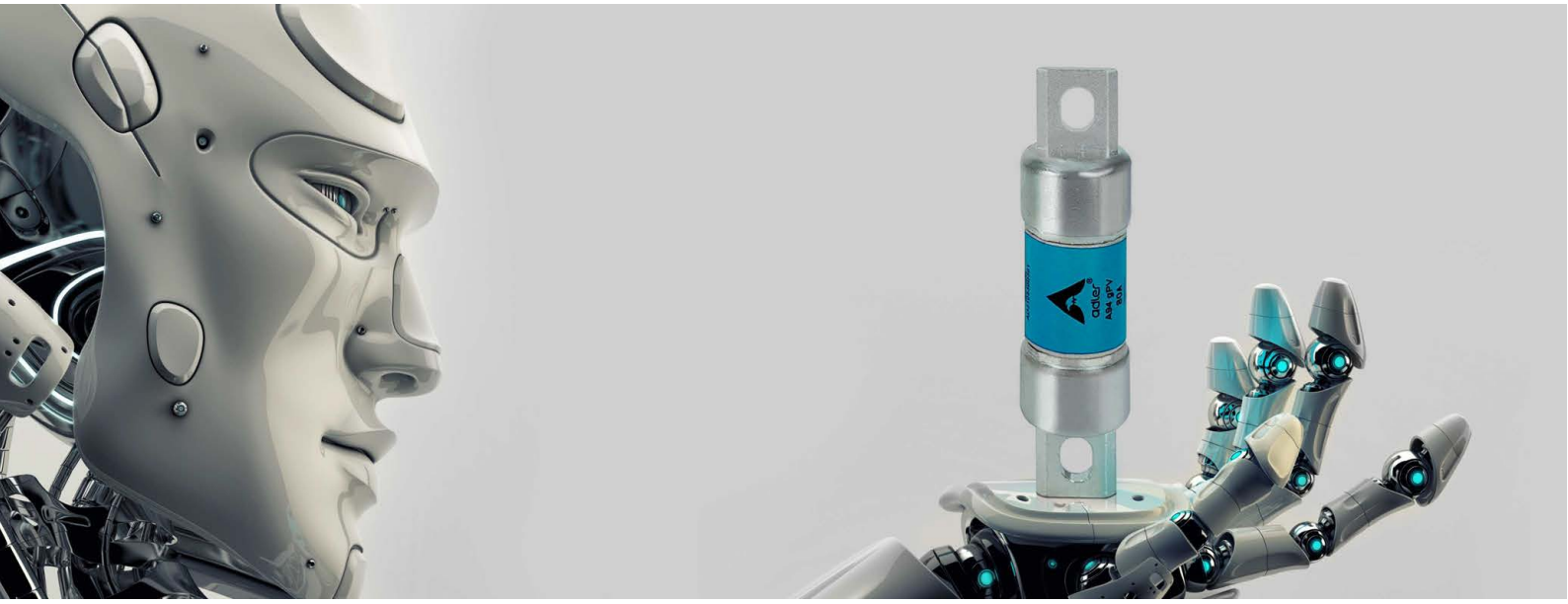
HIGH SPEED FUSES AND SYSTEM PROTECTION

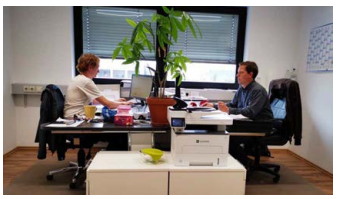
Photovoltaic Fuses and System Protection



Photovoltaic Fuses and
System Protection

Photovoltaic Fuses and System Protection

ADLER-Your All-round Protection for Strong Currents!



ADLER Elektrotechnik Leipzig GmbH has a professional team with wide knowledge, skill and experience to provide both best technical expertise and customer service at one stop. With know-how from a long-time history of fuse development and distribution we establish ourselves as your contact point for

photovoltaic, industrial and electric vehicle fuses and accessories. Based on our strong foundations and innovative spirit we strive to achieve robust growth. Our diversified and dedicated team of sales people, product technicians and field application engineers supplies top quality products and superior customer support.

Our products and their applications

- Photovoltaic midget and medium fuse links (gPV)
- Photovoltaic NH fuses in various sizes (gPV)
- DIN-Rail mount fuse holder cartridges for cylindrical fuses and NH blade type fuse bases
- Photovoltaic system components, combiner boxes and Accessories
- Photovoltaic surge protection devices (SPD)
- Cylindrical fuse links for industrial applications (gG)
- All standard DIN-Rail NH blade fuses for general industrial application (gG)
- Fuse holders for cylindrical fuses, fuse mounts and NH blade type fuse bases
- HV fast acting semiconductor fuses
- Special fuses for battery ESS protection

Across all of our product range, we are proud to offer well estabilized, certified products that have developed a reputation in the market for quality, reliability and innovation.
As a market leader and pioneer, Adler regularly extends and improves its product portfolio and informs about news on the company website.
We provide our customers with expert solutions, a high standard of professional services, an availability of stock and an "easy to deal with" experience.

Our Mission Statement

We add value to our customer's business by supplying sophisticated, high quality electrical products, solutions-focused expertise, personal service and genuine customer care at the highest possible standards in our industry.

ADLER Global Network

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(Headquarters)

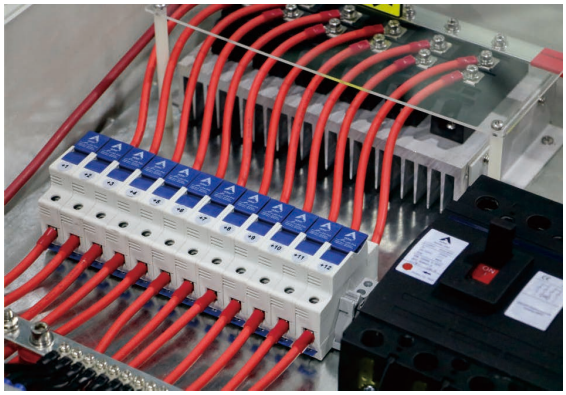
Dongguan - China
(Manufacturing and Testing)

Xi'an - China
(Manufacturing)

Regensburg - Germany
(Engineering)

Product Selection Guides

PV – Fuse Selection Guide



- In PV systems consisting of arrays with N>4 module strings fault current can easily exceed the operating current. The current can reach a level that can cause overheating and damage of wire insulation.
- To ensure the best possible protection for the system and people working on the equipment, each string of solar panels MUST be protected with one fuse on each “+” and “–” terminal.
- These fuses will only isolate the fault string. So the rest of the PV system can continuously generate electricity.

When a fault occurs in the DC circuit of the PV system the absence of natural zero crossing makes the interruption of DC fault more difficult than the interruption of AC faults as only the fuse arc will force the current to decrease to zero.

The fuse's clearing behavior is influenced by the following three factors:

- The value of the DC voltage
- The value of the ratio L/R (time constant) of the fault path
- The value of the fault current

Due to the unique requirement in PV systems of having to clear a very low level fault, it is important to use "Full Range" capability type fuses. This means that the fuse is designed for clearing overloads as well as short circuit faults and requires the use of a fuse with a gPV characteristic.

In order to calculate the best fuse for a general recommendation, the following information is required:

- Number of strings connected in parallel (N)
- N>4: PV system needed fuse protection
- Number of solar modules connected in series per string (M)
- The ambient temperature

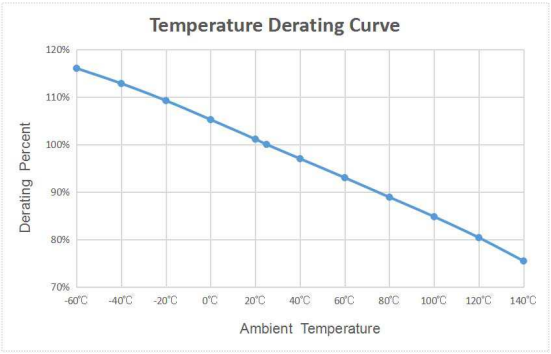
From the solar module specifications:

- Short circuit current of the string “Isc”
- Open circuit voltage U_{oc}
- Conditions: $U_{oc\ STC}$

Checklist:

- Taking into account that neither the “+” nor the “–” terminals are connected to ground, each string of modules has to be equipped with two fuses: one fuse for the “Positive” and one for the “Negative” output.
- When the number of strings(chains) in parallel(N) is equal to or higher than 4, the first rule has to be applied. (for less than 4 chains in parallel no fuse protection is needed)
- The maximum DC operating voltage of the fuse must be higher than or equal to 1.20 x M x ($U_{oc\ STC}$).

In normal operation, fuse links, like thermal devices, are influenced by ambient temperature. The current capability of the PV fuse links shall therefore be derated according to the corresponding correction factor in the PV temperature derating curve.



Calculation method to choose the correct fuse for a PV power system:

Rated voltage of the fuse U_n:

The rated voltage of the fuse must be higher than the maximum open-circuit voltage of the PV string. To determine the maximum value, the open-circuit voltage U_{oc} must be adjusted to the lowest possible ambient air temperature of the solar panel. In most cases, the rated voltage can be calculated as follows, taking into consideration the lowest temperature of -25 °C and the corresponding temperature coefficient:

$$U_n \geq 1.2 \times M \times (U_{OC\,STC})$$

Rated current of the fuse I_n:

The rated current of the fuse must be higher than the maximum value of the current generated by the solar module.

- I_{SC} is the "Maximum Short circuit current" under short circuit condition solar module can generate.

Rated current of the fuse In in grouping conditions:

For non-STC ambient temperatures, operations under fluctuating current loads and side-by-side mounting of several fuse holders, derating factors must be considered. These factors can be obtained from the datasheets of the fuse links and holders.

- **K_T**: Fuse-link temperature correction factor (see diagram above)
- **K_C** Fuse-link derating factor for current variation (**K_C** = 0.85 for PV applications)
- **K_G**: Grouping factor (see table on the right)

Number of units n	K_G grouping factor
4 ≤ n < 7	0.8
7 ≤ n < 10	0.7
10 ≤ n	0.6

This table considers the proximity “heating effect”. (If fuse holders are mounted in groups and are operated at nominal load)
Depending on the fuse link there is a certain power loss from each fuse which may increase the ambient air temperature around the holder within the equipment enclosure.

The formula is as follows: $I_n \geq I_{SC} / (K_T \times 0.85 \times K_G)$

Installation example:

Number of strings connected in parallel	N=5
Number of solar modules connected in series per string	M=4
Ambient temperature	50 °C

Solar module specifications:

Short circuit current of the string	I_{SC} = 5.5 A
Open circuit voltage under Standard Test Conditions:	$U_{OC\,STC}$ = 44.5 V

Determine rated voltage of the fuse:

$U_n \geq 1.2 \times M \times (U_{OC\,STC})$

$U_n \geq 1.2 \times 4 \times 44.5 = 213.6$ V

Determine rated nominal current of the fuse:

Ambient temperature derating: 50 °C, K_T = 0.87 As the fuse holders are grouped in units of five, a grouping factor of K_G = 0.8 shall be applied

$I_n \geq I_{SC} / (K_T \times 0.85 \times K_G)$ $\quad I_n \geq 1.7 \times I_{SC}$

$I_n \geq I_{SC} / (0.87 \times 0.85 \times 0.8)$ $\quad I_n \geq 9.35$ A

For the protection PV fuse rated current, possible next higher rated current above 9.35A must be chosen. According to common practice, next higher rated current is 10A.

$$I_n = 10\,A$$

3 Photovoltaic Fuses and Protection Components

- PV Cylindrical Fuse Links
- PV NH Type Fuses
- DC Surge Protection Devices

A73 gPV 1000 Vdc Fuse 10x38 mm

DESCRIPTION

The Alder A73 gPV (Photovoltaic) fuse series has a compact design and is used in in-line PV protection systems. This fuse series can safely protect PV string modules and combiner box systems from reverse overcurrent and overcurrent conditions. The A73 series has in-line funtionality and mutable terminal designs. Suitable for commercial and residential usage customizable for specific applications.

FEATURES

- 1000 Vdc, 10x38 mm PV fuse link
- Rated Current: 1-30 A
- Breaking Capacity: 30 kA at 1000 Vdc
- Time Constant: 1-3 ms
- Special design with silver plated caps for high-power PV applications
- BH100-01, BH100-02 holders for DIN rail mounting

APPLICATIONS

- PV combiner/Junction boxes
- Inverters
- Battery Charge Controllers
- In-line and in-holder functionality
- Overcurrent protection

AGENCY INFORMATION

- Designed to UL 248-19
- UL certified
- Manufactured under IATF 16949 quality system
- RoHS and REACH Compliant

PART NUMBERING SYSTEM

A73 2300 7 00

- 00 — Supplementary Code: 00:Cartridge; 01: Central Mount; 02: Level Mount; 03: PCB Mount;
- 7 — Voltage Code: 1000 Vdc
- 2300 — Ampere Code: See Table 1
- A73 — Product Series: A73

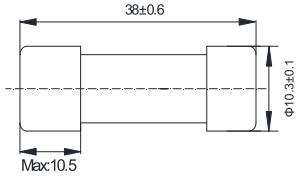
ELECTRICAL SPECIFICATIONS

Part Number				Rated Current	Ampere Code	Breaking Capacity	I²t (A²s)		Dissipation (W)		Certifications
Cartridge	Central Mount	Level Mount	PCB Mount				Pre-Arcing	Total at 1000 V	80 % In	100 % In	UL
A731100700	A731100701	A731100702	A731100703	1 A	1100	30 kA @1000 Vdc	0.15	0.4	0.8	1.5	●
A731200700	A731200701	A731200702	A731200703	2 A	1200		1.3	3.4	0.7	1.1	●
A731300700	A731300701	A731300702	A731300703	3 A	1300		4	12	0.8	1.3	●
A731400700	A731400701	A731400702	A731400703	4 A	1400		10	28	1.1	1.4	●
A731500700	A731500701	A731500702	A731500703	5 A	1500		19	50	1.1	1.4	●
A731600700	A731600701	A731600702	A731600703	6 A	1600		32	93	1.2	1.8	●
A731800700	A731800701	A731800702	A731800703	8 A	1800		85	205	1.2	2.2	●
A732100700	A732100701	A732100702	A732100703	10 A	2100		30	70	1.3	2.3	●
A732120700	A732120701	A732120702	A732120703	12 A	2120		98	150	1.5	2.8	●
A732150700	A732150701	A732150702	A732150703	15 A	2150		149	230	1.8	3.0	●
A732200700	A732200701	A732200702	A732200703	20 A	2200		229	330	2.4	3.6	●
A732250700	A732250701	A732250702	A732250703	25 A	2250		411	500	2.6	4.1	●
A732300700	A732300701	A732300702	A732300703	30 A	2300		1200	2500	4.3	5.7	●

Table1 Note: (1) DC cold resistance are measured at <10 % of rated current in ambient temperature of 25±5 °C
(2) Typical pre-arcing I²t measured at 10*In current
(3)●=Certification obtained.

DIMENSIONS (mm)

A73xxxx700



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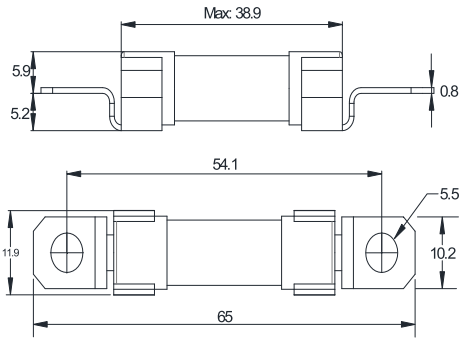

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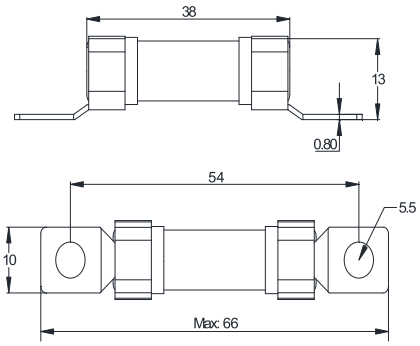

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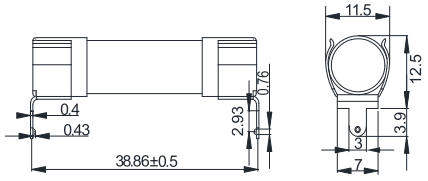
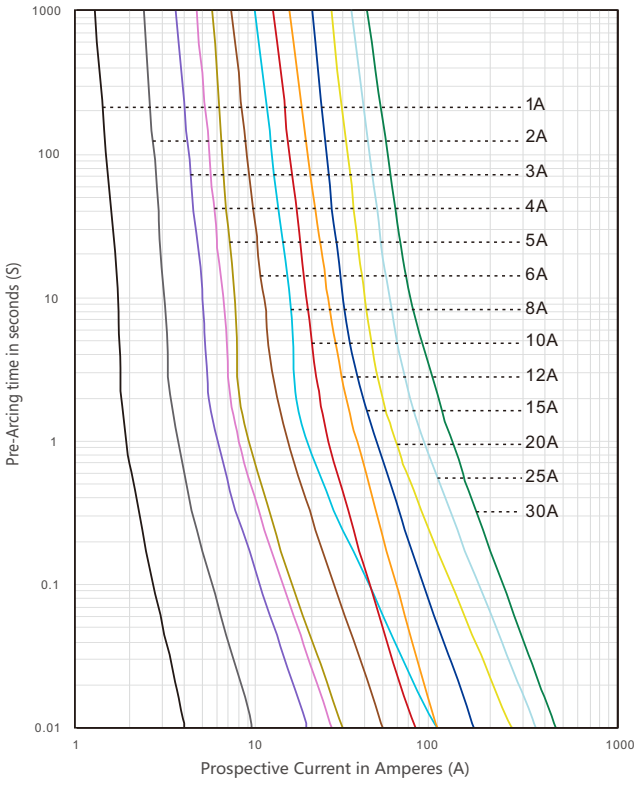


TIME VS CURRENT CHARACTERISTIC

Standard	UL			IEC		
Rated Current	100%	135%	200%	100%	135%	145%
1-30 A	Temperature Stabilization	< 1 h	< 4 min	Temperature Stabilization	>1 h	< 1h

TIME CURRENT CURVE(REFERENCE)



A83 gPV 1000/1100 Vdc Fuse 10x38 mm

DESCRIPTION

The Alder A83 gPV (Photovoltaic) fuse series has been specifically designed for the protection of (PV) systems. These fuses can safely protect PV string modules, conductors and inverters from reverse-overcurrent and overcurrent conditions.

As PV systems have grown in size, so have the corresponding voltage requirements. This increase in system voltage has typically been intended to minimize power loss associated with long conductor runs. A83 gPV has up to 1100 Vdc braking capacity.

FEATURES

- 1000/1100 Vdc, 10x38 mm PV fuse link with glass-fiber body
- Rated Current: 1-32 A
- Breaking Capacity: 30 kA at 1100 Vdc(1-20 A)-UL
  30 kA at 1000 Vdc(25-30 A)-UL
- Breaking Capacity: 30 kA at 1100 Vdc(1-20 A)-TUV
  30 kA at 1100 Vdc(25-32 A)-TUV
- Self - Certified:50 kA at 1100 Vdc(1-20A)
- Time Constant: 1-3 ms
- Special design with silver plated caps for high-power PV applications
- BH100-01, BH100-02 holders for DIN rail mounting
- Customizable for special applications

AGENCY INFORMATION

- Comply to: UL 248-19 (File: E490190)
- Approvals: IEC 60269-6 and GBT 13539.6
- Manufactured under IATF 16949 quality system
- RoHS and REACH Compliant

PART NUMBERING SYSTEM

A83 2300 7 10

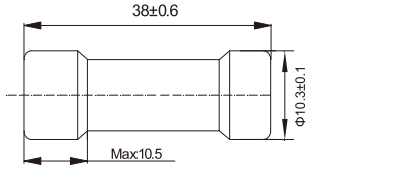
- 10 — Supplementary Code: 00:Cartridge; 01: Central Mount; 02: Level Mount; 03: PCB Mount;
- 7 — Voltage Code: 700 Vdc
- 2300 — Ampere Code: See Table 2
- A83 — Product Series: A83

APPLICATIONS

- PV combiner / junction boxes
- Inverters
- Battery Charge Controllers

DIMENSIONS (mm)

A83xxxx710



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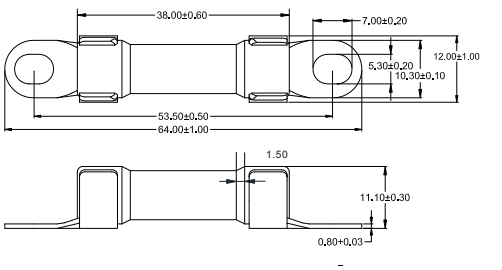

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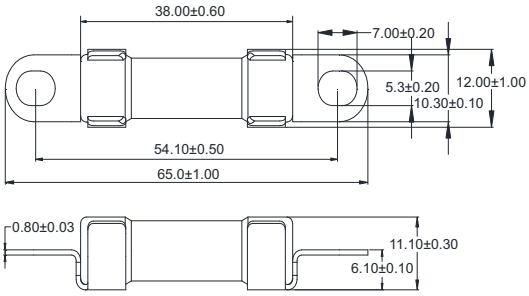

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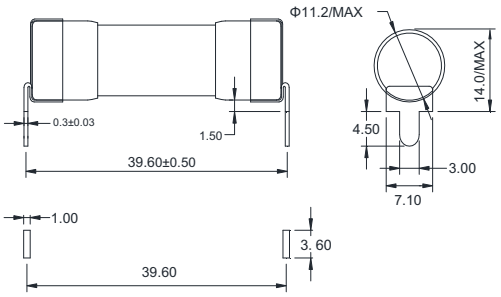

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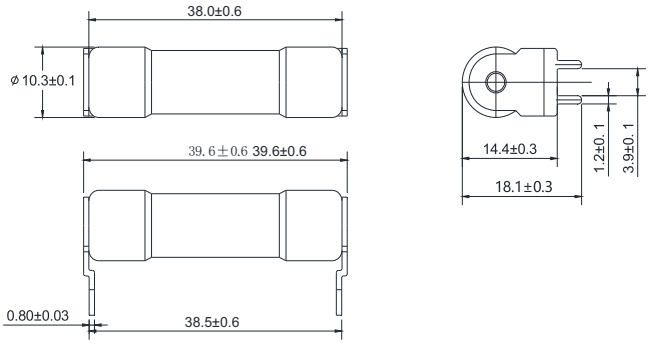


ELECTRICAL SPECIFICATIONS

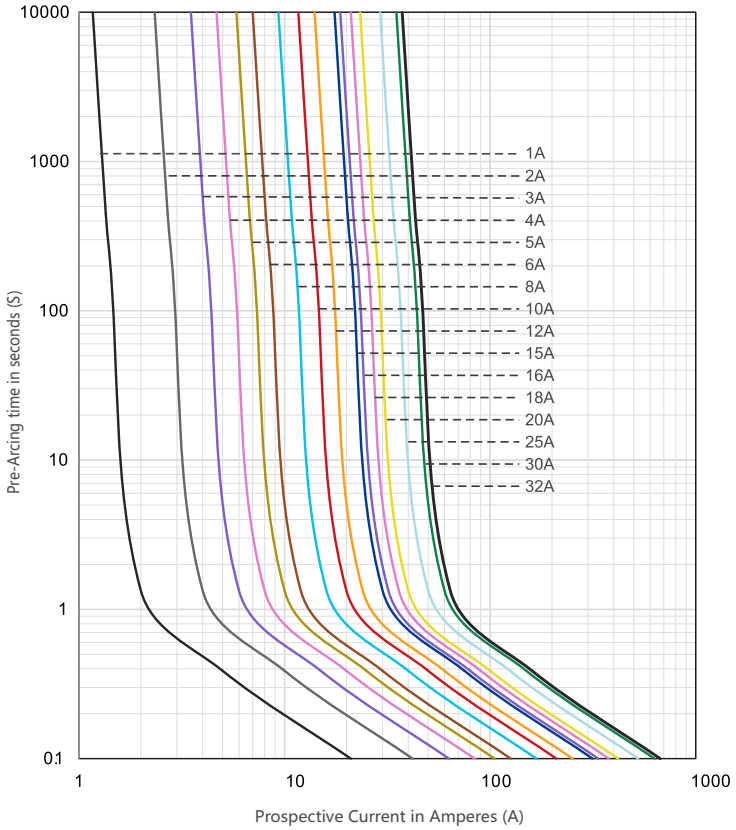
Part Number					Rated	Ampere	Breaking	I^2t (A^2s)		Dissipation(W)		Certifications	
Cylindrical	Level	Central	PCB 2P	PCB 4P	Current	Code	Capacity	Pre-Arcing	Total	80% I_n	100% I_n	UL	TUV
A831100710	A831100711	A831100712	A831100713	A831100716	1A	1100	30kA@ 1100 Vdc	20	110	0.1	0.1	●	●
A831200710	A831200711	A831200712	A831200713	A831200716	2A	1200		40	220	0.2	0.3	●	●
A831300710	A831300711	A831300712	A831300713	A831300716	3A	1300		60	330	0.3	0.4	●	●
A831400710	A831400711	A831400712	A831400713	A831400716	4A	1400		80	440	0.4	0.6	●	●
A831500710	A831500711	A831500712	A831500713	A831500716	5A	1500		100	550	0.5	0.7	●	●
A831600710	A831600711	A831600712	A831600713	A831600716	6A	1600		120	660	0.6	0.9	●	●
A831800710	A831800711	A831800712	A831800713	A831800716	8A	1800		160	880	0.9	1.1	●	●
A832100710	A832100711	A832100712	A832100713	A832100716	10A	2100		200	1100	1.1	1.4	●	●
A832120710	A832120711	A832120712	A832120713	A832120716	12A	2120		240	1320	1.3	1.7	●	●
A832150710	A832150711	A832150712	A832150713	A832150716	15A	2150		300	1650	1.6	2.2	●	●
A832160710	A832160711	A832160712	A832160713	A832160716	16A	2160		310	1660	1.6	2.2	●	●
A832180710	A832180711	A832180712	A832180713	A832180716	18A	2180		380	2100	1.8	2.9	●	●
A832200710	A832200711	A832200712	A832200713	A832200716	20A	2200		400	2200	2.1	2.9	●	●
A832250710	A832250711	A832250712	A832250713	A832250716	25A	2250	30kA@ 1000 Vdc	500	2750	2.7	3.6	●	○
A832300710	A832300711	A832300712	A832300713	A832300716	30A	2300		600	3300	3.2	4.3	●	○
A832250710	A832250711	A832250712	A832250713	A832250716	25A	2250	30kA@ 1100 Vdc	500	2750	2.7	3.6	○	●
A832300710	A832300711	A832300712	A832300713	A832300716	30A	2300		600	3300	3.2	4.3	○	●
A832300710	A832300711	A832300712	A832300713	A832300716	32A	2320		850	3750	4.0	5.5	○	●

Table 1 Note: (1) DC cold resistances are measured at <10 % of rated current in ambient temperature of 25±5 ℃
(2) Typical pre-arcing I^2t measured at 10*In current
(3)●=Certification obtained. ○=No certification. UL File number: E490190

TIME VS CURRENT CHARACTERISTIC

Standard	UL			IEC		
Rated Current	100%	135%	200%	100%	135%	145%
1-32 A	Temperature Stabilization	< 1 h	< 4 min	Temperature Stabilization	>1 h	< 1h

Time Current Curve (reference)



A74 gPV 1500 Vdc Fuse 14x51 mm

DESCRIPTION

The Alder A74 gPV (Photovoltaic) fuse series has a compact design and is used in in-line PV protection systems. This fuse series can safely protect PV string modules inverters and conductors from reverse overcurrent and overcurrent conditions. The A74 gPV series has in-line and in-holder functionality designs 10 kA at 1500 VDC breaking capacity. Suitable for commercial and home usage customizable for specific applications.

FEATURES

- 1500 Vdc, 14x51 mm PV fuse link
- Rated Current: 4-30 A
- Breaking Capacity: 10 kA at 1500 VDC
- Time Constant: ≤1 ms
- Special design with silver plated caps for
- high-power PV applications
- Standards: UL 248-19
- Approvals: UL (File: E490190)
- BH200, BH201 holders for DIN rail mounting

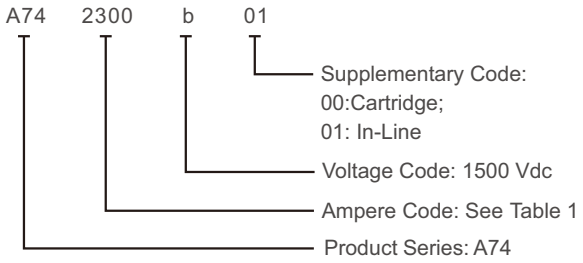
AGENCY INFORMATION

- Designed to UL 248-19
- UL certified
- Manufactured under IATF 16949 quality system
- RoHS and REACH Compliant

APPLICATIONS

- PV combiner / Junction box protection
- Inverter protection
- Battery Charge Controllers
- In-line / Holder functionality
- Overcurrent protection
- Serie string module protection

PART NUMBERING SYSTEM



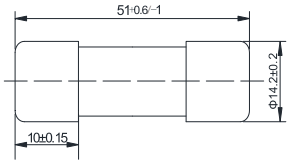
ELECTRICAL SPECIFICATIONS

Part Number		Rated Current	Ampere Code	Breaking Capacity	I²t (A²s)		Dissipation (W)		Certifications
Cartridge	In-Line				Pre-Arcing	Total	0.8 In	1.0 In	UL
A741400b00	A741400b01	4 A	1400	10 kA@ 1500 Vdc	8	60	1.25	2.2	●
A742150b00	A742150b01	15 A	2150		310	900	2.3	3.9	●
A742200b00	A742200b01	20 A	2200		200	340	3.5	6.1	●
A742250b00	A742250b01	25 A	2250		295	400	3.8	7.0	●
A742300b00	A742300b01	30 A	2300		380	450	3.85	7.3	●

Table1 Note: 1.●=Certification obtained. UL File number:E490190

DIMENSIONS (mm)

A74xxxxb00



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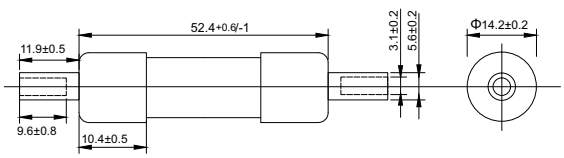
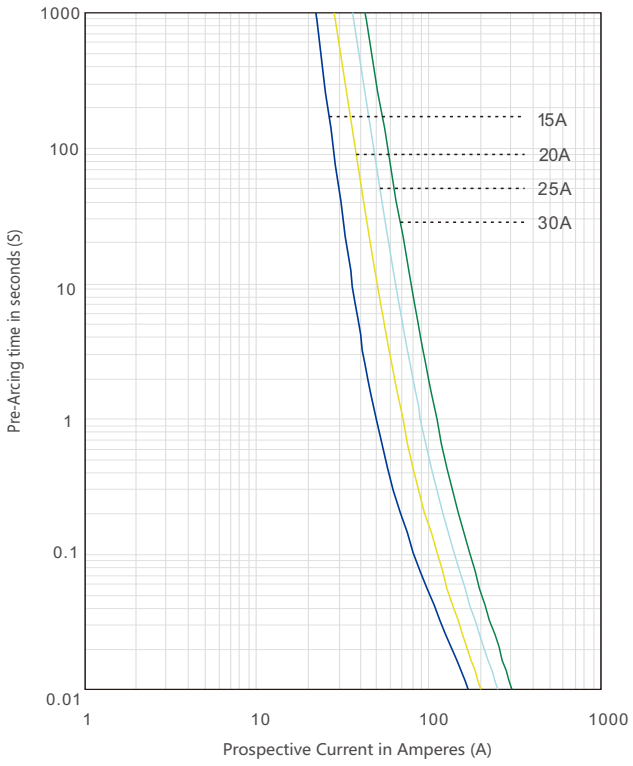


TIME VS CURRENT CHARACTERISTIC

Standard	UL			IEC		
Rated Current	100%	135%	200%	100%	135%	145%
4-30 A	Temperature Stabilization	< 1 h	< 4 min	Temperature Stabilization	>1 h	< 1h

TIME CURRENT CURVE



A84 gPV 1500 Vdc Fuse 14x51 mm

DESCRIPTION

The Alder A84 gPV (Photovoltaic) fuse series has been specifically designed for the protection of PV systems. This series of fuses can safely protect PV series string modules and inverter from reverse overcurrent and overcurrent conditions. With both in-line and holder functionality and mutable terminal designs.

Suitable for residential, commercial and PV farm use.

FEATURES

- 1500 Vdc, 14x51 mm PV fuse link with glass-fiber body
- Rated Current: 1-32 A (regular use)
  1-50 A (single mount inline fuse)
- Breaking Capacity: 10 kA at 1500 Vdc
- Time Constant: 1-3 ms
- Special design with silver plated caps for high-power PV applications
- Customizable for special application
- BH200, BH201 holders for DIN rail mounting

AGENCY INFORMATION

- Comply to: UL248-19; IEC 60269-6
- Approvals: UL (E490190); TUV (50482515)
- Manufactured under IATF 16949 quality system
- RoHS and REACH Compliant

APPLICATIONS

- PV combiner / Junction box
- Inverters
- Battery Charge Controller

PART NUMBERING SYSTEM

A84 2500 b 00

- 00 — Supplementary Code:
  00:Cartridge;
  01: 10/12 AWG In-terminal;
  02: Fixing Mount;
  03: Level Mount;
  04: 8 AWG In-terminal
- b — Voltage Code: 1500 Vdc
- 2500 — Ampere Code: See Table 1/2
- A84 — Product Series: A74

ELECTRICAL SPECIFICATIONS

Part Number			Rated Current	Ampere Code	Breaking Capacity	Cold Resistance (MΩ)	I²t (A²s)		Certifications	
Cartridge	10/12 AWG In-terminal	8 AWG In-terminal					Pre-Arcing	Total	UL	TUV
A841100b00	A841100b01	A841100b04	1 A	1100	10 kA@1500 Vdc	1310～1610 mΩ	20	110	●	●
A841200b00	A841200b01	A841200b04	2 A	1200		278.4～340.3 mΩ	40	220	●	●
A841300b00	A841300b01	A841300b04	3 A	1300		160.9～196.6 mΩ	60	330	●	●
A841400b00	A841400b01	A841400b04	4 A	1400		80.52～98.42 mΩ	80	440	●	●
A841500b00	A841500b01	A841500b04	5 A	1500		49.90～61.02 mΩ	100	550	●	●
A841600b00	A841600b01	A841600b04	6 A	1600		42.66～52.14 mΩ	120	660	●	●
A841800b00	A841800b01	A841800b04	8 A	1800		29.58～36.16 mΩ	160	880	●	●
A842100b00	A842100b01	A842100b04	10 A	2100		13.88～16.97 mΩ	200	1100	●	●
A842120b00	A842120b01	A842120b04	12 A	2120		1.50～14.06 mΩ	240	1320	●	●
A842150b00	A842150b01	A842150b04	15 A	2150		7.54～9.54 mΩ	300	1650	●	●
A842160b00	A842160b01	A842160b04	16 A	2160		7.54～9.54 mΩ	320	1760	●	●
A842200b00	A842200b01	A842200b04	20 A	2200		5.63～7.05 mΩ	400	2200	●	●
A842250b00	A842250b01	A842250b04	25 A	2250		.84～4.71 mΩ	500	2750	●	●
A842300b00	A842300b01	A842300b04	30 A	2300		3.20～3.92 mΩ	600	3300	●	●
A842320b00	A842320b01	A842320b04	32 A	2320		2.84～3.48 mΩ	640	3520	●	●
-	A842350b01	A842350b04	35 A	2350		2.70～3.30 mΩ	700	3850	●	●
-	A842400b01	A842400b04	40 A	2400		2.28～2.79 mΩ	800	4400	●	●
-	A842450b01	A842450b04	45 A	2450		1.98～2.43 mΩ	900	4950	●	●
-	A842500b01	A842500b04	50 A	2500		1.74～2.13 mΩ	1000	5500	●	●

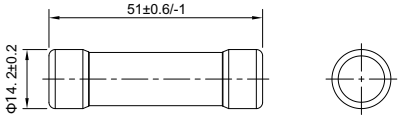
Table1 Note: (1)Typical pre-arcing I²t measured at 10*In current
(2)●=Certification obtained. UL File number: E490190,TUV File number: (50482515)

Part Number	Rated Current	Ampere Code	Breaking Capacity	Cold Resistance (MΩ)	I²t (A²s)		Dissipation		Certifications
Level Mount					Pre-Arcing	Total	0.8 I_n	1.0 I_n	UL
A841100b03	1 A	1100	10 kA@1500 Vdc	310～1610 mΩ	20	110	0.1	0.1	○
A841200b03	2 A	1200		278.4～340.3 mΩ	40	220	0.2	0.3	○
A841300b03	3 A	1300		160.9～196.6 mΩ	60	330	0.3	0.4	○
A841400b03	4 A	1400		80.52～98.42 mΩ	80	440	0.4	0.6	○
A841500b03	5 A	1500		49.90～61.02 mΩ	100	550	0.5	0.7	○
A841600b03	6 A	1600		42.66～52.14 mΩ	120	660	0.6	0.9	○
A841800b03	8 A	1800		29.58～36.16 mΩ	160	880	0.9	1.1	○
A842100b03	10 A	2100		13.88～16.97 mΩ	200	1100	1.1	1.4	○
A842120b03	12 A	2120		11.50～14.06 mΩ	240	1320	1.3	1.7	○
A842150b03	15 A	2150		7.54～9.54 mΩ	300	1650	1.6	2.2	○
A842160b03	16 A	2160		7.54～9.54 mΩ	320	1760	1.7	2.4	○
A842200b03	20 A	2200		5.63～7.05 mΩ	400	2200	2.1	2.9	○
A842250b03	25 A	2250		3.84～4.71 mΩ	500	2750	2.7	3.6	○
A842300b03	30 A	2300		3.20～3.92 mΩ	600	3300	3.2	4.3	○
A842320b03	32 A	2320		2.84～3.48 mΩ	640	3520	3.4	4.6	○
A842350b03	35 A	2350		2.70～3.30 mΩ	700	3850	3.7	5	○
A842400b03	40 A	2400		2.28～2.79 mΩ	800	4400	4.3	5.7	○
A842450b03	45 A	2450		1.98～2.43 mΩ	900	4950	4.8	6.5	○
A842500b03	50 A	2500		1.74～2.13 mΩ	1000	5500	5.3	7.2	○

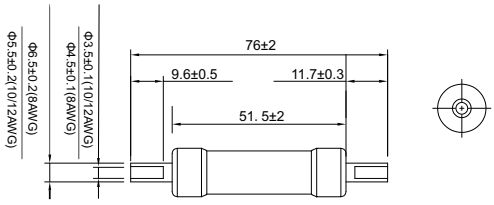
Table1 Note: (1)Typical pre-arcing I²t measured at 10*In current
(2)○=No certification

DIMENSIONS (mm)

A84xxxxb00



A84xxxxb01-b04



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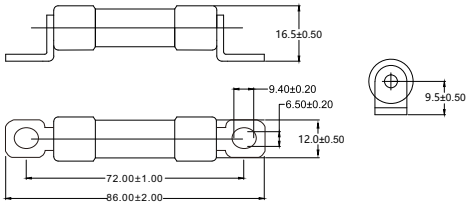
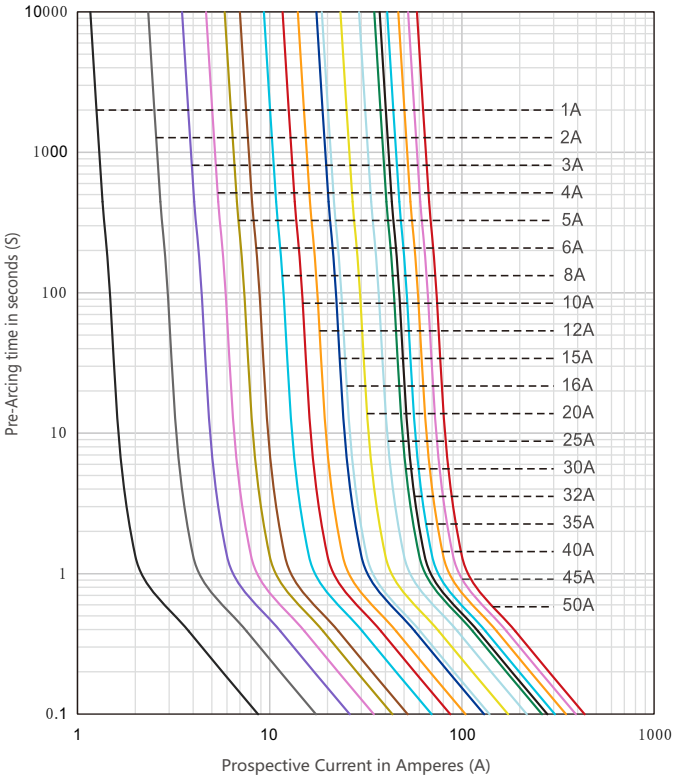


TIME VS CURRENT CHARACTERISTIC

Standard	UL			IEC		
Rated Current	100%	135%	200%	100%	135%	145%
1-50 A	Temperature Stabilization	< 1 h	< 4 min	Temperature Stabilization	>1 h	< 1h

TIME CURRENT CURVE(REFERENCE)



A75/A78 gPV 1500 Vdc Fuse 10x85 mm

DESCRIPTION

The Alder A75/A78 gPV (Photovoltaic) fuse series has a compact design and is used in in-line PV protection systems. This fuse series can safely protect PV string modules and combiner box systems from reverse overcurrent conditions. The A75 series has in-line and in-holder functionality. The 30A / 32A designs include a rubber outer coating for additional protection. Suitable for commercial and PV farm customizable for specific applications.

FEATURES

- 1500 Vdc, 10x85 mm PV fuse link with glass-fiber body
- Rated Current: 1-32 A
  Breaking Capacity: 10 kA at 1500 Vdc
- Time Constant: 1-3 ms
- Special design with silver plated caps for high-power PV applications
- BH300-01, BH300-02 holders for DIN rail mounting

AGENCY INFORMATION

- Designed to UL 248-19
- UL certified
- Manufactured under IATF 16949 quality system
- RoHS and REACH Compliant

APPLICATIONS

- PV combiner / Junction box protection
- Inverter protection
- Battery Charge Controller protection
- Holder functionality
- Overcurrent protection
- Series string module protection

PART NUMBERING SYSTEM

A75 2320 b 00

- 00 — Supplementary Code: 00:Cartridge
- b — Voltage Code: 1500 Vdc
- 2320 — Ampere Code: See Table 1
- A75 — Product Series: A75/A78

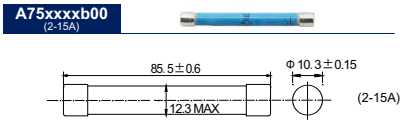
ELECTRICAL SPECIFICATIONS

Part Number		Rated Current	Ampere Code	Breaking Capacity	I²t (A²s)		Dissipation (W)		Certifications
Cartridge	In Line Terminal				Pre-Arcing	Total	0.8 In	1.0 In	UL
A751200b00	A781200b00	2 A	1200	30 kA@1500 Vdc	3.5	10	1.45	2.6	•
A751400b00	A781400b00	4 A	1400		15	50	1.55	2.8	•
A752100b00	A782100b00	10 A	2100		300	1100	2.3	4.2	•
A752120b00	A782120b00	12 A	2120		20	60	2.4	4.2	•
A752150b00	A782150b00	15 A	2150		35	95	2.8	5.0	•
A752200b00	A782200b00	20 A	2200		115	820	3.3	6.2	•
A752250b00	A782250b00	25A	2250		175	1300	4.0	5.7	•
A752300b00	A782300b00	30A	2300		241	1950	4.5	7.5	•
A752320b00	A782320b00	32A	2320		283	2190	4.9	.5	•

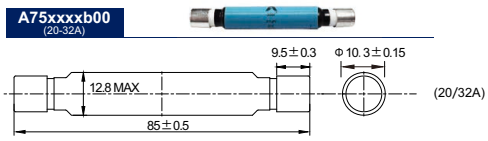
Note: (1)Typical pre-arcing I²t measured at 10*In current
(2)•=Certification obtained. UL File number: E490190

DIMENSIONS (mm)

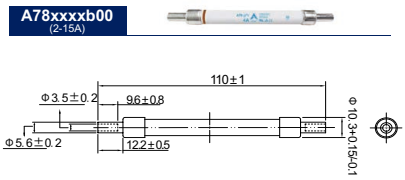
A75xxxxb00 (2-15A)



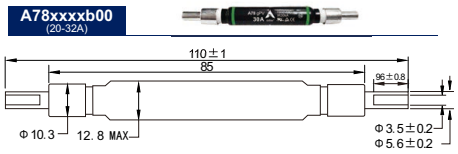
A75xxxxb00 (20-32A)



A78xxxxb00 (2-15A)



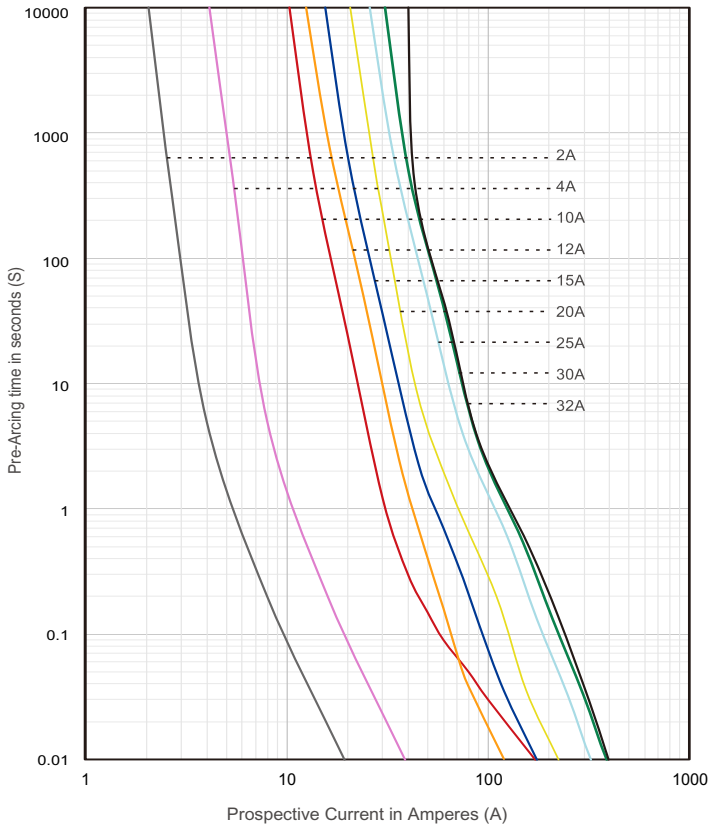
A78xxxxb00 (20-32A)



TIME VS CURRENT CHARACTERISTIC

Standard	UL			IEC		
Rated Current	100%	135%	200%	100%	135%	145%
2-32 A	Temperature Stabilization	< 1 h	< 4 min	Temperature Stabilization	>1 h	< 1h

TIME CURRENT CURVE(REFERENCE)



A85 gPV 1500 Vdc Fuse 10x85 mm

DESCRIPTION

The Alder A85 gPV (Photovoltaic) fuse series has a long slender design and is useful in in-line PV protection systems. This series can safely protect PV series string modules, inverters and conductors from reverse overcurrent and overcurrent conditions. The A85 gPV series has both in-line and in-holder functionality and mutable terminal designs. The Alder A85 gPV series is both functional, reliable and affordable because of this it has become one of Adler's best-selling products.

FEATURES

- 1500 Vdc, 10x85 mm PV fuse link with glass-fiber body
- Rated Current: 1-32 A
- Rated Breaking Capacity: 30 kA at 1500 Vdc (1-32A)
- Self - Certified: 50 kA at 1500 Vdc (1-20A)
- Time Constant: 1-3 ms
- Special design with silver plated caps for high-power PV applications
- Customizable for special applications
- BH300-01, BH300-02 holders for DIN rail mounting

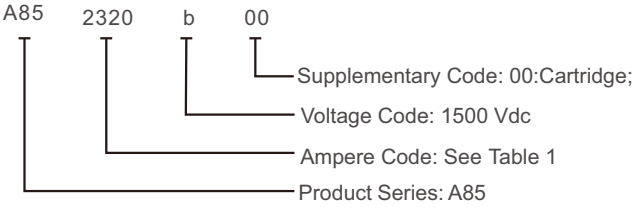
AGENCY INFORMATION

- Approvals: UL 248-19 (File: E490190)
- Approvals: IEC 60269-6
- Manufactured under IATF 16949 quality system
- RoHS and REACH Compliant

APPLICATIONS

- PV combiner / Junction boxes
- Inverter
- Battery Charge Controllers

PART NUMBERING SYSTEM



ELECTRICAL SPECIFICATIONS

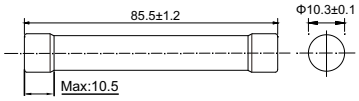
Part Number			Rated Current	Ampere Code	Breaking Capacity	I²t (A²s)		Dissipation (W)		Certifications	
Cartridge	10/12 AWG In-terminal	8 AWG In-terminal				Pre-Arcing	Total	0.8 In	1.0 In	UL	TUV
A851100b00	A851100b01	A851100b02	1 A	1100	30 kA@ 1500 Vdc	59.15	125	0.8	1.6	●	●
A851200b00	A851200b01	A851200b02	2 A	1200		118.3	250	1.4	2.2	●	●
A851300b00	A851300b01	A851300b02	3 A	1300		177.5	375	1.7	2.5	●	●
A851400b00	A851400b01	A851400b02	4 A	1400		236.7	500	2.0	3.0	●	●
A851500b00	A851500b01	A851500b02	5 A	1500		295.8	625	2.8	3.5	●	●
A851600b00	A851600b01	A851600b02	6 A	1600		355.0	750	3.0	4.0	●	●
A851800b00	A851800b01	A851800b02	8 A	1800		473.3	1000	3.0	4.0	●	●
A852100b00	A852100b01	A852100b02	10 A	2100		591.7	1250	2.8	3.5	●	●
A852120b00	A852120b01	A852120b02	12 A	2120		710.0	1500	3.1	4.5	●	●
A852150b00	A852150b01	A852150b02	15 A	2150		887.5	1875	3.2	3.5	●	●
A852160b00	A852160b01	A852160b02	16 A	2160		946.4	2000	3.3	4.5	●	●
A852200b00	A852200b01	A852200b02	20 A	2200		710.0	1500	3.2	5.8	●	●
A852250b00	A852250b01	A852250b02	25 A	2250		887.5	1875	3.3	6.0	●	●
A852300b00	A852300b01	A852300b02	30 A	2300		1183.3	2500	3.6	6.8	●	●
A852320b00	A852320b01	A852320b02	32A	2320		1760	3150	4.5	7.0	●	●

Table 1 Note:(1) Operating temperature range: -40℃ ~ 90℃

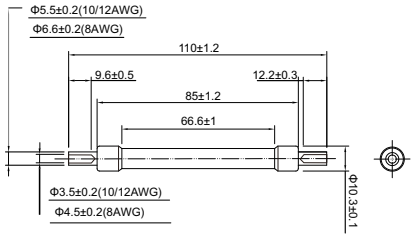
(2)●=Certification obtained. UL File number: E490190

DIMENSIONS (mm)

A85xxxxb00



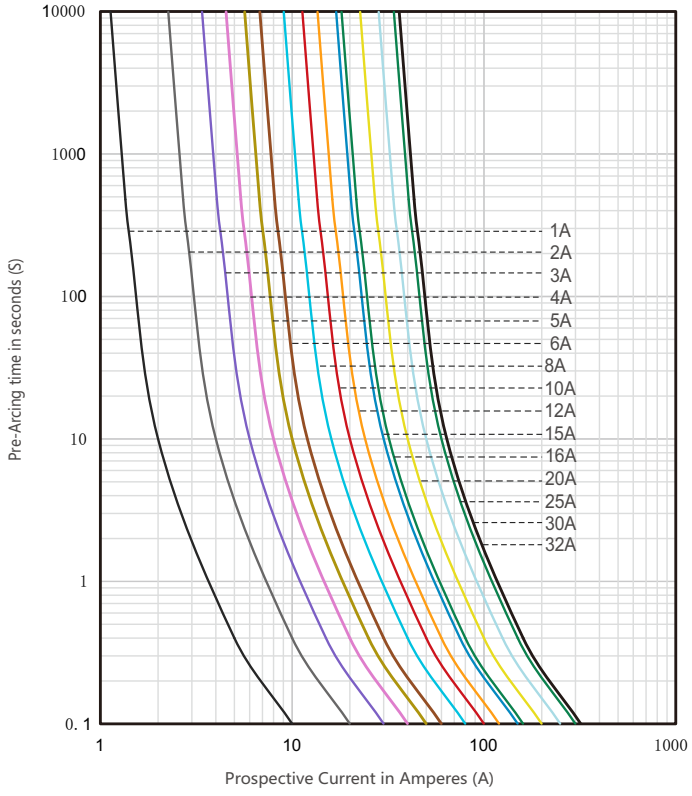
A85xxxxb01



TIME VS CURRENT CHARACTERISTIC

Standard	UL			IEC		
Rated Current	100%	135%	200%	100%	113%	145%
1-32 A	Temperature Stabilization	< 1 h	< 4 min	Temperature Stabilization	>1 h	< 1h

TIME CURRENT CURVE(REFERENCE)



A76/A79 gPV 1500 Vdc Fuse 10x57 mm

DESCRIPTION

The Alder A76/A79 gPV (Photovoltaic) fuse series has a compact design and is used in PV protection systems. This fuse series can safely protect PV modules inverters and conductors from reverse overcurrent conditions.The A76/A79 gPV series has in-holder functionality. Suitable for commercial and home usage customizable for specific applications.

FEATURES

- 1500 Vdc, 10x57 mm PV fuse link
- Rated Current: 2.5-6 A
- Breaking Capacity: 10 kA at 1500 Vdc, 20 kA at 1500 Vdc (the 3rd test)
- Time Constant: ≤1 ms
- Special design with silver plated caps for high-power PV applications

AGENCY INFORMATION

- Designed to UL 248-19
- UL certified
- Manufactured under IATF 16949 quality system
- RoHS and REACH Compliant

APPLICATIONS

- PV combiner / Junction box protection
- Inverter protection
- Battery Charge Controller protection
- Holder functionality
- Series string module protection

PART NUMBERING SYSTEM

A76 1600 b 00

- 00 — Supplementary Code: 00:Cartridge
- b — Voltage Code: 1500 Vdc
- 1600 — Ampere Code: See Table 1
- A76 — Product Series: A76/A79

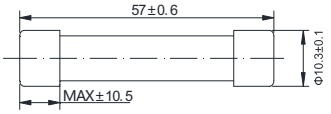
ELECTRICAL SPECIFICATIONS

Part Number		Rated Current	Ampere Code	Breaking Capacity	I²t (A²s)		Dissipation (W)	Certifi-cations
Cartridge	In-Line				Pre-Arcing	Total	1.0 In	UL
A761250b00	A791250b00	2.5 A	1250	10 kA@1500 Vdc 20 kA@1500Vdc (self-certified)	3	15	2.1	●
A761300b00	A791300b00	3.0 A	1300		5	21	2.1	●
A761400b00	A791400b00	4.0 A	1400		18	68	1.85	●
A761600b00	A791600b00	6.0 A	1600		60	200	2.1	●

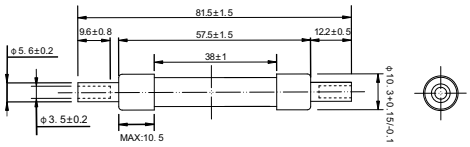
Table 1 Note: (1) Typical pre-arcing I²t measured at 10*In current.
(2)●=Certification obtained. UL File number: E490190

DIMENSIONS (mm)

A76xxxxb00



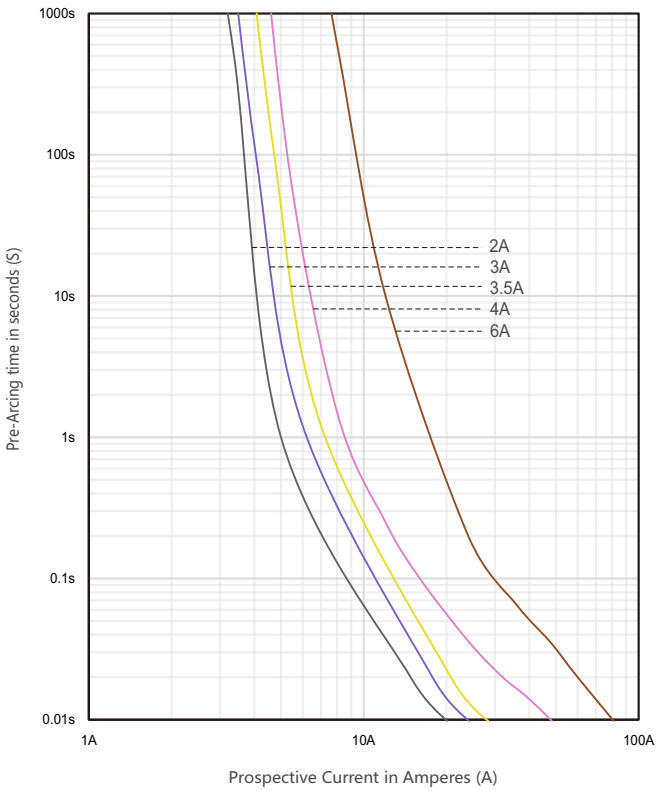
A79xxxxb00



TIME VS CURRENT CHARACTERISTICS

Standard	UL			IEC		
Rated Current	100%	135%	200%	100%	135%	145%
2.6-6 A	Temperature Stabilization	< 1 h	< 4 min	Temperature Stabilization	>1 h	< 1h

TIME CURRENT CURVE



A89 gPV 1500 Vdc Fuse 10x57 mm

DESCRIPTION

The Alder A89 gPV (Photovoltaic) fuse series has a long slender design and is used primarily in in-line PV string protection. A89 gPV series has both in-line and holder functionality and mutable terminal designs.
Customizable for special applications, with a breaking capacity of 30kA at 1500Vdc.

FEATURES

- 1500 Vdc, 10x57 mm PV fuse link with glass-fiber body
- Rated Current: 1-20 A
- Rated Breaking Capacity: 30 kA at 1500 Vdc
- Time Constant: 1-3 ms
- Special design with silver plated caps for high-power PV applications
- Customizable for special applications

AGENCY INFORMATION

- Approvals: UL 248-19 (File: E490190)
- Approvals: IEC 60269-6; GBT 13539.6
- Manufactured under IATF 16949 quality system
- RoHS and REACH Compliant

APPLICATIONS

- PV combiner / Junction boxes
- Inverters
- Battery Charge Controllers

PART NUMBERING SYSTEM

A89 1600 b 00

- 00 — Supplementary Code: 00:10/12 AWG In-terminal ; 01: Cartridge ; 02: PCB Mount ; 04: 8 AWG In-terminal
- b — Voltage Code: 1500 Vdc
- 1600 — Ampere Code: See Table 1
- A89 — Product Series: A89

ELECTRICAL SPECIFICATIONS

Part Number		Rated Current	Ampere Code	Breaking Capacity	Cold Resistance (mΩ)	I²t (A²s)		Dissipation (W)	Certifications	
10/12AWG In-terminal	8 AWG In-terminal					Pre-Arcing	Total	1.0 In	UL	TUV
A891100b00	A891100b04	1 A	1100	30 kA@ 1500 Vdc	1360～1660 mΩ	10	33.3	0.4	●	●
A891200b00	A891200b04	2 A	1200		229～280 mΩ	20	66.7	0.7	●	●
A891300b00	A891300b04	3 A	1300		229～280 mΩ	30	100.0	1.1	●	●
A891400b00	A891400b04	4 A	1400		229～280 mΩ	40	133.3	1.4	●	●
A891500b00	A891500b04	5 A	1500		54.85～67.05 mΩ	50	166.7	1.8	●	●
A891600b00	A891600b04	6 A	1600		45.3～55.4 mΩ	60	200.0	2.1	●	●
A891800b00	A891800b04	8 A	1800		34.7～42.5 mΩ	80	266.7	2.8	●	●
A892100b00	A892100b04	10 A	2100		15.83～19.35 mΩ	100	333.3	3.5	●	●
A892120b00	A892120b04	12 A	2120		15.83～19.35 mΩ	120	400.0	4.2	●	●
A892150b00	A892150b04	15 A	2150		7.97～9.74 mΩ	150	500.0	5.3	●	●
A892160b00	A892160b04	16 A	2160		7.97～9.74 mΩ	160	533.3	5.6	●	●
A892200b00	A892200b04	20 A	2200		5.82～7.13 mΩ	200	666.7	7.0	●	●

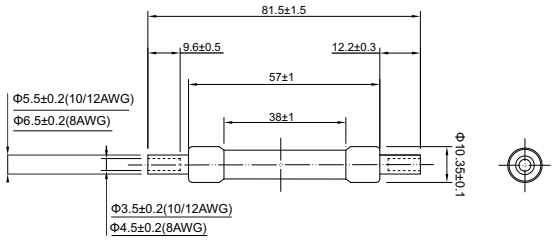
Table1 Note: (1)Typical pre-arcing I²t measured at 10*In current
(2)●=Certification obtained. UL File number: E490190

Part Number		Rated Current	Ampere Code	Breaking Capacity	Norn Cold Resistance (mΩ)	I²t (A²s)		Dissipation (W)	Certifications	
Cartridge	PCB Mount					Pre-Arcing	Total	1.0 In	UL	TUV
A891100b01	A891100b02	1 A	1100	30 kA@ 1500 Vdc	1360～1660 mΩ	10	33.3	0.4	○	○
A891200b01	A891200b02	2 A	1200		229～280 mΩ	20	66.7	0.7	○	○
A891300b01	A891300b02	3 A	1300		150～183 mΩ	30	100.0	1.1	○	○
A891400b01	A891400b02	4 A	1400		74.38～90.92 mΩ	40	133.3	1.4	○	○
A891500b01	A891500b02	5 A	1500		54.85～67.05 mΩ	50	166.7	1.8	○	○
A891600b01	A891600b02	6 A	1600		45.3～55.4 mΩ	60	200.0	2.1	○	○
A891800b01	A891800b02	8 A	1800		34.7～42.5 mΩ	80	266.7	2.8	○	○
A892100b01	A892100b02	10 A	2100		15.83～19.35 mΩ	100	333.3	3.5	○	○
A892120b01	A892120b02	12 A	2120		10.49～12.83 mΩ	120	400.0	4.2	○	○
A892150b01	A892150b02	15 A	2150		7.97～9.74 mΩ	150	500.0	5.3	○	○
A892160b01	A892160b02	16 A	2160		7.97～9.74 mΩ	160	533.3	5.6	○	○
A892200b01	A892200b02	20 A	2200		7.97～9.74 mΩ	200	666.7	7.0	○	○

Table 1 Note: (1)Typical pre-arcing I²t measured at 10*In current
(2)○ --- UL/TUV certification in process

DIMENSIONS (mm)

A89xxxxb00
A89xxxxb04



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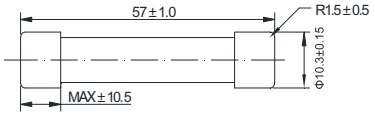

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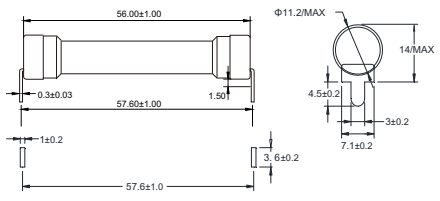
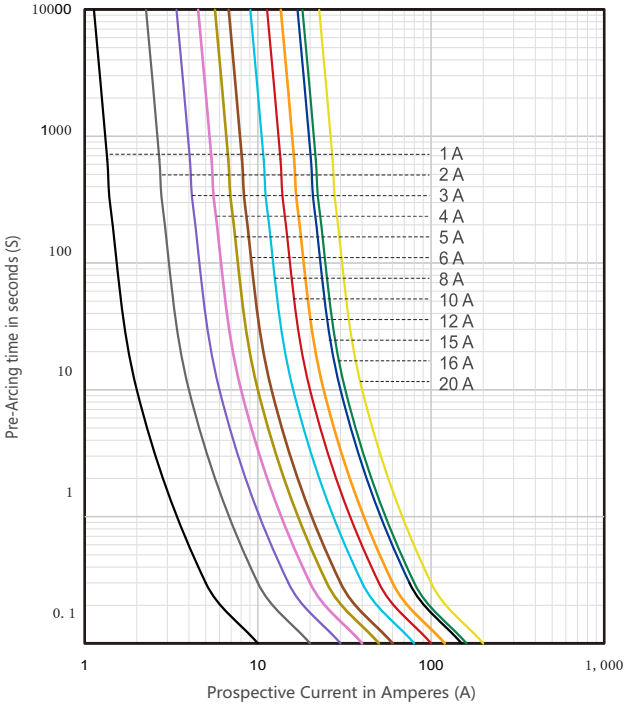


TIME CURRENT CURVE



TIME VS CURRENT CHARACTERISTIC

Standard	UL			IEC		
Rated Current	100%	135%	200%	100%	135%	145%
1-20 A	Temperature Stabilization	< 1 h	<4 min	Temperature Stabilization	>1 h	<1h

A94 gPV 1300Vdc/1500 Vdc Fuse 22x58 mm

DESCRIPTION

The Alder A94 gPV (Photovoltaic) fuse series is used in PV protection systems. This series can safely protect PV modules, inverters and conductors from reverse overcurrent conditions. This strong and durable series has both in-line and holder functionality with mutable terminal options. With up to 80A rated current, 10kA breaking capacity at 1300 - 1500 Vdc. This robust and durable fuse is a best seller among Alder products.

FEATURES

- 1500 Vdc, 22x58 mm PV fuse link with glass-fiber body
- Rated Current: 1-80 A
- Breaking Capacity: 10 kA at 1500 Vdc (1-65 A)
- 10 kA at 1300 Vdc (70 A, 80 A)
- Time Constant: 1-3 ms
- Special design with silver plated caps for high-power PV applications
- BH400, BH401 holders for DIN rail mounting
- Customizable for special applications

AGENCY INFORMATION

- Standard: UL 248-19, IEC 60269-6
- Approvals: UL (File: E490190)
- Manufactured under IATF 16949 quality system
- RoHS and REACH Compliant

APPLICATIONS

- PV combiner / Junction boxes
- Inverters
- Battery Charge Controllers

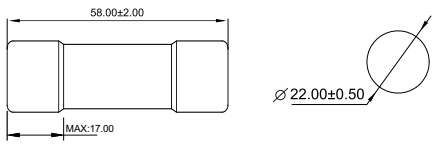
PART NUMBERING SYSTEM

A94 2800 b 00

- 00 — Supplementary Code: 00: Cartridge; 01: Central Mount; 02: Level Mount ;03:In-terminal(4AWG) 06:In-terminal(8AWG);07:In-terminal(10AWG) 08:In-terminal(6AWG);04:Central Mount 05:PCB Mount
- b — Voltage Code: 1500 Vdc
- 2800 — Ampere Code: See Table 1/2
- A94 — Product Series: A94

DIMENSIONS (mm)

A94xxxxb00



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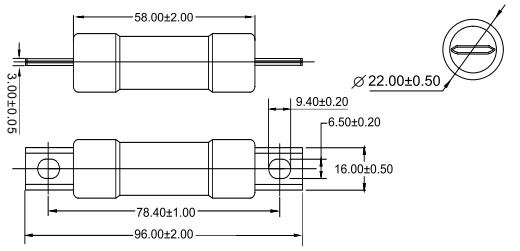

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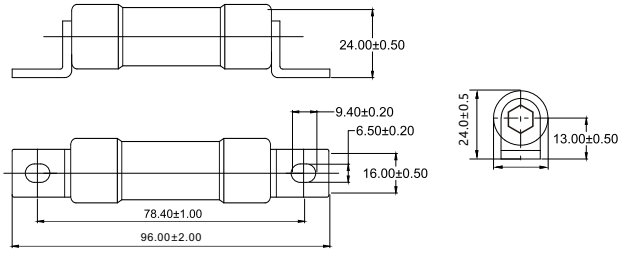

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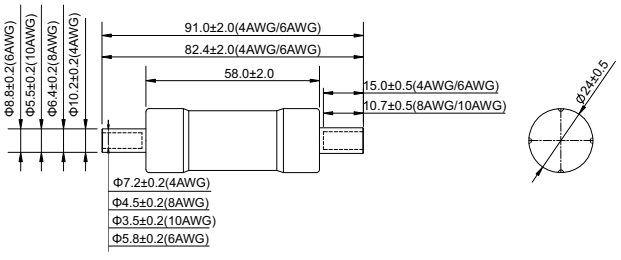

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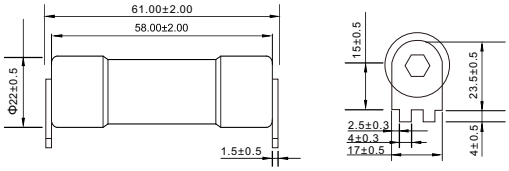

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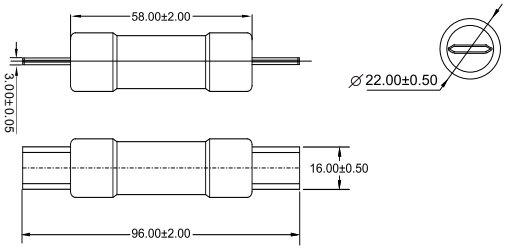


ELECTRICAL SPECIFICATIONS

Part Number			Rated Current	Ampere Code	Breaking Capacity	I²t (A²s)		Dissipation (W)		Certifications	
Cartridge	Central Mount	Level Mount				Pre-Arcing	Total	0.8 In	1.0 In	UL	TUV
A941100b00	A941100b01	A941100b02	1 A	1100	10 kA@1500 Vdc	20	110	0.2	0.3	●	●
A941200b00	A941200b01	A941200b02	2 A	1200		40	220	0.5	0.6	●	●
A941300b00	A941300b01	A941300b02	3 A	1300		60	330	0.5	0.6	●	●
A941400b00	A941400b01	A941400b02	4 A	1400		80	440	0.7	0.8	●	●
A941500b00	A941500b01	A941500b02	5 A	1500		100	550	0.7	0.8	●	●
A941600b00	A941600b01	A941600b02	6 A	1600		120	660	1.2	1.5	●	●
A941800b00	A941800b01	A941800b02	8 A	1800		160	880	1.2	1.5	●	●
A942100b00	A942100b01	A942100b02	10 A	2100		200	1100	1.5	1.9	●	●
A942120b00	A942120b01	A942120b02	12 A	2120		240	1320	2.0	2.5	●	●
A942150b00	A942150b01	A942150b02	15 A	2150		300	1650	2.9	3.6	●	●
A942160b00	A942160b01	A942160b02	16 A	2160		320	1760	3.9	4.8	●	●
A942200b00	A942200b01	A942200b02	20 A	2200		400	2200	4.2	5.2	●	●
A942250b00	A942250b01	A942250b02	25 A	2250		500	2750	5.1	6.3	●	●
A942300b00	A942300b01	A942300b02	30 A	2300		600	3300	5.1	6.3	●	●
A942320b00	A942320b01	A942320b02	32 A	2320		640	3520	6.0	7.5	●	●
A942350b00	A942350b01	A942350b02	35 A	2350		700	3850	6.0	7.5	●	●
A942400b00	A942400b01	A942400b02	40 A	2400		800	4400	7.2	9.0	●	●
A942450b00	A942450b01	A942450b02	45 A	2450		900	4950	7.2	9.0	●	●
A942500b00	A942500b01	A942500b02	50 A	2500		1000	5500	7.2	9.0	●	●
A942550b00	A942550b01	A942550b02	55A	2550		1100	6050	8.0	10.0	●	●
A942600b00	A942600b01	A942600b02	60A	2600		1200	6600	8.0	10.0	●	●
A942650b00	A942650b01	A942650b02	65 A	2650		1300	7150	9.5	12.0	●	●
A942700b00	A942700b01	A942700b02	70 A	2700	10 kA@1300 Vdc	1400	7700	9.5	12.0	●	●
A942800b00	A942800b01	A942800b02	80 A	2800		1600	8800	9.5	12.0	●	●

Table 1 Note: (1) DC cold resistances are measured at <10 % of rated current in ambient temperature of 25 °C
(2)Typical pre-arcing I²t measured at 10*In current
(3)●=Certification obtained. UL File number: E490190

ELECTRICAL SPECIFICATIONS

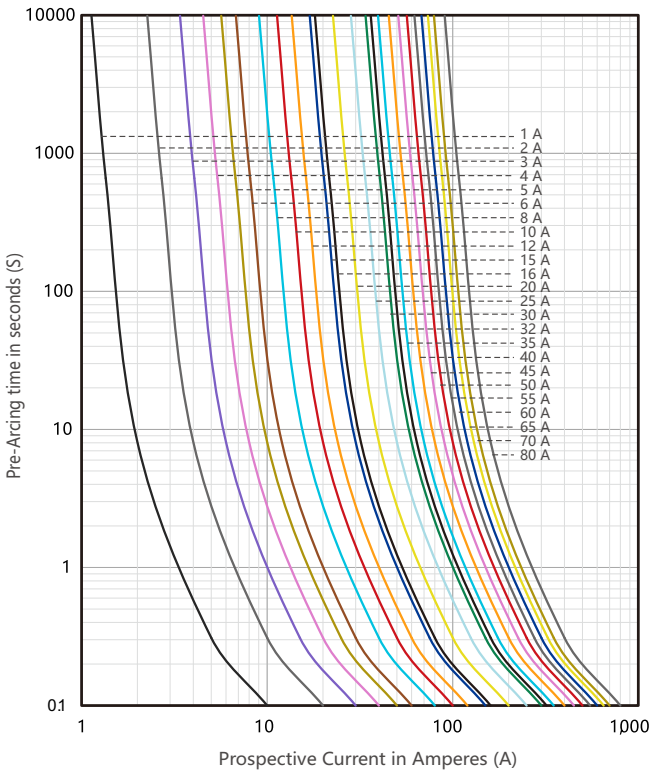
Part Number						Rated Current	Ampere Code	Breaking Capacity	I²t (A²s)		Dissipation (W)	
4AWG In-terminal	8AWG In-terminal	10AWG In-terminal	6AWG In-terminal	Central Mount	PCB Mount				Pre-Arcing	Total	0.8 In	1.0 In
-	A941100b06	A941100b07	-	A941100b04	A941100b05	1 A	1100	10 kA@ 1500 Vdc	20	110	0.2	0.3
-	A941200b06	A941200b07	-	A941200b04	A941200b05	2 A	1200		40	220	0.5	0.6
-	A941300b06	A941300b07	-	A941300b04	A941300b05	3 A	1300		60	330	0.5	0.6
-	A941400b06	A941400b07	-	A941400b04	A941400b05	4 A	1400		80	440	0.7	0.8
-	A941500b06	A941500b07	-	A941500b04	A941500b05	5 A	1500		100	550	0.7	0.8
-	A941600b06	A941600b07	-	A941600b04	A941600b05	6 A	1600		120	660	1.2	1.5
-	A941800b06	A941800b07	-	A941800b04	A941800b05	8 A	1800		160	880	1.2	1.5
-	A942100b06	A942100b07	-	A942100b04	A942100b05	10 A	2100		200	1100	1.5	1.9
-	A942120b06	A942120b07	-	A942120b04	A942120b05	12 A	2120		240	1320	2.0	2.5
-	A942150b06	A942150b07	-	A942150b04	A942150b05	15 A	2150		300	1650	2.9	3.6
-	A942160b06	A942160b07	-	A942160b04	A942160b05	16 A	2160		320	1760	3.9	4.8
-	A942200b06	A942200b07	-	A942200b04	A942200b05	20 A	2200		400	2200	4.2	5.2
-	A942250b06	A942250b07	A942250b08	A942250b04	A942250b05	25 A	2250		500	2750	5.1	6.3
A942300b03	A942300b06	A942300b07	A942300b08	A942300b04	A942300b05	30 A	2300		600	3300	5.1	6.3
A942320b03	A942320b06	A942320b07	A942320b08	A942320b04	A942320b05	32 A	2320		640	3520	6.0	7.5
A942350b03	A942350b06	A942350b07	A942350b08	A942350b04	A942350b05	35 A	2350		700	3850	6.0	7.5
A942400b03	A942400b06	-	A942400b08	A942400b04	A942400b05	40 A	2400		800	4400	7.2	9.0
A942450b03	A942450b06	-	A942450b08	A942450b04	A942450b05	45 A	2450		900	4950	7.2	9.0
A942500b03	A942500b06	-	A942500b08	A942500b04	A942500b05	50 A	2500		1000	5500	7.2	9.0
A942550b03	A942550b06	-	A942550b08	A942550b04	A942550b05	55A	2550		1100	6050	8.0	10.0
A942600b03	-	-	A942600b08	A942600b04	A942600b05	60A	2600		1200	6600	8.0	10.0
A942650b03	-	-	A942650b08	A942650b04	A942650b05	65 A	2650		1300	7150	9.5	12.0
A942700b03	-	-	A942700b08	A942700b04	A942700b05	70 A	2700	10 kA@ 1300 Vdc	1400	7700	9.5	12.0
A942800b03	-	-	A942800b08	A942800b04	A942800b05	80 A	2800		1600	8800	9.5	12.0

Table 1 Note: (1) DC cold resistances are measured at <10 % of rated current in ambient temperature of 25 °C
(2)Typical pre-arcing I²t measured at 10*In current

TIME VS CURRENT CHARACTERISTIC

Standard	UL			IEC		
Rated Current	100%	135%	200%	100%	135%	145%
1-80 A	Temperature Stabilization	< 1 h	< 4 min	Temperature Stabilization	>1 h	< 1h

TIME CURRENT CURVE



A95 gPV 1500 Vdc Fuse 24x65 mm

DESCRIPTION

The Alder A95 gPV (Photovoltaic) fuse series is designed for PV protection systems. This series can safely protect PV modules, inverters and conductors from reverse overcurrent conditions. The Adler A95 fuse series has both in-line and in-holder functionality and mutable terminal designs.
As PV systems have grown in size, so have the corresponding voltage requirements. With high Amp ratings the A95 is a leader in its class.
Suitable for commercial and PV farm application customizable for specific applications.

FEATURES

- 1500 Vdc, 24x65 mm PV fuse link with glass-fiber body
- Rated Current: 35-100A
- Breaking Capacity: 30 kA at 1500 Vdc
- Time Constant: 1-3 ms
- Special design with silver plated caps for high-power PV applications
- Customizable for special applications
- BH500, BH501 holders for DIN rail mounting

AGENCY INFORMATION

- Comply to: UL 248-19
- Approvals: IEC 60269-6
- Manufactured under IATF 16949 quality system
- RoHS and REACH Compliant

APPLICATIONS

- PV combiner/ Junction boxes
- Inverters
- Battery Charge Controllers

PART NUMBERING SYSTEM

A95 3100 b 00

- 00 — Supplementary Code: 00: Cartridge; 01: 2 AWG In-terminal; 02: 4 AWG In-terminal; 03: 6 AWG In-terminal;
- b — Voltage Code: 1500 Vdc
- 3100 — Ampere Code: See Table 1
- A95 — Product Series: A95

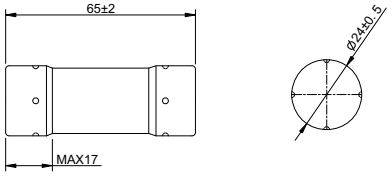
ELECTRICAL SPECIFICATIONS

Part Number				Rated Current	Ampere Code	Breaking Capacity	I²t (A²s)		Dissipation (W)		Certifications	
Cartridge	2AWG In-terminal	4AWG In-terminal	6AWG In-terminal				Pre-Arcing	Total	0.8 I_n	1.0 I_n	UL	TUV
A952350b00	-	A952350b02	A952350b03	35 A	2350	30 kA@ 1500 Vdc	1600	5100	6	7.5	●	●
A952400b00	-	A952400b02	A952400b03	40 A	2400		3000	6500	6.6	8.2	●	●
A952450b00	-	A952450b02	A952450b03	45A	2450		4500	8500	6.8	8.5	●	●
A952500b00	-	A952500b02	A952500b03	50 A	2500		7000	14500	7.2	9	●	●
A952550b00	-	A952550b02	A952550b03	55 A	2550		8500	15500	8	10	●	●
A952600b00	A952600b01	A952600b02	A952600b03	60 A	2600		10500	19000	8.8	11	●	●
A952630b00	A952630b01	A952630b02	A952630b03	63 A	2630		11000	20000	9.0	11.2	●	●
A952650b00	A952650b01	A952650b02	A952650b03	65 A	2650		12000	22000	9.6	12	●	●
A952700b00	A952700b01	A952700b02	A952700b03	70 A	2700		16500	29000	10.4	13	●	●
A952800b00	A952800b01	A952800b02	A952800b03	80 A	2800		20000	33000	12.8	16	●	●
A952900b00	A952900b01	A952900b02	-	90 A	2900		25000	39000	13.6	17	●	●
A953100b00	A953100b01	A953100b02	-	100 A	3100		32000	90000	14.4	18	●	●

Table 1 Note:(1) Operating temperature range: -40℃ -90℃.
(2)●=Certification obtained.

DIMENSIONS (mm)

A95xxxxb00



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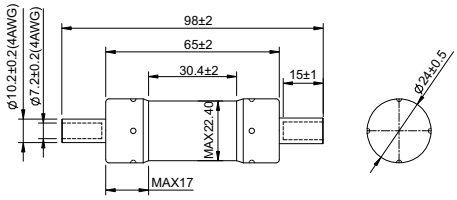

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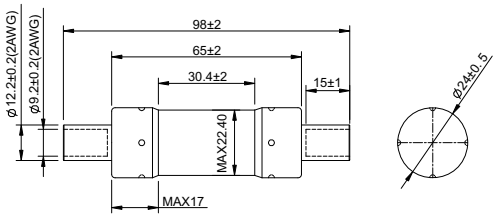

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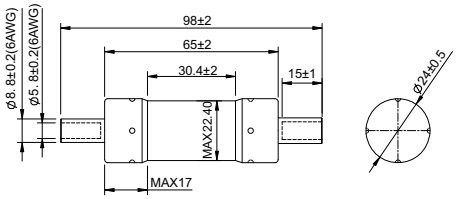
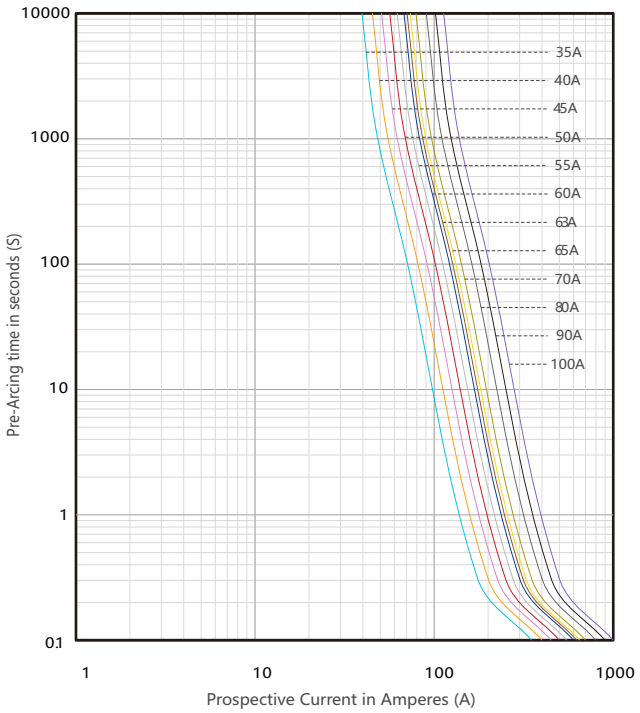


TIME VS CURRENT CHARACTERISTIC

Standard	UL			IEC		
Rated Current	100%	135%	200%	100%	135%	145%
35-100 A	Temperature Stabilization	< 1 h	< 4 min	Temperature Stabilization	>1 h	< 1h

TIME CURRENT CURVE



A65 gPV 1500 Vdc Fuse 14x85 mm

DESCRIPTION

The Adler A65 fuse series is designed and engineered with the best materials to ensure fast response times, excellent heat dissipation and high breaking capacity. Designed and tested for use in PV Combiner Boxes, Inverters and Battery Charge Controller applications.
With current ratings from 10-50A and a breaking capacity of 50kA at 1500Vdc.

FEATURES

- 1500 Vdc, 14x85 mm PV fuse link with ceramic body
- Rated Current: 10-50 A
- Breaking Capacity: 50 kA at 1500 Vdc
- Time Constant: 1-3 ms
- Special design with silver plated caps for high-power PV applications
- Customizable for special application
- BH300-01,BH300-02 holders for DIN rail mounting

APPLICATIONS

- PV combiner/ junction boxes
- Inverters
- Battery Charge Controllers

AGENCY INFORMATION

- Comply to:UL 248-19 (File: E490190)
- Approvals: IEC 60269-6/GBT 13539.6
- Manufactured under IATF 16949 quality system
- RoHS and REACH Compliant

PART NUMBERING SYSTEM

A65 2100 b 00

- 00: Supplementary Code:
  00: Clip Mount;
  01: 10/12 AWG In-terminal;
  02: 8AWG In-terminal;
- b: Voltage Code: 1500 Vdc
- 2100: Ampere Code: See Table 1
- A65: Product Series: A65

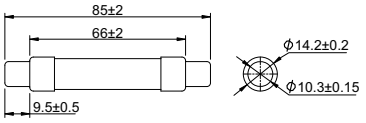
ELECTRICAL SPECIFICATIONS

Part Number			Rated Current	Ampere Code	Breaking Capacity	I²t (A²s)		Dissipation (W)		Certifications	
Clip Mount	10/12AWG In-terminal	8AWG In-terminal				Pre-Arcing	Total	0.8 I_n	1.0 I_n	UL	TUV
A652100b00	A652100b01	A652100b02	10 A	2100	30 kA@ 1500 Vdc	200	750	3.36	4.2	●	●
A652110b00	A652110b01	A652110b02	11 A	2110		220	760	3.52	4.4	●	●
A652120b00	A652120b01	A652120b02	12 A	2120		240	765	3.76	4.7	●	●
A652150b00	A652150b01	A652150b02	15 A	2150		300	800	4.40	5.5	●	●
A652160b00	A652160b01	A652160b02	16 A	2160		310	810	4.56	5.7	●	●
A652180b00	A652180b01	A652180b02	18 A	2180		350	830	4.96	6.2	●	●
A652200b00	A652200b01	A652200b02	20 A	2200		400	860	5.44	6.8	●	●
A652250b00	A652250b01	A652250b02	25 A	2250		520	930	5.84	7.3	●	●
A652300b00	A652300b01	A652300b02	30 A	2300		630	1050	6.24	7.8	●	●
A652320b00	A652320b01	A652320b02	32 A	2320		780	2550	6.40	8.0	●	●
A652350b00	A652350b01	A652350b02	35 A	2350		1050	4.5K	6.6	8.3	●	●
A652400b00	-	A652400b02	40 A	2400		3.95K	8.3K	7.0	8.8	●	●
A652450b00	-	A652450b02	45 A	2450		4.9K	12K	7.5	9.4	●	●
A652500b00	-	A652500b02	50 A	2500		5.8K	15.9K	8.0	10	●	●

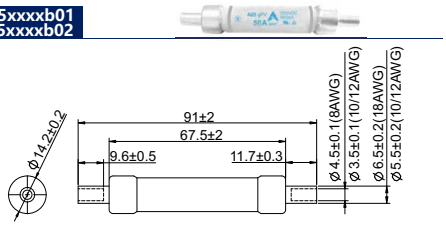
Table 1 Note:(1) ●=Certification obtained.

DIMENSIONS (mm)

A65xxxxb00



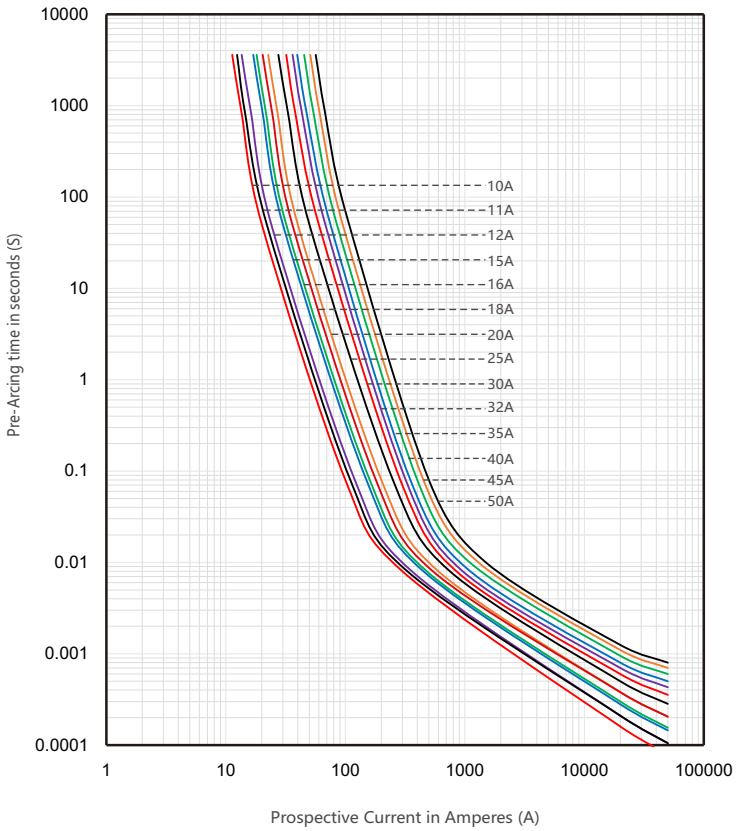
A65xxxxb01
A65xxxxb02



TIME VS CURRENT CHARACTERISTIC

Standard	UL			IEC		
Rated Current	100%	135%	200%	100%	135%	145%
10-50 A	Temperature Stabilization	< 1 h	< 4 min	Temperature Stabilization	>1 h	< 1h

TIME CURRENT CURVE



A96 gPV 2000 Vdc Fuse 22x85 mm

DESCRIPTION

The Alder A96 gPV (Photovoltaic) fuse series is used in PV protection systems. This series can safely protect PV modules, inverters and conductors from reverse overcurrent conditions. This strong and durable series has both in-line and holder functionality with mutable terminal options. With up to 60A rated current, 30kA breaking capacity at 2000Vdc. .

FEATURES

- 2000 Vdc, 22x85 mm PV fuse link with glass-fiber body
- Rated Current: 10-60A
- Breaking Capacity: 30 kA at 2000 Vdc
- Time Constant: 1-3 ms
- Special design with silver plated caps for high-power PV applications
- Customizable for special applications

AGENCY INFORMATION

- Ref. to:UL 248-19 IEC 60269-6
- Manufactured under IATF 16949 quality system
- RoHS and REACH Compliant

APPLICATIONS

- PV combiner / junction boxes
- Inverters
- Battery Charge Controllers

PART NUMBERING SYSTEM

A96 3100 b 01

- 01: Supplementary Code: 00:Cartridge; 01: 8 AWG In-terminal; 02: Level Mount;
- b: Voltage Code: 2000 Vdc
- 3100: Ampere Code: See Table 1
- A96: Product Series: A96

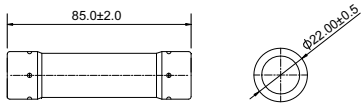
ELECTRICAL SPECIFICATIONS

Part Number			Rated Current	Ampere Code	Breaking Capacity
Cartridge	8AWG In-terminal	LevelMount			
A962100b00	A962100b01	A962100b02	10 A	2100	30 kA@ 2000 Vdc
A962150b00	A962150b01	A962150b02	15A	2150	
A962200b00	A962200b01	A962200b02	20A	2200	
A962300b00	A962300b01	A962300b02	25A	2250	
A962350b00	A962350b01	A962350b02	30 A	2300	
A962400b00	A962400b01	A962400b02	40 A	2400	
A962450b00	A962450b01	A962450b02	45A	2450	
A962500b00	A962500b01	A962500b02	50 A	2500	
A962500b00	A962500b01	A962500b02	55 A	2550	
A962600b00	A962600b01	A962600b02	60 A	2600	

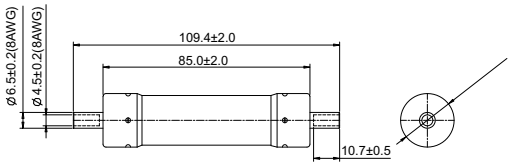
Table 1 Note: Operating temperature range: -40℃ -90℃.

DIMENSIONS (mm)

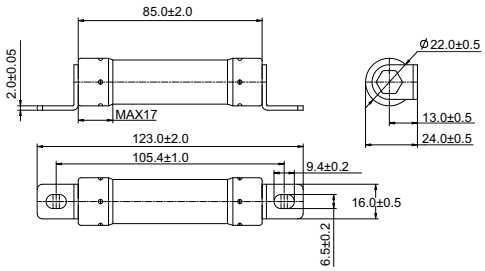
A96xxxxb00



A96xxxxb01



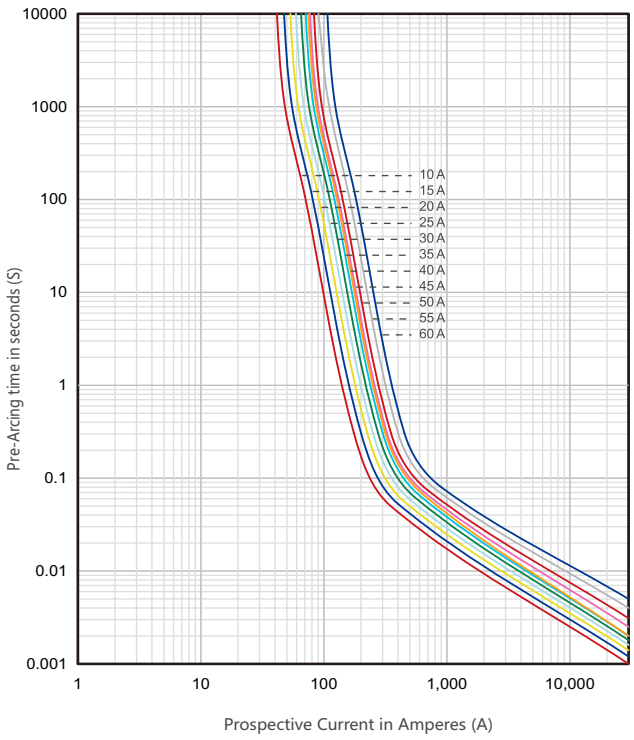
A96xxxxb00



TIME VS CURRENT CHARACTERISTIC

Standard	UL			IEC		
Rated Current	100%	135%	200%	100%	135%	145%
10-60 A	Temperature Stabilization	< 1 h	< 4 min	Temperature Stabilization	>1 h	< 1h

TIME CURRENT CURVE



AX6 gPV 1500 Vdc Fuse

DESCRIPTION

Adler AX6 series gPV fuses has been designed to meet the emerging circuit protection needs for 1500V photovoltaic systems. Durability is assured with a strong ceramic body and silver copper alloy end bells. Suitable for PV inverter input protection and PV MPPT protection. The AX6 series is primally for commercial usage and PV farm customizable for specific applications, up to 1500 Vdc in ratings from 80A to 200A.

FEATURES

- Reliable clearing of DC fault currents
- High cycling performance
- Low watt losses
- Ultra-compact size and power density
- High breaking capacity to 10kA
- Time constants: 1-3ms
- Operation as low as 200% In overload protection
- Full coverage of battery module current
- QR code marks on each fuse for traceability
- BH1XL,BH03L holders for DIN rail mounting

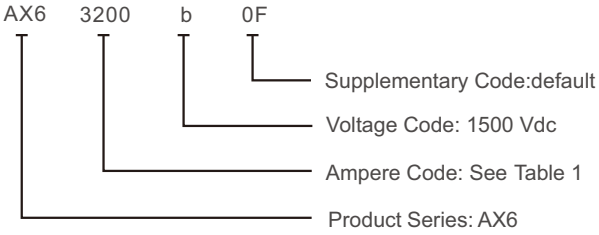
AGENCY INFORMATION

- Designed to IEC 60269-6
- Manufactured under IATF 16949 quality system
- RoHS and REACH Compliant

APPLICATIONS

- Main Line Protection
- Compact NH XL sizes
- Low watt loss design
- 1500 V dc rating for high efficiency designs
- Inverter protection

PART NUMBERING SYSTEM

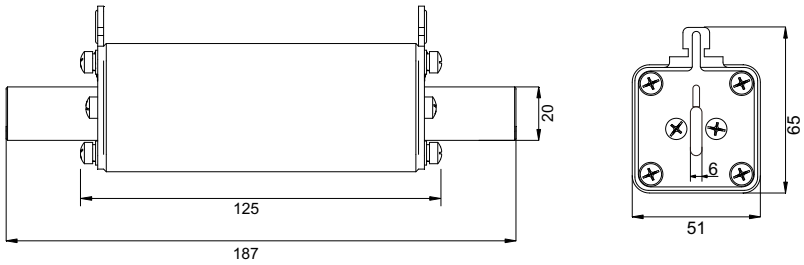


ELECTRICAL SPECIFICATIONS

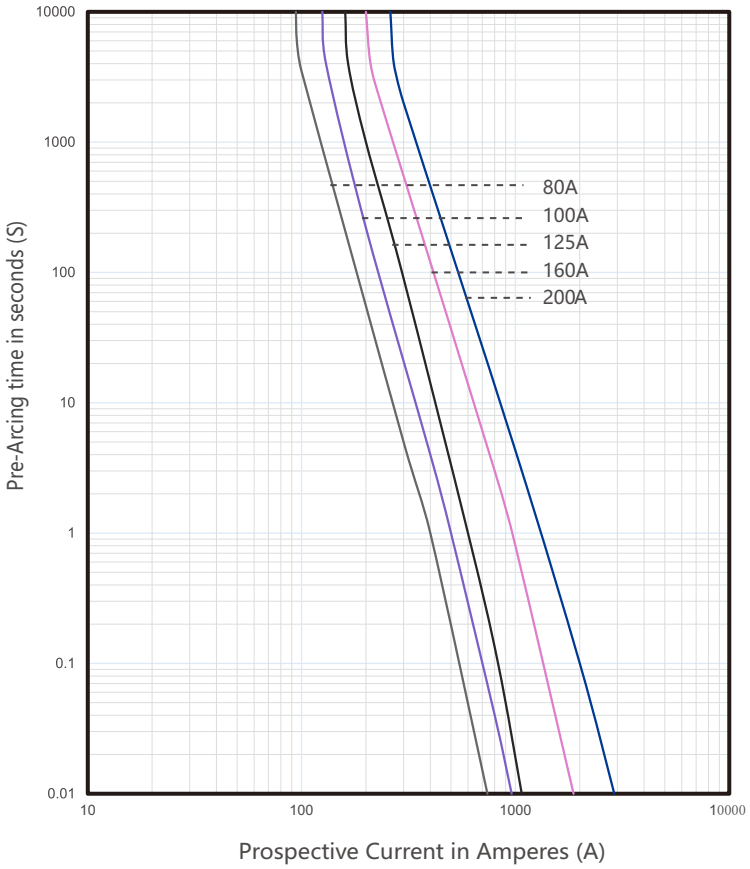
Size (mm)	Part number	Rated Current	Ampere Code	Rated Voltage	Breaking Capacity	$I^2t(A^2s)$		Dissipation (W)		Certifications
					Self-Cerrified	Pre-Arcing	Total	0.7 I n	1.0 I n	UL
125x51	AX62800b0F	80 A	2800	1500 Vdc	10kA@1500 Vdc	1000	4000	9	22	●
	AX63100b0F	100 A	3100	1500 Vdc	10kA@1500 Vdc	1300	6200	11	24	●
	AX63125b0F	125 A	3125	1500 Vdc	10kA@1500 Vdc	2050	9500	12	27	●
	AX63160b0F	160 A	3160	1500 Vdc	10kA@1500 Vdc	4400	21100	15	33	●
	AX63200b0F	200A	3200	1500 Vdc	10kA@1500 Vdc	9600	46100	16	37	●

Table 1 Note : (1)●=Certification obtained.

DIMENSIONS (mm)



TIME CURRENT CURVE



AX7 gPV 1000/1500 Vdc Fuse

DESCRIPTION

The AX7 gPV (Photovoltaic) series has been designed to meet the emerging circuit protection needs for 1000V / 1500V photovoltaic systems. Durability is assured with a strong ceramic body and silver copper alloy end bells. Suitable for PV main line, inverter and power storage systems protection.

The AX7 series is primally for commercial usage and PV farm customizable for specific applications.

FEATURES

- 1000 / 1500 Vdc, PV fuse link
- Rated Current: 125-250 A
- Rated Breaking Capacity: 10 kA
  (Self - Certificated : 50 kA)
- Time Constant: 1-3 ms
- Approvals: UL (File: E490190)
- BH1XL/BH03L holders for DIN rail mounting

APPLICATIONS

- Main Line Protection
- Compact NH XL sizes
- Low watt loss design
- 1500 V dc rating for high efficiency designs
- Inverter protection

AGENCY INFORMATION

- Designed to UL 248-19
- UL certified (file: E490190)
- Manufactured under IATF 16949 quality system
- RoHS and REACH Compliant

PART NUMBERING SYSTEM

AX7 3160 b 00

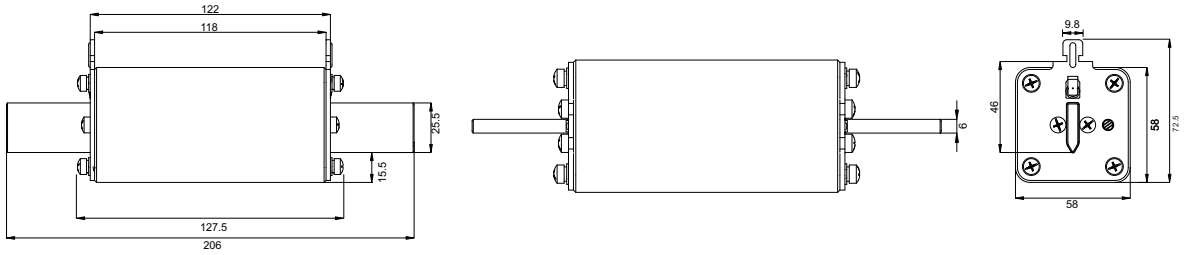
- 00 — Supplementary Code: default
- b — Voltage Code: 7: 1000 V; b: 1500 V
- 3160 — Ampere Code: See Table 1
- AX7 — Product Series: AX7

ELECTRICAL SPECIFICATIONS

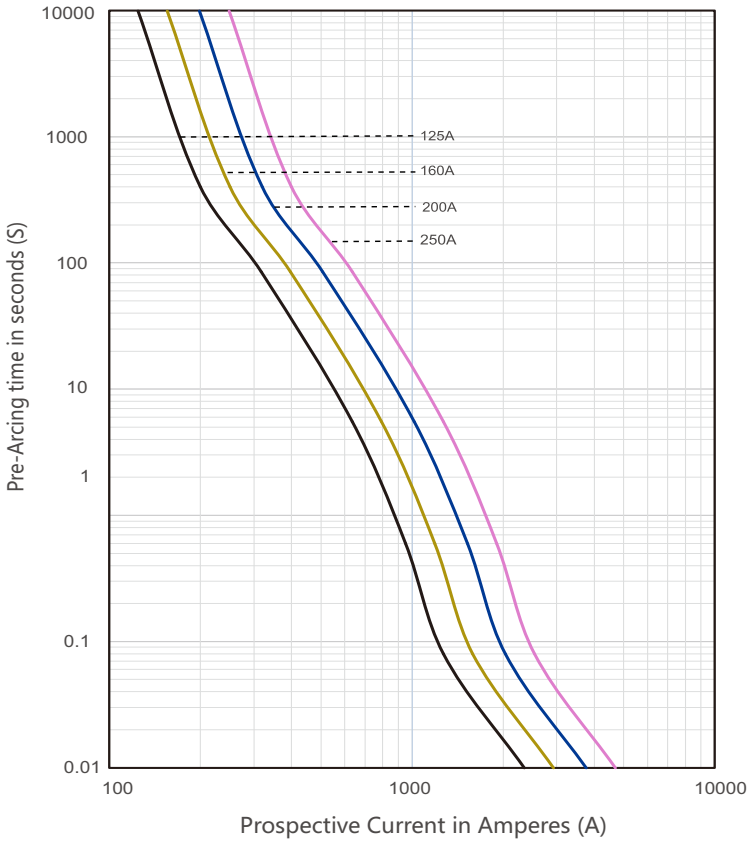
Part number	Rated Current	Ampere Code	Breaking Capacity	$I^2t(A^2s)$		Dissipation (W)		Certifications
				Pre-Arcing	Total	80%I n	100%I n	UL
AX73125700	125 A	3125	10 kA@1000 Vdc	1975.2	12516	18.4	32.8	●
AX73160700	160 A	3160		3333.6	20985.6	22.4	38.4	●
AX73200700	200 A	3200		3340	23404	25	45	●
AX73250700	250 A	3250		8547	57820	35.8	70.2	●
AX73125B00	125 A	3125	10kA@1500Vdc	2469	15645	23	41	●
AX73160B00	160 A	3160		4167	26232	28	48	●
AX73200B00	200 A	3200		9983	60469	32	57	●
AX73250B00	250 A	3250		18078	101563	39	68	●

Table 1 Note:●=Certification obtained. UL File number: E490190

DIMENSIONS (mm)



TIME CURRENT CURVE



AX8 gPV 1500 Vdc Fuse

RoHS CE

DESCRIPTION

Adler AX8 series gPV fuses are specially engineered and tested to provide best-in-class protection performance in protecting photovoltaic strings or arrays, photovoltaic inverters and other devices. Up to 1500 Vdc in ratings from 450A to 630A.

FEATURES

- Reliable clearing of DC fault currents
- High cycling performance
- Low watt losses
- Ultra-compact size and power density
- High breaking capacity to 50kA
- Operation as low as 200% In overload protection
- Full coverage of battery module current
- QR code marks on each fuse for traceability

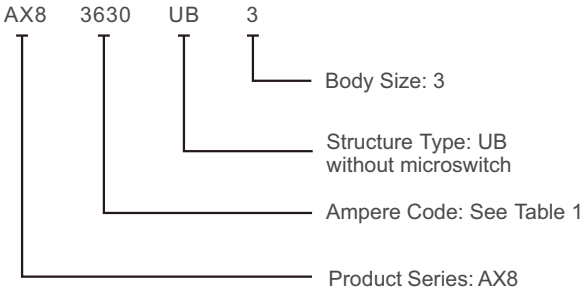
AGENCY INFORMATION

- Designed to IEC60269-6,UL248-19
- Manufactured under IATF 16949 quality system
- RoHS and REACH Compliant

APPLICATIONS

- Main Line Protection
- Compact NH XL sizes
- Low watt loss design
- 1500 VDC rating for high efficiency designs
- Inverter protection

PART NUMBERING SYSTEM



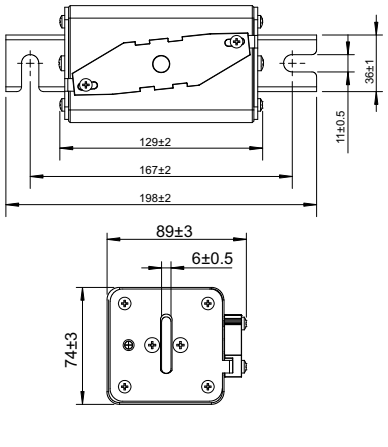
ELECTRICAL SPECIFICATIONS

Size	Part number			Rated Current	Ampere Code	Rated Voltage	Breaking Capacity	Pre-arcing I^2t	Clearing I^2t	Watt Loss (W)	Certifications
(mm)	Din	Bolted	Flush				Self-Certified	(A^2S)	(A^2S)	1.0In	UL
74x74 x118	AX83450DB3	AX83450UB3	AX83450FB3	450A	3450	1500 Vdc	50kA	160000	481600	80	○
	AX83500DB3	AX83500UB3	AX83500FB3	500A	3500	1500 Vdc	50kA	205000	617100	86	○
	AX83500DB3	AX83500UB3	AX83500FB3	550A	3630	1500 Vdc	50kA	268000	806600	94	○
	AX83630DB3	AX83630UB3	AX83630FB3	630A	3630	1500 Vdc	50kA	375000	1132500	100	○

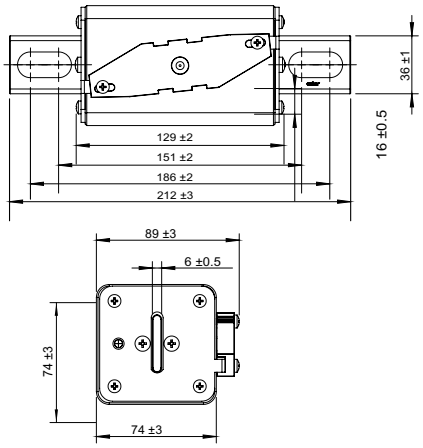
Table1 Note:(1)Time constant: 1~3ms
(2)○ --- UL certification in process

DIMENSIONS (mm)

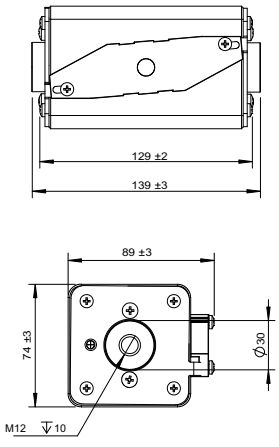
AX8xxxxDB3



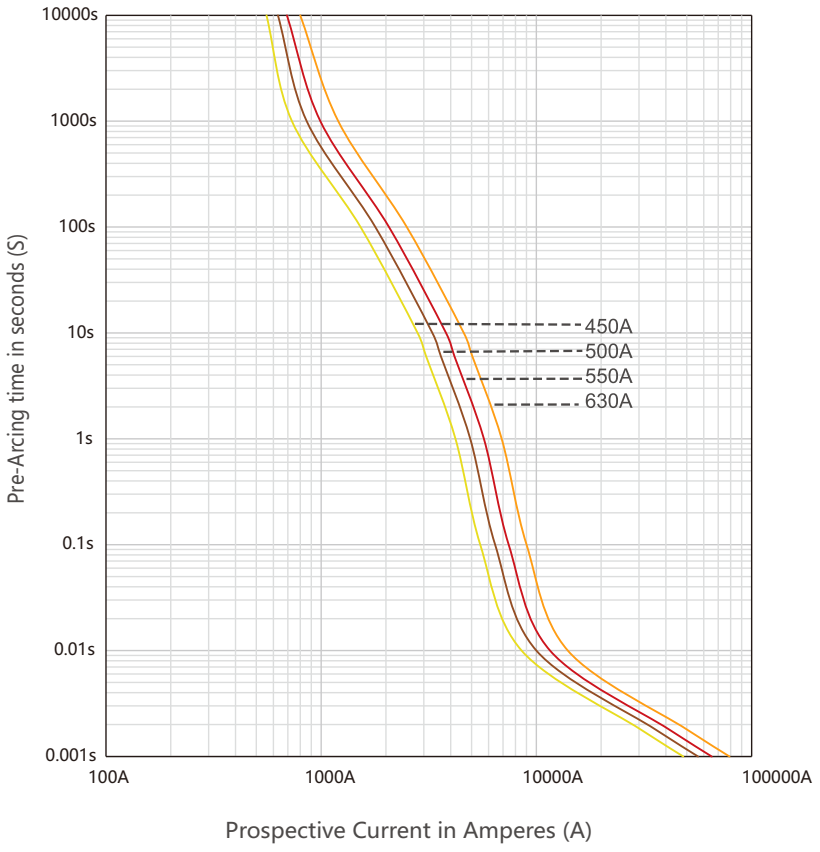
AX8xxxxUB3



AX8xxxxFB3



TIME CURRENT CURVE



AXE gPV 1500 Vdc Fuse

RoHS CE

DESCRIPTION

Adler AXE series gPV fuses are specially engineered and tested to provide best-in-class protection performance in protecting photovoltaic strings or arrays photovoltaic inverters and other devices. Up to 1500Vdc in ratings from 125A to 400A.

FEATURES

- Reliable clearing of DC fault currents
- High cycling performance
- Low watt losses
- High Breaking Capacity to 50kA
- Time Constant: 1~3ms
- Class Type: gPV
- AXE series PN in this datasheet is without microswitch
  Optional microswitch PN: MS0003

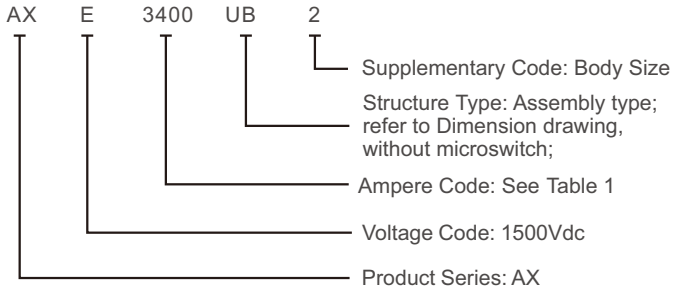
AGENCY INFORMATION

- Ref. standard: IEC 60269 / GB 13539
- UL Certification – (In Progress)
- RoHS and REACH Compliant

APPLICATIONS

- Photovoltaic string and array protection
- Inverter protection

PART NUMBERING SYSTEM

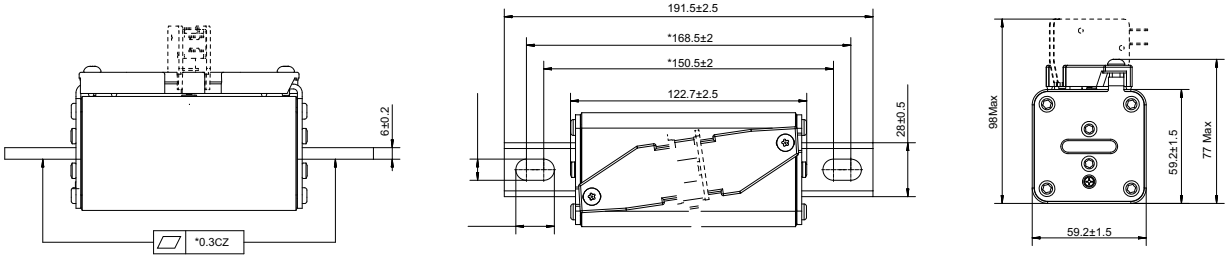


ELECTRICAL SPECIFICATIONS

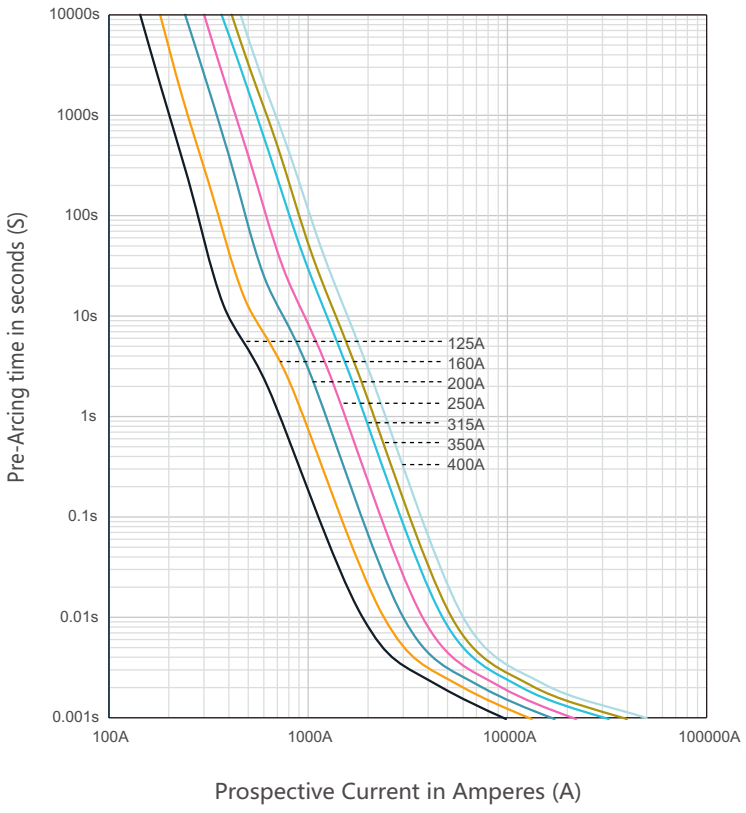
Case Size	Part Number	Rated Current	Ampere Code	Rated Voltage	Breaking Capacity	$I^2t(A^2S)$	
	Bolted				Self-Certified	Pre-arcing	Total
AXE 2#	AXE3125UB2	125A	3125	1500 Vdc	50kA	5400	38900
	AXE3160UB2	160A	3160	1500 Vdc	50kA	7600	54500
	AXE3200UB2	200A	3200	1500 Vdc	50kA	9900	70900
	AXE3250UB2	250A	3250	1500 Vdc	50kA	17600	126000
	AXE3315UB2	315A	3315	1500 Vdc	50kA	31300	224100
	AXE3350UB2	350A	3350	1500 Vdc	50kA	44200	316000
	AXE3400UB2	400A	3400	1500 Vdc	50kA	64500	500000

Table1

DIMENSIONS (mm)



TIME CURRENT CURVE



ASPD 1000 Vdc PV Surge Protection Device

RoHS CE

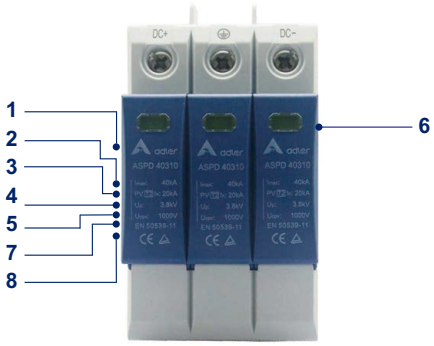
FEATURES:

- Type 2 DC power surge protector for PV systems
- Integrated status indicator window
- Pre wired complete modular unit (consists of base unit and replaceable protection modules)
- Maintenance-free, easily replaceable protection modules
- High energy MOV's response time less than 25 Nano-seconds
- Optional remote signal contacts for monitoring device (floating changeover contacts FM can be installed)
- DIN Rail mounting TH35- 7.5 / DIN35
- Compatible with EN 50539-11

PRODUCT SPECIFICATIONS

ASPD PV DC Surge Protection Device		
Poles		3
Standard		IEC61643-31
Electrical Characteristics		
Category IEC / EN		Type 2
Max Continuous Operational Voltage	U_{CPV}	1000 VDC
Nominal Discharge Current	In(8/20)μs	20 kA
Maximum Discharge Current	Imax(8/20)μs	40 kA
Voltage Protection Level Up	Up	≤3.8 kV
Response Time		≤25 ns
Contol and Indication		
Operating State/fault Indication		Green/Red
Replaceable Plug in type Protection Module		■
Remote Signalling Contact (Optional)	Max. Working Voltage(V)	30 VDC
	Max. Working Current	1 A
Connection And Installation		
Wire	Hard cable mm^2	4-25
	Flexible cable mm^2	4-16
Terminal Screws		M5
Torque(Nm)	Main Circuit	2.5
	Remote Contact	0.25
Degree of Protection		IP20
Installation Environment		
Operating Temperature Range (TU)		-40°C to +80°C
For Mounting on		TH35-7.5/DIN35
Relative Humidity		30% to 90%
Weight kg		0.36

PRODUCT ARCHITECTURE



1 Brand
2 Max. Discharge Current I_{max}
3 Nominal Discharge Current I_n
4 Voltage Protection Level U_p
5 Max. Continuous Operating Voltage U_{cpv}
6 Indicator
7 Standard Code
8 Certificate Symbol

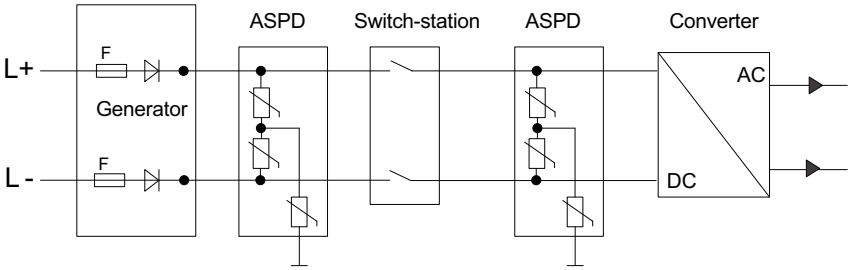
Model Numbering Definitions

ASPD	40	3	10	01
Product code	Max. discharge current	Poles	Rated Voltage (*100)	With remote signal contact
PV DC Surge Protection Device	40 kA	3P	1000 V	01: With Remote signal contact 00: Without contact

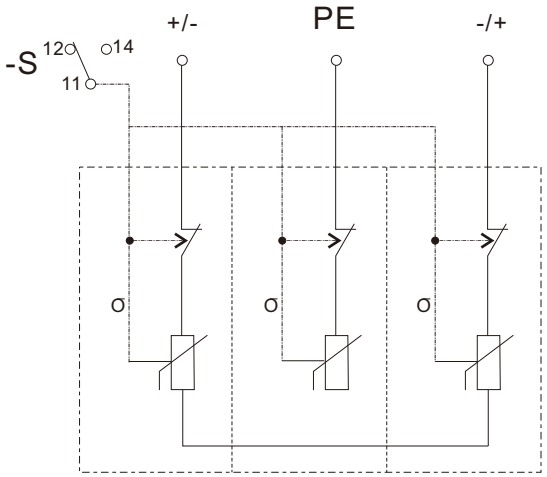
APPLICATION

ADLER's ASPD Series PV DC Surge Protection Devices are designed and manufactured complying to PV standard IEC 61643-31. It is widely used in PV dc combiner boxes, inverters, controllers and dc cabinets. With a rated voltage of 1000 Vdc and a maximum discharge current of 40 kA, the integrated high-energy varistor provides highly effective protection against lightning and surge voltages.

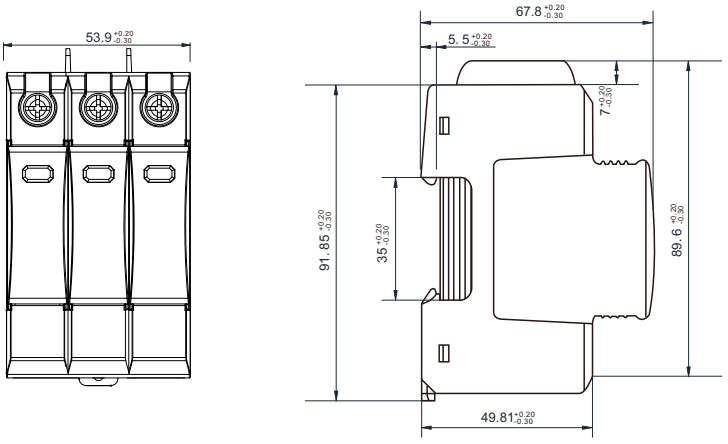
CONNECTION DIAGRAM



ELECTRICAL PRINCIPLE



DIMENSIONS (mm)



ASPD 1500 Vdc PV Surge Protection Device

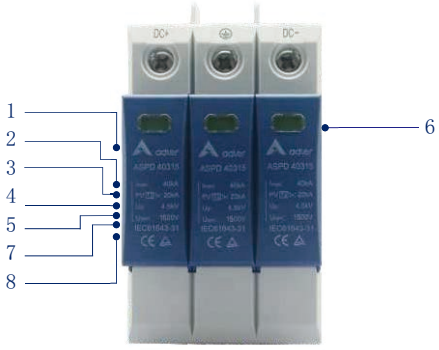
FEATURES:

- Type 2 DC power surge protector for PV systems
- Integrated status indicator window
- Pre wired complete modular unit (consists of base unit and replaceable protection modules)
- Maintenance-free, easily replaceable protection modules
- High energy MOV's response time less than 25 Nano-seconds
- Optional remote signal contacts for monitoring device (floating changeover contacts FM can be installed)
- DIN Rail mounting TH35- 7.5 / DIN35
- Compatible with IEN 61643-31

PRODUCT SPECIFICATIONS

ASPD PV DC Surge Protection Device		
Poles		3
Standard		IEC61643-31
Electrical Characteristics		
Maximum operational continuous voltage	U_{CPV}	1500 VDC
Nominal Discharge Current	In(8/20)μs	20 kA
Maximum Discharge Current	Imax(8/20)μs	40 kA
Voltage Protection Level Up	Up	≤4.5 kV
Response Time		≤25 ns
Thermal Protection Function		Yes
Remote Signal Output Function		Yes
Mode of Protection		+/PE, -/PE, +/-
Connection And Installation		
Wire	Hard cable mm^2	4-25
	Flexible cable mm^2	4-16
Terminal Screws		M5
Torque(Nm)	Main Circuit	2.5
	Remote Contact	0.25
Degree of Protection		IP20
Installation Environment		
Operating Temperature		-40°C to +80°C
Humidity		5% to 95%
Air Pressure		70 - 106 KPA

PRODUCT ARCHITECTURE



1 Brand
2 Max. Discharge Current Imax
3 Nominal Discharge Current In
4 Voltage Protection Level Up
5 Max. Continuous Operating Voltage U_{cpv}
6 Indicator
7 Standard Code
8 Certificate Symbol

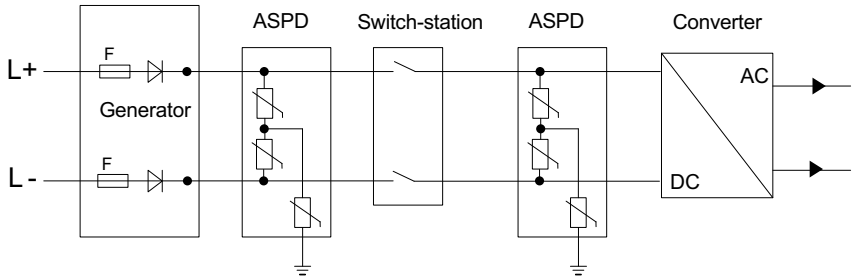
MODEL NUMBERING DEFINITIONS

ASPD	40	3	15	01
Product code	Max. discharge current	Pole	Rated voltage (*100)	With remote signal contact
PV DC Surge Protection Device	40 kA	3P	1500 V	01: With Remote signal contact 00: Without contact

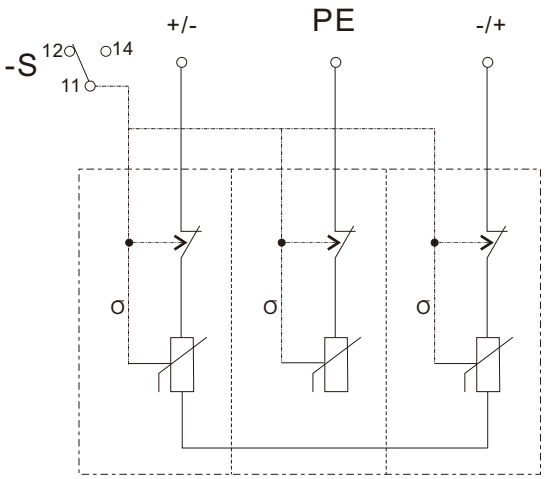
APPLICATION

ADLER's ASPD Series PV DC Surge Protection Devices are designed and manufactured complying to PV standard IEC 61643-31. It is widely used in PV dc combiner boxes, inverters, controllers and dc cabinets. With a rated voltage of 1500 Vdc and a maximum discharge current of 40 kA, the integrated high-energy varistor provides highly effective protection against lightning and surge voltages.

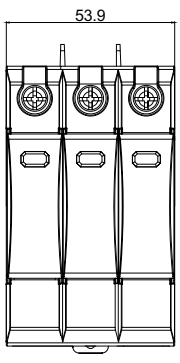
CONNECTION DIAGRAM

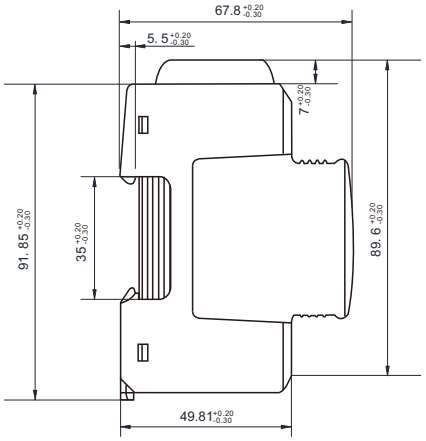


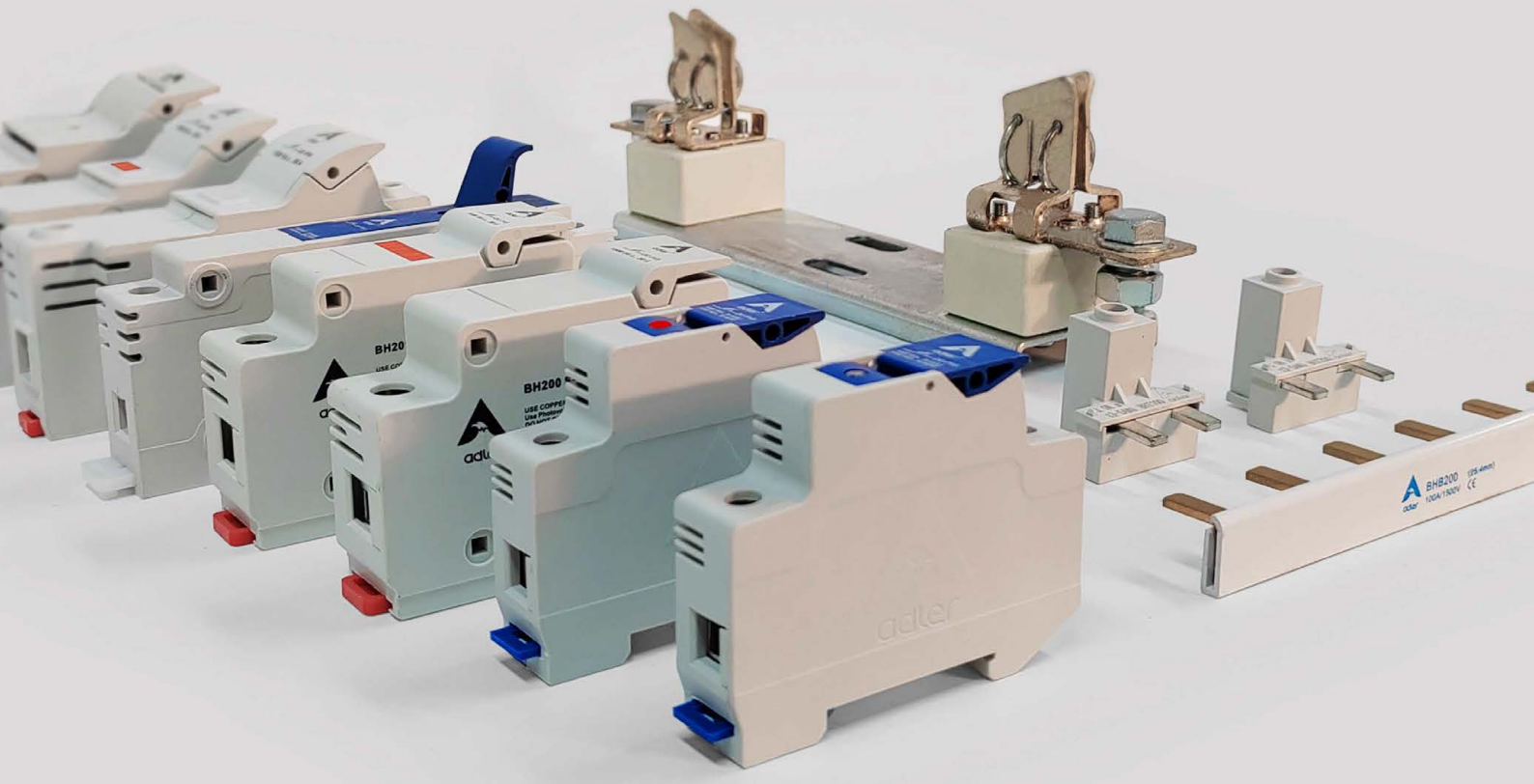
ELECTRICAL PRINCIPLE



DIMENSIONS (mm)







4 Photovoltaic System Components

- PV Fuse Holders and Accessories

BH100-01 1000 /1100 Vdc Fuse Holder

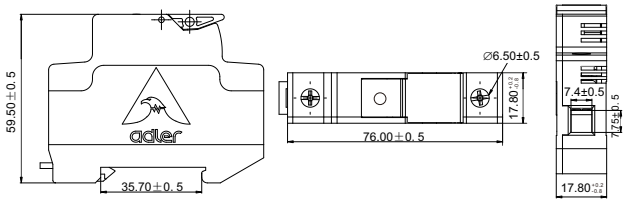
DESCRIPTION:

The BH100-01 touch safe holder are designed for 10x38 mm Cartridge midget fuses, designed for use with photovoltaic equipment.

SPECIFICATIONS:

- Rated Voltage: 1000 Vdc / 1100 Vdc
- Rated Current: up to 30A / 32A
- Short Circuit Current Rating (SCCR):
  DC 30kA@1000 Vdc / 20kA@1100 Vdc
- Standards: UL 4248-18, EN 60947-3
- Wire Range: 18 - 8 AWG
- Max. Torque: 3.4 N m
- Max. Dissipation: 6 W
- Shell Material: PBT(B206)
- Temperature Tolerance: -40 ℃to +75℃
- Material Flammability: UL 94-V0
- Mounting: DIN Rail mounting
- Degree of protection IP20
  UL Listed File: E486822
- TUV (File: R50393963)

DIMENSIONS (mm)



FEATURES:

ADLER's BH100-01 touch safe fuse holder is designed for all standard 10x38 mm PV fuses such as ADLER A73/A83 series.

Note:

SCCR is limited to the interrupting rating of the installed fuse or 30 kA, which ever is less.

BH100-02 1000/1100 Vdc Fuse Holder

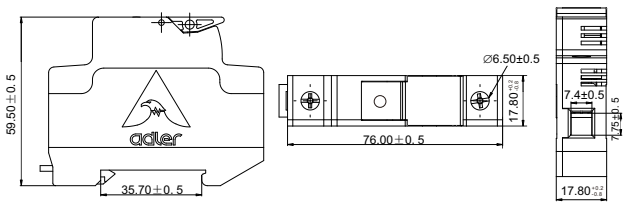
DESCRIPTION:

The BH100-02 touch safe holder is designed for 10x38 mm m DC midget fuses, especially for use with photovoltaic equipment 10x38mm Fuse Holder with Indicator Light

SPECIFICATIONS:

- Rated Voltage: 1000 Vdc / 1100 Vdc
- Rated Current: up to 30A / 32A
- Short Circuit Current Rating (SCCR):
  DC 30kA@1000 Vdc / 20kA@1100 Vdc
- Standards: UL 4248-18, EN 60947-3
- Wire Range: 18 - 8 AWG
- Max. Torque: 3.4 N m
- Max. Dissipation: 6 W
- Shell Material: PBT(B206)
- Temperature Tolerance: -40℃ to +75℃
- Material Flammability: UL 94-V0
- Mounting: DIN Rail mounting
- Degree of protection IP20
- UL Listed File: E486822
- TUV File: R 50393963

DIMENSIONS (mm)



FEATURES:

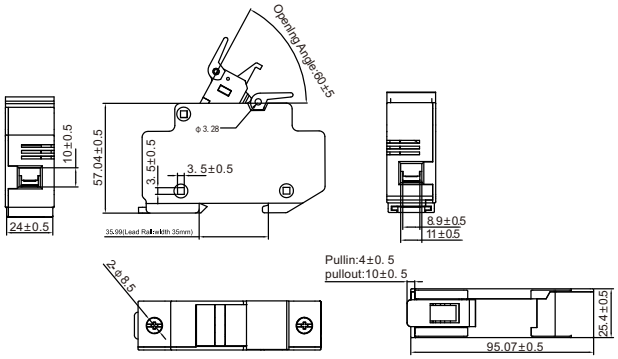
ADLER BH100-02 touch safe fuse holders are designed for all standard 10x38 mm PV fuses such as ADLER A73/A83 series.

Note:

SCCR is limited to the interrupting rating of the installed fuse or 30 kA, whichever is less.

BH200 1500 Vdc Fuse Holder

DIMENSIONS (mm)



DESCRIPTION:

The BH200 touch safe holders are designed for 14x51mm cylindrical fuse links, especially for use with photovoltaic equipment.

SPECIFICATIONS:

- Rated Voltage: 1500 Vdc
- Rated Current: 32A (TUV)
  30A (UL)
- Rated Breaking Capacity: 10 kA
- Wire Range: 13-5 AWG (2-20mm²)
- Max.Torque: 3.4 N.m
- Maximum Heat Dissipation: 8 W
- Operation Temperature: -40℃ to 130 ℃
- Material Flammability: UL 94 V0
- Mounting: DIN Rail mounting
- Standards: UL 4248-19; EN 60947-3
- Approvals: UL (File: E486822)
- TUV (File: R50393975)

FEATURES:

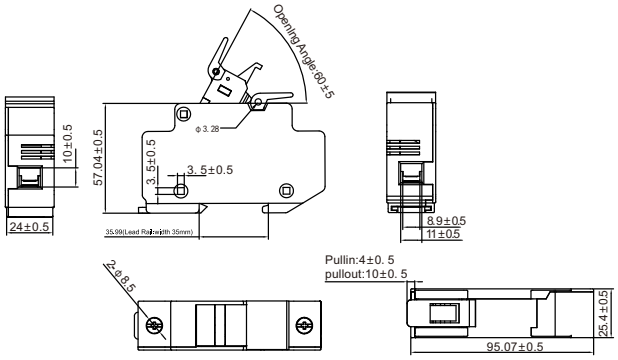
ADLER's BH200 touch safe fuse holders are designed for all standard 14x51 mm PV fusesd such as ADLER A74/A84 series and other cylindrical fuses up to Ø14x51 mm, with current ratings up to 30 A or 32A at 1500 Vdc, it can effectively protect 1500 Vdc circuits and equipment in photovoltaic applications.

Note:

SCCR is limited to the interrupting rating of the installed fuse or 10 kA, which ever is less.

BH201 1500 Vdc Fuse Holder

DIMENSIONS (mm)



DESCRIPTION:

The BH201 touch safe holder is designed for 14x51 mm fuse links and is equipped with a red indicator light. It will light up when the circuit is interrupted.

SPECIFICATIONS:

- Rated Voltage: 1500 Vdc
- Rated Current: up to 30 A
- Short Circuit Current Rating (SCCR): DC 10kA
- Standards: UL 4248-18, EN 60947-3 (10 kA@1500 Vdc)
- Max. Dissipation: 8 W
- Material Flammability: UL 94-V0
- Mounting: DIN Rail mounting
- Wire Range: 5-13 AWG
- Operation Temperature: -40°C to +130°C
- UL Listed File: E486822
- TUV File: R 50393975

FEATURES:

ADLER's BH201 touch safe fuse holder is designed for all standard 14x51 mm PV fuses such as ADLER A74 series. With current ratings up to 30 A@1500 Vdc, this holder provides the most compact and effective solution to protect 1500 Vdc circuits and equipment in photovoltaic applications.

Note:

SCCR is limited to the interrupting rating of the installed fuse or 10 kA, which ever is less.

BH300-01 1500 Vdc Fuse Holder

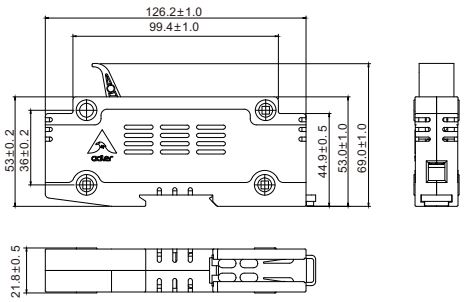
DESCRIPTION:

BH300-01 and BH300-02 touch safe holders are designed for Φ10X85mm/Φ14x85mm cylindrical fuse links,especially for use with photovoltaic equipment.BH300-02 touch safe holder has a short circuit indicator light. It will light up when the circuit is interrupted

SPECIFICATIONS:

- Rated Voltage: 1500 Vdc
- Rated Current: 50 A
- Rated Breaking Capacity:50kA
- Standards: UL 4248-19 and EN 60947-3
- Maximum Heat Dissipation: 8.5W
- Shell Material :PA6(1010N2)
- Temperature Tolerance: -40℃ to +130℃
- Material Flammability: UL 94-V0 (PENDING)
- Approvals: UL(File: E486822)
- TUV(File: R 50460279):

DIMENSIONS (mm)



ADLER's BH300-01 touch safe fuse holders are designed for all standard 10x85mm PV fuses such as ADLERA75/A85/A65 series and other cylindrical fuses uptoΦ10x85mm/Φ14x85mm , With current ratings up to 50A at1500 Vdc ,it can effectively protect 1500 Vdc circuits and equipment in photovoltaic applications.

BH300-02 1500 Vdc Fuse Holder

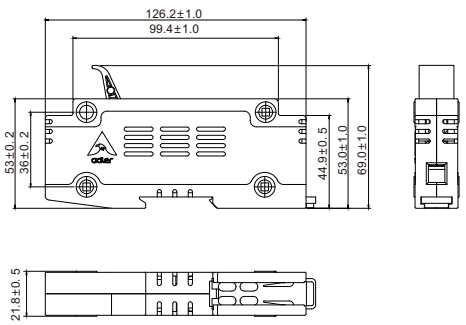
DESCRIPTION:

BH300-01 and BH300-02 touch safe holders are designed for Φ10X85mm/Φ14x85mm cylindrical fuse links,especially for use with photovoltaic equipment.BH300-02 touch safe holder has a short circuit indicator light. It will light up when the circuit is interrupted

SPECIFICATIONS:

- Rated Voltage: 1500 Vdc
- Rated Current: 50 A
- Rated Breaking Capacity:50kA
- Standards: UL 4248-19 and EN 60947-3
- Maximum Heat Dissipation: 8.5W
- Shell Material :PA6(1010N2)
- Temperature Tolerance: -40℃ to +130℃
- Material Flammability: UL 94-V0 (PENDING)
- Approvals: UL(File: E486822)
- TUV(File: R 50460279):

DIMENSIONS (mm)

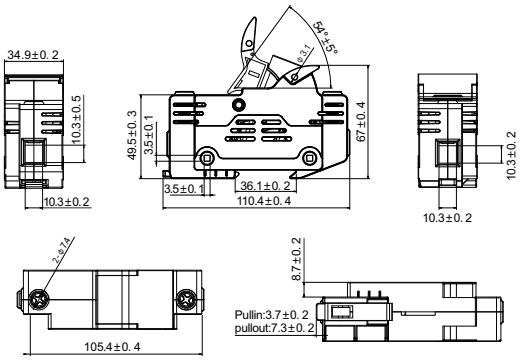


FEATURES:

ADLER's BH300-02 touch safe fuse holders are designed for all standard 10x85mm PV fuses such as ADLER A75/A85/A65 series and other cylindrical fuses up to Φ10x85mm/Φ14x85mm， With current ratings up to 50A at 1500 VDC ,it can effectively protect 1500 VDC circuits and equipment in photovoltaic applications.

BH400 1500 Vdc Fuse Holder

DIMENSIONS (mm)



DESCRIPTION:

The BH400 touch safe holder is designed for 22x58 mm fuse link, especially for use with photovoltaic equipment.

SPECIFICATIONS:

- Rated Voltage: 1500 Vdc
- Rated Current: 80 A
- Rated Breaking Capacity: 10 kA
- Wire Range: 11-1 AWG (4-40 mm²)
- Max. Torque: 4 N.m
- Maximum Heat Dissipation: 8 W
- Operation Temperature: -40 °C to 130 °C
- Material Flammability: UL 94 V0
- Mounting: DIN Rail mounting
- Standards: UL 4248-19; EN 60947-3
- Approvals: UL (File: E486822)
  TUV (File: R50460275)

FEATURES:

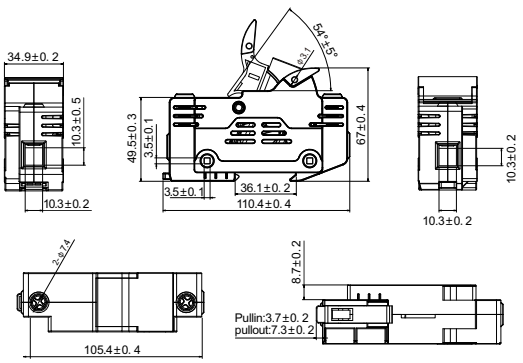
ADLER'S BH400 touch safe fuse holder is designed for all standard 22x58 mm PV fuses such as ADLER A94 series. With current ratings up to 80 A at 1500 VDC, this holder provides the most compact and effective solution to protect 1500 VDC circuits and equipment in photovoltaic applications.

Note:

SCCR is limited to the interrupting rating of the installed fuse or 10kA, which ever is less.

BH401 1500 Vdc Fuse Holder

DIMENSIONS (mm)



DESCRIPTION:

The BH401 touch safe holder is designed for 22x58 mm fuse link, especially for use with photovoltaic equipment. d.

SPECIFICATIONS:

- Rated Voltage: 1500 Vdc
- Rated Current: 80 A
- Rated Breaking Capacity: 10 kA
- Wire Range: 11-1 AWG (4-40 mm²)
- Max. Torque: 4 N.m
- Maximum Heat Dissipation: 8 W
- Operation Temperature: -40 °C to 130 °C
- Material Flammability: UL 94 V0
- Mounting: DIN Rail mounting
- Standards: UL 4248-19; EN 60947-3
- Approvals: UL (File: E486822)
  TUV (File: R50460275)

FEATURES:

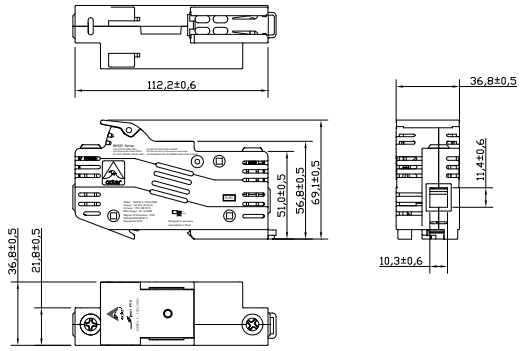
ADLER'S BH401 touch safe fuse holder is as ADLER A94 series. With current ratings up to 80A at1500VDC, this holder provides the most compact and effective solution to protect 1500 VDC circuits and equipment in photovoltaic applications.

Note:

SCCR is limited to the interrupting rating of the installed fuse or 10kA, which ever is less.

BH500 1500 Vdc Fuse Holder

DIMENSIONS (mm)



DESCRIPTION:

The BH500 touch safe holder is designed for 24X65mm fuse links, especially for use with photovoltaic equipment.

SPECIFICATIONS:

- Rated Voltage: 1500 Vdc
- Rated Current: up to 125 A
- Short Circuit Current Rating (SCCR): DC 30 kA
- Standards: UL 4248-19 and EN 60947-1 -3
- (30 kA at 1500 Vdc)
- Max. Dissipation: 25 W
- Material Flammability: UL 94-V0
- Mounting: DIN Rail mounting
- Max. Torque: 4 N.m
- Wire Range: 2-12AWG
- Temperature Tolerance: -40 °C to +130 °C

FEATURES:

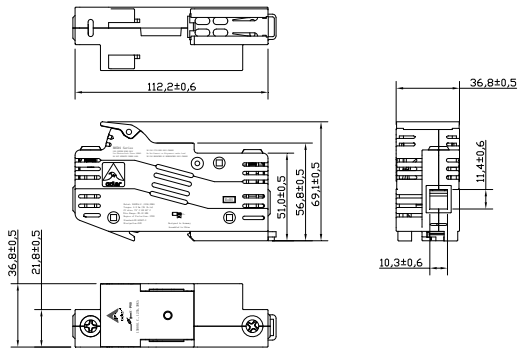
ADLER BH500 touch safe fuse holder is designed for all standard 24X65mm PV fuses such as ADLER A95 series. With current ratings up to 125A at 1500 Vdc, this holder provides the most compact and effective solution to protect 1500 Vdc circuits and equipment in photovoltaic applications.

Note:

SCCR is limited to the interrupting rating of the installed fuse or 30 KA, whichever is less.

BH501 1500 Vdc Fuse Holder

DIMENSIONS (mm)



DESCRIPTION:

The BH501 touch safe holder is designed for 24X65mm fuse links, especially for use with photovoltaic equipment.

SPECIFICATIONS:

- Rated Voltage: 1500 Vdc
- Rated Current: up to 125 A
- Short Circuit Current Rating (SCCR): DC 30 kA
- Standards: UL 4248-19 and EN 60947-1 -3
- (30 kA at 1500 Vdc)
- Max. Dissipation: 25 W
- Material Flammability: UL 94-V0
- Mounting: DIN Rail mounting
- Max. Torque: 4 N.m
- Wire Range: 2-12AWG
- Temperature Tolerance: -40 °C to +130 °C

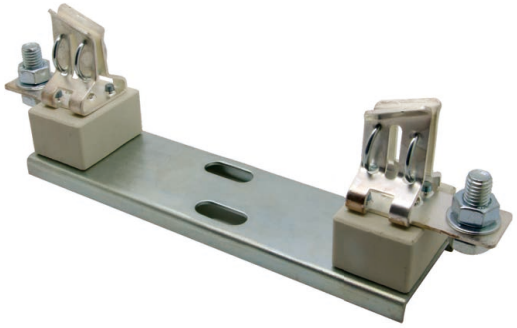
FEATURES:

ADLER BH501 touch safe fuse holder is designed for all standard 24X65mm PV fuses such as ADLER A95 series. With current ratings up to 125A at 1500 Vdc, this holder provides the most compact and effective solution to protect 1500 Vdc circuits and equipment in photovoltaic applications.

Note:

SCCR is limited to the interrupting rating of the installed fuse or 30 KA, whichever is less.

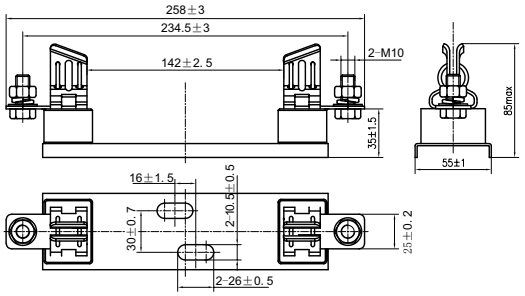
BH1XL 1500 Vdc Fuse Holder



FEATURES:

- Rated Voltage：1500 Vdc
- Rated Current：200 A
- Rated Breaking Capacity: 50 kA
- Uimp: 3.8 kV
- Torque of Mounting Plate: 15 N.m
- Torque of Screw Size (M10): 32 N.m
- Maximum Heat Dissipation: 40 W
- Operation Temperature: -40 °C to 90 °C
- Storage Temperature: -40 °C to 70 °C
- Material of Fuse Clip: Silver Plated Copper
- Material of Insulator: Ceramic
- Material of Spring & Mounting Plate: Zinc Plated Steel
- Standards: UL 4248

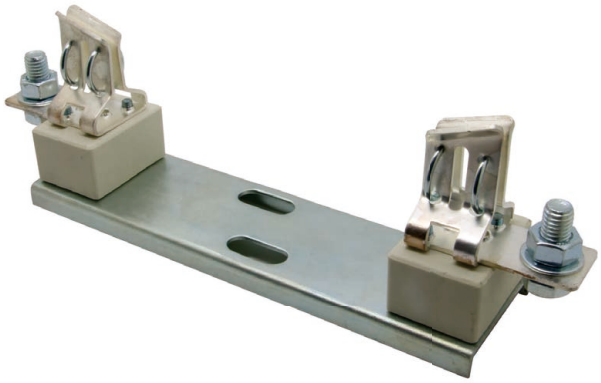
DIMENSIONS (mm)



NOTE:

- Be aware of surface condensation phenomenon in case of temperature changes;
- Class III pollution index for fuse;
- Avoid exposure to gas or oxidizing chemicals that could cause metal corrosions and accumulation of dust particles, which may affect the insulation material.

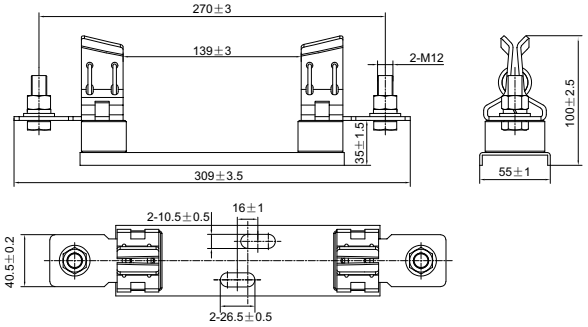
BH03L 1500 Vdc Fuse Holder



FEATURES:

- Rated Voltage:1500 Vdc
- Rated Current:500 A
- Short Circuit Current Rating (SCCR): 50 kA
- Uimp: 3.8 kV
- Maximum Heat Dissipation: 90W
- Standard: Reference to UI4248
- Designed for ADLER AX7, AX8 Fuse Links
- Material:
  - Fuse Clip: Silver Plated Copper
  - Backing Spring: Zinc Plated Steel
  - Mounting Base: Zinc Plated Steel
  - Insulator: Ceramic

DIMENSIONS (mm)

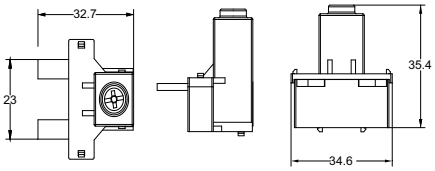


INSTALLATION:

- Ref. Torque: Mounting Plate: 15 N·m
- Screw size (M10): 15 N·m
- Operating Temperature: -40°C to +90°C
- Storage Temperature: -40°C to +70°C
- Be aware of surface condensation phenomenon in case of temperature changes !
- Class III pollution index for fuse links
- Avoid exposure to gas or oxidizing chemicals that could cause metal corrosions and accumulation of dust particles, which may affect the insulation material.

BHT100 1000 Vdc Terminal Block

DIMENSIONS (mm)



FEATURES:

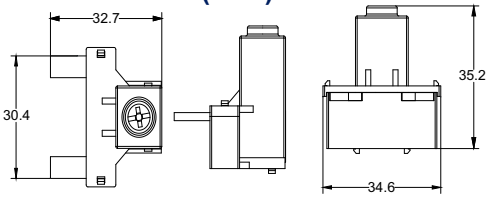
The BHT100 terminal block is suited for PV installations using ADLER BH100-01, BH100-02fuse holder.

SPECIFICATIONS:

- Rated Voltage: 1000 Vdc
- Rated Current: 60 A
- Torque: 3.0 N·m
- Wire Range: 13 - 5 AWG (2.5-16 mm²)
- Operation Temperature: -40°C to +130°C

BHT200 1500 Vdc Terminal Block

DIMENSIONS (mm)



FEATURES:

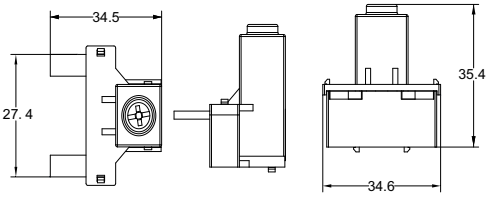
The BHT200 terminal block is suited for PV installations using ADLER BH200, BH201 fuse holder.

SPECIFICATIONS:

- Rated Voltage: 1500 Vdc
- Rated Current: 60 A
- Torque: 3.0 N·m
- Wire Range: 13 - 5 AWG (2.5-16 mm²)
- Operation Temperature: -40°C to +130°C

BHT300 1500 Vdc Terminal Block

DIMENSIONS(mm)



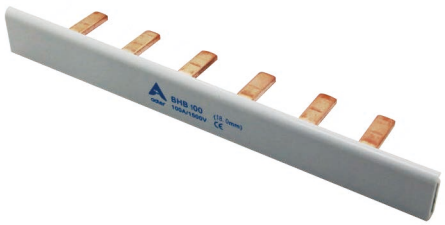
FEATURES:

The BHT300 terminal block is suited for PV installations using ADLER BH300 fuse holder.

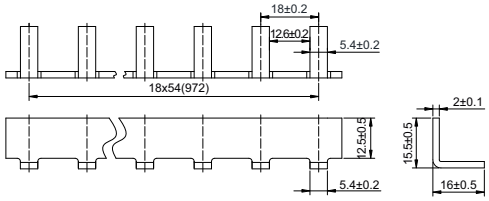
SPECIFICATIONS:

- Rated Voltage: 1500 Vdc
- Rated Current: 60 A
- Torque: 3.0 N·m
- Wire Range: 13 - 5 AWG (2.5-16 mm²)
- Operation Temperature: -40°C to +130°C

BHB100 1000 Vdc Busbar



DIMENSIONS (mm)



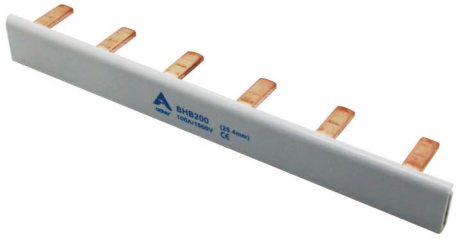
FEATURES:

The insulated BHB100 comb bar is suited for PV installations using ADLER BH100-01, BH100-02 fuse holders.

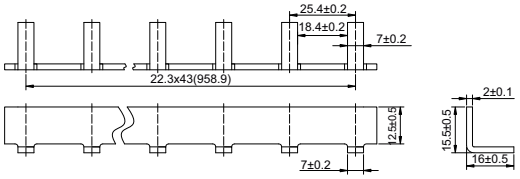
SPECIFICATIONS:

- Rated Voltage: 1000 Vdc
- Rated Current: 100 A
- Pitch: 18.0mm, Width: 1.7 mm
- Operation Temperature: -40 °C - +130 °C
- Standard: EN 61439-6

BHB200 1500 Vdc Busbar



DIMENSIONS (mm)



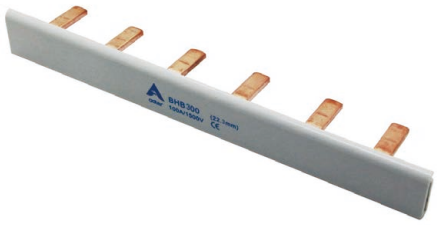
FEATURES:

The insulated BHB200 comb bar is suited for PV installations using ADLER BH200 and BH201 fuse holders.

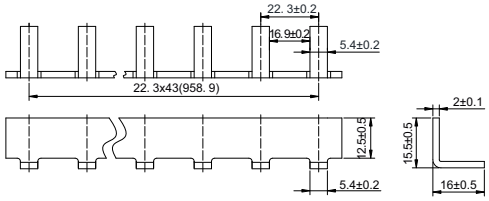
SPECIFICATIONS:

- Insulated Bus Bar Link
- Rated Voltage: 1500 Vdc
- Rated Current: 100 A
- Pitch: 25.4mm, Width: 5.4 mm
- Operation Temperature: -40 °C - +130 °C
- Standard: EN 61439-6: 2012

BHB300 1500 Vdc Busbar



DIMENSIONS (mm)



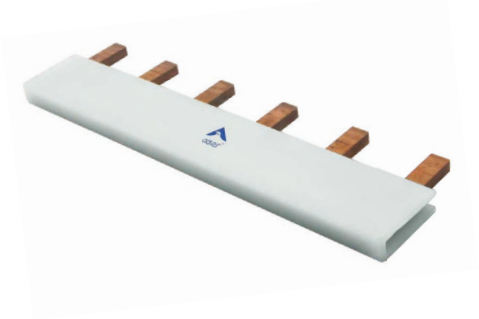
FEATURES:

The insulated BHB300 comb bar is suited for PV installations using ADLER BH300 fuse holder.

SPECIFICATIONS:

- Insulated Bus Bar Link
- Rated Voltage: 1500 Vdc
- Rated Current: 100 A
- Pitch: 22.3mm, Width: 2.0 mm
- Operation Temperature: -40 °C - +130 °C
- Standard: EN 61439-6: 2012

BHB400 1000 Vdc Busbar



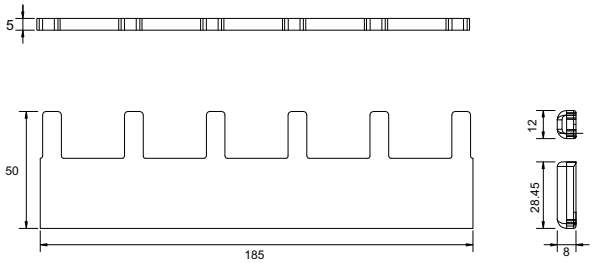
FEATURES:

The insulated BHB400 comb bar is suited for PV installations using ADLER BH400 and BH401 fuse holders.

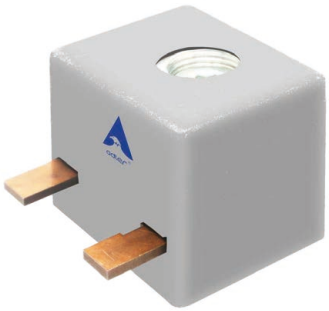
SPECIFICATIONS:

- Insulated Bus Bar Link
- Rated Voltage: 1500 Vdc
- Rated Current: 300 A
- Pitch: 35 mm, Width: 8 mm
- Operation Temperature: -40 °C - +130 °C
- Standard: EN 61439-6: 2012

DIMENSIONS (mm)



BHT400 1500 Vdc BusBar Link



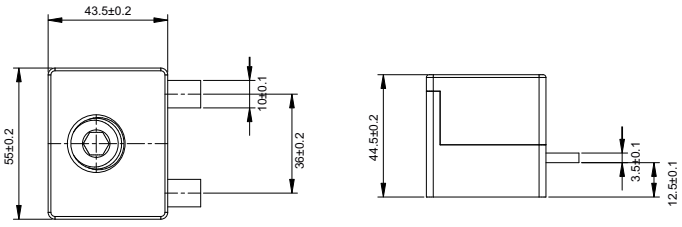
FEATURES:

The insulated BHT400 terminal block is fitting for PV installations using 22x58 mm ADLER BH400 and BH401 fuse holders.

SPECIFICATIONS:

- Rated Voltage: 1500 Vdc
- Rated Current: 300 A
- Torque: 4.0 N • m
- Wire Range: 12-1 AWG
- Operation Temperature: -40°C to +130°C

DIMENSIONS (mm)



ADLER Elektrotechnik Leipzig GmbH

Haynaer Weg 16
04435 Schkeuditz
OT Radefeld

Tel. : +49 34207/ 97 36 36
Fax : +49 34207/ 97 36 35

HRB 32327/ D.C. Leipzig
E-Mail: info@adlerelectric.com

www.adlerelectric.com
www.adlerelektro.de

ADLER Global Network

- ADLER Elektrotechnik Leipzig GmbH (Headquarters)
- ADLER Elektrotechnik Xi'an Co. Ltd (Manufacturing)
- ADLER Elektrotechnik Dongguan Co. Ltd (Manufacturing and Testing)
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INDUSTRIAL POWER FUSES AND SYSTEM PROTECTION

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