

ABAT15AA, ABAT15AD

1 500 VDC Max., L/R ≤ 4ms, 100-500A

BATTERY FUSES

BATTERY RACK FUSES



Mersen's **ABAT** line up is the latest addition to our DC Over-Current protection (O.C.P.) portfolio developed to address Battery Electrical Storage System safety.

The **ABAT15AA & AD** fuses has been specifically designed for 1500 VDC applications with current ratings from 100 to 500 A and according to the IEC 60 269-7 fuse standard for battery protection.

Our state of the art technology allows them to clear fault currents down to 3 times the fuse rated current to perfectly coordinate with contactors, and up to 250 kA to protect from the large short circuits seen in energy storage systems.

Along with the ability to withstand heavy duty cycling and low power losses improving system reliability and efficiency, it makes them ideal for battery and battery related systems.

TECHNICAL DATA OVERVIEW

Rated DC Voltage UN	1500 VDC
Ampere Range (A)	100 ... 500 A
Speed/Characteristic	aBAT
I.R (DC)	250kA @L/R≤4ms
Minimum breaking capacity (MBC) @L/R≤2ms	3x I _n
Packing quantity	2

FEATURES & BENEFITS

- Designed for DC battery applications
- Compact design
- Low power losses
- High cycling performance
- QR code for easy identification
- Bolted and Offset blades mounting

APPLICATIONS

- Electrical Energy Storage (EES)
- Battery Racks
- Battery Strings
- Power Conversion Systems
- Hybrid Inverters
- DC Distribution Systems

STANDARDS

- IEC 60 269-7
- UL/cUL recognized component, UL file E523293



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PRODUCT RANGE



ABAT15AA250GI

ABAT15AA Offset blades ¹

Catalog number	Rated voltage DC (IEC)	Rated current I _n	Pre-arcing I ² t	Clearing I ² t at ME ²	Clearing I ² t @250kA L/R=4ms	Power dissipation at 0.8 I _n	Min. breaking capacity (MBC)	Weight
ABAT15AA100GI	1500 V	100 A	1270 A ² s	8300 A ² s	40000 A ² s	19 W	300 A	0.6 kg
ABAT15AA125GI	1500 V	125 A	2260 A ² s	14000 A ² s	60000 A ² s	24 W	375 A	0.6 kg
ABAT15AA160GI	1500 V	160 A	3730 A ² s	23100 A ² s	78000 A ² s	31 W	480 A	0.6 kg
ABAT15AA200GI	1500 V	200 A	6640 A ² s	39500 A ² s	116000 A ² s	36 W	600 A	0.6 kg
ABAT15AA250GI	1500 V	250 A	11800 A ² s	71800 A ² s	182000 A ² s	46 W	750 A	0.6 kg

¹Add M to the catalog number to order with microswitch

²ME= Max Energy or i²; standardized breaking test where the melting time of the fuse is equal to the L/R value of the circuit and rated voltage of the fuse



ABAT15AA250FI

ABAT15AA Bolted blades ¹

Catalog number	Rated voltage DC (IEC)	Rated current I _n	Pre-arcing I ² t	Clearing I ² t at ME ²	Clearing I ² t @250kA L/R=4ms	Power dissipation at 0.8 I _n	Min. breaking capacity (MBC)	Weight
ABAT15AA100FI	1500 V	100 A	1270 A ² s	8300 A ² s	40000 A ² s	19 W	300 A	0.6 kg
ABAT15AA125FI	1500 V	125 A	2260 A ² s	14000 A ² s	60000 A ² s	24 W	375 A	0.6 kg
ABAT15AA160FI	1500 V	160 A	3730 A ² s	23100 A ² s	78000 A ² s	31 W	480 A	0.6 kg
ABAT15AA200FI	1500 V	200 A	6640 A ² s	39500 A ² s	116000 A ² s	36 W	600 A	0.6 kg
ABAT15AA250FI	1500 V	250 A	11800 A ² s	71800 A ² s	182000 A ² s	46 W	750 A	0.6 kg

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ABAT15AD500GI

ABAT15AD Offset blades ¹

Catalog number	Rated voltage DC (IEC)	Rated current I _n	Pre-arcing I ² t	Clearing I ² t at ME ²	Clearing I ² t @250kA L/R=4ms	Power dissipation at 0.8 I _n	Min. breaking capacity (MBC)	Weight
ABAT15AD200GI	1500 V	200 A	6270 A ² s	36100 A ² s	144000 A ² s	39 W	600 A	1.4 kg
ABAT15AD250GI	1500 V	250 A	10370 A ² s	58700 A ² s	226000 A ² s	47 W	750 A	1.4 kg
ABAT15AD300GI	1500 V	300 A	18430 A ² s	126500 A ² s	383000 A ² s	60 W	900 A	1.4 kg
ABAT15AD350GI	1500 V	350 A	26540 A ² s	164600 A ² s	499000 A ² s	70 W	1050 A	1.4 kg
ABAT15AD400GI	1500 V	400 A	36130 A ² s	224000 A ² s	535000 A ² s	78 W	1200 A	1.4 kg
ABAT15AD450GI	1500 V	450 A	47190 A ² s	296500 A ² s	590000 A ² s	81 W	1350 A	1.4 kg
ABAT15AD500GI	1500 V	500 A	64230 A ² s	398100 A ² s	803000 A ² s	89 W	1500 A	1.4 kg

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ABAT15AD500FI

ABAT15AD Bolted blades ¹

Catalog number	Rated voltage DC (IEC)	Rated current I _n	Pre-arcing I ² t	Clearing I ² t at ME ²	Clearing I ² t @250kA L/R=4ms	Power dissipation at 0.8 I _n	Min. breaking capacity (MBC)	Weight
ABAT15AD200FI	1500 V	200 A	6270 A ² s	36100 A ² s	144000 A ² s	39 W	600 A	1.4 kg
ABAT15AD250FI	1500 V	250 A	10370 A ² s	58700 A ² s	226000 A ² s	47 W	750 A	1.4 kg
ABAT15AD300FI	1500 V	300 A	18430 A ² s	126500 A ² s	383000 A ² s	60 W	900 A	1.4 kg
ABAT15AD350FI	1500 V	350 A	26540 A ² s	164600 A ² s	499000 A ² s	70 W	1050 A	1.4 kg
ABAT15AD400FI	1500 V	400 A	36130 A ² s	224000 A ² s	535000 A ² s	78 W	1200 A	1.4 kg
ABAT15AD450FI	1500 V	450 A	47190 A ² s	296500 A ² s	590000 A ² s	81 W	1350 A	1.4 kg
ABAT15AD500FI	1500 V	500 A	64230 A ² s	398100 A ² s	803000 A ² s	89 W	1500 A	1.4 kg

¹Add M to the catalog number to order with microswitch

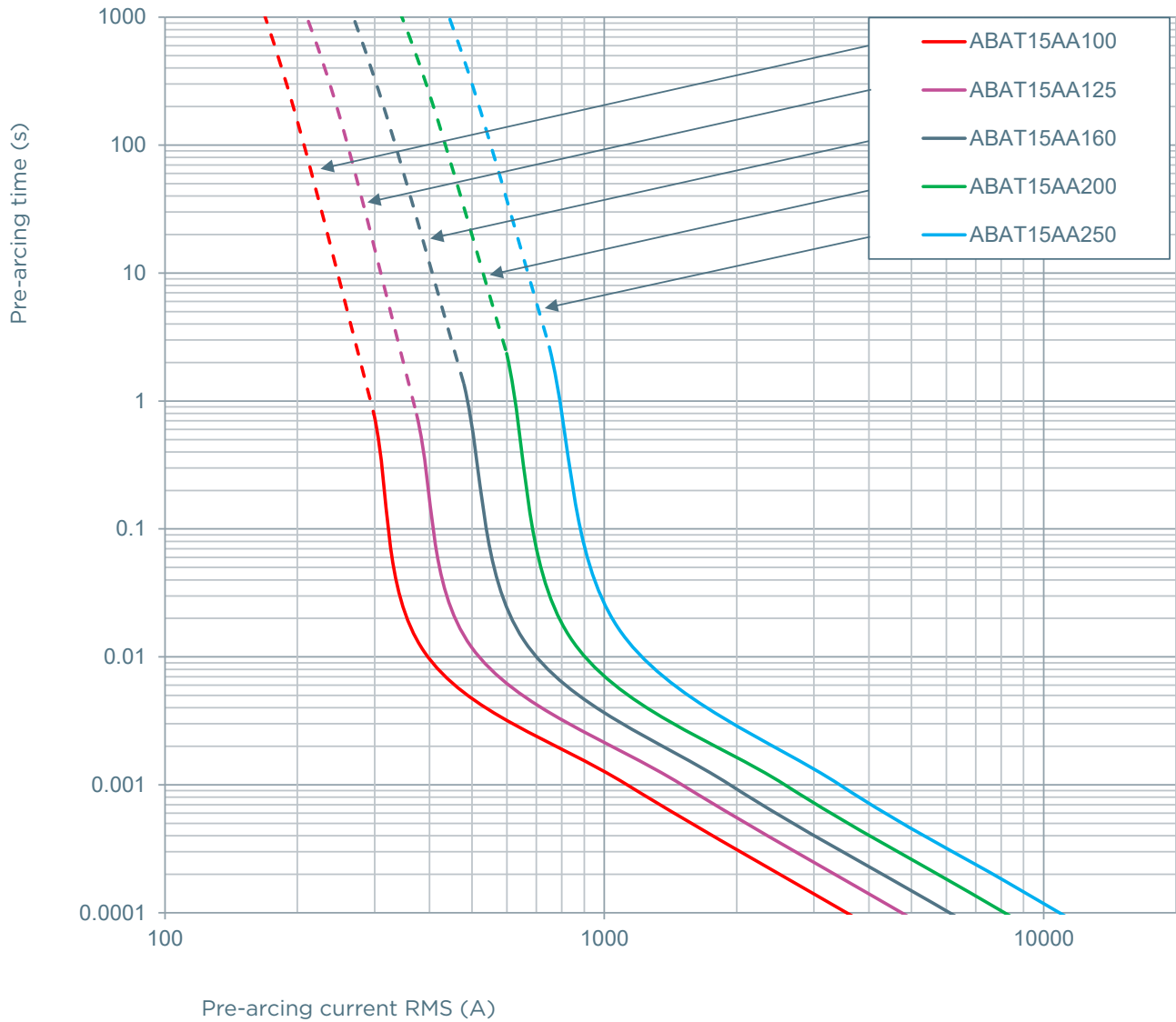
²ME= Max Energy or i²; standardized breaking test where the melting time of the fuse is equal to the L/R value of the circuit and rated voltage of the fuse

ABAT15AA, ABAT15AD

1 500 VDC Max., L/R ≤ 4ms, 100-500A

TIME CURRENT CHARACTERISTIC CURVES

ABAT15AA - 100 to 250A

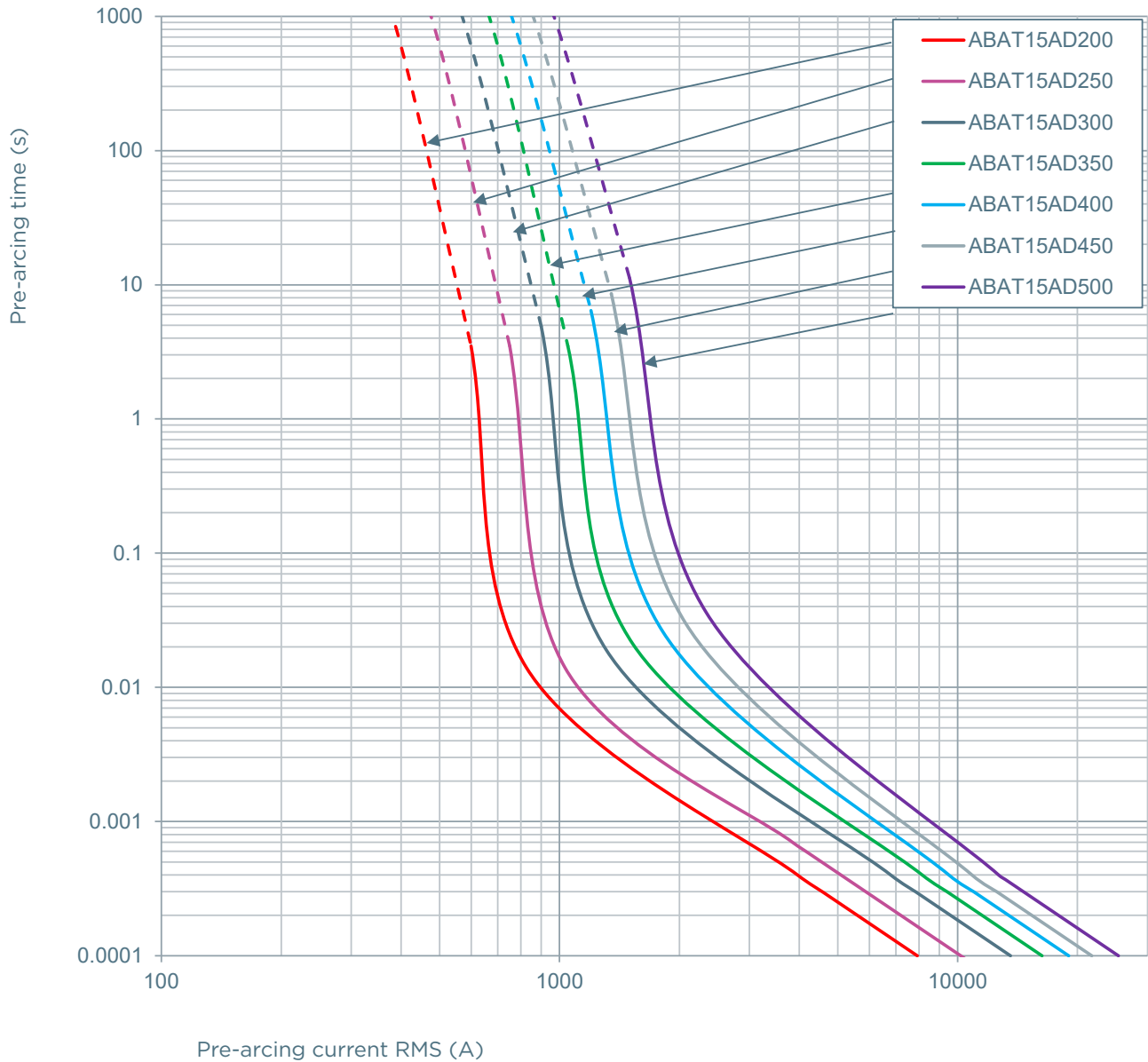


ABAT15AA, ABAT15AD

1 500 VDC Max., L/R ≤ 4ms, 100-500A

TIME CURRENT CHARACTERISTIC CURVES

ABAT15AD - 200 to 500A

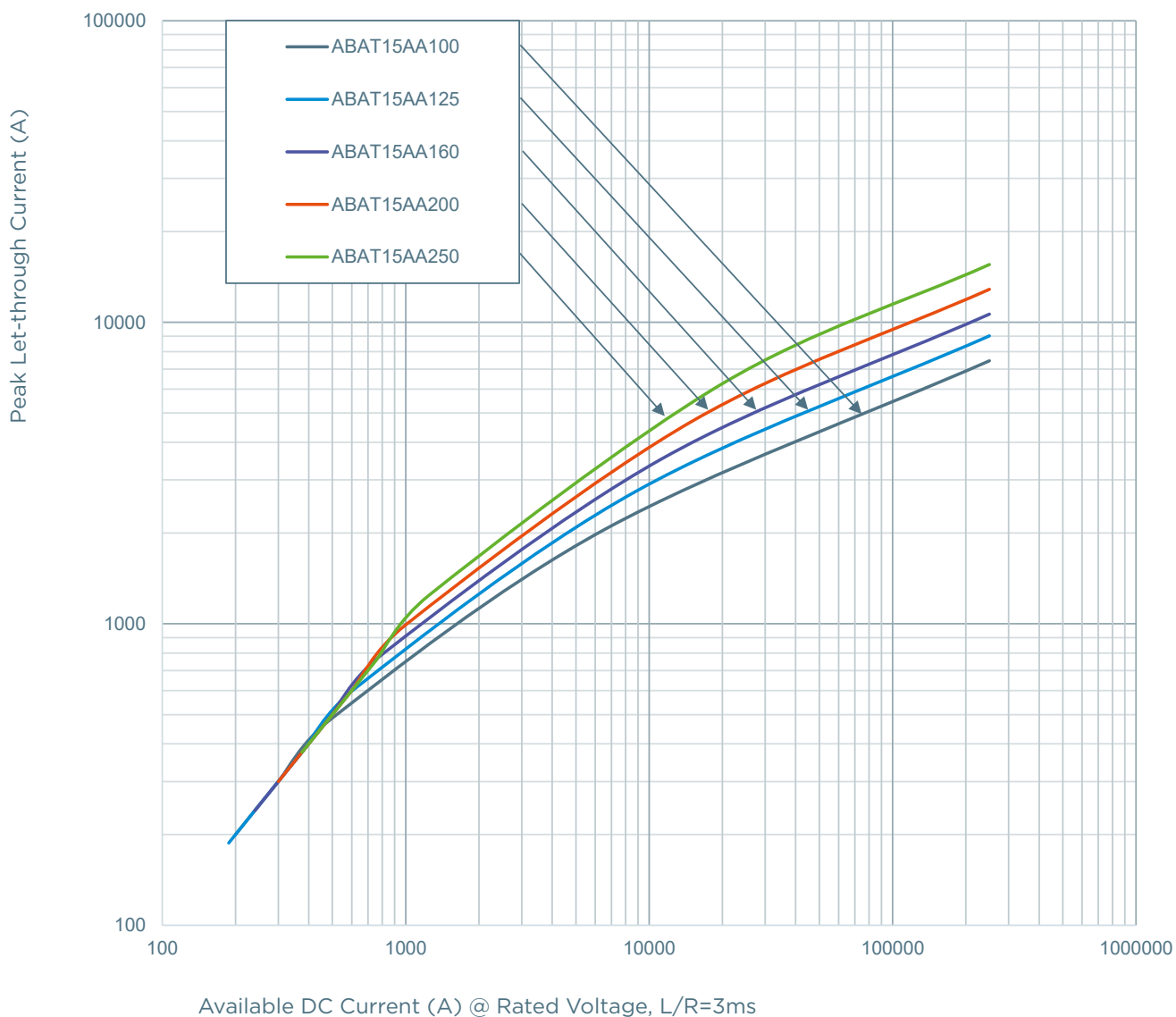


ABAT15AA, ABAT15AD

1 500 VDC Max., L/R ≤ 4ms, 100-500A

CUT-OFF CURRENT CHARACTERISTIC

ABAT15AA 100 to 250A

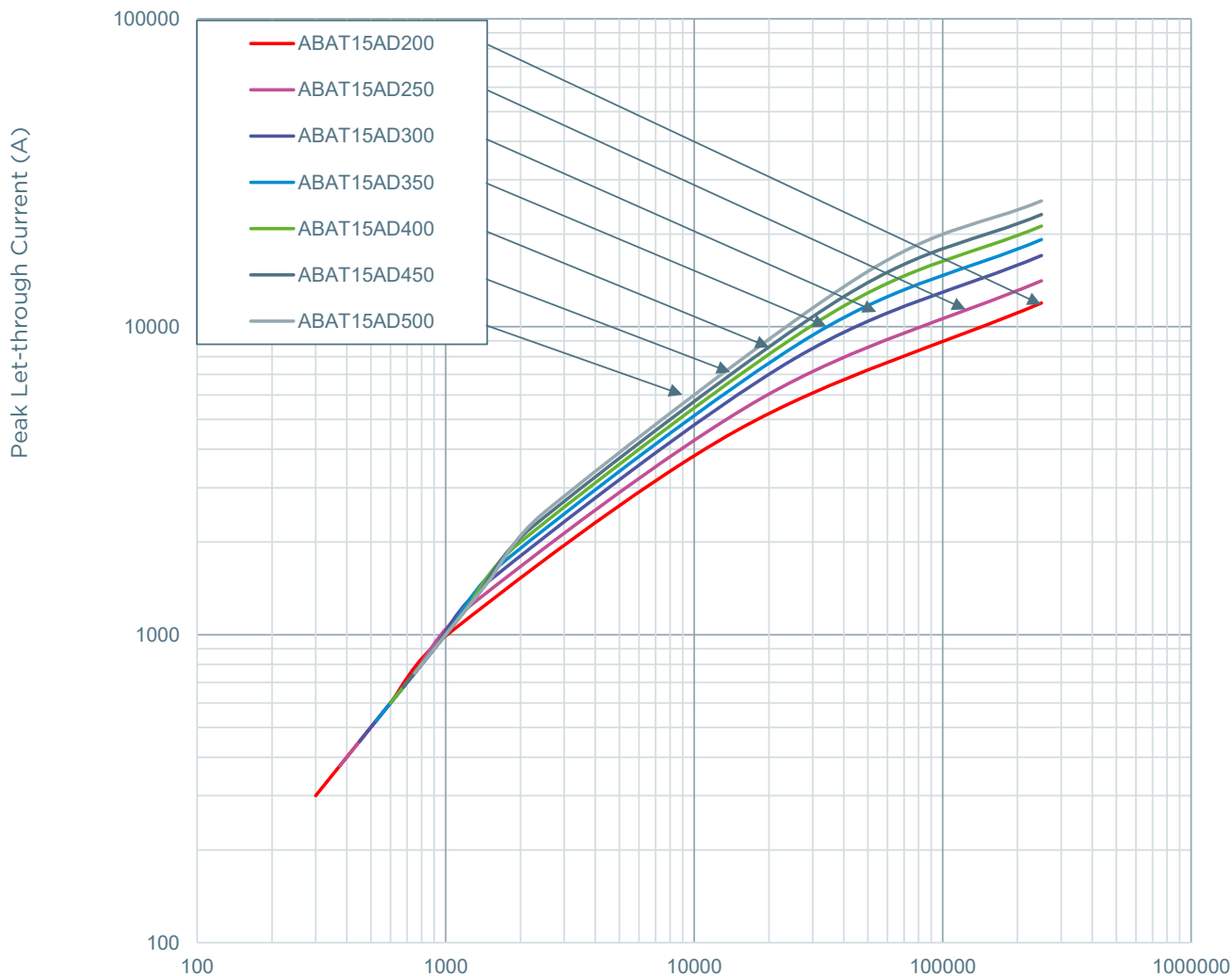


ABAT15AA, ABAT15AD

1 500 VDC Max., L/R ≤ 4ms, 100-500A

CUT-OFF CURRENT CHARACTERISTIC

ABAT15AD 200 to 500A

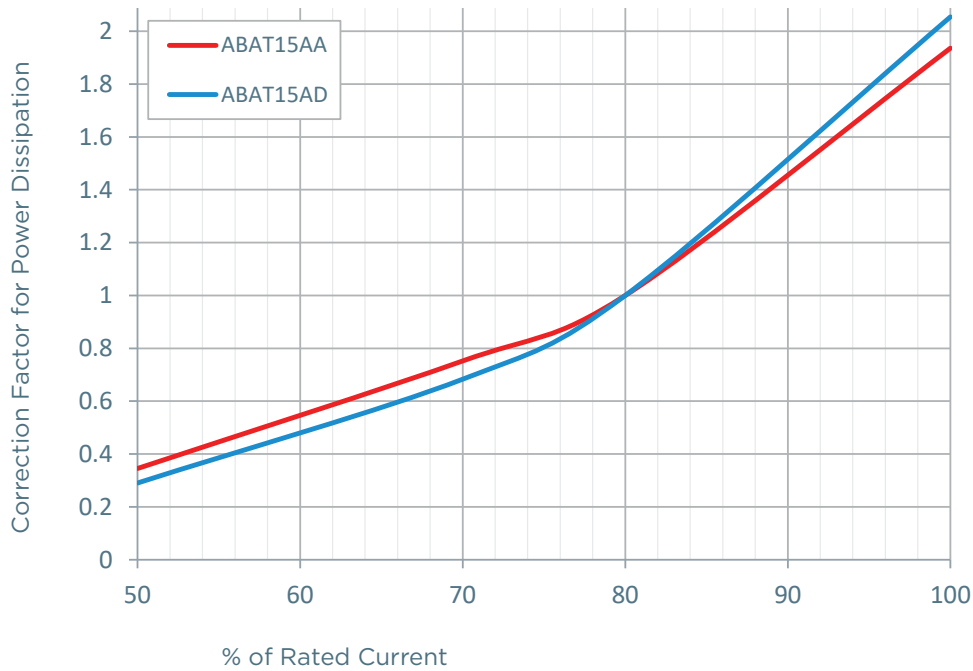


Available DC Current (A) @ Rated Voltage, L/R=3ms

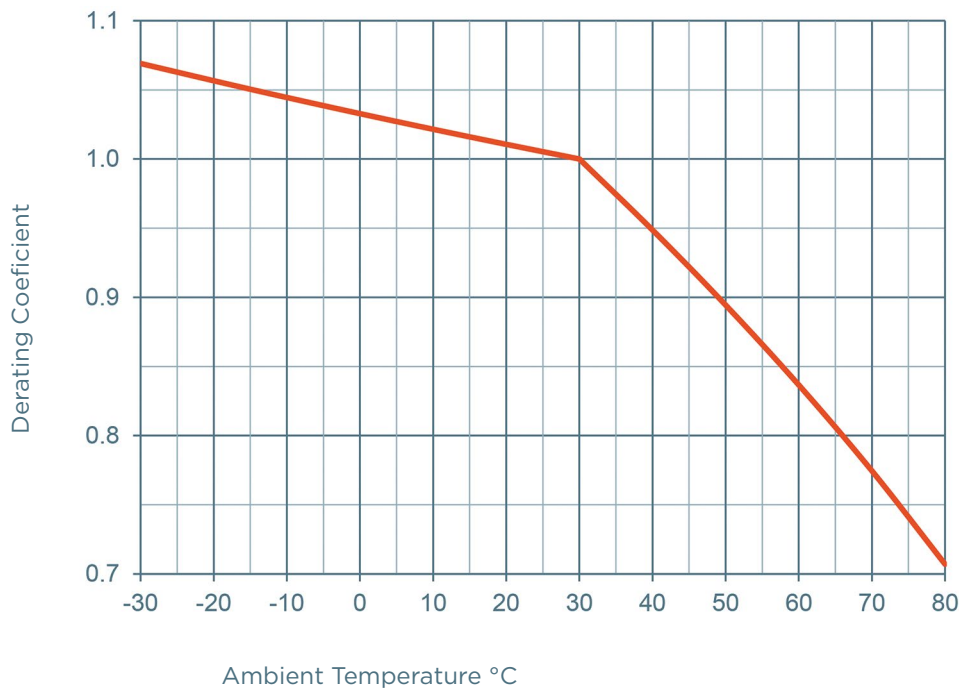
ABAT15AA, ABAT15AD

1 500 VDC Max., L/R ≤ 4ms, 100-500A

POWER DISSIPATION



TEMPERATURE DERATING

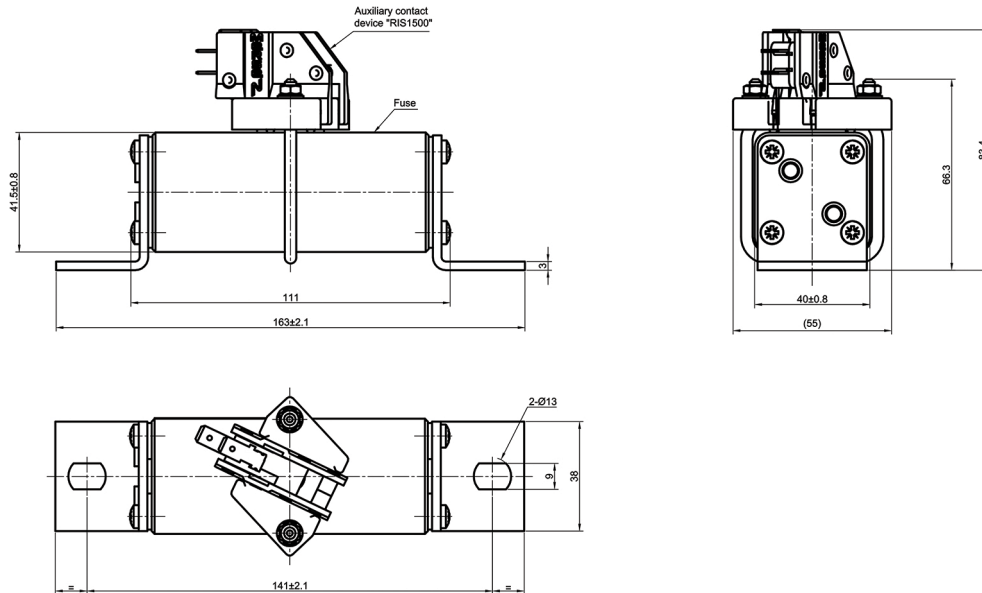


ABAT15AA, ABAT15AD

1 500 VDC Max., L/R ≤ 4ms, 100-500A

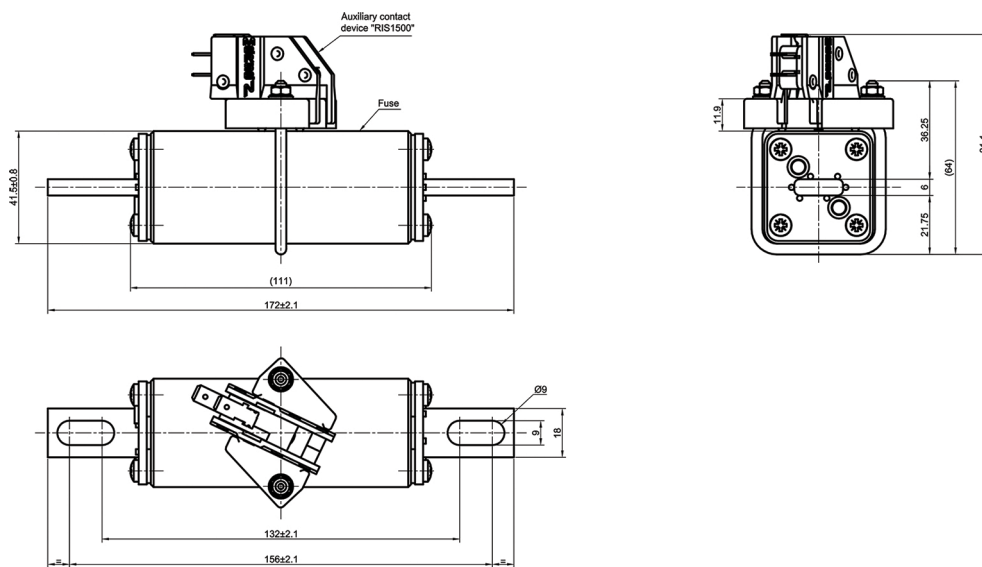
DIMENSIONS

ABAT15AA - Offset blades with optional microswitch



Dimensions in mm

ABAT15AA - Bolted blades with optional microswitch



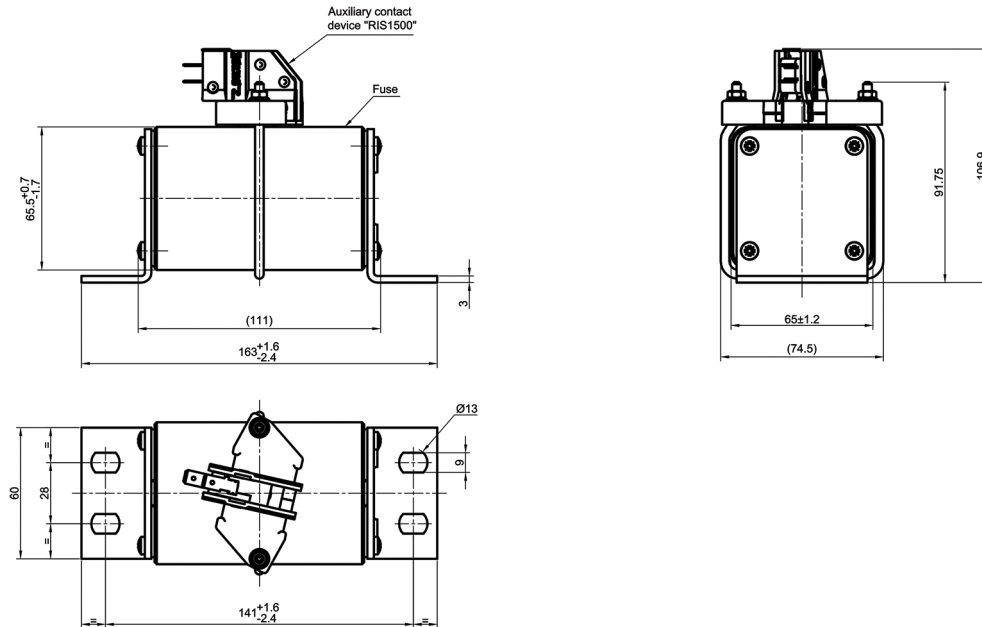
Dimensions in mm

ABAT15AA, ABAT15AD

1 500 VDC Max., L/R ≤ 4ms, 100-500A

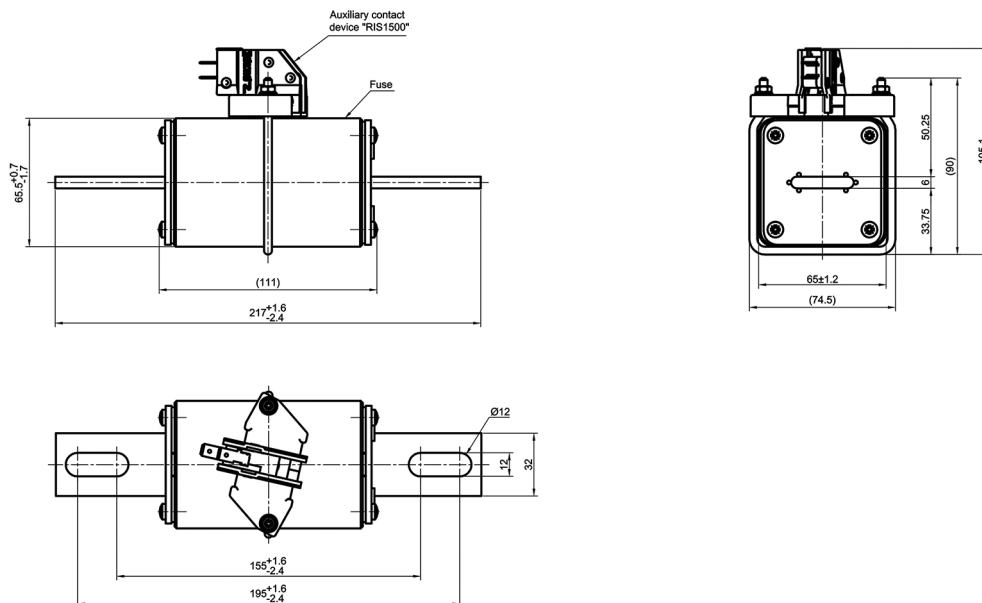
DIMENSIONS

ABAT15AD - Offset blades with optional microswitch



Dimensions in mm

ABAT15AD - Bolted blades with optional microswitch



Dimensions in mm

ABAT15AA, ABAT15AD

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DIMENSIONS

Recommended Mounting Torque and Bolt Size

Fuse Size / Terminals	Mounting Torque	Bolt Size
ABAT15AA GI	15±1 Nm	M8
ABAT15AA FI	15±1 Nm	M8
ABAT15AD GI	15±1 Nm	M8
ABAT15AD FI	20±1 Nm	M10

ACCESSORIES



RIS1500

Microswitches

Catalog number	Rated insulation voltage U _i	Rated current I _n	Indication System	Minimum positive operating voltage / current
RIS1500	1500 V	10 A	Standard NO-NC	10V, 10mA



1SCM8

Fuse blocks

Catalog number	Rated voltage DC	Application DC Fuses	Number of poles/ phases	Contact Materials	Tightening torque (max.)	Weight
1SC/1MSC Modular Fuse blocks						
1SCM8	1500 V	MEV70A, MEV100A and ABAT15AA fuses up to 400A	1	Zinc-Plated Steel	6.8 N-m	68 g
1SCM10	1500 V	MF-A, MEV70A, MEV100A and ABAT15AD fuses up to 800A	1	Zinc-Plated Steel	21.5 N-m	68 g