ABB launches 800V AC fusegear
Solar power plants

ABB has introduced a selection of fusegear with 800V AC ratings to support the higher voltage architectures in solar power plants. The InLine II, EasyLine XLP and SimLine XR fusegear ranges now offer solutions for applications such as solar AC combiners where 800V is used to reduce power losses.

InLine II
The InLine II range of vertical fuse switch disconnectors is typically used in cable distribution cabinets and on the low voltage side of small secondary substations, in solar applications they find their place preferably in AC combiner boxes.

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The use of string inverters for large photovoltaic systems with 20MW or less of installed power is set to increase. Operating at higher voltages reduces the transmission losses and cabling costs of these plants, while limiting the impact of any faults, reducing downtime and maximizing productivity. Higher voltage ratings will also mean fewer DC combiner boxes and less wiring complexity.

Inverters with higher power ratings are smaller, lighter and easier to handle, making installations and replacements manageable for just one or two staff. Higher voltage also helps photovoltaic plants reduce the number of components needed and makes logistics easier. Installation times are shorter and wiring costs are lower, with significant overall savings of up to 20 percent.

ABB's 800V AC rated fusegear have AC-22B utilization categories with a rated operational current of up to 400A. The fuses are designed to provide short circuit protection up to 100 kA.

EasyLine XL
The new EasyLine XLP00-3P and XLP1-3P fusegear are suitable for capacitor banks, power distribution panels and in AC combiner boxes. They are rated for 63A and 160A respectively and provide short circuit protection up to 30kA.

SlimLine XR
The SlimLine XR range is used in energy distribution, powerplant switchboards and data centers, often as part of ABB's enclosures. The new XRM1-3P has a rated operational voltage of 800 VAC and a rated operational current of 160A, while providing protection up to 50kA short circuit currents.

Technical data

Type		ZLBM00-100	ZLBM/ZHBM1	ZLBM/ZHBM2	ZLBM/ZHBM3	XLP00	XLP1	XRM1
NH/HRC fuse link size acc. To. IEC60269-2- and IEC60269-1		00	1	1/2	2*/3	00	1	1
Rated operational voltage U_e [V]		500 / 690 / 800	400 / 500 / 690 / 800	400 / 500 / 690 / 800	400 / 500 / 690 / 800	400 / 500 / 690 / 800	500 / 690 / 800	500 / 690 / 800
Rated operational current I_e [A]		160 / 125 / 63	250 / 250 / 250 / 200	400	630 / 630 / 630 / 400	125 / 160 / 125 / 63	250 / 200 / 160	250 / 250 / 160
Rated insulation voltage U_i [V]		1000	1000	1000	1000	1000	1000	1000
Rated impulse withstand voltage U_{imp} [V]		8000	8000	8	8000	8000	8000	8000
Rated conditional short-circuit current I_q [kArms]		100 / 100 / 30	100	100	100	50 / 50 / 50 / 30	50 / 50 / 30	66 / 66 / 50
Rated conditional short-circuit making capacity I_{cm} [kArms]		100 / 100 / 30	100	100	100	50 / 50 / 50 / 30	50 / 50 / 30	100 / 100 / 50
Utilization category	400V	AC-23B	AC-23B	AC-23B	AC- 23B	AC-23B	AC-22B	AC-23B
	500V	AC-23B	AC-22B	AC-22B	AC-22B	AC-22B	AC-22B	AC-23B
	690V	AC-22B	AC-21B	AC-21B	AC-21B	AC-21B	AC-21B	AC-23B
	800V	AC-22B	AC-22B	AC-22B	AC-22B	AC-22B	AC-22B	AC-22B
Rated frequency (Hz)		50 / 60	50 / 60	50 / 60	50 / 60	50 / 60	50 / 60	50 / 60
Total power loss at I_{th} without fuses [W]		33,4	36,20 / 37,8	52,20 / 55,50	91,30 / 97,20	3,5	7,5	78
Max permis. power loss per fuse link [W]		12	18 / 23 / 32	28 / 34 / 45	40 / 48 / 60	12	23	28 / 34 / 45
Electrical durability, operating cycles		200	200	200	200	200	200	200
Mechanical durability, operating cycles		1400	1400	800	800	1400	1400	1400
Degree of protection from the front acc. to IEC / EN 60529	Open	IP20	IP20	IP20	IP20	IP20	IP20	IP41
Degree of protection from the front acc. to IEC / EN 60529	Closed	IP30	IP30	IP30	IP30	IP30	IP30	IP41

*with dedicated adapter only 1SEP621288R0001 - ZLBM3 NH2 fuse adapter

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For further informatiaon visit:

www.abb.com/low-voltage/products/fusegear/for-800v-ac

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