

Application flexibility and reliable performance



Introduction

Eaton's Magnum™ SB is a low voltage insulated-case power circuit breaker family, designed for the performance and economic requirements of UL® 891 switchboards. The Magnum SB is a UL 1066 listed insulated-case power circuit breaker. Magnum SB breakers have a fixed instantaneous trip of $18 \times I_n$ needed to clear a fault in three cycles, a switchboard class requirement. Their short-time withstand and interruption ratings are optimized for 480 Vac. Fixed internal instantaneous trips are also included, which is characteristic of most UL 489 molded-case circuit breakers used in switchboard applications. Magnum SB breakers are designed to provide excellent application flexibility, a full line of accessories common to all Magnum breakers, and a high level of safety and reliable performance, all while meeting the specific needs of your application.

Product characteristics

- Switchboard class
- Up to 635 Vac
- Three- and four-pole configurations
- Drawout and fixed mounted
- 200A to 6000A continuous current
- 50 kA to 150 kA interrupting ratings
- Short-time withstand up to 100 kA

Performance

- 100% rated at full continuous current
- Three frame sizes to facilitate compact enclosure options
- High withstand breakers for maximum coordination
- Current limiting Magnum SB fuseless fast-opening breakers with high interrupting ratings and low energy let-through for reduced arc flash

Protection, coordination, information and diagnostics with the Digitrip™ trip unit family

- Microprocessor-based rms sensing
- Basic to programmable overcurrent protection and alarms
- Ampere and power metering, power quality
- Local display for information and diagnostics
- Communicates with translators to common protocols, such as Modbus®, INCOM™ and PROFIBUS®
- Zone selective interlocking for improved coordination
- Arcflash Reduction Maintenance System™ technologies for arc flash reduction
- Breaker health monitoring

Safety

- ANSI, UL, CSA® and NEMA® certifications and approvals
- Arc flash reduction solutions
- Closed door levering and control access

Maintenance, modification and service

- UL-approved field-installable accessories
- Common to all frame sizes
- Easy to add or replace accessories and renewal parts at the point of use
- Primary disconnecting contacts are mounted on the breaker for ease of inspection and replacement
- Eaton Electrical Services & Systems is available for startup and support



Powering Business Worldwide



SBS Dimensions in Inches (mm)

	Height		Depth		Width	
	Three-Pole	Four-Pole	Three-Pole	Four-Pole	Three-Pole	Four-Pole
Narrow Frame (800A–2000A)						
Fixed	16.80 (426.7)	16.80 (426.7)	14.60 (370.8)	14.60 (370.8)	12.50 (317.5)	12.50 (317.5)
Drawout	21.00 (533.4)	21.00 (533.4)	18.70 (475.0)	18.70 (475.0)	13.30 (886.5)	17.00 (431.8)
Standard Frame (800A–3000A)						
Fixed	16.80 (426.7)	16.80 (426.7)	14.60 (370.8)	14.60 (370.8)	16.20 (411.5)	21.20 (538.5)
Drawout	21.00 (533.4)	21.00 (533.4)	18.70 (475.0)	18.70 (475.0)	13.30 (337.8)	17.00 (431.8)
Double Frame (3200A–5000A)						
Fixed	16.80 (426.7)	16.80 (426.7)	14.60 (370.8)	14.60 (370.8)	34.90 (886.5)	44.10 (1120.1)
Drawout	21.00 (533.4)	21.00 (533.4)	18.70 (475.0)	18.70 (475.0)	36.00 (914.4)	45.80 (1163.3)

Magnum SB Switchboard Class UL 1066 Insulated-Case Low Voltage Power Circuit Breaker

rms Symmetrical Current Ratings kA 50/60 Hz ①

Frame Amperes	Breaker Type	Frame Type	Interrupting at 254 Vac	Interrupting at 508 Vac	Interrupting at 635 Vac	Short-Time Withstand Rating	Fixed Internal Inst. Trip	Available Current Sensor and Rating Plugs for Digitrip RMS Trip Unit (establishes breaker In rating)
800	SBN-508	Narrow	50	50	35	20	18 x I _n	200, 250, 300, 400, 600, 800
	SBN-608	Narrow	65	65	42	20	18 x I _n	
	SBN-C08	Narrow	100	100	65	20	18 x I _n	
	SBS-608	Standard	65	65	65	20	18 x I _n	
	SBS-C08	Standard	100	100	85	20	18 x I _n	
1200	SBN-512	Narrow	50	50	35	25	18 x I _n	200, 250, 300, 400, 600, 800, 1000, 1200
	SBN-612	Narrow	65	65	42	25	18 x I _n	
	SBS-C12	Narrow	100	100	65	25	18 x I _n	
	SBS-612	Standard	65	65	65	25	18 x I _n	
	SBS-C12	Standard	100	100	85	25	18 x I _n	
1600	SBS-E12 ②	Standard	200	150	65	30	30	200, 250, 300, 400, 600, 800, 1000, 1200, 1600
	SBN-516	Narrow	50	50	35	30	18 x I _n	
	SBN-616	Narrow	65	65	42	30	18 x I _n	
	SBN-C16	Narrow	100	100	65	30	18 x I _n	
	SBS-616	Standard	65	65	65	30	18 x I _n	
2000	SBS-C16	Standard	100	100	85	30	18 x I _n	200, 250, 300, 400, 600, 800, 1000, 1200, 1600, 2000
	SBS-E16 ②	Standard	200	150	65	30	30	
	SBN-620	Narrow	65	65	65	35	18 x I _n	
	SBN-C20	Narrow	100	100	65	35	18 x I _n	
	SBS-620	Standard	65	65	65	35	18 x I _n	
2500	SBS-C20	Standard	100	100	85	35	18 x I _n	200, 250, 300, 400, 600, 800, 1000, 1200, 1600, 2000
	SBS-E20 ②	Standard	200	150	65	30	30	
	SBS-625	Standard	65	65	65	45	18 x I _n	
	SBS-C25	Standard	100	100	85	45	18 x I _n	
	SBS-E25 ②	Double	200	150	③	50	50	
3000	SBS-630	Standard	65	65	65	50	18 x I _n	200, 250, 300, 400, 600, 800, 1000, 1200, 1600, 2000, 2500
	SBS-C30	Standard	100	100	85	50	18 x I _n	
	SBS-E30 ②	Double	200	150	③	50	50	
	SBN84N	Double Narrow	85	85	65	85/65 ④	—	
	SBNC4N	Double Narrow	100	100	65	100/65 ⑤	—	
4000	SBS-840	Double	85	85	85	85	—	2000, 2500, 3000, 4000
	SBS-C40	Double	100	100	100	100	—	
	SBS-E40 ②	Double	200	150	③	50	50	
	SBS-850	Double	85	85	85	85	—	
	SBS-C50	Double	100	100	100	100	—	
5000	SBS-E50 ②	Double	200	150	③	50	50	2500, 3000, 4000, 5000
	SBS-850	Double	85	85	85	85	—	
	SBS-C50	Double	100	100	100	100	—	
6000	SBS-C60	Double	100	100	100	100	—	3000, 4000, 5000, 6000

① Interrupting ratings shown based on breaker equipped with integral Digitrip RMS trip unit. Interruption ratings for non-automatic breakers are equal to the published short-time withstand rating. These interruption ratings are based on the standard-duty cycle consisting of an open operation, a 15-second interval and a close-open operation, in succession, with delayed tripping in case of short-delay devices. The standard-duty cycle for short-time ratings consists of maintaining the rated current for two periods of 1 to 2 seconds each, with a 15-second interval of zero current between the two periods.

② Magnum SBSE current limiting power circuit breaker with fast-opening contacts.

③ Contact Eaton for product rating.

④ 85 kAIC short-time withstand rating applies to 254 Vac and 508 Vac ratings only. 65 kAIC short-time withstand applies at 635 Vac rating only.

⑤ 100 kAIC short-time withstand rating applies to 254 Vac and 508 Vac ratings only. 65 kAIC short-time withstand applies at 635 Vac rating only.

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