



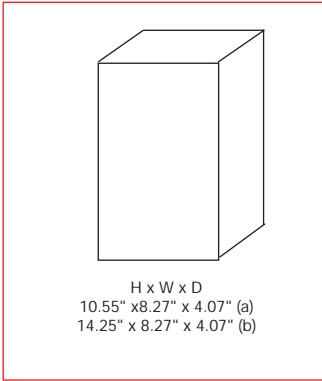
S6

600A / 800A, 600V

Electronic and thermal-magnetic trip type



S6



H x W x D
10.55" x 8.27" x 4.07" (a)
14.25" x 8.27" x 4.07" (b)

Standard S6 package includes complete circuit breaker and mounting hardware. Order cable lugs or other connection scheme as a separate item.

- (a) With K6TH cable lugs breaker is 10.55" tall.
- (b) With K6TJ cable lugs, terminal covers are provided and breaker is 14.25" tall.

General

The S6 breaker family is an 800A frame with a 600A and 800A version, both utilizing a microprocessor based overcurrent protective trip system. Both versions are adjustable from 40% to 100% of rating without the addition of any parts or rating plugs. As standard, the S6 includes adjustable long time function for overload protection and adjustable instantaneous function for short circuit protection.

Versions

To meet all application needs, the S6 is available in various versions:

- B = Adjustment LI
- C = Adjustment LSI
- E = Adjustment LSIG
- Q = 100% UL rated
- D = Molded case switch
- M = Magnetic only (MCP)
- T = Thermal magnetic
- G = 2.5 Mag (3-pole only)

Trip functions

These tripping functions are available:

- L = Long time
- S = Short time
- I = Instantaneous
- G = Ground fault

Performance level

Each version is also available in different maximum fault interrupting levels

- N = Normal
- H = High
- L = Extra high

Number of poles

In UL/CSA version, the S6 is available as in two pole or three pole version, both with the same dimensions. A four pole version is also available in UL/IEC form. For price estimate, add 35% to list price of selected version three pole breaker, contact ABB Control for details.

Accessory mounting

Internal accessories are UL/CSA approved for both factory or field installation. Accessories require control cable connectors. Shunt trips or UVR's mount in the left cavity. Auxiliary or bell alarm switches mount in the right cavity.

Reverse feeding

All versions of the S6 family are suitable for reverse feed applications.

Molded case switches

UL489 switches include no overcurrent protection except for a high instantaneous trip mechanism for self protection. IEC type molded case switches with no trip protection are also available.

UL/CSA Interrupting capacity (kA RMS) UL489 / CSA C22.2

Voltage	N	H	L
240VAC	65	150	200
480VAC	50	65	100
600VAC	25	35	42
500VDC [Ⓞ]	35	50	65
600VDC [Ⓞ]	20	25	50

IEC-947 Interrupting capacity (kA RMS)

Voltage	N	H	L
230VAC	65	100	200
380/400/415VAC	35	65	100
440VAC	30	50	80
500VAC	25	40	65
690VAC	20	25	35

15

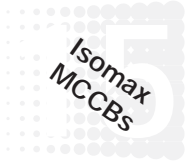
Catalog Number number	Rating	Magnetic trip
S6N600GW	3 pole, 600 Amp thermal magnetic, Im=2.5 x Ith	1500A
S6N800GW	3 pole, 800 Amp thermal magnetic, Im=2.5 x Ith	2000A

[Ⓞ] Thermal magnetic only.

S6

600A / 800A, 600 VAC

Electronic and thermal magnetic trip type



The S6 breaker family uses two available microprocessor based internal trip units. The standard **PR211** trip unit includes adjustments for long time current pick-up and instantaneous current trip point.

The optional **PR212** trip unit includes adjustments for long time current pick-up/delay, short time pick-up/delay, I²t (on/off), instantaneous current trip point and further optional ground fault protection.

600A Frame (240 – 600A adjustable continuous range)

Breaker	IC at 480VAC	Trip type	Adjustment	2 pole, 600VAC catalog number	List price	3 pole, 600VAC catalog number	List price
S6N	50kA	PR211	LI	S6N600BW-2	\$ 2847	S6N600BW	\$ 3608
		PR212	LSI	S6N600CW-2	4237	S6N600CW	4998
		PR212	LSIG	—	—	S6N600EW	6998
S6H	65kA	PR211	LI	S6H600BW-2	4275	S6H600BW	5271
		PR212	LSI	S6H600CW-2	5665	S6H600CW	6661
		PR212	LSIG	—	—	S6H600EW	8661
S6L	100kA	PR211	LI	S6L600BW-2	5481	S6L600BW	6482
		PR212	LSI	S6L600CW-2	6871	S6L600CW	7872
		PR212	LSIG	—	—	S6L600EW	8972

800A Frame (320 – 800A adjustable continuous range)

Breaker	IC at 480VAC	Trip type	Adjustment	2 pole, 600VAC catalog number	List price	3 pole, 600VAC catalog number	List price
S6N	50kA	PR211	LI	S6N800BW-2	\$ 3842	S6N800BW	\$ 4802
		PR212	LSI	S6N800CW-2	5232	S6N800CW	6192
		PR212	LSIG	—	—	S6N800EW	8192
S6H	65kA	PR211	LI	S6H800BW-2	5275	S6H800BW	6465
		PR212	LSI	S6H800CW-2	6665	S6H800CW	7855
		PR212	LSIG	—	—	S6H800EW	9855
S6L	100kA	PR211	LI	S6L800BW-2	6476	S6L800BW	7676
		PR212	LSI	S6L800CW-2	7866	S6L800CW	9066
		PR212	LSIG	—	—	S6L800EW	11,066

Trip settings

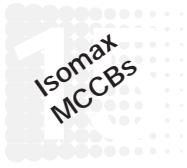
Adjustment	Trip function	Range	Individual settings
L	Long time pick-up Long time delay	0.4 – 1.0 3.0 – 18 sec.	0.4-0.5-0.55-0.6-0.65-0.7-0.75-0.8-0.85-0.875-0.9-0.925-0.95-0.975-1.0 x Frame rating PR212 A - B - C - D
S	Short time pick-up Short time delay	1.0 – 10.0 0.05 – 0.5 sec.	Off-1.0-2.0-3.0-4.0-6.0-8.0-10.0 x Frame rating PR212 A - B - C - D (I ² t On-Off)
I	Instantaneous trip	1.5 – 12.0	1.5-2.0-4.0-6.0-8.0-10.0-12.0 x Frame rating PR212
G	Ground fault Ground fault delay	0.2 – 1.0 0.1 – 0.8 sec.	Off-0.2-0.3-0.4-0.6-0.8-0.9-1.0 x Frame rating PR212 A - B - C - D

Continuous amperage settings (long time adjustment) — PR211

Frame	Set points								Setting
	0.4	0.5	0.6	0.7	0.8	0.9	0.95	1.0	
600A	240	300	360	420	480	540	570	600	Amps
800A	320	400	480	560	640	720	760	800	Amps

S6 thermal-magnetic breakers, for AC and DC applications

Breaker	IC at 500VDC	Rating	Magnetic trip	2 pole, 600VAC /500DC catalog number	List price	3 pole, 600VAC/DC catalog number	List price
S6N	35kA	600A (420 – 600A)	6000A	S6N600TW-2	\$ 2847	S6N600TW	\$ 3608
		800A (560 – 800A)	8000A	S6N800TW-2	3842	S6N800TW	4802
S6H	50kA	600A (420 – 600A)	6000A	S6H600TW-2	4275	S6H600TW	5271
		800A (560 – 800A)	8000A	S6H800TW-2	5275	S6H800TW	6465
S6L	65kA	600A (420 – 600A)	6000A	S6L600TW-2	5481	S6L600TW	6482
		800A (560 – 800A)	8000A	S6L800TW-2	6476	S6L800TW	7676



S6

600A / 800A, 600 VAC

100% UL rated, electronic trip type

When applied correctly, UL tested 100% equipment rated breakers may be applied at full rating rather than on the sizing rules of the NEC where breakers and cable are sized based on actual continuous load current divided by 80%. This

100% rating can save the user the cost of larger cable or bus bar. Please consult the NEC for details and other design factors needed for this application.

600A Frame (240 – 600A adjustable continuous range)

Breaker	IC at 480VAC	Trip type	Adjustment	3 pole 600VAC catalog number	List price
S6N	50kA	PR211	LI	S6NQ600BW	\$ 3969
		PR212	LSI	S6NQ600CW	5498
		PR212	LSIG	S6NQ600EW	7698
S6H	65kA	PR211	LI	S6HQ600BW	5798
		PR212	LSI	S6HQ600CW	7327
		PR212	LSIG	S6HQ600EW	9527
S6L	100kA	PR211	LI	S6LQ600BW	7130
		PR212	LSI	S6LQ600CW	8659
		PR212	LSIG	S6LQ600EW	9869

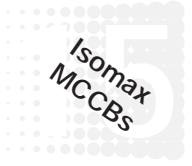
800A Frame (320 – 800A adjustable continuous range)

Breaker	IC at 480VAC	Trip type	Adjustment	3 pole 600VAC catalog number	List price
S6N	50kA	PR211	LI	S6NQ800BW	\$ 5282
		PR212	LSI	S6NQ800CW	6811
		PR212	LSIG	S6NQ800EW	9011
S6H	65kA	PR211	LI	S6HQ800BW	7112
		PR212	LSI	S6HQ800CW	8641
		PR212	LSIG	S6HQ800EW	10,841
S6L	100kA	PR211	LI	S6LQ800BW	8444
		PR212	LSI	S6LQ800CW	9973
		PR212	LSIG	S6LQ800EW	12,173

Trip settings

Adjustment	Trip function	Range	Individual settings
L	Long time pick-up Long time delay	0.4 – 1.0 3.0 – 18 sec.	0.4-0.5-0.55-0.6-0.65-0.7-0.75-0.8-0.85-0.875-0.9-0.925-0.95-0.975-1.0 x Frame rating PR212 A - B - C - D
S	Short time pick-up Short time delay	1.0 – 10.0 0.05 – 0.5 sec.	Off-1.0-2.0-3.0-4.0-6.0-8.0-10.0 x Frame rating A - B - C - D (1 st On-Off)
I	Instantaneous trip	1.5 – 12.0	1.5-2.0-4.0-6.0-8.0-10.0-12.0 x Frame rating
G	Ground fault Ground fault delay	0.2 – 1.0 0.1 – 0.8 sec.	Off-0.2-0.3-0.4-0.6-0.8-0.9-1.0 x Frame rating A - B - C - D

S6 600A / 800A



Magnetic only (MCP)

All S6 magnetic only breakers utilize the electronic PR211 trip unit with an adjustable range of 1.5 to 12 times frame rating. Both two and three pole MCPs are 600VAC rated.

Type	Amps	Interruption capacity	Adjustment range	2 pole 600VAC catalog number	List price	3 pole 600VAC catalog number	List price
S6N	600	240VAC	65kA	900 – 7200A	S6N600MW-2 S6N800MW-2	S6N600MW S6N800MW	\$ 2847 3842
	800	480VAC 600VAC	50kA 25kA	1200 – 9600A			
S6H	600	240VAC	150kA	900 – 7200A	S6H600MW-2 S6H800MW-2	S6H600MW S6H800MW	4275 5270
	800	480VAC 600VAC	65kA 35kA	1200 – 9600A			
S6L	600	240VAC	200kA	900 – 7200A	S6L600MW-2 S6L800MW-2	S6L600MW S6L800MW	5481 6476
	800	480VAC 600VAC	100kA 42kA	1200 – 9600A			

Molded case switches

Type	Interruption capacity ②	Amps	Magnetic trip	3 pole catalog number	List price	
S6H-D	240VAC	200kA	---	---	---	
	480VAC	100kA	600	S6H600DW	\$ 3275	
	600VAC	42kA	800	S6H800DW	4248	
	600VDC	50kA	---	---	---	
Non-UL, switches without overcurrent protection	Withstand rating		400	none	S6D400W	3275
	600VAC	15kA	630	none	S6D630W	3275
			800	none	S6D800W	4248

Neutral current transformer (required for 4 wire GF systems)

Amps	Catalog number	List price
600	K6NCT-600	\$ 250
800	K6NCT-800	

Connection options

Type	Wire range	Amps ②	Set of 2 catalog number	List price	Set of 3 catalog number	List price
CU/AL front lugs	(2) 250kcmil – 500kcmil	600	K6TH-2 K6TJ-2 ①	\$ 50 90	K6TH ① K6TJ ①	\$ 75 135
	(3) 2/0 – 400kcmil	800				
CU rear lugs	(2) 250kcmil – 350kcmil	600	---	---	Set of 6 catalog number K6THR K6TJR	150 170
	(3) 250 – 350kcmil	800	---	---		
Extended front bar	---	600	---	---	K6ET-600 K6ET-800	150 170
Extended front bar	---	800	---	---		

① Includes lug cover.
 ② Suggested lugs for a circuit breaker up to amps shown. Cable size and type determine maximum amperage.
 ③ With fuse or MCCB protected circuit.