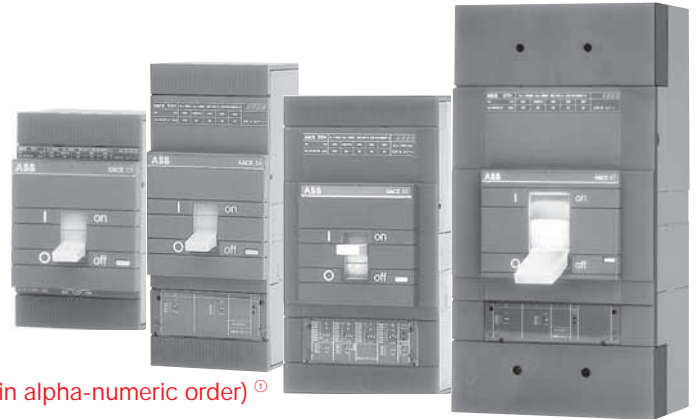




# Isomax

## Molded case circuit breakers

### S3 – S8



**S4 N 250 B W - 2 xxx**

**Accessories (added in alpha-numeric order) ①**

- A = Auxiliary Switch
- BA = Bell Alarm
- BA3 = Bell Alarm (S6/S7 only)
- S\_ = Shunt trip with voltage code
- U\_ = Undervoltage release with voltage code

**Number of poles**

- 2 = 2 pole
- 4 = 4 pole
- None = 3 pole

**Type connectors**

- W = None

**Trip unit function**

- |                                       |                         |
|---------------------------------------|-------------------------|
| B = LI                                | F = LSIG/K              |
| C = LSI                               | H = LSIG/D              |
| D = Molded Case Switch (MCS)          | J = LSIG/DT             |
| E = LSIG                              | K = LSIG/DTK            |
| T = Thermal-magnetic – 10X Mag        | M = Magnetic only (MCP) |
| G = Thermal-magnetic – 2.5 - 3X Mag ② |                         |

**Current rating**

- 015 = 15A
- 250 = 250A
- 400 = 400A
- 1200 = 1200A

**Interrupting rating class**

- |                        |                                |
|------------------------|--------------------------------|
| B = Basic (240VAC)     | NQ = Normal, 100% rated        |
| N = Normal             | HQ = High, 100% rated          |
| H = High               | LQ = Extra High, 100% rated    |
| L = Extra High         | D = Special molded case switch |
| BQ = Basic, 100% rated |                                |

(No trip IEC)

**Frame size**

- |                 |                 |
|-----------------|-----------------|
| S3 = 150 / 225A | S6 = 600 / 800A |
| S4 = 250A       | S7 = 1200A      |
| S5 = 400A       |                 |

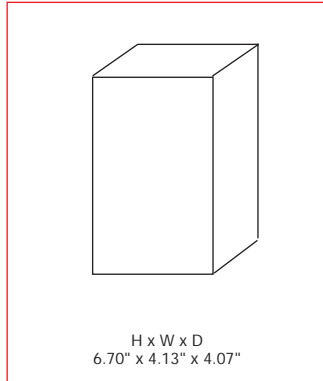
① Consult ABB for factory installed accessories.  
② Consult ABB for availability.



# S3

## 150/225A

### Standard thermal-magnetic



Standard S3 package includes complete circuit breaker and mounting hardware. Order cable lugs as a separate item, standard copper/aluminum (Cu/Al) lugs are no charge when ordered with breaker.

#### General

The S3 breaker family ranges from 15 through 225 amperes. The S3 trip mechanisms are non-interchangeable and use sensitive electromagnetic relays for overcurrent trip protection. Heat sensitive bimetals are used for thermal overcurrent protection. Short circuit current protection begins at 10 times the thermal rating of the breaker and uses a magnetic coil principle.

#### Versions

To meet all application needs, the S3 is available in various versions:

- T = Thermal-magnetic
- O = 100% UL rated
- D = Molded case switch
- M = Magnetic only (MCP)
- G = 3X Mag (100 - 225A 3-pole only)

#### Performance level

Each version is also available in different maximum fault interrupting levels

- B = 240VAC
- N = Normal
- H = High
- L = Extra high

#### Number of poles

In UL/CSA form, the S3 is available in two pole or three pole versions, 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 S3 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	100	150
480VAC	25	50	85 <sup>①</sup>
600VAC	14	14	25
500VDC	35	50	65
600VDC	20	35	50

#### IEC-947 Interrupting capacity (kA RMS)

Voltage	N	H	L
230VAC	65	100	170
380/400/415VAC	35	65	85
440VAC	30	50	65
500VAC	25	40	50
690VAC	14	18	20
500VDC	35	50	65
750VDC	20	35	50

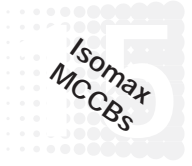
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① 15-30A are 65kA at 480VAC

# S3

## 150/225A

### Standard thermal-magnetic



#### S3B

Breaker	IC at 240VAC	Rating	Magnetic trip	2 pole, 240VAC catalog number	List price	3 pole, 240VAC catalog number	List price
S3B	150kA	175A 200A 225A	1750A 2000A 2250A	S3B175TW-2 S3B200TW-2 S3B225TW-2	\$ 460	S3B175TW S3B200TW S3B225TW	\$ 590

#### S3N

Breaker	IC at 480VAC	Rating	Magnetic trip	2 pole, 600VAC/500VDC catalog number	List price	3 pole, 600VAC/DC catalog number	List price	
S3N	25kA	15A	500A	S3N015TW-2	\$ 316	S3N015TW	\$ 413	
		20A	500A	S3N020TW-2		S3N020TW		
		25A	500A	S3N025TW-2		S3N025TW		
		30A	500A	S3N030TW-2		S3N030TW		
		35A	500A	S3N035TW-2		S3N035TW		
		40A	500A	S3N040TW-2		S3N040TW		
		50A	500A	S3N050TW-2	S3N050TW			
		60A	600A	S3N060TW-2	S3N060TW			
		70A	700A	S3N070TW-2	S3N070TW	407	S3N070TW	504
		80A	800A	S3N080TW-2	S3N080TW			
		90A	900A	S3N090TW-2	S3N090TW			
		100A	1000A	S3N100TW-2	S3N100TW			
125A	1250A	S3N125TW-2	S3N125TW	911	S3N125TW	1131		
150A	1500A	S3N150TW-2	S3N150TW					
175A <sup>①</sup>	1750A	S3N175TW-2	S3N175TW					
200A <sup>①</sup>	2000A	S3N200TW-2	S3N200TW					
225A <sup>①</sup>	2250A	S3N225TW-2	S3N225TW					

#### S3H

Breaker	IC at 480VAC	Rating	Magnetic trip	2 pole, 600VAC/500VDC catalog number	List price	3 pole, 600VAC/DC catalog number	List price	
S3H	50kA	15A	500A	S3H015TW-2	\$ 527	S3H015TW	\$ 619	
		20A	500A	S3H020TW-2		S3H020TW		
		25A	500A	S3H025TW-2		S3H025TW		
		30A	500A	S3H030TW-2		S3H030TW		
		35A	500A	S3H035TW-2		S3H035TW		
		40A	500A	S3H040TW-2		S3H040TW		
		50A	500A	S3H050TW-2	S3H050TW			
		60A	600A	S3H060TW-2	S3H060TW			
		70A	700A	S3H070TW-2	S3H070TW	617	S3H070TW	702
		80A	800A	S3H080TW-2	S3H080TW			
		90A	900A	S3H090TW-2	S3H090TW			
		100A	1000A	S3H100TW-2	S3H100TW			
		125A	1250A	S3H125TW-2	S3H125TW	1376	S3H125TW	1586
		150A	1500A	S3H150TW-2	S3H150TW			
		175A <sup>①</sup>	1750A	S3H175TW-2	S3H175TW			
200A <sup>①</sup>	2000A	S3H200TW-2	S3H200TW					
225A <sup>①</sup>	2250A	S3H225TW-2	S3H225TW					

#### S3L

Breaker	IC at 480VAC	Rating	Magnetic trip	2 pole, 600VAC/500VDC catalog number	List price	3 pole, 600VAC/DC catalog number	List price
S3L	65k	15A	500A	S3L015TW-2	\$ 634	S3L015TW	\$ 824
		20A	500A	S3L020TW-2		S3L020TW	
		25A	500A	S3L025TW-2		S3L025TW	
		30A	500A	S3L030TW-2		S3L030TW	
	85kA	35A	500A	S3L035TW-2	634	S3L035TW	824
		40A	500A	S3L040TW-2		S3L040TW	
		50A	500A	S3L050TW-2		S3L050TW	
		60A	600A	S3L060TW-2		S3L060TW	
	65kA	70A	700A	S3L070TW-2	816	S3L070TW	1010
		80A	800A	S3L080TW-2		S3L080TW	
		90A	900A	S3L090TW-2		S3L090TW	
		100A	1000A	S3L100TW-2		S3L100TW	
	65kA	125A	1250A	S3L125TW-2	1818	S3L125TW	2260
		150A	1500A	S3L150TW-2		S3L150TW	
		175A <sup>①</sup>	1750A	S3L175TW-2		S3L175TW	
65kA	200A <sup>①</sup>	2000A	S3L200TW-2	1818	S3L200TW	2260	
	225A <sup>①</sup>	2250A	S3L225TW-2		S3L225TW		

① 480VAC maximum



**S3**  
**150/225A**  
**100% UL rated**

**S3NQ**

Breaker	IC at 480VAC	Rating	Magnetic trip	3 pole 600VAC/DC catalog number	List price
S3NQ	25kA	15A	500A	S3NQ015TW	\$ 459
		20A	500A	S3NQ020TW	
		25A	500A	S3NQ025TW	
		30A	500A	S3NQ030TW	
		35A	500A	S3NQ035TW	
		40A	500A	S3NQ040TW	
		50A	500A	S3NQ050TW	560
		60A	600A	S3NQ060TW	
		70A	700A	S3NQ070TW	
		80A	800A	S3NQ080TW	1257
		90A	900A	S3NQ090TW	
		100A	1000A	S3NQ100TW	
		125A	1250A	S3NQ125TW	
		150A	1500A	S3NQ150TW	
		175A <sup>①</sup>	1750A	S3NQ175TW	
200A <sup>①</sup>	2000A	S3NQ200TW	2250A		
225A <sup>①</sup>	2250A	S3NQ225TW			

**S3HQ**

Breaker	IC at 480VAC	Rating	Magnetic trip	3 pole catalog number	List price
S3HQ	50kA	15A	500A	S3HQ015TW	\$ 688
		20A	500A	S3HQ020TW	
		25A	500A	S3HQ025TW	
		30A	500A	S3HQ030TW	
		35A	500A	S3HQ035TW	
		40A	500A	S3HQ040TW	
		50A	500A	S3HQ050TW	780
		60A	600A	S3HQ060TW	
		70A	700A	S3HQ070TW	
		80A	800A	S3HQ080TW	1762
		90A	900A	S3HQ090TW	
		100A	1000A	S3HQ100TW	
		125A	1250A	S3HQ125TW	
		150A	1500A	S3HQ150TW	
		175A <sup>①</sup>	1750A	S3HQ175TW	
200A <sup>①</sup>	2000A	S3HQ200TW	2250A		
225A <sup>①</sup>	2250A	S3HQ225TW			

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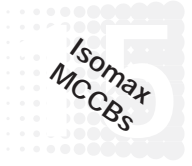
**S3LQ**

Breaker	IC at 480VAC	Rating	Magnetic trip	3 pole catalog number	List price
S3LQ	65kA	15A	500A	S3LQ015TW	\$ 916
		20A	500A	S3LQ020TW	
		25A	500A	S3LQ025TW	
		30A	500A	S3LQ030TW	
	85kA	35A	500A	S3LQ035TW	1123
		40A	500A	S3LQ040TW	
		50A	500A	S3LQ050TW	
		60A	600A	S3LQ060TW	
		70A	700A	S3LQ070TW	2511
		80A	800A	S3LQ080TW	
		90A	900A	S3LQ090TW	
		100A	1000A	S3LQ100TW	
		125A	1250A	S3LQ125TW	2250A
		150A	1500A	S3LQ150TW	
		175A <sup>①</sup>	1750A	S3LQ175TW	
200A <sup>①</sup>	2000A	S3LQ200TW			
225A <sup>①</sup>	2250A	S3LQ225TW			

**Note:** 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.

① 480VAC maximum

# S3 150/225A, 600VAC



## Magnetic only (MCP)

Magnetic only circuit breakers are instantaneous trip only devices which are Underwriters Laboratories Recognized. MCPs must be used with some other device that will provide overload protection.

Type	Interruption capacity		Amps	Magnetic trip	3 pole catalog number	List price
S3N	240VAC	35kA	3	12 – 36	S3N003MW	\$ 568
	480VAC	18kA	5	20 – 60	S3N005MW	
	600VAC	10kA	10	40 – 120	S3N010MW	
	240VAC	35kA	25	100 – 300	S3N025MW	\$ 568
	480VAC	18kA				
	600VAC	10kA				
S3N	240VAC	75kA	50	200 – 600	S3N050MW	633
	480VAC	35kA	100	400 – 1200	S3N100MW	763
	600VAC	14kA	125	500 – 1500	S3N125MW	929
			150	600 – 1500	S3N150MW	929

Type	Interruption capacity		Amps	Magnetic trip	3 pole catalog number	List price
S3L	240VAC	50kA	3	12 – 36	S3L003MW	\$ 710
	480VAC	25kA	5	20 – 60	S3L005MW	
	600VAC	10kA	10	40 – 120	S3L010MW	
	240VAC	50kA	25	100 – 300	S3L025MW	\$ 710
	480VAC	25kA				
	600VAC	10kA				
	240VAC	150kA	50	200 – 600	S3L050MW	710
	480VAC	85kA	100	400 – 1200	S3L100MW	843
	600VAC	25kA	125	500 – 1500	S3L125MW	1910
			150	600 – 1500	S3L150MW	1910
	480VAC	65kA	200 ②	800 – 2400	S3L200MW	1910

## Molded case switches

Type	Interruption capacity ①		Amps	Magnetic trip	3 pole catalog number	List price	
S3B-D	240VAC	150kA	225	2250A	S3B225DW	\$ 410	
S3H-D	240VAC	100kA	150	1500A	S3H150DW	892	
	480VAC	50kA			S3H225DW	1254	
	600VAC	14kA			225 ②		
	500VDC	65kA					
Non-UL switches without overcurrent protection	Withstand rating		100 160 250	none	S3D100W	531	
	600VAC	6.5kA		none	S3D160W	892	
				none	S3D250W	1393	

## Connection options

Type	Wire range	Amps①	Set of 2 catalog number	List price	Set of 3 catalog number	List price
CU/AL front lugs	14AWG – 2AWG	60	K3TA-2	\$ 4	K3TA	\$ 6
CU/AL front lugs	14AWG – 1/0	100	K4TB-2	4	K4TB	6
CU/AL front lugs	2AWG – 4/0	150	K4TC-2	4	K4TC	6
CU/AL front lugs	4AWG – 300kcmil	225	K4TD-2	10	K4TD	15
CU front lugs (saddle) CU rear lugs	14AWG – 250kcmil	250	—	—	Set of 6 catalog number K4TES K4TER	30
	6AWG – 250kcmil	250	—	—		
Extended front bar	—	250	—	—	K4ET-250	46

① Suggested lugs for circuit breaker up to amps shown. Cable size and type determine maximum amperage.

② 480VAC maximum.

③ With fuse or MCCB protected circuit.

Discount schedule SM – S3 MCPs only  
Discount schedule S3 – Circuit breakers  
Discount schedule SA – Lugs