

Molded Case Circuit Breakers

SELECTION

Molded Case Switch — Circuit Disconnect

Maximum Frame Rating	2-Pole	3-Pole	Self-Protective Instantaneous Override $\pm 20\%$ ③
	Catalog Number	Catalog Number	
100A	BQ2S060■ BQ2S100■	BQ3S060■ BQ3S100■	1000A 1000A
125A	ED22S100A■ ED42S100A■ ED42S125A■ ED62S100A■ — CED62S100A■ CED62S125A■	ED23S100A ED43S100A ED43S125A ED63S100A ED63S125A CED63S100A■ CED63S125A■	1000A 1000A 1000A 1000A 1000A 1000A 1000A
225A	QJ22S225A■	QJ23S225A	2000A
250	FXD62S250A HFXD62S250A■ ①	FXD63S250A HFXD63S250A■ CFD63S250A■	3200A 3200A 3200A
400	JXD22S400A■ — — ①	JXD23S400A JXD63S400A HJXD63S400A■ CJD63S400A■	6000A 6000A 6000A 6000A
600	— — ①	LXD63S600A HLXD63S600A■ CLD63S600A■	8000A 8000A 8000A
800	— — ①	LMXD63S800A■ MXD63S800A CMD63S800A	10000A 10000A 10000A
1200	— ①	NXD63S120A CND63S120A■	10000A 10000A
1600	①	PXD63S160A	10000A
2000	①	RXD63S200A■	10000A
Non Automatic Molded Case Switch			
2000	①	TD63S2000■	—
2500	①	TD63S2500■	—
3200	①	TD63S3200■	—
4000-5000	See “SB” Type Insulated Case Breakers		

Ordering Information

Order by catalog number. Switches include frame and self protective (except TD) trip unit only. Order lugs separately from pages 6-70 to 6-72.

■ Built to order. Allow 3-4 weeks for delivery.

① For 2-pole application use outside poles of 3-pole circuit breaker.

② For additional lugs see pages 6-70 to 6-72.

③ Molded case switches up to R frame contain a self protecting instantaneous element, which may open circuit above their override set point.

Digital Solid State Sentron Sensitrip III Series

The Sentron Sensitrip III circuit breaker is a true RMS current sensing device. Digital microprocessor circuitry within the electronic trip unit provides more precise control over the circuit breaker functions. This control allows circuit coordination flexibility not available with thermal magnetic circuit breakers.

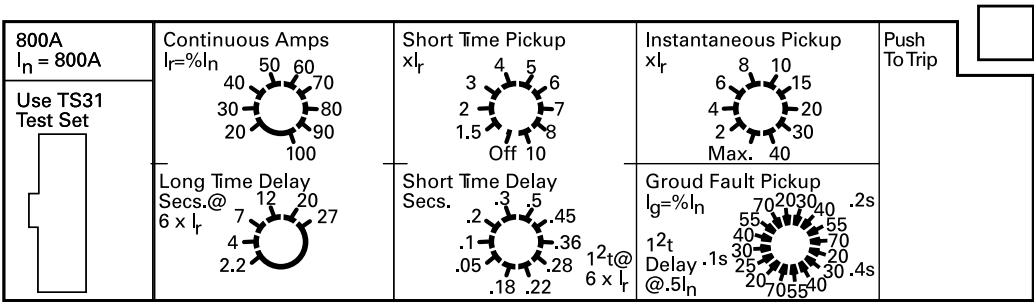
Functions available in Sentron Sensitrip circuit breakers.

Catalog Number (Description + Suffix)	Trip Type	Cont Current Setting	Long Time Delay	Instantaneous Setting	Short Time Pick Up	Short Time Delay	Short Time I ² t Pick Up	Ground Fault Pick Up	Ground Fault Delay
Basic Unit + (A)	LI	✓	✓	✓	—	—	—	—	—
Basic Unit + (A)G	LIG	✓	✓	✓	—	—	—	✓	✓
Basic Unit + (A)NT	LSI	✓	✓	✓	✓	✓	✓	—	—
Basic Unit + (A)NGT	LSIG	✓	✓	✓	✓	✓	✓	✓	✓

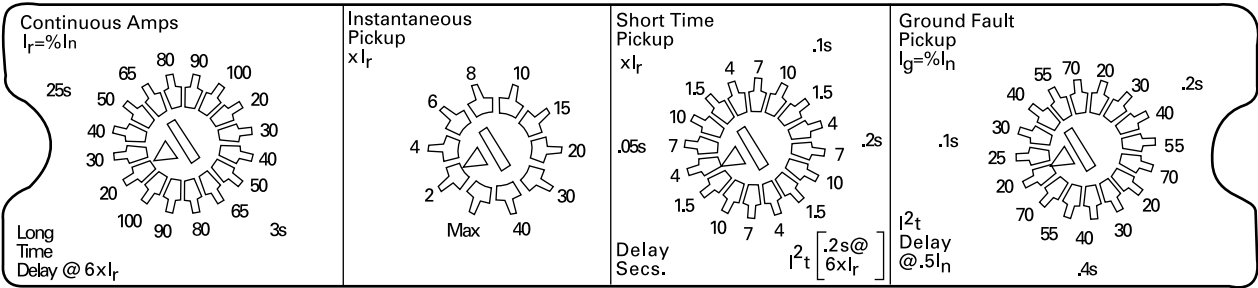
Letter "A" is used for MD and ND Solid State frame types only.

Typical Trip Unit Labeling and Adjustment Positions for the Sentron Sensitrip Circuit Breaker.

SMD6, SHMD6, SCMD6, SND6, SHND6, SCND6, SPD6, SHPD6



SJD6, SHJD6, SCJD6, SCD6, SHLD6, SCLD6



- I_n = Maximum circuit breaker ampere rating.
- I_r = Current Rating — a function of continuous ampere adjustment setting expressed in % of I_n .
- I_g = Ground Fault Pickup — a function of adjustment setting expressed in % of I_n .

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TECHNICAL

Digital Solid State Sentron Sensitrip III Series

A. Adjustable "Continuous Amps" Rating Switch

All Sensitrip III solid state molded case circuit breakers have an adjustable ampere rating switch. Adjustments made to this switch change the continuous current rating of the breaker from 20% to 100% of its maximum trip unit rating depending on the circuit breaker frame.

B. Adjustable "Long Time Delay" Switch

All Sensitrip III circuit breakers have an adjustable long time delay switch to allow for selection of long time delays of fixed time intervals at six times the setting of the adjustable "continuous amps" rating switch.

C. Adjustable "Instantaneous Pick-Up" Switch

Sensitrip III circuit breakers with an adjustable instantaneous trip switch allow selection of a tripping point from related to the adjusted circuit breaker Rating (I_r).

D. Adjustable "Short Time Pick-Up" Switch (Optional)

Sensitrip III circuit breakers with an adjustable short time pick-up switch allow for selection of short time pick-up in a range from 1.5 to 10 times the setting of the maximum current rating.

E. Adjustable "Short Time Delay" Switch (Optional)

Sensitrip III circuit breakers with an adjustable short time pick-up switch also contain a switch for adjustment in time delay. The adjustable short time delay switch allows for either of two modes of short time delays. One range of settings enables the breaker to be set for fixed time delays and the other range of settings enables the breaker to be set for short time delays based on I^2t curves.

Adjustable "Ground Fault Pick-Up" Switch

Sensitrip III circuit breakers containing the optional equipment ground fault protection cover the ground fault pick-up range of 20% to 70% of the circuit breaker frame rating. The ground fault pick-up settings also allow for one of three time delays based on I^2t curves.

For 3-phase, 4-wire systems, an external neutral transformer is required with an ampere rating equal to the trip unit ampere rating.

I_n = Maximum circuit breaker ampere rating.
 I_r = Current Rating — a function of adjustment setting expressed in % of I_n .
 I_g = Ground Fault Pick-up — a function of adjustment setting expressed in % of I_n .

Examples of Adjustment Settings

Catalog Number SMD69800A

I_n = 800	Continuous Current Setting	Long Time Delay Setting	Instantaneous Setting
I_n = 800 amperes Results	30 240 amperes I_r = 30% of 800	12 12 seconds trip at 6×240 amps = 1440.	8 1920 amperes $8 \times I_r = 8 \times 240$

Catalog Number SMD69800ANGT

I_n	I_r Setting	Long Time Delay	Short Time Pick-Up Off	Instantaneous Setting	Short Time Pick-Up On	Short Time Delay	I^2t Set	Ground Fault Pick-Up	Ground Fault Delay
800 amperes Results	70 560	20 20 sec.	— —	$10 I_r$ 5600A	$8 I_r$ 4480A	.5 .5 secs	.28 .28 sec @ 4480A	40 320A	.2 .2 sec
①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩

① I_n = 800 amperes.

② I_r = 560 amperes (70% of 800).

③ Delay = 20 seconds at 3360 amps ($6 \times I_r$).
Breaker will trip in 20 seconds with 3360 amperes.

④ Short Time Pick-Up Off — Instantaneous can be used.

⑤ Instantaneous set at $10 \times I_r = 10 \times 560 = 5600$ amperes.

⑥ Short Time Pick-Up On — Set at $8 \times 560 = 4480$ amperes.

⑦ Short Time Delay = .5 seconds. (Definite Time)

Note: ⑦ & ⑩ are mutually exclusive.

⑧ I^2t switch on .28 seconds @ $6 \times 560 = 3360$ amperes. (Inverse time)

⑨ Ground Fault Pick-Up set at $40 = 40\%$ of $I_n = 320$ amperes. (Definite Time)

⑩ Ground Fault Delay set at .2 seconds. Breaker will trip in 200 milliseconds with a 400 ampere ground fault.