



Spectronic S Air Circuit Breakers





GE Power Controls introduces a new generation of Air Circuit Breakers meeting today's growing industrial market needs.

Featuring superior technical performance, the ACBs satisfy the requirements of all modern and future low voltage installations.

Salient Features

- Specifically designed with total discrimination guarantee.
- Complete range from 800A to 6400A in 3 pole and 4 pole configurations.
- Suitable for either manual or motor operation for closing.
- Microprocessor releases RMS7 and RMS9 provide highly flexible trip characteristics for perfect co-ordination.
- Provision for all electrical accessories like shunt trip, under voltage, closing prevention device.
- Automatic safety shutters with padlocking facility to prevent access to live parts in withdrawn position.
- Mechanical device to prevent the mismatch of breaker and cradle.
- Unique gasket design provides IP54 protection.
- Complies with both Indian and International standards : IS 13947 (Part 1 & 3) IEC 60947 (Part 1 & 3).
- Optional position indication, reinforced ground plug & various interlocks.

Characteristics

Full interrupting capacity kept in all selectivity cases

The original pole design insures a very high withstand to short-circuit currents in "closed" position.

Total selectivity guaranteed even at closing on short-circuit

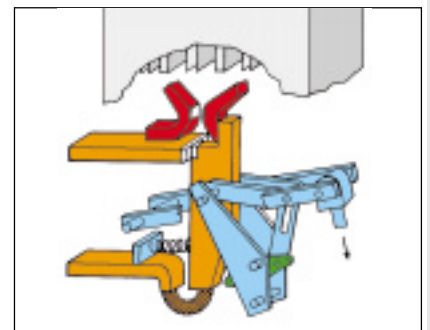
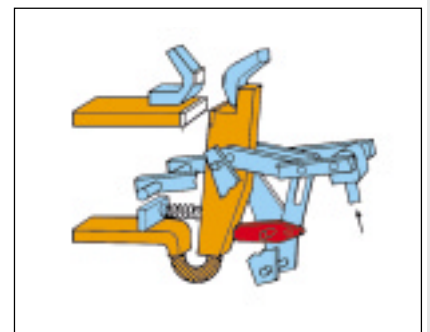
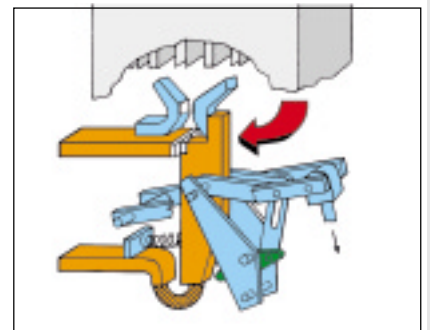
Independant closing directly on main contacts (patented) is obtained by using the energy stored in the springs and released by a lock.

Special design providing a long service of the main contacts

When opening, the unique pole design enables the transition from the main contacts to the arcing contacts. The structure of the spark arrester considerably reduces external effects even at maximum interrupting capacity.

Simple, efficient maintenance possible on site

Safety ensured by fully visible isolation





Selective S circuit breaker characteristics

		S 800	S 1000	S 1250	S 1600	S 2000	S 2500	S 3200	S 4000	S 5000	S 6400
Rated insulation voltage U_i	(V)	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Rated impulse voltage U_{imp}	(kV)	8	8	8	8	8	8	8	8	8	8
Rated maximum nominal voltage U_e	(V)	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Rated thermal current I_{th}	40°C (A)	800	1000	1250	1600	2000	2500	3200	4000	5000	6400
Rated ultimate short-circuit breaking capacity I_{cu}											
Alternating current 50/60Hz	240/415V (kA)	55	55	55	55	65	70	85	90	120	120
1000V ⁽¹⁾	(kA)	15	15	15	15	25	25				
Rated service short-circuit breaking capacity I_{cs}											
Alternating current 50/60Hz	240/415V (kA)	55	55	55	55	55	65	70	85	100	100
1000V ⁽¹⁾	(kA)	15	15	15	15	25	25				
Rated peak short-circuit making capacity I_{cm} (max)	(kA peak)	125	125	125	125	140	150	190	200	270	270
Rated short-time withstand current I_{cw} (415V)											
0.5 s.	(kA eff.)	55	55	55	55	65	70	-	-	-	-
1 s.	(kA eff.)	55	55	55	55	65	70	85	90	120	120
Utilization category		B	B	B	B	B	B	B	B	B	B
Endurance (number of cycles)											
mechanical	# cycles	20000	20000	20000	20000	20000	20000	10000	10000	5000	5000
electrical (under 415V) ⁽²⁾	# cycles	20000	20000	20000	20000	20000	20000	10000	10000	5000	5000
mean time between maintenance	# cycles	2000	2000	2000	2000	1500	1500	1500	1500	1500	1500
Power dissipation (withdrawable 3 pole)	(W)	150	200	300	400	450	500	920	1000	1320	1320
4th pole conventional thermal current	(A)	800	1000	1250	1600	2000	2500	3200	4000	5000	6400
Pollution degree		3	3	3	3	3	3	3	3	3	3

(1) U_e 1000V for all ratings $\leq 2500A$

(2) To guarantee this number of operations, it is necessary to check the spark arrestors and the arc chutes at the maintenance periods as shown above (replace when necessary). This can be done easily on site.

Protection Unit

Two types of microprocessor based protection units available - Standard RMS 7 and optional RMS 9 (with communication facility)



Standard protection

- Overload protection (LT)
- Short-circuit protection (ST-I)
- Optional ground fault protection (GF)

Setting ranges

	Setting points
LT (x In)	0.4 - 0.5 - 0.6 - 0.7 - 0.75 - 0.8 - 0.85 - 0.9 - 0.95 - 1
LTD (s)	5 - 10 - 15 - 20 - 25 - 30 - 35 - 40 delay at 7.2 Ir
ST (x In)	1.5 - 2 - 3 - 4 - 5 - 7 - 9 - 10 - 12 - 14
Time delay (ms)	30 - 60 - 90 - 120 - 150 - 180 - 210 - 240 - 270 - 300
I (x In)	1.5 - 2 - 3 - 5 - 7 - 10 - 15 - OFF
GF (x In)	S 800 - S 2000: 0.2 - 0.3 - 0.4 - 0.5 - 0.6 - 0.7 - 0.8
	S 2500: 0.2 - 0.3 - 0.35 - 0.45 - 0.55 - 0.6 - 0.7
	S 3200 - S 6400: 0.2 - 0.3 - 0.35 - 0.4
Time delay (ms)	100 - 200 - 300

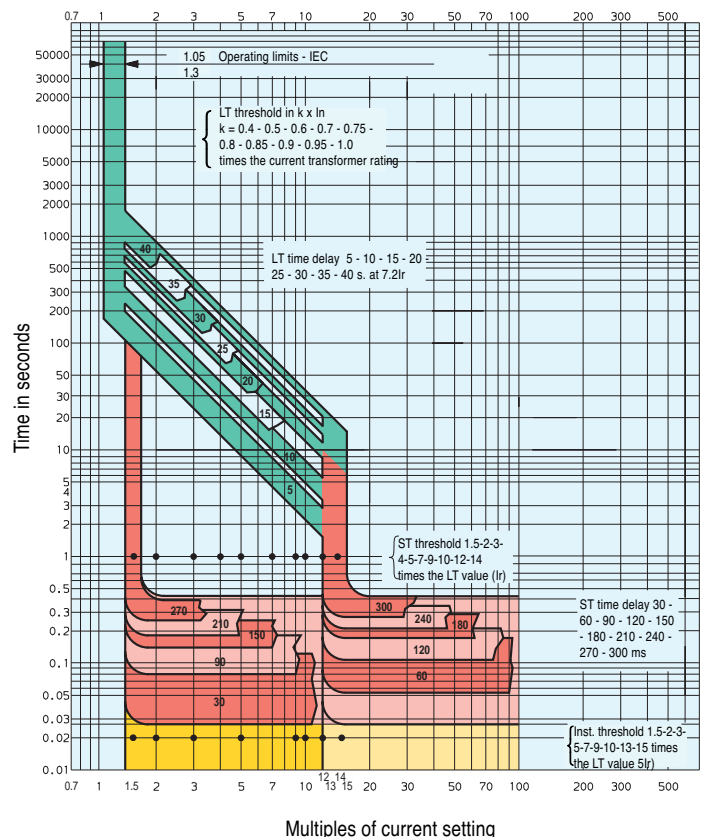
$$I_r = k \times I_n$$

Note

If the GF function is selected, the fourth CT's must be of the same rating as the ones of the phases.

RMS 7: Protection unit for S800 to S6400

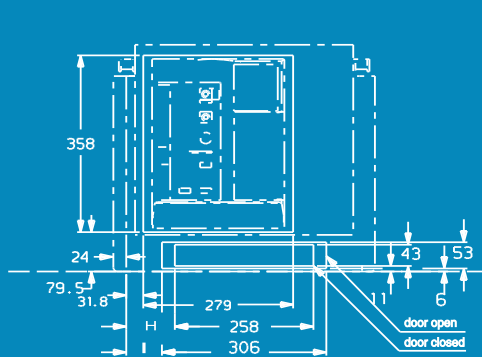
Setting and operating current values



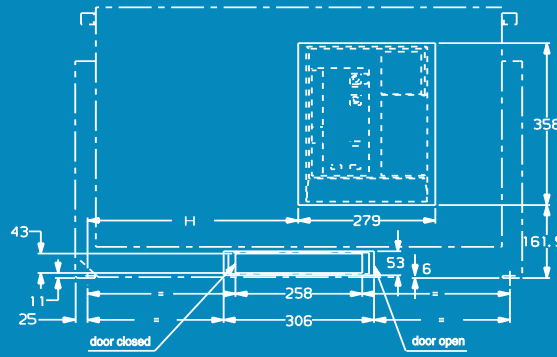
Dimensions in mm

Rating		800	1000	1250	1600	2000	2500	3200	4000
3 poles	Height	(mm)	455	455	455	455	455	599	599
	Width	(mm)	399	399	399	399	487	555	711
	Depth	(mm)	566	566	566	566	566	641.5	641.5
4 poles	Height	(mm)	455	455	455	455	455	599	599
	Width	(mm)	487	487	487	487	621	701	909
	Depth	(mm)	566	566	566	566	566	641.5	641.5

Panel cut out details



S800-2500

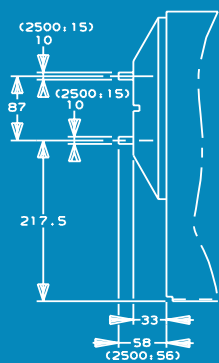


S3200-4000

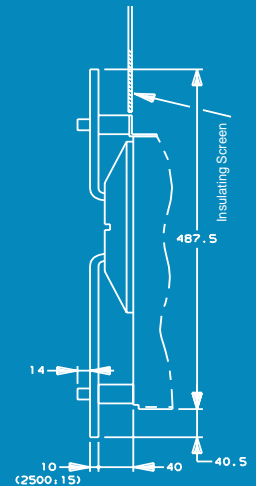
Dimension H & I

Circuit breaker		H	I
S 800 - 1600	3P	46.5	22.5
	4P	90.5	66.5
S 2000	3P	90.5	66.5
	4P	157.5	133.5
S 2500	3P	124.5	100.5
	4P	197.5	173.5
S 3200 - 4000	3P	230.3	-
	4P	428.3	-

Connection terminals



Flexible terminal options



Rear horizontal terminals

Rear vertical terminals

Front terminals

Dimensions shown above are for S800-2500



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