

Metal Clad Switchgears



SMC Series

SMC 12 | SMC 24 | SMC 36 | SMC 40.5 | SMC 46

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SMC Metal Clad Switchgears are Air Insulated Switchgear and Controlgears manufactured for heavy-duty conditions. SMC switchgears, have been produced since 1989 and redesigned according to the revisions in the standards, are currently produced up to 46 kV, 4000 A, 40 kA.

SMC series are manufactured in compliance with type tested design successfully passed in the international accredited laboratories according to IEC 62271-200 standard by ISO 9001, ISO 14001 and ISO 45001 quality certified manufacturer as two types:

- **SMC-O** : front accessible
- **SMC-1** : rear accessible

Application Areas

- Power Generation
- Transmission and Distribution
- Renewable Power Plants
- Transformer Substations
- Heavy Industry
- Rolling Mills
- Pipelines
- Shipyards
- Mining
- Transportation

Standards

- IEC 62271-1
- IEC 61869-2
- IEC 62271-200
- IEC 61869-3
- IEC 62271-100
- IEC 60273
- IEC 62271-102
- IEC 60051
- IEC 62271-105
- IEC 60255

Color

- RAL 9003 for front cover
- RAL 7015 for side cover

Service Conditions		
Application Area		Indoor
Altitude		1000 m
Ambient Temperature	Min.	-5°C
	Max.	40°C
	Average period of 24h	35°C
Humidity	Max. (period of 24h)	95%
	Max. (period of one month)	90%
Ambient Pollution		Light



Advantages

- Suitable for heavy duty applications
- 4 segregated compartments
- Fast and easy service with withdrawable Vacuum / SF6 Circuit Breakers alternatives
- Protection class is IP 4X (doors are closed), IP 3X (between compartments)
- Design with Load Break Switch or Vacuum Contactor
- Modular design which allows to extension
- Fully type tested production
- MV cable entry from the bottom, LV cable entry from bottom, top and side
- Tropical environment option
- 5 years warranty option

Safety

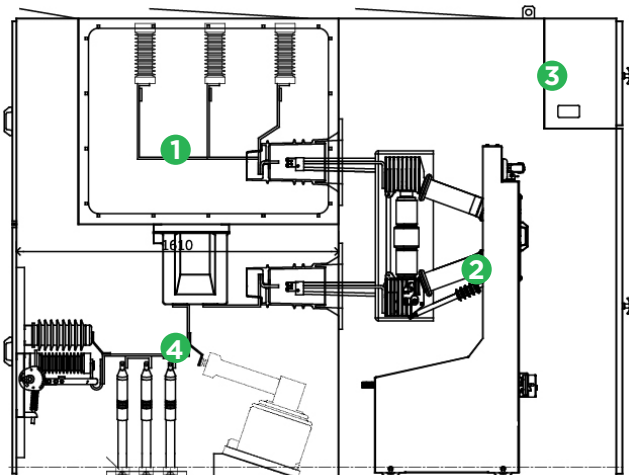
- Internal arc classification IAC AFLR
- Classified LSC-2B, PM
- Safety mechanical and electrical interlock
- Continuity of earthing system
- 3 mm sheet steel construction
- Maximum operational safety with special hinged door design

Technical Specifications

Descriptions		SMC 12	SMC 24	SMC 36	SMC 40.5	SMC 46	
Rated voltage (rms)	kV	12	24	36	40.5	46	
Operating voltage (rms)	kV	12	24	36	40.5	44	
Power frequency withstand voltage 50 Hz (1 min)	kV	28	50	70	95	95	
Lightning impulse withstand voltage 1.2 / 50 ms (peak)	kV	75	125	170	200	200	
Rated frequency	Hz	50 / 60					
Rated (rms) current	Busbars	A	630 ... 3150	630 ... 3150	630 ... 3150	630 ... 2500	1250 / 2500
	(with forced ventilation)	A	4000	4000	4000	-	-
	CB & Disconnecter	A	630 ... 3150	630 ... 3150	630 ... 3150	630 ... 2500	1250 / 2500
	(with forced ventilation)	A	4000	4000	4000	-	-
	Load Break Switch	A	630 / 1250	630 / 1250	630 / 1250	-	-
	Vacuum Contactor (for capacitive load)	A	400	400	-	-	-
Rated short time withstand (rms) current	CB & Disconnecter	kA	16 ... 40	16 ... 40	16 ... 40	16 ... 31.5	31.5
	Load Break Switch	kA	16 / 20	16 / 20	16 / 20	-	-
	Vacuum Contactor	kA	8	8	-	-	-
Short circuit current withstand time	s	3	3	3	3	3	
Rated short time withstand (peak) current	CB & Disconnecter	kA	40 ... 100	40 ... 100	40 ... 80	40 ... 80	80
	Load Break Switch	kA	40 / 50	40 / 50	40 / 50	-	-
	Vacuum Contactor	kA	20	20	-	-	-
Internal arc fault	Current	kA	31.5	31.5	31.5	31.5	31.5
	Duration	s	1	1	1	1	1
Earthing switch	Rated short time withstand current	kA	16 ... 40	16 ... 40	16 ... 31.5	16 ... 31.5	31.5
	Short circuit withstand time	s	3	3	3	3	3

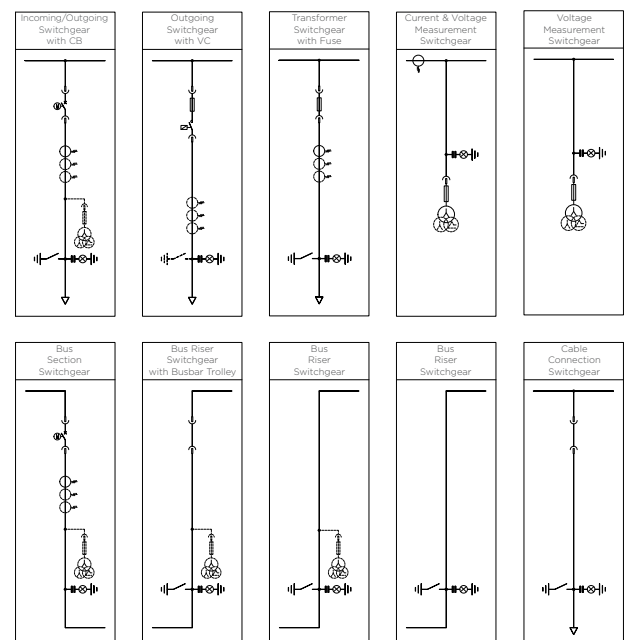
Voltage	Current	Width		Depth		Height
		VCB	SF6 CB	VCB	SF6 CB	
12 kV	≤ 1600 A	800 mm	1100 mm	2000 mm	2250 mm	2100 mm
	2000 / 2500 A	1000 mm				
	3150 A	1100 mm				
24 kV	≤ 1600 A	1000 mm	1100 mm	2000 mm	2250 mm	2100 mm
	2000 / 2500 A	1100 mm				
	3150 A	-				
36 kV	≤ 2500 A	1200 mm	1400 mm	3000 mm	3000 mm	2300 mm
	3150 A	1400 mm		3550 mm		
	4000 A					
40.5 / 46 kV	≤ 2500 A	1500 mm	-	2750 mm	-	2550 mm

Typical Feeder Unit



- 1 - Busbar Compartment
- 2 - Switching Equipment Compartment
- 3 - LV Compartment
- 4 - Cable Compartment

Single Line Diagram of Typical Units





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