

**METAL –ENCLOSED COMPARTMENT
TYPE SFL WITH SF₆ CIRCUIT BREAKER
AND TYPE SFL/V WITH VACUM CIRCUIT BREAKER**



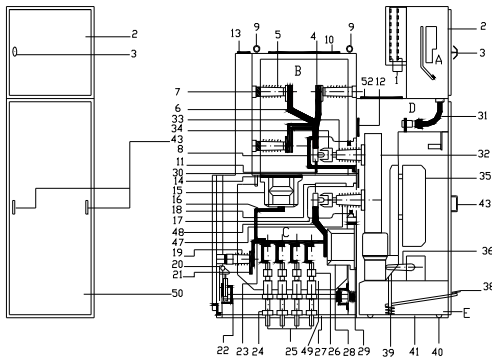
Switchgear SFL type, voltage level up to 36 kV, is in exploitation for a quite long time. It is mainly intended for erecting in industrial and distributive transformer stations.

Each cubicle switchgear which has got a withdrawable circuit breaker SPP type, with SF₆ gas, consist of four compartments, as follows:

- -busbar compartment
- -circuit breaker compartment
- -cable compartment
- -low voltage compartment



CROSS-SECTION OF THE STANDARD FUNCTIONAL UNITS TYPES SFL-4 AND SFL-6



NUMERICAL LIST OF CROSS-SECTIONS POSITIONS FOR THE SFL-FUNCTIONAL UNITS

A – LOW VOLTAGE COMPARTMENT

1. L.V. lines
2. L.V. compartment door
3. Handle of the L.V. compartment door

B – BUSBAR COMPARTMENT

4. Busbars
5. Post-insulator
6. Feeder bar
7. Insulator support
8. Insulating hood
9. Steel hooks (transport eye bolts)
10. Pressure relief opening of the busbar compartment
11. Upper fixed isolating contact
12. Upper metal flap

C – CABLE COMPARTMENT

13. Pressure relief opening of the cable compartment
14. Voltage measurement transformer support
15. Voltage measurement transformer
16. Copper bus
17. Lower insulating hood
18. Lower fixed isolating contact
19. Earthing switch post-or capacitor-insulator
20. Earthing switch
21. Earthing switch contact
22. Operating axle for the earthing switch
23. Copper bus for 'the cables' parallel coupling
24. Cable envelope
25. Electric power cable
26. Cable connection to the cable hub
27. Bottom plate
28. Current measurement transformer
29. Current measurement transformer support
30. Lower metal flap
- 49.
50. Insulating partition (SFL-6 and SFL-7)

D – CIRCUIT BREAKER COMPARTMENT

- 31.-L.V. connection plug with cables inside the flexible tube
52. Pressure relief opening of the circuit-breaker compartment

E – REMOVABLE PART

32. SF₆ circuit-breaker
33. Upper contact-arms of the circuit-breaker
34. Upper tulip-contacts
35. Circuit-breaker operating mechanism
36. Moving lever of the removable part (SFL-4 and SFL-6)
39. Locking finger of the removable part
40. Switching truck wheels
41. Steel plate profiles for the removable part wheels
43. Moving handles of the removable part (SFL-4 and SFL-6)
47. Lower contact arms of the circuit-breaker
48. Lower tulip contacts
50. Front plate (SFL-4 and SFL-6)
38. Unlocking shoe of the removable part (SFL-4 and SFL-6)

Switchgear is specified by:

- High degree of mechanical protection,
- Secure blocking system,
- Automatic functioning of flaps,
- Reliable system for earthing feeder-bars,
- Possibility for bus bar earthing.



Technical data

Type	Rated Voltage (kV)	Rated Lighting Impulse Withstand Voltage		Rated One-min. Power frequency Withstand Voltage (kV)	Rated Peak Withstand Current (kA _{peak})	Rated Short – time Withstand Current (3 sec) (kArms)	System Short-circuit Power (MVA)	Busbar Rated Current (A)	Rated Feeder-Bars Current (A)
		List 1 (kv)	List 2 (kv)						
SFL-4	12	-	75	28	62.5	25	500		630
								1250	1250
								1600	1600
SFL-6	24		125	50	62.5	25	1000		630
								1250	1250
								1600	1600
SFL-7	36	-	170	70	62.5	25	1500		630
								1250	1250
								1600	1600

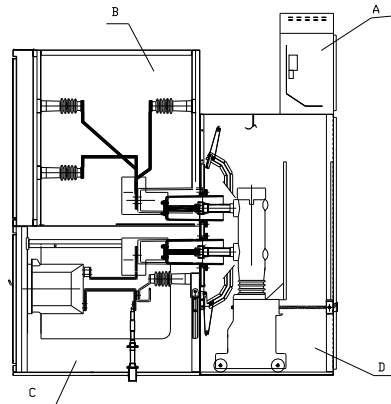
Dimension and weights

Type	Rated Voltage (kV)	Rated Lighting Impulse Withstand Voltage		Rated One-min. Power frequency Withstand Voltage (kV)	Rated Peak Withstand Current (kA _{peak})	Rated Short – time Withstand Current (3 sec) (kArms)	System Short-circuit Power (MVA)	Busbar Rated Current (A)	Rated Feeder-Bars Current (A)
		List 1 (kv)	List 2 (kv)						
SFL-4	12	-	75	28	62.5	25	500		630
								1250	1250
								1600	1600
SFL-6	24		125	50	62.5	25	1000		630
								1250	1250
								1600	1600
SFL-7	36	-	170	70	62.5	25	1500		630
								1250	1250
								1600	1600

METAL-CLAD SWITCHGEAR SFLV TYPE

There is a possibility to replace SF₆ circuit breakers by vacuum one within switchgear SFL type. A cross section and technical characteristics of cubicle SFL 7/V for voltage level 36kV with vacuum circuit breaker are given hereby.

A-low voltage compartment
 B-busbar compartment
 C-cable compartment
 D-circuit breaker compartment with vacuum circuit breaker



Cross-Section of functional units type SFL 7/V:

Technical data

Type	Rated voltage	Rated Lightning Impulse Withstand Voltage		Rated One-min. Power Frequency Withstand Voltage (kV)	Rated Peak Withstand Current (3 sec) (kA)	Rated Short-time Withstand Current (3sec) (kAef)	System Short-circuit Power (MVA)	Busbar Rated Current (A)	Rated Feeder-Bars Current (A)
		List 1 (kV)	List 2 (kV)						
SFL 7/V	36	-	170	70	62.5	25	1500	630	1250
								1250	1250
								1600	1600
								2000	2000

Dimension and weights

Type	Rated voltage (kV)	Circuit-breaker or switch type	Circuit-breaker or Switch Rated Current (A)	Feeder Rated Current (A)	Functional Unit Dimensions (mm)			Approx. Weight of Functional Unit (kg)	
					Height	Width	Depth	Completely mounted	C-B's removable part
SFL 7/V	36	VD4	1250	630	2635	1000	2400	1770	290
		VD4	1250	1250				1770	290
		VD4	2000	1600				1820	340

Note: We can provide switchgear SFLV type for voltage levels 12kV and 24kV, upon a special request.