

Transformer protection by fuse-switches



Fuse replacement

IEC recommendations stipulate that when a fuse has blown, **all three fuses must be replaced.**

Characteristics

Ratings for fuses for transformer protection depend, among other points, on the following criteria:

- service voltage
- transformer rating
- thermal dissipation of the fuses
- fuse technology (manufacturer).

Type of fuse may be installed:

- **Fusarc CF type:** according to IEC 60282-1 dimensional standard, with or without striker.

Example (using the selection table below) general case, for protection of a 400 kVA transformer at 10 kV, **Fusarc CF** fuses with a rating of 50 A are chosen.

Correct operation of the RM6 is not guaranteed when using fuses from other manufacturers.

Selection table

(Rating in A, no overload, $-25^{\circ}\text{C} < \theta < 40^{\circ}\text{C}$)

Fuse type Fusarc CF and SIBA (1) (General case, IEC 60282-1 standard, IEC 62271-105 (to replace IEC 60420) and DIN 43625 standard)

Operating voltage (kV)	Transformer rating (kVA)																Rated voltage (kV)
	50	75	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	
3	20	31.5	40	50	50	63	80	100	125 (2)	160 (1) (2)							12
3.3	20	25	40	40	40	63	80	80	125 (2)	125 (2)	160 (1) (2)						
4.2	20	25	25	40	50	50	63.5	80	80	100	125 (2)	160 (1) (2)					
5.5	16	20	25	25	40	40	50	63	80	80	100	125 (2)	160 (1) (2)				
6	16	20	25	25	31.5	40	50	50	63	80	100	125 (2)	160 (1) (2)				
6.6	10	20	25	25	31.5	40	50	50	63	63	80	100	125 (2)	160 (1) (2)			
10	10	10	16	20	25	25	31.5	40	50	50	63	80	100	125 (2)			
11	10	10	16	20	20	25	25	40	40	50	50	63	80	100	125 (2)		
13.8	10	10	10	16	16	20	25	31.5	40	40	50	50	63	100 (2)			24
15	10	10	10	10	16	20	25	31.5	31.5	40	50	50	63	80	100 (2)		
20	10	10	10	10	16	16	20	25	25	31.5	40	40	63	63	80	100 (2)	
22	10	10	10	10	10	16	16	20	25	31.5	40	40	50	63	80	100 (2)	

(1) SIBA type fuses at 160 A/12 kV reference 30-020-13.

(2) In the case of an external trip system (e.g.: overcurrent relay) A calculation must be carried out to guarantee coordination of fuse-switches – Please consult us. For any values not included in the table, please consult us. In the case of an overload beyond 40°C, please consult us.

Fuses dimensions

Fusarc CF		Ur (kV)	Ir (A)	L (mm)	Ø (mm)	Mass (kg)
		12	10 to 25	292	50.5	1.2
			31.5 to 40	292	55	1.8
			50 to 100	292	76	3.2
			125	442	86	5
		24	10 to 25	442	50.5	1.7
			31.5 to 40	442	55	2.6
			50 to 80	442	76	4.5
			100	442	86	5.7