Conversion factor for Medium Voltage Power Cables, 6–30 kV

Load rating for cables laid in ground
Load factor 0,7 and 1,0

Fundamental conditions*

Ground temperature	20° C
Thermal resistivity	1,0 K · m/W
Distance between cables or systems	7 cm
Single core cables laid in trefoil touching arrangement	

Load factor 0,7

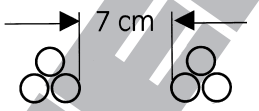
Type of insulation	Cable design	Nominal voltage	Number of cables or systems 2	4	6	8	10
PVC	Multicore cables	0,6/1 bis 3,6/6 kV	0,86	0,71	0,64	0,60	0,57
	Three-core cables	bis 6/10 kV	0,87	0,71	0,63	0,59	0,54
	Single core cables	0,6/1 bis 3,6/6 kV	0,85	0,70	0,63	0,59	0,56
	Single core cables	bis 6/10 kV	0,83	0,66	0,57	0,53	0,49
VPE	Multicore cables	0,6/1 bis 18/30 kV	0,85	0,70	0,63	0,59	0,56
	Single core cables	0,6/1 bis 18/30 kV	0,85	0,70	0,63	0,58	0,56

Load factor 1,0

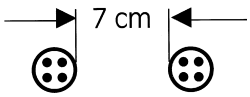
Type of insulation	Cable-design	Nominal-voltage	Number of cables or systems 1	2	4	6	8	10
PVC	Mehradrige Kabel	0,6/1 bis 3,6/6 kV	0,81	0,66	0,52	0,46	0,43	0,40
	Dreiadrige Kabel	bis 6/10 kV	0,82	0,67	0,51	0,45	0,41	0,37
	Einadrige Kabel	0,6/1 bis 3,6/6 kV	0,79	0,65	0,51	0,46	0,42	0,40
	Einadrige Kabel	bis 6/10 kV	0,78	0,62	0,47	0,40	0,36	0,33
VPE	Mehradrige Kabel	0,6/1 bis 18/30 kV	0,83	0,67	0,53	0,47	0,44	0,41
	Einadrige Kabel	0,6/1 bis 18/30 kV	0,81	0,66	0,52	0,47	0,43	0,41

Build-up of systems:

- for single core cables



- for multicore cables



* Conversion factors for multicore cables (≧5 cores), Conductor cross-section from 1,5 to 10 mm²

Number of loaded cores	Conversion factors for the values of 1,5 to 10 mm² to the belonging table	
	Earth	Air
5	0,7	0,75
7	0,6	0,65
10	0,5	0,55
14	0,45	0,5
19	0,4	0,45
24	0,35	0,4
40	0,3	0,35
61	0,25	0,3

* For other conditions e. g. ground temperature, grouping, load factor, thermal resistance, the rating factors should be calculated according to DIN VDE 0276 part 1000.

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