

Table 12-1: Power rating

Of wires & cables having nominal voltage up to 1000 V and heat resistant wire & cables, ambient temperature 30 °C

Cable or lead category					
	A Single core cable • rubber insulated • PVC insulated • TPE insulated • heat resistant	B Multi core cables and cords for home- and portable apparatus • rubber insulated • PVC insulated • TPE insulated		C Multicore cables + cords, excl. home- + portable apparatus • rubber insulated • PVC insulated • TPE-insulated • heat resistant	D Multicore heavy duty rubber cables ≤ 0.6/1kV Single core special rubber cables 0.6/1kV or 1.8/3kV
Method of installation					
Number of current carrying conductors	1 ³⁾	2	3	2 or 3	3 1 ³⁾
Nominal cross section in mm ²	Current rating in A	Current rating in A		Current rating in A	Current rating in A
0.08 ¹⁾	1.5	-	-	1	-
0.14 ¹⁾	3	-	-	2	-
0.25 ¹⁾	5	-	-	4	-
0.34 ¹⁾	8	-	-	6	-
0.5	12 ²⁾	3	3	9 ²⁾	-
0.75	15	6	6	12	-
1.0	19	10	10	15	-
1.5	24	16	16	18	23 30
2.5	32	25	20	26	30 41
4	42	32	25	34	41 55
6	54	40	-	44	53 70
10	73	63	-	61	74 98
16	98	-	-	82	99 132
25	129	-	-	108	131 176
35	158	-	-	135	162 218
50	198	-	-	168	202 276
70	245	-	-	207	250 347
95	292	-	-	250	301 416
120	344	-	-	292	- 488
150	391	-	-	335	- 566
185	448	-	-	382	- 644
240	528	-	-	453	- 775
300	608	-	-	523	- 898
400	726	-	-	-	-
500	830	-	-	-	-
Sources of current ratings of table 12-1:	DIN VDE 0298-4, 2003-08 Table 11 Column 2	DIN VDE 0298-4, 2003-08 Table 11 Column 3 + 4		DIN VDE 0298-4, 2003-08 Table 11 Column 5	DIN VDE 0298-4, 2003-08 Table 15 Column 4 + 2

Note:
Design of tables 12 to 13 deviates from (58 pages-). VDE 0298-4 design. In case of doubt, appliance of the current issue of the DIN VDE 0298-4 is obligatory. Table 12-1 values have to be taken into consideration of further applicable converting/derating factors:

- Other ambient temperatures: Table 12-2
- more than 3 current carrying cores of multiconductor cables up to 10mm²: Table 12-3
- Ambient temperatures > 50 °C of heat resistant wire & cables: Table 12-4
- for wound, spooled cables: Table 12-5
- Grouping of single core & multi core cables in conduits, raceways, wireways, floor & ceiling: Table 12-6
- Grouping of multi core cables in cable trays: Table 12-7
- Grouping of single core cables in cable trays: Table 12-8

Table 12-1 Column A – D, Cable Categories:

- A: Single cores: LiY, LiYCY-EA, H05V-K, H07V-K, H07V2-K, H07Z-K, Multi-standard wiring cable, ÖLFLEX® HEAT 105, -145, ÖLFLEX® HEAT 180 and ÖLFLEX® HEAT 205/260 wires/single core cables.
- B: Multicore cables & service cords for home- and portable apparatus: ÖLFLEX® CLASSIC 100, H05VV-F, 450 P, 500 P 540 P, H05RR-F, H05RN-F, H05BQ-F, H07BQ-F
- C: Multi core power and control cables excluding home and portable apparatus: All ÖLFLEX®, ÖLFLEX® CRANE, ÖLFLEX® HEAT, ÖLFLEX® HEAT 180-, ÖLFLEX® HEAT 205/260- cables,
- D: Multi core heavy duty rubber cables U_n/U ≤ 0.6/1kV: ÖLFLEX® CRANE NSHTÖU, ÖLFLEX® CRANE VS, NSHTÖU, NSSHÖU, ÖLFLEX® HEAT-Multicore cables. Single core special rubber cable U_n/: 0.6/1kV or 1.8/3 kV: NSGAFÖU, NSHXAFÖU; ÖLFLEX® HEAT® 145 single core cables

Current (power) ampacity of other cables:
Copper earthing cable ESUY see VDE 0105 part 1
H07RN-F/A 07RN-F/H07BQ-F for industrial use: see catalogue table T12-9.
Welding cable H01N2-D see catalogue table T12-10.
Cables for building wiring: NYM, NHXMH, NYY, NYCY, NYCWY, NHXHX see VDE 0298-4, 2003-08, Table 3 & 4.
Cables & wires in machines: see DIN EN 60204-1/VDE 0113-1
Cables & wires in machines for USA: see National Electrical Code & NFPA 79, Table 13

- ¹⁾ VDE 0891-1 -borrowed current ratings for conductor sizes < 0.5mm² (0.08-0.34 mm²)
- ²⁾ In terms of VDE 0298-4, 2003-08, Table 11 column 2 extended range for size 0.5 mm².
- ³⁾ Clustering of single core cables in touch to each other or bundled cables:
 - on surfaces: Current rating values of Table 12-1 column A or D,
 - for 1-A.C. or - or D.C.-circuits a derating factor of 0.76
 - for 3-A.C. circuits a derating factor of 0.67
 have to be applied before applying conversion factor of Table 12-6
 - free in air or on cable trays: Current rating values of table 12-1 column A or D,
 - for 1-A.C. - or D.C. circuits a derating factor of 0.8
 - for 3-A.C. circuits a derating factor of 0.7
 have to be applied before applying conversion factor of table 12-8.
 - Attention: Single cores (wires) installed in conduits or pipes in or attached to walls (Installation Methode A1 or B1) in buildings see VDE 0298, tables 3 or 5, column 2, 3, 6, or 7 & table 21.

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