FLEXIBLE COPPER CABLES AND WIRES

current-carrying capacity acc. to DIN VDE 0298-4:2023-06

Bayka products

The values given below are applicable to these products:

Product area BayMotion® (with and without CPR or nonfire):

EMC PUR	EMC-UV-Flex Control	Flex Power +	Flex Power + EMC
Metro	Power +	Power PUR	Power Soil
PTTA	soilblack EMC	soilblack VFD EMC	Telekom-Power
Tram	VFD EMC PUR	VFD EMC Soil	

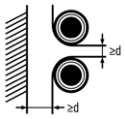
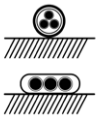
General

When selecting the conductor cross-section, other criteria may have to be taken into account, such as requirements for protection against electric shock (see DIN VDE 0100-410), for protection against thermal influences (see DIN VDE 0100-420), for protection against overcurrent (see DIN VDE 0100-430), the voltage drop (see DIN VDE 0100-520) and for the limit temperatures of terminals to which the conductors are connected.
The rated currents listed in the tables are recommended values for uninterrupted operation.
They apply to operation with alternating or three-phase current with a frequency of 50 Hz to 60 Hz and with direct current.

Recommended values according to DIN VDE 0298-4:2023-06 table 11 (see next page)

Excerpt from DIN VDE 0298-4:2023-06 table 11

current-carrying capacity of cables with rated voltage up to 1 000 V and of heat-resistant cables

1	2	...	5
Laying type [a]	free in air	...	on or at areas
	single core • rubber insulated • PVC-insulated • heat resistant	...	multi-core cables (not for household or handheld devices) • rubber insulated • PVC-insulated • heat resistant
		...	
Number of loaded cores	1	...	2 or 3
cross section copper conductor mm²	current carrying capacity A	...	current carrying capacity A
0,5	-	...	-
0,75	15	...	12
1	19	...	15
1,5	24	...	18
2,5	32	...	26
4	42	...	34
6	54	...	44
10	73	...	61
16	98	...	82
25	129	...	108
35	158	...	135
50	198	...	168
70	245	...	207
95	292	...	250
120	344	...	292
150	391	...	335
185	448	...	382
240	528	...	453
300	608	...	523
400	726	...	-
500	830	...	-
conversion factors for			
different ambient temperature	table 10	...	table 10
accumulation	table 10	...	table 21
laying under the ceiling	-	...	table 21
multi-core cables	-	...	table 26

[a] For a list of the types and the permissible operating temperature on the conductor, see Table 1.

Further conditions, assumptions, installation methods, calculation formulas, etc. see standard.

Excerpt from DIN VDE 0298-4 (VDE 0298-4): table 26

current-carrying capacity multicore cables

Conversion factors for multicore cables and wires with nominal conductor cross-sections up to 10 mm²

NUMBER OF LOADED CORES	LAYING IN AIR	...
5	0,75	...
7	0,65	...
10	0,55	...
14	0,50	...
19	0,45	...
24	0,40	...
40	0,35	...
61	0,30	...

Further conditions, assumptions, installation methods, calculation formulas, etc. see standard.