

Wire-structure data

VDE-standard 0295 only determines the maximum single-wire diameter and the related highest permissible electrical resistance for the respective wire cross-section. Other wire cross-sections and designs are upon request.

Wire Cross-section [mm ²]	Bare or tinned copper wires					
	number of wires x wire diameter [mm]					
	VDE 0295					
	single- wire	multiple- wire	fine - wire*	finest- wire*		
class 1	class 2	class 5	class 6			
	Col. 2	Col. 1				
0.10			14x0.10		26x0.07	50x0.05
0.14			18x0.10		36x0.07	72x0.05
0.25			14x0.15		32x0.10	65x0.07
0.34		7x0.25	19x0.15		43x0.10	88x0.07
0.50	1x0.80	7x0.30	16x0.20	28x0.15	63x0.10	129x0.07
0.75	1x1.00	7x0.37	24x0.20	42x0.15	95x0.10	196x0.07
1.00	1x1.13	7x0.43	32x0.20	56x0.15	127x0.10	258x0.07
1.50	1x1.38	7x0.52	30x0.25	84x0.15	191x0.10	385x0.07
2.50	1x1.78	7x0.67	50x0.25	140x0.15	320x0.10	651x0.07
4.00	1x2.26	7x0.85	56x0.30	224x0.15	512x0.10	1036x0.07
6.00	1x2.77	7x1.05	84x0.30	192x0.20	765x0.10	1561x0.07
10.00	1x3.57	7x1.35	80x0.40	320x0.20	1275x0.10	

* In case of fine- and finest-wire structures, the numbers of wires are preferred numbers.

Current capacity

Excerpts from current-capacity table for wires of industrial machines according to DIN VDE 0113, EN 60204T1.

Rated-Ø Wire [mm ²]	Current capacity for wires of machines machines [A]			Rated currents of fuses according IEC269-2 und IEC 269-3 [A]			
	for normal applications			for mass prodction			
	in cable duct	in air	in cable duct	in air	gll	gl	aM
0.10	1.20	1.3	1.0	1.1	—	—	—
0.14 ¹	1.50	2.0	1.5	2.0	—	—	—
0.25 ¹	3.00	4.0	3.0	4.0	—	—	—
0.34 ¹	4.50	6.0	4.5	6.0	—	—	—
0.50	6.00	6.5	5.0	5.5	12	10	8
0.75	9.00	10.0	7.5	8.5	16	12	12
1.00	12.00	13.5	10.0	11.5	25	20	16
1.50	15.50	17.5	13.0	15.0	32	25	20
2.50	21.00	24.0	18.0	20.0	40	40	32
4.00	28.00	32.0	24.0	27.0	50	50	40
6.00	36.00	41.0	31.0	34.0	80	80	63
10.00	50.00	57.0	43.0	48.0	100	100	100

¹ These rated cross-sections are not covered by this standard. The capacity is selected in compliance with VDE 0891. This application of wires with cross-sections smaller than 0.3 mm² in industrial utilities according to VDE 0113 is only exceptionally permissible. For further information refer to the standard.