



Colour tables

DIN 47100 Multipair cables

N°	Conductor A	Conductor B
1	White	Brown
2	Green	Yellow
3	Grey	Pink
4	Blue	Red
5	Black	Purple
6	Grey/Pink	Red/Blue
7	White/Green	Brown/Green
8	White/Yellow	Yellow/Brown
9	White/Grey	Grey/Brown
10	White/Pink	Pink/Brown
11	White/Blue	Brown/Blue
12	White/Red	Brown/Red
13	White/Black	Brown/Black
14	Grey/Green	Yellow/Grey
15	Pink/Green	Yellow/Pink
16	Green/Blue	Yellow/Blue
17	Green/Red	Yellow/Red
18	Green/Black	Yellow/Black
19	Grey/Blue	Pink/Blue
20	Grey/Red	Pink/Red
21	Grey/Black	Pink/Black
22	Blue/Black	Red/Black

DIN 47100 Multi conductor cables

N°	Colour conductor	N°	Colour conductor
1	White	23	White/Red
2	Brown	24	Brown/Red
3	Green	25	White/Black
4	Yellow	26	Brown/Black
5	Grey	27	Grey/Green
6	Pink	28	Yellow/Grey
7	Blue	29	Pink/Green
8	Red	30	Yellow/Pink
9	Black	31	Green/Blue
10	Purple	32	Yellow/Blue
11	Grey/Pink	33	Green/Red
12	Red/Blue	34	Yellow/Red
13	White/Green	35	Green/Black
14	Brown/Green	36	Yellow/Black
15	White/Yellow	37	Grey/Blue
16	Yellow/Brown	38	Pink/Blue
17	White/Grey	39	Grey/Red
18	Grey/Brown	40	Pink/Red
19	White/Pink	41	Grey/Black
20	Pink/Brown	42	Pink/Black
21	White/Blue	43	Blue/Black
22	Brown/Blue	44	Red/Black

Conversion table for AWG/mm²

AWG	Section mm ²	Diameter mm	D.C. resistance 20°C Ω	AWG	Section mm ²	Diameter mm	D.C. resistance 20°C Ω
44	0,0020	0,050	8498	20	0,519	0,813	33,2
43	0,0025	0,055	7021	19	0,653	0,912	26,4
42	0,0032	0,063	5446	18	0,823	1,02	21,0
41	0,0039	0,071	4330	17	1,04	1,15	16,6
40	0,0049	0,079	3540	16	1,31	1,29	13,2
39	0,0062	0,089	2780	15	1,65	1,45	10,4
38	0,0081	0,102	2130	14	2,08	1,63	8,28
37	0,0103	0,114	1680	13	2,63	1,83	6,56
36	0,0127	0,127	1360	12	3,31	2,05	5,21
35	0,0159	0,142	1080	11	4,17	2,30	4,14
34	0,0201	0,160	857	10	5,26	2,588	3,277
33	0,0255	0,180	675	9	6,63	2,906	2,600
32	0,0324	0,203	532	8	8,37	3,264	2,061
31	0,0401	0,226	430	7	10,55	3,655	1,634
30	0,0507	0,254	340	6	13,30	4,115	1,296
29	0,0649	0,287	266	5	16,77	4,620	1,028
28	0,0806	0,320	214	4	21,15	5,189	0,8152
27	0,102	0,361	169	3	26,67	5,287	0,6466
26	0,128	0,404	135	2	33,62	6,543	0,5128
25	0,162	0,455	106	1	42,41	7,348	0,4065
24	0,205	0,511	84,2	1/0	53,49	8,252	0,3223
23	0,259	0,574	66,6	2/0	67,43	9,266	0,2557
22	0,324	0,643	53,2	3/0	85,01	10,40	0,2028
21	0,411	0,724	41,9	4/0	107,22	11,68	0,1608



Technical notes

Construction of the bare and tinned copper conductors according to VDE 0295 IEC 60228, HD 383

Standard constructions according to VDE 0295 in compliance IEC 228 for single wires and multicore cables

Section mm ²	Class 2 Column 1	Class 5 Column 2	Class 6 Column 4	Class 6 Column 5	Class 6 Column 6
0,05					14x0,07
0,09				7x0,124	24x0,07
0,14		18x0,10	18x0,10	18x0,10	36x0,07
0,25		14x0,15	32x0,10	32x0,10	65x0,07
0,34		19x0,15	42x0,10	42x0,10	88x0,07
0,38		12x0,20	21x0,15	48x0,10	100x0,07
0,50	7x0,30	16x0,20	28x0,15	64x0,10	131x0,07
0,75	7x0,37	24x0,20	42x0,15	96x0,10	195x0,07
1,00	7x0,43	32x0,20	56x0,15	128x0,10	260x0,07
1,50	7x0,52	30x0,25	84x0,15	192x0,10	392x0,07
2,50	7x0,67	50x0,25	140x0,15	320x0,10	651x0,07
4,00	7x0,85	56x0,30	224x0,15	512x0,10	1040x0,07
6,00	7x1,05	84x0,30	192x0,20	768x0,10	1560x0,07
10,00	7x1,35	80x0,40	320x0,20	1280x0,10	2600x0,07
16,00	7x1,70	128x0,40	512x0,20	2048x0,10	4116x0,07
25,00	7x2,13	200x0,40	800x0,20	3200x0,10	6370x0,07
35,00	7x2,52	280x0,40	1120x0,20	4410x0,10	9100x0,07
50,00	19x1,83	400x0,40	705x0,30		
70,00	19x2,17	356x0,50	990x0,30		
95,00	19x2,52	485x0,50	1340x0,30		
120,00	37x2,03	614x0,50	1690x0,30		
150,00	37x2,27	765x0,50	2123x0,30		
185,00	37x2,52	944x0,50	1470x0,40		
240,00	61x2,24	1225x0,50	1905x0,40		
300,00	61x2,89	1530x0,50	2385x0,40		
400,00	61x3,23	2034x0,50			
500,00	61x2,37	1768x0,60			
630,00	61x2,37	2228x0,60			

Note: the number stands in column 3÷6 is indicative only.

The specifications specify the maximum diameter of strands and the maximum value of resistance for each section.

For further information please consult Brevetti Stendalto's Technical Office



Technical notes

Conductor resistance according to VDE 0295 and IEC 228

Conductor resistance according to VDE 0295 and IEC 228 Wires and cables with stranding construction class 5

Nominal cross section mm ²	Ø of single wires	Conductor resistance at 20°C	
		Bare single wires	Metal sheathed single wires
0,5	0,21	39,0	40,1
0,75	0,21	26,0	26,7
1	0,21	19,5	20,0
1,5	0,26	13,3	13,7
2,5	0,26	7,98	8,21
4	0,31	4,95	5,08
6	0,31	3,30	3,39
10	0,41	1,91	1,95
16	0,41	1,21	1,24
25	0,41	0,780	0,795
35	0,41	0,554	0,565
50	0,41	0,388	0,393
70	0,51	0,272	0,277
95	0,51	0,206	0,210
120	0,51	0,161	0,184
150	0,51	0,129	0,132
185	0,51	0,106	0,108
240	0,51	0,0801	0,0817
300	0,51	0,0841	0,0654
400	0,51	0,0486	0,0495
500	0,61	0,0384	0,0391
630	0,61	0,0287	0,0292

Conductor resistance according to VDE 0295 and IEC 228 Wires and cables with stranding construction class 5

Nominal cross section mm ²	Ø of single wires	Conductor resistance at 20°C	
		Bare single wires	Metal sheathed single wires
0,5	0,16	39,0	40,1
0,75	0,16	26,0	26,7
1	0,16	19,5	20,0
1,5	0,16	13,3	13,7
2,5	0,16	7,98	8,21
4	0,16	4,95	5,08
6	0,21	3,30	3,39
10	0,21	1,91	1,95
16	0,21	1,21	1,24
25	0,21	0,780	0,795
35	0,21	0,554	0,565
50	0,31	0,388	0,393
70	0,31	0,272	0,277
95	0,31	0,206	0,210
120	0,31	0,161	0,184
150	0,31	0,129	0,132
185	0,41	0,106	0,108
240	0,41	0,0801	0,0817
300	0,41	0,0841	0,0654



Technical notes

Current carrying capacity and reduction factors

Current carrying capacity for cables up to 1000 V

Nominal section mm ²	Single core cable Capacity A	Multiconductor cables Capacity A
0,08	1,5	1
0,14	3	2
0,25	5	4
0,34	8	6
0,50	12	9
0,75	15	12
1,00	19	15
1,50	24	18
2,50	32	26
4,00	42	34
6,00	54	44
10,00	73	61
16,00	98	82
25,00	129	108
35,00	158	135
50,00	198	168
70,00	245	207
95,00	292	250
120,00	344	292
150,00	391	335
185,00	448	382
240,00	528	453
300,00	608	523
400,00	726	-
500,00	830	-

DIN VDE 0298-4, 2003-08
Table 11/column 2

DIN VDE 0298-4, 2003-08
Table 11/column 5

Conversion factors for multicore cables with nominal section 10 up to mm²

No. cores	Factors
5	0,75
7	0,65
10	0,55
14	0,50
19	0,45
24	0,40
40	0,35
81	0,30

Conversion factors for deviating ambient temperature

Ambient temperature °C	Factors
10	1,22
20	1,12
30	1,00
40	0,87
45	0,79
50	0,71
55	0,61
60	0,50
65	0,35

Conversion factors for multicore cables with nominal section 10 up to mm²

Conversion factors for the accumulation on walls, in tubes and conduits	
No. cores	Factors
2	1,00
3	0,80
4	0,70
5	0,65
6	0,60
7	0,57
8	0,54
9	0,52
10	0,50
11	0,48
12	0,45
13	0,43
14	0,41
15	0,39
16	0,38



Thermal influence

Cables have to be chosen, layed or installed in a way that the expected current heat emission is not impeded and thus doesn't create any fire risk for adjacent materials.

The limit temperatures of the individual conductor types are shown in the catalogue.

The indicated values shall not be exceeded by the combined effects of internal current heat and environmental conditions considered the max temperature ratify of the insulation compound.

For further information please consult Brevetti Stendalto's Technical Office