

## Colour Codes for Twisted Pair as per DIN 47100

Each pair has an a-core and a b-core. The marking is repeated for the first time as from 23 pairs, and for the second time as from 45 pairs. The cores in pair from 6 to 22 are provided with bi colour strip with the first mentioned as major colour.

Pair No.	Colour of a-core	Colour of b-core	Pair No.	Colour of a-core	Colour of b-core
1	white	brown	13	white/black	brown/black
2	green	yellow	14	grey/green	yellow/grey
3	grey	pink	15	pink/green	yellow/pink
4	blue	red	16	green/blue	yellow/blue
5	black	violet	17	green/red	yellow/red
6	grey/pink	red/blue	18	green/black	yellow/black
7	white/green	brown/green	19	grey/blue	pink/blue
8	white/yellow	yellow/brown	20	grey/red	pink/red
9	white/grey	grey/brown	21	grey/black	pink/black
10	white/pink	pink/brown	22	blue/black	red/black
11	white/blue	brown/blue	23-44	see 1 -22	see 1-22
12	white/red	brown/red	45-66	see 1 -22	see 1-22

## Colour Codes for Cores as per DIN 47100

(but differs from DIN as the core colour after 44th core shall be bi-colour insulation with the ring colour being the last).

Core No.	Colour	Core No.	Colour	Core No.	Colour	Core No.	Colour	Core No.	Colour
1	white	14	brown/green	27	grey/green	40	pink/red	53	white/grey/black
2	brown	15	white/yellow	28	yellow/grey	41	grey/black	54	grey/brown/black
3	green	16	yellow/brown	29	pink/green	42	pink/black	55	white/pink/black
4	yellow	17	white/grey	30	yellow/pink	43	blue/black	56	pink/brown/black
5	grey	18	grey/brown	31	green/blue	44	red/black	57	white/blue/black
6	pink	19	white/pink	32	yellow/blue	45	white/brown/black	58	brown/blue/black
7	blue	20	pink/brown	33	green/red	46	yellow/green/black	59	white/red/black
8	red	21	white/blue	34	yellow/red	47	grey/pink/black	60	brown/red/black
9	black	22	brown/blue	35	green/black	48	red/blue/black	61	black/white
10	violet	23	white/red	36	yellow/black	49	white/green/black		
11	grey/pink	24	brown/red	37	grey/blue	50	brown/green/black		
12	red/blue	25	white/black	38	pink/blue	51	white/yellow/black		
13	white/green	26	brown/black	39	grey/red	52	yellow/brown/black		

## Max. DC Conductor Resistance for Copper Conductor

Max. DC Conductor resistance as per EN 60228/DIN VDE 0295/IS 8130 for conductor made of soft-annealed copper.

Nominal Cross-Section (mm <sup>2</sup> )	Max. D.C. Conductor resistance at 20°C (Ω/km)			
	Tin Coated Copper Conductor		Plain Copper Conductor	
	Class 2	Class 5+6	Class 2	Class 5+6
0.08	-	250.0	-	243.0
0.14	-	142.0	-	138.0
0.25	-	82.0	-	79.0
0.34	-	59.0	-	57.0
0.38	-	52.8	-	48.5
0.5	36.7	40.1	36	39.0
0.75	24.8	26.7	24.5	26.0
1	18.2	20.0	18.1	19.5
1.5	12.2	13.7	12.1	13.3
2.5	7.56	2.21	7.41	7.98
4	4.70	5.09	4.61	4.95
6	3.11	3.39	3.08	3.30
10	1.84	1.95	1.83	1.91
16	1.16	1.24	1.15	1.21
25	0.734	0.795	0.727	0.780
35	0.529	0.565	0.524	0.554
50	0.391	0.393	0.387	0.386
70	0.270	0.277	0.268	0.272
95	0.195	0.210	0.193	0.206
120	0.154	0.165	0.153	0.161
150	0.126	0.132	0.124	0.129
185	0.100	0.108	0.0991	0.106
240	0.0762	0.0817	0.0754	0.0801
300	0.0607	0.0654	0.0601	0.0641
400	0.0475	-	0.0470	-
500	0.0369	-	0.0366	-
630	0.0286	-	0.0283	-
800	0.0224	-	0.0221	-
1000	0.0177	-	0.0176	-

Note:

\* 0.08 Sq. mm to 0.38 Sq. mm as per DIN VDE 0295 (Class 5/6)

\* In accordance to

- IS 8130, Class 1, Plain and tin coated copper max up to and including 150 Sq. mm and 16 Sq. mm respectively- IEC 60228, Class 1, Plain and tin coated copper max up to and including 400 Sq. mm and 16 Sq. mm respectively- IS 8130, Class 2, Plain and tin coated copper from 1 Sq. mm to 1000 Sq. mm

- IEC 60228, Class 2, Plain and tin coated copper from 0.5 Sq. mm to 1000 Sq. mm

- IS 8130 and IEC 60228, Class 5 and 6, Plain and tin coated copper up to and including 630 Sq. mm and 300 Sq. mm respectively

## Conductor Stranding (Metric)

Cross-Section (mm <sup>2</sup> )	Multiwire Conductor	Several-wire Conductor	Fine-Wire Conductor	Extra-Fine Wire Conductor			
				Class-6	Class-6	Class-6	Class-6
Class of Conductor	Class-2	Class-2	Class-5	Class-6	Class-6	Class-6	Class-6
0.14	-	-	8 x 0.15	18 x 0.10	18 x 0.1	36 x 0.07	72 x 0.05
0.25	-	-	14 x 0.15	32 x 0.10	32 x 0.1	65 x 0.07	128 x 0.05
0.34	-	7 x 0.25	19 x 0.15	42 x 0.10	42 x 0.1	88 x 0.07	174 x 0.05
0.38	-	7 x 0.27	19 x 0.16	19 x 0.16	64 x 0.1	100 x 0.07	194 x 0.05
0.5	7 x 0.30	7 x 0.30	16 x 0.20	28 x 0.15	96 x 0.1	131 x 0.07	256 x 0.05
0.75	7 x 0.37	7 x 0.37	24 x 0.20	42 x 0.15	128 x 0.1	195 x 0.07	384 x 0.05
1	7 x 0.43	7 x 0.43	32 x 0.20	56 x 0.15	192 x 0.1	260 x 0.07	512 x 0.05
1.5	7 x 0.52	7 x 0.52	30 x 0.25	84 x 0.15	320 x 0.1	392 x 0.07	768 x 0.05
2.5	7 x 0.67	19 x 0.41	50 x 0.25	140 x 0.15	512 x 0.1	651 x 0.07	1280 x 0.05
4	7 x 0.85	19 x 0.52	56 x 0.30	224 x 0.15	768 x 0.1	1040 x 0.07	-
6	7 x 1.05	19 x 0.64	84 x 0.30	192 x 0.20	1280 x 0.1	1560 x 0.07	-
10	7 x 1.35	49 x 0.51	140 x 0.30	320 x 0.20	2048 x 0.1	2600 x 0.07	-
16	7 x 1.7	49 x 0.65	126 x 0.40	512 x 0.20	3200 x 0.1	-	-
25	7 x 2.13	84 x 0.62	196 x 0.40	800 x 0.20	-	-	-
35	7 x 2.52	133 x 0.58	276 x 0.40	1120 x 0.20	-	-	-
50	19 x 1.83	133 x 0.69	396 x 0.40	705 x 0.30	-	-	-
70	19 x 2.17	189 x 0.69	360 x 0.50	990 x 0.30	-	-	-
95	19 x 2.52	259 x 0.69	480 x 0.50	1340 x 0.30	-	-	-
120	37 x 2.03	336 x 0.67	608 x 0.50	1690 x 0.30	-	-	-
150	37 x 2.27	392 x 0.69	750 x 0.50	2123 x 0.30	-	-	-
185	37 x 2.52	464 x 0.69	931 x 0.50	1470 x 0.40	-	-	-
240	37 x 2.87	627 x 0.70	1200 x 0.50	1905 x 0.40	-	-	-
300	61 x 2.50	790 x 0.70	1500 x 0.50	2385 x 0.40	-	-	-
400	61 x 2.89	-	2013 x 0.50	-	-	-	-
500	61 x 3.23	-	2562 x 0.50	-	-	-	-
630	91 x 2.97	-	3416 x 0.50	-	-	-	-

