# **Caledonian** Industrial Cables



## German Standard (VDE)

# Colour Codes according to Different Standards

### Colour code according to DIN 47100

### a. With colour repetition from core no. 45 and above

The insulation of the conductor gives the first basic colour. The codes of the multi-coloured identification are combined with a basic colour and colour rings. The second and third colour is printed on the basic colour as a form of ring.

The ring width is 2–3 mm. A less unsharpness on the edge of the identification colour and a minor pledging of both half-rings are permitted.

The cores are to be counted continuously through all layers at the same direction, beginning with the outer layer towards inside

Conductor No.	Base Colour	1st Ring	2nd Ring	Conductor No.	Base Colour	1st Ring	2nd Ring
1	white			32	yellow	blue	
2	brown			33	green	red	
3	green			34	yellow	red	
4	yellow			35	green	black	
5	gray			36	yellow	black	
6	pink			37	gray	blue	
7	blue			38	pink	blue	
8	red			39	gray	red	
9	black			40	pink	red	
10	violet			41	gray	black	
11	gray	pink		42	pink	black	
12	red	blue		43	blue	black	
13	white	green		44	red	black	
14	brown	green		45	white		
15	white	yellow		46	brown		
16	yellow	brown		47	green		
17	white	gray		48	yellow		
18	gray	brown		49	gray		
19	white	pink		50	pink		
20	pink	brown		51	blue		
21	white	blue		52	red		
22	brown	blue		53	black		



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23	white	red	54	violet		
24	brown	red	55	gray	pink	
25	white	black	56	red	blue	
26	brown	black	57	white	green	
27	gray	green	58	brown	green	
28	yellow	gray	59	white	yellow	
29	pink	green	60	yellow	brown	
30	yellow	pink	61	white	gray	
31	green	blue				

### b. Without colour repetition

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

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#### c. DIN 47100 for twisted pairs

Each pair comprises one a-core and one b-core. From 23 pairs upwards the marking repeats for the first time and from 45 pairs upwards for the second time. The first colour is always the basic colour of the core and the second colour is printed in rings.

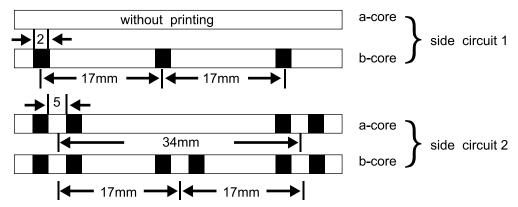
Pair	Pair Colour a-core		Colour b-core		Pair	Colour a-core		Colour b-core	
No.	basic color	ring color	basic color	ring color	No.	basic color	ring color	basic color	ring color
1	white		brown		13	white	black	brown	black
2	green		yellow		14	grey	green	yellow	grey
3	grey		pink		15	pink	green	yellow	pink
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 code according to VDE 0815

### a. Colour Code for the following Installation Cable Types:

J-YY . . . Bd, J-HH . . . Bd, J-Y(St)Y . . . Bd, J-H(St)H . . . Bd and J-2Y(St)Y . . . Bd

The Insulating coverings of single cores of a star quad are marked with black rings:



The cores of 5 star quads of a sub unit are counted according to the sequence of basic colours:

Quad 1: basic colour of all cores red

Quad 2: basic colour of all cores green



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Quad 3: basic colour of all cores grey

Quad 4: basic colour of all cores yellow

Quad 5: basic colour of all cores white

The marker of units are identified with a red helix, the others with white or uncoloured.

The guads of sub units are counted according to the sequence of basic colours.

The units are counted continuously through all layers beginning in the inner layer.

### b. Colour Code for the following Installation Cable Types:

J-Y(St)Y . . . Lg (Pairs in layers)

#### 2-paired installation cables are stranded to a star quad

circuit 1 a-core red, b-core black

circuit 2 a-core white, b-core yellow

#### 4- and multi-paired installation cables

a-core of 1st pair in each layer is red, all other pairs are white.

b-core blue, yellow, green, brown, black in continual repetition.

Counting: from outside to inside.

### c. Colour Code for the following Installation Cable Types:

JE-Y(St)Y . . . Bd, JE-LiYCY . . . Bd, JE-H(St) . . . and JE-HCH . . . Bd (Industrial Electronic Cables)

#### Pair-colour-identification

The insulating cores are identified with different basic colours which are repeated in the same sequence in each unit.

Basic colours of pairs

Pair	1	2	3	4
a-core	blue	grey	green	white
b-core	red	yellow	brown	black

2-paired cables: the cores are stranded to a star quad:

circuit 1: a-core blue circuit 2: a-core grey

b-core red b-core yellow

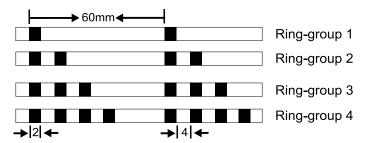
Each unit is assigned to one group of ring. All cores in each unit are marked with coloured rings and ring-groups. Counting direction in all units is from inside to outside.

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### Ring-colour and Ring-group



### **Unit-identification**

Cables with more than 12 units contain coloured plastic helix in addition to ring code.

Unit-No	Ring- Colour	Ring- Group	Colour identification tape	Unit-No	Ring- Colour	Ring- Group	Colour identification tape
1	pink	I		11	violent	III	
2	pink	II		12	violent	IV	
3	pink	III		13	pink	I	blue
4	pink	IV		14	pink	II	blue
5	orange	I		15	pink	III	blue
6	orange	II		16	pink	IV	blue
7	orange	III		17	orange	I	red
8	orange	IV		18	orange	II	red
9	violent	I		19	orange	III	red
10	violent	II		20	orange	IV	red



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### Colour coded to VDE 0293-308

2 cores - Brown + Blue

3 cores (G) - Green-Yellow + Brown + Blue

3 cores - Brown + Black + Grey

4 cores (G) - Green-Yellow + Brown + Black + Grey

4 cores - Blue + Brown + Black + Grey

5 cores (G) - Green-Yellow + Blue + Brown + Black + Grey

5 cores - Blue + Brown + Black + Grey + Black

Single core - Black, Blue, Green/Yellow, Red, Yellow, White, Violet, Brown, Grey, Orange, Pink

	With ground wire	Without ground wire
2 cores	-	+
3 cores	+ • +	+ + +
4 cores	+ + +	+ + + +
5 cores	+ + + + + +	+ + + + +
≥6 cores	+ black numbered	black numbered