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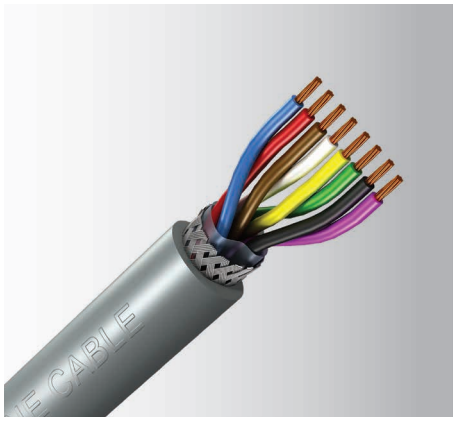
250V or 300/500V Multi-Core
PVC Insulated, Braided Screen, PVC Sheathed Flexible Cable

Description: CU/PVC/TCWB/PVC
Model Code: LiYCY



Application :	For computer, data transmission, office equipment process control, and instrumentation usage where EMI protection is required.
Voltage rating :	250V (0.14 ~ 0.25mm²); 300/500V (0.34 ~ 0.5mm²)
Construction :	Fine plain annealed copper, PVC insulated, polyester tape wrapping, tinned copper wire braided screen, PVC sheathed cable
Core colour :	According to Table 13 (page 48)
Sheath colour :	Grey
Specification :	VDE 0812, IEC 60332-1-2
Operating temperature :	Static : -30˚C ~ 70˚C
	Flexing : -5˚C ~ 70˚C
Insulation resistance :	Min. 200MΩ·km

No. of Core	Conductor		Insulation	Part No.	Approx. Overall Diam.	Approx. Weight
	Nominal Area	No./Diam. of Strand	Thickness			
	(mm²)	(no./mm)	(mm)		(mm)	(kg/km)
2	0.14	18/0.10	0.3	**00023827**	3.9	20
3				**00033827**	4.1	28
4				**00043827**	4.3	33
5				**00053827**	4.6	38
6				**00063827**	4.9	38
7				**00073827**	4.9	49
8				**00083827**	5.8	56
10				**00103827**	6.1	66
12				**00123827**	6.3	78
14				**00143827**	6.7	80
16				**00163827**	7.0	90
18				**00183827**	7.3	104
20				**00203827**	7.7	116
25				**00253827**	8.6	149
30				**00303827**	8.9	158
2	0.25	14/0.15	0.3	**01023827**	4.5	32
3				**01033827**	4.7	37
4				**01043827**	5.0	41
5				**01053827**	5.6	51
6				**01063827**	6.0	58
7				**01073827**	6.0	65
8				**01083827**	7.1	73
10				**01103827**	7.5	82
12				**01123827**	7.7	98
14				**01143827**	8.0	99
16				**01163827**	8.4	124
18				**01183827**	8.8	143
20				**01203827**	9.3	152
25				**01253827**	10.7	172
30				**01303827**	11.0	189

Current rating
Please refer to Table 15 (Page 49)
For Rating Factors, please refer to Table 7 (Page 45)

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250V or 300/500V Multi-Core
PVC Insulated, Braided Screen, PVC Sheathed Flexible Cable

Description: CU/PVC/TCWB/PVC
Model Code: LiYCY

No. of Core	Conductor		Insulation	Part No.	Approx. Overall Diam.	Approx. Weight
	Nominal Area	No./Diam. of Strand	Thickness			
	(mm^2)	(no./mm)	(mm)		(mm)	(kg/km)
2	0.34	7/0.25	0.4	**02023865**	4.9	37
3				**02033865**	5.1	49
4				**02043865**	5.7	59
5				**02053865**	6.2	66
6				**02063865**	6.8	79
7				**02073865**	6.8	83
8				**02083865**	7.8	94
10				**02103865**	8.3	129
12				**02123865**	8.5	142
14				**02143865**	8.9	154
16				**02163865**	9.4	160
18				**02183865**	10.2	173
20				**02203865**	10.7	192
25				**02253865**	12.0	260
30				**02303865**	12.5	292
2	0.5	16/0.20	0.4	**04023865**	5.6	54
3				**04033865**	5.9	67
4				**04043865**	6.5	77
5				**04053865**	7.0	90
6				**04063865**	7.8	104
7				**04073865**	7.8	112
8				**04083865**	8.7	135
10				**04103865**	9.5	160
12				**04123865**	9.8	177
18				**04183865**	11.8	239
20				**04203865**	12.2	276
25				**04253865**	14.0	352
30				**04303865**	14.8	399

Current rating
Please refer to Table 15 (Page 49)
For Rating Factors, please refer to Table 7 (Page 45)

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Table 6 : Correction Factors for Ambient Temperature & Group Installation

Correction for groups of more than one circuit of single-core cables, or more than one multi-core cable.

Reference Methods of Installation		Correction Factor (Cg)													
		Number of Circuits or Multi-Core Cables													
		2	3	4	5	6	7	8	9	10	12	14	16	18	20
Enclosed (Method 3 or 4) or bunched and clipped to a non-metallic surface (Method 1)		0.80	0.70	0.65	0.60	0.57	0.54	0.52	0.50	0.48	0.45	0.43	0.41	0.39	0.38
Single layer clipped to a non-metallic surface (Method 1)	Touching	0.85	0.79	0.75	0.73	0.72	0.72	0.71	0.70	-	-	-	-	-	-
	Spaced*	0.94	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Single layer multi-core on a perforated metal cable tray (Method 11)	Touching	0.86	0.81	0.77	0.75	0.74	0.73	0.73	0.72	0.71	0.70	-	-	-	-
	Spaced*	0.91	0.89	0.88	0.87	0.87	-	-	-	-	-	-	-	-	-
Single layer single-core on a perforated metal cable tray, touching (Method 11)	Horizontal	0.90	0.85	-	-	-	-	-	-	-	-	-	-	-	-
	Vertical	0.85	-	-	-	-	-	-	-	-	-	-	-	-	-
Single layer multi-core touching on ladder supports		0.86	0.82	0.80	0.79	0.78	0.78	0.78	0.77	-	-	-	-	-	-

* Space means a clearance between adjacent surfaces of at least one cable Diam. (D_e). Where the horizontal clearance between adjacent cables exceeds 2 D_e, no correction factor need to be applied.

Note : 1 The factors in the table are applicable to a group of cables of all the same sizes. The value of the current derived from application of the appropriate factors is the maximum continous current to be carried by any of the cables in the group.

2 If, due to known operating conditions, a cable is expected to carry not more than 30% of its grouped rating, it may be ignored for the purpose of obtaining the rating factor for the rest of the group.

For example, a group of N loaded cables would normally require a group reduction factor of Cg applied to the tabulated Lt. However, if M cables in the group carry loads which are not greater than 0.3Cg Lt amperes, the other cables can be sized by using the group rating factor corresponding to (N-M) cables.

Table 7 : Correction Factor for Cables with More Than 4 Loaded Cores

No. of Loaded Cores	5	6	7	10	12	14	19
Correction Factor	0.72	0.67	0.63	0.56	0.53	0.51	0.45
No. of Loaded Cores	24	27	30	37	44	46	48
Correction Factor	0.42	0.40	0.39	0.36	0.34	0.33	0.33

Note: 1. The current-carrying capacity for a cable in the size range 1.5 to 4mm^2, having more than 4 loaded cores, is obtained by multiplying the current-carrying capacity of a 2-core, having the same installation type, by the factor selected from this table. The current-carrying for the 2-core cable is that for the installation condition to be used for the multi-core cable.

2. If due to known operating conditions, a core is expected to carry not more than 30% of its current-carrying capacity in the multi-core cable, it may be ignored for the purpose of obtaining the correction factor for the number of loaded cores.

3. If due to known operating conditions, a core is expected to carry not more than 30% of its rating, after applying the correction factor for the total number of current-carrying cores, it may be ignored for the purpose of obtaining the correction factor for the number of loaded cores.

For example, the current-carrying capacity of a cable having N loaded cores would normally be obtained by multiplying the current-carrying capacity of a 2-core, having the same insulation type, by the factor selected from this table for N cores. That is $I_{z1c} = I_{t2c} \times C_{gN}$ where:

I_{z1c} is the current-carrying capacity for the multi-core cable after applying the correction factor for the total number of current-carrying cores.

I_{t2c} is the tablulated current-carrying capacity of a 2-core cable, having the same insulation type as the multi-core cable.

C_{gN} is the correction factor from Table 7 for the total number of current-carrying cores.

However, if M cores in the cable carry loads which are not greater than $0.3 \times I_{t2c} \times C_{gN}$, the current-carrying capacity can be obtained by using the correction factor corresponding to (N-M) cores.

The 'not greater than $0.3 \times I_{t2c} \times C_{gN}$' calculation should be applied before the adjacent multi-core cable grouping factor, if applicable, from Table 6 from BS 7671. The 30% rule should not be further applied to any adjacent cable grouping factor calculations.

I_{z1c} should be greater than or equal to I_n or I_b as appropriate, divided by the relevant correction factor(s) C, that is $I_{z1c} \geq I_n$ or I_b / C

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Table 13 : DIN 47100 with Colour Repetition for Multi-Core LiYY, LiYCY Control Cables to DIN VDE 0812

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

Table 14 : DIN 47100 with Colour Repetition for Multi-Pair LiYY-TP, LiYCY-TP Cables to DIN VDE 0812, Pairs Are Repeated After the 22nd Pair, then Repeated After 44 Pairs Again

Pair	A Wire	B Wire	Pair	A Wire	B Wire
1	White	Brown	12	White/red	Brown/red
2	Green	Yellow	13	White/black	Brown/black
3	Grey	Pink	14	Grey/green	Yellow/grey
4	Blue	Red	15	Pink/green	Yellow/pink
5	Black	Violet	16	Green/blue	Yellow/blue
6	Grey/pink	Red/blue	17	Green/red	Yellow/red
7	White/green	Brown/green	18	Green/black	Yellow/black
8	White/yellow	Yellow/brown	19	Grey/blue	Pink/blue
9	White/grey	Grey/brown	20	Grey/red	Pink/red
10	White/pink	Pink/brown	21	Grey/black	Pink/black
11	White/blue	Brown/blue	22	Blue/black	Red/black

Explanation of Colour Code Identification as Follows:

Multi-coloured code identification for core or pair are combined with a basic colour and a colour in form of rings or stripe.

In reference to Table 13, Colour A is the base colour, and Colour B is the secondary colour in the form of rings, printed on top of Colour A. Each ring seperation is 2-3mm. The cores are counted in one direction from the outer layer in.

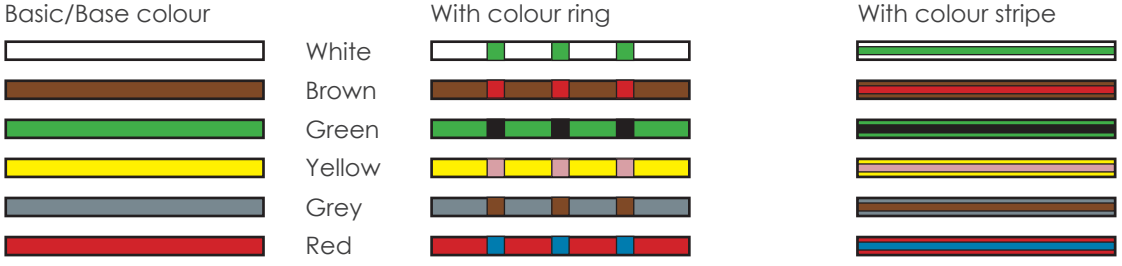

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Table 15 : For LiYY, LiYCY (1 ~ 4-Core) Cables

Cross-sectional Area	No./Diam. of Strand	Maximum Conductor Resistance at 20°C	Capacitance at 800Hz, 20°C	Capatiance at 800 Hz, 20°C		Minimum Insulation Resistance	Voltage Test (1 min)	Current Rating at 30°C
			Between cores	Between pairs	Pair to ground			
(mm^2)	(no./mm)	(Ω/km)	(nF/km)	(nF/km)	(nF/km)	(MΩ·km)	(V)	(A)
0.14	18/0.10	148	80				1200	1.5
0.25	14/0.15	79.9	100					2.5
0.34	7/0.25	58.0	100					4
0.5	16/0.20	39.0	110	120	160	200	2500	7
0.75	24/0.20	26.0	110					12
1	32/0.20	19.5	120					15
1.5	30/0.25	13.3	120					18

Table 16 : UL 1581, Conductor Configuration and D.C. Resistance

Conductor Size	Class (UL)	Configuration		Approx. Diam.	Maximum D.C. Resistance at 20°C	
					Plain	Tinned
(AWG)		(AWG)	(mm)	(mm)	(Ω/km)	(Ω/km)
24	B	7 x 32	7 x 0.203	0.579	87.6	94.2
22	B	7 x 30	7 x 0.254	0.729	55.4	59.4
20	B	7 x 28	7 x 0.320	0.919	34.6	36.7
18	B	7 x 26	7 x 0.404	1.16	21.8	23.2
16	C	19 x 29	19 x 0.287	1.49	13.7	14.9
14	C	19 x 27	19 x 0.361	1.87	8.62	9.32
12	C	19 x 25	19 x 0.450	2.35	5.43	5.88

Table 17 : UL 1581, Single/Solid Wire Diam.

Conductor Size	Nominal Diam.	Minimum Diam.	Conductor Size	Nominal Diam.	Minimum Diam.	Conductor Size	Nominal Diam.	Minimum Diam.
(AWG)	(mm)	(mm)	(AWG)	(mm)	(mm)	(AWG)	(mm)	(mm)
40	0.079	0.077	28	0.320	0.312	16	1.29	1.26
39	0.089	0.087	27	0.361	0.353	15	1.45	1.42
38	0.102	0.100	26	0.404	0.396	14	1.63	1.60
37	0.114	0.112	25	0.455	0.444	13	1.83	1.79
36	0.127	0.125	24	0.511	0.500	12	2.05	2.01
35	0.142	0.139	23	0.574	0.561	11	2.30	2.26
34	0.160	0.157	22	0.643	0.630	10	2.588	2.537
33	0.180	0.177	21	0.724	0.709	9	2.906	2.847
32	0.203	0.199	20	0.813	0.798	8	3.264	3.198
31	0.226	0.222	19	0.912	0.894	7	3.665	3.592
30	0.254	0.249	18	1.020	1.000	6	4.115	4.034
29	0.287	0.282	17	1.150	1.130	5	4.620	4.529