CY Screened Cable

Application: Control cable to connect equipment in production/assembly lines. Can be used between both fixed and mobile equipment and air conditioning systems. CY Cables are not suitable for direct connection to the public mains supply. Suitable as data and control cables in machinery, computer systems etc as well as a signal cable for electronics

Technical Data:

1	**Conductor**	Plain annealed flexible copper. Class 5 flexible
2	**Insulation**	PVC (Polyvinyl Chloride)
3	**Sheath**	PVC (Polyvinyl Chloride)

Voltage Rating 300/500V

Conductor Operating Temperature -15°C to +70°C

Core Identification

Single core: blue
2 core: brown & blue
3 core: brown, blue & green/yellow
4 core: brown, grey, black & green/yellow
5 core: brown, blue, grey, black & green/yellow
7 core and above: black cores with white number inc Green/Yellow
2 – 5 core: also stocked with number coded conductors

Sizes and Dimensions - 2 Core

Part No	No Cores	Conductor Cross Section Area (mm²)	Cable Cross Section Area (mm²)	Overall Diameter (mm)	Gland Size	Cleat Size	Nominal Weight (kg/km)	Resistance of Copper Conductor (Ω/Km) at 20°C
2C.75CY	2	0.75	-	6.1	20SS	-	-	-
2C1.0CY	2	1.0	-	6.3	20SS	-	-	-
2C1.5CY	2	1.5	-	7.3	20SS	-	-	-
2C2.5CY	2	2.5	-	8.7	20SS	-	-	-
2C4.0CY	2	4.0	-	10.5	20S	-	-	-
2C6.0CY	2	6.0	-	-	-	-	-	-
2C10.0CY	2	10.0	-	-	-	-	-	-

Sizes and Dimensions - 3 Core

Part No	No Cores	Conductor Cross Section Area (mm²)	Cable Cross Section Area (mm²)	Overall Diameter (mm)	Gland Size	Cleat Size	Nominal Weight (kg/km)	Resistance of Copper Conductor (Ω/Km) at 20°C
3C.75CY	3	0.75	-	6.4	20SS	-	-	-
3C1.0CY	3	1.0	-	6.6	20SS	-	-	-
3C1.5CY	3	1.5	-	7.7	20S	-	-	-
3C2.5CY	3	2.5	-	9.2	20S	-	-	-
3C4.0CY	3	4.0	-	10.3	20S	-	-	-
3C6.0CY	3	6.0	-	-	-	-	-	-
3C10.0CY	3	10.0	-	-	-	-	-	-
3C16.0CY	3	16.0	-	-	-	-	-	-
3C25.0CY	3	25.0	-	-	-	-	-	-
3C35.0CY	3	35.0	-	-	-	-	-	-
3C50.0CY	3	50.0	-	-	-	-	-	-

Sizes and Dimensions - 4 Core

Part No	No Cores	Conductor Cross Section Area (mm²)	Cable Cross Section Area (mm²)	Overall Diameter (mm)	Gland Size	Cleat Size	Nominal Weight (kg/km)	Resistance of Copper Conductor (Ω/Km) at 20°C
4C.75CY	4	0.75	-	6.9	20SS	-	-	-
4C1.0CY	4	1.0	-	7.1	20S	-	-	-
4C1.5CY	4	1.5	-	8.4	20S	-	-	-
4C2.5CY	4	2.5	-	10.0	20S	-	-	-
4C4.0CY	4	4.0	-	11.8	20S	-	-	-
4C6.0CY	4	6.0	-	12.90	20S	-	-	-
4C10.0CY	4	10.0	-	17.20	25	-	-	-
4C16.0CY	4	16.0	-	-	-	-	-	-
4C25.0CY	4	25.0	-	-	-	-	-	-
4C35.0CY	4	35.0	-	-	-	-	-	-
4C50.0CY	4	50.0	-	-	-	-	-	-
4C70.0CY	4	70.0	-	-	-	-	-	-
4C95.0CY	4	95.0	-	-	-	-	-	-
4C120.0CY	4	120.0	-	-	-	-	-	-

Sizes and Dimensions - 5 Core

Part No	No Cores	Conductor Cross Section Area (mm²)	Cable Cross Section Area (mm²)	Overall Diameter (mm)	Gland Size	Cleat Size	Nominal Weight (kg/km)	Resistance of Copper Conductor (Ω/Km) at 20°C
5C.75CY	5	0.75	-	6.9	20S	-	-	-
5C1.0CY	5	1.0	-	7.5	20S	-	-	-
5C1.5CY	5	1.5	-	7.7	20S	-	-	-
5C2.5CY	5	2.5	-	9.1	20S	-	-	-
5C4.0CY	5	4.0	-	10.9	20S	-	-	-
5C6.0CY	5	6.0	-	16.70	25	-	-	-
5C10.0CY	5	10.0	-	-	-	-	-	-
5C16.0CY	5	16.0	-	-	-	-	-	-
5C25.0CY	5	25.0	-	-	-	-	-	-
5C35.0CY	5	35.0	-	-	-	-	-	-

Sizes and Dimensions - 7 Core

Part No	No Cores	Conductor Cross Section Area (mm²)	Cable Cross Section Area (mm²)	Overall Diameter (mm)	Gland Size	Cleat Size	Nominal Weight (kg/km)	Resistance of Copper Conductor (Ω/Km) at 20°C
7C.75CY	7	0.75	-	8.1	20S	-	-	-
7C1.0CY	7	1.0	-	8.4	20S	-	-	-
7C1.5CY	7	1.5	-	9.9	20S	-	-	-
7C2.5CY	7	2.5	-	11.9	20	-	-	-

Sizes and Dimensions - 12 Core

Part No	No Cores	Conductor Cross Section Area (mm²)	Cable Cross Section Area (mm²)	Overall Diameter (mm)	Gland Size	Cleat Size	Nominal Weight (kg/km)	Resistance of Copper Conductor (Ω/Km) at 20°C
12C.75CY	12	0.75	-	10.4	20S	-	-	-
12C1.0CY	12	1.0	-	10.8	20S	-	-	-
12C1.5CY	12	1.5	-	12.9	20	-	-	-
12C2.5CY	12	2.5	-	-	-	-	-	-

Sizes and Dimensions - 18 Core

Part No	No Cores	Conductor Cross Section Area (mm²)	Cable Cross Section Area (mm²)	Overall Diameter (mm)	Gland Size	Cleat Size	Nominal Weight (kg/km)	Resistance of Copper Conductor (Ω/Km) at 20°C
18C.75CY	18	0.75	-	12.1	20	-	-	-
18C1.0CY	18	1.0	-	12.6	20	-	-	-
18C1.5CY	18	1.5	-	-	-	-	-	-
18C2.5CY	18	2.5	-	-	-	-	-	-

Sizes and Dimensions - 25 Core

Part No	No Cores	Conductor Cross Section Area (mm²)	Cable Cross Section Area (mm²)	Overall Diameter (mm)	Gland Size	Cleat Size	Nominal Weight (kg/km)	Resistance of Copper Conductor (Ω/Km) at 20°C
25C.75CY	25	0.75	-	-	-	-	-	-
25C1.0CY	25	1.0	-	-	-	-	-	-
25C1.5CY	25	1.5	-	-	-	-	-	-
25C2.5CY	25	2.5	-	-	-	-	-	-

Size and Dimensions – 34 Core

Part No	No Cores	Conductor Cross Section Area (mm²)	Cable Cross Section Area (mm²)	Overall Diameter (mm)	Gland Size	Cleat Size	Nominal Weight (kg/km)	Resistance of Copper Conductor (Ω/Km) at 20°C
34C.75CY	34	0.75	-	-	-	-	-	-
34C1.0CY	34	1.0	-	-	-	-	-	-
34C1.5CY	34	1.5	-	-	-	-	-	-
34C2.5CY	34	2.5	-	-	-	-	-	-

Size and Dimensions – 50 Core

Part No	No Cores	Conductor Cross Section Area (mm²)	Cable Cross Section Area (mm²)	Overall Diameter (mm)	Gland Size	Cleat Size	Nominal Weight (kg/km)	Resistance of Copper Conductor (Ω/Km) at 20°C
50C.75CY	50	0.75	-	-	-	-	-	-
50C1.0CY	50	1.0	-	-	-	-	-	-
50C1.5CY	50	1.5	-	-	-	-	-	-
50C2.5CY	50	2.5	-	-	-	-	-	-

The information contained within this datasheet is for guidance only. Please note that actual cable dimensions may vary due to manufacturing tolerances.

Table 4F3A – Flexible Cables
Non Armoured
(Copper Condustors)

CURRENT CARRYING CAPACITY (amperes) and MASS SUPPORTABLE (kg)

Conductor cross-sectional area	Current Carrying Capacity		Maximum mass Supportable by Twin flexible cable (see regulations 522.7.2 and 559.6.1.5)
	Single –phase a.c.	Three –phase a.c.	
1	2	3	4
(mm²)	(A)	(A)	(kg)
0.5	3	3	2
0.75	6	6	3
1	10	10	5
1.25	13	-	5
1.5	16	16	5
2.5	25	20	5
4	32	25	5

This table above is in accordance with Table 4F3A of the 17th Edition of IET Wiring Regulations

Rating Factors for Ambient Temperature

60°C thermoplastic or thermosetting insulated cable					
Ambient temperature	35°C	40°C	45°C	50°C	55°C
Rating factor	0.91	0.82	0.71	0.58	0.41

90°C thermoplastic or thermosetting insulated cable					
Ambient temperature	35 to 50°C	55°C	60°C	65°C	70°C
Rating factor	1.0	0.96	0.83	0.67	0.47

150°C flexible cable						
Ambient temperature	35 to 120°C	125°C	130°C	135°C	140°C	145°C
Rating factor	1.0	0.96	0.85	0.74	0.60	0.42

Glass fibre flexible cable						
Ambient temperature	35 to 150°C	155°C	160°C	165°C	170°C	175°C
Rating factor	1.0	0.92	0.82	0.71	0.57	0.40

Table 4F3B

VOLTAGE DROP (per ampere per meter) **Conductor operating Temperature: 60°C**

Conductor Cross-sectional Area	d.c or single –phase a.c.	Three –phase a.c.
1	2	3
(mm²)	(mV/A/m)	(mV/A/m)
0.5	93	80
0.75	62	54
1	46	40
1.25	37	-
1.5	32	27
2.5	19	16
4	12	10

This table above is in accordance with Table 4F3B of the 17th Edition of IET Wiring Regulations

NOTE: *The tabulated values above are for 60°C thermoplastic or thermosetting insulated flexible cables and for other types of flexible cable they are to be multiplied by the following factors:

For	90°C thermoplastic or thermosetting insulated	1.09
	150°C	1.31
	185°C glass fibre	1.43

Table 4F1A

Ambient temperature: 30°C
Conductor operating temperature: 60°C

CURRENT CARRYING CAPACITY (amperes)

Conductor cross-sectional area	Single – phase a.c. or d.c.	Three – phase a.c.	Single – phase a.c. or d.c.
1	1 two-core cable, With or without Protective conductor 2	1three-core, four-core or five-core cable 3	2 single-core cables, touching 4
(mm²)	(A)	(A)	(A)
4	30	26	-
6	39	34	-
10	51	47	-
16	73	63	-
25	97	83	-
35	-	102	140
50	-	124	175
70	-	158	216
95	-	192	258
120	-	222	302
150	-	255	347
185	-	291	394
240	-	343	471
300	-	394	541
400	-	-	644
500	-	-	738
630	-	-	861

Notes:

1. The current ratings tabulated are for cables in free air but may also be used for cables resting on a surface. If the cable is to be wound on a drum on load the ratings should be reduced in accordance with NOTE 2 below and for cables which may be covered, NOTE 3 below.
2. Flexible cables wound on reeling drums
   The current ratings of cables used on reeling drums are to be reduced by the following factors:
   a) Radial type drum
      Ventilated: 85%
      Unventilated: 75%
   b) Ventilated cylindrical type drum
      1 layer of cable: 85%
      2 layers of cable: 65%
      3 layers of cable: 45%
      4 layers of cable: 35%

   A radial type drum is one where spiral layers of cable are accommodated between closely spaced flanges; if fitted with solid flanges the ratings given above should be reduced and the drum is described as non-ventilated. If the flanges have suitable apertures the drum is described as ventilated.
   A ventilated cylindrical cable drum is one where layers of cable are accommodated between widely spaced flanges and the drum and end flanges have suitable ventilating apertures.
3. Where cable may be covered over or coiled up whilst on load, or the air movement over the cable restricted, the current rating should be reduced.
   It is not possible to specify the amount of reduction but the table of rating factors for reeling drums can be used as a guide.

TABLE 4F1B

VOLTAGE DROP (per ampere per metre): **Conductor operating temperature: 60°C**

Conductor cross-sectional area	Two-core cable, d.c.	Two-core cable, single-phase a.c.			1 three-core, four-core or five-core cable, three phase a.c.			2 single-core cables, touching			
								d.c.	Single-phase a.c.*		
1	2	3			4			5	6		
(mm²)	(mV/A/m)	(mV/A/m)			(mV/A/m)			-	-		
4	12	12			10			-	-		
6	7.8	7.8			6.7			-	-		
10	4.6	4.6			4.0			-	-		
16	2.9	2.9			2.5			-	-		
		r	x	z	r	x	z		r	X	z
25	1.80	1.80	0.175	1.85	1.55	0.150	1.55	-	-	-	-
35	-	-	-	-	1.10	0.150	1.15	1.31	1.31	0.21	1.32
50	-	-	-	-	0.83	0.145	0.84	0.91	0.91	0.21	0.93
70	-	-	-	-	0.57	0.140	0.58	0.64	0.64	0.20	0.67
95	-	-	-	-	0.42	0.135	0.44	0.49	0.49	0.195	0.53
120	-	-	-	-	0.33	0.135	0.36	0.38	0.38	0.190	0.43
150	-	-	-	-	0.27	0.130	0.30	0.31	0.31	0.190	0.36
185	-	-	-	-	0.22	0.130	0.26	0.25	0.25	0.190	0.32
240	-	-	-	-	0.170	0.130	0.21	0.190	0.195	0.185	0.27
300	-	-	-	-	0.135	0.125	0.185	0.150	0.155	0.180	0.24
400	-	-	-	-	-	-	-	0.115	0.120	0.175	0.21
500	-	-	-	-	-	-	-	0.090	0.099	0.170	0.20
630	-	-	-	-	-	-	-	0.068	0.079	0.170	0.185

This table above is in accordance with Table 4E4B of the 17th Edition of IET Wiring Regulations