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## SY CONTROL

### SY CONTROL



**STANDARD:** Generally to HD21.14, BS 6500 & PR EN 50525.

**VOLTAGE RATING:** 300/500V.

**APPLICATION:** Flexible cable used as interconnecting cable for measuring, controlling or regulation in control equipment for assembly and production lines, conveyors and for computer units. Can be used outdoors (WHEN PROTECTED) and in dry conditions indoors. Also suitable for fixed installations or for flexible use where there may be light mechanical stress.

#### Control Flex

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[SY CONTROL](#)

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**CONDUCTOR TYPE:** Plain Annealed Copper (Class 5 to BS EN 60228).

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**CORE COLOURS:**

2 Core – Blue, Brown

3 Core – Brown, Blue & Green/Yellow.

4 Core – Brown, Black, Grey & Green/Yellow.

5 Core – Brown, Black, Grey, Blue & Green/Yellow.

Number Coded cores plus green / yellow also available

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**INSULATION MATERIAL:** PVC (type ST2 IEC 60502).

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**LAY UP:** Twisted cores.

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**INNER SHEATH:** PVC

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**MECHANICAL PROTECTION :** Galvanised steel wire braid

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**OUTER SHEATH MATERIAL:** Transparent PVC (type TM1 IEC 60502).

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**SHEATH COLOUR:** Clear

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**MINIMUM BEND RADIUS:** 10 x OD

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**MAXIMUM OPERATING TEMP. : 70°C**

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**MINIMUM OPERATING TEMP. : 0°C**

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**FLAME PROPAGATION: BS EN 60332-1**

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Reference number	Nominal area of conductor	Class of conductor	Maximum resistance of conductor at 20°C	Insulation thickness	Sheath thickness	Nominal Cable diameter	Approx. nett weight
2 Core	0.75	5	26.00	0.5	0.8	7.4	75
	1.0	5	19.50	0.5	0.8	7.5	80
	1.5	5	13.30	0.5	0.8	8.4	105
	2.5	5	7.98	0.6	0.8	9.2	132
	4.0	5	4.95	0.7	0.8	11.5	210
	6.0	5	3.3	0.7	0.8	13.4	290
3 Core	0.75	5	26.00	0.5	0.8	7.5	85
	1.0	5	19.50	0.5	0.8	7.9	94
	1.5	5	13.3	0.5	0.8	8.8	125
	2.5	5	7.98	0.6	0.8	9.8	170
	4.0	5	4.95	0.7	0.8	11.5	238
	6.0	5	3.3	0.7	0.8	13.1	324
	10.0	5	1.91	1.0	1.5	16.3	520
16.0	5	1.21	1.0	1.5	21.0	820	
4 Core	0.75	5	26.00	0.5	0.8	8.0	97
	1.0	5	19.50	0.5	0.8	8.6	115

	1.5	5	13.3	0.5	0.8	9.2	142
	2.5	5	7.98	0.6	0.8	10.7	205
	4.0	5	4.95	0.6	1.0	13.3	313
	6.0	5	3.3	0.6	1.0	14.6	406
	10.0	5	1.91	1.0	1.8	18.0	650
	16.0	5	1.21	1.0	1.8	21.5	980
	25.0	5	0.78	1.2	2.0	27.8	1510
	35.0	5	0.554	1.2	2.0	36.0	2380
5 Core	0.75	5	26.00	0.5	0.8	8.8	116
	1.0	5	19.50	0.5	0.8	9.1	130
	1.5	5	13.3	0.5	0.8	10.2	177
	2.5	5	7.98	0.6	0.8	11.4	239
	4.0	5	4.95	0.7	1.0	14.3	370
	6.0	5	3.3	0.7	1.2	16.2	500
	10.0	5	1.91	1.0	1.8	20.0	810
	16.0	5	1.21	1.0	1.8	24.0	1230
	25.0	5	0.78	1.2	2.0	35.0	2220
	35.0	5	0.554	1.2	2.0	39.0	2800
7 Core	0.75	5	26.00	0.5	0.8	9.3	136
	1.0	5	19.50	0.5	0.8	10.0	165
	1.5	5	13.3	0.5	0.8	10.9	210
	2.5	5	7.98	0.6	0.8	12.7	300
	4.0	5	4.95	0.6	1.0	15.6	465
	6.0	5	3.3	0.6	1.0	18.0	650
	10.0	5	1.91	1.0	1.8	23.5	975
	16.0	5	1.21	1.0	1.8	25.0	885
12 Core	0.75	5	26.00	0.5	0.8	11.5	220
	1.0	5	19.50	0.5	0.8	12.5	265
	1.5	5	13.3	0.5	0.8	13.9	340
	2.5	5	7.98	0.6	0.8	16.5	525
18 Core	0.75	5	26.00	0.6	0.8	14.0	320
	1.0	5	19.50	0.6	0.8	15.1	390
	1.5	5	13.3	0.5	0.8	17.1	510
	2.5	5	7.98	0.5	0.8	20.1	770
25 Core	0.75	5	26.00	0.5	0.8	15.0	335

	1.0	5	19.50	0.5	0.8	18.5	475
	1.5	5	13.3	0.5	0.8	20.0	625
34 Core	0.75	5	26.00	0.5	0.8	19.5	515
	1.0	5	19.50	0.5	0.8	19.9	575
	1.5	5	13.3	0.5	0.8	23.5	902
50 Core	0.75	5	26.00	0.5	0.8	24.5	755
	1.0	5	19.50	0.5	0.8	23.5	855
	1.5	5	13.3	0.5	0.8	26.0	1105

## Table 4D2A - Multicore 70°C thermoplastic insulated and thermoplastic sheathed cables, non-armoured (copper conductors)

Current-Carrying Capacity (amperes):  
 Ambient temperature: 30°C  
 Conductor operating temperature: 70°C

Conductor cross-sectional area	Reference method A (enclosed in conduit on a thermally insulated wall etc)		Reference method B (enclosed in conduit on a wall or ceiling, or in trunking)		Reference method C (clipped direct)		Reference method E (in free air or on a perforated cable tray etc; horizontal or vertical)	
	1 two-core cable*, single phase A.C. or D.C.	1 three-core cable* or 1 four-core cable, three-phase A.C.	1 two-core cable*, single phase A.C. or D.C.	1 three-core cable* or 1 four-core cable, three-phase A.C.	1 two-core cable*, single phase A.C. or D.C.	1 three-core cable* or 1 four-core cable, three-phase A.C.	1 two-core cable*, single phase A.C. or D.C.	1 three-core cable* or 1 four-core cable, three-phase A.C.
1	2	3	4	5	6	7	8	9
mm <sup>2</sup>	A	A	A	A	A	A	A	A
1	11	10	13	11.5	15	13.5	17	14.5
1.5	14	13	16.5	15	19.5	17.5	22	18.5
2.5	18.5	17.5	23	20	27	24	30	25
4	25	23	30	27	36	32	40	34
6	32	29	38	34	46	41	51	43
10	43	39	52	46	63	57	70	60
16	57	52	69	62	85	76	94	80
25	75	68	90	80	112	96	119	101
35	92	83	111	99	138	119	148	126
50	110	99	133	118	168	144	180	153
70	139	125	168	149	213	184	232	196
95	167	150	201	179	258	223	282	238
120	192	172	232	206	299	259	328	276

## Table 4F3A - flexible cords, non-armoured (copper conductors)

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

Conductor cross-sectional area	Current-carrying capacity		Maximum mass supportable by twin flexible cord (see Regulations 522.7.2 and 559.6.1.5)
	Single-phase A.C.	Three-phase A.C.	
1	2	3	4
mm <sup>2</sup>	A	A	kg
0.5	3	3	2
0.75	6	6	3
1.0	10	10	5
1.25	13	-	5
1.5	16	16	5
2.5	25	20	5
4.0	32	25	5

Where cable is on a reel see the notes to Table 4F1A.

### RATING FACTOR FOR AMBIENT TEMPERATURE

60°C thermoplastic or thermosetting insulated cords:

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 cords:

Ambient temperature	35°C 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

90°C thermoplastic or thermosetting insulated cords:

Ambient temperature	35°C to 50°C	55°C	60°C	65°C	70°C
Rating Factor	1.0	0.96	0.83	0.67	0.47

Glass fibre cords:

Ambient temperature	35°C 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 metre)  
Conductor operating temperature: 60°C\*

Conductor cross-sectional area	D.C. or single-phase A.C.		Three-phase A.C.