METSEC
CABLES LIMITED

Control Flexible Cable (YY/PVC)

APPLICATION

Used as interconnecting cable for measuring, controlling or regulation in control equipment for assembly and production lines, conveyors and for computer units. Suitable for flexible use in conditions of light mechanical stress. Can be used outdoors when protected against direct sunlight, and in dry or moist conditions indoors. YY control cables are not suitable for fixed wiring applications requiring compliance with the regulations set out in BS7671.

CHARACTERISTICS

Voltage Rating Uo/U
300/500V

Temperature Rating
Fixed: -40°C to +70°C
Flexed: -5°C to +70°C

Minimum Bending Radius
Fixed: 4 x overall diameter
Flexed: 12.5 x overall diameter

CONSTRUCTION

Conductor
Class 5 flexible copper conductor

Insulation
PVC (Polyvinyl Chloride) TI2 according to KS-188

Sheath
PVC (Polyvinyl Chloride) TM2 according to KS-188

CABLE STANDARDS

VDE 0250, BS EN/IEC 60332-1

CORE IDENTIFICATION

2 core: Blue Brown
3 core: Green/Yellow Blue Brown
4 core: Green/yellow Brown Black Grey
5 core: Green/Yellow Brown Black Grey Blue
7 core and above: White with Black Numbers
(3 cores and above includes Green/Yellow)

Sheath Colour
Grey

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DIMENSIONS

CORES	NOMINAL CROSS-SECTIONAL AREA	NOMINAL OVERALL DIAMETER	NOMINAL WEIGHT	A2 GLAND	A2P GLAND
	mm²	mm	kg/km	Brass	Plastic
2	0.5	5.2	40	16	12
2	0.8	5.7	48	16	12
2	1.0	5.9	55	16	12
2	1.5	7.1	79	16	20S
2	2.5	8.3	114	16	20
3	0.5	5.5	47	16	12
3	0.8	6.0	58	16	12
3	1.0	6.3	67	16	12
3	1.5	7.5	95	16	20S
3	2.5	9.0	144	20	20
3	4.0	10.9	214	20	20
3	6.0	12.4	293	20S	20L
3	10.0	15.5	478	25	25
3	16.0	18.4	706	25	32
3	25.0	21.1	1080	32	32
4	0.5	6.0	57	16	12
4	0.8	6.6	70	16	12
4	1.0	7.0	85	16	20S
4	1.5	8.2	117	16	20
4	2.5	9.9	178	20	20
4	4.0	11.9	265	20S	20
4	6.0	13.6	366	20S	20L
4	10.0	17.2	608	25	20L
4	16.0	18.7	844	32	32
4	25.0	23.6	1327	32	32
4	35.0	27.2	1790	40	40
5	0.5	6.5	69	16	12
5	0.8	7.4	89	16	20S
5	1.0	7.7	103	16	20S
5	1.5	9.2	136	20	20
5	2.5	11.1	213	20	20
5	4.0	13.1	325	20S	20L
5	6.0	15.1	454	25	25
5	10.0	18.9	745	25	32
5	16.0	22.2	1091	32	32
5	25.0	29.0	1775	40	40
5	35.0	30.3	2252	50S	50S
7	0.5	7.3	88	16	20S
7	0.8	8.1	110	16	20
7	1.0	8.6	133	16	20
7	1.5	10.1	184	20	20
7	2.5	12.3	287	20S	20L

NO. OF CORES	NOMINAL CROSS-SECTIONAL AREA mm²	NOMINAL OVERALL DIAMETER mm	NOMINAL WEIGHT kg/km	A2 GLAND Brass	A2P GLAND Plastic
8	0.75	8.70	127	22	20S
8	1.00	9.90	152	22	20S
8	1.50	10.30	200	22	20S
12	0.50	9.70	155	20	20
12	0.75	10.94	179	20	20
12	1.00	11.36	225	20	20
12	1.50	13.64	302	20S	20L
12	2.50	16.54	478	25	25
18	0.50	11.50	221	20	20
18	0.75	12.95	230	20S	20L
18	1.00	13.65	324	20S	20L
18	1.50	16.35	446	25	25
18	2.50	19.75	742	32	32
25	0.50	13.80	315	20S	20L
25	0.75	15.50	372	25	25
25	1.00	16.10	462	25	25
25	1.50	19.50	627	25	32
25	2.50	23.50	1043	32	32
34	0.50	15.80	385	25	25
34	0.75	17.90	530	25	32
34	1.00	19.70	660	32	32
34	1.50	21.90	880	32	40
34	2.50	28.00	1350	40	50

* Available with colour coded cores

CONDUCTORS

Class 5 Flexible Copper Conductorsfor Single Core and Multi-Core Cables

NOMINAL CROSS-SECTIONAL AREA mm²	MAXIMUM DIAMETER OF WIRES IN CONDUCTOR mm	MAXIMUM RESISTANCE OFCONDUCTOR AT 20ºC
		Plain Wires
		ohms/km
0.5	0.21	39.0
0.8	0.21	26.0
1.0	0.21	19.5
1.5	0.26	13.3
2.5	0.26	8.0
4.0	0.31	5.0
6.0	0.31	3.3
10.0	0.41	1.9
16.0	0.41	1.2
25.0	0.41	0.8
35.0	0.41	0.6

The above table is in accordance with BS EN 60228 (previously BS 6360)

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ELECTRICAL CHARACTERISTICS

Current Carrying Capacity at 30ºC

NOMINAL CROSS-SECTIONAL AREA	CURRENT RATING
mm²	Amps
0.5	9
0.8	12
1.0	15
1.5	18
2.5	26
4.0	34
6.0	44
10.0	61
16.0	82
25.0	108
35.0	135

The above table is a guide extracted from DIN VDE 0298 Part 4 and DIN 0100 Part 430

DE-RATING FACTORS

NO. OF CORES	5	7	10	14	19	24	40
DE-RATING FACTOR	0.75	0.65	0.55	0.5	0.45	0.4	0.35

Control Flexible Cable (YY PVC)

Cable Size	2 core		3 core		4 core		5 core	
0.5	CYYPCPU00502BK0>	36.00	CYYPCPU00503BK0>	48.00	CYYPCPU00504BK0>	62.00	CYYPCPU00505BK0>	76.00
0.75	CYYPCPU07502BK0>	45.00	CYYPCPU07503BK0>	60.00	CYYPCPU07504BK0>	78.00	CYYPCPU07505BK0>	96.00
1	CYYPCPU10002BK0>	53.00	CYYPCPU10003BK0>	72.00	CYYPCPU10004BK0>	93.00	CYYPCPU10005BK0>	115.00
1.5	CYYPCPU15002BK0>	72.00	CYYPCPU15003BK0>	101.00	CYYPCPU15004BK0>	131.00	CYYPCPU15005BK0>	162.00
2.5	CYYPCPU25002BK0>		CYYPCPU25003BK0>		CYYPCPU25004BK0>		CYYPCPU25005BK0>	
4	CYYPCPU40002BK0>		CYYPCPU40003BK0>		CYYPCPU40004BK0>		CYYPCPU40005BK0>	
6	CYYPCPU60002BK0>		CYYPCPU60003BK0>		CYYPCPU60004BK0>		CYYPCPU60005BK0>	

Cable Size	7 core		12 core		18 core		25 core		34 core
0.5	CYYPCNU00507BK0>	105.00	CYYPCNU00512BK0>	181.00	CYYPCNU00518BK0>	276.00	CYYPCNU00525BK0>	383.00	CYYPCNU00534BK0>
0.75	CYYPCNU07507BK0>	134.00	CYYPCNU07512BK0>	231.00	CYYPCNU07518BK0>	353.00	CYYPCNU07525BK0>	490.00	CYYPCNU07534BK0>
1	CYYPCNU10007BK0>	162.00	CYYPCNU10012BK0>	278.00	CYYPCNU10018BK0>	428.00	CYYPCNU10025BK0>	594.00	CYYPCNU10034BK0>
1.5	CYYPCNU15007BK0>	229.00	CYYPCNU15012BK0>	395.00	CYYPCNU15018BK0>	10.00	CYYPCNU15025BK0>	847.00	CYYPCNU15034BK0>
2.5	CYYPCNU25007BK0>		CYYPCNU25012BK0>		CYYPCNU25018BK0>		CYYPCNU25025BK0>		CYYPCNU25034BK0>
4	CYYPCNU40007BK0>		CYYPCNU40012BK0>		CYYPCNU40018BK0>		CYYPCNU40025BK0>		CYYPCNU40034BK0>
6	CYYPCNU60007BK0>		CYYPCNU60012BK0>		CYYPCNU60018BK0>		CYYPCNU60025BK0>		CYYPCNU60034BK0>