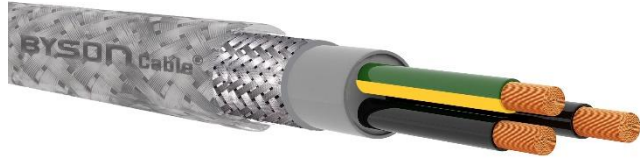


# SY PVC Flexible Control Cable

VDE-registered oil-resistant PVC control cable



Flexible Control Cable with steel wire braiding



## Application Range

- Plant engineering, industrial machinery
- Heavy duty control equipment
- Used as interconnecting cable for measuring, controlling or regulation in control systems
- Also used in production lines and conveyors
- Suitable for fixed installations or for flexible
- Use in conditions of heavy mechanical stress.
- Can be used outdoors when protected, and in dry or moist conditions indoors.

## Product Features

- Extra mechanical protection due to steel wire braid
- Extensively oil resistant
- Flame Retardant – IEC 60332-1

## Design

- Fine Wire Strands BS6360 Class 5 and VDE 0295 Class 5
- Cores twisted in layers
- PVC core insulation
- Braid of galvanized steel wires
- PVC outer sheath

## Technical Data

### Core Identification: VDE0293

Black with White numbers (3 cores and above includes Green/Yellow)

### Conductor Stranding: IEC60228

Class 5 Flexible stranded copper conductors

### Insulation Resistance

Min. 20MΩ x km

### Minimum Bending Radius

Flexing: 20 x cable  $\varnothing$

Fixed: 6 x cable  $\varnothing$

### Nominal Voltage

300/500V

### Test Voltage

4000V

### Temperature Range

Flexing: -5°C to +70°C

Fixed: -40°C to +80°C

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Part number	Number of cores and mm <sup>2</sup> per conductor	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
<b>SY - JZ</b>				
1125752	2 X0,5	7,8	10.0	87
1125003	3 G0,5	8,1	15.0	95
1125004	4 G0,5	8,5	19.2	107
1125005	5 G0,5	9,2	24.0	123
1125007	7 G0,5	9,7	33.6	147
1125010	10 G0,5	11,6	48.0	196
1125012	12 G0,5	11,9	58.0	213
1125014	14 G0,5	12,5	67.0	237
1125018	18 G0,5	13,9	86.4	291
1125021	21 G0,5	14,9	101.0	332
1125025	25 G0,5	15,6	120.0	375
1125030	30 G0,5	16,5	144.0	422
1125040	40 G0,5	18,8	192.0	545
1125061	61 G0,5	21,9	293.0	773
1125802	2 X0,75	8,2	14.4	97
1125103	3 G0,75	8,5	21.6	108
1125104	4 G0,75	9,2	28.8	126
1125105	5 G0,75	9,7	36.0	146
1125107	7 G0,75	10,3	50.0	172
1125109	9 G0,75	12,4	65.0	224
1125112	12 G0,75	12,9	86.0	260
1125115	15 G0,75	14,1	108.0	315
1125118	18 G0,75	14,9	130.0	355
1125125	25 G0,75	17.0	180.0	465
1125134	34 G0,75	19,3	245.0	596
1125150	50 G0,75	22,8	360.0	832
1125852	2 X1,0	8,5	19.2	106
1125203	3 G1,0	8,8	28.8	119
1125204	4 G1,0	9,5	38.4	141
1125205	5 G1,0	10,1	48.0	164
1125207	7 G1,0	11.0	67.0	200

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Part number	Number of cores and mm <sup>2</sup> per conductor	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
1125208	8 G1,0	12,5	77.0	234
1125209	9 G1,0	13,2	86.0	260
1125212	12 G1,0	13,9	115.0	309
1125214	14 G1,0	14,4	134.0	345
1125218	18 G1,0	15,9	173.0	415
1125220	20 G1,0	16,8	192.0	455
1125225	25 G1,0	18,1	240.0	548
1125234	34 G1,0	20,5	326.0	714
1125241	41 G1,0	22,2	394.0	832
1125250	50 G1,0	24,2	480.0	987
1125265	65 G1,0	27,2	624.0	1250
1125902	2 X1,5	9,3	29.0	128
1125303	3 G1,5	9,7	43.0	151
1125304	4 G1,5	10,2	58.0	173
1125305	5 G1,5	11,1	72.0	202
1125307	7 G1,5	11,9	101.0	248
1125308	8 G1,5	14,0	115.0	301
1125312	12 G1,5	15,4	173.0	396
1125314	14 G1,5	15,9	202.0	438
1125318	18 G1,5	17,6	259.0	538
1125325	25 G1,5	20,3	360.0	713
1125332	32 G1,5	22,1	461.0	876
1125341	41 G1,5	24,9	591.0	1101
1125350	50 G1,5	27,1	720.0	1305
1125403	3 G2,5	11,1	72.0	206
1125404	4 G2,5	12,1	96.0	249
1125405	5 G2,5	13,2	120.0	295
1125407	7 G2,5	14,3	168.0	373
1125412	12 G2,5	18,2	288.0	586
1125418	18 G2,5	21,4	432.0	823
1125425	25 G2,5	24,4	600.0	1093

# SY PVC Flexible Control Cable

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Part number	Number of cores and mm <sup>2</sup> per conductor	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
1125503	3 G4	12,7	115.0	285
1125504	4 G4	14.0	154.0	348
1125505	5 G4	15,1	192.0	410
1125507	7 G4	16,4	269.0	519
1125604	4 G6	16,2	230.0	482
1125605	5 G6	17,7	288.0	579
1125607	7 G6	19,2	403.0	740
1125614	4 G10	19,4	384.0	731
1125615	5 G10	21,5	480.0	889
1125617	7 G10	23,4	672.0	1146
1125624	4 G16	22,4	614.0	1384
1125625	5 G16	24,6	768.0	1740
1125626	4 G25	26,9	960.0	1680
1125629	5 G25	30.0	1200.0	2050
1125629	4 G35	30,2	1344.0	2170

## ELECTRICAL CHARACTERISTICS

Current Ratings – Table 1A - Current Carrying Capacity at 30 °C

NOMINAL CROSS SECTIONAL AREA mm <sup>2</sup>	CURRENT RATING Amps
0.25	4
0.34	6
0.5	9
0.75	12
1.0	15
1.5	18
2.5	25
4	34
6	44
10	61
16	82
25	108
35	135
50	168
70	207
95	250
120	292
150	335
185	382
240	453
300	523

The above table is a guide extracted from DIN VDE 0298 Part 4 and DIN 0100 Part 430 (2003-08 Table 11 Column 5)

### Table 1B – Conductor Resistances

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Nominal cross-section in mm <sup>2</sup>	Conductor resistances at 20°C for 1 km in Ω (max. value)			
	Made of wires with metal sheath		Made of bare wires	
	Class 2	Class 5 + 6	Class 2	Class 5 + 6
0.14		142.0		138.0
0.25		82.0		79.0
0.34		59.0		57.0
0.38		52.8		48.5
0.5	36.7	40.1	36.0	39.0
0.75	24.8	26.7	24.5	26.0
1	18.2	20.0	18.1	19.5
1.5	12.2	13.7	12.1	13.3
2.5	7.56	8.21	7.41	7.98
4	4.70	5.09	4.61	4.95
6	3.11	3.39	3.08	3.30
10	1.84	1.95	1.83	1.91
16	1.16	1.24	1.15	1.21
25	0.734	0.795	0.727	0.780
35	0.529	0.565	0.524	0.554
50	0.391	0.393	0.387	0.386
70	0.270	0.277	0.268	0.272
95	0.195	0.210	0.193	0.206
120	0.154	0.164	0.153	0.161
150	0.126	0.132	0.124	0.129
185	0.100	0.108	0.0991	0.106
240	0.0762	0.0817	0.0754	0.0801

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

**Table 1C – Correction Factors**

**For Multi core cables with conductor cross-sections up to 10mm<sup>2</sup>**

Number of cores under load	Conversion factor for installation in the open air	Conversion factor for installation underground
5	0.75	0.70
7	0.65	0.60
10	0.55	0.50
14	0.50	0.45
19	0.45	0.40
24	0.40	0.35
40	0.35	0.30
61	0.30	0.25

*The above table is a guide extracted from DIN VDE 0298 Part 4 (2003-08 Table 26)*

# SY PVC Flexible Control Cable

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**Table 1D – Correction Factors for ambient temperatures other than 30 °C**

Permissible/recommended operating conductor temperature					
	60 °C	70 °C	80 °C	85 °C	90 °C
Ambient temperature in °C	Conversion factors to be applied to the current rating values in Table 1A				
10	1.29	1.22	1.18	1.17	1.15
15	1.22	1.17	1.14	1.13	1.12
20	1.15	1.12	1.10	1.09	1.08
25	1.08	1.06	1.05	1.04	1.04
30	1.00	1.00	1.00	1.00	1.00
35	0.91	0.94	0.95	0.95	0.96
40	0.82	0.87	0.89	0.90	0.91
45	0.71	0.79	0.84	0.85	0.87
50	0.58	0.71	0.77	-	0.82
55	0.41	0.61	0.71	-	0.76
60	-	0.50	0.63	-	0.71
65	-	0.35	0.55	-	0.65
70	-	-	0.45	-	0.58
75	-	-	0.32	-	0.50
80	-	-	-	-	0.41
85	-	-	-	-	0.29

*The above table is a guide extracted from DIN VDE 0298 Part 4 (2003-08 Table 17)*

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