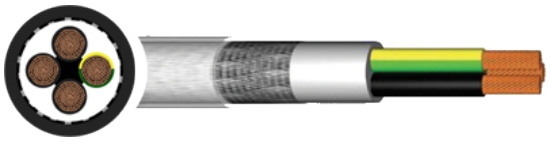
SY Control Cable - Flexible - BS EN 50525-2-11 and VDE 0250 - 0.75mm² to 95mm²



Description

SY cables are used as an interconnecting cable between fixed and mobile equipment in conveyors, assembly lines, production lines and machine tool manufacture where the galvanised steel wire braid armour gives excellent mechanical protection.

These cables are not UV resistant but can be used outdoors if adequately protected against direct sunlight in trunking etc.

Key Features

Voltage Rating
300/500 Volts

Minimum Bending Radius
Fixed: 12 x overall diameter

Flame Retardancy
BS EN 60332-1-2

Temperature Limits
Fixed: -40°C to +80°C

Core Colours

2 core - Black with White numbers

3 core and above - Black with White numbers plus Green Yellow

Also available with coloured cores as follows:

3 core - Blue Brown Green Yellow

4 core - Brown Black Grey Green Yellow

5 core - Blue Brown Black Grey Green Yellow

Standards

- Generally to BS EN 50525-2-11
- BS EN/IEC 60332-1-2
- BS EN/IEC 60228
- Generally to VDE 0250

Construction

- **Conductor**: Class 5 flexible, stranded copper
- **Insulation**: Polyvinyl Chloride (PVC)
- **Bedding**: Polyvinyl Chloride (PVC)
- **Armour**: Galvanised Steel Wire Braid (GSWB)
- **Outer Sheath**: Transparent Poly Vinyl Chloride (PVC)
- **Sheath Colour**: Sheath Neutral / Transparent

QA Lab

Cleveland Cable Test & Training Lab
Our state-of-the-art cable testing facility ensures that every cable meets the highest standards of quality and compliance through continuous, rigorous testing. Where applicable, cables are independently tested and certified by BASEC to ensure full compliance.

CPR
Cleveland Cable Company is committed to compliance with the Construction Products Regulation (CPR). Where applicable, all cables manufactured after 1st July 2017 have been assessed in accordance with CPR requirements, with full supporting documentation available.

Our Sustainability Commitment

We are committed to the journey to Net Zero as a business partner, an employer and a community member.

By thinking and acting sustainably, we deliver excellent customer service while reducing carbon emissions in collaboration with our customers and suppliers.

ecovadis
Cleveland Cable Company has been independently assessed by EcoVadis, a globally recognised provider of business sustainability ratings. Our score places us among the top 35% of companies evaluated worldwide, reflecting our strong commitment to environmental, social, and ethical performance

SY Control Cable - Flexible - BS EN 50525-2-11 and VDE 0250 - 0.75mm² to 95mm² - Dimensions

Reference	Conductor Size (mm2)	No Of Cores	Stranding(mm)	Overall Diameter(mm)	Weight(Kg/Km)	Gland Size
SY2X	0.75	2	24/0.20	7.1	78	20/16
SY3X/75	0.75	3	24/0.20	7.6	91	20/16
SY4X/75	0.75	4	24/0.20	8.3	104	20/16
SY5X/75	0.75	5	24/0.20	8.9	121	20/16
SY7X/75	0.75	7	24/0.20	9.5	135	20/16
SY12X/75	0.75	12	24/0.20	11.9	214	20S
SY18X/75	0.75	18	24/0.20	13.2	293	20S
SY25X/75	0.75	25	24/0.20	13.7	418	20S
SY34X/75	0.75	34	24/0.20	19	610	20
SY2X1	1	2	32/0.20	7.7	85	20/16
SY3X1	1	3	32/0.20	8.2	95	20/16
SY4X1	1	4	32/0.20	9	120	20/16
SY5X1	1	5	32/0.20	9.2	123	20/16
SY7X1	1	7	32/0.20	10.1	171	20/16
SY12X1	1	12	32/0.20	12.9	276	20S
SY18X1	1	18	32/0.20	15	382	20
SY25X1	1	25	32/0.20	17.9	437	20
SY34X1	1	34	32/0.20	20	556	20
SY50X1	1	50	32/0.20	23.7	955	25
SY2X1/5	1.5	2	30/0.25	8.2	100	20/16
SY3X1/5	1.5	3	30/0.25	8.6	143	20/16
SY4X1/5	1.5	4	30/0.25	9.3	170	20/16
SY5X1/5	1.5	5	30/0.25	10	173	20/16
SY7X1/5	1.5	7	30/0.25	10.7	198	20/16
SY12X1/5	1.5	12	30/0.25	13.8	341	20S
SY18X1/5	1.5	18	30/0.25	16.4	490	20
SY25X1/5	1.5	25	30/0.25	19.2	606	20
SY34X1/5	1.5	34	30/0.25	21.6	835	25
SY50X1/5	1.5	50	30/0.25	23.8	1046	25
SY2X2/5	2.5	2	50/0.25	9.8	177	20/16
SY3X2/5	2.5	3	50/0.25	9.9	190	20/16
SY4X2/5	2.5	4	50/0.25	10.8	240	20/16
SY5X2/5	2.5	5	50/0.25	11.5	247	20S
SY7X2/5	2.5	7	50/0.25	13	327	20S
SY12X2/5	2.5	12	50/0.25	16.9	502	20
SY18X2/5	2.5	18	50/0.25	19.8	740	20
SY25X2/5	2.5	25	50/0.25	23.2	1065	25
SY34X2/5	2.5	34	50/0.25	24.3	1126	25

Reference	Conductor Size (mm2)	No Of Cores	Stranding(mm)	Overall Diameter(mm)	Weight(Kg/Km)	Gland Size
SY2X4	4	2	56/0.30	11.2	220	20S
SY3X4	4	3	56/0.30	12.2	323	20S
SY4X4	4	4	56/0.30	13.4	354	20S
SY5X4	4	5	56/0.30	15	392	20
SY7X4	4	7	56/0.30	16	486	20
SY3X6	6	3	84/0.30	13.4	343	20S
SY4X6	6	4	84/0.30	14.6	458	20S
SY5X6	6	5	84/0.30	16.7	572	20
SY7X6	6	7	84/0.30	18	640	20
SY3X10CC	10	3	84/0.30	17.3	563	20
SY4X10CC	10	4	84/0.30	19.1	776	20
SY5X10CC	10	5	84/0.30	21	855	25
SY3X16CC	16	3	126/0.40	20.5	813	25
SY4X16CC	16	4	126/0.40	22.4	900	25
SY5X16CC	16	5	126/0.40	25.2	1258	25
SY4X25CC	25	4	196/0.40	28.2	1597	32
SY5X25CC	25	5	196/0.40	31.2	2007	40
SY4X35CC	35	4	276/0.40	31.3	2046	40
SY5X35CC	35	5	276/0.40	34.3	2524	40
SY4X50CC	50	4	396/0.40	37	2888	40
SY4X70CC	70	4	356/0.50	41.2	4015	50S
SY4X95CC	95	4	485/0.50	47.8	5176	50

Multi core non-armoured 90 °C and 180°C thermosetting insulated flexible cables with sheath Reproduced from BS7671:2018 Wiring Regulations

TABLE 4F2A

CURRENT-CARRYING CAPACITY (Amps)

Ambient temperature: 30 °C
Conductor operating temperature: 90 °C

Conductor cross sectional area	Single-phase AC or DC	Three-phase AC	Single-phase AC or DC
	1 x 2 core cable, with or without protective conductor	1 x 3 core, 4 core or 5 core cable	2 single-core cables, touching
(mm^2)	(A)	(A)	(A)
4	42	37	-
6	55	49	-
10	76	66	-
16	103	89	-
25	136	119	-
35	-	146	200
50	-	177	250
70	-	225	310
95	-	273	369
120	-	316	432
150	-	363	497
185	-	414	564
240	-	487	673
300	-	560	773
400	-	-	924
500	-	-	1062
630	-	-	1242

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.

4 For 180 °C cables, the rating factors for ambient temperature allow a conductor operating temperature up to 150 °C.
Consult the cable manufacturer for further information.

5 Where it is intended to connect the cables in this table to equipment or accessories designed to operate at a temperature lower than the maximum operating temperature of the cable, the cables should be rated at the maximum operating temperature of the equipment or accessory (see Regulation 512.1.5).

6 Where it is intended to group a cable in this table with other cables, the cable should be rated at the lowest of the maximum operating temperatures of any of the cables in the group (see Regulation 512.1.5).

TABLE 4F2B

VOLTAGE DROP (per ampere per metre):

Conductor operating temperature: 90 °C

Conductor cross-sectional area	Two-core cable or 2 x Single core cables DC	2 core cable, single-phase AC			1 x 3 core, 4 core or 5 core cable, three-phase AC			2 single-core cables, touching Single-phase AC*		
(mm^2)	(mV/Nm)	(mV/Nm)			(mV/Nm)			(mV/Nm)		
4	13.20	13.20			11.10			-		
6	8.50	8.50			7.40			-		
10	5.10	5.10			4.40			-		
16	3.20	3.20			2.70			-		
		r	x	z	r	x	z	r	x	z
25	2.03	2.03	0.175	2.04	1.73	0.150	1.73	-	-	-
35	1.420	-	-	-	1.22	0.150	1.23	1.44	0.21	1.46
50	1.000	-	-	-	0.91	0.145	0.93	1.00	0.21	1.02
70	0.710	-	-	-	0.62	0.140	0.64	0.71	0.20	0.73
95	0.540	-	-	-	0.47	0.135	0.49	0.54	0.195	0.57
120	0.420	-	-	-	0.37	0.135	0.39	0.42	0.190	0.46
150	0.340	-	-	-	0.29	0.130	0.32	0.34	0.190	0.39
185	0.270	-	-	-	0.24	0.130	0.27	0.27	0.190	0.33
240	0.210	-	-	-	0.188	0.130	0.23	0.210	0.185	0.28
300	0.167	-	-	-	0.147	0.125	0.195	0.173	0.180	0.25
400	0.127	-	-	-	-	-	-	0.132	0.175	0.22
500	0.100	-	-	-	-	-	-	0.107	0.170	0.20
630	0.074	-	-	-	-	-	-	0.085	0.170	0.190

NOTES:

1 The voltage drop figures given above are based on a conductor operating temperature of 90 °C and are therefore not accurate when the operating temperature is in excess of 90 C. In the case of the 180 °C cables with a conductor temperature of 150 °C the above resistive values should be increased by a factor of 1.2.

2 *A larger voltage drop will result if the cables are spaced.