Doncaster Cables

SY CONTROL FLEXIBLE

PVC INSULATED, BEDDED AND SHEATHED WITH GALVANISED STEEL BRAID

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Manufactured generally to BS EN 50525-2-11:2011

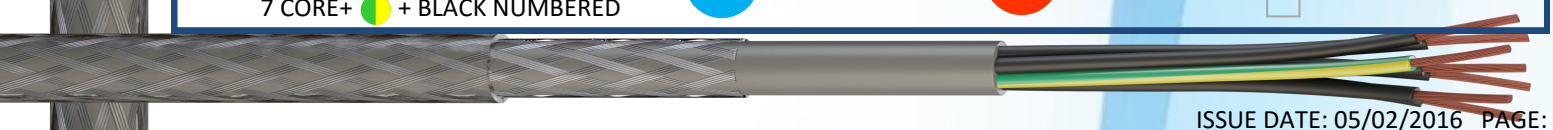
Plain Annealed Flexible Copper Conductors / PVC Insulated / PVC Bedding / GSWB (Galvanised Steel Wire Braid) / PVC Sheathed. 300/500V

Conductor :	Plain Annealed Copper Class 5 to BS EN 60228
Insulation:	PVC Type TI2 to BS EN 50363-3
Bedding:	PVC Type TM2 to B EN 50363-4-1
Braiding:	GSWB (Galvanised Steel Wire Braid)
Sheath:	Clear PVC Type TM2 to B EN 50363-4-1
Current Ratings:	For current ratings refer to table 4F1 and 4F3 of BS7671 IEE Wiring Regulations Seventeenth Edition.

The cable is designed to be used as interconnecting cable for measuring, controlling or regulation in control equipment for assembly and production lines, conveyors and for computer units. It is commonly used in a wide number of industries including building and construction, rail and transport infrastructures, transmission and automation and process control.

This cable is also used by electricians in certain fixed installations where only light mechanical stress may occur. This cable can also be used outdoors (but should be protected); however, it is best suited to dry or moist conditions indoors.

STANDARD CORE COLOURS	MINIMUM OPERATING TEMPERATURE	MAXIMUM OPERATING TEMPERATURE	MINIMUM BENDING RADIUS
2 CORE 3 CORE 4 CORE 5 CORE 7 CORE+ + BLACK NUMBERED	-15°C	70°C	6 x Ø



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Reference Number	Nominal Cross Sectional Area of Conductor (mm^2)	Nominal Stranding of Conductor (mm)	Nominal Radial Thickness of insulation (mm)	Nominal Radial Thickness of bedding (mm)	Nominal Radial Thickness of sheath (mm)	Approximate Overall Diameter Lower Limit (mm)	Approximate Overall Diameter Upper Limit (mm)	Approximate Weight (kg/km)
SY0.752C	0.75	24/0.2	0.5	0.4	1.0	7.1	9.1	103
SY1.02C	1.0	32/0.2	0.5	0.4	1.0	7.5	9.5	113
SY1.52C	1.5	30/0.25	0.5	0.4	1.0	7.9	9.9	128
SY0.753C	0.75	24/0.2	0.5	0.4	1.0	7.9	9.9	115
SY1.03C	1.0	32/0.2	0.5	0.4	1.0	8.3	10.3	126
SY1.53C	1.5	30/0.25	0.5	0.4	1.0	8.9	10.9	146
SY2.53C	2.5	50/0.25	0.5	0.4	1.0	9.7	11.7	184
SY4.03C	4.0	56/0.3	0.5	0.4	1.0	11.0	13.0	247
SY6.03C	6.0	84/0.3	0.5	0.6	1.0	13.0	15.0	322
SY7103C	10.0	80/0.4	0.6	0.6	1.0	15.6	17.6	485
SY7163C	16.0	126/0.4	0.6	0.8	1.0	19.1	21.1	900
SY0.754C	0.75	24/0.2	0.5	0.4	1.0	8.4	10.4	130
SY1.04C	1.0	32/0.2	0.5	0.4	1.0	8.9	10.9	145
SY1.54C	1.5	30/0.25	0.5	0.4	1.0	9.5	11.5	170
SY2.54C	2.5	50/0.25	0.5	0.4	1.0	10.5	12.5	218
SY4.04C	4.0	56/0.3	0.5	0.4	1.0	12.0	14.0	299
SY6.04C	6.0	84/0.3	0.5	0.6	1.0	14.2	16.2	394
SY7104C	10.0	80/0.4	0.6	0.6	1	17.6	19.6	638
SY7164C	16.0	126/0.4	0.6	0.8	1.0	21.2	23.2	996
SY7254C	25.0	196/0.4	0.8	0.8	1.0	25.7	27.7	1383
SY7354C	35.0	276/0.4	0.8	0.8	1	29.5	31.5	1938

Weight and dimensional information is provided as an approximate guide only.

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Reference Number	Nominal Cross Sectional Area of Conductor	Nominal Stranding of Conductor (mm)	Nominal Radial Thickness of insulation (mm)	Nominal Radial Thickness of bedding (mm)	Nominal Radial Thickness of sheath (mm)	Approximate Overall Diameter Lower Limit	Approximate Overall Diameter Upper Limit	Approximate Weight (kg/km)
SY0.755C	0.75	24/0.2	0.5	0.4	1.0	9.0	11.0	147
SY1.05C	1.0	32/0.2	0.5	0.4	1.0	9.5	11.5	167
SY1.55C	1.5	30/0.25	0.5	0.4	1.0	10.3	12.3	196
SY2.55C	2.5	50/0.25	0.5	0.4	1.0	11.3	13.3	256
SY4.05C	4.0	56/0.3	0.5	0.4	1.0	13.0	15.0	356
SY6.05C	6.0	84/0.3	0.5	0.6	1.0	15.3	17.3	476
SY7105C	10.0	80/0.4	0.6	0.6	1.0	19.3	21.3	766
SY7165C	16.0	126/0.4	0.6	0.8	1.0	23.2	25.2	1159
SY7255C	25.0	196/0.4	0.8	0.8	1.0	28.1	30.1	1758
SY7355C	35.0	276/0.4	0.8	0.8	1.0	32.0	34.0	2560
SY0.757C	0.75	24/0.2	0.5	0.4	1.0	9.7	11.7	174
SY1.07C	1.0	32/0.2	0.5	0.4	1.0	10.2	12.2	195
SY1.57C	1.5	30/0.25	0.5	0.4	1.0	11.0	13.0	235
SY2.57C	2.5	50/0.25	0.5	0.4	1.0	12.2	14.2	313
SY4.07C	4.0	56/0.3	0.5	0.4	1.0	14.0	16.0	460
SY0.7512C	0.75	24/0.2	0.5	0.5	1.0	12.3	14.3	221
SY1.012C	1.0	32/0.2	0.5	0.5	1.0	12.5	14.5	238
SY1.512C	1.5	30/0.25	0.5	0.5	1	14.4	16.4	321
SY2.512C	2.5	50/0.25	0.5	0.5	1.0	16.9	18.9	499
SY0.7518C	0.75	24/0.2	0.5	0.5	1	14.3	16.3	279
SY1.018C	1.0	32/0.2	0.5	0.5	1	15.2	17.2	326
SY1.518C	1.5	30/0.25	0.5	0.5	1	16.9	18.9	464
SY2.518C	2.5	50/0.25	0.5	0.5	1	19.9	21.9	685
SY0.7525C	0.75	24/0.2	0.5	0.5	1	16.9	18.9	397
SY1.025C	1.0	32/0.2	0.5	0.5	1	17.7	19.7	479

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XT Gland Chart

Size mm²	Number of Cores							
	2	3	4	5	7	12	18	25
0.75	20S	20S	20S	20S	20S	20	25	25
1.0	20S	20S	20S	20S	20S	20	25	25
1.5	20S	20S	20S	20	20	25	25	32
2.5	-	20	20	20	25	25	25	
4.0	-	20	20	25	25			
6.0	-	25	25	25				
10.0	-	25	32	32				
16.0	-	32	32	40				
25.0	-	-	40	40				
35.0	-	-	40	40				

Multicore Loading

In practice, the majority of cores in a multicore control cable of 7 cores and above carry only small or intermittent current and a current rating based on the assumption that all cores are equally loaded is quite unrealistic. In most cases only two cores, the line and neutral feed cores are likely to approach the maximum permitted loading. The current rating for twin core cable can therefore be used in these cables. Where more than two cores are known to carry an appreciable current, the multiplying factors applicable to the two core ratings are given below. The normal current rating for twin cable may also be used in cases where the number of cores carrying appreciable current does not exceed the square root of the total number of cores in the cable.

Number of loaded cores	3	4	5	6	7	10	12	14
Multiplying factor	0.87	0.78	0.72	0.67	0.63	0.56	0.53	0.51

Number of loaded cores	19	24	27	30	37	44	46	48
Multiplying factor	0.45	0.42	0.40	0.39	0.36	0.34	0.33	0.33