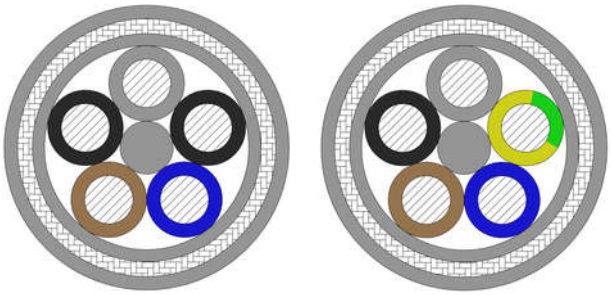
Technical Data Sheet – Armored (SY) PVC Control Cable



MachFlex 375 SY

Galvanized Steel Wire Braid (GSWB) --> Excellent Mechanical Protection

Applications

Designed for applications which are installed in occasional flexing and fixed locations. Cable applications include precision control sensors, multi axis control machines, temperature controllers, control panels, machine cutting tools, auxiliary equipment, motor speed control, production machinery and many more.

General Reference Standards

- DIN VDE 0295, IEC 60228, BS 6360
- DIN EN 50290-2-22, DIN VDE 0207-363-4-1
- IEC 60227-5, EN 50525-2-51, VDE 0281-13
- DIN VDE 0482-332-1-2, DIN EN 60332-1-2, IEC 60332-1-2
- RoHS, REACH & CE Directives

Construction & Performance

1.	**Conductor Material**	Stranded bare copper (DIN VDE 0295 Class 5 / IEC 60228 class 5)
2.	**Insulation Material & Colour**	PVC (polyvinyl chloride), VDE 0293-308 (colour) up to 5 cores: colour-coded according to VDE 0293-308, From 6 cores : Belden MachFlex colour code **A)** G = with GN-YE protective conductor **OR** **B)** X = without protective earth conductor
3.	**Braid Shield Material**	GSWB (Galvanized Steel Wire Braid)
4.	**Jacket / Sheath Material**	PVC (polyvinyl chloride)
5.	**Flame Retardancy**	VDE 0482-332-1-2, DIN EN 60332-1-2, IEC 60332-1-2
6.	**Voltage Rating (Uo / U)**	Up to 1.5 mm^2: 300 / 500 V
		From 2.5 mm^2: 450 / 750 V
7.	**Oil Resistant**	DIN EN 50290-2-22 (TM54)
8.	**Temperature Range**	-5°C TO +70°C (Occasional movement)
		-40°C TO +80°C (Fixed installation)
9.	**Bending Radius**	20 x OD (Occasional movement)
		6 x OD (Fixed installation)
10.	**Other Properties**	Good UV resistance, chemical resistance & flexibility

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TABLE A

Part Code	Cable Description	No. Of Cores	Nom. Conductor Size (mm²)	Nom. Cable Diameter (mm)	Nom. Cable Weight (kg/km)
C2X0.5SY	2 X0.5	2	0.5	7.4	78
C3X0.5SY	3 X0.5	3	0.5	7.7	87
C3G0.5SY	3 G0.5	3	0.5	7.7	87
C4X0.5SY	4 X0.5	4	0.5	8.3	101
C4G0.5SY	4 G0.5	4	0.5	8.3	101
C5X0.5SY	5 X0.5	5	0.5	8.8	116
C5G0.5SY	5 G0.5	5	0.5	8.8	116
C7X0.5SY	7 X0.5	7	0.5	9.5	137
C7G0.5SY	7 G0.5	7	0.5	9.5	137
C9X0.5SY	9 X0.5	9	0.5	11.1	174
C9G0.5SY	9 G0.5	9	0.5	11.1	174
C10X0.5SY	10 X0.5	10	0.5	11.5	191
C10G0.5SY	10 G0.5	10	0.5	11.5	191
C12X0.5SY	12 X0.5	12	0.5	11.9	209
C12G0.5SY	12 G0.5	12	0.5	11.9	209
C14X0.5SY	14 X0.5	14	0.5	12.4	231
C14G0.5SY	14 G0.5	14	0.5	12.4	231
C16X0.5SY	16 X0.5	16	0.5	13.0	256
C16G0.5SY	16 G0.5	16	0.5	13.0	256
C18X0.5SY	18 X0.5	18	0.5	13.8	291
C18G0.5SY	18 G0.5	18	0.5	13.8	291
C20X0.5SY	20 X0.5	20	0.5	14.5	317
C20G0.5SY	20 G0.5	20	0.5	14.5	317
C2X0.75SY	2 X0.75	2	0.75	7.9	89
C3X0.75SY	3 X0.75	3	0.75	8.3	102
C3G0.75SY	3 G0.75	3	0.75	8.3	102
C4X0.75SY	4 X0.75	4	0.75	8.9	120
C4G0.75SY	4 G0.75	4	0.75	8.9	120
C5X0.75SY	5 X0.75	5	0.75	9.5	140
C5G0.75SY	5 G0.75	5	0.75	9.5	140
C7X0.75SY	7 X0.75	7	0.75	10.2	168
C7G0.75SY	7 G0.75	7	0.75	10.2	168
C9X0.75SY	9 X0.75	9	0.75	12.1	215
C9G0.75SY	9 G0.75	9	0.75	12.1	215
C10X0.75SY	10 X0.75	10	0.75	12.5	234
C10G0.75SY	10 G0.75	10	0.75	12.5	234
C12X0.75SY	12 X0.75	12	0.75	12.9	259
C12G0.75SY	12 G0.75	12	0.75	12.9	259
C14X0.75SY	14 X0.75	14	0.75	13.7	300
C14G0.75SY	14 G0.75	14	0.75	13.7	300
C16X0.75SY	16 X0.75	16	0.75	14.4	331
C16G0.75SY	16 G0.75	16	0.75	14.4	331
C18X0.75SY	18 X0.75	18	0.75	15.1	366
C18G0.75SY	18 G0.75	18	0.75	15.1	366
C20X0.75SY	20 X0.75	20	0.75	15.9	401
C20G0.75SY	20 G0.75	20	0.75	15.9	401

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Part Code	Cable Description	No. Of Cores	Nom. Conductor Size (mm²)	Nom. Cable Diameter (mm)	Nom. Cable Weight (kg/km)
C2X1.0SY	2 X1.0	2	1.0	8.3	100
C3X1.0SY	3 X1.0	3	1.0	8.7	117
C3G1.0SY	3 G1.0	3	1.0	8.7	117
C4X1.0SY	4 X1.0	4	1.0	9.4	139
C4G1.0SY	4 G1.0	4	1.0	9.4	139
C5X1.0SY	5 X1.0	5	1.0	10.1	164
C5G1.0SY	5 G1.0	5	1.0	10.1	164
C7X1.0SY	7 X1.0	7	1.0	10.8	197
C7G1.0SY	7 G1.0	7	1.0	10.8	197
C9X1.0SY	9 X1.0	9	1.0	12.9	255
C9G1.0SY	9 G1.0	9	1.0	12.9	255
C10X1.0SY	10 X1.0	10	1.0	13.4	278
C10G1.0SY	10 G1.0	10	1.0	13.4	278
C12X1.0SY	12 X1.0	12	1.0	14.0	320
C12G1.0SY	12 G1.0	12	1.0	14.0	320
C14X1.0SY	14 X1.0	14	1.0	14.6	358
C14G1.0SY	14 G1.0	14	1.0	14.6	358
C16X1.0SY	16 X1.0	16	1.0	15.4	397
C16G1.0SY	16 G1.0	16	1.0	15.4	397
C18X1.0SY	18 X1.0	18	1.0	16.1	439
C18G1.0SY	18 G1.0	18	1.0	16.1	439
C20X1.0SY	20 X1.0	20	1.0	16.9	483
C20G1.0SY	20 G1.0	20	1.0	16.9	483
C2X1.5SY	2 X1.5	2	1.5	8.8	116
C3X1.5SY	3 X1.5	3	1.5	9.3	133
C3G1.5SY	3 G1.5	3	1.5	9.3	133
C4X1.5SY	4 X1.5	4	1.5	10.0	164
C4G1.5SY	4 G1.5	4	1.5	10.0	164
C5X1.5SY	5 X1.5	5	1.5	10.8	193
C5G1.5SY	5 G1.5	5	1.5	10.8	193
C7X1.5SY	7 X1.5	7	1.5	11.6	231
C7G1.5SY	7 G1.5	7	1.5	11.6	231
C9X1.5SY	9 X1.5	9	1.5	14.1	315
C9G1.5SY	9 G1.5	9	1.5	14.1	315
C10X1.5SY	10 X1.5	10	1.5	14.6	344
C10G1.5SY	10 G1.5	10	1.5	14.6	344
C12X1.5SY	12 X1.5	12	1.5	15.1	376
C12G1.5SY	12 G1.5	12	1.5	15.1	376
C14X1.5SY	14 X1.5	14	1.5	15.8	432
C14G1.5SY	14 G1.5	14	1.5	15.8	432
C16X1.5SY	16 X1.5	16	1.5	16.6	481
C16G1.5SY	16 G1.5	16	1.5	16.6	481
C18X1.5SY	18 X1.5	18	1.5	17.4	533
C18G1.5SY	18 G1.5	18	1.5	17.4	533
C20X1.5SY	20 X1.5	20	1.5	18.4	587
C20G1.5SY	20 G1.5	20	1.5	18.4	587
C2X2.5SY	2 X2.5	2	2.5	11.9	198

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C3X2.5SY	3 X2.5	3	2.5	12.6	238
C3G2.5SY	3 G2.5	3	2.5	12.6	238
C4X2.5SY	4 X2.5	4	2.5	13.9	300
C4G2.5SY	4 G2.5	4	2.5	13.9	300
C5X2.5SY	5 X2.5	5	2.5	15.1	358
C5G2.5SY	5 G2.5	5	2.5	15.1	358
C7X2.5SY	7 X2.5	7	2.5	16.4	439
C7G2.5SY	7 G2.5	7	2.5	16.4	439
C9X2.5SY	9 X2.5	9	2.5	19.9	574
C9G2.5SY	9 G2.5	9	2.5	19.9	574
C10X2.5SY	10 X2.5	10	2.5	20.7	633
C10G2.5SY	10 G2.5	10	2.5	20.7	633
C12X2.5SY	12 X2.5	12	2.5	21.4	709
C12G2.5SY	12 G2.5	12	2.5	21.4	709
C14X2.5SY	14 X2.5	14	2.5	22.5	803
C14G2.5SY	14 G2.5	14	2.5	22.5	803
C16X2.5SY	16 X2.5	16	2.5	23.7	897
C16G2.5SY	16 G2.5	16	2.5	23.7	897
C18X2.5SY	18 X2.5	18	2.5	25.0	1000
C18G2.5SY	18 G2.5	18	2.5	25.0	1000
C20X2.5SY	20 X2.5	20	2.5	26.5	1105
C20G2.5SY	20 G2.5	20	2.5	26.5	1105
C2X4SY	2 X4	2	4	13.3	263
C3X4SY	3 X4	3	4	14.4	331
C3G4SY	3 G4	3	4	14.4	331
C4X4SY	4 X4	4	4	15.7	407
C4G4SY	4 G4	4	4	15.7	407
C5X4SY	5 X4	5	4	17.1	491
C5G4SY	5 G4	5	4	17.1	491
C7X4SY	7 X4	7	4	18.6	610
C7G4SY	7 G4	7	4	18.6	610
C9X4SY	9 X4	9	4	22.7	801
C9G4SY	9 G4	9	4	22.7	801
C10X4SY	10 X4	10	4	23.7	886
C10G4SY	10 G4	10	4	23.7	886
C12X4SY	12 X4	12	4	24.5	1000
C12G4SY	12 G4	12	4	24.5	1000
C2X6SY	2 X6	2	6	15.0	346
C3X6SY	3 X6	3	6	15.9	428
C3G6SY	3 G6	3	6	15.9	428
C4X6SY	4 X6	4	6	17.4	532
C4G6SY	4 G6	4	6	17.4	532
C5X6SY	5 X6	5	6	19.0	643
C5G6SY	5 G6	5	6	19.0	643
C7X6SY	7 X6	7	6	20.7	811
C7G6SY	7 G6	7	6	20.7	811
C9X6SY	9 X6	9	6	25.4	1065

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C9G6SY	9 G6	9	6	25.4	1065
C2X10SY	2 X10	2	10	17.4	483
C3X10SY	3 X10	3	10	18.6	607
C3G10SY	3 G10	3	10	18.6	607
C4X10SY	4 X10	4	10	20.4	760
C4G10SY	4 G10	4	10	20.4	760
C5X10SY	5 X10	5	10	22.3	926
C5G10SY	5 G10	5	10	22.3	926
C7X10SY	7 X10	7	10	24.4	1177
C7G10SY	7 G10	7	10	24.4	1177
C9X10SY	9 X10	9	10	30.0	1549
C9G10SY	9 G10	9	10	30.0	1549
C2X16SY	2 X16	2	16	21.5	741
C3X16SY	3 X16	3	16	23.0	940
C3G16SY	3 G16	3	16	23.0	940
C4X16SY	4 X16	4	16	25.3	1189
C4G16SY	4 G16	4	16	25.3	1189
C5X16SY	5 X16	5	16	27.9	1458
C5G16SY	5 G16	5	16	27.9	1458
C7X16SY	7 X16	7	16	30.5	1859
C7G16SY	7 G16	7	16	30.5	1859
C2X25SY	2 X25	2	25	24.2	1001
C3X25SY	3 X25	3	25	25.9	1293
C3G25SY	3 G25	3	25	25.9	1293
C4X25SY	4 X25	4	25	28.6	1647
C4G25SY	4 G25	4	25	28.6	1647
C5X25SY	5 X25	5	25	31.2	2011
C5G25SY	5 G25	5	25	31.2	2011
C2X35SY	2 X35	2	35	27.6	1288
C3X35SY	3 X35	3	35	29.5	1670
C3G35SY	3 G35	3	35	29.5	1670

Sheath / Jacket Colour

	Colour	Colour Code
1)	Grey (RAL 7001)	G8U
2)	Transparent*	368
3)	Black	010
4)	Blue	006
5)	Orange	003
6)	Violet	007

*** Transparent jacket colour by default will have a Grey (RAL 7001) inner jacket colour. For all other colours the inner and outer jacket colour will be the same. Special colours can also be provided upon request.**

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Packaging

*Belden can offer these cables with various packing options like coiled, plastic or wooden reels. This will be decided at the discretion of Belden based on the cable design and structure.

Put-up Length

Putup Length	Putup Length Code
1) 100 Meters	100M
2) 200 Meters*	200M
3) 300 Meters*	300M

*Applicable only for certain part codes, please check with Belden for more information.

Stock Code Selection Procedure:

C	5	G	2	.	5	S	Y

Select the part code from Table A

G	8	U

Select the sheath / jacket color code

1	0	0	M

Select the putup length code

C	5	G	2	.	5	S	Y	G	8	U	1	0	0	M

Cable Stock Code = C5G2.5SY G8U100M



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