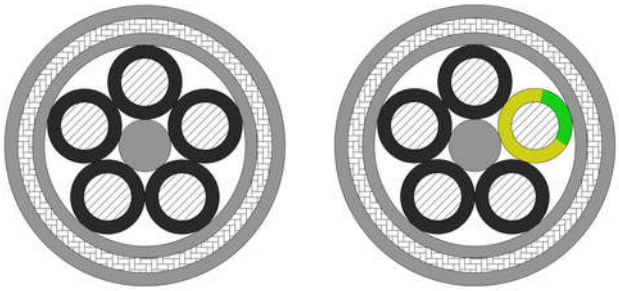
Technical Data Sheet – Armored (SY) PVC Control Cable



MachFlex 350 SY

VDE Registered
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), DIN VDE 0293-1 (colour) **A)** All black colour with number coding = without protective earth conductor. **OR** **B)** Black colour with number coding and 1 green & yellow colour conductor = with 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)**	300 / 500 V
7.	**Oil Resistant**	DIN EN 50290-2-22 (TM54)
8.	**Temperature Range**	-30°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 (mm^2)	Nom. Cable Diameter (mm)	Nom. Cable Weight (kg/km)
2X0.5SY	2 X0.5	2	0.5	7.1	55
3X0.5SY	3 X0.5	3	0.5	7.5	79
3G0.5SY	3 G0.5	3	0.5	7.5	79
4X0.5SY	4 X0.5	4	0.5	8.0	92
4G0.5SY	4 G0.5	4	0.5	8.0	92
5X0.5SY	5 X0.5	5	0.5	8.5	106
5G0.5SY	5 G0.5	5	0.5	8.5	106
7X0.5SY	7 X0.5	7	0.5	9.1	124
7G0.5SY	7 G0.5	7	0.5	9.1	124
9X0.5SY	9 X0.5	9	0.5	10.7	158
9G0.5SY	9 G0.5	9	0.5	10.7	158
10X0.5SY	10 X0.5	10	0.5	11.1	173
10G0.5SY	10 G0.5	10	0.5	11.1	173
12X0.5SY	12 X0.5	12	0.5	11.4	190
12G0.5SY	12 G0.5	12	0.5	11.4	190
14X0.5SY	14 X0.5	14	0.5	11.9	210
14G0.5SY	14 G0.5	14	0.5	11.9	210
16X0.5SY	16 X0.5	16	0.5	12.4	232
16G0.5SY	16 G0.5	16	0.5	12.4	232
18X0.5SY	18 X0.5	18	0.5	13.0	256
18G0.5SY	18 G0.5	18	0.5	13.0	256
20X0.5SY	20 X0.5	20	0.5	13.9	288
20G0.5SY	20 G0.5	20	0.5	13.9	288
2X0.75SY	2 X0.75	2	0.75	7.7	81
3X0.75SY	3 X0.75	3	0.75	8.0	94
3G0.75SY	3 G0.75	3	0.75	8.0	94
4X0.75SY	4 X0.75	4	0.75	8.6	111
4G0.75SY	4 G0.75	4	0.75	8.6	111
5X0.75SY	5 X0.75	5	0.75	9.2	129
5G0.75SY	5 G0.75	5	0.75	9.2	129
7X0.75SY	7 X0.75	7	0.75	9.9	154
7G0.75SY	7 G0.75	7	0.75	9.9	154
9X0.75SY	9 X0.75	9	0.75	11.6	198
9G0.75SY	9 G0.75	9	0.75	11.6	198
10X0.75SY	10 X0.75	10	0.75	12.1	216
10G0.75SY	10 G0.75	10	0.75	12.1	216
12X0.75SY	12 X0.75	12	0.75	12.4	239
12G0.75SY	12 G0.75	12	0.75	12.4	239
14X0.75SY	14 X0.75	14	0.75	13.0	266
14G0.75SY	14 G0.75	14	0.75	13.0	266
16X0.75SY	16 X0.75	16	0.75	13.8	305
16G0.75SY	16 G0.75	16	0.75	13.8	305
18X0.75SY	18 X0.75	18	0.75	14.5	337
18G0.75SY	18 G0.75	18	0.75	14.5	337
20X0.75SY	20 X0.75	20	0.75	15.2	365
20G0.75SY	20 G0.75	20	0.75	15.2	365

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Part Code	Cable Description	No. Of Cores	Nom. Conductor Size (mm^2)	Nom. Cable Diameter (mm)	Nom. Cable Weight (kg/km)
2X1.0SY	2 X1.0	2	1.0	8.1	93
3X1.0SY	3 X1.0	3	1.0	8.4	109
3G1.0SY	3 G1.0	3	1.0	8.4	109
4X1.0SY	4 X1.0	4	1.0	9.1	129
4G1.0SY	4 G1.0	4	1.0	9.1	129
5X1.0SY	5 X1.0	5	1.0	9.8	152
5G1.0SY	5 G1.0	5	1.0	9.8	152
7X1.0SY	7 X1.0	7	1.0	10.5	184
7G1.0SY	7 G1.0	7	1.0	10.5	184
9X1.0SY	9 X1.0	9	1.0	12.4	236
9G1.0SY	9 G1.0	9	1.0	12.4	236
10X1.0SY	10 X1.0	10	1.0	12.9	258
10G1.0SY	10 G1.0	10	1.0	12.9	258
12X1.0SY	12 X1.0	12	1.0	13.3	287
12G1.0SY	12 G1.0	12	1.0	13.3	287
14X1.0SY	14 X1.0	14	1.0	14.1	331
14G1.0SY	14 G1.0	14	1.0	14.1	331
16X1.0SY	16 X1.0	16	1.0	14.8	369
16G1.0SY	16 G1.0	16	1.0	14.8	369
18X1.0SY	18 X1.0	18	1.0	15.5	408
18G1.0SY	18 G1.0	18	1.0	15.5	408
20X1.0SY	20 X1.0	20	1.0	16.3	442
20G1.0SY	20 G1.0	20	1.0	16.3	442
2X1.5SY	2 X1.5	2	1.5	8.6	108
3X1.5SY	3 X1.5	3	1.5	9.0	124
3G1.5SY	3 G1.5	3	1.5	9.0	124
4X1.5SY	4 X1.5	4	1.5	9.7	153
4G1.5SY	4 G1.5	4	1.5	9.7	153
5X1.5SY	5 X1.5	5	1.5	10.5	181
5G1.5SY	5 G1.5	5	1.5	10.5	181
7X1.5SY	7 X1.5	7	1.5	11.3	215
7G1.5SY	7 G1.5	7	1.5	11.3	215
9X1.5SY	9 X1.5	9	1.5	13.4	285
9G1.5SY	9 G1.5	9	1.5	13.4	285
10X1.5SY	10 X1.5	10	1.5	14.2	321
10G1.5SY	10 G1.5	10	1.5	14.2	321
12X1.5SY	12 X1.5	12	1.5	14.6	352
12G1.5SY	12 G1.5	12	1.5	14.6	352
14X1.5SY	14 X1.5	14	1.5	15.3	403
14G1.5SY	14 G1.5	14	1.5	15.3	403
16X1.5SY	16 X1.5	16	1.5	16.0	450
16G1.5SY	16 G1.5	16	1.5	16.0	450
18X1.5SY	18 X1.5	18	1.5	16.8	499
18G1.5SY	18 G1.5	18	1.5	16.8	499
20X1.5SY	20 X1.5	20	1.5	17.7	543
20G1.5SY	20 G1.5	20	1.5	17.7	543
2X2.5SY	2 X2.5	2	2.5	10.4	159

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3X2.5SY	3 X2.5	3	2.5	11.0	191
3G2.5SY	3 G2.5	3	2.5	11.0	191
4X2.5SY	4 X2.5	4	2.5	11.9	233
4G2.5SY	4 G2.5	4	2.5	11.9	233
5X2.5SY	5 X2.5	5	2.5	12.9	278
5G2.5SY	5 G2.5	5	2.5	12.9	278
7X2.5SY	7 X2.5	7	2.5	14.2	353
7G2.5SY	7 G2.5	7	2.5	14.2	353
9X2.5SY	9 X2.5	9	2.5	17.1	459
9G2.5SY	9 G2.5	9	2.5	17.1	459
10X2.5SY	10 X2.5	10	2.5	17.8	505
10G2.5SY	10 G2.5	10	2.5	17.8	505
12X2.5SY	12 X2.5	12	2.5	18.4	568
12G2.5SY	12 G2.5	12	2.5	18.4	568
14X2.5SY	14 X2.5	14	2.5	19.3	641
14G2.5SY	14 G2.5	14	2.5	19.3	641
16X2.5SY	16 X2.5	16	2.5	20.3	719
16G2.5SY	16 G2.5	16	2.5	20.3	719
18X2.5SY	18 X2.5	18	2.5	21.4	801
18G2.5SY	18 G2.5	18	2.5	21.4	801
20X2.5SY	20 X2.5	20	2.5	22.6	873
20G2.5SY	20 G2.5	20	2.5	22.6	873
2X4SY	2 X4	2	4	11.9	218
3X4SY	3 X4	3	4	12.6	268
3G4SY	3 G4	3	4	12.6	268
4X4SY	4 X4	4	4	13.9	341
4G4SY	4 G4	4	4	13.9	341
5X4SY	5 X4	5	4	15.1	410
5G4SY	5 G4	5	4	15.1	410
7X4SY	7 X4	7	4	16.4	514
7G4SY	7 G4	7	4	16.4	514
9X4SY	9 X4	9	4	19.9	671
9G4SY	9 G4	9	4	19.9	671
10X4SY	10 X4	10	4	20.8	740
10G4SY	10 G4	10	4	20.8	740
12X4SY	12 X4	12	4	21.5	839
12G4SY	12 G4	12	4	21.5	839
2X6SY	2 X6	2	6	14.0	308
3X6SY	3 X6	3	6	14.9	384
3G6SY	3 G6	3	6	14.9	384
4X6SY	4 X6	4	6	16.2	477
4G6SY	4 G6	4	6	16.2	477
5X6SY	5 X6	5	6	17.7	578
5G6SY	5 G6	5	6	17.7	578
7X6SY	7 X6	7	6	19.3	731
7G6SY	7 G6	7	6	19.3	731
9X6SY	9 X6	9	6	23.5	958

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9G6SY	9 G6	9	6	23.5	958
2X10SY	2 X10	2	10	17.0	456
3X10SY	3 X10	3	10	18.0	574
3G10SY	3 G10	3	10	18.0	574
4X10SY	4 X10	4	10	19.8	721
4G10SY	4 G10	4	10	19.8	721
5X10SY	5 X10	5	10	21.7	878
5G10SY	5 G10	5	10	21.7	878
7X10SY	7 X10	7	10	23.7	1119
7G10SY	7 G10	7	10	23.7	1119
9X10SY	9 X10	9	10	29.1	1473
9G10SY	9 G10	9	10	29.1	1473
2X16SY	2 X16	2	16	20.1	666
3X16SY	3 X16	3	16	21.4	851
3G16SY	3 G16	3	16	21.4	851
4X16SY	4 X16	4	16	23.6	1077
4G16SY	4 G16	4	16	23.6	1077
5X16SY	5 X16	5	16	25.9	1321
5G16SY	5 G16	5	16	25.9	1321
7X16SY	7 X16	7	16	28.4	1700
7G16SY	7 G16	7	16	28.4	1700
2X25SY	2 X25	2	25	24.2	985
3X25SY	3 X25	3	25	25.9	1273
3G25SY	3 G25	3	25	25.9	1273
4X25SY	4 X25	4	25	28.6	1622
4G25SY	4 G25	4	25	28.6	1622
5X25SY	5 X25	5	25	31.2	1982
5G25SY	5 G25	5	25	31.2	1982
7X25SY	7 X25	7	25	33.9	2533
7G25SY	7 G25	7	25	33.9	2533
2X35SY	2 X35	2	35	27.6	1268
3X35SY	3 X35	3	35	29.5	1644
3G35SY	3 G35	3	35	29.5	1644
4X35SY	4 X35	4	35	32.2	2072
4G35SY	4 G35	4	35	32.2	2072

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

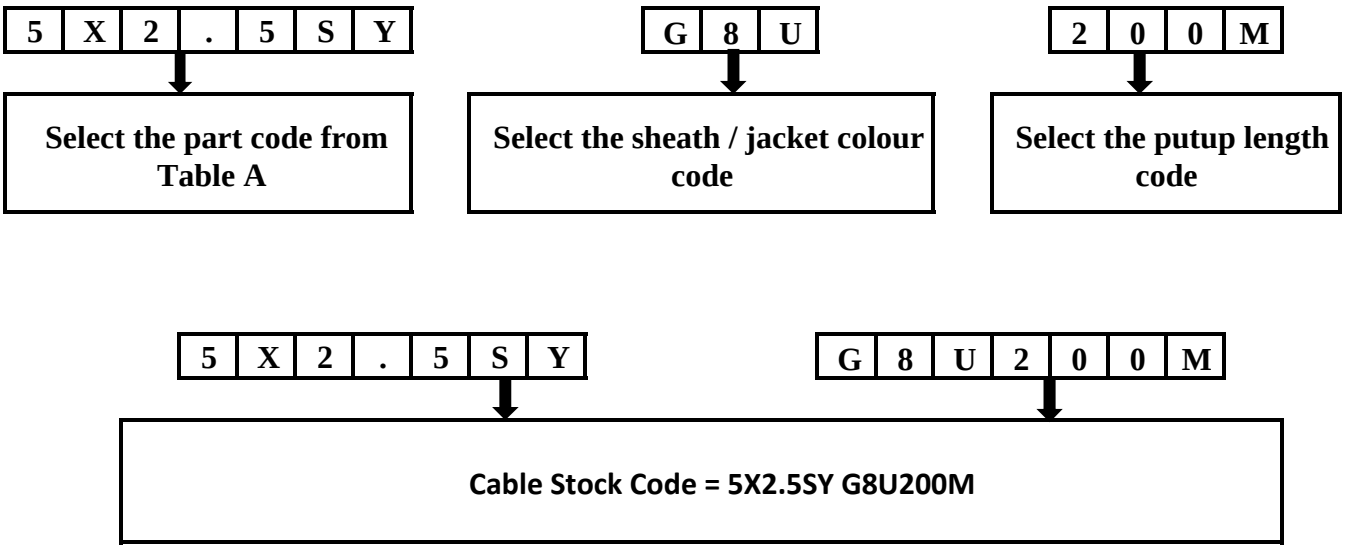
*Belden can offer these cables with various packing options like coiled, plastic or wooden reels. This will be decided at the discretion of Belden based on the cable design and structure.

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:





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