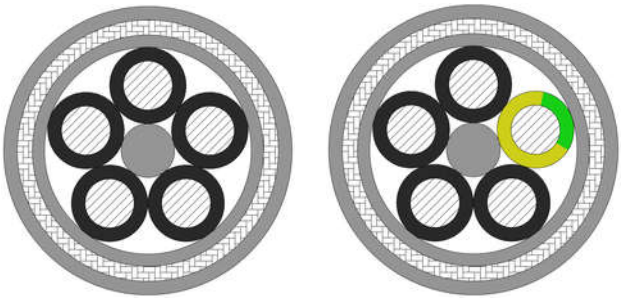
Technical Data Sheet – Shielded (CY) PVC Control Cable



MachFlex 350 CY

VDE Registered
Tinned Copper Braid Shield (TCB) – Excellent Noise Immunity

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**	Tinned Copper Braid Shield
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)
2X0.5CY	2 X0.5	2	0.5	6.9	71
3X0.5CY	3 X0.5	3	0.5	7.2	80
3G0.5CY	3 G0.5	3	0.5	7.2	80
4X0.5CY	4 X0.5	4	0.5	7.7	93
4G0.5CY	4 G0.5	4	0.5	7.7	93
5X0.5CY	5 X0.5	5	0.5	8.3	107
5G0.5CY	5 G0.5	5	0.5	8.3	107
7X0.5CY	7 X0.5	7	0.5	9.1	136
7G0.5CY	7 G0.5	7	0.5	9.1	136
9X0.5CY	9 X0.5	9	0.5	10.7	172
9G0.5CY	9 G0.5	9	0.5	10.7	172
10X0.5CY	10 X0.5	10	0.5	11.1	188
10G0.5CY	10 G0.5	10	0.5	11.1	188
12X0.5CY	12 X0.5	12	0.5	11.4	205
12G0.5CY	12 G0.5	12	0.5	11.4	205
14X0.5CY	14 X0.5	14	0.5	11.9	225
14G0.5CY	14 G0.5	14	0.5	11.9	225
16X0.5CY	16 X0.5	16	0.5	12.4	249
16G0.5CY	16 G0.5	16	0.5	12.4	249
18X0.5CY	18 X0.5	18	0.5	13.0	273
18G0.5CY	18 G0.5	18	0.5	13.0	273
20X0.5CY	20 X0.5	20	0.5	13.7	296
20G0.5CY	20 G0.5	20	0.5	13.7	296
2X0.75CY	2 X0.75	2	0.75	7.4	82
3X0.75CY	3 X0.75	3	0.75	7.7	95
3G0.75CY	3 G0.75	3	0.75	7.7	95
4X0.75CY	4 X0.75	4	0.75	8.3	112
4G0.75CY	4 G0.75	4	0.75	8.3	112
5X0.75CY	5 X0.75	5	0.75	9.2	141
5G0.75CY	5 G0.75	5	0.75	9.2	141
7X0.75CY	7 X0.75	7	0.75	9.9	167
7G0.75CY	7 G0.75	7	0.75	9.9	167
9X0.75CY	9 X0.75	9	0.75	11.6	214
9G0.75CY	9 G0.75	9	0.75	11.6	214
10X0.75CY	10 X0.75	10	0.75	12.1	231
10G0.75CY	10 G0.75	10	0.75	12.1	231
12X0.75CY	12 X0.75	12	0.75	12.4	255
12G0.75CY	12 G0.75	12	0.75	12.4	255
14X0.75CY	14 X0.75	14	0.75	13.0	283
14G0.75CY	14 G0.75	14	0.75	13.0	283
16X0.75CY	16 X0.75	16	0.75	13.6	314
16G0.75CY	16 G0.75	16	0.75	13.6	314
18X0.75CY	18 X0.75	18	0.75	14.3	346
18G0.75CY	18 G0.75	18	0.75	14.3	346
20X0.75CY	20 X0.75	20	0.75	15.0	374
20G0.75CY	20 G0.75	20	0.75	15.0	374

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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)
2X1.0CY	2 X1.0	2	1.0	7.8	94
3X1.0CY	3 X1.0	3	1.0	8.2	110
3G1.0CY	3 G1.0	3	1.0	8.2	110
4X1.0CY	4 X1.0	4	1.0	9.1	141
4G1.0CY	4 G1.0	4	1.0	9.1	141
5X1.0CY	5 X1.0	5	1.0	9.8	164
5G1.0CY	5 G1.0	5	1.0	9.8	164
7X1.0CY	7 X1.0	7	1.0	10.5	197
7G1.0CY	7 G1.0	7	1.0	10.5	197
9X1.0CY	9 X1.0	9	1.0	12.4	253
9G1.0CY	9 G1.0	9	1.0	12.4	253
10X1.0CY	10 X1.0	10	1.0	12.9	275
10G1.0CY	10 G1.0	10	1.0	12.9	275
12X1.0CY	12 X1.0	12	1.0	13.3	305
12G1.0CY	12 G1.0	12	1.0	13.3	305
14X1.0CY	14 X1.0	14	1.0	13.9	340
14G1.0CY	14 G1.0	14	1.0	13.9	340
16X1.0CY	16 X1.0	16	1.0	14.6	379
16G1.0CY	16 G1.0	16	1.0	14.6	379
18X1.0CY	18 X1.0	18	1.0	15.3	418
18G1.0CY	18 G1.0	18	1.0	15.3	418
20X1.0CY	20 X1.0	20	1.0	16.1	454
20G1.0CY	20 G1.0	20	1.0	16.1	454
2X1.5CY	2 X1.5	2	1.5	8.3	109
3X1.5CY	3 X1.5	3	1.5	9.0	135
3G1.5CY	3 G1.5	3	1.5	9.0	135
4X1.5CY	4 X1.5	4	1.5	9.7	165
4G1.5CY	4 G1.5	4	1.5	9.7	165
5X1.5CY	5 X1.5	5	1.5	10.5	194
5G1.5CY	5 G1.5	5	1.5	10.5	194
7X1.5CY	7 X1.5	7	1.5	11.3	230
7G1.5CY	7 G1.5	7	1.5	11.3	230
9X1.5CY	9 X1.5	9	1.5	13.4	303
9G1.5CY	9 G1.5	9	1.5	13.4	303
10X1.5CY	10 X1.5	10	1.5	14.0	330
10G1.5CY	10 G1.5	10	1.5	14.0	330
12X1.5CY	12 X1.5	12	1.5	14.4	362
12G1.5CY	12 G1.5	12	1.5	14.4	362
14X1.5CY	14 X1.5	14	1.5	15.0	413
14G1.5CY	14 G1.5	14	1.5	15.0	413
16X1.5CY	16 X1.5	16	1.5	15.8	460
16G1.5CY	16 G1.5	16	1.5	15.8	460
18X1.5CY	18 X1.5	18	1.5	16.6	511
18G1.5CY	18 G1.5	18	1.5	16.6	511
20X1.5CY	20 X1.5	20	1.5	17.5	554
20G1.5CY	20 G1.5	20	1.5	17.5	554
2X2.5CY	2 X2.5	2	2.5	10.4	172

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3X2.5CY	3 X2.5	3	2.5	11.0	205
3G2.5CY	3 G2.5	3	2.5	11.0	205
4X2.5CY	4 X2.5	4	2.5	11.9	248
4G2.5CY	4 G2.5	4	2.5	11.9	248
5X2.5CY	5 X2.5	5	2.5	12.9	295
5G2.5CY	5 G2.5	5	2.5	12.9	295
7X2.5CY	7 X2.5	7	2.5	14.0	362
7G2.5CY	7 G2.5	7	2.5	14.0	362
9X2.5CY	9 X2.5	9	2.5	16.9	471
9G2.5CY	9 G2.5	9	2.5	16.9	471
10X2.5CY	10 X2.5	10	2.5	17.6	517
10G2.5CY	10 G2.5	10	2.5	17.6	517
12X2.5CY	12 X2.5	12	2.5	18.2	581
12G2.5CY	12 G2.5	12	2.5	18.2	581
14X2.5CY	14 X2.5	14	2.5	19.1	655
14G2.5CY	14 G2.5	14	2.5	19.1	655
16X2.5CY	16 X2.5	16	2.5	20.4	757
16G2.5CY	16 G2.5	16	2.5	20.4	757
18X2.5CY	18 X2.5	18	2.5	21.5	842
18G2.5CY	18 G2.5	18	2.5	21.5	842
20X2.5CY	20 X2.5	20	2.5	22.7	916
20G2.5CY	20 G2.5	20	2.5	22.7	916
2X4CY	2 X4	2	4	11.9	233
3X4CY	3 X4	3	4	12.6	285
3G4CY	3 G4	3	4	12.6	285
4X4CY	4 X4	4	4	13.7	350
4G4CY	4 G4	4	4	13.7	350
5X4CY	5 X4	5	4	14.9	420
5G4CY	5 G4	5	4	14.9	420
7X4CY	7 X4	7	4	16.2	524
7G4CY	7 G4	7	4	16.2	524
9X4CY	9 X4	9	4	20.0	708
9G4CY	9 G4	9	4	20.0	708
10X4CY	10 X4	10	4	20.8	779
10G4CY	10 G4	10	4	20.8	779
12X4CY	12 X4	12	4	21.5	880
12G4CY	12 G4	12	4	21.5	880
2X6CY	2 X6	2	6	13.8	318
3X6CY	3 X6	3	6	14.6	394
3G6CY	3 G6	3	6	14.6	394
4X6CY	4 X6	4	6	16.0	488
4G6CY	4 G6	4	6	16.0	488
5X6CY	5 X6	5	6	17.5	590
5G6CY	5 G6	5	6	17.5	590
7X6CY	7 X6	7	6	19.1	744
7G6CY	7 G6	7	6	19.1	744
9X6CY	9 X6	9	6	23.6	1003

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9G6CY	9 G6	9	6	23.6	1003
2X10CY	2 X10	2	10	16.7	468
3X10CY	3 X10	3	10	17.8	587
3G10CY	3 G10	3	10	17.8	587
4X10CY	4 X10	4	10	19.8	758
4G10CY	4 G10	4	10	19.8	758
5X10CY	5 X10	5	10	21.7	920
5G10CY	5 G10	5	10	21.7	920
7X10CY	7 X10	7	10	23.8	1164
7G10CY	7 G10	7	10	23.8	1164
9X10CY	9 X10	9	10	29.2	1529
9G10CY	9 G10	9	10	29.2	1529
2X16CY	2 X16	2	16	20.1	703
3X16CY	3 X16	3	16	21.5	892
3G16CY	3 G16	3	16	21.5	892
4X16CY	4 X16	4	16	23.6	1123
4G16CY	4 G16	4	16	23.6	1123
5X16CY	5 X16	5	16	26.0	1372
5G16CY	5 G16	5	16	26.0	1372
7X16CY	7 X16	7	16	28.5	1754
7G16CY	7 G16	7	16	28.5	1754
2X25CY	2 X25	2	25	24.2	1030
3X25CY	3 X25	3	25	25.9	1322
3G25CY	3 G25	3	25	25.9	1322
4X25CY	4 X25	4	25	28.6	1676
4G25CY	4 G25	4	25	28.6	1676
5X25CY	5 X25	5	25	31.5	2076
5G25CY	5 G25	5	25	31.5	2076
7X25CY	7 X25	7	25	34.2	2637
7G25CY	7 G25	7	25	34.2	2637
2X35CY	2 X35	2	35	27.6	1322
3X35CY	3 X35	3	35	29.6	1700
3G35CY	3 G35	3	35	29.6	1700
4X35CY	4 X35	4	35	32.5	2169
4G35CY	4 G35	4	35	32.5	2169

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:

5	G	0	.	5	C	Y

Select the part code from Table A

G	8	U

Select the sheath / jacket colour code

3	0	0	M

Select the putup length code

5	G	0	.	5	C	Y	G	8	U	3	0	0	M

Cable Stock Code = 5G0.5CY G8U300M



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