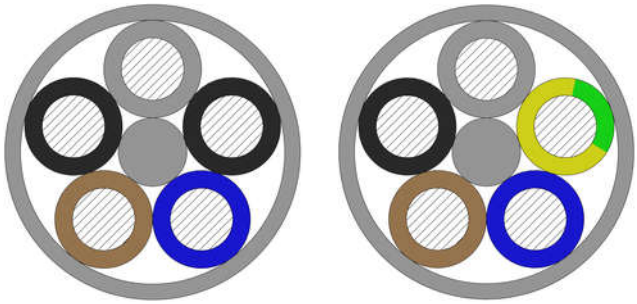
Technical Data Sheet – Unshielded (YY) PVC Control Cable



MachFlex 375 YY

Flexible Colour Coded PVC Control Cables

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.	**Jacket / Sheath Material**	PVC (polyvinyl chloride)
4.	**Flame Retardancy**	VDE 0482-332-1-2, DIN EN 60332-1-2, IEC 60332-1-2
5.	**Voltage Rating (Uo/U)**	Up to 1.5 mm^2: 300 / 500 V
		From 2.5 mm^2: 450 / 750 V
6.	**Oil Resistant**	DIN EN 50290-2-22 (TM54)
7.	**Temperature Range**	-5°C TO +70°C (Occasional movement)
		-40°C TO +80°C (Fixed installation)
8.	**Bending Radius**	15 x OD (Occasional movement)
		4 x OD (Fixed installation)
9.	**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)
C2X0.5	2 X0.5	2	0.5	4.8	30
C3X0.5	3 X0.5	3	0.5	5.1	38
C3G0.5	3 G0.5	3	0.5	5.1	38
C4X0.5	4 X0.5	4	0.5	5.6	48
C4G0.5	4 G0.5	4	0.5	5.6	48
C5X0.5	5 X0.5	5	0.5	6.2	59
C5G0.5	5 G0.5	5	0.5	6.2	59
C7X0.5	7 X0.5	7	0.5	6.8	74
C7G0.5	7 G0.5	7	0.5	6.8	74
C9X0.5	9 X0.5	9	0.5	8.4	99
C9G0.5	9 G0.5	9	0.5	8.4	99
C10X0.5	10 X0.5	10	0.5	8.8	109
C10G0.5	10 G0.5	10	0.5	8.8	109
C12X0.5	12 X0.5	12	0.5	9.1	125
C12G0.5	12 G0.5	12	0.5	9.1	125
C14X0.5	14 X0.5	14	0.5	9.6	143
C14G0.5	14 G0.5	14	0.5	9.6	143
C16X0.5	16 X0.5	16	0.5	10.2	162
C16G0.5	16 G0.5	16	0.5	10.2	162
C18X0.5	18 X0.5	18	0.5	10.8	183
C18G0.5	18 G0.5	18	0.5	10.8	183
C20X0.5	20 X0.5	20	0.5	11.4	203
C20G0.5	20 G0.5	20	0.5	11.4	203
C2X0.75	2 X0.75	2	0.75	5.3	39
C3X0.75	3 X0.75	3	0.75	5.6	49
C3G0.75	3 G0.75	3	0.75	5.6	49
C4X0.75	4 X0.75	4	0.75	6.2	62
C4G0.75	4 G0.75	4	0.75	6.2	62
C5X0.75	5 X0.75	5	0.75	6.8	77
C5G0.75	5 G0.75	5	0.75	6.8	77
C7X0.75	7 X0.75	7	0.75	7.5	98
C7G0.75	7 G0.75	7	0.75	7.5	98
C9X0.75	9 X0.75	9	0.75	9.3	131
C9G0.75	9 G0.75	9	0.75	9.3	131
C10X0.75	10 X0.75	10	0.75	9.8	144
C10G0.75	10 G0.75	10	0.75	9.8	144
C12X0.75	12 X0.75	12	0.75	10.1	165
C12G0.75	12 G0.75	12	0.75	10.1	165
C14X0.75	14 X0.75	14	0.75	10.7	190
C14G0.75	14 G0.75	14	0.75	10.7	190
C16X0.75	16 X0.75	16	0.75	11.3	216
C16G0.75	16 G0.75	16	0.75	11.3	216
C18X0.75	18 X0.75	18	0.75	12.0	243
C18G0.75	18 G0.75	18	0.75	12.0	243
C20X0.75	20 X0.75	20	0.75	12.7	270
C20G0.75	20 G0.75	20	0.75	12.7	270

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Technical Data Sheet – Unshielded (YY) PVC Control Cable

Part Code	Cable Description	No. Of Cores	Nom. Conductor Size (mm²)	Nom. Cable Diameter (mm)	Nom. Cable Weight (kg/km)
C2X1.0	2 X1.0	2	1.0	5.7	47
C3X1.0	3 X1.0	3	1.0	6.1	60
C3G1.0	3 G1.0	3	1.0	6.1	60
C4X1.0	4 X1.0	4	1.0	6.7	77
C4G1.0	4 G1.0	4	1.0	6.7	77
C5X1.0	5 X1.0	5	1.0	7.4	95
C5G1.0	5 G1.0	5	1.0	7.4	95
C7X1.0	7 X1.0	7	1.0	8.1	122
C7G1.0	7 G1.0	7	1.0	8.1	122
C9X1.0	9 X1.0	9	1.0	10.1	163
C9G1.0	9 G1.0	9	1.0	10.1	163
C10X1.0	10 X1.0	10	1.0	10.5	180
C10G1.0	10 G1.0	10	1.0	10.5	180
C12X1.0	12 X1.0	12	1.0	10.9	208
C12G1.0	12 G1.0	12	1.0	10.9	208
C14X1.0	14 X1.0	14	1.0	11.5	239
C14G1.0	14 G1.0	14	1.0	11.5	239
C16X1.0	16 X1.0	16	1.0	12.3	271
C16G1.0	16 G1.0	16	1.0	12.3	271
C18X1.0	18 X1.0	18	1.0	13.0	306
C18G1.0	18 G1.0	18	1.0	13.0	306
C20X1.0	20 X1.0	20	1.0	13.8	340
C20G1.0	20 G1.0	20	1.0	13.8	340
C2X1.5	2 X1.5	2	1.5	6.2	58
C3X1.5	3 X1.5	3	1.5	6.6	75
C3G1.5	3 G1.5	3	1.5	6.6	75
C4X1.5	4 X1.5	4	1.5	7.3	96
C4G1.5	4 G1.5	4	1.5	7.3	96
C5X1.5	5 X1.5	5	1.5	8.1	119
C5G1.5	5 G1.5	5	1.5	8.1	119
C7X1.5	7 X1.5	7	1.5	8.9	154
C7G1.5	7 G1.5	7	1.5	8.9	154
C9X1.5	9 X1.5	9	1.5	11.0	204
C9G1.5	9 G1.5	9	1.5	11.0	204
C10X1.5	10 X1.5	10	1.5	11.6	226
C10G1.5	10 G1.5	10	1.5	11.6	226
C12X1.5	12 X1.5	12	1.5	12.0	261
C12G1.5	12 G1.5	12	1.5	12.0	261
C14X1.5	14 X1.5	14	1.5	12.7	300
C14G1.5	14 G1.5	14	1.5	12.7	300
C16X1.5	16 X1.5	16	1.5	13.4	342
C16G1.5	16 G1.5	16	1.5	13.4	342
C18X1.5	18 X1.5	18	1.5	14.3	385
C18G1.5	18 G1.5	18	1.5	14.3	385
C20X1.5	20 X1.5	20	1.5	15.1	429
C20G1.5	20 G1.5	20	1.5	15.1	429
C2X2.5	2 X2.5	2	2.5	9.1	114

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Part Code	Cable Description	No. Of Cores	Nom. Conductor Size (mm²)	Nom. Cable Diameter (mm)	Nom. Cable Weight (kg/km)
C3X2.5	3 X2.5	3	2.5	9.8	147
C3G2.5	3 G2.5	3	2.5	9.8	147
C4X2.5	4 X2.5	4	2.5	10.9	189
C4G2.5	4 G2.5	4	2.5	10.9	189
C5X2.5	5 X2.5	5	2.5	12.0	234
C5G2.5	5 G2.5	5	2.5	12.0	234
C7X2.5	7 X2.5	7	2.5	13.3	301
C7G2.5	7 G2.5	7	2.5	13.3	301
C9X2.5	9 X2.5	9	2.5	16.6	401
C9G2.5	9 G2.5	9	2.5	16.6	401
C10X2.5	10 X2.5	10	2.5	17.4	447
C10G2.5	10 G2.5	10	2.5	17.4	447
C12X2.5	12 X2.5	12	2.5	18.1	516
C12G2.5	12 G2.5	12	2.5	18.1	516
C14X2.5	14 X2.5	14	2.5	19.1	594
C14G2.5	14 G2.5	14	2.5	19.1	594
C16X2.5	16 X2.5	16	2.5	20.3	677
C16G2.5	16 G2.5	16	2.5	20.3	677
C18X2.5	18 X2.5	18	2.5	21.6	764
C18G2.5	18 G2.5	18	2.5	21.6	764
C20X2.5	20 X2.5	20	2.5	22.9	852
C20G2.5	20 G2.5	20	2.5	22.9	852
C2X4	2 X4	2	4	10.5	165
C3X4	3 X4	3	4	11.3	216
C3G4	3 G4	3	4	11.3	216
C4X4	4 X4	4	4	12.6	278
C4G4	4 G4	4	4	12.6	278
C5X4	5 X4	5	4	13.9	346
C5G4	5 G4	5	4	13.9	346
C7X4	7 X4	7	4	15.4	450
C7G4	7 G4	7	4	15.4	450
C9X4	9 X4	9	4	19.3	597
C9G4	9 G4	9	4	19.3	597
C10X4	10 X4	10	4	20.2	667
C10G4	10 G4	10	4	20.2	667
C12X4	12 X4	12	4	21.0	772
C12G4	12 G4	12	4	21.0	772
C2X6	2 X6	2	6	11.9	224
C3X6	3 X6	3	6	12.8	297
C3G6	3 G6	3	6	12.8	297
C4X6	4 X6	4	6	14.2	384
C4G6	4 G6	4	6	14.2	384
C5X6	5 X6	5	6	15.8	478
C5G6	5 G6	5	6	15.8	478
C7X6	7 X6	7	6	17.4	625
C7G6	7 G6	7	6	17.4	625
C9X6	9 X6	9	6	21.9	828

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Part Code	Cable Description	No. Of Cores	Nom. Conductor Size (mm²)	Nom. Cable Diameter (mm)	Nom. Cable Weight (kg/km)
C9G6	9 G6	9	6	21.9	828
C2X10	2 X10	2	10	14.3	335
C3X10	3 X10	3	10	15.3	447
C3G10	3 G10	3	10	15.3	447
C4X10	4 X10	4	10	17.1	580
C4G10	4 G10	4	10	17.1	580
C5X10	5 X10	5	10	19.0	723
C5G10	5 G10	5	10	19.0	723
C7X10	7 X10	7	10	21.0	950
C7G10	7 G10	7	10	21.0	950
C9X10	9 X10	9	10	26.4	1256
C9G10	9 G10	9	10	26.4	1256
C2X16	2 X16	2	16	18.2	547
C3X16	3 X16	3	16	19.6	730
C3G16	3 G16	3	16	19.6	730
C4X16	4 X16	4	16	21.9	949
C4G16	4 G16	4	16	21.9	949
C5X16	5 X16	5	16	24.3	1186
C5G16	5 G16	5	16	24.3	1186
C7X16	7 X16	7	16	26.9	1559
C7G16	7 G16	7	16	26.9	1559
C2X25	2 X25	2	25	20.8	776
C3X25	3 X25	3	25	22.3	1048
C3G25	3 G25	3	25	22.3	1048
C4X25	4 X25	4	25	24.9	1367
C4G25	4 G25	4	25	24.9	1367
C5X25	5 X25	5	25	27.7	1709
C5G25	5 G25	5	25	27.7	1709
C2X35	2 X35	2	35	24.0	1022
C3X35	3 X35	3	35	25.9	1378
C3G35	3 G35	3	35	25.9	1378

Sheath / Jacket Colour

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

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.

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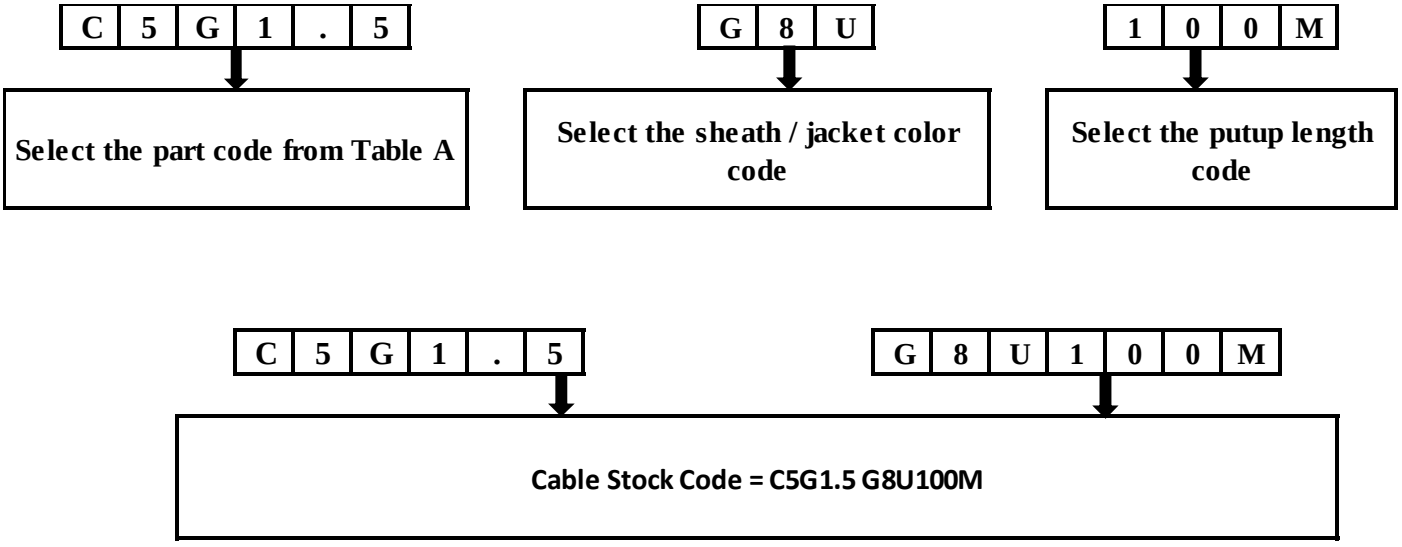
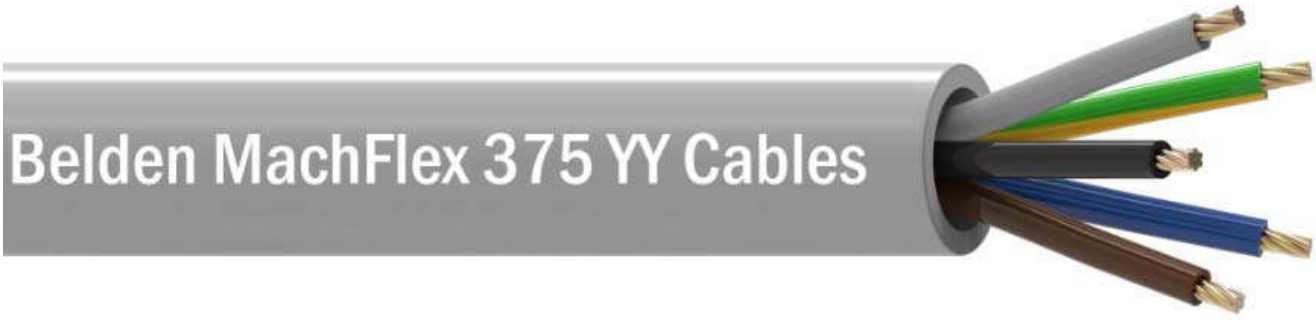
Put-up Length

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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