

Controlflex® “YCY-JZ” Transparent PVC Sheath

PVC Insulated, PVC inner bedding, tinned copper wire screened, PVC transparent sheath 300/500V 80°C



Application

These flexible cables are designed for industrial control and instrumentation circuits and interconnections between mobile and fixed equipment. Incorporates a collective tinned copper wire braid screen for electrical protection and inner PVC bedding for better mechanical protection. Cables are not recommended for applications where cable is likely to be subjected to repetitive flexing and/or twisting e.g. robotics, reeling drum, cranes etc. Details on dynamic types available on request

Specifications

- Generally in accordance with BS6500 and VDE0250.
- **Conductors:** Flexible (Class 5) copper conductors to BS EN 60228.
- **Insulation:** PVC insulation TI.2 to BS EN 50363-3, Type YI.2 to DIN VDE 0207 Pt 4.
- **Core Identification:** cores will be number printed, in a contrasting colour, on black PVC insulation. All cables of three core and above will incorporate a green/yellow earth core in the outer layer.
- PVC inner bedding in grey.
- Tinned copper wire braid screen 70% coverage.
- Transparent PVC sheath Type TM.2 to BS EN 50363-4-1, Type YM.2 to DIN VDE 0207 Pt 5.
- Flame retardant to BS EN 60332-1-2 & IEC 60332-1.
- **Voltage Rating:** 300/500V.
- **Temperature Rating:** flexible -5°C to +80°C, static -30°C to +80°C.

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Anixter Number	Number of Cores	Nominal Conductor Size	Nominal Number and Size of Wires	Nominal O/D	Approx Cable Weight
		mm ²	#/mm	mm	kg/km
A4AM-C003-13	3	1.0	32/0.20	7.6	90
A4AM-C004-13	4	1.0	32/0.20	8.1	106
A4AM-C005-13	5	1.0	32/0.20	8.7	121
A4AM-C007-13	7	1.0	32/0.20	9.3	144
A4AM-C012-13	12	1.0	32/0.20	11.7	225
A4AM-C025-13	25	1.0	32/0.20	16.6	455
A4AN-C003-13	3	1.5	30/0.25	8.3	112
A4AN-C004-13	4	1.5	30/0.25	9.1	133
A4AN-C005-13	5	1.5	30/0.25	9.7	148
A4AN-C007-13	7	1.5	30/0.25	10.2	183
A4AN-C012-13	12	1.5	30/0.25	13.3	295
A4AN-C025-13	25	1.5	30/0.25	18.6	599
A4AO-C003-13	3	2.5	50/0.25	9.5	158
A4AO-C004-13	4	2.5	50/0.25	10.3	191
A4AO-C005-13	5	2.5	50/0.25	11.5	213
A4AO-C007-13	7	2.5	50/0.25	12.3	274
A4AO-C012-13	12	2.5	50/0.25	13.3	530
A4AOA-C003-13	3	4.0	56/0.30	10.7	218
A4AOA-C004-13	4	4.0	56/0.30	12.2	274
A4AOA-C005-13	5	4.0	56/0.30	12.7	317
A4AOB-C004-13	4	6.0	84/0.30	14.0	378
A4AOB-C005-13	5	6.0	84/0.30	16.4	493

Technical Information for Controflex®

CURRENT RATINGS

30°C ambient air temperature

Nominal Conductor Area	Current Ratings	
	Single Phase a.c. or d.c.	Three Phase a.c.
mm ²	A	A
0.5	3	3
0.75	6	6
1.0	10	10
1.5	16	16
2.5	25	20
4.0	32	25
6.0	51	43
10	70	60
16	94	80
25	119	101
35	148	126
50	180	153
70	232	196
95	282	238

The above ratings are based on cable in FREE air, in an ambient air temperature of 30°C. For ambient air temperatures other than 30°C the following rating factors should be applied:

Ratings for cables up to and including 4mm² are based on 60°C conductor operating temperature with 6mm² and above based on 70°C operating temperature.

Cables up to and including 4mm² (Assuming 60°C conductor temperature)

Ambient air temp °C	35	40	45	50	55
Rating factor	0.91	0.82	0.71	0.58	0.41

Cables 6mm² and above (Assuming 70°C conductor temperature)

Ambient air temp °C	35	40	45	50	55	60
Rating factor	0.94	0.87	0.79	0.71	0.61	0.50

Technical Information for Controlflex®

VOLTAGE DROP

60°C* conductor operating temperature

Nominal Conductor Area	Voltage Drop					
	Single Phase a.c. or d.c.			Three Phase a.c.		
mm ²	mV/A/m			mV/A/m		
0.5	93			80		
0.75	62			54		
1.0	46			40		
1.5	32			27		
2.5	19			16		
4.0	12			10		
6.0	7.3			6.4		
10	4.4			3.8		
16	2.8			2.4		
	r	x	z	r	x	z
25	1.75	0.170	1.75	1.50	0.145	1.50
35	1.25	0.165	1.25	1.10	0.145	1.10
50	0.93	0.165	0.94	0.80	0.140	0.81
70	0.63	0.160	0.65	0.55	0.140	0.57
95	0.47	0.155	0.50	0.41	0.135	0.43

Since cables may be used at conductor operating temperatures up to 80°C, the current ratings may be increased by the following factors:

Cable up to and including 4mm² x 1.25 cables above 6mm² x 1.10.

Ambient temperature correction factors for cables operating at 80°C conductor temperatures should be applied as follows.

Ambient air temp °C	35	40	45	50	55	60
Rating factor	0.95	0.89	0.84	0.77	0.71	0.63

For cables where four or more cores are loaded, the following rating factors should be applied:

No. of cores loaded	4	5	6	7	10	12	14	19	24	27	30	37
Rating factor	0.78	0.72	0.67	0.63	0.56	0.53	0.51	0.45	0.42	0.40	0.39	0.36

These factors need not be applied if the number of cores loaded does not exceed the square root of the total number of cores in the cable.