



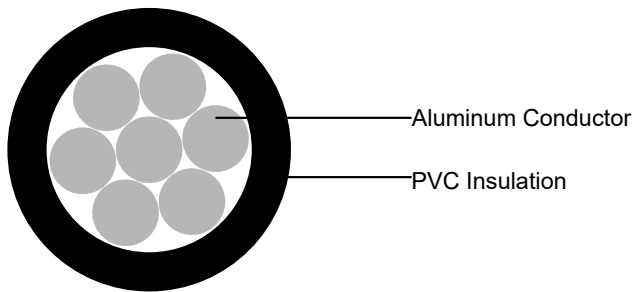
Caledonian

Aluminum Conductor Flame Retardant Power & Control Cables

www.caledonian-cables.co.uk www.addison-cables.com

450/750V Aluminum Conductor, PVC Insulated, Non-sheathed Power Cables (Single Core)

FGD100 07AV-R (AL/PVC 450/750V Class 2)



APPLICATION

This cables are mainly used in power stations, mass transit underground passenger systems, airports, petrochemical plants, hotels, hospitals, and high-rise buildings. This product type is CE and TUV approved.

STANDARDS

Basic design to BS EN 50525-2-31(formerly BS 6004:2000)

FIRE PERFORMANCE

Flame Retardance (Single Vertical Wire Test)	EN 60332-1-2
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VOLTAGE RATING

450/750V

CABLE CONSTRUCTION

Conductor: Aluminum wire, stranded according to BS EN 60228 class 2.

Insulation: PVC Type TI 1 according to BS EN 50363-3.

COLOUR CODE

Black, Blue, Brown, Grey, Orange, Pink, Red, Turquoise, Violet, White, Green and Yellow.

PHYSICAL AND THERMAL PROPERTIES

Maximum temperature range during operation (PVC): 70°C

Maximum short circuit temperature (5 Seconds): 160°C

Minimum bending radius:

Up to 8mm²: 4 x overall diameter

8mm² to 12mm²: 5 x overall diameter

Above 12mm²: 6 x overall diameter

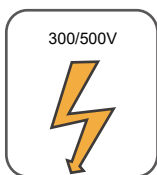
CONSTRUCTION PARAMETERS

Conductor		FGD100 07AV-R		
No. of Cores x Cross Section	Class of Conductor	Nominal Insulation Thickness	AOverall Diameter	Approx. Weight
No.xmm ²		mm	mm	kg/km
1x1.5	2	0.7	6.0	12
1x2.5	2	0.8	7.2	17
1x4.0	2	0.8	8.3	24
1x6.0	2	0.8	9.4	31
1x10	2	1.0	12.1	52
1x16	2	1.0	14.2	73
1x25	2	1.2	17.6	114
1x35	2	1.2	19.9	147
1x50	2	1.4	23.4	201
1x70	2	1.4	27.0	272
1x95	2	1.6	31.6	373
1x120	2	1.6	34.8	455
1x150	2	1.8	38.7	562
1x185	2	2.0	43.3	703
1x240	2	2.2	49.3	913
1x300	2	2.4	55.0	1137
1x400	2	2.6	61.7	1438
1x500	2	2.8	68.8	1794

ELECTRICAL PROPERTIES

Conductor Operating Temperature: 70°C

Ambient Temperature: 30°C



Rated Voltage



Standard



Flame Retardancy
EN 60332-1-2



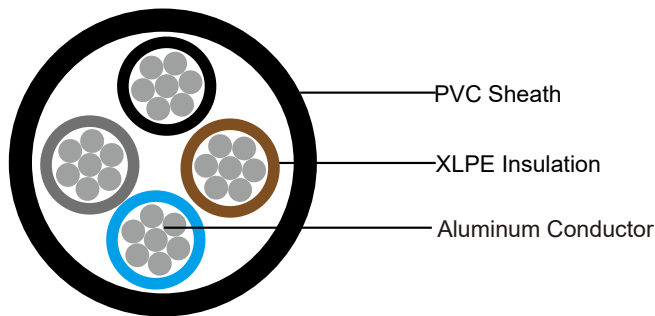
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Aluminum Conductor Flame Retardant Power & Control Cables

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600/1000V Aluminum Conductor, PVC Insulated, PVC Sheathed, Unarmoured Power Cables (2-5 Cores & Multicore)

FGD400 1AVV-R (AL/PVC/PVC 600/1000V Class 2)



APPLICATION

The cables are mainly use in fixed installations in industrial areas, buildings and similar applications but not for burial in the ground, either directly or in ducts.

STANDARDS

Basic design to IEC 60502-1



Approvals:

TUV Certification (B 098200 0031 Rev.00)

FIRE PERFORMANCE

Flame Retardance (Single Vertical Wire Test)	IEC 60332-1
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VOLTAGE RATING

600/1000V

CABLE CONSTRUCTION

Conductor: Annealed aluminum wire, stranded according to BS EN 60228 class 2.

Insulation: PVC according to IEC 60502-1.

Inner Covering Option: Extruded PVC or polymeric compound.

Outer Sheath: Extruded PVC Type ST₁/ST₂ according to IEC 60502-1.

Outer Sheath Option: UV resistance, hydrocarbon resistance, oil resistance, anti rodent and anti termite properties can be offered as option. Compliance to fire performance standard (IEC 60332-1, IEC 60332-3,

UL 1581, UL 1666 etc) depends on the oxygen index of the PVC compound and the overall cable design. LSPVC can also be provided upon request.

COLOUR CODE

Insulation Colour:

Two-core: Brown, blue

Three-core: Brown, black, grey. Alternatively, green-and-yellow, blue, brown

Four-core: Blue, brown, black, grey. Alternatively, green-and-yellow, brown, black, grey

Five-core: Green-and-yellow, blue, brown, black, grey

Note: Depending on their intended use, the cables might be subject to the core colour requirements specified in BS 7671 or other standards, or in statutory requirements.

Sheath Colour: Black, other colours can be offered upon request

PHYSICAL AND THERMAL PROPERTIES

Maximum temperature range during operation (PVC): 70°C

Maximum short circuit temperature (5 Seconds):

Conductor cross-section $\leq 300 \text{ mm}^2$: 160°C

Conductor cross-section $> 300 \text{ mm}^2$: 140°C

Minimum bending radius: 12 x Overall Diameter

CONSTRUCTION PARAMETERS

Conductor		FGD400 1AVV-R			
No. of Cores x Cross Section	Class of Conductor	Nominal Insulation Thickness	Nominal Sheath Thickness	Approx. Overall Diameter	Approx. Weight
No. x mm ²		mm	mm	mm	kg/km
2 Cores					
2x1.5	2	0.8	1.8	10.0	94
2x2.5	2	0.8	1.8	10.8	110
2x4.0	2	1.0	1.8	12.7	146
2x6.0	2	1.0	1.8	13.8	172
2x10	2	1.0	1.8	15.7	219
2x16	2	1.0	1.8	17.8	279
2x25	2	1.2	1.8	21.2	388
2x35	2	1.2	1.8	23.5	475
2x50	2	1.4	1.8	27.0	610
2x70	2	1.4	1.9	30.8	796
2x95	2	1.6	2.0	35.6	1055
2x120	2	1.6	2.1	39.0	1267
2x150	2	1.8	2.2	43.1	1538
2x185	2	2.0	2.4	48.1	1911
2x240	2	2.2	2.5	54.3	2423
2x300	2	2.4	2.7	60.4	2992
2x400	2	2.6	2.9	67.5	3739
3 Cores					



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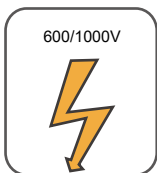
Conductor		FGD400 1AVV-R			
No. of Cores x Cross Section	Class of Conductor	Nominal Insulation Thickness	Nominal Sheath Thickness	Approx. Overall Diameter	Approx. Weight
No.xmm ²		mm	mm	mm	kg/km
3x1.5	2	0.8	1.8	10.5	112
3x2.5	2	0.8	1.8	11.4	132
3x4.0	2	1.0	1.8	13.4	180
3x6.0	2	1.0	1.8	14.6	215
3x10	2	1.0	1.8	16.6	279
3x16	2	1.0	1.8	18.9	362
3x25	2	1.2	1.8	22.6	513
3x35	2	1.2	1.8	25.1	635
3x50	2	1.4	1.8	28.8	825
3x70	2	1.4	1.9	32.9	1086
3x95	2	1.6	2.1	38.2	1468
3x120	2	1.6	2.2	41.9	1768
3x150	2	1.8	2.3	46.3	2151
3x185	2	2.0	2.5	51.6	2674
3x240	2	2.2	2.7	58.5	3434
3x300	2	2.4	2.8	64.8	4211
3x400	2	2.6	3.1	72.7	5307
4 Cores					
4x1.5	2	0.8	1.8	11.3	132
4x2.5	2	0.8	1.8	12.3	157
4x4.0	2	1.0	1.8	14.6	217
4x6.0	2	1.0	1.8	16.0	262
4x10	2	1.0	1.8	18.2	343
4x16	2	1.0	1.8	21.7	486
4x25	2	1.2	1.8	24.9	646
4x35	2	1.2	1.8	28.6	850
4x50	2	1.4	1.9	32.0	1066
4x70	2	1.4	2.0	36.6	1405
4x95	2	1.6	2.2	42.5	1900
4x120	2	1.6	2.3	46.6	2290
4x150	2	1.8	2.5	51.7	2813
4x185	2	2.0	2.6	57.4	3468
4x240	2	2.2	2.9	65.3	4487
4x300	2	2.4	3.1	72.5	5541
4x400	2	2.6	3.3	81.1	6934
Multicores					
5x1.5	2	0.8	1.8	12.2	154
7x1.5	2	0.8	1.8	13.2	189
10x1.5	2	0.8	1.8	16.4	257
12x1.5	2	0.8	1.8	16.9	288
14x1.5	2	0.8	1.8	17.7	322
19x1.5	2	0.8	1.8	19.6	405
21x1.5	2	0.8	1.8	20.5	440
24x1.5	2	0.8	1.8	22.7	500

Conductor		FGD400 1AVV-R			
No. of Cores x Cross Section	Class of Conductor	Nominal Insulation Thickness	Nominal Sheath Thickness	Approx. Overall Diameter	Approx. Weight
No.xmm ²		mm	mm	mm	kg/km
30x1.5	2	0.8	1.8	24.1	592
40x1.5	2	0.8	1.8	26.9	751
48x1.5	2	0.8	1.9	29.8	896
61x1.5	2	0.8	1.9	32.5	1097
5x2.5	2	0.8	1.8	13.3	185
7x2.5	2	0.8	1.8	14.4	230
10x2.5	2	0.8	1.8	18.0	313
12x2.5	2	0.8	1.8	18.6	353
14x2.5	2	0.8	1.8	19.5	397
19x2.5	2	0.8	1.8	21.7	504
21x2.5	2	0.8	1.8	22.7	548
24x2.5	2	0.8	1.8	25.3	623
30x2.5	2	0.8	1.8	26.8	742
40x2.5	2	0.8	2.0	30.4	975
48x2.5	2	0.8	2.0	33.4	1146
61x2.5	2	0.8	2.1	36.7	1423

ELECTRICAL PROPERTIES

Conductor Operating Temperature: 70°C

Ambient Temperature: 30°C



Rated Voltage



Standard



Flame Retardancy
IEC60332-1