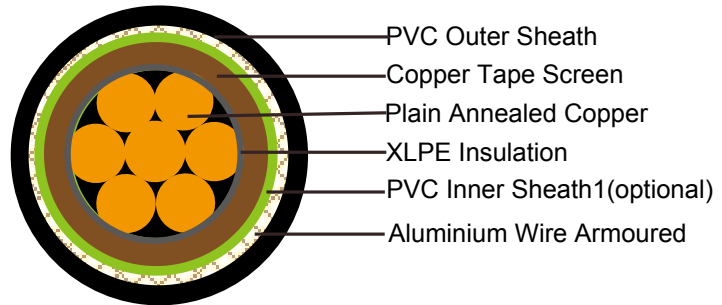




600/1000V XLPE Insulated, PVC Sheathed, Armoured Power Cables (Single Core)

FGD300 1RCVMV-R (CU/XLPE/CUTO/PVC/AWA/PVC 600/1000V Class 2)



APPLICATION

This range of screened cables drastically reduce interferences from electrical noise, especially in Variable Speed Drive (VSD) applications and are manufactured with fixed conductors.

STANDARDS

Basic design adapted to IEC 60502-1

FIRE PERFORMANCE

Flame Retardance (Single Vertical Wire Test)**	EN 60332-1-2; IEC 60332-1-2; BS EN 60332-1-2; VDE 0482-332-1 ; NBN C 30-004 (cat. F1); NF C32-070-2.1(C2); CEI 20-35/1-2; EN 50265-2-1*; DIN VDE 0482-265-2-1*
Reduced Fire Propagation (Vertically-mounted bundled wires & cable test)**	EN 60332-3-24 (cat. C); IEC 60332-3-24; BS EN 60332-3-24; VDE 0482-332-3; NBN C 30-004 (cat. F2); NF C32-070-2.2(C1); CEI 20-22/3-4; EN 50266-2-4*; DIN VDE 0482-266-2-4

Note: Asterisk ** denotes that the standard compliance is optional, depending on the oxygen index of the PVC compound and the cable design.

VOLTAGE RATING

600/1000V

CABLE CONSTRUCTION

Conductor: Plain annealed copper wire, stranded according to IEC(EN) 60228 class 2.

Insulation: Extruded cross-linked XLPE compound.

Overall Screen: Copper Tape

Inner sheath: PVC Compound

Armouring: Aluminium Wire

Outer Sheath: Thermoplastic PVC compound. 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 as per BS7671

	With Earth Conductor	Without Earth Conductor
2Cores	-	Brown, Blue
3Cores	Yellow/Green, Brown, Blue	Brown, Gray, Black
4Cores	Yellow/Green, Brown, Gray, Black	Brown, Gray, Black, Blue
5Cores	Yellow/Green, Brown, Gray, Black, Blue	Brown, Gray, Black, Blue, Black
Above 5 Cores	Yellow/Green, Black Numbered	Black Numbered

Sheath Colour: Black (other colors upon request)

PHYSICAL AND THERMAL PROPERTIES

Maximum conductor temperature: Max 90°C for XLPE

Minimum bending radius: 12 x Overall Diameter (for 70mm² to 1000mm²)

CONSTRUCTION PARAMETERS

Conductor		FGD300 1RCVMV-R						
No. of Core X Cross Section	No./ Nominal Diameter of Strands	Nominal Insulation Thickness	Nominal Sheath Thickness	Diameter Under Screen	Diameter Over Inner Sheath	Armour Wire Diameter	Nominal Overall Diameter	Approx. Weight
mm ²	No./mm	mm	mm	mm	mm	mm	mm	kg/km
1x70	19/2.14	1.1	1.8	15.2	17.6	20.1	23.9	1400
1x95	19/2.52	1.1	1.8	17.1	19.5	22.0	25.8	1700
1x120	37/2.03	1.2	1.8	19.0	20.8	24.0	27.8	2000
1x150	37/2.25	1.4	1.8	21.0	22.8	26.0	29.8	2400
1x185	37/2.52	1.6	1.8	23.2	25.0	28.2	32.0	2800
1x240	61/2.25	1.7	1.9	26.1	27.9	31.1	35.1	3500
1x300	61/2.52	1.8	2.0	28.7	30.5	33.7	37.9	4200
1x400	61/2.85	2.0	2.1	32.5	34.3	38.3	42.7	5400
1x500	61/3.20	2.2	2.2	36.0	37.8	41.8	46.4	6500
1x630	127/2.52	2.4	2.3	40.4	42.2	46.2	51.0	8200
1x800	127/2.85	2.6	2.5	45.5	47.3	52.3	57.5	10400
1x1000	127/3.20	2.8	2.7	50.4	52.2	57.2	62.4	13000



ELECTRICAL PROPERTIES

Conductor Operating Temperature : 90°C

Ambient Temperature : 30°C

Current-Carrying Capacities (Amp)

Conductor cross-sectional area	Reference Method 1 (clipped direct)		Reference Method 11 (on a perforated horizontal cable tray or Reference Method 13 [free air])		Reference Method 12 (free air)	In single-way ducts		Laid direct in ground	
	2 cables, single-phase a.c. or d.c.	3 or 4 cables, 3-phase a.c.	2 cables, single-phase a.c. or d.c.	3 or 4 cables, 3-phase a.c.	3 cables 3-phase a.c. trefoil touching	2 cables, single-phase a.c. or d.c.	3 or 4 cables, 3-phase a.c.	2 cables, single-phase a.c. or d.c.	3 or 4 cables, 3-phase a.c.
1	2	3	4	5	6	7	8	9	10
mm ²	A	A	A	A	A	A	A	A	A
70	303	277	322	293	285	310	280	340	290
95	367	333	389	352	346	365	330	405	345
120	425	383	449	405	402	410	370	460	389
150	488	437	516	462	463	445	405	510	435
185	557	496	587	524	529	485	440	580	490
240	656	579	689	612	625	550	500	670	560
300	755	662	792	700	720	610	550	750	630
400	853	717	899	767	815	640	580	830	700
500	962	791	1016	851	918	690	620	910	770
630	1082	861	1146	935	1027	750	670	1000	840
800	1170	904	1246	987	1119	828	735	1117	931
1000	1261	961	1345	1055	1214	919	811	1254	1038

Voltage Drop (Per Amp Per Meter)

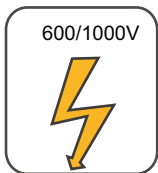
Conductor cross-sectional area	2 cables d.c.	2 cables single-phase a.c.			3 or 4 cables three-phase a.c.						2 cables singlephase a.c.		3 or 4 cables, 3-phase a.c. touching	
		Reference Method 1 & 11 (touching)			Reference Method 1, 11 & 12 (in trefoil touching)			Reference Method 1 & 11 (Flat touching)			In ducts	In ground	In ducts	In ground
1	2	3			4			5			6	7	8	9
mm ²	mV/A/m	mV/A/m			mV/A/m			mV/A/m			mV/A/m	mV/A/m	mV/A/m	mV/A/m
		r	x	z	r	x	z	r	x	z				
70	0.67	0.68	0.20	0.71	0.59	0.17	0.62	0.6	0.25	0.65	0.80	0.70	0.70	0.61
95	0.49	0.51	0.195	0.55	0.44	0.17	0.47	0.46	0.24	0.52	0.65	0.53	0.56	0.46
120	0.39	0.41	0.190	0.45	0.35	0.165	0.39	0.38	0.24	0.44	0.55	0.43	0.48	0.37
150	0.31	0.33	0.185	0.38	0.29	0.160	0.33	0.31	0.23	0.39	0.50	0.37	0.43	0.32
185	0.25	0.27	0.185	0.33	0.23	0.160	0.28	0.26	0.23	0.34	0.45	0.31	0.39	0.27
240	0.195	0.21	0.180	0.28	0.18	0.155	0.24	0.21	0.22	0.30	0.40	0.26	0.35	0.23
300	0.155	0.17	0.175	0.25	0.145	0.150	0.21	0.17	0.22	0.28	0.37	0.24	0.32	0.21
400	0.115	0.145	0.170	0.22	0.125	0.150	0.195	0.160	0.21	0.27	0.35	0.21	0.30	0.19
500	0.093	0.125	0.170	0.21	0.105	0.145	0.180	0.145	0.20	0.25	0.33	0.20	0.28	0.18
630	0.073	0.105	0.165	0.195	0.092	0.145	0.170	0.135	0.195	0.24	0.30	0.19	0.26	0.17
800	0.056	0.090	0.160	0.190	0.086	0.140	0.165	0.130	0.180	0.23	0.28	0.18	0.24	0.16
1000	0.045	0.092	0.155	0.180	0.080	0.135	0.155	0.125	0.170	0.21	0.26	0.17	0.22	0.15

Note :

r = conductor resistance at operating temperature

x = reactance

z = impedance



Rated Voltage



Standard



Flame Retardancy**
NF C32-070-2.1(C2)
IEC60332-1-2/EN50265-2-1



Reduced Fire Propagation**
NF C32-070-2.2(C1)
IEC60332-3-24/EN50266-2-4