ENERGY CABLES

MV Paper Lead

19/33kV,

3C, Aluminium (Screened)

APPLICATION		
In urban networks for primary supply to underground residential distribution substations. Main feeders to commercial and industrial projects. The lead sheath provides an earth fault capacity adequate for many installations although it is fixed, and usually less than the equivalent XLPE copper wire screened cable. Each core is screened with metallised paper to distribute electrical stresses evenly through the paper insulation.	STANDARD	AS/NZS 1026
	VOLTAGE	19000/33000V
	CONDUCTOR	Shaped Compacted Annealed Aluminium
	CONDUCTOR SCREEN	Semi-conducting paper tape
	INSULATION	Mass Impregnated (Non Draining) Paper
	CORE SCREEN	Metallized Paper tape
	METALLIC SHEATH	Extruded lead alloy E
	SHEATH	PVC 5V-90 or Polyethylene
	MAX. OPERATING TEMP.	65 °C

TECHNICAL SPECIFICATIONS

CONDUCTOR		OVERALL DIAMETER		APPROX. MASS PVC	MINIMUM BENDING RADIUS	
mm^2	NO. OF STRANDS	MINIMUM mm	MAXIMUM mm	kg/km	INSTALLED mm	DURING INSTALLATION mm
50	19 strands	56.9	58.5	8100	880	1470
70	19 strands	59.7	61.4	8900	930	1540
95	19 strands	62.5	64.2	9700	970	1610
120	19 strands	65.4	67.2	10700	1010	1680
150	19 strands	67.2	69.1	11300	1040	1730
185	37 strands	70.6	72.4	12600	1090	1810
240	37 strands	75.0	76.9	14200	1160	1930
300	37 strands	79.9	81.8	15800	1230	2050

Lengths and packing can be supplied to customer's requirements.
For glanding details, contact your local service centre.
Bending radii to AS/NZS 4026

GENERAL CABLE AUSTRALIA PTY LTD
Level 1, 591-595 Blackburn Road
Notting Hill VIC 3168
Locked Bag 220, Clayton VIC 3168, Australia
Phone: 1300 363 282
FAX: 1300 363 382
EMAIL: sales@generalcable.com.au

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TECHNICAL SPECIFICATIONS - Continued

NOMINAL AREA mm²	CURRENT RATING (a)		ELECTRICAL CHARACTERISTICS						
	Buried Direct A	Buried In Ducts A	Max. DC Resistance @ 20°C ohm/km	Max. AC Resistance @ 65°C ohm/km	Inductance mH/km	Equivalent Star Reactance ohm/km	Capacitance µF/km	3 Phase Voltage Drop mV/A.m	1 Sec Fault Rating (b) 3 Phase Symmetrical kA
50	115	105	0.641	0.757	0.401	0.126	0.229	1.330	3.9
70	145	130	0.443	0.524	0.348	0.109	0.278	0.926	5.5
95	175	150	0.320	0.378	0.329	0.103	0.308	0.679	7.5
120	200	175	0.253	0.299	0.313	0.098	0.344	0.546	9.4
150	225	195	0.206	0.244	0.300	0.094	0.382	0.453	11.8
185	255	220	0.164	0.194	0.290	0.091	0.416	0.372	14.5
240	295	255	0.125	0.149	0.279	0.088	0.462	0.299	18.8
300	330	290	0.100	0.119	0.271	0.085	0.504	0.254	23.5

(a) Based on 65°C maximum conductor temperature, burial depth of 0.8m, soil temperature of 25°C and thermal resistivity of 1.2°Cm/W.
(b) For fault durations other than one second, divide the appropriate given value by the square root of the required time (in seconds).
(c) Based on a duct size of 150mm internal diameter.
Conductor fault ratings are based on an initial temperature of 65°C and a final temperature of 160°C.

CONDUCTOR			LEAD ALLOY SHEATH				
NOMINAL AREA mm²	NOMINAL DIAMETER mm	MIN. INSULATION BETWEEN CONDUCTOR AND SHEATH mm	MINIMUM THICKNESS mm	DIAMETER OVER SHEATH MINIMUM mm	DIAMETER OVER SHEATH MAXIMUM mm	NOMINAL AREA mm²	1 SEC FAULT RATING (c) kA
50	7.0	7.3	2.2	52.7	53.9	369	11.2
70	8.1	7.3	2.3	55.3	56.6	412	12.5
95	9.7	7.1	2.4	57.9	59.2	440	13.3
120	10.8	7.1	2.5	60.6	61.9	479	14.5
150	12.1	6.8	2.6	62.2	63.6	520	15.8
185	13.5	6.8	2.7	65.4	66.7	556	16.9
240	15.4	6.8	2.8	69.6	70.9	613	18.6
300	17.6	6.8	2.9	74.3	75.7	689	20.9

(c) For fault durations other than one second, divide the appropriate given value by the square root of the required time (in seconds).
Sheath fault ratings are based on an initial temperature of 55°C and a final temperature of 250°C.

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