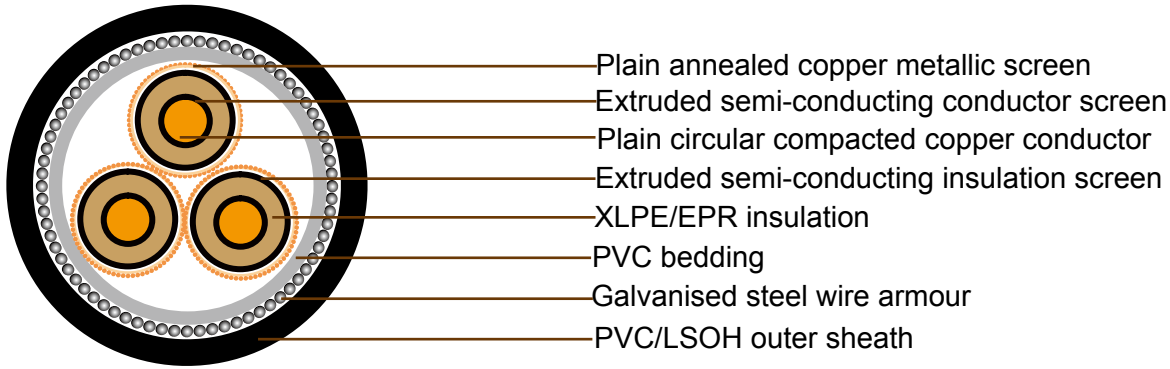
6.35/11kV Three Core Individual Screened & PVC/SWA/PVC Sheathed (Cu Conductor)

Application

These cables are designed to be used for the supply of electrical energy in fixed applications up to the rated voltages at a nominal power frequency between 49Hz and 61Hz., they are suitable for use in distribution installation, electrical power station , they are applied for installation, outdoors, underground where subject to mechanical damage.



Standard

AS/NZS 1429.1

Cable Construction

CONDUCTOR: Plain circular compacted copper to AS/NZS1125
Maximum Continuous Operating Temperature: 90°C

CONDUCTOR SCREEN: Extruded semi-conducting compound, bonded to the insulation and applied in the same operation as the insulation

INSULATION: Cross Linked Polyethylene (XLPE) – standard
Ethylene Propylene Rubber (EPR) – alternative

INSULATION SCREEN: Extruded semi-conducting compound

METALLIC SCREEN: Plain annealed copper wire: 10kA for nominal 1 second(HEAVY DUTY)

BEDDING: PVC

ARMOURING: Galvanised steel wires

SHEATH: Black 5V-90 polyvinyl chloride (PVC) – standard
Orange 5V-90 PVC inner plus black high density polyethylene (HDPE) outer – alternative
Low smoke zero halogen (LSOH) – alternative

Technical Characteristics

Nominal conductor area	Maximum Conductor DC resistance at 20°C	Cond. AC resistance at 50Hz and 90°C	Inductive reactance at 50Hz	Insulation resistance at 20°C	Conductor to screen capacitance	Charging current per phase	Dielectric loss per phrase	Maximum diaelectric stress	Screen DC resistance at 20°C	Armour DC resistance at 20°C	Zero sequence resistance at 20°C	Zero seq. react. at 50Hz
mm^2	Ohm/km	Ohm/km	Ohm/km	MegOhm. km	µF x km	A x km	W x km	kV x mm	Ohm/km	Ohm/km	Ohm/km	Ohm/km
16	1.15	1.47	0.142	14000	0.177	0.354	8.98	2.77	1.06	0.77	2.49	0.0922
25	0.727	0.927	0.134	12000	0.198	0.394	10	2.65	0.707	0.629	1.73	0.0845
35	0.524	0.668	0.127	11000	0.219	0.436	11.1	2.55	0.53	0.592	1.36	0.0782
50	0.387	0.494	0.121	10000	0.242	0.484	12.3	2.46	0.366	0.559	1.05	0.0725
70	0.268	0.342	0.115	8800	0.275	0.549	13.9	2.37	0.265	0.521	0.795	0.0663
95	0.193	0.247	0.106	7700	0.314	0.626	15.9	2.3	0.265	0.479	0.706	0.058
120	0.153	0.196	0.102	7000	0.346	0.689	17.5	2.25	0.265	0.451	0.655	0.0543
150	0.124	0.16	0.099	6400	0.374	0.747	19	2.21	0.266	0.425	0.616	0.0515
185	0.0991	0.128	0.0961	5900	0.407	0.811	20.6	2.17	0.265	0.403	0.58	0.0488
240	0.0754	0.0985	0.0926	5300	0.456	0.909	23.1	2.13	0.266	0.293	0.495	0.0455
300	0.0601	0.0796	0.0904	4800	0.503	1	25.5	2.1	0.265	0.272	0.464	0.0434
400	0.047	0.0638	0.087	4300	0.561	1.12	28.5	2.07	0.265	0.25	0.435	0.0403
500	0.0373	0.0525	0.0847	3900	0.62	1.24	31.4	2.05	0.265	0.232	0.411	0.0381

Cable Parameter

Sectional Area of Conductor	Nom. Conductor Diameter	Nom. Insulation Thickness	Nom. Diamete Over insulation	Screen Area on cores	No. and Diamter of Screened Wires	Nom. Diamete Over Screened Wires	Nom. Diamete Over Bedding	Nom. Diamete of Armour	Nom. Diamete Over Armour	Nom. Overall Diameter	Approx. mass
mm^2	mm	mm	mm	mm^2	no x mm	mm	mm	mm	mm	mm	kg/100m
16	4.8	3.4	12.8	17	10 x 0.85	16.1	37.9	2	41.9	46.9	330
25	5.8	3.4	13.8	25.5	15 x 0.85	17.1	40.2	2.5	45.2	50.4	430
35	6.8	3.4	14.8	34	20 x 0.85	18.1	42.6	2.5	47.6	53	490
50	8	3.4	16	49.4	29 x 0.85	19.3	45.1	2.5	50.1	55.7	565
70	9.6	3.4	17.6	68.1	40 x 0.85	20.9	48.8	2.5	53.8	59.6	680
95	11.5	3.4	19.4	68.1	40 x 0.85	22.7	53	2.5	58	64.1	795
120	13.1	3.4	21	68.1	40 x 0.85	24.3	56.4	2.5	61.4	67.9	910
150	14.5	3.4	22.4	68.1	40 x 0.85	25.7	59.9	2.5	64.9	71.5	1020
185	16.1	3.4	24.1	68.1	40 x 0.85	27.4	63.3	2.5	68.3	75.2	1150
240	18.5	3.4	26.5	68.1	40 x 0.85	29.8	68.8	3.15	75.1	82.3	1470
300	20.7	3.4	28.9	68.1	40 x 0.85	32.2	74.1	3.15	80.4	88	1710
400	23.6	3.4	31.8	68.1	40 x 0.85	35.3	81.2	3.15	87.5	95.5	2070
500	26.5	3.4	34.7	68.1	40 x 0.85	38.2	87.6	3.15	93.9	102.4	2450