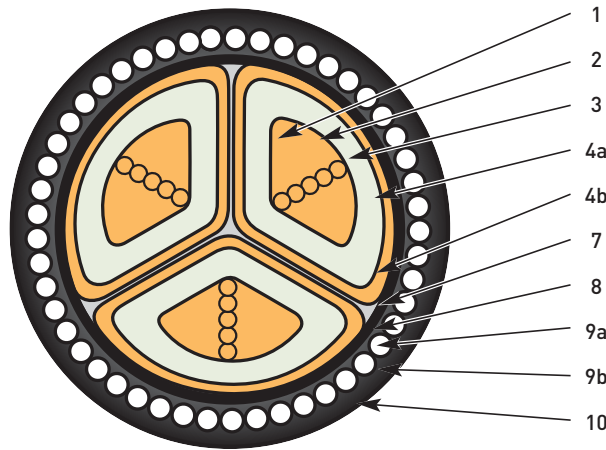




XLPE Insulated, Wire Armoured and PVC Sheathed Power Cables

3800/6600 volt in accordance with BCS 656 Part 1.

To provide distribution of power in coal mines, both on the surface and underground.

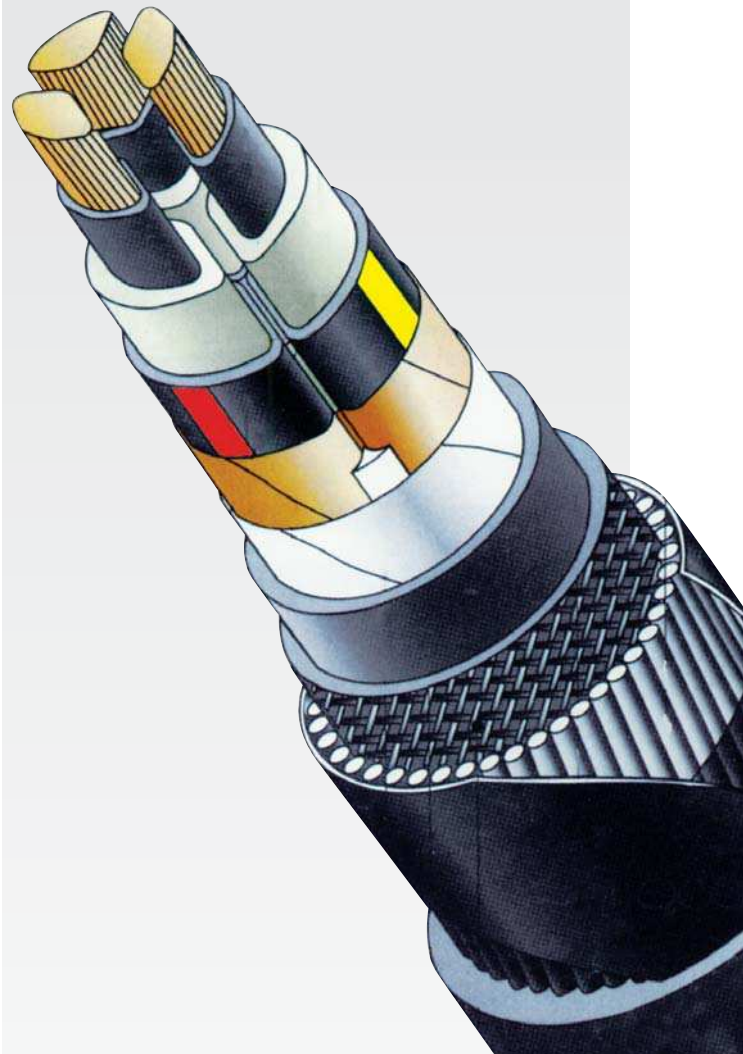


Item	Description	Details
1	Phase conductor	PAC conductors
2	Phase insulation	Extruded semi-con. XLPE
3	Phase insulation	Extruded natural XLPE
4a	Insulation screen	Extruded semi-con. XLPE
4b	Insulation screen	Copper tape
5	Phase identification	Red, yellow, blue
6	Lay up	Cores laid up
7	Bedding sheath	Extruded PVC
8	Additional bedding	PETP tape and bitumen compounded hessian tape
9a	Armour	Galvanised steel wires
9b	Armour	Steel binder tape
10	Overall sheath	Extruded PVC black

Description

Plain annealed copper (PAC) conductors, semi-con. XLPE/XLPE insulated/semi-con. XLPE, copper taped, laid up, PVC bedded single (SWA) or double (DWA) galvanised steel wire armoured and PVC sheathed.

The SWA designs can also be supplied with steel binder tape over the single wire armour. All designs contain a PETP tape and a bitumen compounded hessian tape over the bedding sheath. In the case of the double wire armoured designs a bitumen compounded hessian tape is also applied between the two layers of armour. Bitumen compound is applied under, between and over the armouring wires in all designs.



BCS 656 Part 1: 3800/6600V Power Cables

TECHNICAL DETAILS Single wire armoured and steel tape

Phase Conductor							
Number and CSA	mm ²	3 x 70mm ²	3 x 95mm ²	3 x 120mm ²	3 x 150mm ²	3 x 185mm ²	3 x 240mm ²
Cable Details							
Nominal diameter over inner sheath	mm	44.0	47.5	50.0	53.5	56.5	61.5
Approximate overall diameter	mm	57.0	60.0	63.0	66.5	69.5	75.0
Minimum bending radius	mm	700	720	760	800	840	900
Maximum pulling tension	kgf	1260	1710	2000	2000	2000	2000
Approximate cable weight	kg/km	6270	7200	8100	9250	10660	12790
Electrical Details							
Continuous current rating at 25°C ambient							
- in air	Amps	280	335	385	435	500	580
Continuous current rating at 15°C ambient							
- in ground	Amps	260	300	345	385	430	490
Maximum d.c. resistance at 20°C							
- Power conductor	Ω/km	0.268	0.193	0.153	0.124	0.099	0.075
- Armour	Ω/km	0.447	0.322	0.255	0.207	0.165	0.126
Maximum a.c. resistance at 90°C							
- Power conductor	Ω/km	0.343	0.247	0.196	0.159	0.128	0.099
Nominal reactance at 50 Hz	Ω/km	0.100	0.095	0.092	0.090	0.087	0.085
Nominal reactance at 60 Hz	Ω/km	0.120	0.114	0.110	0.108	0.104	0.102

TECHNICAL DETAILS Double wire armoured

Phase Conductor							
Number and CSA	mm ²	3 x 70mm ²	3 x 95mm ²	3 x 120mm ²	3 x 150mm ²	3 x 185mm ²	3 x 240mm ²
Cable Details							
Nominal diameter over inner sheath	mm	44.0	47.5	50.0	53.5	56.5	61.5
Approximate overall diameter	mm	62.0	65.5	68.0	72.0	75.0	80.0
Minimum bending radius	mm	750	790	820	870	900	960
Maximum pulling tension	kgf	1260	1710	2000	2000	2000	2000
Approximate cable weight	kg/km	8380	9530	10660	11940	13950	15850
Electrical Details							
Continuous current rating at 25°C ambient							
- in air	Amps	280	335	385	435	500	580
Continuous current rating at 15°C ambient							
- in ground	Amps	260	300	345	385	430	490
Maximum d.c. resistance at 20°C							
- Power conductor	Ω/km	0.268	0.193	0.153	0.124	0.099	0.075
- Armour	Ω/km	0.357	0.257	0.204	0.165	0.132	0.101
Maximum a.c. resistance at 90°C							
- Power conductor	Ω/km	0.343	0.247	0.196	0.159	0.128	0.099
Nominal reactance at 50 Hz	Ω/km	0.100	0.095	0.092	0.090	0.087	0.085
Nominal reactance at 60 Hz	Ω/km	0.120	0.114	0.110	0.108	0.104	0.102

Notes:

1. The designs shown in the above tables contain shaped stranded Class 2 conductors.
2. The above designs represent the more popular sizes/designs. Information on the availability of other sizes/designs can be provided upon request.

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