

**1. Design guidelines.**

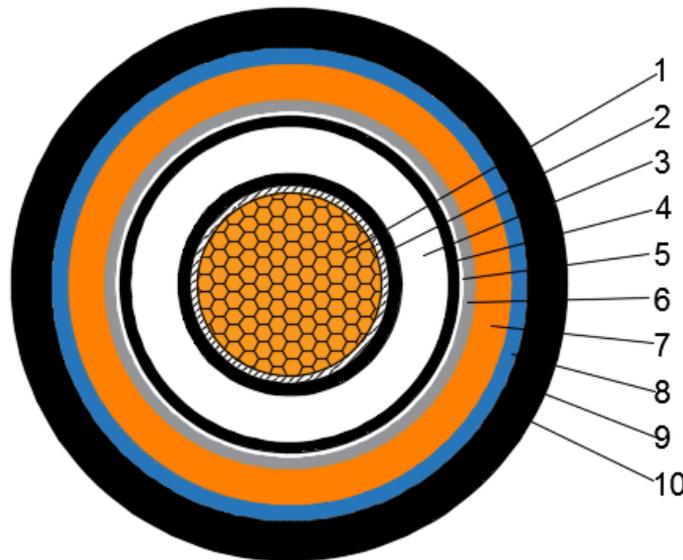
AS/NZS 1429.2	Electric cables—Polymeric insulated Part 2: For working voltages above 19/33 (36) kV up to and including 87/150(170) kV
AS/NZS 1125	Conductors in insulated electric cables and flexible cords
AS/NZS 3808	Insulating and sheathing materials for electric cables

**2. Application.**

Normal use operating temperature	90°C
Max. conductor temperature during short circuit(5s)	250°C
Lowest recommended temperature during installation	0°C

**3. Construction.**

**HCA - 300mm<sup>2</sup> x 1 core Cu(WBY)/XLPE/CAS(13.5kA)/MDPE/NY/HDPE(Graphite) - HCA503100PWC**



1	Conductor	Class 2, circular compacted Copper conductor(non-conductive water-blocking yarn) A Semi-conductive tape shall be applied over the conductor
2	Conductor screen	Semi-conductive tape and compound
3	Insulation	XLPE
4	Insulation screen	Semi-conductive compound
5	Water blocking	Semi-conductive water-blocking tape
6	Metallic sheath	Corrugated Aluminum sheath
7	Inner sheath	MDPE/Orange
8	Anti-termite sheath	Nylon (PA12)/Blue
9	Outer sheath	HDPE/Black with 2% carbon black
10	Outer conductive layer	Graphite coating

**4. Cable mark as listed below, or as purchase order.**

Marking on cable: by printing in two approximately diametrically opposed lines on the surface of outer sheath
HENG TONG CABLE AUSTRALIA "YEAR" ELECTRIC CABLE 38/66kV
300mm <sup>2</sup> 1 core Cu(WBY) XLPE CAS(13.5kA) MDPE NY HDPE(Graphite) XXXXm

**5. Construction parameters.**

Description	Unit	Values
<b>Conductor</b>		
Cross sectional area	mm <sup>2</sup>	300
Shaped	/	Circular
Number of wires	No.	≥34
Approx. diameter of conductor	mm	20.6
<b>Conductor screen</b>		
Min. thickness at any point	mm	1.1
Approx. diameter over conductor screen	mm	23.3
<b>Insulation</b>		
Nominal thickness/Min. thickness at any point	mm	11.0/9.8
Approx. diameter over insulation	mm	45.3
<b>Insulation screen</b>		
Type		Fully bonded
Min. thickness at any point	mm	1.0
Approx. diameter over insulation screen	mm	47.3
<b>Metallic sheath</b>		
Nominal thickness/Min. thickness at any point	mm	2.0/1.6
Approx. diameter over corrugated aluminum sheath	mm	68.5
<b>Inner sheath (MDPE)</b>		
Nominal thickness/Min. thickness at any point	mm	4.0/3.3
Approx. diameter over MDPE sheath	mm	76.5
<b>Anti-termite sheath (PA12)</b>		
Nominal thickness/Min. thickness at any point	mm	1.3/0.8
Approx. diameter over nylon sheath	mm	79.1
<b>Outer sheath (HDPE w/ graphite)</b>		
Nominal thickness/Min. thickness at any point	mm	3.0/2.2
Approx. diameter over HDPE sheath	mm	85.1
Max. diameter of cable	mm	90.1
Min. bending radius during installation	mm	2373
Min. bending radius after installed	mm	1582
Max. D.C. resistance of conductor at 20°C	Ω/km	0.0601
Max. A.C. resistance of conductor at 90°C	Ω/km	0.0789
Fault current carrying capacity of conductor for 1 second	kA	42.9
Fault current carrying capacity of metallic screen for 1 second	kA	13.5
Maximum pulling tension of conductor	kN	21.0
Cable weight	kg/m	7.6