

**1. Design guidelines.**

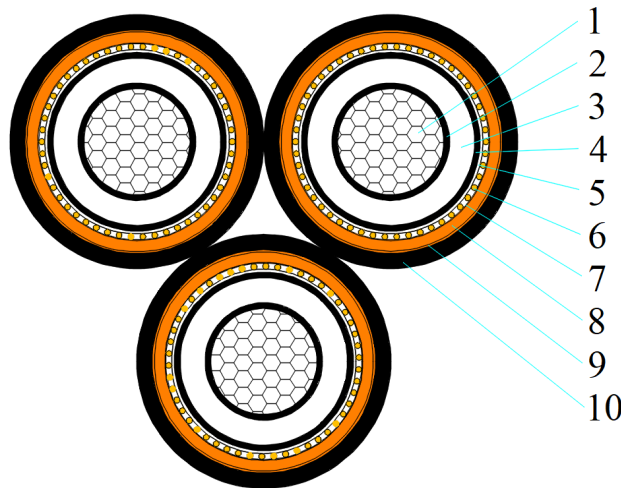
AS/NZS 1429.1	Electric cables-Polymeric insulated Part 1: For working voltages 1.9/3.3(3.6) kV up to and including 19/33(36) kV
AS/NZS 1125	Conductors in insulated electric cables and flexible cords
AS/NZS 3808	Insulating and sheathing materials for electric cables

**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 - 400mm<sup>2</sup> x 3 \* 1 Core Al(WBY)/TR-XLPE/WBT/CWS(13.1kA)/WBT/PVC/NY/HDPE(Graphite) Triplex- HCA504543PWC**



1	Conductor	Class 2, circular compacted Aluminium conductor (non-conductive water-blocking yarn) A Semi-conductive tape may be applied over the conductor
2	Conductor screen	Semi-conductive compound
3	Insulation	TR-XLPE
4	Insulation screen	Semi-conductive compound
5	Bedding tape	Semi-conductive water-blocking tape
6	Metallic screen	Plain annealed copper wire screen
7	Binder tape	Water-blocking tape
8	Inner sheath	5V-90 Orange
9	Insect protection	Nylon 12 Blue
10	Outer sheath	HDPE Black (with Graphite on the outer surface)

**4. Core identification and mark as listed below, or as purchase order.**

Identification of core: Red, White, Blue (color tape)
Marking on cable: by printing in two diametrically opposed lines on the surface of outer sheath (one phase)
HENG TONG CABLE AUSTRALIA "YEAR" ELECTRIC CABLE 6.35/11kV
400mm <sup>2</sup> x 3*1 core Al(WBY) TR-XLPE WBT CWS(13.1kA) WBT PVC NY HDPE(Graphite) Triplex XXXXm

**5. Construction parameters.**

Description	Unit	Values
<b>Active Conductor</b>		
Material	-	Aluminium
Nominal cross-sectional area	mm <sup>2</sup>	400
Conductor shape	/	Circular Compacted
Approx. diameter of active conductor	mm	23.4
<b>Conductor screen</b>		
Min. thickness at any point	mm	0.3
Approx. diameter of conductor screen	mm	25.4
<b>Active Insulation</b>		
Material	-	TR-XLPE
Nominal thickness/Min. thickness at any point	mm	3.4/2.96
Approx. diameter over insulation	mm	32.2
<b>Insulation screen</b>		
Type	-	Hand-strippable
Min. thickness at any point	mm	0.6
Approx. diameter of insulation screen	mm	33.7
<b>Metallic screen</b>		
No.& Diameter of copper wires per phase	No./mm	50/1.53
Approx. diameter of metallic screen	mm	37.6
<b>Laying up</b>		
Direction of lay	-	Right
Diameter of laid up core	mm	37.6
<b>Inner sheath</b>		
Material	-	5V-90
Nominal thickness/Min. thickness at any point	mm	1.1/0.68
Approx. diameter of inner sheath	mm	42.1
<b>Insect protection</b>		
Material	-	Nylon 12
Min. thickness at any point	mm	0.5
Approx. diameter over Insect protection	mm	43.7
<b>Outer sheath</b>		
Material	-	HDPE
Nominal thickness/Min. thickness at any point	mm	2.5/1.80
Approx. diameter of outer sheath	mm	48.7
<b>Laying up</b>		
Direction of lay	-	Right
Approx. diameter of laid up core	mm	105.2
<b>Max. diameter of cable</b>	mm	110.5



**TECHNICAL DATA SHEET  
HENG TONG CABLE AUSTRALIA**

Doc No.:  
GD/TC/431-2023

Rev: 1

**6.35/11(12) kV PWC**

Date: 11/13/2023

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Description	Unit	Values
<b>Approx. mass of cable</b>	kg/km	10,252
<b>Electrical data</b>		
Max. D.C. resistance of active conductor at 20°C	Ω/km	0.0778
Max. A.C. resistance of conductor at 90°C	Ω/km	0.101
Fault current carrying capacity of conductor	kA/1sec	37.8
Fault current carrying of screen	kA/1sec	13.1
<b>Mechanical data</b>		
Maximum pulling tension of conductor	kN	46.8
Min. bending radius during installation (one phase)	mm	1310
Min. bending radius after installed (one phase)	mm	870
Min. bending radius during installation (bundled cable)	mm	2210
Min. bending radius after installed (bundled cable)	mm	1660