

SYSTEM VOLTAGE:22KV

CABLE	ITEM NUMBER	CORE TO SCREEN CAPACITANCE μF/km	CORE TO CORE CAPACITANCE μF/km	TRANSFORMER RATED KVA	FERRORESONANT CRITICAL LENGTH meters
Aluminium 1 Core XLPE 35 sqmm	Termitex: 407180	0.165	0	300	18
				500	30
				750	45
				1000	60

CABLE	ITEM NUMBER	CORE TO SCREEN CAPACITANCE μF/km	CORE TO CORE CAPACITANCE μF/km	TRANSFORMER RATED KVA	FERRORESONANT CRITICAL LENGTH meters
Aluminium 1 Core XLPE 95 sqmm	Termitex: 407181	0.223	0	300	13
				500	22
				750	33
				1000	44

CABLE	ITEM NUMBER	CORE TO SCREEN CAPACITANCE μF/km	CORE TO CORE CAPACITANCE μF/km	TRANSFORMER RATED KVA	FERRORESONANT CRITICAL LENGTH meters
Aluminium 1 Core XLPE 240 sqmm	411618	0.29	0	300	9
				500	10
				750	25
				1000	34

CABLE	ITEM NUMBER	CORE TO SCREEN CAPACITANCE μF/km	CORE TO CORE CAPACITANCE μF/km	TRANSFORMER RATED KVA	FERRORESONANT CRITICAL LENGTH meters
Aluminium 1 Core XLPE 400 sqmm	Termitex: 407179	0.385	0	300	7
				500	12
				750	19
				1000	25

CABLE	ITEM NUMBER	CORE TO SCREEN CAPACITANCE μF/km	CORE TO CORE CAPACITANCE μF/km	TRANSFORMER RATED KVA	FERRORESONANT CRITICAL LENGTH meters
Aluminium 1 Core XLPE 500 sqmm	Termitex: 407177	0.425	0	300	7
				500	11
				750	17
				1000	23

CABLE	ITEM NUMBER	CORE TO SCREEN CAPACITANCE μF/km	CORE TO CORE CAPACITANCE μF/km	TRANSFORMER RATED KVA	FERRORESONANT CRITICAL LENGTH meters
Copper 1 Core XLPE 35 sqmm	232074	0.157	0	300	19
				500	31
				750	47
				1000	63

CABLE	ITEM NUMBER	CORE TO SCREEN CAPACITANCE μF/km	CORE TO CORE CAPACITANCE μF/km	TRANSFORMER RATED KVA	FERRORESONANT CRITICAL LENGTH meters
Aluminium 1 Core XLPE 120 sqmm	Termitex: 232082	0.236	0	300	12
				500	21
				750	31
				1000	42

CABLE	ITEM NUMBER	CORE TO SCREEN CAPACITANCE μF/km	CORE TO CORE CAPACITANCE μF/km	TRANSFORMER RATED KVA	FERRORESONANT CRITICAL LENGTH meters
COPPER 1 Core XLPE 240 sqmm	232090	0.308	0	300	9
				500	16
				750	24
				1000	32

CABLE	ITEM NUMBER	CORE TO SCREEN CAPACITANCE μF/km	CORE TO CORE CAPACITANCE μF/km	TRANSFORMER RATED KVA	FERRORESONANT CRITICAL LENGTH meters
Copper 3 Core screened PAPER 25 sqmm	9076	0.243	0	300	12
				500	20
				750	30
				1000	41

CABLE	ITEM NUMBER	CORE TO SCREEN CAPACITANCE μF/km	CORE TO CORE CAPACITANCE μF/km	TRANSFORMER RATED KVA	FERRORESONANT CRITICAL LENGTH meters
Copper 3 Core screened PAPER 120 sqmm	9084	0.455	0	300	6
				500	10
				750	16
				1000	21

CABLE	ITEM NUMBER	CORE TO SCREEN CAPACITANCE μF/km	CORE TO CORE CAPACITANCE μF/km	TRANSFORMER RATED KVA	FERRORESONANT CRITICAL LENGTH meters
Copper 3 Core screened PAPER 240 sqmm		0.602	0	300	4
				500	8
				750	12
				1000	16

CABLE	ITEM NUMBER	CORE TO SCREEN CAPACITANCE μF/km	CORE TO CORE CAPACITANCE μF/km	TRANSFORMER RATED KVA	FERRORESONANT CRITICAL LENGTH meters
Aluminium 3 Core screened XLPE 400 sqmm	Termitex: 407178	0.385	0	300	7
				500	12
				750	19
				1000	25

- NOTES:
1. DATA DERIVED ASSUMING MAGNETIZING CURRENT OF 0.8% OF RATED FULL LOAD CURRENT.
 2. CRITICAL CABLE LENGTHS ROUNDED DOWN TO THE NEAREST METER.
 3. INSTALLATIONS WITH CABLE LENGTHS GREATER THAN THE ABOVE CRITICAL LENGTH ARE LIKELY TO BE PRONE TO FERRORESONANCE DURING SINGLE PHASE SWITCHING OF TRANSFORMER.
 4. WHERE CABLE LENGTHS CAN NOT BE LIMITED TO BELOW THE ABOVE CRITICAL LENGTH THEN A 3 PHASE SWITCH MUST BE INSTALLED.
 5. WHERE CABLE PROTECTION SCHEMES ARE INSTALLED IF CABLE CRITICAL LENGTHS ARE EXCEEDED THE PROTECTION DEVICE SHALL BE DE-ENERGISE ALL THREE PHASES UNFER ANY FAULT CONDITION.
 6. WHERE AN UNDERGROUND CABLE SECTION IS USED IN OVERHEAD NETWORKS, THE SUM TOTAL LOAD OF THE DOWNSTREAM SUBSTATIONS SHOULD BE CONSIDERED AGAINST THE CABLE LENGTH/TYPE. FOR SCENARIOS WHERE CRITICAL CABLE LENGTHS HAVED BEEN EXCEEDED, THREE PHASE SWITCHING CAPABILITY SHALL BE IMPLEMENTED OR USED TO ELIMINATE THE POTENTIAL IF FERRORESONANCE.

	4	ADDED NOTES 5 AND 6. REFORMATTED TABLE.	J.R.	MAY'25	B.B.	B.V.
	3	TITLEBLOCK & DRAWING NUMBER FORMATTED	K.T.	APR'19	C.C.	C.C.
	2	240SQMM ALUMINIUM CABLE DATA UPDATED	A.T.	SEP'11	B.C.	S.C.
	1	NEW CHART	J.C.	AUG'08	A.T.	S.C.
NO	DESCRIPTION		DRN	DATE	CKD	APPD
AMENDMENTS						



DES	T.TANG		POWER STANDARD DRAWING			
DRN	PMC		DESIGN DATA UNDERGROUND CABLES FERRORESONANT CRITICAL LENGTH 22000 VOLTS			
CKD	A. GREENWOOD					
APPD	-					
SCALE	N.T.S.					
ISSUED	OCT'94		A3	DRAWING NUMBER	S02-04-02-10	
ALL DIM. IN mm						
DRAFTING STANDARD TO A.S.1100			CAD PRODUCT - DO NOT AMEND MANUALLY		AMDT	