

nkt cables CB/CC Screened T-Connectors

CB/CC MV switchgear connections for EN 50180/50181 Type C



nkt cables manufactures a wide range of cables and cable accessories and is the leading supplier of medium voltage screened connectors across much of Australasia.

nkt cables was the first to manufacture silicone rubber cable terminations and now has 50 years' experience, in applications up to 400 kV.

The CB/CC range of screened T-connectors and coupling connectors are made of silicone rubber for connecting to medium voltage switchgear, RMUs and transformers fitted with Type C bushings according to EN 50180/50181.

The silicone rubber grade used in CB/CC connectors is durable, UV and ozone resistant, waterproof, non-flammable, self-extinguishing and heat resistant. Together with its excellent mechanical and electrical

properties, this makes it the preferred material for 11-33 kV screened connectors.

In addition to offering high quality electrical insulation and superior corona and tracking resistance, the elasticity of silicone rubber facilitates a wide application range for each CB/CC size. So one product can be used for many different conductor cross-sections.

The Type C bolted connection type is secure and safe and is very widely used, with sizes available up to 1000 mm². Installation is straightforward and fast, requiring no special tools.

The outer screen is a fully bonded conductive layer specially developed by nkt cables for long term reliability. Operation is maintenance free.

Screened connectors for interface Sizes A, B and F are also available.

Product Data Sheet

nkt cables screened connectors for Type C interface

Hamer Code		System Voltage			Application range				Dimensions	
		11kV	22kV	33kV	Cross section ¹ , mm		Insulation diameter, mm		Approx length ²	Approx depth ³
T-connector	Coupling connector				Min	Max	Min	Max	mm	mm
NKTCB12630C0	NKTCC12630C0	✓			25	70	12.7	19.2	245	190
NKTCB12630D2	NKTCC12630D2	✓				95		25.0		
NKTCB12630G1	NKTCC12630G1	✓			95	150	17.0	24.3		
NKTCB12630G3	NKTCC12630G3	✓						32.6		
NKTCB12630L4	NKTCC12630L4	✓			185	240	21.2	33.6		
NKTCB12630L5	NKTCC12630L5	✓						34.6		
NKTCB12630M4	NKTCC12630M4	✓			300	300		33.6		
NKTCB12630N6	NKTCC12630N6	✓			400	500	28.9	40.0	385	
NKTCB24630C3	NKTCC24630C3		✓		25	95	12.7	25.0	245	190
NKTCB24630H5	NKTCC24630H5		✓		95	240	21.2	34.6		
NKTCB24630M5	NKTCC24630M5	✓	✓		120	300				
NKTCB241250P7	NKTCC241250P7	✓	✓		400	630	34.0	45.6	385	
NKTCB36630A2	NKTCC36630A2			✓	25	35	17.0	24.3	245	190
NKTCB36630F4	NKTCC36630F4			✓	50	120	21.2	33.6		
NKTCB36630K6	NKTCC36630K6			✓	150	240	28.9	40.0		
NKTCB36630M6	NKTCC36630M6			✓	300	300				
NKTCB361250N7	NKTCC361250N7			✓	400	500	34.0	45.6	385	190
NKTCB361250P8	NKTCC361250P8			✓	400	630	39.1	51.0		
NKTCB421250R8				✓	630	800			440	200
NKTCB421250S9				✓	630	1000	45.5	57.8		

Test requirements

Test	Test voltage	Product voltage code				Requirements
		NKTCB12 ⁴	NKTCB24 ⁵	NKTCB36 ⁶	NKTCB42 ⁷	
Humidity and salt fog	1.25 U _o	7.5 kV	15 kV	22.5 kV	26 kV	No Breakdown or flashover, <3 ignitions, no visual damage.
Partial discharge	2 U _o	12 kV	24 kV	36 kV	42 kV	XLPE cable: ≤10 pC
Thermal cycling 500 h ⁸	2.5 U _o	15 kV	30 kV	45 kV	52 kV	No breakdown or flashover
AC withstand 5min	4.5 U _o	27 kV	54 kV	81 kV	94 kV	
DC withstand 15 min	6 U _o	36 kV	72 kV	108 kV	125 kV	
Impulse withst and ±10x	-	75 kVpk	125 kVpk	170 kV	200 kV	

Product Data Sheet

nkt cables screened coupling surge arresters

Hamer code	Residual voltages							
	Max continuous operating voltage, U_c	Rated voltage, U_r	Nominal discharge current, I_n	Steep current impulse (5/10 kA, 1/20 μ s)	Long duration current impulse (125 A, 30/75 μ s)	Lightning current impulse (5/10 kA, 8/20 μ s)	Partial discharge at 1.05x U_c	Approx length ⁹
	kV	kV	kA	kV	kV	kV	pC	mm
NKTCSA125	12	15	5	43.1	30.3	27	<5	270
NKTCSA1210	12	15	10	42.8	30.1	40.0		225
NKTCSA245	24	30	5	86.1	60.6	79.7		370
NKTCSA2410	24	30	10	85.3	61.4	79.7		345
NKTCSA3610	36	45	10	128.0	92	85.2		470

nkt cables accessories for inner cone connectors

Hamer code	Description	Max system voltage kV	Notes
NKTCBEAS630	End plug for C type connectors	33	Fits into front of T-connector (in place of bushing)
NKTCBC40630	End cover for C type bushings		Fits onto bushing in place of T-connector
NKTCBE20M12	Earthing plug for NKTCB12/24/36630 connectors		Fits into back of T-connector to provide earthing point (20 mm dia)
NKTCBE20M16	Earthing plug for NKTCB36/421250 connectors		Fits into back of T-connector to provide test point for AC, DC, VLF testing
NKTCBPAKM12	Test adaptor for NKTCB12/24/36630 connectors		
NKTCBPAKM16	Test adaptor for NKTCB36/421250 connectors	-	Always use the correct assembly paste
NKT-PASTE	Assembly paste (60 g tube)		

Notes

- Maximum size is for AL or CU RMV conductor
- From bushing centre line to end of stress cone
- From mounting face to back plug cover
- $U_c = 6 \text{ kV} / U = 10 \text{ kV} / U_m = 12 \text{ kV}$
- $U_c = 12 \text{ kV} / U = 20 \text{ kV} / U_m = 24 \text{ kV}$
- $U_c = 18 \text{ kV} / U = 30 \text{ kV} / U_m = 36 \text{ kV}$
- $U_c = 20.8 \text{ kV} / U = 36 \text{ kV} / U_m = 42 \text{ kV}$
- AC withstand 15 min
- From mounting face to end of arrester (excluding earth stud)