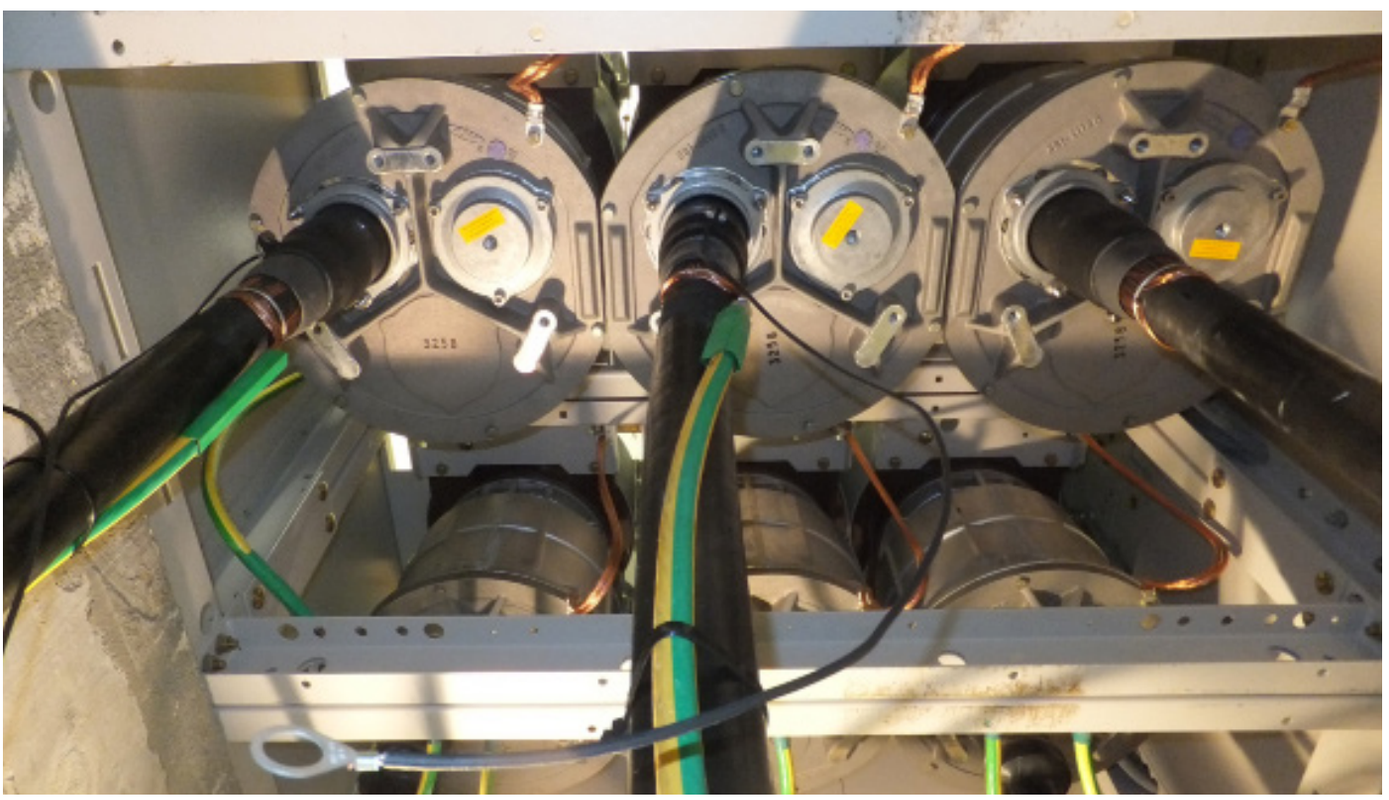
NKT CPI Inner Cone Connectors

Easy to install, range-taking MV switchgear connections for EN 50180/50181 Sizes 2 and 3



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

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

CPI is a screened inner cone cable connector made of silicone rubber for connecting to medium voltage switchgear, RMUs and transformers fitted with bushings Size 2 or 3 according to EN 50180/50181.

The silicone rubber grade used in the CPI is durable, UV and ozone resistant, waterproof, non-flammable, self-extinguishing and heat resistant. Together with its excellent mechanical and electrical properties, this makes silicone rubber a preferred material for 11-33 kV inner cone 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 CPI. So one product can be used for many different conductor cross-sections.

This connection type delivers a compact and reliable in-line interface with XLPE and EPR cables.

Installation is straightforward and fast thanks to the design of the CPI. The unique shear-bolt connector simplifies assembly and provides assurance of correct fit; the multi-range stress cone allows realistic cable preparation tolerances; the unique connector casing eliminates the requirement for special tools.

The outer screen is a fully bonded conductive layer. The cable screen can be tested without disassembly. Operation is maintenance free.

NKT inner cone connectors for Size 2 and Size 3 interfaces

Hamer Code	Interface type	Continuous nominal current, A	Application range							Dimemsions
						Cross Section[1], mm²		Insulation diameter, mm		Approx length[2]
			11kV	22kV	33kV	Min	Max	Min	Max	mm
NKTCPI23670V	2	800	✓	-	-	35	70	12.7	19.2	190
NKTCPI236120W			✓	✓	✓	95	120	17.0	24.3	
NKTCPI236185W			✓	-	-	120	185	17.0	24.3	
NKTCPI236120X			-	✓	✓	50	120	21.2	33.6	
NKTCPI236185X			✓	✓	✓	120	185	21.2	33.6	
NKTCPI236300X			✓	✓	✓	240	300	21.2	33.6	
NKTCPI236185Y			-	-	✓	150	185	28.9	40.0[3]	
NKTCPI236300Y			-	✓	✓	240	300	28.9	40.0[3]	
NKTCPI336120A	3	1250	-	✓	✓	95	120	21.2	33.6	195
NKTCPI336185A			✓	✓	✓	120	185	21.2	33.6	
NKTCPI336300A			✓	✓	-	240	300	21.2	33.6	
NKTCPI336185B			-	-	✓	150	185	28.9	37.8	
NKTCPI336300B			-	✓	✓	240	300	28.9	37.8	
NKTCPI336300B			✓	-	-	400	500	28.9	37.8	
NKTCPI336300C			-	-	✓	300		34.0	45.6	
NKTCPI336630C			✓	✓	✓	400	630	34.0	45.6	
NKTCPI336630D			-	-	✓	630		39.1	51.0	
NKTCPI336800D			✓	✓	-	800[4]		39.1	51.0	300
NKTCPI336800E			-	-	✓	800[4]		45.5	57.8	

Test requirements

Test	Test voltage	Requirements
Partial discharge	42kV	XLPE cable: ≤5 pC
AC withstand 5 min	117kV	No breakdown or flashover
DC withstand 15 min	125kV	
Impulse withstand ±10x	200kV	

NKT screened coupling surge arresters

Hamer code	Residual voltages							
	Max continuous operating voltage, Uc	Rated voltage, Ur	Nominal discharge current, In	Steep current impulse (5/10 kA, 1/50 µs)	Long duration current impulse (125 A, 30/60 µs)	Lightning current impulse (5/10 kA, 8/20 µs)	Partial discharge at 1.05x Uc	Approx length
	kV	kV	kA	kV	kV	kV	pC	mm
NKT-SPI2-24-5	24	30	5	125	60.6	79.7	<5	340
NKT-SPI3-42-10	42	52.5	10	200	99.4	140.0	<5	460

NKT accessories for inner cone connectors

Hamer code	Description	Max system voltage kV	Notes
NKT-FPI2	Final plug for Size 2 (set of 3)	42	Insulating plug for equipment interface
NKT-FPI3	Final plug for Size 3 (set of 3)	52	Insulating plug for equipment interface
NKT-PASTE	Assembly paste (60 g tube)	-	Always use the correct assembly paste

Notes
1. For round stranded conductors, designation RM
2. From mounting face to end of stress cone. Three core cables only
3. Three core cables 44.0 mm
4. Maximum conductor diameter 36 mm (fits 1000 mm² round solid, designation RE)

For more information contact your Hamer representative
Hamer Limited reserve the right to amend product details without notice.
DS0038 07-18

NKT