

**CONSTRUCTION - XLPE CABLES 0.6/1 kV**

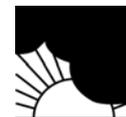
# 4C+E XLPE CIRCULAR

X-90 XLPE INSULATED LAID UP AND PVC SHEATHED CABLE TO AS/NZS 5000.1.

For mains, submains and subcircuits unenclosed, in conduit, buried or in underground ducts for buildings and industrial plants where not subject to mechanical damage and where out of balance currents may require a neutral equal in size to the active. Suitable where space is at a premium and/or where conditions of overload may occur.



## Cable Characteristics

							
Semi-rigid	OD≤25 4D OD>25 6D	1	Water Drops	Good	+90 °C -15 °C	C3	Good

## Cable Design

**CONDUCTOR:**

Plain annealed copper conductor to AS/NZS 1125  
 Maximum continuous operating temperature: 90 °C

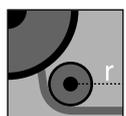
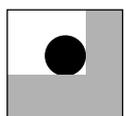
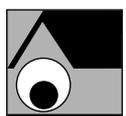
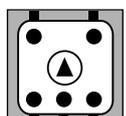
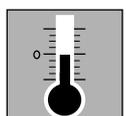
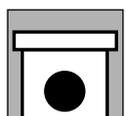
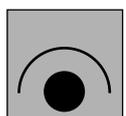
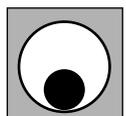
**INSULATION:**

X-90 XLPE  
 Colours: Red, White, Blue, Black, Green

**SHEATH:**

5V-90 PVC  
 Colours: Orange

## Installation Conditions

							
INDUSTRIAL EQUIPMENT	OD≤25 6D OD>25 9D	IN FREE AIR	IN CONDUIT	MACHINES	0 °C	IN TRENCH	IN GROUND WITH PROTECTION
							
IN DUCT	EXTERNAL BUILDING						

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## Physical & Electrical Characteristics

Product code	Conductor			Cable				Min. installed bending radius mm
	Nominal C.S.A. mm <sup>2</sup>	Number and diameter of wires No/mm	Nominal diameter mm	Nominal insulation thickness mm	Overall diameter mm		Approx. mass kg/100 m	
					Minimum	Maximum		
254CEXP	25	19/1.35	6.8	0.9	24.0	25.1	132	150
354CEXP	35	19/1.53	7.7	0.9	26.8	28.1	175	170
504CEXP	50	19/1.78	8.9	1.0	30.8	32.2	237	190
704CEXP	70	19/2.14	10.7	1.1	36.1	37.3	328	220
954CEXP	95	19/2.45	12.5	1.1	40.6	42.1	439	250
1204CEXP	120	37/2.03	14.2	1.2	45.3	46.7	550	280
1504CEXP	150	37/2.25	15.8	1.4	50.7	52.3	684	310
1854CEXP	185	37/2.52	17.6	1.6	57.0	58.6	862	350
2404CEXP	240	61/2.25	20.3	1.7	64.4	66.2	1127	400
3004CEXP	300	61/2.52	22.7	1.8	71.3	73.3	1407	440

Conductor nominal C.S.A. mm <sup>2</sup>	Current rating (a)			Electrical characteristics	
	Unenclosed spaced A	Buried direct A	Underground in duct A	Maximum D.C. resistance at 20°C Ω/km	Reactance per core Ω/km
25	120	145	110	0.727	0.0808
35	145	170	135	0.524	0.0786
50	180	205	160	0.387	0.0751
70	230	250	200	0.268	0.0741
95	285	300	240	0.193	0.0725
120	330	345	275	0.153	0.0713
150	375	385	310	0.124	0.0718
185	435	435	355	0.0991	0.0720
240	520	500	420	0.0745	0.0709
300	590	570	475	0.0601	0.0704

(a) Based on 90 °C conductor temperature, 40 °C ambient air temperature and where applicable, burial depth of 0.5 m, soil temperature of 25 °C and soil thermal resistivity of 1.2 °C.m/W. Refer to AS/NZS 3008.1 for other installation conditions.

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## CABLE HANDLING

### Cable Usage Characteristics



#### AMBIENT TEMPERATURE

Maximum operating temperature  
Minimum operating temperature



#### MECHANICAL IMPACT RESISTANCE

1	Light Impact
2	Moderate Impact
3	Heavy Impact
4	Very Heavy Impact



#### RESISTANCE TO SOLAR RADIATION AND WEATHER

Excellent	Permanent
Very Good	Frequent
Good	Occasional
Acceptable	Accidental
Poor	None



#### BEHAVIOUR IN FLAME AND FIRE

Reaction To Fire	Resistant To Fire
C 1 Fire retardant	Level 1 Ultimate fire survival
C 2 Flame retardant	Level 2 Two hours fire survival
C 3 No fire performance	Level 3 Restrained spread & self extinguishing



#### HALOGEN FREE

AS/NZS 4507



#### MINIMUM BENDING RADIUS

Minimum bending radius of installed cables



#### CHEMICAL RESISTANCE

Excellent	Permanent
Very Good	Frequent
Good	Occasional
Acceptable	Accidental
Poor	None



#### RESISTANCE TO WATER

Negligible	No humidity
Water Drops	Occasional condensation
Spray	Water run off
Splashes	Exposed to water splashes
Heavy Sea	Exposed to waves
Immersion	Temporarily covered by water
Submersion	Permanently covered by water



#### FLEXIBILITY

Rigid	Flexible
Semi-rigid	Very flexible



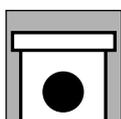
#### LOW SMOKE EMISSION

AS/NZS 4507

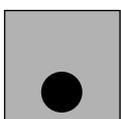
### Laying Conditions



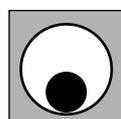
MINIMUM BENDING RADIUS DURING INSTALLATION



IN TRENCH



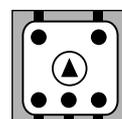
IN GROUND



IN DUCT



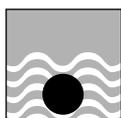
DOMESTIC APPLIANCES



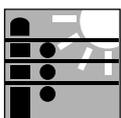
MACHINES



MOBILE EQUIPMENT



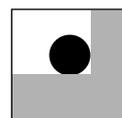
SUBMERGED



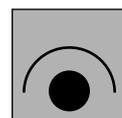
OVERHEAD AERIAL



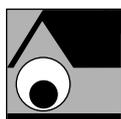
MIN. INSTALLATION TEMPERATURE



IN FREE AIR



IN GROUND WITH PROTECTION



IN CONDUIT



OUTDOOR APPLIANCES



FESTOON



INTERNAL WIRING



INDUSTRIAL EQUIPMENT



EXTERNAL BUILDING

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