

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

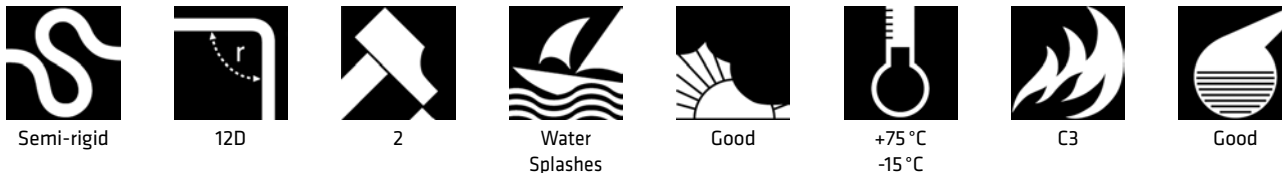
# 4C+E PVC CIRCULAR SWA

PVC INSULATED LAID UP PVC BEDDED GSW ARMoured AND PVC SHEATHED CABLE TO AS/NZS 5000.1.

For mains, submains and subcircuits unenclosed, in conduit, buried direct or in underground ducts for buildings and industrial plants where mechanical damage may occur. Where out of balance currents may require a neutral equal in size to the active. Suitable for glanding.



**Cable Characteristics**



**Cable Design**

**CONDUCTOR:**

Plain annealed copper conductor to AS/NZS 1125  
Maximum continuous operating temperature: 75 °C

Can also be operated at temperatures up to 90 °C when not exposed to mechanical deformation (see AS/NZS 3008.1)

**INSULATION:**

V-90 PVC  
Colours: Red, White, Blue, Black, Green/Yellow

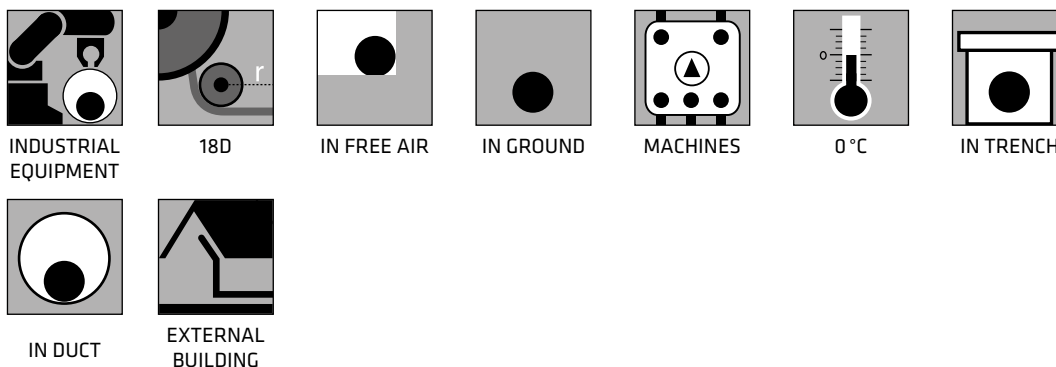
**ARMOUR:**

Steel wire armour

**SHEATH:**

5V-90 PVC  
Colours: Orange

**Installation Conditions**



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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		
1.54CEOCA	1.5	7/0.50	1.5	0.8	16.3	17.3	60	210
2.54CEOCA	2.5	7/0.67	2.0	0.8	17.8	18.8	72	225
44CEOCA	4	7/0.85	2.6	1.0	19.8	20.9	89	250
66CEOCA	6	7/1.04	3.1	1.0	21.0	22.2	103	270
104CEOCA	10	7/1.35	4.1	1.0	24.7	26.1	147	320
164CEOCA	16	7/1.70	5.1	1.0	27.3	28.7	185	340
254CEOCA	25	19/1.35	6.8	1.2	30.8	32.2	242	380
354CEOCA	35	19/1.53	7.7	1.2	33.9	35.5	300	420
504CEOCA	50	19/1.78	8.9	1.4	39.6	41.2	413	490
704CEOCA	70	19/2.14	10.7	1.4	44.5	45.8	526	550
954CEOCA	95	19/2.45	12.5	1.6	50.9	52.5	716	640
1204CEOCA	120	37/2.03	14.2	1.6	55.8	57.2	857	690
1504CEOCA	150	37/2.25	15.8	1.8	61.1	62.9	1028	760
1854CEOCA	185	37/2.52	17.6	2.0	67.7	69.6	1252	840
2404CEOCA	240	61/2.25	20.3	2.2	75.7	77.9	1577	940
3004CEOCA	300	61/2.52	22.7	2.4	84.9	87.2	2017	1050

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
1.5	16	24	19	13.6	0.111
2.5	23	34	26	7.41	0.102
4	31	44	34	4.61	0.102
6	40	55	43	3.08	0.0967
10	54	74	57	1.83	0.0906
16	72	96	74	1.15	0.0861
25	97	125	96	0.727	0.0853
35	120	150	115	0.524	0.0826
50	145	180	140	0.387	0.0797
70	185	220	175	0.268	0.0770
95	230	265	210	0.193	0.0766
120	265	300	240	0.153	0.0743
150	305	335	270	0.124	0.0745
185	350	380	310	0.0991	0.0744
240	410	440	370	0.0754	0.0735
300	470	495	415	0.0601	0.0778

(a) Based on 75 °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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Physical & Electrical Characteristics

Conductor nominal C.S.A. mm <sup>2</sup>	Diameter under armour		Diameter over armour		Armour wire diameter mm
	Minimum mm	Maximum mm	Minimum mm	Maximum mm	
1.5	10.2	10.9	12.7	13.4	1.25
2.5	11.7	12.3	14.2	14.8	1.25
4	13.7	14.4	16.2	16.9	1.25
6	14.9	15.8	17.4	18.3	1.25
10	17.9	19.0	21.1	22.2	1.6
16	20.5	21.6	23.7	24.8	1.6
25	24.0	25.1	27.2	28.3	1.6
35	26.9	28.1	30.1	31.3	1.6
50	31.4	32.6	35.4	36.6	2.0
70	36.2	37.1	40.1	41.1	2.0
95	41.1	42.3	46.1	47.3	2.5
120	45.6	46.7	50.6	51.7	2.5
150	50.7	52.2	55.7	57.2	2.5
185	56.9	58.4	61.9	63.4	2.5
240	64.5	66.2	69.5	71.2	2.5
300	71.8	73.7	78.1	80.0	3.15

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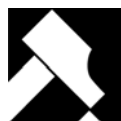
## CABLE HANDLING

### 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



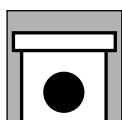
#### LOW SMOKE EMISSION

AS/NZS 4507

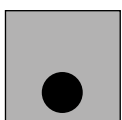
### Laying Conditions



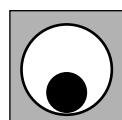
MINIMUM BENDING RADIUS DURING INSTALLATION



IN TRENCH



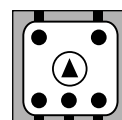
IN GROUND



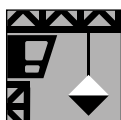
IN DUCT



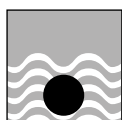
DOMESTIC APPLIANCES



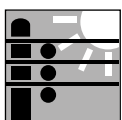
MACHINES



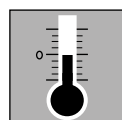
MOBILE EQUIPMENT



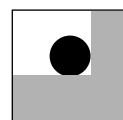
SUBMERGED



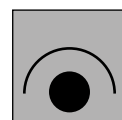
OVERHEAD AERIAL



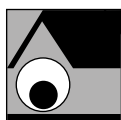
MIN. INSTALLATION TEMPERATURE



IN FREE AIR



IN GROUND WITH PROTECTION



IN CONDUIT



OUTDOOR APPLIANCES



FESTOON



INTERNAL WIRING



INDUSTRIAL EQUIPMENT



EXTERNAL BUILDING

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