CONSTRUCTION – PVC CABLES 0.6 /1 kV

1C PVC V-90



PVC INSULATED ONLY CABLE TO AS/NZS 5000.1.

For seperate earth conductors. For switchboard and control panel wiring. For fixed wiring within other enclosures or apparatus where the cable is not accessible without the use of tools. For use where improved aging properties to those of 75°C PVC are required because of higher ambient temperatures. Suitable for glanding.

Cable Characteristics


Semi-rigid



OD25 4D
OD>25 6D


1


Water
Drops


Good


+75 °C
-15 °C


C3


Good

Cable Design

CONDUCTOR:

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

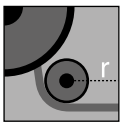
Can also be operated at temperatures up to 90 °C when not exposed to mechanical deformation (see AS/NZS 3008.1)

INSULATION:

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

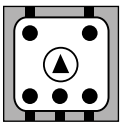
Installation Conditions


INDUSTRIAL
EQUIPMENT



OD≤25 6D
OD>25 9D


IN
CONDUIT


MACHINES


INTERNAL
WIRING



0 °C

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Physical & Electrical Characteristics

Product code	Conductor			Cable				Min. installed bending radius mm
	Nominal C.S.A. mm^2	Number and diameter of wires No/mm	Nominal diameter mm	Nominal insulation thickness mm	Overall diameter		Approx. mass kg/100 m	
					Minimum mm	Maximum mm		
1.0SBW	1.0*	1/1.13	1.13	0.8	2.6	2.8	1.7	10
1.5BW	1.5	7/0.50	1.5	0.8	3.0	3.2	2.2	15
2.5SBW	2.5*	1/1.78	1.78	0.8	3.3	3.5	3.3	15
2.5BW	2.5	7/0.67	2.0	0.8	3.5	3.7	3.4	15
4BW	4	7/0.85	2.6	1.0	4.5	4.6	5.4	20
6BW	6	7/1.04	3.1	1.0	5.1	5.2	7.6	20
10BW	10	7/1.35	4.1	1.0	6.0	6.1	12	25
16BW	16	7/1.70	5.1	1.0	7.1	7.2	18	30
25BW	25	19/1.35	6.8	1.2	9.1	9.3	27	35
35BW	35	19/1.53	7.7	1.2	10.0	10.1	36	40
50BW	50	19/1.78	8.9	1.4	11.6	11.9	51	50
70BW	70	19/2.14	10.7	1.4	13.4	13.5	70	55
95BW	95	19/2.45	12.5	1.6	15.6	15.9	98	65
120BW	120	37/2.03	14.2	1.6	17.1	17.4	120	70
150BW	150	37/2.25	15.8	1.8	19.3	19.5	148	80
185BW	185	37/2.52	17.6	2.0	21.2	21.7	185	90

Conductor nominal C.S.A. mm^2	Current rating (a)				Electrical characteristics	
	Three phase		Single phase		Maximum D.C. resistance at 20°C Ω/km	Reactance per core (Trefoil, Touching) Ω/km
	In conduit in air A	Underground in duct A	In conduit in air A	Underground in duct A		
1.0*	11	16	13	18	18.1	0.119
1.5	14	20	16	24	13.6	0.111
2.5*	20	28	22	33	7.41	0.102
2.5	20	28	22	33	7.41	0.102
4	26	37	30	42	4.61	0.102
6	34	46	38	53	3.08	0.0967
10	47	61	53	71	1.83	0.0906
16	62	80	71	91	1.15	0.0861
25	87	105	97	120	0.727	0.0853
35	100	125	115	145	0.524	0.0826
50	125	150	140	170	0.387	0.0797
70	155	185	175	210	0.268	0.0770
95	185	225	210	260	0.193	0.0766
120	220	260	250	295	0.153	0.0743
150	250	290	280	335	0.124	0.0745
185	285	335	325	380	0.0991	0.0744

(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.
* Single wire conductor

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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

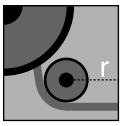


FLEXIBILITY	
Rigid	Flexible
Semi-rigid	Very flexible

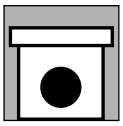


LOW SMOKE EMISSION
AS/NZS 4507

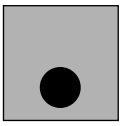
Laying Conditions



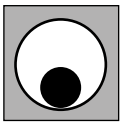
MINIMUM BENDING RADIUS DURING INSTALLATION



IN TRENCH



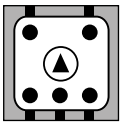
IN GROUND



IN DUCT



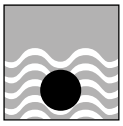
DOMESTIC APPLIANCES



MACHINES



MOBILE EQUIPMENT



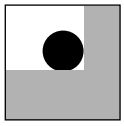
SUBMERGED



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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