

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

# 1C PVC V-90HT

PVC INSULATED ONLY CABLE TO AS/NZS 5000.1.

For separate 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 ageing 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 105 °C for an average of 500 hours per annum during the cable service life when not exposed to mechanical deformation (see AS/NZS 3008.1).

### INSULATION:

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

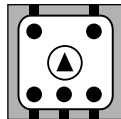
## Installation Conditions



INDUSTRIAL  
EQUIPMENT



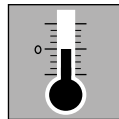
OD≤25 6D  
OD>25 9D



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 <sup>2</sup>	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		
1.0SBW90HT	1.0*	1/1.13	1.13	0.8	2.6	2.8	1.7	10
1.5BW90HT	1.5	7/0.50	1.5	0.8	3.0	3.2	2.2	15
2.5SBW90HT	2.5*	1/1.78	1.78	0.8	3.3	3.5	3.3	15
2.5BW90HT	2.5	7/0.67	2.0	0.8	3.5	3.7	3.4	15
4BW90HT	4	7/0.85	2.6	1.0	4.5	4.6	5.4	20

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Conductor nominal C.S.A. mm <sup>2</sup>	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

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(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 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

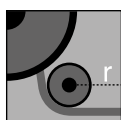
Rigid	Flexible
Semi-rigid	Very flexible



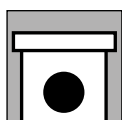
#### LOW SMOKE EMISSION

AS/NZS 4507

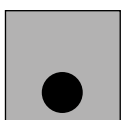
### Laying Conditions



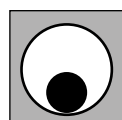
MINIMUM BENDING RADIUS DURING INSTALLATION



IN TRENCH



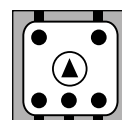
IN GROUND



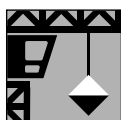
IN DUCT



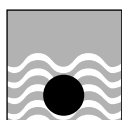
DOMESTIC APPLIANCES



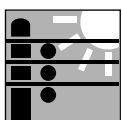
MACHINES



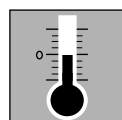
MOBILE EQUIPMENT



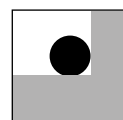
SUBMERGED



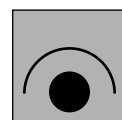
OVERHEAD AERIAL



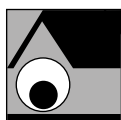
MIN. INSTALLATION TEMPERATURE



IN FREE AIR



IN GROUND WITH PROTECTION



IN CONDUIT



OUTDOOR APPLIANCES



FESTOON



INTERNAL WIRING



INDUSTRIAL EQUIPMENT



EXTERNAL BUILDING

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