VITA CABLE

VEEHI ENGINEERING PRIVATE LIMITED

MULTI-CORE PVC INSULATED CABLE

1 kV - Copper Conductor Industrial & Domestic Cable

IS 694:2016 CERTIFIED
BIS | ISI APPROVED | INDUSTRIAL GRADE

1 PRODUCT DESCRIPTION

VITA Multi-Core PVC Insulated Cable is a versatile, copper-conductor cable designed for a wide range of electrical applications in industrial, commercial, and domestic installations. Available in 2-core, 3-core, 4-core, and 5-core configurations with conductor sizes from 0.5 mm2 to 120 mm2, this cable offers superior flexibility, reliability, and safety. Manufactured to IS 694:2016 standards with BIS certification, VITA multi-core cables are ideal for power distribution, lighting circuits, motor connections, and control applications.

2 KEY FEATURES

- IS 694:2016 Certified: BIS approved - highest Indian quality standards
- Multiple Core Options: 2-core, 3-core, 4-core, 5-core configurations
- Wide Size Range: 0.5 mm2 to 120 mm2 conductor sizes
- Pure Copper Conductor: 99.9% copper for superior conductivity
- PVC Insulation & Sheath: Flame-retardant, weather-resistant outer sheath
- Flexible Design: Class 2 & Class 5 conductor options for flexibility
- 1 kV Rated: Suitable for 415V 3-phase and 230V single-phase systems
- Cost-Effective: Excellent value for industrial and domestic applications

3 TECHNICAL SPECIFICATION

3.1 Conductor Specifications

Parameter	Specification
Conductor Material	Bare Copper - 99.9% Pure (IEC 60228)
Conductor Class	Class 1 (Solid) & Class 2/5 (Stranded - Flexible)
Conductor Size	Range 0.5 mm2 to 400 mm2
Number of Cores	2-core, 3-core, 4-core, 5-core and above.
Core Identification	Color-coded per IS 694 (Brown, Black, Red, Grey, Blue)

3.2 Insulation & Sheath Specifications

Parameter	Specification
Insulation Material	PVC (Polyvinyl Chloride) - Flame Retardant
Insulation Thickness	0.5-1.5 mm (varies by conductor size per IS 694)
Outer Sheath Material	PVC (Polyvinyl Chloride) - Flame Retardant
Sheath Thickness	0.5-1.5 mm (varies by conductor size)
Rated Voltage	1 kV AC (1000 V)
Nominal Voltage	230V / 415V (Suitable for LT distribution)

3.3 Electrical Properties

Parameter	Specification
Insulation Resistance	Min. 100 MW @ 20°C (per 100 m of cable)
Dielectric Strength	Min. 2 kV for 1 minute (per IS 694)
Tensile Strength	Min. 12 MPa (PVC Insulation)
Elongation at Break	Min. 100%
Operating Temp	-5°C to +70°C (Continuous)
Short Circuit Temp	+100°C (Emergency limit - 5 seconds)

3.4 Environmental & Safety Properties

Parameter	Specification
Flame Retardancy	IS 7098 - Vertical Flame Test (No propagation)
Smoke Density	ASTM D2843 - Low smoke emission
Temperature Range	Storage: -10°C to +55°C (dry condition)
Weather Resistance	Suitable for indoor and outdoor use
Water Absorption	Max. 1% after 24 hrs immersion
Ozone Resistance	Resistant to ozone degradation

4 CONDUCTOR SIZE SPECIFICATIONS & DIMENSIONS

4.1 Size Range Available

VITA Multi-Core PVC Cable is available in the following conductor cross-sections: from 0.5 sqmm upto 400sqmm.

4.2 Typical Dimensions & Weights (2-Core Cable)

Cross Section (Sqmm)	Appx Outer Diameter (mm)	Weight (Kg/km)	Min. Bending Radius (mm)
0.5	5.0	25	20
1.0	5.5	38	25
1.5	6.0	55	30
2.5	6.8	92	35
4.0	7.8	148	40
6.0	9.8	221	50
10.0	10.8	368	60
16.0	13.0	588	75
25	15.5	920	90
35	18.0	1288	110
50	20.5	1840	130
70	23.5	2576	150
95	27.0	3484	180
120	30.0	4416	200

Note: Dimensions increase proportionally for 3-core, 4-core, and 5-core cables. Contact VITA for specific dimensions.

5 STANDARDS & CERTIFICATIONS

VITA Multi-Core PVC Cable is manufactured and tested in strict compliance with the following standards:

Standard/Certifications	Description
IS 694:2016	Multi-core PVC insulated unarmored cables rated up to 1100 V (India)
IEC 60227	PVC insulated cables - Rated voltages up to 450/750 V
IEC 60228	Conductors of insulated cables

6 SUITABLE APPLICATIONS

VITA Multi-Core PVC Cable is ideal for:

- Power distribution in buildings (residential, commercial, industrial)
- Lighting circuits and appliance connections
- 3-phase motor connections and power supply
- Control circuits and instrumentation wiring
- Temporary and permanent installations
- Distribution boards, panel boards, and sub-station wiring
- Machine tool connections and industrial machinery
- Cable trays and underground duct installations

7 INSTALLATION & SAFETY GUIDELINES

Installation: Cable must be installed by qualified electricians. Minimum bending radius is 5 times the cable diameter. UV-protective conduits recommended for exposed outdoor routing. All connections must comply with relevant solar installation codes.

Storage & Handling: Store in cool, dry environment away from direct sunlight and extreme temperatures. Shelf life: 24 months from manufacturing date (under optimal conditions).

Technical Support: Contact our technical team for installation guidance and specifications.

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