The Suraksha Chakra

To keep your family safe and protected

V-Guard Wires & Cables





Efficient Performance

For over four decades V-Guard lived up to the reputation of making reliable products that were designed to work efficiently and last a lifetime. And now we are taking our next quantum leap. Harnessing the learnings, insights and experience of four decades it will be our endeavour to understand human lives and its relationship with the tools and appliances that he uses. And then to evolve a seamless experience with thoughtful engineered products in our quest to enriching consumer lives. V-Guard has emerged as a prestigious manufacturer for availing an array of Cables befitting the demands of modern day technology. Wires and Cables from V-Guard are known for their cutting-edge product features, and efficient performance.

Certified by Certified by





Tested at





CPRI

ERDA

Accreditation



International Research Institute for Manufacturing[™] (IRIM)
NATIONAL AWARD FOR
MANUFACTURING COMPETITIVENESS 2015-16

Major Approvals & Supplied Projects





Wires & Cables Division

V-Guard wires and cables manufacturing facilities are located at Coimbatore in Tamil Nadu and Kashipur in Uttarakhand. Both factories put together have the capacity to produce 110 Lakh Coils (in terms of 90 mtr.) and 30,000 Km of Multicore Round & Flat Cables per annum. The factories boast of state-of- the-art technology, both indigenous and imported, with RBD, Wire drawing machines and Bunchers supplied by Niehoff and Triple Layer Insulating Lines supplied by Nextrom, Johann Leimbach, etc.





3 LAYERED WIRES 3 TIMES PROTECTION

Description	Wires Factory, Coimbatore	Wires Factory, Kashipur	PVC Compounding Unit
PLANT ADDRESS	V-Guard Industries Ltd., (Cable Division), K.G.Chavadi, Coimbatore - 05.	V-Guard Industries Ltd., 6th Km Stone, Moradabad Road, Village Basai, Khasra No. 86, Kashipur, Udham Singh Nagar, Uttrakhand - 13.	V-Guard Industries Ltd., K. G. Chavadi, Coimbatore -05.





PVC Compounding Division

V-Guard Wires & Cables Division has also implemented a backward integration project for producing its own PVC Grades for House Wiring Cables and Multicore Round & Flat Cables. The PVC Compounding Unit is a fully automated state-of-the-art modern plant established with focus on the best manufacturing practices right from the material handling to the finished goods packing for obtaining the best quality of the product consistently in a safe environment.

All raw materials used are high quality global and indigenous sources which contributes to the best quality of the Wires & Cables.

The PVC Compounding plant boasts of machinery with the world renowned extrusion technology from Germany and a full-fledged dedicated QA Lab for testing the incoming raw materials and the finished goods.

The present capacity of the plant is 400MT per month and next expansion project would be 500MT per month.

Range available



Flat Cables













Cables

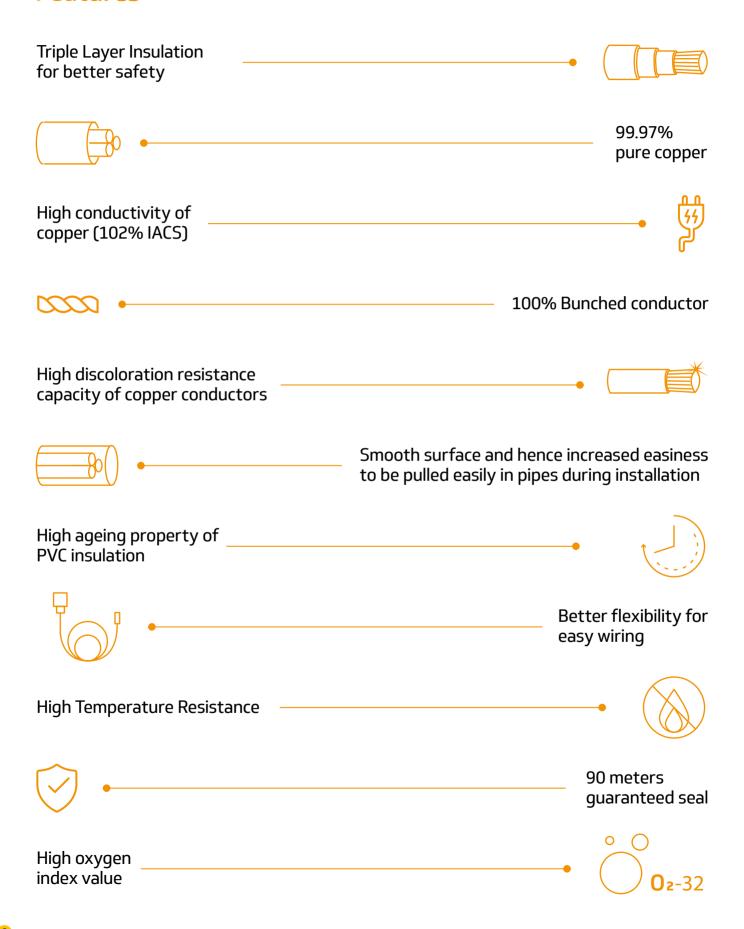


Aluminium Cables





Features



FR Cable (Flame Retardant Cable)



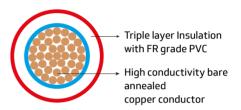
V-Guard FR (Flame Retardant) cable can withstand continuous heat up to 70°C

Application

The cables can be used in Domestic, Residential and Industrial Infrastructure projects.

Technical Details

- Product reference standard: IS694:2010
- Voltage Grade: Up to and including 1100V
- Size: 0.5 to 120 sq. mm in Single core
- · Conductor: Thin strands of multi drawn Electrolytic Copper
- Insulation Conformity: IS 5831, Type A/D FR 70°C
- · Colours: Red, Yellow, Blue, Black, Green, Grey & White
- Marking: The cables are printed with marking of 'FR'
- Packing: 90 mtrs. coil is packed in protective cartons up to size 4 sq.mm and other sizes in polycover. Project packing of 180 mtrs & 270 mtrs are also available



	Technical Specifi	cations of Single C	ore, FR PVC Insula	ted Unsheathed (Cables 1100 Volts		
Nominal Cross	Number/ Nom.	Max Conductor	Approximate	Nominal	Current carry Two cables	ring capacity single phase	
Sectional area of conductor	Dia of cond. strandsZ	Resistance per KM @ 20°C	overall thickness of Diameter insulation In cond		In conduit/ trunking	Unenclosed - clipped directly to a surface or on cable tray	
Sq. mm	mm	Ohms	mm	mm	Amps	Amps	
0.50	16/0.2**	39.0	2.20	0.6	3	4	
0.75	24/0.2**	26.0	2.30	0.6	6	7	
1.0	14/0.3*	18.10	2.70	0.7	11	12	
1.5	22/0.3*	12.10	3.00 0.7		13	16	
2.5	36/0.3*	7.41	3.60	0.8	18	22	
4.0	56/0.3**	4.95	4.00	0.8	24	29	
6.0	84/0.3**	3.30	4.60	0.8	31	37	
10.0	140/0.3**	1.91	6.10	1.0	42	51	
16.0	126/0.4**	1.21	7.20	1.0	57	68	
25.0	196/0.4**	0.780	9.10	1.2	71	86	
35.0	276/0.4**	0.554	10.30	1.2	91	110	
50.0	396/0.4**	0.386	12.30	1.4	120	145	
70.0	360/0.5**	0.272	14.30	1.4	165	200	
95.0	475/0.5**	0.206	16.60	1.6	200	235	
120.0	608/0.5**	0.161	18.40	1.6	225	270	
* A:	s per conductor cla	ass 2 of IS:8130-19	984 ** As per co	onductor class 5 of	f IS:8130-1984		
		FR inc	dicates Flame Reta	ardant			



FRLSH Cable (Flame Retardant Low Smoke & Low Halogen)



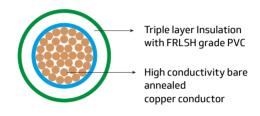
V-Guard FRLSH cables are made from specially formulated PVC polymers that restrict the toxic gases and smoke and therefore are safe, reliable, flame retardant and a non-toxic alternative.

Application

Cables for wiring in fire and explosion prone areas, schools, hospitals, malls, commercial complexes, theaters, airports, hotels, residential apartments, densely populated area and public buildings.

Technical Details

- · Cable design reference standard: IS694:2010
- Voltage Grade: Up to and including 1100V
- Size: 0.5 to 120 sq. mm in Single core
- · Conductor: Thin strands of multi-drawn Electrolytic Copper
- Insulation Conformity: IS 5831, Type A/D FRLSH 70°C
- · Colours: Red, Yellow, Blue, Black, Green, Grey & White
- Marking: The cables are printed with marking of 'FRLSH'
- · Packing: Packing of 180 meters coils available



Technic	Technical Specifications of Single Core, FRLSH PVC Insulated Unsheathed Cables 1100 Volts									
Nominal		Max				arrying capacity es single phase				
Cross Sectional area of conductor	Number/ Nom. Dia of cond. strands*	Conductor Resistance per KM @ 20°C	Approximate overall Diameter	Nominal thickness of insulation	In conduit/ trunking	Unenclosed- clipped directly to a surface or on cable tray				
Sq. mm	mm	Ohms	mm	mm	Amps	Amps				
0.50	16/0.2	39.0	2.20	0.6	3	4				
0.75	24/0.2	26.0	2.30	0.6	6	7				
1.0	32/0.2	19.50	2.50	0.6	11	12				
1.5	30/0.25	13.30	2.70	0.6	13	16				
2.5	48/0.25	7.98	3.40	0.7	18	22				
4.0	56/0.3	4.95	4.00	0.8	24	29				
6.0	84/0.3	3.30	4.60	0.8	31	37				
10.0	140/0.3	1.91	6.10	1.0	42	51				
16.0	126/0.4	1.21	7.20	1.0	57	68				
25.0	196/0.4	0.780	9.10	1.2	71	86				
35.0	276/0.4	0.554	10.30	1.2	91	110				
50.0	396/0.4	0.386	12.30	1.4	120	145				
70.0	360/0.5	0.272	14.30	1.4	165	200				
95.0	475/0.5	0.206	16.60	1.6	200	235				
120.0	608/0.5	0.161	18.40	1.6	225	270				
	1	* As per condu	ictor class 5 of IS	:8130-1984						
	FRLSH	indicates Flam	ne Retardant Low	Smoke & Low H	lalogen					

HRFR Cable (Heat Resistant and Flame Retardant)



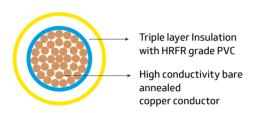
V-Guard Heat Resistant and Flame retardant Cables are suitable to bear temperature up to 85° C along with flame retardant and heat resistant properties.

Application

The cables can be used in Domestic, Residential and Industrial Infrastructures.

Technical Details

- Product reference standard: IS694:2010
- Voltage Grade: Up to and including 1100V
- Size: 0.5 to 120 sq. mm in Single core
- · Conductor: Thin strands of multi-drawn Electrolytic Copper
- Insulation Conformity: IS 5831, Type C HRFR 85°C. As per customer requirement 105°C HRFR cable also can be provided
- · Colours: Red, Yellow, Blue, Black, Green, Grey & White
- Marking: The cables are printed with marking of 'HRFR'
- Packing: 90 mtrs. coil is packed in protective cartons upto size 4 sq.mm and other sizes in polycover. Project packing of 180 mtrs & 270 mtrs are also available



Technical Specifications of Single Core, HRFR PVC Insulated Unsheathed Cables 1100 Volts									
				_		rrying capacity s single phase			
Nominal Cross Sectional area of conductor	Number/Nom. Dia of cond. strands*	Max Conductor Resistance per KM @ 20°C	Approximate overall Diameter	Nominal thickness of insulation	In conduit/ trunking	Unenclosed- clipped directly to a surface or on cable tray			
Sq. mm	mm	Ohms	mm	mm	Amps	Amps			
0.50	16/0.2	39.0	2.20	0.6	4	4			
0.75	24/0.2	26.0	2.30	0.6	8	8			
1.0	14/0.3	18.10	2.70	0.7	12	13			
1.5	22/0.3	12.10	3.00	0.7	14	18			
2.5	36/0.3	7.41	3.60	0.8	20	24			
4.0	56/0.3	4.95	4.00	0.8	26	32			
6.0	84/0.3	3.30	4.60	0.8	34	41			
10.0	140/0.3	1.91	6.10	1.0	47	58			
16.0	126/0.4	1.21	7.20	1.0	65	79			
		* Conducto	r as per IS:8130	-1984					
	Н	RFR indicates Hea	t Resistant and	Flame Retardan	t				



Multi Core Round Cables



V-Guard Multicore cables are available in variant of 70° C & 85° C in FR & FRLSH categories.

Application

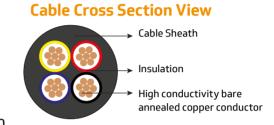
Flexible & Cord Cables for Residential and Commercial infrastructure projects.

Features

- Better finish and strength for heavy duty applications
- Every "meter length" is marked

Technical Details

- Product reference standard: IS694:2010
- Voltage Grade: Up to and including 1100V
- Size: 2, 3 & 4 cores available in sizes from 0.5 to 16 sq.mm
- Conductor: Electrolytic grade annealed copper class 5 as per IS 8130
- Insulation: PVC with 70° C & 85° C rating
- Sheath: ST1/ST3 grade with FR & FRLSH property
- Sheath Colour: Black, Ivory, White & Grey
- Packing: Standard packing of 100 mtr. in coils. Longer length available on request



	Technical Specification of Multicore Round PVC Insulated and PVC Sheathed Flexible Cables, 1100 Volts												
									70°C PVC insulated and ST3 sheathed cables		85°C HR PVC insulated and ST2 sheathed cables		
"Nominal Cross Sectional area of	"Number/ Nom. Dia of cond.	Max Conductor Resistance per KM @	Nominal thickness of	Nominal thickness of Sheath			proxim all Dian		cap (Unenclos directly to	carrying acity sed - clipped a surface or ole tray)	cap (Unenclos directly to	carrying acity sed - clipped a surface or lle tray)	
conductor"	strands**"	20°C	insulation	2 Core	- - -		2 Core	3 Core	4 Core	2 Core & 3 Core Cables for Single Phase AC/ DC	3 Core & 4 Core Cables for Three Phase AC	2 Core & 3 Core Cables for Single Phase AC/ DC	3 Core & 4 Core Cables for Three Phase AC
Sq. mm	mm	Ohms	mm	mm	mm	mm	mm	mm	mm	Amps	Amps	Amps	Amps
0.50	16/0.2	39.0	0.6	0.9	0.9	0.9	6.2	6.5	7.0	4	4	5	5
0.75	24/0.2	26.0	0.6	0.9	0.9	0.9	6.5	6.9	7.5	7	7	8	8
1.0	32/0.2	19.5	0.6	0.9	0.9	0.9	6.9	7.4	8.0	12	10	14	12
1.5	30/0.25	13.3	0.6	0.9	0.9	1.0	7.5	8.0	8.7	16	14	19	17
2.5	48/0.25	7.98	0.7	1.0	1.0	1.0	8.9	9.4	10.3	20	18	24	22
4.0	56/0.3	4.95	0.8	1.0	1.0	1.0	10.1	10.8	11.9	27	24	32	29
6.0	84/0.3	3.30	0.8	1.1	1.2	1.2	11.5	12.4	13.6	34	30	41	36
10.0	140/0.3	1.91	1.0	1.3	1.4	1.4	14.7	15.8	17.5	44	39	53	47
16.0	126/0.4	1.21	1.0	1.4	1.4	1.4	17.0	18.1	20.0	61	55	73	66
		**	As per cond	uctor (lass 5	of IS:8	130-19	984					

3 Core Flat Submersible Cables



V-Guard Three core flat cables are ideally suited for heavy duty applications mainly in submersible pumps

Application

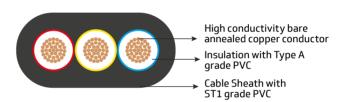
Flat cables for Submersible Pumps & Motors

Features

- Better finish and strength for heavy duty applications
- Non hygroscopic: Protection against ingress of water
- High abrasion resistant

Technical Details

- Cable design reference standard: IS694:2010
- Voltage grade: Up to and including 1100V
- Size: 1 to 10 sq. mm in three cores
- Conductor: Electrolytic grade annealed copper class 5 as per IS 8130
- Insulation Conformity: IS 5831, Type A grade.
- Sheath Conformity: IS 5831, ST1 grade.
- Sheath Colour: Black
- Packing: Standard packing of 500 mtr (coils & drum)
 Longer length also available on request



Ted	Technical Specification of Three Core Flat PVC Insulated and PVC sheathed cables, 1100 Volts										
Nominal Cross Sectional area of	Number/Nom. Dia of cond. strands**	Max Conductor Resistance per	Nominal thickness of	Nominal thickness of		ximate Diameter	Current carrying				
conductor	or cond. Stranus	KM @ 20°C	insulation	Sheath	Width	Height	capacity at 40°C				
Sq. mm	mm	Ohms	mm	mm	mm	mm	Amps				
1.0	32/0.2	19.5	0.6	0.9	9.4	4.4	12				
1.5	30/0.25	13.3	0.6	0.9	10.3	4.7	16				
2.5	48/0.25	7.98	0.7	1.0	12.3	5.5	22				
4.0	56/0.3	4.95	0.8	1.0	14.1	6.2	29				
6.0	84/0.3	3.30	0.8	1.1	16.2	7.0	37				
10.0	140/0.3	1.91	1.0	1.4	20.9	8.9	51				
		** As per conduct	tor class 5 of 19	5:8130-1984							



Coaxial Cable (RG6)



V-Guard Coaxial Cables are designed to be used at homes for television sets and also in security agencies for advanced data transmission.

Salient Features

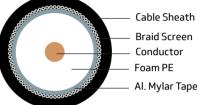
- · Protects signals from external electromagnetic interference
- Very low Attenuation or signal losses
- For both analog and digital transmission
- Special jacketing offers increased life even in rugged conditions
- Jelly flooded

Technical Details

- Conductor: The central conductor is made of solid electrolytic grade annealed bare copper (BC) conductor or copper clad steel (CCS) conductor.
- Insulation: The insulation provided over the conductor is of foam PE dielectric insulator with gas injucted in it to reduce signal loss .
- Screen: Aluminium mylar tape is provided over the insulated conductor to shield the conductor and ensure disturbance-free transmission of signals
- Braiding: The braiding is generally provided with 60% coverage of Aluminium-Magnesium alloy
- Packing: Available in 100 meter packed in carton and 305 meter packed in easy pull box. Higher lengths available on special request







Telephone Cables



V-Guard twisted paired cables are best suited for telephone and switchboard cabling applications. The cables can be used for switchboard and internal telephone wiring in apartments, high-rise buildings, offices, factories, hotels, residential complexes, etc. The most common sizes are 2 Pair, 3 Pair, 4 Pair and 5 Pair in conductor of 0.4 mm or 0.5 mm.

Salient Features

- Low Power Loss
- Low Crosstalk
- Fire Retardant Sheath
- Low attenuation

Range of Product

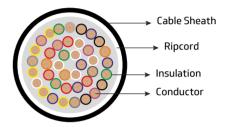
• 1 Pair to 20 Pair (0.4 mm / 0.5 mm)

Technical Details:

- Conductor: The central conductor is made of bare annealed solid electrolytic grade of copper
- Insulation: Premium quality HDPE is used. This serves for low attenuation and minimized cross talk
- Twisted Pairs: The cores are carefully twisted with suitable lays and bunched together
- Packing: Available in 90 meter packed in carton and 500 meter packed in easy pull box. Higher lengths available on special request

SI. No	Technical Parameters	Requirements						
Α	Physical Parameter							
1	Construction	1 Pair	2 Pair	3 Pair	4 Pair	5 Pair		
2	Conductor Material:	Solid Annealed Bare Copper of						
	0.4 mm diameter (nom.) & 0.5 mm diameter (nom.)		Conductivit	y 102% IACS & Pu	rity 99.97%			
3	Insulation Material (0.4 & 0.5 mm dia.)		High	Density Polyethy	/lene			
4a	Insulation Thickness (Average) for 0.4 mm dia.	0.17 mm	0.17 mm	0.17 mm	0.17 mm	0.17 mm		
4b	Insulation Thickness (Average) for 0.5 mm dia.	0.20 mm	0.20 mm	0.20 mm	0.20 mm	0.20 mm		
5a	Diameter of Insulated Conductor for 0.4 mm dia.	0.74 mm	0.74 mm	0.74 mm	0.74 mm	0.74 mm		
5b	Diameter of Insulated Conductor for 0.5 mm dia.	0.92 mm	0.92 mm	0.92 mm	0.92 mm	0.92 mm		
6	Rip cord (0.4 & 0.5 mm dia.)	Nylon						
		White-Blue	White-Blue	White-Blue	White-Blue	White-Blue		
		-	White-Orange	White-Orange	White-Orange	White-Orange		
7	Colour Combination		-	White-Green	White-Green	White-Green		
				-	White-Brown	White-Brown		
					-	White-Grey		
8a	PVC Jacket (0.4 mm diameter & 0.5 mm diameter)	F	RPVC compound	with high oxygen	index (LOI = 29%)	*		
8b	PVC Thickness Minimum (in mm)	1.1	1.1	1.1	1.2	1.2		
9	Approx. Outer Diameter (for 0.4 mm)	2.4	3.1	3.5	3.9	4.3		
10	Approx. Outer Diameter (for 0.5 mm)	3.1	3.9	4.2	5.1	5.6		
11	Packing Length (meters)	90	90	90	90	90		
В	Electrical Parameters							
1	Conductor Resistance (max.) ohms/km at 20°C	143 Ω /	km for 0.4 mm d	iameter & 92.2 Ω /	/ km for 0.5 mm di	iameter		
2	Mutual Capacitance (max.) Nano Farads/km	50	50	50	50	50		
3	Insulation Resistance in Air (min.) Meg-ohms/km	10000	10000	10000	10000	10000		
4	Capacitance Unbalance Pair to Pair (max.) Pico Farad / km	250	250	250	250	250		







Lan Cable



V-Guard LAN Cables enable data transfer without transmission loss or theft. These technologically advanced cables are compatible with the most superior networking switch gears and provide express-speed performance of up to 250 MHz. Its unique zero interference feature assures that signal loss is experienced during data transfer process.

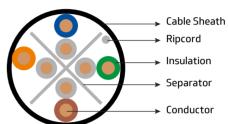
Salient Features

- · Min. radiation and max. noise immunity
- Excellent electromagnetic compatibility
- High speed data access
- Prevent cross talking

Technical Details

- · Conductor: Solid bare copper
- Insulation: High density polyethylene
- Pair: 2 Insulated conductors twisted together with unique lay
- Outer Jacket: FR PVC
- Outer Jacket colours White, Grey, Yellow, Blue, etc. or as per customer requirement
- Packing: Available in 305 meter packed in easy pull box

TECHNICA	TECHNICAL SPECIFICATION OF UTP CAT6 (23AWG) 4 Pair							
Description	Unit	Size / Specification						
CONDUCTOR:		·						
Conductor Material		23 AWG Solid Annealed Bare Copper						
Conductor dia	mm	0.55 ± 0.01						
INSULATION								
a) Composition of insulation		High Density Polyethylene						
b) Nominal diameter for insulation	mm	0.24						
c) Nominal Thickness for insulation	mm	0.98 ± 0.02						
LAID UP								
Rip Cord Material		3 Ply Nylon						
Colour Codes		Brown / Brown-White Green / Green -White Blue / Blue-White Orange / Orange-White						
SHEATH								
a) Composition of Sheath	-	FRPVC compound with high oxygen index (LOI > 29%)*						
b) Hardness of Sheath	Shore A	86 - 88						
c) Nominal Thickness for sheath	mm	0.7						
d) Nominal Diameter for sheath	mm	6.0 ± 0.2						
ELECTRICAL CHARACTERISTICS								
Mutual Capacitance (nominal)	nF/100m	5.6						
Characteristic Impedance	Ω	100±15						
Nominal Velocity of Propagation	%	69						
Conductor Resistance	Ω/100m	< 9.38						
Mutual Capacitance	nF/100m	< 5.6						
Resistance Unbalance	%	5 (Max)						
Capacitance Unbalance	pF/100m	330						
Delay Skew	nS	< 45						
Pulling Force	Kg	11.5						
Temperature Range	°C	20° to +70°						



CCTV Cable



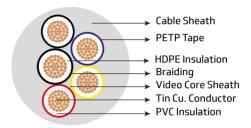
V-Guard offers specially designed cables for CCTV Camera cable for high quality video transmission. These cables are designed to transmit the complete video frequency range with minimum distortion or attenuation. They offer reliable security by withstanding over-heating, seepage, weather changes and rodent attacks.

Salient Features

- · Min. distortion of video frequency range
- Clear Picture even on low frequency

Technical Details

- Screened Core for Video signal
- Conductor: The central conductor is made of fine wires tin coated electrolytic grade copper
- Insulation: The insulation provided over the conductor is of HDPE with high dielectric strength and low capacitance
- Screen: Annealed tin coated copper 85% coverage approx
- Sheath: Black coloured PVC Power Cores
- Separator: PETP tape
- Sheath: PVC
- · Cable Colour: White.
- Packing: Available in 100 meter packed in carton and 305 meter packed in easy pull box.



	TECHNICAL SPECIFIC	ATI	ON OF CCTV CABLES					
	Construction	on F	Parameters					
Co-axia	al Cable Section			Power Cable Section				
Inner Conductor			Number of Cores	3+1	4+1			
Material	Annealed Tinned Copper		Conductor	7x0.20 Annealed Ti	nned Copper			
Diameter in mm (Nom)	9x0.20		Insulation	Type A PVC conformi	ng to IS:5831			
Dielectric Insulation			Diameter in mm (Nom)	1.47				
Material	PE				Dad Vallani			
Diameter in mm (Nom)	1.50		Colour Codes	Red, Yellow, Blue	Red, Yellow, Blue, Black			
Shield			Jacket					
Material	48/0.12 TC		Material	aterial ST 1 PVC conforming to IS:583				
Jacket			Colour	White				
Material	PVC Black		Diameter in the second	6.50	7.00			
Diameter in mm (Nom)	3.00		Diameter in mm	6.50				
	Electrical S	Spe	cifications					
Nominal DC Resistance at 20° C (Ohm)	3.55			Performance				
M. A 1 C	F2		Frequency in MHz	Max. Attenuation (db/	100m) at 20° C			
Mutual Capacitance (pf/m)	53		55	6.73				
Characteristics Impedance			187	11.81				
(Ohm)	75		300	14.60				
			550	19.52				
Structural Return Loss	Min 15 dB @ 1 - 1000 MHz		750	22.87				
Name and Valority Basis (202	0.5		865	24.67				
Nominal Velocity Ratio (%)	85		1000	26.64				





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