ORBIT®

THE POWER OF PEOPLE

Communication Cables

www.orbitcables.com

THE QUALITY REVOLUTION

EVOLUTION OF ETHERNET FOR HIGH SPEED INTERNET

CONTENTS

About **Company**

Orbit Group of Companies is a renowned wiring and cabling solution partner, established in 1996. We have dominated the trade and engineering of wires and cables for over two decades with dynamic and pioneering technology.
Orbit wires and cables are designed and manufactured by the industry's best and are continually evolving to stay ahead of market demands. Our trusted products are designed and fabricated with efficiency and focus on the minutiae to ensure a satisfactory experience for every customer.

Orbit wires and cables are credited to be a one-stop enterprise that manufactures and sells a variety of wiring and cabling solutions for diverse applications. As an established enterprise we promise to deliver reliable and standard wiring and cabling solutions for your specific needs at a competitive price.

Message From **The Chairman**

Mr. RK Agarwal
Founder

One of the core purposes of Orbit Wires India Pvt. Ltd. is to build a long term relationship with people and organizations across the globe. Orbit Wires Company has proactively worked towards creating brand credibility and recognition by maintaining the industry standards of our products. We strive to be an innocuous company with safety as our precedence and aim to ultimately have zero accidents. We aspire to be the best cable manufacturer in the country and establish our brand identity through quality product delivery and commitment towards customer value.

Mr. Amit Agarwal
Managing Director

Ms. Neelam Bansel
Managing Director

Mr. Govinda Agarwal
Managing Director

Mission Vision & **Values**

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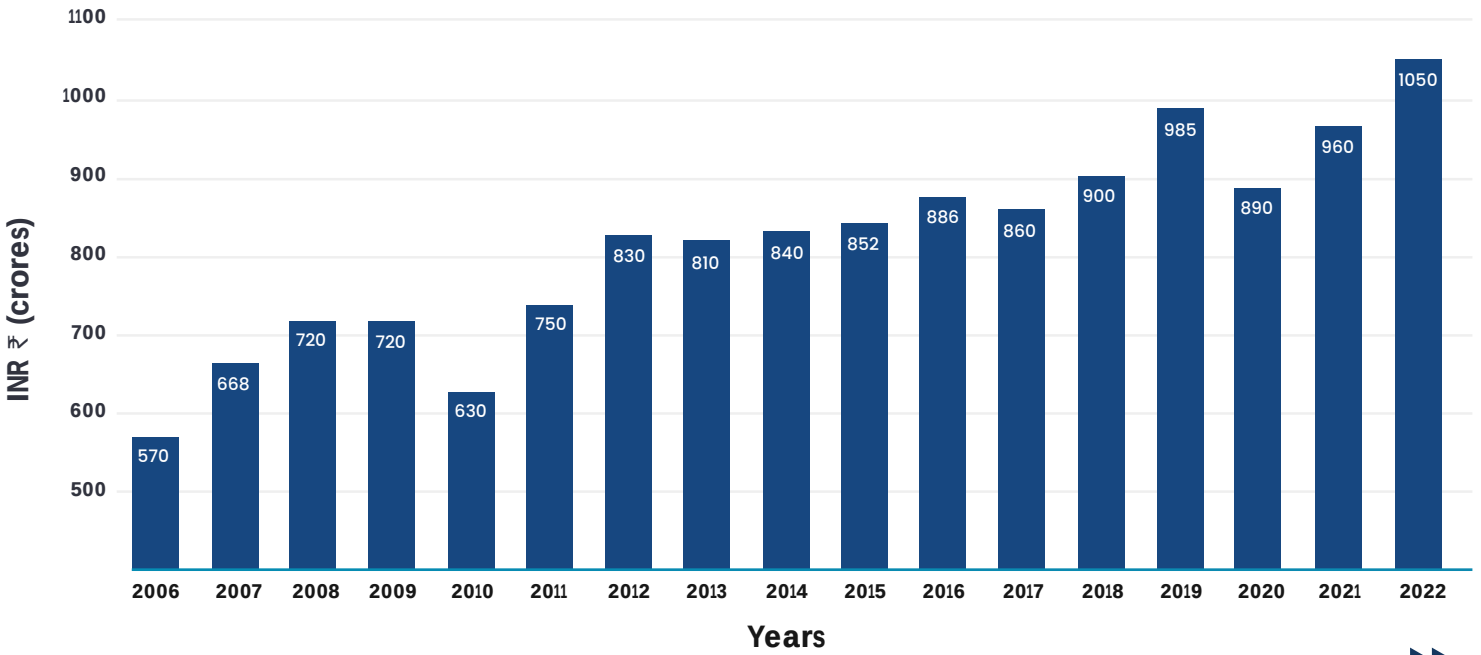


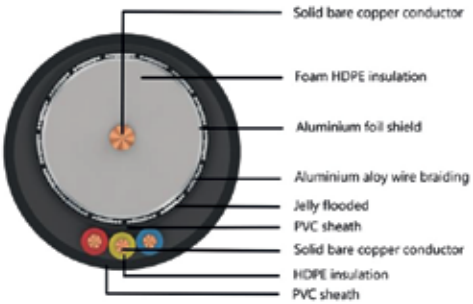
Certificates

QMS

EMS

HEALTH & SAFETY

ORBIT, CCTV (CLOSED CIRCUIT TELEVISION) CABLE



ORBIT offers CCTV cable which are specially designed to transmit complete video frequency with minimum distortion or attenuation.

This cable is offered in two types namely 3+1 CCTV cable & 4+1 CCTV cable. Co-axial cable forms the carrier for video signal and other 4 core or 3 core forms the carrier for power. Technologically superior construction of Co-axial cable in CCTV cable ensures distortion free video signal.

ORBIT CCTV cables are truly tested for all parameters by computerised analyser. CCTV cables with armouring can also be supplied on demand.

APPLICATION

Orbit CCTV cable is designed to use in close circuit camera system for safety and security management in industries, Malls, hospitals, shops, Roads and offices

OPERATION TEMPERATURE

Max.: 70˚ C

CONSTRUCTION

Solid bare copper conductor
Insulated with HDPE (high densitypolyethylene)
Co-axial cable: RG 59 F
Solid bare copper
Insulated with foam HDPE (high density polyethylene)
Inner shielded by Aluminium foil
Braided by aluminium alloy wire braiding with tensile strength
flooded with jelly
Sheathed with PVC type ST1
Sheathed with PVC type ST1

BENDING RADIUS

60 mm

NOTE

CCTV armoured cable is available on demand

FEATURES & ADVANTAGES

Minimum loss in signal quality

Higher bandwidth

Low attenuation value

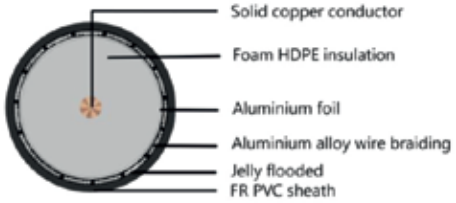
Minimum structural return loss (SRL)

Moisture proof

CCTV cable Type	CCTV cable	Nominal dia. over insulation mm	Dia. over dielectric (RG 59 F) mm	Overall diameter mm
CCTV (3+1)	RG 59 F + 3C x 0.5mm	0.9	3.55	7.5±1.5
CCTV (4+1)	RG 59 F + 4C x 0.5mm	0.9	3.55	7.5±1.5

Parameter	CCTV (3+1)	CCTV (3+1)
Nominal impedance (Ω)	75±3	75±3
Capacitance (pf/m)	53±3	53±3
Maximum DC conductor resistance at 20°C (Ω/km)	35.5	35.5
Velocity of propagation (%)	82	82
Attenuation at 20°C (dB/100 m) at		
5 MHz	2.82	2.82
55 MHz	6.73	6.73
211 MHz	12.47	12.47
250 MHz	13.45	13.45
300 MHz	14.6	14.6
350 MHz	15.75	15.75
400 MHz	16.73	16.73
450 MHz	17.72	17.72
550 MHz	19.52	19.52
600 MHz	22.87	22.87
750 MHz	24.67	24.67
865 MHz	26.64	26.64
1000 MHz	21.45	21.45

ORBIT, JELLY FLOODED CO-AXIAL CABLE



Orbit Co-axial cable for Cable TV network is manufactured at Ahmedabad. The provide an ideal combination of electrical cables the preferred choice for a variety of application in CATV network.

The centre conductor is made of solid electrical grade 99.97% pure copper to ensure better signal transmission. The conductor is insulated with nitrogen gas, which is superior and environment friendly as compared to chemical foam. The double screen of special composite type bonded aluminium foil and special grade aluminium alloy braiding of 60% coverage ensures low loss in signal quality, additional mechanical strength, and resistance to oxide formation in tropical whether conditions. The specially inhouse formulated PVC compound used in jacket is UV and abrasion resistant.

APPLICATION

Orbit Co-axial cables are technologically superior and provide a smooth high frequency signal transmission to CATV network. Orbit Coaxial cables are suitable to use in external as well as in internal installation for low power video signal and broad band signals.

OPERATION TEMPERATURE

Max.: 70˚ C

CONSTRUCTION

RG-59 F/RG-6 F/RG-11 F: Solid bare copper,
RG-6 CCS/RG-11 CCS: solid copper clad steel.
Insulated with foam HDPE (high density polyethylene).
Inner shielded by Bonded Aluminium foil.
Braided with aluminium alloy wire.
Flooded with jelly.
Sheathed with Flame retardant PVC in Black colour.

BENDING RADIUS

20 x Overall diameter

STANDARD & REFERENCES

ANSI/SCTE 74 2011

NOTE

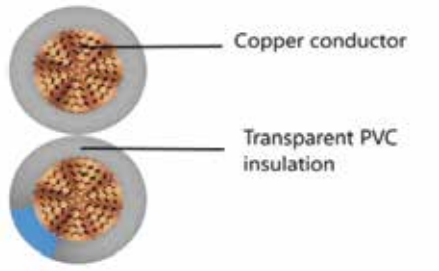
All above products are available with armouring on demand

Co-axial cable	Dia. over dielectric mm	Overall diameter mm
RG-59 F	3.55	5.7
RG-6 F	4.57	6.6
RG-11 F	7.11	9.8
RG-11 CCS	7.11	9.8
RG-6 CCS	4.57	6.8

ELECTRICAL CHARACTERISTICS

Parameter	RG-59 F	RG-6 F	RG-11 F	RG-11 CCS	RG-6 CCS
Nominal impedance (Ω)	75±3	75±3	75±3	75±3	75±3
Capacitance (pf/m)	53±3	53±3	53±3	53±3	53±3
Maximum DC conductor resistance at 20°C (Ω/km)	35.5	21.4	8.5	45 (Conductivity-21%)	112 (Conductivity-21%)
Velocity of propagation (%)	82	82	82	82	82
Attenuation at 20°C (dB/100 m) at					
5 MHz	2.82	1.95	1.25	1.25	1.95
55 MHz	6.73	5.2	3.15	3.15	5.2
211 MHz	12.47	9.5	3.87	3.87	9.5
250 MHz	13.45	10.5	5.74	5.74	10.5
300 MHz	14.6	11.5	6.23	6.23	11.5
350 MHz	15.75	12.4	6.72	6.72	12.4
400 MHz	16.73	13.3	7.38	7.38	13.3
450 MHz	17.72	14.35	7.94	7.94	14.35
550 MHz	19.52	15.7	8.53	8.53	15.7
600 MHz	22.87	16.45	9.02	9.02	16.45
750 MHz	24.67	18.35	9.51	9.51	18.35
865 MHz	26.64	19.95	9.97	9.97	19.95
1000 MHz	21.45	21.45	10.43	10.43	21.45

ORBIT, SPEAKER CABLE



Orbit speaker cable are best to use in connecting receivers or power amplifier to speakers and fo
trouble free internal wiring in the speakers.

Orbit speaker cable with higher number of copper strands, tighter inner twisting and low capacitance ensures the minimum signal loss during transmission of signal from amplifier to speaker. These cables are designed with high conductivity copper and thick insulation will helps to sustain sound quality in longest run. Excellent sound quality and minimum signal loss of Orbit speaker cable make it ideal for both Hi-Fi speaker system & home theatre applications, where long runs for the surrounding channel speakers are required to be discrete. These cables are extremely durable and have thin construction with transparent insulating material.

APPLICATION

Orbit Speaker cables are designed to use in connecting receivers or power amplifier to speakers for clear, trouble free and distortion free voice with low signal loss. Orbit speaker cable is Ideal for both Hi-Fi speaker system, home theatre application and broadcasting application.

VOLTAGE RATING

1100 V

OPERATION TEMPERATURE

Max.: 70˚ C

CONSTRUCTION

Oxygen free stranded copper conductor to
IS 8130, class 5 or class 6.
Insulated with Transparent PVC.

CORE IDENTIFICATION

Natural and Natural-Blue

BENDING RADIUS

4 x Overall diameter

STANDARD & REFERENCES

IS 8130:2013 IS 5831:1984

COMPLIANCE

Conductor Resistance : IS 8130IS
Insulation Resistance : 5831:1984

FEATURES & ADVANTAGES

Distortion free

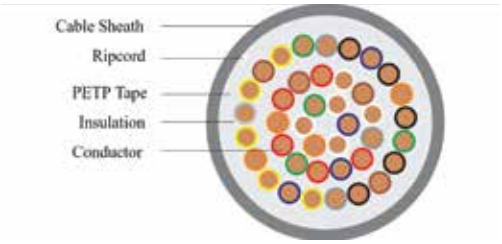
Good quality BUS

Low signal loss during low frequency transmission

Low bending radius

Nominal cross sectional area AWG	Nominal cross sectional area mm²	Nominal insulation thickness mm	Overall dimension mm	Maximum DC conductor resistance at 20°Cmm
20	0.5	0.8	2.51 x 5.02	39
18	0.75	0.8	2.72 x 5.44	26
17	1	0.8	2.89 x 5.78	19.5
16	1.5	0.8	3.18 x 6.36	13.3
14	2	0.8	3.42 x 6.84	9.05
13	2.5	1	4.04 x 8.08	7.98

ORBIT, TELEPHONE CABLES



Orbit Telephone Cable is an important invention that has the ability to connect people all over the world. They consist of numerous pairs of copper insulated wires having a diameter that ranges from 0.3 to 0.9 and are either twisted into two or four pairs. These pairs of wires are then connected to each phone jack in your house. There are many different cables that serve different purposes and vary in configuration, size, and performance.

APPLICATION :

Recommended for switchboard and telephone wiring in residentials and commercial infrastructure, for transmission of analog and digital signals, wiring in faxes, modems, alarm enunciators, data recording/acquisition systems and various communication devices.

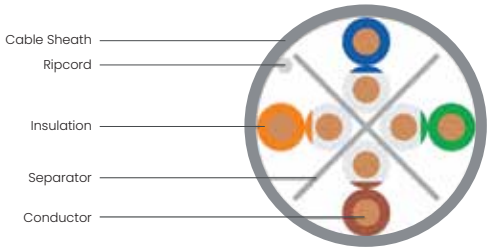
Copper Type	: Drawn from 8mm Wire Rod-Electrolytic Cathode Grade of 99.97% purity
Standard for Conductors	: IS 8130:1984 with latest amendments
Conductor Construction and type for all sizes	: Single Solid in 0.4mm and 0.7mm Conductor Size
Conductor Construction and type manufactured against Order	: Single Solid in 0.6mm and 0.9mm Conductor Size
Standard Insulation Base	: Special grade High Density Polyethylene
Standard Jacketing Base	: Jacketing of FR (Flame Retardant) PVC Compound made from Virgin Grade PVC resin
Insulation Type for all sizes	: Single coloured pressure extrusion
Jacketing Type for all Pairs	: Generally Tubular Extrusion
Rip Cord	: Nylon

SR.No.	Size	OVERALL ODM-M+/-0.5MM	Coils/Master cartoon (std Packing)	100 METER COILS WEIGHT KG	Available Max.Gross wts on Master Cartoon	RESISTANCE OHM/KM
1	1 PAIR X 0.4 MM	2.30	20	0.70	18.0	143
2	2 PAIR X 0.4 MM	2.90	20	1.1	26.0	143
3	3 PAIR X 0.4 MM	3.40	16	1.5	24.0	143
4	4 PAIR X 0.4 MM	3.80	12	1.8	21.6	143
5	5 PAIR X 0.4 MM	4.20	8	2.2	17.6	143
6	1 PAIR X 0.5 MM	2.60	20	1.1	22.0	92.2
7	2 PAIR X 0.5 MM	3.30	20	1.6	36.0	92.2
8	3 PAIR X 0.5 MM	3.80	16	2.1	33.6	92.2
9	4 PAIR X 0.5 MM	4.50	12	2.4	28.8	92.2
10	5 PAIR X 0.5 MM	4.90	8	3.0	24.0	92.2

ELECTRICAL PARAMETERS

Electrical Parameters	Size	
	0.5 mm	0.4 mm
DC conductor resistance2	92.20 Ω/Km at 20°C max.	143.0 Ω/Km at 20°C max.
Mutual capacitance	50 nF/km max.	
Insulation resistance in air	5000 M-Ω/Km	
Capacitance unbalance– pair to pair	230 pF/100m max.	

ORBIT CAT 6E UTP SOLID COPPER CABLE 23 AWG WITH FR-PVC JACKET



This Category 6+, four pair cable is a high-speed, high performance, 100 ohm impedance cable capable of carrying high bit-rate signaling for extended distances in horizontal cabling. Signal amplifiers are not required for a length of 328 feet (100 M). Applications can include Voice, ISDN, ATM 155 Mbps, ATM 622 Mbps 100 Mbps TPDDI, Fast and Giga Ethernet, and IEEE 802.3/5/12, 100 BASE VG (100 BASE NE), 100 BASE-T, 100 Mbps TP-PMD, 1000 BASE-T, 10Gb and any other future applications designed for Category 6 Cables.

APPLICATION :

LAN cables are high performance cables used increasingly for modern computer network systems. These cables form the back bone of modern data transmission in industries, residential and commercial infrastructure.

KEY FEATURES :

For Data Center Applications.
High bandwidth @ 500 MHz.
4 Pair 23 AWG.
FR-PVC jacket.
High speed transmission of Voice, Video and Data on LAN.
Complies to ANSI/TIA 568-C.2 Cat 6A, ISO/IEC 11801 EA.

MECHANICAL PROPERTIES :

Installation Temperature: (0°C to +50°C)
Pulling Force: 25 lbs
Cable Diameter: 6.6 ± 1.0 mm
Rip cord: Nylon Rip cord
Jacket Colour: Light Grey (Customised colours request)
Central Separator: PE Cross Separator
Solid Pairs: 4 Pairs Twisted together
Outer Jacket: FR-PVC sheath
Bending Radius: 4 X OD at 20°C
Operating Temperature: (-20°C to +60°C)
Conductor: 23 AWG Solid Bare Copper
Insulation: High Density Polyethylene

ELECTRICAL PROPERTIES :

Mutual Capacitance: 5.6 nF for 100 Mtr.

Resistance Unbalance (%): max 5.

Conductor Resistance: 9.2 Ω/100 Mtr max.

Capacitance Unbalance: 330 pF for 100 Mtr.

NVP: 69%.

Insulation Resistance: 100 M Ω.

Delay Skew: 48 ns/100 Mtr.

Dielectric strength: 1000 V RMS.

Operating Voltage: 72 V.

Propagation Delay: < 542 ns/100 Mtr.

Current Rating: max 1.5 A

COLOR CODE

Pair Number : Colour

1 - 2 : White-Orange Strip and Orange

3 - 6 : White-Green Strip and Green

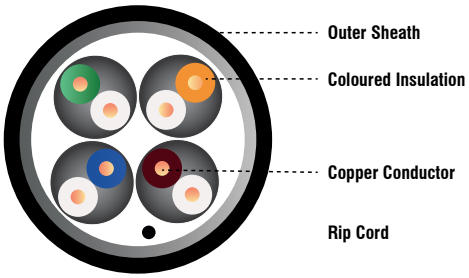
4 - 5 : White-Blue Strip and Blue

7 - 8 : White-Brown Strip and Brown

FREQUENCY MHz	ATTENUATION (dB)	NEXT (dB)	PSNEXT (dB)	ELFEXT (dB)	PSELFEXT (dB)	RETURN LOSS (dB)
1	2.03	74.30	72.30	67.80	64.80	20.0
10	32.9	38.33	36.33	19.84	16.84	17.32
25	9.65	53.33	51.34	39.84	36.83	24.32
62.5	5.95	59.30	57.30	47.80	44.80	25.0
100	15.46	47.36	45.32	31.88	28.88	21.54
250	19.9	44.30	42.28	27.8	24.76	20.11
500	48.90	33.82	31.82	13.80	10.82	15.21

PACKING: Wooden drum of 305 m length (100 m, 500 m and 1000 m on request)

ORBIT CAT 6 UTP SOLID COPPER CABLE 23 AWG DOUBLE JACKET-OUTDOOR



Are widely used in areas of Enhanced performance Cable for Transmission of High speed Data, Digital and Analog Voice & Video (RGB) Signals on LANs. Supports Gigabit Ethernet (1000 baseT) standard. Operates at bandwidth upto 250MHz.

APPLICATION :

LAN cables are high performance cables used increasingly for modern computer network systems. These cables form the back bone of modern data transmission in industries, residential and commercial infrastructure.

KEY FEATURES :

High speed transmission of Voice, Video and Data on LAN
Rugged Double sheath construction
4 Pair 23 AWG
Complies to ANSI/TIA-568-C.2, ISO/IEC 11801
High bandwidth @ 250 MHz
Suitable for Outdoor above ground application
For Data Center Applications

MECHANICAL PROPERTIES :

Solid Pairs: 4 Pairs Twisted together
Inner sheet: PVC
Bending Radius: 8 X OD at 20°C
Cable Diameter: 7.5 ± 0.5 mm
Operating Temperature: (-20°C to +60°C)
Installation Temperature: (0°C to +50°C)
Rip cord: Nylon Rip cord
Pulling Force: 25 lbs
Outer Jacket: Black HDPE/LSZH/Anti Rodent
Central Separator: PE Cross Separator
Conductor: 23 AWG Solid Bare Copper
Insulation: High Density Polyethylene

ELECTRICAL PROPERTIES :

Operating Voltage: 72 V

Conductor Resistance: 9.2 Ω/100 Mtr max

Mutual Capacitance: 5.6 nF for 100 Mtr

Resistance Unbalance (%): max 5

Capacitance Unbalance: 330 pF for 100 Mtr

Delay Skew: 48 ns/100 Mtr

Propagation Delay: < 538 ns /100 Mtr

NVP: 69%

Current Rating: max 1.5 A

Dielectric Strength: 1000 V RMS

Insulation Resistance: 100 M Ω

COLOR CODE

Pair Number : Colour

1 - 2 : White-Orange Strip and Orange

3 - 6 : White-Green Strip and Green

4 - 5 : White-Blue Strip and Blue

7 - 8 : White-Brown Strip and Brown

FREQUENCY MHz	ATT (dB@100 m)	NEXT (dB) min.	PS.NEXT (dB) min.	ACRF (dB@100 m)	PS.ACRF dB@100 m) min	RETURN LOSS (dB@100 m)
1	2.1	65.0	62.0	63.3	60.3	19.0
4	4.0	63.0	60.5	51.2	48.2	19.0
8	5.7	58.2	55.6	45.2	42.2	19.0
10	6.3	56.6	54.0	43.3	40.3	19.0
16	8.0	53.2	50.6	39.2	36.2	18.0
20	9.0	51.6	49.0	37.2	34.2	17.5
25	10.1	50.0	47.3	35.3	32.3	17.0
31.25	11.4	48.4	45.7	33.4	30.4	16.5
62.5	16.5	43.4	40.6	27.3	24.3	14.0
100	21.3	39.9	37.1	23.3	20.3	12.0
200	31.5	34.8	31.9	17.2	14.2	9.0
250	35.9	33.1	30.2	15.3	12.3	8.0

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