



# CATALOGUE

KLJ Paraflex India Ltd. Toll Free: 1800 833 3401



### **OUR COMPANY**

Innovative solutions for all your wiring needs

Paraflex is a product of an ISO 9001:2015 Certified Company and is considered to be one of the fastest-growing companies in the Indian cable industry. Our competitive edge lies in our product innovation, superior quality, and easy availability. With over 50 years of experience, Paraflex is certified by BIS, ISO, NSIC, and SSI, MSME.

Our raw materials are produced in our in-house plant, which is Paraflex GTP approved by NTPC, PCCL, GTA, DVVNL, AVVNL, HPCL, Indian Railways, JBVNL, JUSNL, TSECL, and APEPDCL.

At Paraflex, customer satisfaction is our prime objective. Our dedication to our customers has earned us a distinguished clientele from all sectors, including real estate, contractors, steel and metal, oil and natural gas companies, cement and chemical, atomic energy and nuclear power, construction, and EPC contractors.

Our materials are supplied to states such as Himachal Pradesh, Punjab, Haryana, Delhi, Jammu and Kashmir, Uttar Pradesh, Uttarakhand, Rajasthan, Bihar, Jharkhand, West Bengal, Maharashtra, Madhya Pradesh, Chhattisgarh, Goa, Assam, Orissa, Andhra Pradesh, and Himachal Pradesh.

The growth of our customers is a prerequisite to the development of our company, and we strive to provide the best service and dedication to ensure their satisfaction.

### **PRODUCT IN THE MARKET**

At Paraflex, we are proud to offer high-quality wires and cables that are made from the finest materials and tested to exacting standards. This commitment to quality sets our products apart from those on the market and ensures that they meet the stringent requirements of organizations such as BIS.

Our cables are BIS-marked and have been approved by various departments, and our company is ISO 9001:2015 certified. This further demonstrates our dedication to producing top-quality products.

Our cables are trusted by a range of government departments, including NTPC and UP Housing Board, and are used in a variety of applications. We take pride in the fact that our products are reliable, durable, and able to meet the demands of various industries and environments.

### **OUR SPECIALTY (in UNI-R)**

- The Multistrand is triple-twisted with triple-layer PVC.
- ◆ The submersible is triple-twisted.
- Use of Unique Bunched Copper.
- ◆ First manufacture in India.
- ◆ The first priority is to maintain a quality product.
- Best quality equipment in laboratory.
- Experienced technician & staff.
- ◆ Fast Delivery on time.
- ◆ Fire Retardant Low Smoke





CONDUCTOR

### WHAT MAKES PARAFLEX SO UNIQUE?

Our company has introduced an innovative product, UNIR, to the Indian market. This product is a multistrand triple twisted copper with triple-layer PVC and is designed for use as a submersible flat cable. It features high-class PVC and triple-twisted copper for enhanced performance and durability.

# CERTIFICATION

Achieve Industry-Leading Quality with Our Certified Products



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### Certificate of Registration

### KLJ PARAFLEX INDIA LIMITED

OFFICE: 3/71, 3/72 RAM GALI VISHWAS NAGAR, SHAHDARA, DELHI — 110037, INDIA MANUFACTURING UNIT: PLOT NO. E-1224 RICO INDUSTRIAL AREA, BHIWADI ALWAR, RAJASTHAN — 301019, INDIA

has been assessed and Certified by Otabu Certification Pvt. Ltd.

ISO 9001:2015

### Quality Management System

For the following scope of activities:

MANUFACTURER AND SUPPLIER OF PVC INSULATED WIRES AND CABLES, CONDUIT PIPE. ADHESIVE INSULATING ELECTRIC TAPES & MOULDED PLUGS

Date of Certification: 14 December 2021 1st Surveillance Due: 13 December 2022 Revision No.(.) 1 NA 2nd Survellance Dust 13 December 2023 Certificate Expiry: 13 December 2024 (signs of to coryon valencing is gister to the

Certificate No:- 1214Q126221









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### Certificate of Compliance



RoHS Directive (2011/85/EU) Of the European Parliament and of the Council On The

### KLJ PARAFLEX INDIA LIMITED

OFFICE: 371, 372 RAM GALL VISHWAS NAGAR, SHAHDARA, DELHI - 110032 INDIA.

MANUFACTURING UNIT, PLOT NO. E-1224 RIICO INDUSTRIAL AREA. BRIWADI ALWAR, RAJASTHAN - 101019 INDIA.

MANUFACTURER

### PRODUCT - PAC INSULATED WIRES AND CABLES, CONDUIT PIPE, ADHESIVE INSULATING ELECTRIC TAPES & MOULDED PLUGS.

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### INTERODUCTION

### PARAFLEX Wires

As an ISO 9001:2015 certified company, Paraflex is dedicated to providing superior quality cables and wires using the latest technology and techniques. We are also recognized by various certifications such as BIS, ISO, NSIC, MSME and SSI, which attest to the high standard of our products. In addition, we actively invest in research and development to optimize production efficiency while minimizing our environmental impact.

Paraflex is a trusted vendor for many reputable clients such as North Eastern Railway, North Frontier Railway, Central Railway, CPWD, MCD, NTPC, HCL, Western Command, Central Command, and many more. We have manufacturing units in Bhiwadi Rajasthan and supply from various locations, including, Jharkhand, Maharashtra, Karnataka, UP, Himachal, WB, J&K, and UK etc.

At Paraflex, we are committed to delivering innovative products that stand the test of time. Our passion for excellence is reflected in the durability and efficiency of our cables and wires, which is why we are known as **the best brand of wires and cables in India**.



# PARAFLEX® WIRES & CABLES

PARAFLEX UNI-R FR-LSH IS: 694-2010 VOLTAGE GRADE



Traditional BunchConductor



Uni-R Conductor

### **UNI-R** Wires

Triple Twisted With Triple Layer PVC





# UNI-R FR MULTISTRAND SINGLE CORE UNSHEATHED FLEXIBLE INDUSTRIAL CABLES

### FR UNI-R PROPERTIES

TEST	TESTING METHOD	SPECIFIED VALUE
CRITICAL OXYGEN INDEX	IS : 10810 PART 58	OXYGEN INDEX MINIMUM 29%
TEMPERATURE INDEX	IS : 10810 PART 64	MIN. TEMP INDEX 250°C AT 21% OXYGEN

Also meet requirements of Flammability test as per IS:694:90

### SINGLE CORE UNSHEATHED FLEXIBLE INDUSTRIAL CABLE IN VOLTAGE GRADE 1100 VOLTS

Nominal cross sectional area of conductor	Number/Nom . Die of Wire Nominal Thickness of Insulation		Overall Diameter (Approx)	Current Carrying Capacity Rating	Max. Resistance per Km@20°C
Sq. mm	mm	mm	mm	Amps.	Ohms.
0.75	7/0.37	0.6	2.6	10	26.0
1.0	19/0.26	0.7	2.8	16	18.10
1.5	19/0.32	0.7	3.1	24	12.10
2.5	37/0.29	0.8	3.8	35	7.41
4.0	37/0.37	0.8	4.0	48	4.61
6.0	61/0.355	0.8	5.2	70	3.06

COLOURS: Red, Yellow, Blue, Black, Green, Green/Yellow, Grey & White

Approvals: IS 694 marked, CM/L-2675974 Packing: 180 mtrs. coils packed in protective cartons



### HRFRLSH Multistrand Single Core Unsheathed Flexible Cables



### SINGLE CORE UNSHEATHED FLEXIBLE INDUSTRIAL CABLE IN VOLTAGE GRADE 1100 VOLTS

Nominal Cross	Nominal	Overall	Current Carrying	Max. Resistance
Sectional Area	Thickness Of	Diameter	Capacity 2 Cable,	Of Conductor
Of Conductor  Number / Nom. Die Of Wire	Insulation	(Approx)	Single Phase#A	Per Km@20 C

In Conduit / Trunking Unenclosed Clipped Directly To Surface On Cable Tray

Sq. mm	mm	mm	Amps.	Amps.	Ohms.
0.75	0.6	2.3	6	7	26.0
1.0	0.7	2.7	11	12	18.10
1.5	0.7	3.1	13	16	12.10
2.5	0.8	3.7	18	22	7.41
4.0	0.8	4.1	24	29	4.95
6.0	0.8	4.7	31	37	3.30

### SINGLE CORE UNSHEATHED FLEXIBLR INDUSTRIAL CABLE IN VOLTAGE GRADE 1100 V

10	80/0.4**	1.0	6.40	42	51	1.91
16	126/0.4	1.0	7.60	57	68	1.21
25	196/0.4	1.2	9.70	71	86	0.780
35	276/0.4	1.2	10.60	91	110	1.554
50	396/0.4	1.4	12.50	120	140	0.386

**Standard Colors:** 

Red, Yellow, Blue, Black, White, Grey & Green Longer length & other colors are available on request

\*\*As per conductor Class 5 of IS: 8130/1984 # As per IS:3961 (Part V)-1968 Sample Card available on request (1.0 to 6.0 sq. mm) **Our New Invention** 

# 3 CORE





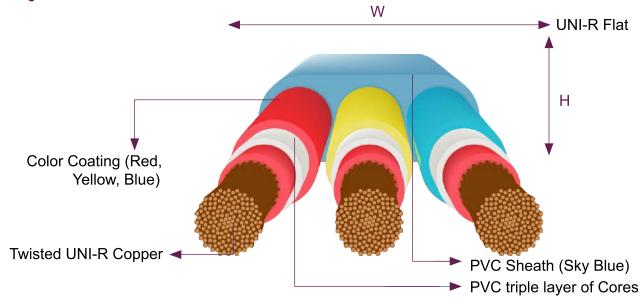


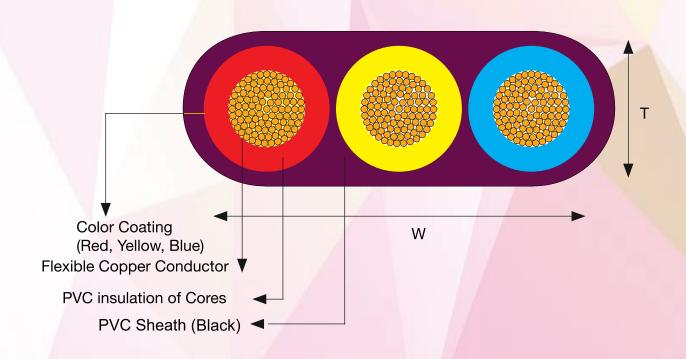
### UNI-R **3** Core Flat PVC Industrial Cables For Submersible Pump Motors

Nominal Area Of Conducto	Number / Nom Dia Of Wire	Thickness Of Insulation (Nom)	Approx. Overall Diameter	Current Carrying Capacity Rating	Resistance (Max) per Km @20°C
Sq. mm	mm	mm	mm	Amps	0hms
1.0	19/0.26	0.7	2.8	16	18.10
1.5	19/0.32	0.7	3.1	24	12.10
2.5	37/0.29	0.8	3.8	35	7.41
4.0	37/0.37	0.8	4.4	48	4.61
6.0	61./0.355	0.8	5.2	70	3.08

Note: Available in 500 ± 5% metre packing in drums. Also available in 100 metre packing on request.

The number and diameter of conductor strands are for reference only. Conductor resistance as per IS 8130 is the governing criteria.









### Core Flat PVC Industrial Cables For Submersible Pump Motors

A submersible pump cable is specifically designed for use with submersible pumps in deep wells. These cables are suitable for installation in physically restrictive and hostile environments and are manufactured for use underground, underwater, or on wet surfaces. Paraflex offers three-core submersible cables that are designed to meet these challenging conditions.

### **Features of 3 Core Flat Cable**

The outer sheath of these cables is made with a highly abrasion-resistant PVC compound that is resistant to grease, oil, and water. It has good insulation properties when submerged in water and excellent mechanical and electrical properties.

Basic Code	Nominal area of	Number/ Size of Wire for	Nominal Thickness of	Nominal Thickness Of	Sheath App Dime	Maximum Conductor Resistance	Current Carrying Capacity	
	conductor	each Core	Insulation	Sheath	Width (W)	Height (H)	At 20 C	At 40 C
	sq. mm	mm	mm	mm	(Nom.) mm	(Nom.) mm	Ω/km	Α
WHPNDSKG 31X0	1.00 sq. mm	14 N/0. 30 mm	0.6 mm	0.9 mm	9.4 mm	4.4 mm	19.50 Ω/km	11 A
WHPNDSKG 31X5	1.50 sq. mm	22 N/0. 30 mm	0.6 mm	0.9 mm	10.1 mm	4.7 mm	13.30 Ω/km	13 A
WHPNDSKG 32X5	2.50 sq. mm	36 N/O. 30 mm	0.7 mm	1.0 mm	12.2 mm	5.5 mm	7.98 Ω/km	18 A
WHPNDSKG 34X0	4.00 sq. mm	56 N/0.30 mm	0.8 mm	1.0 mm	14.6 mm	6.5 mm	4.95 Ω/km	24 A
WHPNDSKG 36X0	6.00 sq. mm	84 N/0.3 mm	0.8 mm	1.1 mm	16.2 mm	7.0 mm	3.30 Ω/km	31 A
WHPNDSKG 3010	10.00 sq. mm	80 N/0.40 mm	1.0 mm	1.4 mm	20.2 mm	8.5 mm	1.91 Ω/km	42 A
WHPNDSKG 3016	16.00 sq. mm	126 N/0.40 mm	1.0 mm	1.4 mm	23.4 mm	9.7 mm	1.21 Ω/km	57 A
WHPNDSKG 3025	25.00 sq. mm	196 N/0.40 mm	1.2 mm	2.0 mm	28.5 mm	11.7 mm	0.780 Ω/km	72 A
WHPNDSKG 3035	35.00 sq. mm	276 N/0.40 mm	1.2 mm	2.0 mm	32.1 mm	13.0 mm	0.554 Ω/km	90 A

Note: Available in 500 ± 5% metre packing in drums. Also available in 100 metre packing on request.

The number and diameter of conductor strands are for reference only. Conductor resistance as per IS 8130 is the governing criteria.





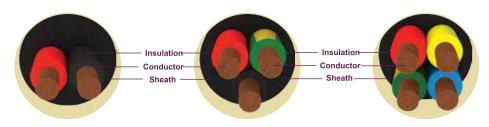
### Multicore Round FR PVC Insulated Copper Conductor (Sheathed) Flexible Cables, 1100 Volt

"PARAFLEX" manufacture and supply premium quality multi core fexible cables with copper conductor for various industrial and domestic applications like electrically operated Machines & Equipment's (eg. Air-Conditioners/ Refrigerators/ motors etc.)

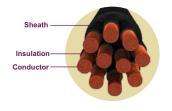
Special formulated "Polyvinyl Chloride" (PVC) used for insulation and sheath tends to fexibility of cables.

The sheathing material provides resistance to oil, moisture and superior mechanical strength without losing its fexibility. These cables can also be made available with HRFR, FR-LSH & HFFR compound on request.

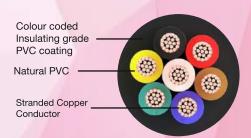
Nominal		Nominal	Nominal Thickness of Sheath			Appx. Overall Diameter			Current	Amp/	e Drop/ Metre	Maximum
Cross Sectional area of conductor	Nominal Diameter of conductor strands2	Thickness of Insulation	2 Core	3 Core	4 Core	2 Core	3 Core	4 Core	Current Rating AC	DC or Single Phase AC	3 Phase AC	Conductor Resistance per kilometre at 20°C
0.5 sq. mm	16 N/0.20 mm	0.6 mm	0.9 mm	0.9 mm	0.9 mm	6.2 mm	6.5 mm	7.0 mm	4 A	83 mV	72 mV	39.0 Ω (Ohm)
0.75 sq. mm	24 N/0.20 mm	0.6 mm	0.9 mm	0.9 mm	0.9 mm	6.6 mm	6.9 mm	7.5 mm	7 A	56 mV	48 mV	26.0 Ω (Ohm)
1.0 sq. mm	32 N/0.20 mm	0.6 mm	0.9 mm	0.9 mm	0.9 mm	6.9 mm	7.3 mm	7.9 mm	11 A	43 mV	37 mV	19.5 Ω (Ohm)
1.5 sq. mm	30 N/0.25 mm	0.6 mm	0.9 mm	0.9 mm	1.0 mm	7.4 mm	7.8 mm	8.7 mm	13 A	31 mV	26 mV	13.3 Ω (Ohm)
2.5 sq. mm	50 N/0.25 mm	0.7 mm	1.0 mm	1.0 mm	1.0 mm	8.8 mm	9.4 mm	10.2 mm	18 A	18 mV	16 mV	7.98 Ω (Ohm)
4.0 sq. mm	56 N/0.30 mm	0.8 mm	1.0 mm	1.0 mm	1.0 mm	10.2 mm	10.9 mm	11.9 mm	24 A	11 mV	9.6 mV	4.95 Ω (Ohm)
6.0 sq. mm	84 N/0.30 mm	0.8 mm	1.1 mm	1.1 mm	1.2 mm	11.5 mm	12.2 mm	13.6 mm	31 A	8 mV	7 mV	3.30 Ω (Ohm)



Sectional Diameter	Nominal	Nominal Thickness	Nominal Thickness of Sheath						opx. Over Diamete			Maximum Conductor	
	of Insulation	5 Core	6 Core	7 Core	8 Core	10 Core	5 Core	6 Core	7 Core	8 Core	10 Core	Resistance per kilometre at 20 °C	
sq. mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	Ω(0hm)
0.5 sq. mm	16 N/0.20 mm	0.6 mm	0.9 mm	0.9 mm	0.9 mm	1.0 mm	1.0 mm	7.8 mm	8.2 mm	8.2 mm	9.4 mm	11.0 mm	39.0 Ω (Ohm)
0.75 sq. mm	24 N/0.20 mm	0.6 mm	0.9 mm	1.0 mm	1.0 mm	1.0 mm	1.1 mm	8.3 mm	9.4 mm	9.4 mm	10.4 mm	11.8 mm	26.0 Ω (Ohm)
1.0 sq. mm	32 N/0.20 mm	0.6 mm	1.0 mm	1.0 mm	1.0 mm	1.0 mm	1.1 mm	9.0 mm	9.8 mm	9.8 mm	10.9 mm	12.5 mm	19.50 Ω (Ohm)
1.5 sq. mm	30 N/0.25 mm	0.6 mm	1.0 mm	1.0 mm	1.0 mm	1.1 mm	1.1 mm	9.8 mm	10.7 mm	10.7 mm	12.0 mm	13.7 mm	13.30 Ω (Ohm)
2.5 sq. mm	50 N/0.25 mm	0.7 mm	1.0 mm	1.1 mm	1.1 mm	1.2 mm	1.3 mm	11.8 mm	12.8 mm	12.8 mm	14.0 mm	16.8 mm	7.98 Ω (Ohm)
4.0 sq. mm	56 N/0.30 mm	0.8 mm	1.1 mm	1.2 mm	1.2 mm	1.3 mm	1.4 mm	13.8 mm	15.8 mm	15.8 mm	16.8 mm	20.4 mm	4.95 Ω (Ohm)







Nominal Number Cross Nominal	Nominal	Nominal Thickness of Sheath						opx. Over Diamete			Maximum		
Cross Sectional area of conductor	Sectional Diameter of of conductor Insulation	Thickness of Insulation	12 Core	14 Core	16 Core	19 Core	24 Core	12 Core	14 Core	16 Core	19 Core	24 Core	Conductor Resistance per kilometre at 20°C
sq. mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	Ω(0hm)
0.5 sq. mm	16 N/0.20 mm	0.6 mm	1.0 mm	1.1 mm	1.1 mm	1.1 mm	1.2 mm	11.6 mm	12.0 mm	12.7 mm	13.2 mm	15.4 mm	39.0 Ω (Ohm)
0.75 sq. mm	24 N/0.20 mm	0.6 mm	1.1 mm	1.1 mm	1.2 mm	1.2 mm	1.3 mm	12.4 mm	12.8 mm	13.8 mm	14.3 mm	16.8 mm	26.0 Ω (Ohm)
1.0 sq. mm	32 N/0.20 mm	0.6 mm	1.1 mm	1.1 mm	1.2 mm	1.3 mm	1.4 mm	12.9 mm	13.7 mm	14.4 mm	15.1 mm	18.0 mm	19.50 Ω (Ohm)
1.5 sq. mm	30 N/0.25 mm	0.6 mm	1.1 mm	1.2 mm	1.2 mm	1.3 mm	1.4 mm	4.2 mm	14.8 mm	15.8 mm	16.6 mm	19.4 mm	13.30 Ω (Ohm)
2.5 sq. mm	50 N/0.25 mm	0.7 mm	1.3 mm	1.3 mm	1.4 mm	1.4 mm	1.5 mm	17.3 mm	18.0 mm	19.5 mm	20.4 mm	23.8 mm	7.98 Ω (Ohm)
4.0 sq. mm	56 N/0.30 mm	0.8 mm	1.4 mm	1.4 mm	1.5 mm	1.5 mm	1.6 mm	20.6 mm	22.0 mm	23.8 mm	25.2 mm	28.5 mm	4.95 Ω (Ohm)

Note: Available in 100 meter length and 500 meter length with black outer sheath. Any color on specific request can be supplied, in economical run.

The number and diameter of conductor strands are for reference only. Conductor resistance as per IS 8130 is the governing criteria. Conductor shall be of Class-V as per IS 8130

Progressive sequential length marking on every metre.

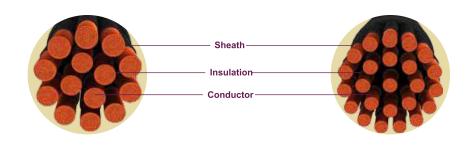
Available in FRLSH outer sheathing on Request.

### Core Identification:

2 CORE : Red & Black
3 CORE : Red, Black & Green
4 CORE : Red, Yellow, Blue & Green
5 CORE : Red, Yellow, Blue, Black & Grey

6 CORE : Red, Yellow, Blue, Yellow-Green, White & Black

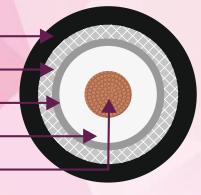
7 CORE & Above: Number printing on each core / Colour code as specified in IS:694







# PARAFLEX WIRES & CABLES



### Co-Axial TV Cables

### **APPLICATION**

Used in cable TV operations, Computer net-working etc.

### CONSTRUCTION

Solid annealed bare copper conductor polyethylene insulated shielded with polyester backed aluminium tape and additional shielding with fine aluminium braid protected with polyester tape wrapping and sheathed with PVC.



### **TECHNICAL DATA**

S. No.	Туре				
1	Size	RG-59, RG-6, RG-11			
2	Inner Conductor	Solid Copper			
3	Insulation	Gas Injected Physical Foamed Polyethylene			
4	Outer Conductor	Bonded polyaluminium Tape, Braided with Aluminium Alloy Wire			
5	Outer Jacket	UV Resistant Black PVC Jacket			
6	Marking	Progressive Sequential Length Marking on Every Metre			

### **ELECTRICAL PARAMETERS**

S. No.	Туре	RG-11 Foam	RG-6 Foam	RG-59 Foam
1	Inner Conductor			
	Max. Resistance Ω/km (Ohm per kilometre) @ 20 °C	0.84 Ω/km	2.13 Ω/km	3.55 Ω/km
2	Inner Conductor			
	Loop Resistance Ω/km (Ohm per kilometre) @ 20 °C	1.66 Ω/km	2.78 Ω/km	4.64 Ω/km
3	Nominal Capacitance (pF/m)	53 pF/m	53 pF/m	53 pF/m
4	Nominal Impedance Ω (Ohm)	75 Ω	75 Ω	75 Ω
5	Nominal Velocity Ratio (%)	85%	85%	85%
6	Nominal Attenuation @ 25 °C (dB/100 m)			
	@55 MHz	2.82 dB	1.95 dB	6.73 dB
	@83 MHz	3.87 dB	6.20 dB	8.04 dB
	@187 MHz	5.74 dB	9.15 dB	11.81 dB
	@211 MHz	6.23 dB	9.50 dB	12.47 dB
	@250 MHz	6.72 dB	10.50 dB	13.45 dB
	@300 MHz	7.38 dB	11.50 dB	14.60 dB
	@350 MHz	7.94 dB	12.45 dB	15.71 dB
	@400 MHz	8.53 dB	13.30 dB	16.73 dB
	@450 MHz	9.02 dB	14.35 dB	17.72 dB
	@500 MHz	9.51 dB	14.95 dB	18.70 dB
	@550 MHz	9.92 dB	15.70 dB	19.52 dB
7	Structural Return Loss (dB/100 m)			
	From 30 MHz to 300 MHz	>26 dB	>28 dB	>30 dB
	From 300 MHz to 550 MHz	>24 dB	>22 dB	>24 dB
	Bending Radius, min (mm)	75 mm	65 mm	65 mm

Note: RG 6 also available in CCS.

### **CONSTRUCTION PARAMETERS**

S. No.	Type Foam	RG-11 Foam	RG-6 Foam	RG-59 Foam	RG 6 CCS Foam
1	Inner Conductor	Solid Bare Copper	Solid Bare Copper	Solid Bare Copper	Copper Coated Steel
2	Nominal Diameter (mm)	1.63 mm	1.02 mm	0.80 mm	1.02 mm ± 0.03 mm
3	Dielectric	Foam PE	Foam PE	Foam PE	Foam PE
4	Nominal Diameter (mm)	7.11 mm	4.57 mm	3.55 mm	4.57 mm
5	Outer Conductor - First	Bonded AL Tape	Bonded AL Tape	Bonded AL Tape	Bonded Al Tape
6	Outer Conductor - Second	AL Braid	AL Braid	AL Braid	Al Braid
7	Nominal Coverage (%)	60%	60%	60%	60%
8	Jacket	PVC (Black)	PVC (Black)	PVC (Black)	PVC (Black)
9	Nominal Diameter (mm)	10.00 mm	7.00 mm	6.20 mm	7.00 mm ± 0.10 mm

Note: Supplied in 90 m & 305 m project packaging.



### **CCTV Cables**

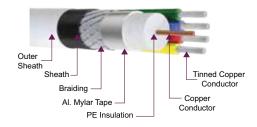
### INTRODUCTION

Paraflex offers two types of CCTV cables: 4+1 CCTV Cable and 3+1 CCTV Cable. Both cables consist of a coaxial cable designed to transmit video signals with minimal distortion or attenuation and additional cores that carry power.

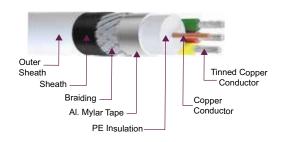
The coaxial cable in Paraflex CCTV cables is made with high-quality materials, including a solid annealed bare copper conductor of electrolytic grade, foamed dielectric insulation, aluminum foil tape, jelly flood, and a braided aluminum alloy outer layer. This construction ensures that the video signals transmitted through the cable remain distortion-free, resulting in clear picture quality over a wide range of frequencies.

In addition, the impedance of the coaxial cable in Paraflex CCTV cables is 75 ohms, which matches the impedance of CCTV equipment. This ensures optimal signal strength, minimal reflection, and exceptional picture quality.

### **CROSS SECTION VIEW FOR 4+1 CCTV**



### **CROSS SECTION VIEW FOR 3+1 CCTV**



	ical Requirement  Particular	214 CCTV	ALA COTV
S. No.		3+1 CCTV	4+1 CCTV
	ial Cable		
1.	Conductor		
	Material	Annealed Bare Copper	Annealed Bare Copper
	No. of Wire/ Diameter of Wire	1 N/0.60 mm ± 0.02 mm	1 N/0.60 mm ± 0.02 mm
2.	Insulation		
	Material	Polyethylene	Polyethylene
	Nominal Thickness of Insulation	0.35 mm	0.35 mm
	Diameter of Insulation	1.30 mm ± 0.10 mm	1.30 mm ± 0.10 mm
3.	Overall Shielded (Braided)		
	First Shield Material	Polyester Backed Al. Foil - 100%	Polyester Backed Al. Foil - 100%
	Second Shield Material	Aluminium Alloy Wire	Aluminium Alloy Wire
	Coverage	55%	55%
Coaxi	al Outer Sheath		
	Material	PVC	PVC
	Diameter of Sheath	2.80 mm ± 0.20 mm	2.80 mm ± 0.20 mm
Power	· Core		
1.	Conductor		
	Material	Annealed Bare Copper	Annealed Bare Copper
	No. of Wire/Diameter of Wire	7 N/0.15 mm ± 0.01 mm	7 N/0.15 mm ± 0.01 mm
2.	Insulation		
	Material	PVC Type-A	PVC Type-A
	Nominal Thickness of Insulation	0.40 mm	0.40 mm
	Diameter of Insulation	1.30 mm ± 0.10 mm	1.30 mm ± 0.10 mm
Outer	Sheath		
1.	Outer Sheath		
	Material	FR PVC	FR PVC
	Nominal Thickness of Sheath	0.70 mm ± 0.10 mm	0.70 mm ± 0.10 mm



### VIR Cables PVC Insulated Unsheathed Solid Stranded Copper Wire

SINGLE CORE SOLID & STRANDED BRIGHT ANNEALED COPPER CONDUCTOR PVC INSULATED

UNSHEATHED WIRES UP TO 1100 VOLTS GRADE, AS PER IS-694/1990,WITH ISI MARK

Nominal cross sectional area of conductor	No. of strand & Size of wire in	Nominal Thickness of Insulation in	Nominal Overall Dia	Max. Resistance of Conductor per Km@20°C	Current rating 2 Cable Single Phase AC/DC
Sq. mm	mm	mm	mm	Ohms.	Amps.
1.0	1/1.13	0.7	3.20	18.10	12
1.5	3/0.80	0.7	3.40	12.10	16
2.5	3/1.04	0.8	4.20	7.14	22
4.0	7/0.85	0.8	4.80	4.16	29
6.0	7/1.04	0.8	5.60	3.08	37
10.0	7/1.35	1.0	7.00	1.83	51
16.0	7/1.70	1.0	8.20	1.15	68
25.0	19/1.30	1.20	10.0	0.727	86
35.0	19/1.53	1.20	11.5	0.524	110
50.0	19/1.78	1.40	13.0	0.387	145
70.0	37/1.55	1.40	15.0	0.268	200
95.0	37/1.80	1.60	17.5	0.193	235
120.0	37/2.03	1.55	19.0	0.153	270

PVC INSULATED UNSHEATHED SINGLE CORE WIRES MANUFACTURED WITH PLAIN ANNEALD COPPER CONDUCTOR SOLID & STRANDED INSULATED WITH ELECTRIC GRADE PVC COMPOUND CONFIRMING (INDUSTRIAL CABLES) CONFIRMING TO BS:2004, VOLTAGE GRADE 650/1100 VOLTS.





# Power & Control Cables

# Paraflex 1.1 kv Two Core PVC insulated unarmoured & armoured cable with Aluminium Conductor conforming to IS 1554

		Nominal	Minimum	UI	NARMOURE	ED	RO	DUND WIRI	E ARMOUR!	ΞD		LAT STRIP	ARMOURE	D	
Nominal Area Of Conductor	From Of Conductor	Thicknes s Of Insulation	Thicknes s Of Inner Sheath	Nominal Thickness Of Outer Sheath	Approx. Overall Diameter Of Cable	Approx. Weight of Cable	Nominal Diameter of Round Wire	Minimum Thickness Of Outer Sheath	Approx. Overall Diameter Of Cable	Approx. Weight of Cable	Nominal Diameter of Flat Strip	Minimum Thickness Of Outer Sheath	Approx. Overall Diameter Of Cable	Approx. Weight of Cable	Normal Delivery Length (m)
(mm²)		(mm)	(mm)	(mm)	(mm)	(kg/km)	(mm)	(mm)	(mm)	(kg/km)	(mm)	(mm)	(mm)	(kg/km)	
4	Solid circulor	1.0	0.3	1.8	14.5	213	1.4	1.24	16.0	474	-	-	-	-	500
4	Stronded Circular	1.0	0.3	1.8	15.5	214	1.4	1.24	17.0	537	-	-	-	-	,,
6	Solid Circular	1.0	0.3	1.8	15.5	256	1.4	1.24	17.5	552	-	ı	-	-	,,
6	Stronded Circular	1.0	0.3	1.8	16.5	274	1.4	1.24	18.0	583	1	ı	-	1	,,
10	Solid Circular	1.0	0.3	1.8	17.0	311	1.4	1.24	18.5	643	-	ı	-	-	,,
10	Stranded Circular	1.0	0.3	1.8	18.0	338	1.4	1.24	19.5	681	1	ı	-	ı	,,
16	Compacte d Circular	1.0	0.3	1.8	19.5	413	1.6	1.4	22.0	882	4.0 X 0.8	1.4	20.5	670	,,,
25	Stronded Shaped	1.2	0.3	2.0	20.5	435	1.6	1.4	22.5	903	,,	,,	21.0	700	,,
35	ш	1.2	0.3	2.0	21.5	506	1.6	1.4	23.5	1005	"	-	22.0	769	,,
50	u	1.4	0.3	2.0	24.5	654	1.6	1.56	27.0	1251	,,	-	25.0	964	,,
70	ii.	1.4	0.3	2.0	27.0	811	1.6	"	29.5	1473	,,	1.56	27.5	1192	,,
95	u	1.6	0.4	2.2	31.5	1156	2.0	,,	34.0	2113	,,	,,	32.0	1584	,,
120	u	1.6	0.4	2.2	32.5	1329	2.0	1.72	36.0	2364	,,	,,	33.0	1781	,,
150	и	1.8	0.4	2.4	37.0	1638	2.0	,,	39.5	2766	,,	1.72	37.0	2106	,,
185	и	2.0	0.5	2.4	40.5	2016	2.0	1.88	43.5	3326	,,	1.88	41.5	2588	,,
240	и	2.2	05	2.6	45.0	2546	2.5	2.04	49.0	4360	"	2.04	46.0	3188	,,,
300	ш	2.4	0.6	2.8	49.0	3090	2.5	2.2	53.0	5060	"	2.2	49.5	3776	,,,
400	и	2.6	0.7	3.2	57.0	3973	3.15	2.52	62.0	6921	"	2.36	57.0	4725	,,
500	"	3.0	0.7	3.4	64.0	4989	3.15	2.84	69.0	8291	,,	2.68	64.0	5872	,,
630	"	3.4	0.7	3.8	72.5	6355	4.0	3.0	79.0	11093	,,	2.84	72.5	7278	,,





## LT XLPE Cables

### XLPE INSULATED UNARMOURED PVC SHEATHED CABLE - SINGLE CORE CU/XLPE/PVC/ CABLE 0.6/1(1.1) kV.

Nominal Cross-		Nominal	Nominal	Approximate	Approximate \	Weight of Cable
sectional Area	Conductor Shape	Thickness of	Thickness of	Overall Diameter	Copper	Aluminium
mm²		mm	mm	mm	Kg / Km	Kg / Km
1.5	r.m.	0.7	1.4	5.8	50	-
2.5	r.m.	0.7	1.4	6.2	62	-
4	r.m.	1.7	1.4	6.8	81	-
6	r.m.	0.7	1.4	7.3	105	67
10	r.m.	0.7	1.4	8.3	151	88
16	C.C.	0.7	1.4	9.0	211	110
05			1.1	10.0	715	155
25	C.C.	0.9	1.4	10.6	315	155
35	C.C.	0.9	1.4	11.8	141	192
50	C.C.	1.0	1.4	13.2	542	243
70	C.C.	1.1	1.4	15.1	757	324
95	c.c.	1.1	1.5	17.0	1025	425
120	C.C.	1.2	1.5	18.8	1281	520
150	c.c.	1.4	1.6	20.8	1562	650
185	c.c.	1.6	1.6	23.0	1940	773
240	c.c.	1.7	1.7	25.8	2522	987
300	c.c.	1.8	1.8	28.5	3144	1215
400	c.c.	2.0	1.9	31.9	4006	1527
500	C.C.	2.2	2.0	35.5	5042	1903
630	c.c.	2.4	2.2	40.0	6460	2437
800	c.c.	2.6	2.3	43.5	8194	3049
1000	r.m.	2.8	2.4	52.0	10397	3853





# Aerial Bunched Conductor

### **Aerial Bunched Conductor**

Ph	ase Co	nduc	tor					
Nominal cross-sectional area	mm²	50	70	95	120	150	185	240
Number of cores		3	3	3	3	3	3	3
Minimum number of wires		6	12	15	15	15	30	30
Nominal diameter of conductor	mm	8.1	9.7	11.5	12.9	14.3	16.1	18.4
Nominal thickness of XLPE insulation	mm	3.4	3.4	3.4	3.4	3.4	3.4	3.4
Metallic screening appr. thickness of copper tape	mm	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nominal thickness of outer sheath	mm	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Nominal diameter over sheathing	mm	23.0	24.6	26.3	27.8	29.2	30.9	33.3
Max. dc resistance at 20 C	ohm/km	0.641	0.443	0.320	0.253	0.206	0.164	0.125
Earth fault current carry capacity of metallic scree	n at							
-1 second (1 core)	kA	1.57	1.72	1.88	2.01	2.14	2.30	2.52
-3 second(1core)	kA	0.90	0.99	1.08	1.16	1.23	1.33	1.45
Messen	ger - galva	nized st	eel wire					
Nominal cross- sectional area	50	50	50	50	50	50	50	50
stranding	7/3.15	7/3.15	7/3.15	7/3.15	7/3.15	7/3.15	7/3.15	7/3.15
Direction of the outermost layer				Right-ha	ind (Z)			
Overall diamter	mm	9.45	9.45	9.45	9.45	9.45	9.45	9.45
Minimum breaking load	kg	6270	6270	6270	6270	6270	6270	6270
	Complet	e cable						
Approx. overall diameter	mm	55	59	62	65	67	71	75
Approx. weight of cable	kg/km	2540	2890	3300	3660	4040	4540	5290
Packing length	500	500	500	500	500	500	500	500





### **PVC INSULATED CABLES**

### INTRODUCTION

As the solar photovoltaic industry grows in popularity as a clean and environmentally friendly energy source, it is becoming increasingly important in addressing the global energy crisis. With decreasing production costs and a reputation for reliability, solar energy is increasingly seen as a cost-effective alternative. In this context, the demand for solar cables, which are essential for transmitting electricity from solar panels to inverters and other equipment, is rising. These cables must be able to withstand harsh outdoor environments and meet stringent safety and performance standards.

### Why PARAFLEX cables are the best in the market?

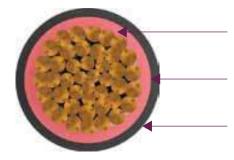
- ◆ Outdoor durability: resists extreme temperatures (-40 °C to 120 °C maximum at the core) and is ozone resistant.
- UV resistance: complete protection against ultraviolet rays.
- ◆ Halogen-free: Low Smoke Emission & Low Toxicity/Corrosivity during the fire.
- Properties against fire: flame retardant, fire retardant.
- Flexibility and strip ability: for fast and easy installation.
- ◆ Fully recyclable: in accordance with new environmental regulations.
- Easy installation with color identification (blue, red). Suitable to common connector types.
- ◆ TUVcertified

### CONSTITUENTS

PARAFLEX solar cables are manufactured with the following materials.

- 1. Annealed Tinned Copper Conductor
- 2. Cross-Linked Polyolefin Compound
- 3. Zero Halogen Polyolefin Compound

### ON OF SOLAR CABLES



Flexible tinned copper stranded class -5 conductors as per IEC-60228

Insulation – Cross linked Polyolefin, Natural Color\*

Outer sheath – Halogen free Polyolefin Black Color

### REQUIRED FEATURES OF SOLAR CABLE

### **Chemical Features**

- · Weather resistant
- · Resistant to mineral oils
- Resistant to acids & alkaline
   Thermal Factures

### **Thermal Features**

- Maximum conductor temperature of operation 120°C during 20000 hours.
- Minimum operating temperature :- 40°C

### **Electrical Features**

- Voltage rating: 1.5 (1.8)kV dc/0.6/1.0 (1.2)kV ac
- High voltage test: 6.5kV dc for 5 minutes.
   Mechanical Features
- · Resistant to Impact, tear & abrasion
- Minimum bending radius 4 times of overall diameter

# REQUIRED FEATURES OF SOLAR CABLE (TUV certified -2Pfg 1169)

0.210 Ω/km 13.25 mm 17.05 mm 17.85 mm 920 kg/km 1 0.164 Ω/km 15.00 mm 18.80 mm 19.60 mm 1150 kg/km 1 0.132 Ω/km 16.77 mm 21.37 mm 22.37 mm 1460 kg/km 0.108 Ω/km 18.54 mm 23.54 mm 24.54 mm 1770 kg/km 1 0.0817 Ω/km 21.33 mm 26.33 mm 27.33 mm 2300 kg/km	700 35 35 35 35 35 35 35 35 35 35 35 35 35	SIZE cross- sectional area in (sq. mm) .5 sq. mm .5 sq. mm .0 sq. mm 10 sq. mm 16 sq. mm 16 sq. mm 16 sq. mm 16 sq. mm 170 sq. mm	Max. Conductor D.C. Resistance at 20 °C (in Ω/km) 13.7 Ω/km 8.21 Ω/km 5.09 Ω/km 1.95 Ω/km 1.95 Ω/km 0.795 Ω/km 0.795 Ω/km 0.393 Ω/km 0.393 Ω/km	Average Diameter of Conductor (in mm)  1.46 mm  1.88 mm  2.39 mm  2.93 mm  5.39 mm  6.73 mm  8.08 mm  9.69 mm  11.54 mm	Approximate Overall Diameter of cable (in mm)  4.46 mm	dimate jiameter (in mm)  4.86 mm  5.28 mm  5.79 mm  6.33 mm  7.66 mm  9.19 mm  11.13 mm  11.13 mm  12.48 mm  15.94 mm	Approximate Overall weight (in kg/km)  35 kg/km  46 kg/km  64 kg/km  133 kg/km  195 kg/km  290 kg/km  390 kg/km  530 kg/km	Minimum Bending radius (in mm)  19 mm 21 mm 23 mm 25 mm 37 mm 45 mm 50 mm 56 mm 64 mm	Current rating under continous operation 90 °C and ambient temperature 40 °C (in A)  22 A  22 A  30 A  42 A  52 A  76 A  95 A  124 A  159 A  185 A  239 A	Short circuit current rating for 1 second duration (in kA)  0.189 kA  0.315 kA  0.504 kA  0.756 kA  1.26 kA  2.02 kA  3.15 kA  4.41 kA  6.30 kA  8.82 kA
13.7 Ω/km       1.46 mm       4.46 mm       4.86 mm       35 kg/km         8.21 Ω/km       1.88 mm       4.88 mm       5.28 mm       46 kg/km         5.09 Ω/km       2.39 mm       5.39 mm       5.79 mm       64 kg/km         3.39 Ω/km       2.93 mm       5.93 mm       6.33 mm       84 kg/km         1.95 Ω/km       3.86 mm       7.26 mm       7.66 mm       133 kg/km         0.795 Ω/km       5.39 mm       8.79 mm       9.19 mm       195 kg/km         0.795 Ω/km       6.73 mm       10.53 mm       11.13 mm       290 kg/km         0.565 Ω/km       8.08 mm       11.88 mm       12.48 mm       390 kg/km         0.277 Ω/km       11.54 mm       13.49 mm       14.09 mm       530 kg/km         0.277 Ω/km       11.54 mm       15.34 mm       15.94 mm       715 kg/km         0.164 Ω/km       13.25 mm       17.05 mm       17.85 mm       920 kg/km         0.132 Ω/km       15.00 mm       18.80 mm       19.60 mm       1150 kg/km         0.108 Ω/km       16.77 mm       21.37 mm       22.37 mm       1460 kg/km         0.0817 Ω/km       21.33 mm       23.33 mm       23.00 kg/km	(S)	cross- ectional area in sq. mm)	D.C. Resistance at 20 °C (in Ω/km)	Diameter of Conductor (in mm)	Approx Overall C of cable	ilmate Diameter (in mm)	Overall weight (in kg/km)	Bending radius (in mm)	continous operation 90 °C and ambient temperature 40 °C (in A)	current rat for 1 seco duration (in kA)
8.21 Ω/km       1.88 mm       4.88 mm       5.28 mm       46 kg/km         5.09 Ω/km       2.39 mm       5.39 mm       5.79 mm       64 kg/km         3.39 Ω/km       2.93 mm       5.93 mm       6.33 mm       84 kg/km         1.95 Ω/km       3.86 mm       7.26 mm       7.66 mm       133 kg/km         1.24 Ω/km       5.39 mm       8.79 mm       9.19 mm       195 kg/km         0.795 Ω/km       6.73 mm       10.53 mm       11.13 mm       290 kg/km         0.565 Ω/km       8.08 mm       11.88 mm       12.48 mm       390 kg/km         0.393 Ω/km       9.69 mm       13.49 mm       14.09 mm       530 kg/km         0.277 Ω/km       11.54 mm       15.34 mm       15.94 mm       715 kg/km         0.210 Ω/km       13.25 mm       17.05 mm       17.85 mm       920 kg/km         0.164 Ω/km       15.00 mm       18.80 mm       19.60 mm       1460 kg/km         0.108 Ω/km       18.54 mm       22.37 mm       170 kg/km         0.0817 Ω/km       21.33 mm       23.33 mm       2300 kg/km	1.5	5 sq. mm	13.7 Ω/km	1.46 mm	4.46 mm	4.86 mm	35 kg/km	19 mm	22 A	0.189 k
5.09 Ω/km       2.39 mm       5.39 mm       5.79 mm       64 kg/km         3.39 Ω/km       2.93 mm       5.93 mm       6.33 mm       84 kg/km         1.95 Ω/km       3.86 mm       7.26 mm       7.66 mm       133 kg/km         1.24 Ω/km       5.39 mm       8.79 mm       9.19 mm       195 kg/km         0.795 Ω/km       6.73 mm       10.53 mm       11.13 mm       290 kg/km         0.565 Ω/km       8.08 mm       11.88 mm       12.48 mm       390 kg/km         0.393 Ω/km       9.69 mm       13.49 mm       14.09 mm       530 kg/km         0.277 Ω/km       11.54 mm       15.34 mm       15.94 mm       715 kg/km         0.164 Ω/km       13.25 mm       17.05 mm       17.85 mm       920 kg/km         0.132 Ω/km       15.00 mm       18.80 mm       19.60 mm       1150 kg/km         0.108 Ω/km       16.77 mm       21.37 mm       22.37 mm       1460 kg/km         0.108 Ω/km       18.54 mm       23.54 mm       24.54 mm       1770 kg/km         0.0817 Ω/km       21.33 mm       26.33 mm       27.33 mm       2300 kg/km	2.5	5 sq. mm	8.21 Ω/km	1.88 mm	4.88 mm	5.28 mm	46 kg/km	21 mm	30 A	0.315 k
3.39 Ω/km       2.93 mm       5.93 mm       6.33 mm       84 kg/km         1.95 Ω/km       3.86 mm       7.26 mm       7.66 mm       133 kg/km         1.24 Ω/km       5.39 mm       8.79 mm       9.19 mm       195 kg/km         0.795 Ω/km       6.73 mm       10.53 mm       11.13 mm       290 kg/km         0.565 Ω/km       8.08 mm       11.88 mm       12.48 mm       390 kg/km         0.393 Ω/km       9.69 mm       13.49 mm       14.09 mm       530 kg/km         0.277 Ω/km       11.54 mm       15.34 mm       17.95 mm       715 kg/km         0.164 Ω/km       13.25 mm       17.05 mm       17.85 mm       920 kg/km         0.164 Ω/km       15.00 mm       18.80 mm       19.60 mm       1150 kg/km         0.108 Ω/km       16.77 mm       21.37 mm       22.37 mm       1460 kg/km         0.0817 Ω/km       18.54 mm       23.54 mm       27.33 mm       2300 kg/km	4.0	o sq. mm	5.09 Ω/km	2.39 mm	5.39 mm	5.79 mm	64 kg/km	23 mm	42 A	0.504 k
1.95 Ω/km       3.86 mm       7.26 mm       7.66 mm       133 kg/km         1.24 Ω/km       5.39 mm       8.79 mm       9.19 mm       195 kg/km         0.795 Ω/km       6.73 mm       10.53 mm       11.13 mm       290 kg/km         0.565 Ω/km       8.08 mm       11.88 mm       12.48 mm       390 kg/km         0.393 Ω/km       9.69 mm       13.49 mm       14.09 mm       530 kg/km         0.277 Ω/km       11.54 mm       15.34 mm       15.94 mm       715 kg/km         0.210 Ω/km       13.25 mm       17.05 mm       17.85 mm       920 kg/km         0.164 Ω/km       15.00 mm       18.80 mm       19.60 mm       1150 kg/km         0.108 Ω/km       16.77 mm       21.37 mm       22.37 mm       1460 kg/km         0.108 Ω/km       18.54 mm       23.54 mm       27.33 mm       2300 kg/km	6.(	o sq. mm	3.39 Ω/km	2.93 mm	5.93 mm	6.33 mm	84 kg/km	25 mm	52 A	0.756 k/
1.24 Ω/km       5.39 mm       8.79 mm       9.19 mm       195 kg/km         0.795 Ω/km       6.73 mm       10.53 mm       11.13 mm       290 kg/km         0.565 Ω/km       8.08 mm       11.88 mm       12.48 mm       390 kg/km         0.393 Ω/km       9.69 mm       13.49 mm       14.09 mm       530 kg/km         0.277 Ω/km       11.54 mm       15.34 mm       15.94 mm       715 kg/km         0.210 Ω/km       13.25 mm       17.05 mm       17.85 mm       920 kg/km         0.164 Ω/km       15.00 mm       18.80 mm       19.60 mm       1150 kg/km         0.108 Ω/km       16.77 mm       21.37 mm       22.37 mm       1460 kg/km         0.0817 Ω/km       18.54 mm       23.54 mm       24.54 mm       1770 kg/km         0.0817 Ω/km       21.33 mm       26.33 mm       27.33 mm       2300 kg/km	10	) sq. mm	1.95 Ω/km	3.86 mm	7.26 mm	7.66 mm	133 kg/km	31 mm	76 A	1.26 k∕
0.795 Ω/km       6.73 mm       10.53 mm       11.13 mm       290 kg/km         0.565 Ω/km       8.08 mm       11.88 mm       12.48 mm       390 kg/km         0.393 Ω/km       9.69 mm       13.49 mm       14.09 mm       530 kg/km         0.277 Ω/km       11.54 mm       15.34 mm       15.94 mm       715 kg/km         0.210 Ω/km       13.25 mm       17.05 mm       17.85 mm       920 kg/km         0.164 Ω/km       15.00 mm       18.80 mm       19.60 mm       1150 kg/km         0.132 Ω/km       16.77 mm       21.37 mm       22.37 mm       1460 kg/km         0.108 Ω/km       18.54 mm       23.54 mm       24.54 mm       1770 kg/km         0.0817 Ω/km       21.33 mm       26.33 mm       27.33 mm       2300 kg/km	16	ີ sq. mm	1.24 Ω/km	5.39 mm	8.79 mm	9.19 mm	195 kg/km	37 mm	A 56	2.02 kA
0.565 Ω/km       8.08 mm       11.88 mm       12.48 mm       390 kg/km         0.393 Ω/km       9.69 mm       13.49 mm       14.09 mm       530 kg/km         0.277 Ω/km       11.54 mm       15.34 mm       15.94 mm       715 kg/km         0.210 Ω/km       13.25 mm       17.05 mm       17.85 mm       920 kg/km         0.164 Ω/km       15.00 mm       18.80 mm       19.60 mm       1150 kg/km         0.132 Ω/km       16.77 mm       21.37 mm       22.37 mm       1460 kg/km         0.108 Ω/km       18.54 mm       23.54 mm       24.54 mm       1770 kg/km         0.0817 Ω/km       21.33 mm       26.33 mm       27.33 mm       2300 kg/km	25	sq. mm	0.795 Ω/km	6.73 mm	10.53 mm	11.13 mm	290 kg/km	45 mm	124 A	3.15 kA
0.393 Ω/km       9.69 mm       13.49 mm       14.09 mm       530 kg/km         0.277 Ω/km       11.54 mm       15.34 mm       15.94 mm       715 kg/km         0.210 Ω/km       13.25 mm       17.05 mm       17.85 mm       920 kg/km         0.164 Ω/km       15.00 mm       18.80 mm       19.60 mm       1150 kg/km         0.132 Ω/km       16.77 mm       21.37 mm       22.37 mm       1460 kg/km         0.108 Ω/km       18.54 mm       23.54 mm       24.54 mm       1770 kg/km         0.0817 Ω/km       21.33 mm       26.33 mm       27.33 mm       2300 kg/km	35	sq. mm	0.565 Ω/km	8.08 mm	11.88 mm	12.48 mm	390 kg/km	50 mm	159 A	4.41 kA
0.277 Ω/km       11.54 mm       15.34 mm       15.94 mm       715 kg/km         0.210 Ω/km       13.25 mm       17.05 mm       17.85 mm       920 kg/km         0.164 Ω/km       15.00 mm       18.80 mm       19.60 mm       1150 kg/km         0.132 Ω/km       16.77 mm       21.37 mm       22.37 mm       1460 kg/km         0.108 Ω/km       18.54 mm       23.54 mm       24.54 mm       1770 kg/km         0.0817 Ω/km       21.33 mm       26.33 mm       27.33 mm       2300 kg/km	50	) sq. mm	0.393 Ω/km	9.69 mm	13.49 mm	14.09 mm	530 kg/km	56 mm	185 A	6.30 kA
0.210 Ω/km       13.25 mm       17.05 mm       17.85 mm       920 kg/km         0.164 Ω/km       15.00 mm       18.80 mm       19.60 mm       1150 kg/km         0.132 Ω/km       16.77 mm       21.37 mm       22.37 mm       1460 kg/km         0.108 Ω/km       18.54 mm       23.54 mm       24.54 mm       1770 kg/km         0.0817 Ω/km       21.33 mm       26.33 mm       27.33 mm       2300 kg/km	70	) sq. mm	0.277 Ω/km	11.54 mm	15.34 mm	15.94 mm	715 kg/km	64 mm	239 A	8.82 kA
0.164 Ω/km       15.00 mm       18.80 mm       19.60 mm       1150 kg/km         0.132 Ω/km       16.77 mm       21.37 mm       22.37 mm       1460 kg/km         0.108 Ω/km       18.54 mm       23.54 mm       24.54 mm       1770 kg/km         0.0817 Ω/km       21.33 mm       26.33 mm       27.33 mm       2300 kg/km	95	sq. mm	0.210 Ω/km	13.25 mm	17.05 mm	17.85 mm	920 kg/km	71 mm	290 A	11.97 kA
0.132 Ω/km       16.77 mm       21.37 mm       22.37 mm       1460 kg/km         0.108 Ω/km       18.54 mm       23.54 mm       24.54 mm       1770 kg/km         0.0817 Ω/km       21.33 mm       26.33 mm       27.33 mm       2300 kg/km	120	0 sq. mm	0.164 Ω/km	15.00 mm	18.80 mm	19.60 mm	1150 kg/km	78 mm	335 A	15.12 kA
0.108 Ω/km 18.54 mm 23.54 mm 24.54 mm 1770 kg/km 0.0817 Ω/km 21.33 mm 26.33 mm 27.33 mm 2300 kg/km	15(	0 sq. mm	0.132 Ω/km	16.77 mm	21.37 mm	22.37 mm	1460 kg/km	mm 68	385 A	18.90 kA
0.0817 Ω/km   21.33 mm   26.33 mm   27.33 mm   2300 kg/km	18	5 sq. mm	0.108 Ω/km	18.54 mm	23.54 mm	24.54 mm	1770 kg/km	98 mm	440 A	23.31 kA
	24(	0 sq. mm	0.0817 Ω/km	21.33 mm	26.33 mm	27.33 mm	2300 kg/km	110 mm	520 A	30.24 kA

### SPEAKER CABLE (OFC)

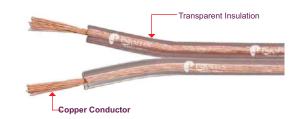
### INTRODUCTION

Paraflex India Limited, a leading manufacturer of wire and cable in India, is introducing a new line of speaker cables. These cables are used to connect loudspeakers to audio amplifiers in various sound instruments. In modern construction projects such as airports, railway platforms, auditoriums, offices, high-rise apartments, and hospitals, high-quality speaker cables are essential for clear and distortion-free voice transmission with minimal dB loss.

Paraflex's twin parallel speaker cables are made with multiwire, bright, annealed, flexible bare electrolytic grade copper conductors and insulation made from specially formulated and in-house manufactured FR (Fire Retardant) PVC compound with a high oxygen and temperature index. Each conductor is designed for easy identification.

**CONSTRUCTION DETAILS**:The twin parallel cable have the following construction with different coloring of insulation.

### **CROSS SECTION VIEW**



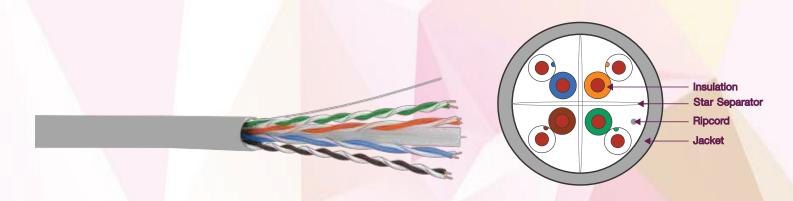
Packaging: Reel packing in 100 mtr.

Technical R	equirement				
Cond	ductor		Insulation		
Size (sq. mm)	Maximum Conductor Resistance at 20 °C Ω/ km (Ohm per kilometre)	Thickness of Insulation (in mm)	Approx. Width (in mm)	Approx. Height (in mm)	Approx. Web Dims (W x H)
0.50 sq.mm	39 Ω/km	0.60 mm	4.30 mm x 2.10 mm	4.30 mm x 2.10 mm	4.30 mm x 2.10 mm
0.75 sq.mm	26 Ω/km	0.60 mm	4.60 mm x 2.28 mm	4.60 mm x 2.28 mm	4.60 mm x 2.28 mm
1.00 sq.mm	18.1 Ω/km	0.70 mm	5.40 mm x 2.70 mm	5.40 mm x 2.70 mm	5.40 mm x 2.70 mm
1.50 sq.mm	12.1 Ω/km	0.80 mm	6.40 mm x 3.18 mm	6.40 mm x 3.18 mm	6.40 mm x 3.18 mm





### **CAT 6 LAN Cables**



Transmission Pa	rameter as per 100	0 metre					
Frequency (Hz)	Insertion Loss (dB/100 m)	NEXT (dB)	PSNEXT (dB)	ELFEXT	PSELFEXT (dB)	RL (dB)	ACR (dB)
1 Hz	2.00	74.3	72.3	67.8	64.8	20.0	72.3
4 Hz	3.90	65.3	63.3	55.8	52.8	23.0	61.5
8 Hz	5.30	60.8	58.8	49.7	46.7	24.5	55.5
10 Hz	6.00	59.3	57.3	47.8	44.8	25.0	53.3
16 Hz	7.60	56.2	54.2	43.7	40.7	25.0	48.6
20 Hz	8.50	54.8	52.8	41.8	38.8	25.0	46.3
25 Hz	9.50	53.3	51.3	39.8	36.8	24.3	43.8
31.25 Hz	10.70	51.9	49.9	37.9	34.9	23.6	41.2
62.50 Hz	15.40	47.4	45.4	31.9	28.9	21.5	32.0
100 Hz	19.80	44.3	42.3	27.8	24.8	20.1	24.5
200 Hz	29.0	39.8	37.8	21.8	18.8	18.0	10.8
250 Hz	32.8	38.3	36.3	19.8	16.8	17.3	5.5

### **LAN Cables - Complete Networking Solution**

### INTRODUCTION

PARAFLEX Networking Cables provide a complete solution for device access to high-speed networks and Internet data. These cables have been verified to meet the performance requirements of ISO/IEC 11801 and TIA/EIA 568 C.2.

Unshielded twisted pair (UTP) cables are commonly used in home and business Ethernet networks. They consist of four pairs of wires that are twisted together to prevent interference from other devices on the network. The wires are housed inside a protective lining for added durability and reliability.

### CAT 6

Category 6 (Cat 6) cable is a type of twisted pair cable that is used for Gigabit Ethernet and other network physical layers. It is designed to be backward compatible with CAT5/5e and is standardized for use in these applications. Cat 6 cable is characterized by its ability to transmit data at high speeds with minimal interference, making it a popular choice for high-performance networks. It is often used in commercial and enterprise settings where high bandwidth and fast data transmission are required.

Cat 6 cables have more stringent specifications for crosstalk and system noise than previous generations of twisted pair cables. These specifications allow Cat 6 cables to offer higher performance, with a nominal velocity of propagation of up to 69% and a frequency range of up to 250 MHz. This makes them suitable for use in high-bandwidth, high-speed networking environments where minimal interference and fast data transmission are essential.

Technical Requirement	
Conductor Metal	23 AWG Solid Bare Copper
Insulation	High Density Polyethylene
Pairs	2 Insulated conductors twisted together
Sheath	PVC
Cable Diameter	6 ± 0.3 mm
Printing	Each metre printed with sequential Length Counter

Mechanical Properties	
Outer Diameter	Nominal Diameter 6 ± 0.3 mm 4 twisted pair
Conductor Type	23 AWG bare annealed copper
Jacket Material	PVC
Standard Colour	Grey
Pulling Force	11.5 kg
Operating Tem. Ran.	–20 °C to +70 °C
Storage Tem. Ran.	0 °C to +50 °C

Electrical characteristics	
Characteristic Impedance	100 ± 6 Ω@ 1-250 MHz
DC Resistance	72 Ω/km (max)
Voltage Rating	72 Vdc max
Dielectric Strength	1500 V/1 minute MHz
Insulation Resistance	500 MΩ/km (minute) @ 500 Vdc
Nominal Velocity of Propagation (%)	69%
Conductor Resistance	<7.20/100 m
Mutual Capacitance	5.6 nF/100 m nominal
Resistance Unbalance	5% Max
Capacitance Unbalance	330 pF/100 m
Delay Skew	<45 nS
Bending Radius	<4 X Cable Diameter at –20 °C ± 1 °C
Operating Voltage	72 V
Dielectric Strength	1.0 kVdc or 0.75 kVdc for 1 minute

### **COLOUR CODE**

Pair 1 - White - Blue and Blue

Pair 2 - White - Orange and Orange

Pair 3 - White - Green and Green

Pair 4 - White - Brown and Brown



# The New-Wire Artery **PVC Conduit Pipes**

Paraflex RIGID CONDUIT PIPE 25 mm MMS

Paraflex RIGID CONDUIT PIPE 25 mm MMS

WITH MARK

### Dimensions of Round Conduits [as per (IS:9537 Part 3)]

Normal Size	Outside Diameter	Tolerance on Outside Diameter	Inside Diameter (Min) : mm		
mm	mm	mm	Light	Medium	Heavy
16	16	-0.3	13.7	13.0	12.2
20	20	-0.3	17.4	16.9	15.8
25	25	-0.4	22.1	21.4	20.6
32	32	-0.4	28.6	27.8	266
40	40	-0.4	35.8	35.4	34.4
50	50	-0.5	45.1	44.3	43.2

### **Technical Features:**

Properties	
Electrical Characteristics     (a) Dielectric Strength     (b) Insulation Resistance	No Breakdown even at 2000 V Resistance above 100 megaohm.
2. Mechanical Strength (a) Resistance to crushing (b) Impact Results (c) Rigidity (d) Compression Results	Excellent.  No Crack [Visible]  Excellent. (Closed packed structure)  Excellent. [Elastics & Plastics  Properties]
3. Bending	Efficient xibility.
4. Resistance to Heat	No Deformation.
5. Resistance to Combustion	Very strong against H.D. flame
6. Resistance to Chemical Action (a) In Hydrochloric Acid (b) In Sodium Hydroxide	No Deterioration. No Deterioration.
7. Resistance to Oil	Excellent.

Non-socketed pipes are also available

### **Salient Features of PVC Conduit Pipes.**

- Wrinkle free bending assures smooth passing of wire.
- Smooth surface finish for enhanced aesthetics.
- Offer More Value for Money as compared to the steel / aluminium conduits.
- Corrosion proof finish offers complete protection from rust, salinity and humidity.
- Uniformity of wall thickness.
- Light weight and easy to transport & handle.
- Offer good mechanical protection for the resident cables.
- Longer operational as well as shelf life as compared to the metal conduits.
- Self extinguishing PVC materials offers added flame resistance.
- Each batch is tested through computerized laboratory.

IS:7809



part 3, section1 F-PVCp/90/0/Tp/FR CM/L No.8100077009



10 M Ohms/25 mm width (Min)

Opaque

SELF ADHSIVE PVC ELECTRICAL INSULATION TAPE

### **PVC ELECTRICAL INSULATION**

ACT EN 10: 7000 FART COLOTION FOOM ON 10 FOT DEED WING OF EDIT IDATIONS					
E	SR. NO.	PARTICULARS	SPECIFICATION		
	1 2 3 4 5 6 7 8	Nominal Thickness Adhesion to Steel Adhesion to Baking Tensile Strength Electric Strength at Room Temp. Electric Strength other 24 Hrs, Humidicaation At. 27C ± 2% RG Flammability Stability to Accelerated Ageing at 65+10C & 80% RH For 96 Hrs.	0.125 ± 0.025mm 1.6N/10mm Width (Min) 1.3N/10mm Width (Min) 150N/10mm Width Per mm Thickness 40KV/mm (Min) 35KV/mm(Min) Self Extinguishing Type No change in Adhesive Property		

AS PER IS: 7809 PART - 3 SECTION - 1 CONFORMS TO FOLLOWING SPECIFICATIONS

ALL REGULAR/CUSTOMIZED SIZE AVAILABLE

Appearance

Insulation Resistance

RELIABLE SELF-EXTINGUISHING ELECTRICAL INSULATION TAPE

INSULATION & PROTECTION TO WIRE OF ELECTRICAL APPLIANCES & MACHINES.

STRETCHABLE, GRIPS FIRMLY & MOULD ITSELF TO ANY SURFACE

### **COLORS AVAILABLE:**

9 10

- BLACK,
- BLUE,
- GREEN,
- YELLOW.
- RED
- **■** WHITE

Long exposure to water does notdestroy insulation properties

Weather - Proof

Moulds itself to any surface Resistant to Acids, Alkalis and Oils

Stretchable Non-ageing Grips firmly

Withstands upto 40 KV



# Our Brand Approved By Government Department





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HR-POLICE HEQ



HR-M.C.P



UP - RNNL



JUSNL



JU CPWD



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APEPDCL



मिश्राहरण सिश्राहर

BHEL



BIS

BSF

ISO

### KLJ Paraflex India Ltd.

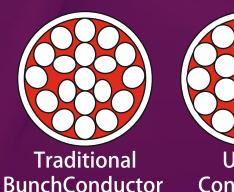
MGF:
Plot No - E 1224 RIICO
Industrial Area Bhiwadi Alwar,
Rajasthan - 301019



Website: www.paraflex.co.in Toll Free No.: 1800-833-3401 Email: info@paraflex.co.in



### Brand of India, Pride of India





### **KLJ Paraflex India Ltd.**

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