

INTRODUCTION

We, "RADIX CABLES" are one of the leading wires and cables manufacturers based in Ahmedabad, Gujarat, India. We, at RADIX CABLES manufacture "RADIX" brand electric wires & cables. The company has an experience of manufacturing wires & cables for more than 25 years, with the help of advanced technology and skilful employees.



RADIX CABLES is ISO 9001 certified company. We are available globally with our products being certified to BIS IS: 694 with FIA/TAC & CE and other quality certifications.

RADIX CABLES endeavours to create best quality products using the latest advances in design and engineering. We have latest machinery & well equipped testing facilities for our entire range of our product. Our product is manufactured from best quality electrolytic annealed copper and best quality PVC compounds for insulation and sheathing. A non-contact ink-jet printer ensures continuous print product details with sequential meter marking throughout the cable length for correct and complete length for every coil or drum brought by our customer. We offer the widest range of premium wires and cables for various residential, commercial, industrial and infrastructure purposes.

OUR PRODUCT RANGE

1. Single core flexible cables
2. Multi-core flexible cables
3. Solid stranded copper cables
4. Copper conductor FR/HR/FRLS/ZHFR household wires
5. Submersible flat cables
6. Copper armoured & unarmoured cables
7. DC solar cables
8. Multi core Control cables


"RADIX" single core and multi-core sheathed flexible cables have been specifically designed and produced to achieve enhance conduction & superior insulation and sheath to satisfy the needs. High purity, bright electrolytic annealed copper are bunched to technical parameters that ensure flexibility and uniform resistance. For insulation, only high dielectric strength with high insulation resistant flexible grade PVC compound is used. In multicore cable laid up in round or parallel, the sheathing is provided with specifically formulated PVC compound to facilitate not only ease in strapping but also with stand mechanical abrasion while in used in applications such as lifts, control panels, machine tools and every kind of industrial or domestic machinery.

"RADIX" copper conductor, PVC insulated and sheathed Single core / multicore flexible cables as per IS:694 : Voltage grade up to 1100 V.

Size / Area in Sq.mm.	No. & size of wire	Max. resistance @20°C (ohm/km)	Current rating (Amp.)	Nominal Insulation thickness (mm)	Overall core Diameter (mm)	Sheath thickness (mm)			Overall diameter (mm)		
						2 core	3 core	4 core	2 core	3 core	4 core
0.50	16/0.20	39.0	4	0.60	2.20	0.90	0.90	0.90	6.20	6.60	7.20
0.75	24/0.20	26.0	7	0.60	2.50	0.90	0.90	0.90	6.80	7.20	7.90
1.00	32/0.20	19.50	11	0.60	2.60	0.90	0.90	0.90	7.00	7.50	8.10
1.50	48/0.20	13.30	14	0.60	2.90	0.90	0.90	1.00	7.60	8.10	9.00
2.50	80/0.20	7.98	19	0.70	3.50	1.00	1.00	1.00	9.00	9.60	10.50
4.00	56/0.30	4.95	25	0.80	4.30	1.00	1.00	1.00	10.60	11.30	12.40
6.00	84/0.30	3.30	32	0.80	5.50	1.30	1.30	1.40	13.70	14.00	16.50
10.00	140/0.30	1.91	45	1.00	6.70	1.40	1.40	1.40	16.50	18.00	19.00
16.00	224/0.30	1.21	60	1.00	8.40						
25.00	350/0.30	0.78	75	1.20	10.50						
35.00	217/0.45	0.55	95	1.20	11.60						
50.00	315/0.45	0.38	125	1.40	13.90						
70.00	357/0.50	0.27	200	1.40	15.50						
95.00	469/0.50	0.20	250	1.60	18.10						
120.00	602/0.50	0.16	295	1.60	19.60						



IS 694:2010



CM/L:7200097309

Standard insulation colours: Red, Yellow, Blue, Black, Grey, Green. Standard sheath colour: Black

Our multicore flexible cable range also includes 5 cores to 19 cores of 0.50 sq.mm, 0.75 sq.mm, 1.0 sq.mm, 1.50 sq.mm, 2.50 sq.mm, & 4.0 sq.mm.

“RADIX” Plain Solid / Stranded copper conductor (class – 1 & 2), PVC insulated Single core cables as per IS:694 : Voltage grade up to 1100 V.

Size / Area in Sq.mm.	No. & size of wire	Conductor diameter (mm)	Nominal Insulation thickness (mm)	Overall core Diameter (mm)	Max. resistance @20°C (ohm/km)	Current rating (Amp.)
1.00	1/1.13	1.13	0.70	3.00	18.10	10
1.50	3/0.81	1.75	0.70	3.30	12.80	14
2.50	3/1.04	2.24	0.80	4.00	7.41	20
4.00	7/0.85	2.55	0.80	4.40	4.61	26
6.00	7/1.04	3.12	0.80	5.10	3.10	32
10.00	7/1.35	4.05	1.00	6.50	1.83	45
16.00	19/1.03	5.15	1.00	7.80	1.15	60
25.00	19/1.29	6.45	1.20	9.50	0.73	75
35.00	19/1.53	7.65	1.20	11.50	0.52	90
50.00	19/1.83	9.15	1.40	13.00	0.38	120

Standard insulation colours: Red, Yellow, Blue, Black, Grey & Green supplied in 90 meters length confirm to IS: 694-2010.

“RADIX” Copper conductor FR/HR/FRLS/ZHFR household wires have been specifically designed and produced to achieve enhances conduction & superior insulation to satisfy the requirement. High purity, bright electrolytic annealed copper are bunched to technical parameters that ensure flexibility and uniform resistance. A specially formulated superior insulation with higher oxygen and temperature index FR properties enables the cable to hold out against overloads. Insulation is tested for higher di-electric strength with high insulation resistant, high thermal stability & aging properties. A non-contact ink-jet printer ensures continuous print product detail with sequential meter marking throughout the cable length for correct and complete length for every coil brought by our customer.

“RADIX” Copper conductor FR-PVC insulated single core flexible household wires as per IS: 694: Voltage grade up to 1100 V.

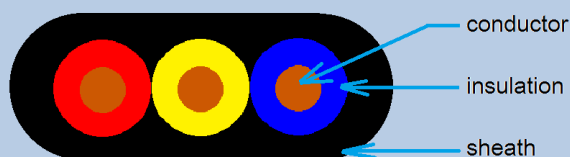
Size / Area in Sq.mm.	No. & size of wire	Nominal Insulation thickness (mm)	Overall core Diameter (mm)	Max. resistance @20°C (ohm/km)	Current rating (Amp.)
0.75	24/0.20	0.60	2.60	26.00	7
1.00	14/0.30	0.70	2.80	18.10	10
1.50	22/0.30	0.70	3.00	12.10	13
2.50	36/0.30	0.80	3.80	7.41	18
4.00	56/0.30	0.80	4.40	4.95	24

Standard insulation colours: Red, Yellow, Blue, Black, Grey & Green supplied in 90 meters length confirm to IS: 694-2010.

Additional FR properties: Minimum critical oxygen index: 29%, Maximum Temperature index: 250 °C

HR/FRLS/ZHFR insulations can be provided on request.

“RADIX” single core 3 core submersible flat cables have been specifically designed for submersible pump motors keeping in mind the difficult conditions in which they are required to perform. High purity, bright electrolytic annealed copper are bunched to technical parameters that ensure flexibility and uniform resistance. For insulation, only high di-electric strength with high insulation resistant flexible grade PVC compound is used. In submersible flat cable 3 cores are laid up in flat parallel position and sheathed with a specifically formulated PVC compound which is water, oil and grease resistant and provides better mechanical strength to the cable. Such cables is perfectly suitable for irrigation pumps, drinking water supply pumps, fire fighting equipment, sewage treatment plants & sea/river water handling equipment.



“RADIX” copper conductor, PVC insulated and sheathed 3 core flat cables for submersible pump motors as per IS:694 : Voltage grade up to 1100 V.

Size / Area in Sq.mm.	No. & size of wire	Nominal Insulation thickness (mm)	Overall core Diameter (mm)	Sheath thickness (mm)	Overall size (W X T) (mm)	Max. resistance @20°C (ohm/km)	Current rating (Amp.)
1.50	22/0.30	0.60	3.00	0.90	11.5 X 5.5	12.10	14
2.50	36/0.30	0.70	3.60	1.00	14.0 X 6.4	7.41	18
4.00	56/0.30	0.80	4.50	1.10	16.5 X 7.2	4.61	25
6.00	84/0.30	1.00	5.20	1.15	18.2 X 8.0	3.08	32
10.00	140/0.30	1.00	6.50	1.30	23.0 X 9.8	1.83	45
16.00	226/0.30	1.00	7.80	1.40	27.5 X 11.2	1.15	57
25.00	354/0.30	1.20	9.50	2.00	34.5 X 14.0	0.727	72
35.00	495/0.30	1.40	11.20	2.00	40.0 X 17.0	0.524	90
50.00	703/0.30	1.40	12.50	2.10	45.5 X 18.5	0.386	110

Note : Insulation thickness, sheath thickness and overall dimension given in the table are nominal values. The number of wires and strand diameter are satisfy the requirements of conductor resistance as per IS:8130/1984. Confirm to IS :694/2010

CABLE SELECTION GUIDE FOR 3 CORE FLAT CABLES AT 40 °C 415V

SUBMERSIBLE MOTOR	H.P.	5	7.5	10	12.5	15	17.5	20	25	30	35	40	45	50	55	60	65	70	75	80		
	Full load current (A)	7.5	11	15	19	22.5	26	28.4	35.6	42.3	50.4	58.1	62.1	67.5	73.8	81.0	87.3	93.6	101	108		
Size of cable in SQ.MM. at different length in meters	With DOL starter	30	1.5	1.5	2.5	2.5	4	4	6	10	10	16	16	25	25	35	35	35	50	50	50	
		40	1.5	1.5	2.5	2.5	4	4	6	10	10	16	16	25	25	35	35	35	50	50	50	
		50	1.5	1.5	2.5	2.5	4	4	6	10	10	16	16	25	25	35	35	35	50	50	50	
		60	1.5	1.5	2.5	2.5	4	4	6	10	10	16	16	25	25	35	35	35	50	50	50	
		70	1.5	2.5	2.5	4	4	4	4	6	10	10	16	16	25	25	35	35	35	50	50	50
		80	1.5	2.5	2.5	4	4	4	6	6	10	10	16	16	25	25	35	35	35	50	50	50
		90	1.5	2.5	4	4	4	4	6	6	10	10	16	16	25	25	35	35	35	50	50	50
		100	1.5	2.5	4	4	4	6	6	6	10	10	16	16	25	25	35	35	35	50	50	50
		120	2.5	4	4	6	6	6	10	10	10	16	16	16	25	25	35	35	35	50	50	50
	With Star-Delta starter	140	4	4	6	10	10	10	10	16	16	25	25	25	25	35	35	35	50	50	50	
		160	4	4	6	10	10	10	10	16	16	25	25	25	25	35	35	35	50	50	50	
		180	4	6	6	10	10	10	16	16	16	25	25	25	35	35	35	35	50	50	50	
		30	1.5	1.5	1.5	2.5	2.5	2.5	2.5	4	4	6	10	10	10	10	16	16	16	16	16	25
		40	1.5	1.5	1.5	2.5	2.5	2.5	2.5	4	4	6	10	10	10	10	16	16	16	16	16	25
		50	1.5	1.5	1.5	2.5	2.5	2.5	2.5	4	4	6	10	10	10	10	16	16	16	16	16	25
		60	1.5	1.5	2.5	2.5	2.5	2.5	4	4	4	6	10	10	10	10	16	16	16	16	16	25
		70	1.5	1.5	2.5	2.5	2.5	2.5	4	4	4	6	6	10	10	10	10	16	16	16	16	25
		80	1.5	1.5	2.5	2.5	4	4	4	4	4	6	6	10	10	10	10	16	16	16	16	25
90	1.5	1.5	2.5	4	4	4	4	4	6	6	6	10	10	10	10	16	16	16	16	25		
100	1.5	1.5	4	6	4	4	4	6	6	10	10	10	10	10	10	16	16	16	16	25		
120	1.5	2.5	4	6	4	4	6	6	10	10	10	10	16	16	16	16	25	25	25	25		
140	2.5	4	6	6	6	6	6	10	10	10	16	16	16	16	16	25	25	25	25	25		
160	2.5	4	6	6	6	6	6	10	10	10	16	16	16	16	16	25	25	25	25	25		
180	2.5	4	6	6	6	6	10	10	16	16	16	16	16	25	25	25	25	35	35	35		

Rating factor for low voltage:

Multiply the full load current of submersible motor by factors given below for different supply voltage & select right cable.

Voltage	415	400	350	300	275	250
Rating factor	1.00	1.05	1.15	1.25	1.30	1.35