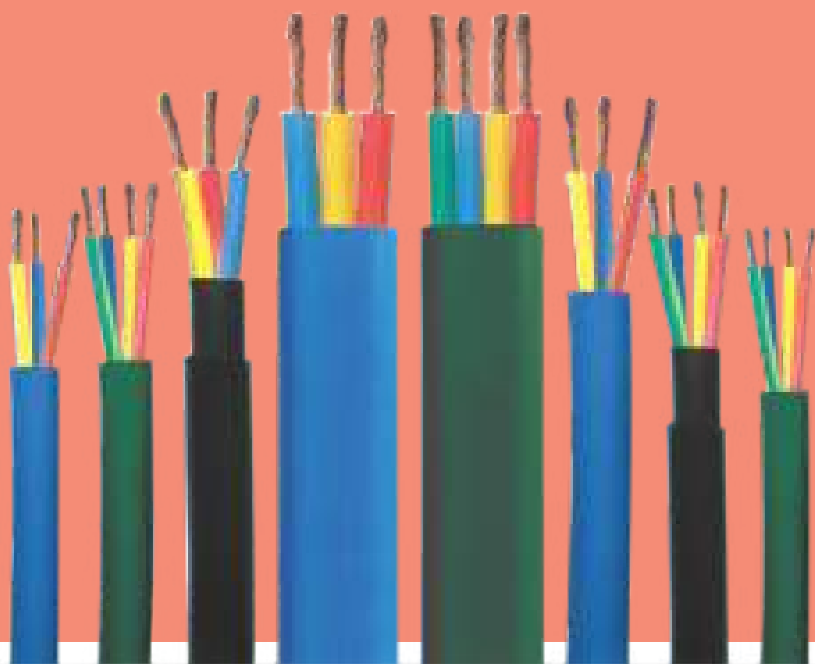


# SUBMERSIBLE CABLES & WIRES

Zirantec



[www.zirantec.com](http://www.zirantec.com)



FABBRICA ITALIANA POMPE SOMMERSIBILI S.r.l



ZIRANTEC products are  
manufactured by well  
qualified and experienced  
Italian Pump Engineers  
in state of the art  
manufacturing facilities  
in Italy

## CERTIFICATION



ZIRANTEC Pumps & Motors are from the house of **Fabbrica Italiana Pompe Sommergibili S.r.l.** a four decades old Italian company of high repute, offering complete waste water solutions around the world. Its current product portfolio includes world class Waste Water Pumps of various types, Multistage Centrifugal Pressure Booster Pumps, Borehole Submersible Pumps & Motors, End Suction Centrifugal Pumps, Industrial Pumps for various applications.

Founded as early as 1978 in Rozzano, South of Milan, Italy by Mr.Orfeo Agostini, the company has witnessed steady growth and market expansion continuously ever since. In these four decades of existence, the company has carved a niche for itself in the waste water and sewage pump market in Italy and other countries. Its products are employed in Municipal, Domestic and Industrial applications. The Company is well known for the unique and robust designs of its products and their workmanship. Due to its superior quality ZIRANTEC products are also exported to many European, African and Asian countries.

ZIRANTEC's products are conceived, designed and manufactured by well qualified and experienced Italian Pump Engineers in state of the art manufacturing facilities in Italy. These manufacturing plants are accredited with UNI EN ISO 9001:2008 Certification.

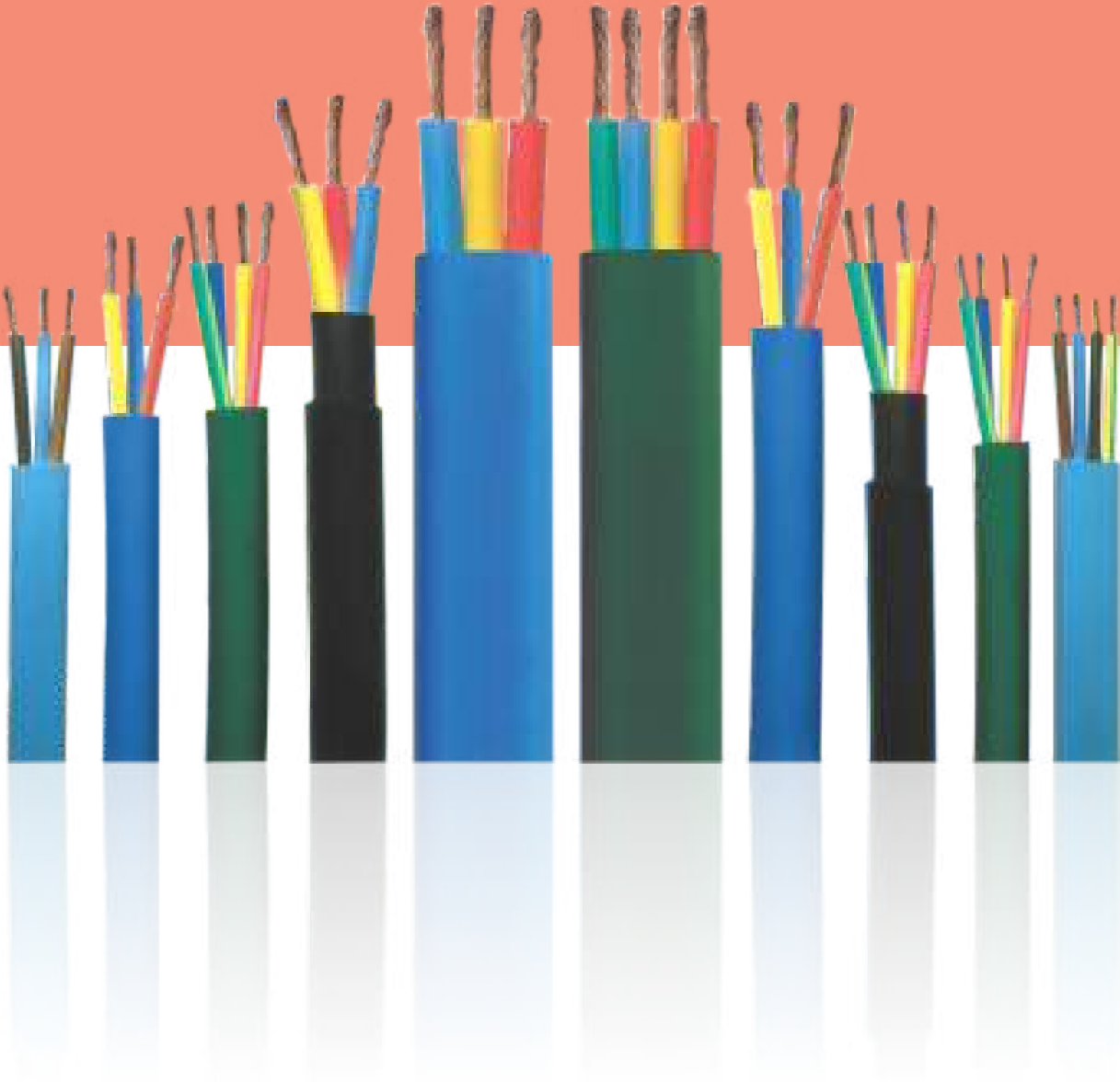
Over the years, the company has metamorphosed and ventured into manufacturing of high quality water pumps, for domestic, agricultural and industrial applications. In the due process, Fabbrica Italiana Pompe Sommergibili S.r.l. has shed its image of an exclusive sewage and waste water pumps manufacturer to a complete pump production company with an ability to manufacture diverse kinds of pumps for different applications.



# C O N T E N T S

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# Submersible Cables





# SUBMERSIBLE CABLES

## DESCRIPTION

ZIRANTEC submersible cables are produced in a well equipped manufacturing plant using high thermal stability, bright electrolytic copper of 99.95% purity with low conductor resistance for high current carrying capacity with superior grade rubber & PVC compounds. Outer sheath is made up of special grade water proof PVC / Rubber compound resistant to moisture, abrasion, grease, oil and other environment effect. ZIRANTEC produces different types of submersible cables in a wide range to meet the different needs of customers across the world. ZIRANTEC supplies cables in both SWG and AWG dimensions. These cables are produced keeping vagaries of field conditions voltage fluctuations into account to ensure reliability, safety, longevity and energy saving.

## FEATURES

- 99.95% EC Grade Copper
- High Conductivity
- Better Thermal Stability
- Abrasion Resistant PVC Compound
- High Ageing property
- Impervious to water, oil & Grease

## APPLICATIONS

- To supply power to submersible motors, pumping equipments & industrial machineries.

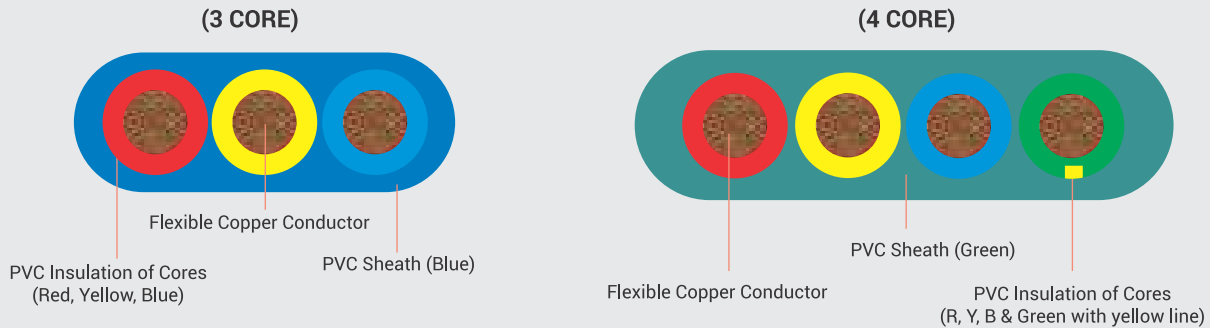
SPECIFICATIONS	
Available sizes in Sq.mm	1.5, 2.5, 4, 6, 10, 16, 25, 35, 50, 70, 95, 120 & 150 (3 core and 4 core) - 1100 V
Available sizes in AWG	14, 12, 10, 8, 6, 4, 2, 1, 1/0, 2/0, 3/0, 4/0, & 250 MCM (3 core and 4 core) - 600 V
Armoured cables sizes available in Sq.mm	1.5, 2.5, 4, 6, 10, 16, 25 & 35 (3 core and 4 core) 1100 V
Temperature Range	-40°C to +90°C
Conductor	High conductivity annealed and bunched copper
Conductor material	Plain / Tinned
Conductor Resistance is as per :	PVC / Rubber Std - Class 5 of IEC60228, DIN VDE 0295, IS 8130, BS 6360 PVC / Rubber AWG - Class 5 of IEC60228, UL 83, DIN VDE 0295, IS 8130, BS 6360 Armoured Cable - IS : 1554 (Part 1) 1988
Insulation material	Flexible water proof PVC / Rubber
Sheath material	Flexible water proof PVC / Rubber
Sheath colour	Black / Blue / Green / Any other color as be specified by the customer
Standards conforming to	PVC Std - CENELEC HD 21, IEC60227, BS 6500, DIN VDE 0281, IS 694 Rubber Std - CENELEC HD 21.152, DIN VDE 0282, PART 810, IEC 245, CEI 20-19 & BS 6007, BS 6899 PVC AWG - UL 83, IEC 60227, BS 6500, ISI 694 Rubber AWG - UL 83, IEC 60245, DIN VDE 0282, PART 810, BS 6007 & BS 6899 ARMOURED POWER CABLE - IEC 60502-1, BS 5467, BS 6724

### Colour Coding : PVC / Rubber Insulated & Sheathed 3 & 4 core, flat & Round (Single / Double sheathed)

Country	Core colour Codes	Outer sheath colour code
European Standard	4 core - Brown, Blue, Black, Yellow with Green stripe 3 core - Brown, Blue, Black	Blue
Australia	4 core - Brown, Blue, Black, Yellow with Green stripe 3 core - Brown, Blue, Yellow with Green stripe	Blue
South Africa	4 core - Red, Yellow, Blue, Green with Yellow stripe 3 core - Red, Yellow, Blue	4 core Round / Flat - Green 3 core Round / Flat - Blue
USA Standard - AWG	4 core - Yellow, Black, Red, Green 3 core - Yellow, Black, Red	Blue

Note : Do not use single sheath cables for heavy-duty applications like sewage, slurry and de-watering pumps in which the acidic fluids and chemicals may damage the sheath. Double-sheathed cables can be used for these kind of applications, which can be supplied on request.

## PVC 3 & 4 CORE FLAT CABLES



### PVC 3 CORE FLAT CABLES FOR SUBMERSIBLE PUMPS (1100 VOLTS)

CONDUCTOR		PVC INSULATION		PVC SHEATH			Conductor Resistance at 20°C (max) ohms/km	CURRENT Rating at 40°C Amps.
Nominal Area in Sq.mm.	Nos. & Dia of wire Nos./mm.	Nominal Thickness (in mm)	Nominal Core Dia (in mm)	Nominal Thickness (in mm)	Approx. Overall Dimensions (in mm)			
					W	H		
1,50	22/0,30	0,80	3,25	1,15	12,80	6,20	12,10	14
2,50	36/0,30	0,90	3,80	1,15	14,60	6,40	7,41	18
4,00	56/0,30	1,00	4,50	1,15	16,80	7,40	4,95	26
6,00	84/0,30	1,00	5,25	1,15	18,70	8,00	3,30	31
10,00	140/0,30	1,00	6,50	1,40	23,70	9,90	1,91	42
16,00	224/0,30	1,00	8,00	1,40	28,00	11,80	1,21	57
25,00	350/0,30	1,20	10,10	2,00	35,50	14,70	0,780	72
35,00	490/0,30	1,20	11,30	2,00	39,50	16,80	0,554	90
50,00	703/0,30	1,40	13,30	2,20	45,50	18,30	0,386	115
70,00	988/0,30	1,40	15,30	2,20	51,00	20,00	0,272	143
95,00	1349/0,30	1,60	18,00	2,40	60,00	23,50	0,206	165
120,00	608/0,50	1,80	19,80	2,80	65,00	25,00	0,161	188
150,00	760/0,50	2,20	22,00	4,00	76,10	30,70	0,129	216



### PVC 4 CORE FLAT CABLES FOR SUBMERSIBLE PUMPS (1100 VOLTS)

CONDUCTOR		PVC INSULATION		PVC SHEATH			Conductor Resistance at 20°C (max) ohms/km	CURRENT Rating at 40°C Amps.
Nominal Area in Sq.mm.	Nos. & Dia of wire Nos./mm.	Nominal Thickness (in mm)	Nominal Core Dia (in mm)	Nominal Thickness (in mm)	Approx. Overall Dimensions (in mm)			
					W	H		
1,50	22/0,30	0,80	3,25	1,30	15,80	6,20	12,10	14
2,50	36/0,30	0,90	3,80	1,30	18,00	6,40	7,41	18
4,00	56/0,30	1,00	4,50	1,45	21,00	7,40	4,95	26
6,00	84/0,30	1,00	5,25	1,50	24,50	8,00	3,30	31
10,00	140/0,30	1,00	6,50	1,80	29,70	9,90	1,91	42
16,00	224/0,30	1,00	8,00	1,95	36,00	11,80	1,21	57
25,00	350/0,30	1,20	10,10	2,00	45,10	14,70	0,780	72
35,00	490/0,30	1,20	11,30	2,00	50,10	16,80	0,554	90
50,00	703/0,30	1,40	13,30	2,20	58,10	18,30	0,386	115
70,00	988/0,30	1,40	15,30	2,20	66,50	20,00	0,272	143
95,00	1349/0,30	1,60	18,00	2,40	77,30	23,50	0,206	165
120,00	608/0,50	1,80	19,80	3,50	87,00	27,40	0,161	188

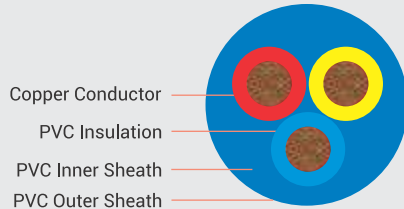


Note : The number of strands are approximate and strands diameter is nominal ;  
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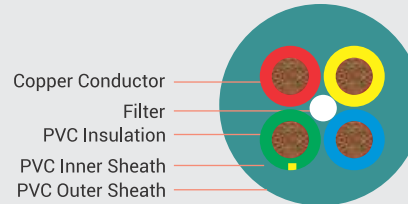


## PVC 3 & 4 CORE ROUND CABLES

(3 CORE)



(4 CORE)



### PVC 3 CORE ROUND CABLES FOR SUBMERSIBLE PUMPS (1100 VOLTS)

CONDUCTOR		PVC INSULATION		PVC SHEATH		Conductor Resistance at 20°C (max) ohms/km	CURRENT Rating at 40°C Amps.
Nominal Area in Sq.mm.	Nos. & Dia of wire Nos./mm.	Nominal Thickness (in mm)	Nominal Core Dia (in mm)	Nominal Thickness (in mm)	Approx. Overall Dimensions (in mm)		
1,50	22/0,30	0,80	3,25	1,50	10,00	12,10	14
2,50	36/0,30	0,90	3,80	1,50	11,00	7,41	18
4,00	56/0,30	1,00	4,50	1,60	13,00	4,95	26
6,00	84/0,30	1,00	5,25	1,60	14,60	3,30	31
10,00	140/0,30	1,00	6,50	2,00	18,00	1,91	42
16,00	224/0,30	1,00	8,00	2,00	21,20	1,21	57
25,00	350/0,30	1,20	10,10	2,40	26,50	0,780	72
35,00	490/0,30	1,20	11,30	2,60	29,50	0,554	90
50,00	703/0,30	1,40	13,30	3,10	34,80	0,386	115
70,00	988/0,30	1,40	15,30	3,20	39,30	0,272	143
95,00	1349/0,30	1,60	18,00	3,50	45,70	0,206	165
120,00	608/0,50	1,90	19,80	3,80	50,20	0,161	188
150,00	760/0,50	2,00	22,00	4,00	55,30	0,129	216



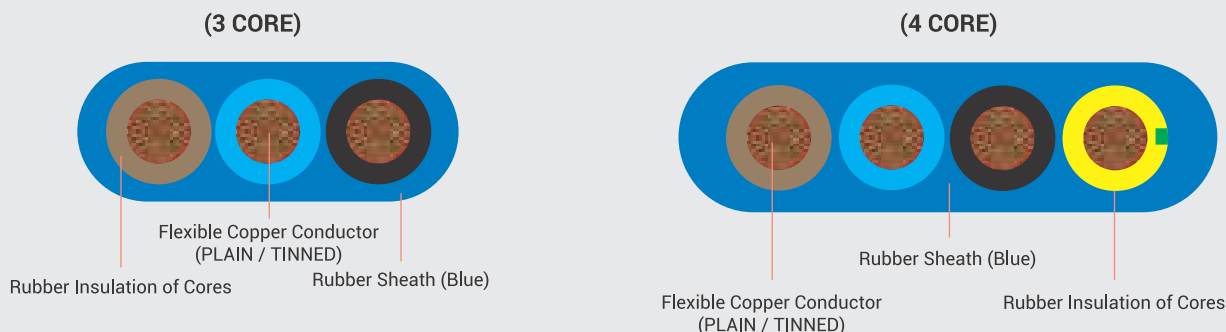
### PVC 4 CORE ROUND CABLES FOR SUBMERSIBLE PUMPS (1100 VOLTS)

CONDUCTOR		PVC INSULATION		PVC SHEATH		Conductor Resistance at 20°C (max) ohms/km	CURRENT Rating at 40°C Amps.
Nominal Area in Sq.mm.	Nos. & Dia of wire Nos./mm.	Nominal Thickness (in mm)	Nominal Core Dia (in mm)	Nominal Thickness (in mm)	Approx. Overall Dimensions (in mm)		
1,50	22/0,30	0,80	3,25	1,50	10,80	12,10	14
2,50	36/0,30	0,90	3,80	1,65	12,50	7,41	18
4,00	56/0,30	1,00	4,50	1,65	14,10	4,95	26
6,00	84/0,30	1,00	5,25	1,65	16,00	3,30	31
10,00	140/0,30	1,00	6,50	2,00	20,35	1,91	42
16,00	224/0,30	1,00	8,00	2,00	23,40	1,21	57
25,00	350/0,30	1,20	10,10	2,40	29,20	0,780	72
35,00	490/0,30	1,20	11,30	2,60	32,40	0,554	90
50,00	703/0,30	1,40	13,30	3,10	38,25	0,386	115
70,00	988/0,30	1,40	15,30	3,20	43,30	0,272	143
95,00	1349/0,30	1,60	18,00	3,50	50,40	0,206	165
120,00	608/0,50	1,90	19,80	3,80	55,30	0,161	188
150,00	760/0,50	2,00	22,00	4,00	61,00	0,129	216



Note : The number of strands are approximate and strands diameter is nominal ;  
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## RUBBER 3 & 4 CORE FLAT CABLES



### RUBBER 3 CORE FLAT CABLES FOR SUBMERSIBLE PUMPS (1100 VOLTS)

CONDUCTOR		RUBBER INSULATION		RUBBER SHEATH		Conductor Resistance at 20°C (max) ohms/km	CURRENT Rating at 40°C Amps.	
Nominal Area in Sq.mm.	Nos. & Dia of wire Nos./mm.	Nominal Thickness (in mm)	Nominal Core Dia (in mm)	Nominal Thickness (in mm)	Approx. Overall Dimensions (in mm)			
					W			H
1,50	22/0,30	0,80	3,25	1,15	12,80	6,20	12,10	14
2,50	36/0,30	0,90	3,80	1,15	14,60	6,40	7,41	18
4,00	56/0,30	1,00	4,50	1,15	16,80	7,40	4,95	26
6,00	84/0,30	1,00	5,25	1,15	18,70	8,00	3,30	31
10,00	140/0,30	1,00	6,50	1,40	23,70	9,90	1,91	42
16,00	224/0,30	1,00	8,00	1,40	28,00	11,80	1,21	57
25,00	350/0,30	1,20	10,10	2,00	35,50	14,70	0,780	72
35,00	490/0,30	1,20	11,30	2,00	39,50	16,80	0,554	90
50,00	703/0,30	1,40	13,30	2,20	45,50	18,30	0,386	115
70,00	988/0,30	1,40	15,30	2,20	51,00	20,00	0,272	143
95,00	1349/0,30	1,60	18,00	2,40	60,00	23,50	0,206	165
120,00	608/0,50	1,80	19,80	2,80	65,00	25,00	0,161	188
150,00	760/0,50	2,20	22,00	4,00	76,10	30,70	0,129	216



### RUBBER 4 CORE FLAT CABLES FOR SUBMERSIBLE PUMPS (1100 VOLTS)

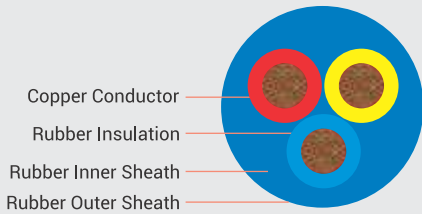
CONDUCTOR		RUBBER INSULATION		RUBBER SHEATH		Conductor Resistance at 20°C (max) ohms/km	CURRENT Rating at 40°C Amps.	
Nominal Area in Sq.mm.	Nos. & Dia of wire Nos./mm.	Nominal Thickness (in mm)	Nominal Core Dia (in mm)	Nominal Thickness (in mm)	Approx. Overall Dimensions (in mm)			
					W			H
1,50	22/0,30	0,80	3,25	1,30	15,80	6,20	12,10	14
2,50	36/0,30	0,90	3,80	1,30	18,00	6,40	7,41	18
4,00	56/0,30	1,00	4,50	1,45	21,00	7,40	4,95	26
6,00	84/0,30	1,00	5,25	1,50	24,50	8,00	3,30	31
10,00	140/0,30	1,00	6,50	1,80	29,70	9,90	1,91	42
16,00	224/0,30	1,00	8,00	1,95	36,00	11,80	1,21	57
25,00	350/0,30	1,20	10,10	2,00	45,10	14,70	0,780	72
35,00	490/0,30	1,20	11,30	2,00	50,10	16,80	0,554	90
50,00	703/0,30	1,40	13,30	2,20	58,10	18,30	0,386	115
70,00	988/0,30	1,40	15,30	2,20	66,50	20,00	0,272	143
95,00	1349/0,30	1,60	18,00	2,40	77,30	23,50	0,206	165
120,00	608/0,50	1,80	19,80	3,50	87,00	27,40	0,161	188



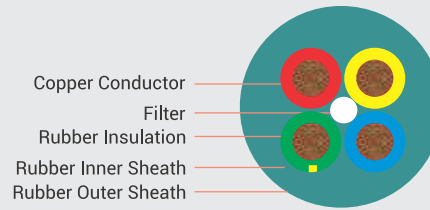
Note : The number of strands are approximate and strands diameter is nominal ;  
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# RUBBER 3 & 4 CORE ROUND CABLES

(3 CORE)



(4 CORE)



## RUBBER 3 CORE ROUND CABLES FOR SUBMERSIBLE PUMPS (1100 VOLTS)

CONDUCTOR		RUBBER INSULATION		RUBBER SHEATH		Conductor Resistance at 20°C (max) ohms/km	CURRENT Rating at 40°C Amps.
Nominal Area in Sq.mm.	Nos. & Dia of wire Nos./mm.	Nominal Thickness (in mm)	Nominal Core Dia (in mm)	Nominal Thickness (in mm)	Approx. Overall Dimensions (in mm)		
1,50	22/0,30	0,80	3,25	1,50	10,00	12,10	14
2,50	36/0,30	0,90	3,80	1,50	11,00	7,41	18
4,00	56/0,30	1,00	4,50	1,60	13,00	4,95	26
6,00	84/0,30	1,00	5,25	1,60	14,60	3,30	31
10,00	140/0,30	1,00	6,50	2,00	18,00	1,91	42
16,00	224/0,30	1,00	8,00	2,00	21,20	1,21	57
25,00	350/0,30	1,20	10,10	2,40	26,50	0,780	72
35,00	490/0,30	1,20	11,30	2,60	29,50	0,554	90
50,00	703/0,30	1,40	13,30	3,10	34,80	0,386	115
70,00	988/0,30	1,40	15,30	3,20	39,30	0,272	143
95,00	1349/0,30	1,60	18,00	3,50	45,70	0,206	165
120,00	608/0,50	1,90	19,80	3,80	50,20	0,161	188
150,00	760/0,50	2,00	22,00	4,00	55,30	0,129	216



## RUBBER 4 CORE ROUND CABLES FOR SUBMERSIBLE PUMPS (1100 VOLTS)

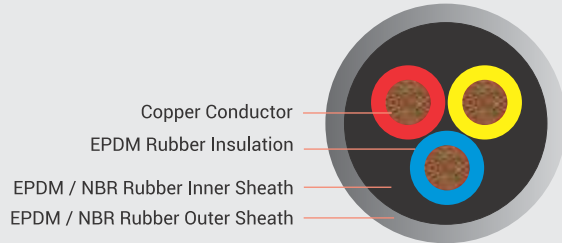
CONDUCTOR		RUBBER INSULATION		RUBBER SHEATH		Conductor Resistance at 20°C (max) ohms/km	CURRENT Rating at 40°C Amps.
Nominal Area in Sq.mm.	Nos. & Dia of wire Nos./mm.	Nominal Thickness (in mm)	Nominal Core Dia (in mm)	Nominal Thickness (in mm)	Approx. Overall Dimensions (in mm)		
1,50	22/0,30	0,80	3,25	1,50	10,80	12,10	14
2,50	36/0,30	0,90	3,80	1,65	12,50	7,41	18
4,00	56/0,30	1,00	4,50	1,65	14,10	4,95	26
6,00	84/0,30	1,00	5,25	1,65	16,00	3,30	31
10,00	140/0,30	1,00	6,50	2,00	20,35	1,91	42
16,00	224/0,30	1,00	8,00	2,00	23,40	1,21	57
25,00	350/0,30	1,20	10,10	2,40	29,20	0,780	72
35,00	490/0,30	1,20	11,30	2,60	32,40	0,554	90
50,00	703/0,30	1,40	13,30	3,10	38,25	0,386	115
70,00	988/0,30	1,40	15,30	3,20	43,30	0,272	143
95,00	1349/0,30	1,60	18,00	3,50	50,40	0,206	165
120,00	608/0,50	1,90	19,80	3,80	55,30	0,161	188
150,00	760/0,50	2,00	22,00	4,00	61,00	0,129	216



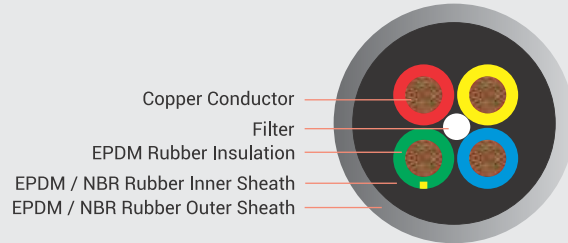
Note : The number of strands are approximate and strands diameter is nominal ;  
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## EPDM RUBBER INSULATED & EPDM / NBR RUBBER SHEATHED ROUND CABLES 3 & 4 CORE - DOUBLE SHEATHED

(3 CORE)



(4 CORE)



### 3 CORE

Conductor Area (in Sq.mm Nominal)	No. of strands and Diameter (Nominal)	Thickness of Insulation (in mm) (Nominal)	Thickness of Sheath (in mm) (Nominal)	Maximum Overall Dimensions (in mm)	Maximum Conductor Resistance at 20°C Ohms/km	Current Carrying Capacity at 40°C in Amps
1,50	22/0,30	0,80	1,50	10,00	12,10	14
2,50	36/0,30	0,90	1,50	11,00	7,41	18
4,00	56/0,30	1,00	1,60	13,00	4,95	26
6,00	84/0,30	1,00	1,60	14,60	3,30	31
10,00	140/0,30	1,00	2,00	18,00	1,91	42
16,00	226/0,30	1,00	2,00	21,20	1,21	57
25,00	354/0,30	1,20	2,15	26,00	0,780	72
35,00	495/0,30	1,20	2,15	28,30	0,554	90
50,00	703/0,30	1,40	2,25	33,50	0,386	115
70,00	440/0,45	1,40	2,45	37,80	0,272	143
95,00	475/0,50	1,60	2,40	43,50	0,206	165



### 4 CORE

Conductor Area (in Sq.mm Nominal)	No. of strands and Diameter (Nominal)	Thickness of Insulation (in mm) (Nominal)	Thickness of Sheath (in mm) (Nominal)	Maximum Overall Dimensions (in mm)	Maximum Conductor Resistance at 20°C Ohms/km	Current Carrying Capacity at 40°C in Amps
1,50	22/0,30	0,80	1,50	10,80	12,10	14
2,50	36/0,30	0,90	1,65	12,50	7,41	18
4,00	56/0,30	1,00	1,65	14,10	4,95	26
6,00	84/0,30	1,00	1,65	16,00	3,30	31
10,00	140/0,30	1,00	2,00	20,35	1,91	42
16,00	226/0,30	1,00	2,00	23,40	1,21	57
25,00	354/0,30	1,20	2,20	28,80	0,780	72
35,00	495/0,30	1,20	2,20	31,50	0,554	90
50,00	703/0,30	1,40	2,30	37,30	0,386	115
70,00	440/0,45	1,40	2,60	42,20	0,272	143
95,00	475/0,50	1,60	2,65	48,80	0,206	165



NBR - Nitrile butadiene rubber.

Cables with EPDM Insulation & NBR Sheath is equivalent to H07RN-F Standards.

Cables on request with lead free NBR Sheath also can be supply on additional cost.

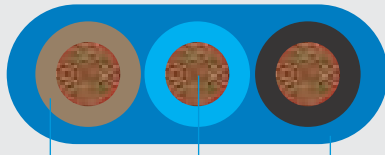
Note : The number of strands are approximate and strands diameter is nominal ; Conductor resistance is as per class 5 of IEC 60228 / DIN VDE 0295 / IS 8130 / BS 6360

In view of continuous developments, the information / descriptions / specifications / illustrations are subject to change without notice.

## PVC AWG SUBMERSIBLE PUMP CABLES

without ground flat cable

(3 CORE)



Flexible Copper Conductor

PVC Insulation of Cores

PVC Jacket

with ground flat cable

(4 CORE)



Flexible Copper Conductor  
(PLAIN / TINNED)

PVC Jacket

PVC Insulation of Cores

### HEAVY DUTY PVC JACKETED FLAT SUBMERSIBLE PUMP CABLES ( WITHOUT GROUND)

Conductor Size (AWG)	No. of Conductor	Nos. & Dia. of wire	Core Dia. (mm)	Nominal Sheath Thickness (mm)	Maximum Overall Dimensions (in mm)		Current Carrying Capacity at 40°C in Amps
					W	H	
14	3	41 x 0,254	3,60	1,15	13,30	6,20	15
12	3	65 x 0,254	4,30	1,15	15,60	7,00	20
10	3	105 x 0,254	5,10	1,15	17,70	7,40	30
8	3	168 x 0,254	6,30	1,40	22,30	9,30	50
6	3	226 x 0,254	7,60	1,40	26,30	10,60	65
4	3	420 x 0,254	9,90	2,00	32,30	13,10	85
2	3	665 x 0,254	11,10	2,00	35,90	14,30	115
1	3	817 x 0,254	13,60	2,20	45,50	18,30	130
1/0	3	1045 x 0,254	13,60	2,20	45,50	18,30	150
2/0	3	1330 x 0,254	15,60	2,20	51,00	20,00	175
3/0	3	1672 x 0,254	18,00	2,40	61,00	23,50	175
4/0	3	2116 x 0,254	19,80	2,65	65,00	25,50	230
250 MCM	3	646 x 0,5	20,60	2,80	68,00	28,00	255



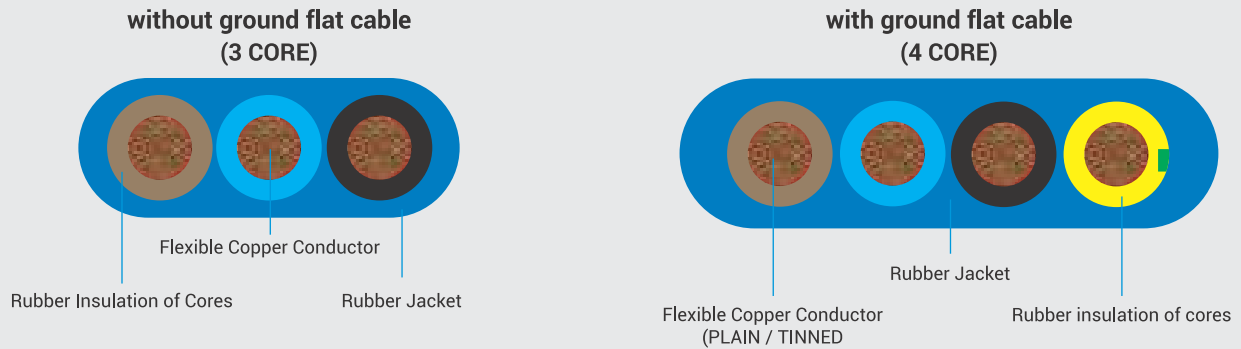
### HEAVY DUTY PVC JACKETED FLAT SUBMERSIBLE PUMP CABLES ( WITH GROUND)

Conductor Size (AWG)	No. of Conductor	Nos. & Dia. of wire	Ground Conductor Size (AWG)	Core Dia. (mm)	Nominal Sheath Thickness (mm)	Maximum Overall Dimensions (in mm)		Current Carrying Capacity at 40°C in Amps
						W	H	
14	3	41 x 0,254	14	3,85	1,15	18,00	6,50	15
12	3	65 x 0,254	12	4,50	1,15	21,00	7,60	20
10	3	105 x 0,254	10	5,30	1,15	24,30	7,90	30
8	3	168 x 0,254	10	6,50	1,40	29,70	9,90	50
6	3	226 x 0,254	8	8,00	1,40	36,00	11,80	65
4	3	420 x 0,254	8	10,10	2,00	45,10	14,70	85
2	3	665 x 0,254	6	11,30	2,00	50,10	16,20	115
1	3	817 x 0,254	6	13,60	2,20	58,10	19,00	130
1/0	3	1045 x 0,254	6	15,60	2,20	58,10	19,00	150
2/0	3	1330 x 0,254	6	18,00	2,20	66,50	21,50	175
3/0	3	1672 x 0,254	2	18,00	2,65	77,30	23,50	175
4/0	3	2116 x 0,254	2	19,80	3,85	87,00	27,80	230



Note : The number of strands are approximate and strands diameter is nominal ;  
In the view of continuous developments, the information / descriptions / specifications / illustrations are subject to change without notice.

## RUBBER AWG SUBMERSIBLE PUMP CABLES



### Heavy Duty Rubber Jacketed Flat Submersible Pump Cables ( Without Ground)

Conductor Size (AWG)	No. of Conductor	Nos. & Dia. of wire	Core Dia. (mm)	Nominal Sheath Thickness (mm)	Maximum Overall Dimensions (in mm)		Current Carrying Capacity at 40°C in Amps
					W	H	
14	3	41 x 0,254	3,85	1,15	14,60	6,40	15
12	3	65 x 0,254	4,50	1,15	16,80	7,40	20
10	3	105 x 0,254	5,30	1,15	18,70	7,90	30
8	3	168 x 0,254	6,50	1,40	23,70	9,90	50
6	3	226 x 0,254	8,00	1,40	28,00	11,40	65
4	3	420 x 0,254	10,10	2,00	35,50	14,70	85
2	3	665 x 0,254	11,30	2,00	39,50	16,20	115
1	3	817 x 0,254	13,60	2,20	45,50	18,30	130
1/0	3	1045 x 0,254	13,60	2,20	45,50	18,30	150
2/0	3	1330 x 0,254	15,60	2,20	51,00	20,00	175
3/0	3	1672 x 0,254	18,00	2,40	60,00	23,50	175
4/0	3	2116 x 0,254	19,80	2,65	65,00	25,00	230
250 MCM	3	2503 x 0,254	20,60	2,80	68,00	28,00	255



### Heavy Duty Rubber Jacketed Flat Submersible Pump Cables ( With Ground)

Conductor Size (AWG)	No. of Conductor	Nos. & Dia. of wire	Ground Conductor Size (AWG)	Core Dia. (mm)	Nominal Sheath Thickness (mm)	Maximum Overall Dimensions (in mm)		Current Carrying Capacity at 40°C in Amps
						W	H	
14	3	41 x 0,254	14	3,85	1,15	18,00	6,50	15
12	3	65 x 0,254	12	4,50	1,15	21,00	7,60	20
10	3	105 x 0,254	10	5,30	1,15	24,30	7,90	30
8	3	168 x 0,254	10	6,50	1,40	29,70	9,90	50
6	3	266 x 0,254	8	8,00	2,00	36,00	11,80	65
4	3	420 x 0,254	8	10,10	2,00	45,10	14,70	85
2	3	665 x 0,254	6	11,30	2,20	50,10	16,20	115
1	3	817 x 0,254	6	13,60	2,20	58,10	19,00	130
1/0	3	1045 x 0,254	6	15,60	2,20	58,10	19,00	150
2/0	3	1330 x 0,254	4	18,00	2,20	66,50	21,50	175
3/0	3	1672 x 0,254	2	19,80	3,85	77,30	23,50	175
4/0	3	2116 x 0,254	2	19,80	3,85	87,00	27,80	230



Note : The number of strands are approximate and strands diameter is nominal ;  
In the view of continuous developments, the information / descriptions / specifications / illustrations are subject to change without notice.



# ARMoured POWER CABLES

1100 Volts grade, Copper Flexible Conductor, XLPE Insulated, Cores Laid up, PVC extruded inner-sheath, Galvanized Steel Wire / Strip Armoured. Extruded PVC Sheathed power cables.

## 3 Core Copper conductor XLPE Insulated PVC sheathed Armoured Cable

Size (No. of Core x Nom. Area of Conductor)	Conductor Configuration No./Dia of Wire	Max. Conductor Resistance at 20° C Ohm/Km.	Nominal Insulation Thickness in mm	Armour Size in mm		Nominal Sheath Thickness in mm	Overall Diameter in mm	Current Carrying Capacity in Amps	
				Round Diameter of wire in mm	Strips (Width x Thickness) mm			Ground	Air
3C x 1.5	1/1,38	12,1	0,7	1,4	-	1,8	14	26	23
3C x 2.5	1/1,79	7,41	0,7	1,4	-	1,8	15	27	24
3C x 4	1/2,24	4,61	0,7	1,4	-	1,8	16	45	41
3C x 6	1/2,78	3,08	0,7	1,4	-	1,8	17	56	52
3C x 10	7/1,35	1,83	0,7	1,4	-	1,8	19,5	74	70
3C x 16	7/1,72	1,15	0,7	-	4 x 0,80	1,8	21,5	95	89
3C x 25	7/2,18	0,727	0,9	-	4 x 0,80	2	22,5	122	119
3C x 35	7/2,52	0,524	0,9	-	4 x 0,80	2	24	146	147
3C x 50	7/3,02	0,387	1	-	4 x 0,80	2	27,5	173	179
3C x 70	19/2,18	0,268	1,1	-	4 x 0,80	2,2	31	212	226
3C x 95	19/2,52	0,193	1,1	-	4 x 0,80	2,2	35,5	254	279
3C x 120	19/2,85	0,153	1,2	-	4 x 0,80	2,2	38,5	287	320
3C x 150	19/3,21	0,124	1,4	-	4 x 0,80	2,4	42	321	365
3C x 185	37/2,52	0,0991	1,6	-	4 x 0,80	2,6	46,5	362	422
3C x 240	37/2,85	0,0754	1,7	-	4 x 0,80	2,8	52	418	500
3C x 300	37/3,21	0,0601	1,8	-	4 x 0,80	3	61,5	469	574
3C x 400	61/2,88	0,047	2	-	4 x 0,80	3,4	64	528	662

+Overall diameter of cable has a tolerance (±) 3mm for the above 30mm / othwise (±) 2mm below 30mm



## 4 Core Copper conductor XLPE Insulated PVC sheathed Armoured Cable

Size (No. of Core x Nom. Area of Conductor)	Conductor Configuration No./Dia of Wire	Max. Conductor Resistance at 20° C Ohm/Km.	Nominal Insulation Thickness in mm	Armour Size in mm		Nominal Sheath Thickness in mm	Overall Diameter in mm	Current Carrying Capacity in Amps	
				Round Diameter of wire in mm	Strips (Width x Thickness) mm			Ground	Air
4C x 1.5	1/1,38	12,1	0,7	1,4	-	1,8	15	26	23
4C x 2.5	1/1,79	7,41	0,7	1,4	-	1,8	16	34	30
4C x 4	1/2,24	4,61	0,7	1,4	-	1,8	17	45	41
4C x 6	1/2,78	3,08	0,7	1,4	-	1,8	18	56	52
4C x 10	7/1,35	1,83	0,7	1,4	-	2	21	74	70
4C x 16	7/1,72	1,15	0,7	-	4 x 0,80	2	23	95	89
4C x 25	7/2,18	0,727	0,9	-	4 x 0,80	2	27	122	119
4C x 35	7/2,52	0,524	0,9	-	4 x 0,80	2	30	146	147
4C x 50	7/3,02	0,387	1	-	4 x 0,80	2,2	34	173	179
4C x 70	19/2,18	0,268	1,1	-	4 x 0,80	2,2	38,5	212	226
4C x 95	19/2,52	0,193	1,1	-	4 x 0,80	2,4	43	254	279
4C x 120	19/2,85	0,153	1,2	-	4 x 0,80	2,4	47,5	287	320
4C x 150	19/3,21	0,124	1,4	-	4 x 0,80	2,6	52,5	321	365
4C x 185	37/2,52	0,0991	1,6	-	4 x 0,80	2,8	58	362	422
4C x 240	37/2,85	0,0754	1,7	-	4 x 0,80	3,0	64,5	418	500
4C x 300	37/3,21	0,0601	1,8	-	4 x 0,80	3,2	70,5	469	574
4C x 400	61/2,88	0,047	2	-	4 x 0,80	3,4	79	528	662

+Overall diameter of cable has a tolerance (±) 3mm for the above 30mm / othwise (±) 2mm below 30mm



Note : The number of strands are approximate and strands diameter is nominal ;  
In the view of continuous developments, the information / descriptions / specifications / illustrations are subject to change without notice.

## ZIRANTEC Z FIRE FR BUILDING WIRES

### Conductor

These wires are manufactured using Electrolytic Grade 99,97% purity copper with more than 100% conductivity. The conductors are drawn using state-of-the-art multiwire drawing machine as fine wires and bunched with concentricity according to IS 8130. High purity and conductivity of copper ensures greater saving of electrical energy which helps to reduce electricity bills.

### Insulation

The bunched conductors are insulated with specially formulated and in-house manufactured FR-(Flame Retardant) PVC compound with high oxygen index and temperature index. These properties help in restricting the spread of fire even at very high temperatures. Wires are **insulated with double layer**, Natural FR PVC compound as first layer and Natural + Skin color as second layer which gives double protection in insulation.

All wires are tested with online high voltage spark tester to ensure that there are no weak spots in the insulation, pin holes, black spots and any other defects during extrusion. These wires meet the requirements of IS 694 with latest amendments with improved fire performance for category C1. This ensures **extra protection against electrical shocks, short circuits and fire.**

#### Single Core, unsheathed cables in voltage grade 1100v

#### IS 694 ISI CM/L-3406447

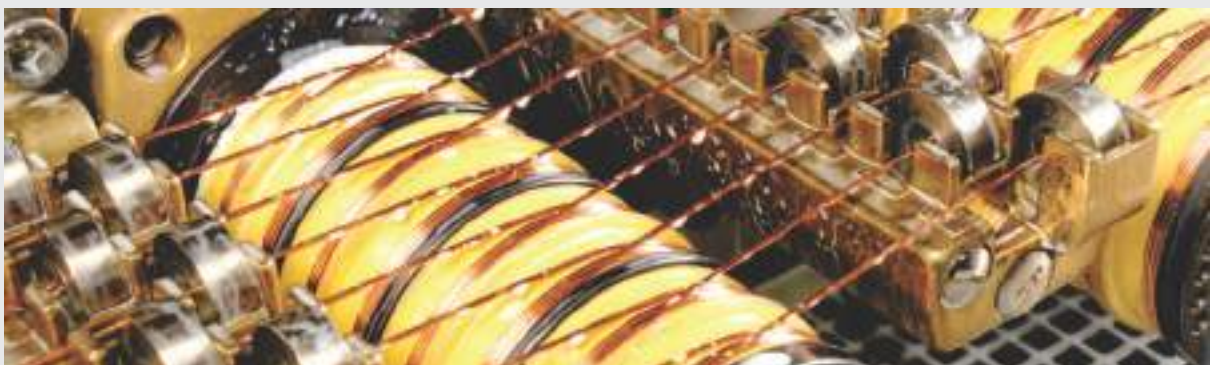
Nominal Area of Conductor	No. of strands/ Nominal Dia of wire**	Thickness of insulation (Nom.)	Approx. Overall Diameter	Current Carrying Capacity# 2 Cables, Single Phase		Max. Resistance per km @ 20°C as per IS 8130
				In Conduit/ Trunking	Unenclosed- Clipped directly to a surface or on cable tray	
sq. mm.	mm	mm	mm	Amps.	Amps.	ohms
1,0	14/0,30	0,70	2,70	11	12	18,10
1,5	22/0,30	0,70	3,00	13	16	12,10
2,5	36/0,30	0,80	3,60	18	22	7,41
4,0	56/0,30	0,80	4,00	24	29	4,95
6,0	84/0,30	0,80	4,60	31	37	3,30

**Standard Colours:** Red, Yellow, Blue, Black, Green, Grey & White. Can also be supplied in any colour based on the request.

**Standard Length:** 90 Meter Coils in Protective Carton. Project Coils of 180 / 270 mtrs also available.

# As per IS 3961(Part V) : 1968.

\*\* Nominal Dia to meet the Specified resistance.





FR PROPERTIES		
TEST	TEST METHOD	SPECIFIED VALUES
Critical Oxygen Index	IS 10810 : 1984; Part 58	Oxygen Index Minimum 29%
Temperature Index	IS 10810 : 1984; Part 64	Minimum Temperature Index 250°C
Meets requirement of Flammability Test as per IS 694		



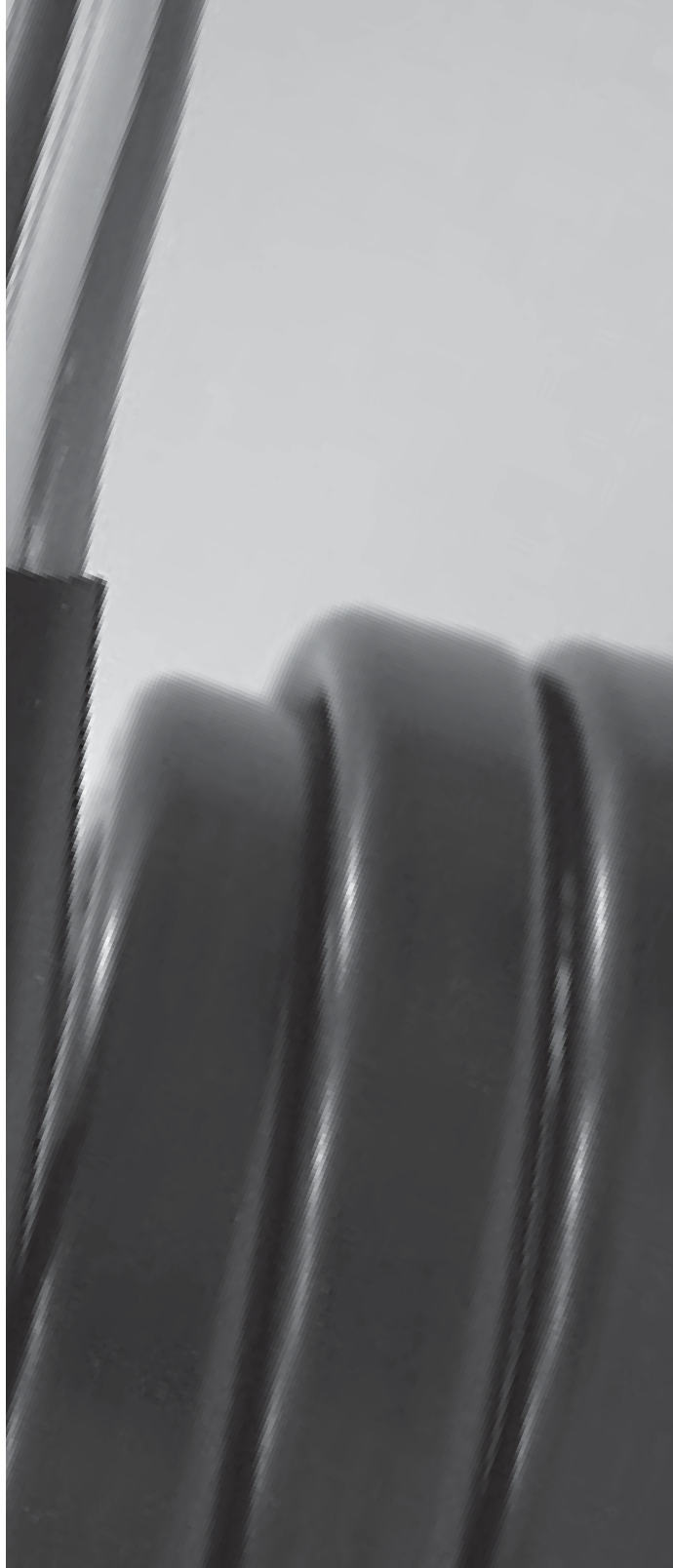
## CONVERSION TABLE - Sq.mm, Sq.Inch , CIRCULAR MILS & AWG

Sq.mm	Sq.Inch	Cir.Mils	AWG	Sq.mm	Sq.Inch	Cir.Mils	AWG	Sq.mm	Sq.Inch	Cir.Mils	AWG
1000	1,550	1974000	-	80	0,1240	157920	-	9,5	0,01472	18753	-
975	1,511	1924700	-	75	0,1163	148050	-	9,0	0,01395	17766	-
950	1,472	1875300	-	70	0,1085	138180	-	8,5	0,01317	16779	-
925	1,434	826000	-	-	-	133100	2/0	-	-	16510	8
900	1,395	1776600	-	65	0,1008	128310	-	8,0	0,01240	15792	-
875	1,356	1727300	-	60	0,0930	118440	-	7,5	0,01163	14805	-
850	1,317	1677900	-	55	0,0853	108570	-	7,0	0,01085	13818	-
825	1,279	1628600	-	-	-	105600	1/0	-	-	13090	9
800	1,240	1579200	-	50	0,0775	98700	-	6,5	0,01008	12831	-
775	1,201	1529900	-	45	0,0698	88830	-	6,0	0,00930	11844	-
750	1,163	1480500	-	-	-	83690	1	5,5	0,00853	10857	-
725	1,124	1431200	-	40	0,0620	78960	-	-	-	10380	10
700	1,085	1381800	-	35	0,0542	69090	-	5,0	0,00775	9870	-
675	1,046	1332500	-	-	-	66360	2	4,75	0,00736	9377	-
650	1,008	1283100	-	30	0,0465	59220	-	4,50	0,00698	8883	-
625	0,969	1233800	-	-	-	52620	3	4,25	0,00659	8390	-
600	0,930	1184400	-	25	0,0388	49350	-	-	-	8230	11
575	0,891	1135100	-	-	-	41740	4	4,0	0,00620	7896	-
550	0,853	1085700	-	20	0,0310	39480	-	3,75	0,00581	7403	-
525	0,814	1036400	-	19,5	0,0302	38490	-	3,50	0,00542	6909	-
500	0,775	987000	-	19,0	0,0294	37510	-	-	-	6530	12
475	0,736	937700	-	18,5	0,0287	36520	-	3,25	0,00504	6416	-
450	0,698	888300	-	18,0	0,0279	35520	-	3,0	0,00465	5922	-
425	0,659	839000	-	17,5	0,0271	34550	-	2,75	0,00426	5429	-
400	0,620	789600	-	17,0	0,0264	33560	-	-	-	5180	13
375	0,581	740300	-	-	-	33090	5	2,50	0,00388	4935	-
350	0,542	690900	-	16,5	0,0256	32560	-	2,25	0,00349	4442	-
325	0,504	641600	-	16,0	0,0248	31580	-	-	-	4110	14
300	0,465	592200	-	15,5	0,0240	30600	-	2,0	0,00310	3948	-
275	0,526	542900	-	15,0	0,0233	29610	-	1,75	0,00271	3455	-
250	0,388	493500	-	14,5	0,0225	28620	-	-	-	3260	15
225	0,349	444200	-	14,0	0,0217	27640	-	1,50	0,00233	2961	-
200	0,310	394800	-	13,5	0,0209	26650	-	-	-	2580	16
175	0,271	345500	-	-	-	26240	6	1,25	0,00194	2468	-
150	0,233	296100	-	13,0	0,0201	25660	-	-	-	2050	17
125	0,1938	246800	-	12,5	0,0194	24680	-	1,0	0,00155	1974	-
-	-	211600	4/0	12,0	0,0186	23690	-	0,9	0,00140	1777	-
100	0,1550	197400	-	11,5	0,0178	22700	-	-	-	1620	18
95	0,1472	187530	-	11,0	0,0171	21710	-	0,8	0,00124	1579	-
90	0,1395	177660	-	-	-	20820	7	0,75	0,00116	1481	-
-	-	167800	3/0	10,5	0,0163	20730	-	0,7	0,00109	1382	-
85	0,1317	167790	-	10,0	0,0155	19740	-	-	-	1290	19

To Convert :	Multiply by :
Meters to feet	3,2808
Kilometers to feet	3280,8
Feet to meters	0,3048
Feet to kilometers	0,0003048
Kilograms to pounds	2,205
Pounds to kilograms	0,4536
Pounds 1000 ft. to pounds 1000 meters	3,2808
Pounds 1000 ft to kilograms 1000 meters	1,4882
Kilograms 1000 meters to pounds 1000 feet	0,6719
°C = 5/9 (°F - 32)	°F = 32 + 5/9 (°C)

0,6	0,00093	1184	-
-	-	1029	-
0,5	0,000775	987	20





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