SINGLE CORE, MULTI CORE INDUSTRIAL CABLES

Single Core Switchgear Wires (Flexible / Stranded Copper)

Zenium Cables PVC Insulated single core cables with flexible/stranded conductors are manufactured with most stringent quality control to ensure total safety, prevention of shock hazards, less possibility of fires and complete assurance for a perfect system. These are used for indoor fixed installations in dry locations where particular flexibility is required. For building installations they can be laid in conduits over or under the walls as well as in steel brackets. These wires are ideal for any industrial/ Equipment / appliances application. The flexible cords with copper conductors for electric power and lighting including **WEATHERPROOF** cables upto 1100 volts are also manufactured here.

TABLE 2.1

SINGLE CORE FLEXIBLE SWITCHGEAR WIRES AS PER IS 694 : 2010

Conductor Area	No. of Strand	Thickness of PVC Insulation	Approx Overall Diameter	Max DC Resistance at 20°C	Current Carrying Capacity
Sq. mm	Nos	mm	mm	Ohm/Km	Amps
0.5	16	0.6	2.20	39	4
0.75	24	0.6	2.40	26	7
1	32	0.6	2.55	19.5	12
1.5	48	0.6	3.10	13.3	15
2.5	80	0.7	3.60	7.98	20
4	56	0.8	4.00	4.95	23
6	84	0.8	4.70	3.3	35
10	80	1.0	6.40	1.91	46
16	126	1.0	7.10	1.21	62
25	196	1.2	9.55	0.78	80

Conductor Area	No. of Strand	Thickness of PVC Insulation	Approx Overall Resistance Diameter	Max DC Resistance at 20°C	Current Carrying Capacity
Sq. mm	Nos	mm	mm	Ohm/Km	Amps
35	276	1.2	10.8	0.554	102
50	396	1.4	12.9	0.386	138
70	354	1.4	14.9	0.272	170
95	484	1.6	17.25	0.206	210
120	608	1.6	18.95	0.161	235
150	750	1.8	21.1	0.129	295
185	925	2.0	23.8	0.106	330
240	1221	2.2	27.15	0.0801	400
300	1525	2.4	30.2	0.0641	475
400	2013	2.6	34.35	0.0486	550

SINGLE CORE STRANDED SWITCHGEAR WIRES AS PER IS 694 : 2010

Conductor Area	No. of Strand	Thickness of PVC Insulation	Approx Overall Diameter	Max DC Resistance at 20°C	Current Carrying Capacity
Sq. mm	Nos	mm	mm	Ohm/Km	Amps
1.0	7	0.7	2.65	18.10	12
1.5	7	0.7	3.10	12.10	15
2.5	7	0.8	3.70	7.41	20
4.0	7	0.8	4.25	4.61	23
6.0	7	0.8	4.85	3.08	35
10	7	1.0	6.15	1.83	46
16	7	1.0	7.20	1.15	62
25	7	1.2	8.95	0.727	80
35	7	1.2	11.0	0.524	102

Conductor Area	No.of Strand	Thickness of PVC Insulation	Approx Overall Resistance Diameter	Max DC Resistance at 20°C	Current Carrying Capacity
Sq. mm	Nos	mm	mm	Ohm/Km	Amps
50	19	1.4	12.10	0.387	138
70	19	1.4	13.80	0.268	170
95	19	1.6	16.00	0.193	210
120	37	1.6	17.60	0.153	236
150	37	1.8	19.65	0.124	295
185	37	2.0	21.80	0.0991	330
240	61	2.2	24.70	0.0754	400
300	61	2.4	27.45	0.0601	475
400	61	2.6	31.60	0.0470	550

The above data is approximate and subject to manufacturing tolerance

Single Core Switchgear Wires (Flexible / Stranded Copper)

TABLE 2.2

ZENIUM PVC INSULATED SINGLE CORE INDUSTRIAL FLEXIBLE CABLES 1100 V.

Zenium PVC insulated Single Core Cables with flexible / stranded conductors are manufactured with most stringent quality control to ensure total safety, prevention of shock hazards. These are used for indoor fixed installations in dry locations where flexibility of cable is the key factor. These cables are ideal for Industrial / Equipments / Appliances . These cables being manufactured as per IS 694 : 2010.

Conductor Area	No. & Size of each Strand	Thickness of PVC Insulation	Approx Overall Diameter	Max DC Resistance at 20°C	Current Carrying Capacity
Sq. mm	Nos/Dia	mm	mm	Ohm/Km	Amps
0.5	16/0.2	0.6	2.20	39	4
0.75	24/0.2	0.6	2.40	26	7
1	32/0.2	0.6	2.55	19.5	12
1.5	*30/0.25	0.6	3.10	13.3	15
2.5	**50/0.25	0.7	3.60	7.98	20
4	56/0.3	0.8	4.00	4.95	23
6	84/0.3	0.8	4.70	3.3	35
10	80/0.4	1.0	6.40	1.91	46
16	126/0.4	1.0	7.10	1.21	62
25	196/0.4	1.2	9.05	0.78	80
35	276/0.4	1.2	10.8	0.554	102
50	396/0.4	1.4	12.9	0.386	138
70	360/0.5	1.4	14.9	0.272	170
95	475/0.5	1.6	17.25	0.206	210
120	608/0.5	1.6	18.95	0.161	235
150	750/0.5	1.8	21.1	0.129	295
185	925/0.5	2.0	23.8	0.106	330
240	1210/0.5	2.2	27.15	0.0801	400
300	1527/0.5	2.4	30.2	0.0641	475
400	2013/0.5	2.6	34.35	0.0486	550

*This size can be supplied in 48/0.2 Construction.

**This size can be supplied in 80/0.2 Construction.

TABLE 2.3

ZENIUM PVC INSULATED AND SHEATHED MULTICORE FLEXIBLE CABLES, 450 / 750 V.

Conductor Area	No. & Size of each Strand	Thickness of PVC Insulation	Max DC Resist. at 20°C	Current Carrying Capacity	Thickness of PVC Outer Sheath (mm)			Approximate Overall Diameter (mm)		
Sq.mm	Nos/Dia	mm	Ohm/Km	Amps	2 Core	3 Core	4 Core	2 Core	3 Core	4 Core
0.5	16/0.2	0.6	39	4	0.9	0.9	0.9	6.15	6.40	7.05
0.75	24/0.2	0.6	26	7	0.9	0.9	0.9	6.55	6.85	7.50
1	32/0.2	0.6	19.5	12	0.9	0.9	0.9	6.90	7.20	7.90
1.5	*30/0.25	0.6	13.3	15	0.9	0.9	1.0	7.45	7.80	8.80
2.5	**50/0.25	0.7	7.98	20	1.0	1.0	1.0	8.95	9.35	10.35
4	56/0.3	0.8	4.95	23	1.0	1.0	1.0	10.35	10.85	12.05
6	84/0.3	0.8	3.30	35	1.1	1.1	1.2	11.65	12.20	13.80
10	80/0.4	1.0	1.91	36	1.2	1.2	1.3	14.55	15.30	17.25
16	126/0.4	1.0	1.21	62	1.3	1.3	1.4	16.80	17.70	19.95
25	196/0.4	1.2	0.78	80	1.4	1.5	1.6	21.90	23.25	26.20
35	276/0.4	1.2	0.554	102	1.5	1.6	1.7	24.60	26.10	29.45
50	396/0.4	1.4	0.386	138	1.6	1.7	1.8	29.00	30.75	34.70

*This size can be supplied in 48/0.2 Construction.

**This size can be supplied in 80/0.2 Construction.

The above data is approximate and subject to manufacturing tolerance

Multicore Flexible Copper Cables

TABLE 2.4

ZENIUM PVC INSULATED FLEXIBLE WIRES & CABLES
ZENIUM MULTICORE ROUND FLEXIBLE CABLES (6 Cores to 30 Cores) Generally as per IS : 694/2010

Area in Sq. mm	0.5	0.75	1.0	1.5	2.5	4.0
General Construction No./Dia	16/0.2	24/0.2	32/0.2	*30/0.25	**50/0.25	56/0.3
Conductor Dia in mm	0.94	1.2	1.34	1.64	2.08	2.61
Avg Insu. Thickness in mm	0.6	0.6	0.6	0.6	0.7	0.8
Core Dia in mm	2.2	2.5	2.6	2.9	3.5	4.3

No. of Cores						
6	Avg Sheath Thickness in mm	0.9	1.0	1.0	1.0	1.1	1.2
	App. Overall Dia in mm	8.5	9.5	9.8	10.7	12.7	15.3
7	Avg Sheath Thickness in mm	0.9	1.0	1.0	1.0	1.1	1.2
	App. Overall Dia in mm	8.5	9.5	9.8	10.7	12.7	15.3
8	Avg Sheath Thickness in mm	1.0	1.0	1.0	1.1	1.2	1.3
	App. Overall Dia in mm	9.3	10.4	10.7	11.9	14.1	16.9
10	Avg Sheath Thickness in mm	1.0	1.1	1.1	1.1	1.3	1.4
	App. Overall Dia in mm	10.8	12.2	12.6	13.8	16.6	20
12	Avg Sheath Thickness in mm	1.0	1.1	1.1	1.1	1.3	1.4
	App. Overall Dia in mm	11.2	12.6	13	14.3	17.2	20.7
14	Avg Sheath Thickness in mm	1.1	1.1	1.1	1.2	1.3	1.4
	App. Overall Dia in mm	12	13.3	13.7	15.2	18.1	21.8
16	Avg Sheath Thickness in mm	1.1	1.2	1.2	1.2	1.4	1.5
	App. Overall Dia in mm	12.6	14.2	14.6	16	19.3	23.2
19	Avg Sheath Thickness in mm	1.1	1.2	1.3	1.3	1.4	1.5
	App. Overall Dia in mm	13.2	14.9	15.6	17.1	20.3	24.5
24	Avg Sheath Thickness in mm	1.2	1.3	1.3	1.4	1.4	1.5
	App. Overall Dia in mm	15.6	17.6	18.2	20.2	23.8	28.8
30	Avg Sheath Thickness in mm	1.3	1.3	1.3	1.4	1.4	1.5
	App. Overall Dia in mm	16.8	18.7	19.3	21.5	25.7	30.6
	Max Conductor Resistance in Ohm/Km at 20^0C	39	26	19.5	13.3	7.98	4.95
	Recommended Current Rating in Amps	4	7	11	14	19	26

* This size can be supplied in 48/0.2 Construction.

** This size can be supplied in 80/0.2 Constructions

The above data is approximate and subject to manufacturing tolerance