

GEMSCAB®
CABLES

THE RIGHT CONNECTION

FLEXIBLE PVC WIRES & CABLES FOR DOMESTIC & INDUSTRIAL APPLICATIONS



ISI 694:2010

GEMSCAB has established itself as supplier of Power, Control, Instrumentation cables & flexible wires of various leading customers in industry, projects, domestic, commercial & power network over two decades now.

GEMSCAB has developed an extensive range of PVC Flexible wires to meet the requirement of its customers. All the products are manufactured as per IS 694:2010

GEMSCAB is committed to provide quality products & services to its customers.

CONSTRUCTION DETAIL OF **GEMSCAB** FLEXIBLES WIRES

- CONDUCTOR** : Electrolytic grade, high conductivity, solid / stranded / flexible, plain / tinned copper conductor as per IS 8130:2013
- INSULATION** : PVC Insulation of heat resistance PVC compound by extrusion process with automatic diameter control.
- SHEATH** : In case of Sheathed flexible wires the outer sheath is provided of PVC by extrusion process with automatic diameter control.
- NOTE** : **GEMSCAB** Flexible wires can also be supplied with HR/ FR/ FRLS PVC insulation and outer sheath as per the requirement of the customers.

AA : **GEMSCAB** Single Core PVC insulated Flexible Copper Conductor (Unsheathed) heavy duty Electric wires in Voltage grade upto & including 1100 volts as per IS : 694/2010 – Supplied in 90 meters.

Conductor Area (Sq.mm)	Conductor Construction No./dia mm	Current Carrying Capacity (AMPS)	Standard Resistance at 20° C (Ohm/km)	Nominal Thickness of Insulation (mm)	Overall Diameter (mm) (Approx)
0.75	24/0.20	7	26.0	0.60	2.50
1.00	14/0.30	12	18.1	0.70	2.80
1.50	22/0.30	16	12.1	0.70	3.10
2.50	36/0.30	22	7.41	0.80	3.70
4.00	56/0.30	29	4.95	0.80	4.30
6.00	84/0.30	37	3.30	0.80	5.30
10.0	140/0.30	51	1.91	1.00	6.70

AA: **GEMSCAB** PVC insulated Unsheathed Single Core Industrial Wires with bright Annealed Bare/Copper Solid/Stranded Conductor as per IS : 694 / 2010 – Supplied in 100 metres.

Conductor Area (Sq.mm)	No. of Strands/ Conductor dia/(mm)	Current Carrying Capacity (AMPS)	Standard Resistance at 20° C (Ohm/km)	Nominal Thickness of Insulation (mm)	Overall Diameter (mm) (Approx)
1.00	01./1.13	12	18.10	0.70	2.65
1.50	07/0.53	16	12.10	0.70	3.10
2.50	07/0.67	22	7.41	0.80	3.75
4.00	07/0.85	29	4.61	0.80	4.30
6.00	07/1.04	37	3.08	0.80	4.90
10.0	07/1.35	45	1.83	1.00	6.20
16.0	07/1.70	60	1.15	1.00	7.30
25.0	07/2.14	75	0.727	1.20	9.00
35.0	07/2.52	95	0.524	1.20	10.00
50.0	19/1.78	125	0.387	1.40	11.90
70.0	19/2.14	170	0.268	1.40	13.70
95.0	19/2.52	210	0.193	1.60	15.90
120	37/2.03	235	0.153	1.60	17.60
150	37/2.25	295	0.124	1.80	19.50

APPLICATIONS

GEMSCAB Flexible wires can be used at 70°C Conductor Temperature.

GEMSCAB Flexible wires with HR Insulation can be used at can be used at 85°C.

GEMSCAB FR/FRLS Flexible wires can be used for low smoke, less generation of gas & acid, with self extinguishing & flame retarding properties.

BB: **GEMSCAB** PVC Insulated Unsheathed Bright Annealed Bare/Flexible Copper Conductor Single Core Unsheathed Wires for Voltage grade upto 1100 volts as per can be used at 70°C Conductor Temperature.

Conductor Area (Sq.mm)	Conductor Construction No./dia mm	Current Carrying Capacity (AMPS)	Nominal Thickness of Insulation (mm)	Max. DC Resistance (OHM/km) at 20°C	Overall Diameter (mm) (Approx)
00.50	16/.20	4	0.60	39.0	2.2
00.75	24/.20	7	0.60	26.0	2.5
1.00	32/.20	12	0.60	19.5	2.8
1.50	30/.25	16	0.60	13.3	3.1
2.50	50/.25	22	0.70	7.98	3.8
4.00	56/.30	29	0.80	4.95	4.4
6.00	84/.30	37	0.80	3.30	5.2
10.0	140/.30	51	1.00	1.91	6.6
16.0	126/.40	68	1.00	1.21	7.8
25.0	196/.40	86	1.20	0.780	9.7
35.0	276/.40	110	1.20	0.554	10.9
50.0	276/.40	110	1.20	0.554	10.9
70.0	360/.50	215	1.40	0.272	14.6
95.0	475/.50	260	1.60	0.206	16.6
120	608/.50	305	1.60	0.161	18.5
150	756/.50	355	1.80	0.129	21.2
185	925/.50	415	2.00	0.106	24.4
240	1221/.50	500	2.20	0.0801	27.6
300	1525/.50	585	2.40	0.0641	31.2
400	2013/.50	695	2.60	0.0486	35.6
500	2540/.50	790	2.80	0.0384	38.0

CC: **GEMSCAB** PVC Insulated, PVC Sheathed Bare/Flexible Copper Conductor Multicore Industrial Cables Voltage Grade 100 Volts as per IS 694-2010.

Conductor Area (Sq.mm)	Conductor Construction No./dia mm	Current Carrying Capacity (AMPS)	Max. DC Resistance at 20°C (OHM/km)	Nominal Thickness of Insulation (mm)	Outer Sheath Thickness in mm Nominal			Overall Diameter in mm Approx			Current Rating AMP
					2 Core	3 Core	4 Core	2 Core	3 Core	4 Core	
0.50	16/.20	4	39.0	0.60	0.90	0.90	0.90	6.20	6.60	7.20	4
0.75	24/.20	7	26.0	0.60	0.90	0.90	0.90	6.50	6.90	7.60	7
1.00	32/.20	12	19.5	0.60	0.90	0.90	0.90	6.90	7.30	8.20	12
1.50	30/.25	16	13.3	0.60	0.90	0.90	1.00	7.60	8.20	9.30	16
2.50	50/.25	22	7.98	0.70	1.00	1.00	1.00	9.00	9.60	10.50	22
4.00	56/.30	29	4.95	0.80	1.00	1.00	1.00	10.30	10.90	12.30	29
6.00	84/.30	37	3.30	0.80	1.10	1.20	1.20	12.10	12.90	14.30	37
10.0	140/.30	51	1.91	1.00	1.30	1.40	1.40	16.20	17.20	19.20	51
16.0	126/.40	68	1.21	1.00	1.40	1.40	1.40	17.40	18.50	20.60	68
25.0	196/.40	86	0.780	1.20	1.40	1.50	1.60	22.40	24.20	26.90	86
35.0	276/.40	110	0.554	1.20	1.60	1.60	1.70	25.60	27.40	30.50	110
50.0	396/.40	145	0.386	1.40	2.00	2.00	2.00	30.60	33.00	36.50	145
70.0	360/.50	215	0.272	1.40	2.20	2.20	2.20	35.00	37.70	41.70	215
95.0	475/.50	260	0.206	1.60	2.40	2.40	2.40	40.20	43.50	47.80	260
120	608/.50	305	0.161	1.60	2.50	2.50	2.50	43.00	46.50	51.50	305
150	756/0.5	-	0.129	1.80	-	2.60	2.60	-	51.80	57.50	355
185	925/0.5	-	0.106	2.00	-	2.80	2.80	-	57.40	63.70	415
240	1221/0.5	-	0.0801	2.20	-	3.00	3.00	-	65.20	72.30	500
300	1525/0.5	-	0.0641	2.40	-	3.20	3.20	-	72.90	80.90	585

GEMSCAB Multicore Round Flexible Cables (6 Cores to 19 Cores) Generally as per IS : 694/2010

Area Sq.mm		0.50	0.75	1.00	1.50	2.50
General Construction no./dia		16/0.2	24/0.2	32/0.2	30/0.25	50/0.25
Conductor Dia in MM		0.90	1.10	1.30	1.60	2.00
Avg. Insu. Thickness in MM		0.60	0.60	0.60	0.60	0.70
Core Dia in MM (Approx)		2.20	2.50	2.60	2.90	3.50
No. of Cores						
6	Avg. Sheath thickness MM	0.90	1.00	1.00	1.00	1.10
	App. Overall Dia MM	8.50	9.50	9.80	10.70	12.70
7	Avg. Sheath thickness MM	0.90	1.00	1.00	1.00	1.10
	App. Overall Dia MM	8.50	9.50	9.80	10.70	12.70
8	Avg. Sheath thickness MM	1.00	1.00	1.00	1.10	1.20
	App. Overall Dia MM	9.30	10.40	10.70	11.90	14.10
10	Avg. Sheath thickness MM	1.00	1.10	1.10	1.10	1.30
	App. Overall Dia MM	10.80	12.20	12.60	13.80	16.60
12	Avg. Sheath thickness MM	1.00	1.10	1.10	1.10	1.30
	App. Overall Dia MM	11.20	12.60	13.00	14.30	17.20
14	Avg. Sheath thickness MM	1.10	1.10	1.10	1.20	1.30
	App. Overall Dia MM	12.00	13.30	13.70	15.20	18.10
16	Avg. Sheath thickness MM	1.10	1.20	1.20	1.20	1.40
	App. Overall Dia MM	12.60	14.20	14.60	16.00	19.30
19	Avg. Sheath thickness MM	1.10	1.20	1.30	1.30	1.40
	App. Overall Dia MM	13.20	14.90	15.60	17.10	20.30
24	Avg. Sheath thickness MM	1.20	1.30	1.40	1.40	1.50
	App. Overall Dia MM	15.60	17.60	18.20	20.20	23.80
30	Avg. Sheath thickness MM	1.30	1.30	1.30	1.40	1.40
	App. Overall Dia MM	16.80	18.70	19.30	21.50	25.70
	Max. Conductor Resistance in Ohm/km at 20 deg.C	39.00	26.00	19.50	13.30	7.98
	Recommended Current Rating in AMP	4	7	12	16	22



GEMSCAB INDUSTRIES LIMITED

An ISO 9001, ISO 14001, OHSAS 18001 Certified Company

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