



# SPECIAL CABLES PVT. LTD.

## CONTROL CABLES

**Application:** Mainly used for interconnections for control circuits, communication systems, electrical panels, machine tools as well as lighting at lower loads.

**Types and Sizes:** Typically upto 61 cores from 1.0 sq. mm to 2.5 sq. mm with voltage grade upto 1.1 KV

**Conductor:** Copper – Solid, Stranded (Circular) or Flexible – Bare or Tinned

**Insulation:** PVC- GP/HR/FR/FRLS, PE, XLPE, Zero Halogen or EPR Rubber.

**Inner Sheath:** PVC - GP/HR/FR/FRLS, PE, Zero Halogen or Rubber – FR/HOFR

**Armour:** Galvanized Steel Round Wire / Flat Strip / Tape or Aluminium Round Wire / Flat Strip or GI / Tinned Copper Braiding

**Outer Sheath:** PVC - GP/HR/FR/FRLS, PE, Zero Halogen or Rubber- FR/HOFR/TRS.

**Specification:** Generally confirming to IS: 694, IS: 1554 (Pt-I), IS: 7098 (Pt-I), IEC: 60502-1, BS: 5467, BS: 6346

### Key Features:

1. Provides high degree of protection against electrical interference
2. Cable design can be customised to meet customer requirements
3. Allows better transmission of power and signal at very low voltages to control processes and critical equipment with low effect of induced voltage.

### Note:

- Technical Data provided is for stranded (Class 2) conductor and PVC-GP (General Purpose). Details given are for reference only and may be revised without notice.
- Max. Conductor D.C. Resistance at 20°C - Conductor Size :
  - ❖ 1.5 sq.mm - 12.1 Ohm / km (Bare), 12.2 Ohm / km (Tinned)
  - ❖ 2.5 sq.mm - 7.41 Ohm / km (Bare), 7.56 Ohm / km (Tinned)
- Current ratings are given for standard conditions (Ambient Air Temperature @ 40°C, Ambient Ground /Duct Temperature @ 30°C ) and may vary if site conditions are different.
- Other details can be provided on request



## UN-ARMoured / ARMoured CONTROL CABLES WITH PVC INSULATION & SHEATHING FOR VOLTAGE GRADE 1.1KV AS PER IS : 1554 (PT - I) - 1988

No. of Cores & Cross Sectional Area	Thickness of PVC Insulation	Thickness of Inner sheath (Extruded)	Unarmoured			Flat Strip Armoured				Round Wire Armoured				Short Circuit Rating For 1 Sec Duration	Current Rating		Reac-tance of cable at 50 Hz	Capaci-tance of cable
			Thickness of Outer sheath	Outer Dia	Cable Weight	Size of Strip	Thickness of Outer sheath	Outer Dia	Cable Weight	Round Wire Dia	Thickness of Outer sheath	Outer Dia	Cable Weight		Direct in Ground	In Air/ Duct		
No. X	(Nom.)	(Min.)	(Nom.)	(Approx.)	(Approx.)	(Nom.)	(Min.)	(Approx.)	(Approx.)	(Nom.)	(Min.)	(Approx.)	(Approx.)	(For reference only)			(Approx.)	(Approx.)
sq. mm	(mm)	(mm)	(mm)	(mm)	(kg/km)	(mm)	(mm)	(mm)	(kg/km)	(mm)	(mm)	(mm)	(kg/km)	(kA)	(Amps)	(Amps)	(Ω/km)	(μf/km)
2 x 1.5	0.8	0.3	1.8	11.5	185	—	—	—	—	1.4	1.24	13.0	400	0.173	23	20	0.112	0.20
3 x 1.5	0.8	0.3	1.8	12.0	190	—	—	—	—	1.4	1.24	13.5	430	0.173	21	17	0.112	0.20
4 x 1.5	0.8	0.3	1.8	12.5	225	—	—	—	—	1.4	1.24	14.5	470	0.173	21	17	0.112	0.20
5 x 1.5	0.8	0.3	1.8	13.5	260	—	—	—	—	1.4	1.24	15.5	530	0.173	21	17	0.112	0.20
6 x 1.5	0.8	0.3	1.8	14.6	295	—	—	—	—	1.4	1.24	16.5	590	0.173	15	13	0.112	0.20
7 x 1.5	0.8	0.3	1.8	14.5	315	—	—	—	—	1.4	1.24	16.5	610	0.173	14	13	0.112	0.20
10 x 1.5	0.8	0.3	1.8	18.0	425	—	—	—	—	1.4	1.40	20.0	790	0.173	13	11	0.112	0.20
12 x 1.5	0.8	0.3	1.8	18.5	480	4 x 0.8	1.24	19.5	700	1.6	1.40	21.0	900	0.173	12	10	0.112	0.20
14 x 1.5	0.8	0.3	1.8	19.0	535	4 x 0.8	1.40	20.5	780	1.6	1.40	22.0	980	0.173	11	10	0.112	0.20
16 x 1.5	0.8	0.3	1.8	20.0	595	4 x 0.8	1.40	21.0	840	1.6	1.40	22.5	1060	0.173	11	9	0.112	0.20
19 x 1.5	0.8	0.3	2.0	21.5	720	4 x 0.8	1.40	22.0	940	1.6	1.40	23.5	1170	0.173	10	9	0.112	0.20
24 x 1.5	0.8	0.3	2.0	24.5	880	4 x 0.8	1.40	25.5	1140	1.6	1.40	27.0	1400	0.173	9	8	0.112	0.20
27 x 1.5	0.8	0.3	2.0	25.0	960	4 x 0.8	1.40	26.0	1200	1.6	1.40	27.5	1490	0.173	9	8	0.112	0.20
30 x 1.5	0.8	0.3	2.0	26.0	1040	4 x 0.8	1.40	26.5	1320	1.6	1.40	28.0	1600	0.173	9	7	0.112	0.20
37 x 1.5	0.8	0.3	2.0	28.0	1230	4 x 0.8	1.40	28.5	1520	1.6	1.40	30.0	1830	0.173	8	7	0.112	0.20
61 x 1.5	0.8	0.4	2.2	35.0	1820	4 x 0.8	1.56	35.0	2210	2.0	1.56	38.0	2780	0.173	6	6	0.112	0.20
2 x 2.5	0.9	0.3	1.8	12.5	230	—	—	—	—	1.4	1.24	14.5	470	0.283	32	27	0.107	0.22
3 x 2.5	0.9	0.3	1.8	13.0	240	—	—	—	—	1.4	1.24	15.0	520	0.283	27	24	0.107	0.22
4 x 2.5	0.9	0.3	1.8	14.0	290	—	—	—	—	1.4	1.24	16.0	560	0.283	27	24	0.107	0.22
5 x 2.5	0.9	0.3	1.8	15.0	335	—	—	—	—	1.4	1.24	17.0	630	0.283	23	19	0.107	0.22
6 x 2.5	0.9	0.3	1.8	16.5	385	—	—	—	—	1.4	1.24	18.5	720	0.283	21	18	0.107	0.22
7 x 2.5	0.9	0.3	1.8	16.5	420	—	—	—	—	1.4	1.24	18.5	750	0.283	20	17	0.107	0.22
10 x 2.5	0.9	0.3	1.8	20.5	570	4 x 0.8	1.40	21.5	820	1.6	1.40	23.0	1050	0.283	18	15	0.107	0.22
12 x 2.5	0.9	0.3	2.0	21.5	690	4 x 0.8	1.40	22.0	920	1.6	1.40	23.5	1140	0.283	17	14	0.107	0.22
14 x 2.5	0.9	0.3	2.0	22.5	775	4 x 0.8	1.40	23.0	990	1.6	1.40	24.5	1250	0.283	16	13	0.107	0.22
16 x 2.5	0.9	0.3	2.0	23.5	860	4 x 0.8	1.40	24.0	1100	1.6	1.40	25.5	1360	0.283	15	13	0.107	0.22
19 x 2.5	0.9	0.3	2.0	24.5	985	4 x 0.8	1.40	25.0	1250	1.6	1.40	26.5	1510	0.283	14	12	0.107	0.22
24 x 2.5	0.9	0.3	2.0	28.5	1215	4 x 0.8	1.40	29.0	1530	1.6	1.56	31.0	1860	0.283	13	11	0.107	0.22
27 x 2.5	0.9	0.3	2.0	29.0	1330	4 x 0.8	1.40	29.5	1640	1.6	1.56	31.5	1990	0.283	12	10	0.107	0.22
30 x 2.5	0.9	0.3	2.0	30.0	1450	4 x 0.8	1.56	30.5	1770	1.6	1.56	32.5	2140	0.283	12	10	0.107	0.22
37 x 2.5	0.9	0.4	2.2	32.5	1720	4 x 0.8	1.56	33.5	2140	2.0	1.56	36.0	2690	0.283	11	9	0.107	0.22
61 x 2.5	0.9	0.4	2.2	41.0	2620	4 x 0.8	1.56	41.0	3050	2.0	1.72	44.0	3810	0.283	8	8	0.107	0.22