Cu/PE/IS/OS/SWA/PVC
Cu/XLPE/IS/OS/SWA/LSOH

Instrumentation Cables, 300V and 500V,BS EN 50288-7

CONSTRUCTION

Conductor	Solid, stranded or flexible plain or metal coated copper (Class 1, 2 or 5)*
Insulation	PVC, PE or XLPE -Identification:white color with black number Other color available upon request
Cores	Pair (twisted) triple (twisted) quad (twisted)
Twisting	Lay length clearly defined; depending on conductor size and element; between 100 and 150mm
Individual pair screens	Laminated tape aluminium/PET total thickness 24μm
Drain wire	Solid tinned copper drain wire 0.6mm Ø, under individual screen
Collective screen	Collective screen (24μm aluminium/PET) tape + 7 stranded tinned copper drain wire (0.5mm2); overlap of foil min 20%; drain wire in direct contact with metallic side of the foil wrapping layer of tape under collective screen
Drain wire	Solid tinned copper drain wire 0.6mm Ø, under individual screen
Inner Sheath	PVC, PE or LSZH -Black color,other color available upon request
Metal braid	tinned copper wires (C) wire diameter ≥0.3mm filling factor ≥0.57mm
Armouring	SWA, Flat steel wires with counter helix, Steel or Brass Tape
Outer Sheath	PVC, PE or LSZH

APPLICABLE STANDARDS

- **Design guidelines:** BS EN 50288-7
- **Flame retardant properties:** BS EN/IEC 60332-1-2, BS EN/IEC 60332-3-24
- **Halogen free properties:** IEC 60754(only for LOSH sheath)
- **Low smoke performance:** IEC 61034(only for LOSH sheath)
- **Fire retardant:** IEC 60332-3A

CABLE PARAMETER

Working voltage	300V or 500V
Minimum bending radius	7×Overall diameter for PVC sheath 6×Overall diameter for LSOH sheath
Operating temperature	-25℃ to +80℃

300V

(PE/PVC/SWA/PVC or XLPE/LSOH/SWA/LSOH or XLPE/PVC/SWA/PVC)

Cross section (nPairs x mm²)	Diameter of conductor (mm)	Maximum DC resistance at 20℃ (Q/km)	Diameter over insulation (mm)	Diameter over inner sheath (mm)	Diameter of armour wires (mm)	Diameter over armour (mm)	Outer diameter approx (mm)	Weight of cable approx (kg/km)	Min bending radius (mm)	Capaci-tance (pF/m)	L/R (μH/Q)
1px0.5	7/0.30	36.0	2.2	6.8	0.9	8.6	11.7	262.9	175	150	25
2px0.5	7/0.30	36.0	2.2	10.9	0.9	12.7	16.0	435.3	240	150	25
4px0.5	7/0.30	36.0	2.2	12.7	0.9	14.5	18.0	542.0	269	150	25
5px0.5	7/0.30	36.0	2.2	13.8	0.9	15.6	19.1	604.3	287	150	25
6px0.5	7/0.30	36.0	2.2	15.1	0.9	16.9	20.4	671.1	306	150	25
10px0.5	7/0.30	36.0	2.2	19.3	1.25	21.8	25.7	1090.6	386	150	25
12px0.5	7/0.30	36.0	2.2	20.0	1.25	22.5	26.4	1156.5	396	150	25
15px0.5	7/0.30	36.0	2.2	22.3	1.25	24.8	28.9	1338.6	433	150	25
20px0.5	7/0.30	36.0	2.2	24.9	1.25	27.4	31.5	1564.1	473	150	25
24px0.5	7/0.30	36.0	2.2	27.7	1.6	30.9	35.2	2023.4	528	150	25
1px0.75	7/0.37	24.5	2.4	7.2	0.9	9.0	12.1	282.1	182	150	25
2px0.75	7/0.37	24.5	2.4	11.6	0.9	13.4	16.9	480.7	254	150	25
4px0.75	7/0.37	24.5	2.4	13.6	0.9	15.4	18.9	595.9	283	150	25
5px0.75	7/0.37	24.5	2.4	14.9	0.9	16.7	20.2	667.7	302	150	25
6px0.75	7/0.37	24.5	2.4	16.2	1.25	18.7	22.4	887.3	336	150	25
10px0.75	7/0.37	24.5	2.4	20.8	1.25	23.3	27.2	1214.6	408	150	25
12px0.75	7/0.37	24.5	2.4	21.6	1.25	24.1	28.0	1293.4	419	150	25
15px0.75	7/0.37	24.5	2.4	24.0	1.25	26.5	30.6	1503.6	459	150	25
20px0.75	7/0.37	24.5	2.4	26.9	1.6	30.1	34.4	1996.2	516	150	25
24px0.75	7/0.37	24.5	2.4	30.4	1.6	33.6	38.1	2345.7	572	150	25
1px1.0	7/0.43	18.1	2.6	7.6	0.9	9.4	12.5	299.3	187	150	25
2px1.0	7/0.43	18.1	2.6	12.3	0.9	14.1	17.6	514.8	264	150	25
4px1.0	7/0.43	18.1	2.6	14.4	0.9	16.2	19.7	645.3	295	150	25
5px1.0	7/0.43	18.1	2.6	15.7	0.9	17.5	21.2	736.3	318	150	25
6px1.0	7/0.43	18.1	2.6	17.2	1.25	19.7	23.4	962.5	351	150	25
10px1.0	7/0.43	18.1	2.6	22.1	1.25	24.6	28.5	1329.1	428	150	25
12px1.0	7/0.43	18.1	2.6	22.9	1.25	25.4	29.5	1434.4	443	150	25

Cross section (nPairs x mm²)	Diameter of conductor (mm)	Maximum DC resistance at 20°C (Q/km)	Diameter over insulation (mm)	Diameter over inner sheath (mm)	Diameter of armour wires (mm)	Diameter over armour (mm)	Outer diameter approx (mm)	Weight of cable approx (kg/km)	Min bending radius (mm)	Capaci-tance (pF/m)	L/R (µH/Q)
15px1.0	7/0.43	18.1	2.6	25.6	1.25	28.1	32.2	1657.3	482	150	25
20px1.0	7/0.43	18.1	2.6	28.7	1.6	31.9	36.2	2200.4	542	150	25
24px1.0	7/0.43	18.1	2.6	32.3	1.6	35.5	40.0	2589.8	601	150	25
1px1.5	7/0.52	12.1	2.8	8.1	0.9	9.9	13.2	332.9	198	150	40
2px1.5	7/0.52	12.1	2.8	13.3	0.9	15.1	18.6	568.9	278	150	40
4px1.5	7/0.52	12.1	2.8	15.5	0.9	17.3	21.0	735.2	315	150	40
5px1.5	7/0.52	12.1	2.8	17.0	1.25	19.5	23.2	969.4	349	150	40
6px1.5	7/0.52	12.1	2.8	18.7	1.25	21.2	25.1	1095.7	376	150	40
10px1.5	7/0.52	12.1	2.8	24.1	1.25	26.6	30.7	1529.9	460	150	40
12px1.5	7/0.52	12.1	2.8	24.9	1.25	27.4	31.5	1642.8	473	150	40
15px1.5	7/0.52	12.1	2.8	27.8	1.6	31.0	35.3	2143.2	530	150	40
20px1.5	7/0.52	12.1	2.8	31.6	1.6	34.8	39.3	2600.2	590	150	40
24px1.5	7/0.52	12.1	2.8	35.3	1.6	38.5	43.2	3010.6	647	150	40

500V

(PE/PVC/SWA/PVC or XLPE/LSOH/SWA/LSOH or XLPE/PVC/SWA/PVC)

Cross section (nPairs x mm²)	Diameter of conductor (mm)	Maximum DC resistance at 20°C (Q/km)	Diameter over insulation (mm)	Diameter over inner sheath (mm)	Diameter of armour wires (mm)	Diameter over armour (mm)	Outer diameter approx (mm)	Weight of cable approx (kg/km)	Min bending radius (mm)	Capaci-tance (pF/m)	L/R (µH/Q)
1px2.5	7/0.68	7.41	3.5	9.4	0.9	11.2	14.5	397.2	217	150	65
2px2.5	7/0.68	7.41	3.5	15.6	0.9	17.4	21.1	705.4	316	150	65
4px2.5	7/0.68	7.41	3.5	18.3	1.25	20.8	24.5	1067.0	368	150	65
5px2.5	7/0.68	7.41	3.5	20.2	1.25	22.7	26.6	1223.0	398	150	65
6px2.5	7/0.68	7.41	3.5	22.1	1.25	24.6	28.5	1377.0	428	150	65
10px2.5	7/0.68	7.41	3.5	28.7	1.6	31.9	36.2	2201.4	543	150	65
12px2.5	7/0.68	7.41	3.5	30.1	1.6	33.3	37.8	2431.7	567	150	65
15px2.5	7/0.68	7.41	3.5	33.7	1.6	36.9	41.6	2847.7	623	150	65
20px2.5	7/0.68	7.41	3.5	37.8	2.0	41.8	46.7	3752.1	700	150	65
24px2,5	7/0.68	7.41	3.5	42.2	2.0	46.2	51.3	4348.0	769	150	65