



# 0.5mm CS1/CS8 cable

## Jelly filled/ Screened/ Armoured Telephone Cable



### General Description

- Telephone Cable with cellular polyethylene insulation, jelly filled with petroleum jelly and a polyethylene coating.
- For use in the Underground Distribution network.
- Insulated conductors uniformly twisted together to form a pair.
- The water resistant filling compound is applied to the air spaces within the cable core to provide the water-proofness
- Wrapping is applied over the cable core.
- A flat aluminium foil coated with copolymer on both sides is applied longitudinally over the core covering as screen.
- Black linear-low density polyethylene compound is extruded over the armour.
- Galvanised Steel wire Armoured

### Physical Description

<b>Conductors</b>	Solid annealed bare copper conductors conforming to CCITT Yellow Book Vol. III – 2-G.541 b article, IEC 28 and ASTM B3
<b>Insulation</b>	Foam-skin polyethylene
<b>Cable Assembly</b>	Twisted pairs ,cabled in a circular form
<b>Color Code</b>	As indicated below
<b>Filling Compound</b>	Water resistant filling compound, applied to the gaps between the pairs
<b>Tape wrap</b>	Non hygroscopic polyester tape, wrapped with 25% overlap
<b>Identification tape</b>	Manufacturer name and year of manufacture
<b>Flooding compound</b>	Water resistant flooding compound , applied between the core wrap and the aluminum foil
<b>Screen ( Shield)</b>	Two side Copolymer coated aluminum foil laid longitudinally , bonded to the outer jacket, conforming to ASTM B736 Minimum thickness of Aluminium 0.150mm
<b>Inner Sheath</b>	Black Low Density PE
<b>Armouring</b>	Galvanized steel wire armouring
<b>Outer Sheath</b>	Black Low Density PE
<b>Surface Marking</b>	Telephone symbol, length marking, telephone symbol



### Mechanical Parameters of basic conductors

<b>Nominal Conductor Diameter (mm)</b>	0.5
<b>Maximum Conductor Diameter (mm)</b>	0.51
<b>Minimum Conductor Elongation, %</b>	15
<b>Insulated Conductor diameter (mm)</b>	0.9
<b>Insulation ultimate tensile force minimum (N)</b>	2.0

### Electrical Properties

<b>DC resistance @20C Ohm/km Maximum Average</b>	91
<b>DC resistance @20C Ohm/km Maximum for 1% of cases</b>	96
<b>Mutual Capacitance nF/km, max Average</b>	53
<b>Mutual Capacitance nF/km, max for 1% of cases</b>	60
<b>Pair to pair capacitance unbalance, pF max</b>	275
<b>Insulation Resistance, 500V DC Minimum Mohm.km</b>	1500

### Colour codes of units

<b>Pair No</b>	<b>Colour of conductor insulation</b>	
	<b>A - wire</b>	<b>B - wire</b>
<b>1</b>	White	Blue
<b>2</b>	White	Orange
<b>3</b>	White	Green
<b>4</b>	White	Brown
<b>5</b>	White	Grey
<b>6</b>	Red	Blue
<b>7</b>	Red	Orange
<b>8</b>	Red	Green
<b>9</b>	Red	Brown
<b>10</b>	Red	Grey



### Colour codes of tape lappings, Unit

Unit Number	Colour
1	Blue
2	Orange
3	Green
4	Brown
5	Grey
6	White
7	Red
8	Black
9	Yellow
10	Violet

### Colour scheme, Concentric

1	2	3	4	5	6	7	8	9	10	11	12	13
Pair Number	1		2		3		4		5		Last	
Wire	A	B	A	B	A	B	A	B	A	B	A	B
Cable												
5 pairs	Orange	White	Red	Grey	Blue	Brown	Red	Grey	Green	Black		
Centre												
1pr	Orange	White										
2pr	Orange	White	Green	Black								
3pr	Orange	White	Red	Grey	Green	Black						
Layers	Orange	White	Red	Grey	Blue	Brown	Red	Grey	Blue	Brown		
						With even and odd pairs to					Green	Black



### Makeup, Concentric

Cable Size	No. of Pair Size of Units in Centre and Layers					
	Centre	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>
2prs	2	-	-	-	-	-
5prs	-	5	-	-	-	-
10prs	2	8	-	-	-	-
20prs	1	6	13	-	-	-
50prs	3	9	16	22	-	-
100prs	2	8	14	20	25	31

### Thickness, Diameter and Weight

Number of pairs	Minimum sheath thickness (mm)	App. Outer diameter (mm)	App. Weight (kg/km)
5	1.1	11.7	244
10	1.1	12.5	292
20	1.2	15.2	420
30	1.3	17.1	596
50	1.3	20.0	876
100	1.4	25.0	1333