

## Technical Particulars

### 1100 Volt PVC Power Cable(Unarmoured)

Sl.No	Particulars	Size/ Unit	3.5 Core x 35 mm <sup>2</sup>	4 Core x 10 mm <sup>2</sup>	2 Core x 16 mm <sup>2</sup>
1	Name of the Manufacture				
2	Applicable Standard	IS : 1554 (Part-1) 1988			
3	Type of Cable		AYFY	AYFY	AYFY
4	Voltage Grade	Volts	1100	1100	1100
5	No of Cores	No	3.5	4	2
6	<u>Conductor</u>				
a	Material		E.C Grade Aluminium		
b	Nom.Size - Phase/ Neutral	Sq.mm	35/16	10	16
c	Min. no of Strands- Phase/ Neutral	No	6/7	7	7
d	Shape		Sector Shaped	Standard Circular	
e	Max. D.C. Resistance at 20 <sup>o</sup> C PN	ohm/km	0.868/1.91	3.08	1.91
7	<u>Insulation</u>				
a	Material		PVC Type A [IS: 5831-84]		
b	Nom. Thickness	mm	1.2/1.0	1	1
8	Core Identification		Red, Yellow, Blue & Black coloured insulation	Red & Black coloured insulation	
9	<u>Inner Sheath</u>				
a	Material		PVC Type A [IS: 5831-84]		
b	Min. Thickness	mm	0.3	0.3	0.3
10	<u>Outer sheath</u>				
a	Material		PVC Type A [IS: 5831-84]		
b	Min. Thickness	mm	1.4	1.4	1.4
11	Approx. overall diameter of Cable	mm	25.5	21.5	21
12	Continuous current carrying capacity				
a	In Air (At 40 <sup>o</sup> C)	Amps	86	40	59
b	In Ground (At 30 <sup>o</sup> C)	Amps	92	46	70
13	Short Circuit rating (Duration 1 Sec.)	KA	2.66	0.76	1.22
14	Standard packing length	Mtrs	500 ± 5%	1000 ± 5%	1000 ± 5%
15	Min. Bending Radius	mm	12 times O.D		

**Technical Particulars**  
**1100 Volt XLPE Aerial Bunched Cable**

Sl.No	Particulars	Size/ Unit	1100 V 3 x 50+ 1x 35 mm <sup>2</sup>
1	Name of the Manufacture		
2	Applicable Standard		IS: 14255:1995
3	Type of Cable		LT Aerial Bunched XLPE Cable
4	Voltage Grade	Volts	1100
5	No of Cores		
i	Phase	No	3
ii	Bare Messenger	No	1
6	Phase Cores		
6.1	<u>Conductor</u>		
a	Material		E.C Grade Aluminium
b	Nom.Size	Sq.mm	50
c	Shape		Stranded Circular Compacted
d	Maz. D.C. Resistance at 20 <sup>0</sup> C	ohm/km	0.641
6.2	<u>Insulation</u>		
a	Material		Black XLPE
b	Nom. Thickness	mm	1.5
6.3	Core Identification		By provided ridges on phase core
7	<u>Messenger</u>		
a	Material		Aluminium Alloy Conductor as per IS 398 (IV) 1994 & IS 14255: 1995
b	Nom.Size	Sq.mm	35
c	Maz. D.C. Resistance at 20 <sup>0</sup> C	ohm/km	0.986
d	Approx. Breaking load	KN	9.8
8	Approx. overall diameter of Cable	mm	30.6
9	Continuous current carrying capacity		
	In Air (At 40 <sup>0</sup> C)	Ampa	130
10	Short Circuit rating (Duration 1 Sec.)	KA	4.7
11	Standard packing length	Mtrs	500 ± 5% / 1000 ± 5%

**Technical Particulars**  
**1100 Volt XLPE Aerial Bunched Cable**

Sl.No	Particulars	Size/ Unit	3 x 95 + 1x 50 + 1x 35 mm <sup>2</sup>
1	Name of the Manufacture		
2	Applicable Standard		IS: 14255:1995
3	Type of Cable		LT Aerial Bunched XLPE Cable
4	Voltage Grade	Volts	1100
5	No of Cores		
i	Phase	No	3
ii	Bare Messenger	No	1
iii	Lighting conductor	No	1
6	Phase Cores		
6.1	<u>Conductor</u>		
a	Material		E.C Grade Aluminium
b	Nom.Size	Sq.mm	95
c	Shape		Stranded Circular Compacted
d	Maz. D.C. Resistance at 20 <sup>0</sup> C	ohm/km	0.32
6.2	<u>Insulation</u>		
a	Material		Black XLPE
b	Nom. Thickness	mm	1.5
6.3	Core Identification		By provided ridges on phase core
7	<u>Messenger</u>		
a	Material		Aluminium Alloy Conductor as per IS 398 (IV) 1994 & IS 14255: 1995
b	Nom.Size	Sq.mm	50
c	Shape		Stranded Circular Compacted
d	Maz. D.C. Resistance at 20 <sup>0</sup> C	ohm/km	0.689
e	Min. Breaking load	KN	14
8	Lighting Core		
8.1	Conductor		
a	Material		E.C Grade Aluminium
b	Nom.Size		35
c	Shape		Stranded Circular Compacted
d	Maz. D.C. Resistance at 20 <sup>0</sup> C		0.868
8.2	<u>Insulation</u>		
a	Material		XLPE
b	Nom. Thickness	mm	1.2
9	Approx. overall diameter of Cable	mm	38.5
10	Continuous current carrying capacity		
	In Air (At 40 <sup>0</sup> C)	Ampa	188
11	Short Circuit rating (Duration 1 Sec.)	KA	8.93
12	Standard packing length	Mtrs	500 ± 5% / 1000 ± 5%

**Guranteed Technical Particulars of 1.1 KV (LT) Aerial Bunched Cable**

Sl.No	Description	Guranteed value
1	Name & Address of the manufacturer	
2	Applicable Standard to which cable conforms	IS: 10810-1984, IS:8130-1984, IS: 14255-1995 & IS: 398 (Pt-IV)-1979
3	Type of cable	LT Aerial Bunched XLPE Cable
4	Voltage Grade (KV)	Upto & including 1.1 KV (LT) Cable <b>3Cx35+1Cx25+1Cx16 mm<sup>2</sup></b>
5	Phase conductor Details	
	i Type of material	EC grade Al. Cond. As per IS 8130/84
	ii Nominal cros sectional area (mm <sup>2</sup> )	35.00
	iii No. of phase conductor	3
	iv Nominal conductor diameter (mm)	7.2 + 0.20
	v Diameter of each strand before stranding (mm)	2.52
	vi No.of strands in each conductor	7
	vii Shape	Compacted Circular
	viii Tensile strength (N/mm <sup>2</sup> )	N.A
	ix Max. DC resistance at 20 <sup>o</sup> C (Ohm/Km)	0.868
	x Approx mass (Kg/ Km)	95+5
6	Massenger detail (Bare)	
	i Material	Al.Alloy Cond. Generally conf. IS-398 (Pt-IV)
	ii Nominal size (mm <sup>2</sup> )	25.00
	iii No of wires (No)	7
	iv Diameter of each wire (mm)	2.14
	v Nominal conductor diameter (mm)	6.0+0.20
	vi Shape	Compacted Circular
	vii Max. DC resistance at 20 <sup>o</sup> C (Ohm/Km)	1.38
	viii Min. Breaking load (KN)	7.00
	ix Approx mass (Kg/ Km)	65.00+3
7	Street Light Conductor Details	
	i Type of material	EC grade Al. Cond. As per IS 8130/84
	ii Nominal cros sectional area (mm <sup>2</sup> )	16.00
	iii Nominal conductor diameter (mm)	5.0 + 0.20
	iv Diameter of each strand before stranding (mm)	1.71
	v No.of strands in each conductor	7
	vi Shape	Compacted Circular
	vii Tensile strength (N/mm <sup>2</sup> )	N.A
	viii Max. DC resistance at 20 <sup>o</sup> C (Ohm/Km)	1.91
	ix Approx mass (Kg/ Km)	43+3
8	Insulation (For phase conductor)	
	i Material	XLPE
	ii Type	As per IS: 14255/95
	iii Nominal Thickness (mm)	1.20
	iv Phase Identification	By ridge
9	Insulation Properties (XLPE)	
	i Tensile strength (N/mm <sup>2</sup> )(Min)	12.5
	ii % Elongation (Min)	200
	iii Volume Resistivity (Min)	
	a At 270C (Ohms-cm)	1 x 10 <sup>13</sup> Ohm Cm.
	b At 700C (Ohms-cm)	1 x 10 <sup>11</sup> Ohm Cm.
10	Approx. overall diameter of cable (mm)	25.20
11	Sequential marking of length	N.A
12	Packing	Wooden drums
13	Standard drum length (Mtrs.)	1 lengths of 1000 + 5%
14	Embossing	

**Guranteed Technical Particulars of 1.1 KV (LT) Aerial Bunched Cable**

Sl.No	Description	Guranteed value
1	Name & Address of the manufacturer	
2	Applicable Standard to which cable conforms	IS: 10810-1984, IS:8130-1984, IS: 14255-1995 & IS: 398 (Pt-IV)-1979
3	Type of cable	LT Aerial Bunched XLPE Cable
4	Voltage Grade (KV)	Upto & including 1.1 KV (LT) Cable
5	Phase conductor Details	<b>1Cx35 + 1Cx25 mm<sup>2</sup></b>
	i Type of material	EC grade Al. Cond. As per IS 8130/84
	ii Nominal cros sectional area (mm <sup>2</sup> )	35.00
	iii No. of phase conductor	1
	iv Nominal conductor diameter (mm)	7.2±0.20
	v Diameter of each strand before stranding (mm)	2.52
	vi No.of strands in each conductor	7
	vii Shape	Compacted Circular
	viii Tensile strength (N/mm <sup>2</sup> )	N.A
	ix Max. DC resistance at 20 <sup>o</sup> C (Ohm/Km)	0.868
	x Approx mass (Kg/ Km)	95±3
6	Massenger detail (Bare)	
	i Material	Al.Alloy Cond. Generally conf. IS-398 (Pt-IV)
	ii Nominal size (mm <sup>2</sup> )	25
	iii No of wires (No)	7
	iv Diameter of each wire (mm)	2.14
	v Nominal conductor diameter (mm)	6.0±0.20
	vi Shape	Compacted Circular
	vii Max. DC resistance at 20 <sup>o</sup> C (Ohm/Km)	1.38
	viii Min. Breaking load (KN)	7
	ix Approx mass (Kg/ Km)	65.00±3
7	Insulation (For phase conductor)	
	i Material	XLPE
	ii Type	As per IS: 14255/95
	iii Nominal Thickness (mm)	1.2
	iv Phase Identification	By ridge
8	Insulation Properties (XLPE)	
	i Tensile strength (N/mm <sup>2</sup> )(Min)	12.5
	ii % Elongation (Min)	200
	iii Volume Resistivity (Min)	
	a At 27 <sup>o</sup> C (Ohms-cm)	1 x 10 <sup>13</sup> Ohm Cm.
	b At 70 <sup>o</sup> C (Ohms-cm)	1 x 10 <sup>11</sup> Ohm Cm.
9	Approx. overall diameter of cable (mm)	15.8
10	Sequential marking of length	N.A
11	Packing	Wooden drums
12	Standard drum length (Mtrs.)	1 lengths of 1000 ± 5%
13	Embossing	

**Guranteed Technical Particulars of 1.1 KV (LT) Aerial Bunched Cable**

Sl.No	Description	Guranteed value
1	Name & Address of the manufacturer	
2	Applicable Standard to which cable conforms	IS: 10810-1984, IS:8130-1984, IS: 14255-1995 & IS: 398 (Pt-IV)-1979
3	Type of cable	LT Aerial Bunched XLPE Cable
4	Voltage Grade (KV)	Upto & including 1.1 KV (LT) Cable <b>3Cx16+1Cx25 mm<sup>2</sup></b>
5	Phase conductor Details	
	i Type of material	EC grade Al. Cond. As per IS 8130/84
	ii Nominal cros sectional area (mm <sup>2</sup> )	16.00
	iii No. of phase conductor	3
	iv Nominal conductor diameter (mm)	5.0 ± 0.20
	v Diameter of each strand before stranding (mm)	1.71
	vi No.of strands in each conductor	7
	vii Shape	Compacted Circular
	viii Tensile strength (N/mm <sup>2</sup> )	N.A
	ix Max. DC resistance at 20 <sup>o</sup> C (Ohm/Km)	1.91
	x Approx mass (Kg/ Km)	43±3
6	Massenger detail (Bare)	
	i Material	Al.Alloy Cond. Generally conf. IS-398 (Pt-IV)
	ii Nominal size (mm <sup>2</sup> )	25.00
	iii No of wires (No)	7
	iv Diameter of each wire (mm)	2.14
	v Nominal conductor diameter (mm)	6.0±0.20
	vi Shape	Compacted Circular
	vii Max. DC resistance at 20 <sup>o</sup> C (Ohm/Km)	1.38
	viii Min. Breaking load (KN)	7.00
	ix Approx mass (Kg/ Km)	65.00+3
7	Insulation (For phase conductor)	
	i Material	XLPE
	ii Type	As per IS: 14255/95
	iii Nominal Thickness (mm)	1.20
	iv Phase Identification	By ridge
8	Insulation Properties (XLPE)	
	i Tensile strength (N/mm <sup>2</sup> )(Min)	12.5
	ii % Elongation (Min)	200
	iii Volume Resistivity (Min)	
	a At 27OC (Ohms-cm)	1 x 10 <sup>13</sup> Ohm Cm.
	b At 70OC (Ohms-cm)	1 x 10 <sup>11</sup> Ohm Cm.
9	Approx. overall diameter of cable (mm)	20.80
10	Sequential marking of length	N.A
11	Packing	Wooden drums
12	Standard drum length (Mtrs.)	1 lengths of 1000 ± 5%
13	Embossing	

**Guranteed Technical Particulars of 1.1 KV (LT) Aerial Bunched Cable**

Sl.No	Description	Guranteed value
1	Name & Address of the manufacturer	
2	Applicable Standard to which cable conforms	IS: 10810-1984, IS:8130-1984, IS: 14255-1995 & IS: 398 (Pt-IV)-1979
3	Type of cable	LT Aerial Bunched Cable
4	Voltage Grade (KV)	Upto & including 1.1 KV (LT) Cable <b>3Cx25+1Cx16 mm<sup>2</sup></b>
5	Phase conductor Details	
	i Type of material	EC grade Al. Cond. As per IS 8130/84
	ii Nominal cros sectional area (mm <sup>2</sup> )	25.00
	iii No. of phase conductor	3
	iv Nominal conductor diameter (mm)	6.0 ± 0.20
	v Diameter of each strand before stranding (mm)	2.14
	vi No.of strands in each conductor	7
	vii Shape	Compacted Circular
	viii Tensile strength (N/mm <sup>2</sup> )	N.A
	ix Max. DC resistance at 20 <sup>o</sup> C (Ohm/Km)	1.2
	x Approx mass (Kg/ Km)	65±3
6	Massenger detail (Bare)	
	i Material	Al Alloy Cond. Generally conf. IS-398 (Pt-IV)
	ii Nominal size (mm <sup>2</sup> )	25.00
	iii No of wires (No)	7
	iv Diameter of each wire (mm)	1.71
	v Nominal conductor diameter (mm)	5.0±0.20
	vi Shape	Compacted Circular
	vii Max. DC resistance at 20 <sup>o</sup> C (Ohm/Km)	1.91
	viii Min. Breaking load (KN)	6.50
	ix Approx mass (Kg/ Km)	43.00±3
7	Insulation (For phase conductor)	
	i Material	XLPE
	ii Type	As per IS: 14255/95
	iii Nominal Thickness (mm)	1.20
	iv Phase Identification	By ridge
8	Insulation Properties (XLPE)	
	i Tensile strength (N/mm2)(Min)	12.5
	ii % Elongation (Min)	200
	iii Volume Resistivity (Min)	
	a At 27OC (Ohms-cm)	1 x 10 <sup>13</sup> Ohm Cm.
	b At 70OC (Ohms-cm)	1 x 10 <sup>11</sup> Ohm Cm.
9	Approx. overall diameter of cable (mm)	23.00
10	Sequential marking of length	N.A
11	Packing	Wooden drums
12	Standard drum length (Mtrs.)	1 lengths of 1000 ± 5%
13	Embossing	