Polycab HT Aerial bunch cable generally conforming to IS 7098-2 standards

Polycab offers HT aerial bunch cable generally conforming to IS 7098-2. These cables are recommended as overhead distribution feeder in rural or residential area and hill area where underground installation is not possible.
These cables are available as three phase or single-phase system with or without street light conductor for HT cable with continuous operation temperature 90°C.

Conductor:

Phase conductor: High conductivity annealed stranded aluminium conductor produced in-house from state-of-the art machine

Messenger conductor: Stranded circular or compacted heat-treated aluminium magnesium alloy wire

Screen: Conductor screened by semi-conducting compound for HT phase conductor

Insulation:

Phase conductor: in-house developed compounded XLPE

Messenger conductor: in-house developed compounded XLPE (optional)

Screen: Insulation screened by semi-conducting compound followed by copper tape for HT phase conductor

Sheath: Extruded sheathing over insulation screen for HT phase conductor.

Polycab assures the highest quality standard in every product by having stringent quality control with requisite testing which are applied at every single stage from raw material to finished goods.

The construction is based on the application and requirement of the user against IS 7098-2.

POLYCAB Aerial Bunched Cable (ABC)
Overhead Power Distribution Cable, 1100 V

POLYCAB Aerial Bunched Cable (ABC)
Overhead Power Distribution Cable, 1.9/3.3kV

POLYCAB Aerial Bunched Cable (ABC)
Overhead Power Distribution Cable, 6.35/11KV(E)

POLYCAB Aerial Bunched Cable (ABC)
Overhead Power Distribution Cable, 19/33KV(E)

POLYCAB Aerial Bunched Cable (ABC)

Overhead Power Distribution Cable, 1.9/3.3kV

Application

POLYCAB Aerial Bunched Cable (ABC) is recommended as overhead distribution feeder in rural or residential areas and hill area where underground installation is not possible.

Voltage Rating

1.9/3.3 KV

Operation Temperature

Max.: 90˚C

Configuration

Three phase system cable with insulated messenger or with bare messenger

Construction

- Phase conductor
  - Stranded compacted aluminium conductor to IS 8130, Class 2
  - Insulated with XLPE (Cross linked polyethylene)
  - Sheathed with PVC to IS 5831
- Messenger conductor
  - Stranded circular or compacted heat-treated aluminium-magnesium alloy wire to IS 398 (part 4)
  - Insulated with in-house developed compounded XLPE (if required)

Core Identification

Phase conductor	one, two or three ridges
Neutral conductor	four ridges
Messenger (if insulated)	No identification mark

Bending Radius

10 x Overall diameter

Standard and References

IS 8130:2013
IS 398 (Part 4)
IS 5831
IS 7098-2
IS 14255:1995

Test Voltage

10000 V AC

Compliance

Conductor resistance	IS 8130
Elongation test	IS 5831
Tensile strength	IS 5831

POLYCAB Aerial Bunched Cable (ABC)

Overhead Power Distribution Cable, 1.9/3.3kV

Phase Conductor + Messenger (Bare)					
Construction (Phase + Messenger) n x mm²	Insulation thickness mm	Phase conductor Overall diameter mm	messenger Overall diameter mm	Weight (Approx.)	Minimum Breaking load of messenger KN
3 x 25 + 1 x 25	2.20	14.42	6.42	802	7.7
3 x 35 + 1 x 35	2.20	15.56	7.60	965	10.8
3 x 50 + 1 x 50	2.20	17.15	9.11	1208	15.5
3 x 70 + 1 x 50	2.20	19.20	9.11	1508	15.5
3 x 95 + 1 x 55	2.20	21.00	9.53	1821	17.0
3 x 120 + 1 x 70	2.20	22.61	10.77	2152	21.6
3 x 150 + 1 x 75	2.20	24.29	11.13	2499	23.1
3 x 185 + 1 x 95	2.20	26.04	12.55	2932	29.4
3 x 240 + 1 x 125	2.20	28.49	14.36	3593	38.5
3 x 300 + 1 x 150	2.20	31.30	15.75	4378	46.3

Phase Conductor + Messenger (Insulated)						
Construction (Phase + Messenger) n x mm²	Insulation thickness mm		Phase conductor Overall diameter mm	messenger Overall diameter mm	Weight (Approx.)	Minimum Breaking load of messenger KN
	Phase mm	Messenger mm				
3 x 25 + 1 x 25	2.20	2.20	14.4	10.8	866	7.7
3 x 35 + 1 x 35	2.20	2.20	15.6	12.0	1038	10.8
3 x 50 + 1 x 50	2.20	2.20	17.2	13.5	1292	15.5
3 x 70 + 1 x 50	2.20	2.20	19.2	13.5	1593	15.5
3 x 95 + 1 x 55	2.20	2.20	21.0	13.9	1909	17.0
3 x 120 + 1 x 70	2.20	2.20	22.6	15.2	2249	21.6
3 x 150 + 1 x 75	2.20	2.20	24.3	15.5	2599	23.1
3 x 185 + 1 x 95	2.20	2.20	26.0	16.9	3043	29.4
3 x 240 + 1 x 125	2.20	2.20	28.5	18.8	3716	38.5
3 x 300 + 1 x 150	2.20	2.20	31.3	20.2	4512	46.3

POLYCAB Aerial Bunched Cable (ABC)

Overhead Power Distribution Cable, 1.9/3.3kV

Electrical characteristics

Current carrying capacity and maximum DC conductor resistance.

Construction (Phase + Messenger) n x mm²	Maximum DC conductor resistance at 20°C		Reactance Ω/km	Current carrying capacity in Air @ 40°C Amp.
	Phase Ω/km	Messenger Ω/km		
3 x 25 + 1 x 25	1.2	1.33	0.115	118
3 x 35 + 1 x 35	0.868	0.95	0.109	142
3 x 50 + 1 x 50	0.641	0.66	0.100	169
3 x 70 + 1 x 50	0.443	0.66	0.0971	212
3 x 95 + 1 x 55	0.32	0.605	0.0931	256
3 x 120 + 1 x 70	0.253	0.474	0.0893	296
3 x 150 + 1 x 75	0.206	0.444	0.0868	333
3 x 185 + 1 x 95	0.164	0.349	0.0846	383
3 x 240 + 1 x 125	0.125	0.268	0.0821	444
3 x 300 + 1 x 150	0.1	0.223	0.0804	502

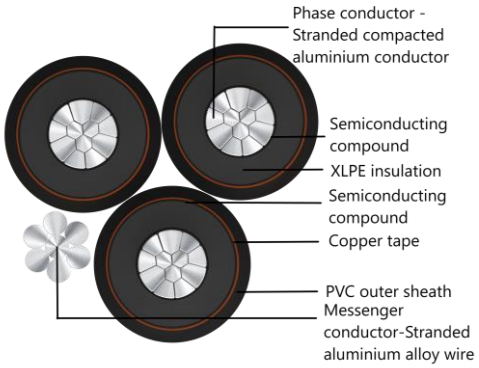
De-Rating Factor

De-ratting factor for various ambient temperature.

Air-Temperature	25°C	30°C	35°C	40°C	45°C	50°C	55°C	60°C
De-rating factor	1.14	1.1	1.05	1	0.95	0.89	0.84	0.77

POLYCAB Aerial Bunched Cable (ABC)

Overhead Power Distribution Cable, 6.35/11KV(E) AC



Application

POLYCAB Aerial Bunched Cable (ABC) is recommended as overhead distribution feeder in rural or residential areas and hill area where underground installation is not possible.

Voltage Rating

6.35/11 KV(E)

Operation Temperature

Max.: 90˚C

Configuration

Three phase system cable with insulated messenger or with bare messenger

Construction

- Phase conductor
  - Stranded compacted aluminium conductor to IS 8130, Class 2
  - Screened by semiconducting compound
  - Insulated with XLPE (Cross linked polyethylene)
  - Screened by semiconducting compound
  - Wrapped with copper tape
  - Sheathed with PVC sheath
- Messenger conductor
  - Stranded circular or compacted heat-treated aluminium-magnesium alloy wire to IS 398 (part 4)
  - Insulated with in-house developed compounded XLPE (if required)

Core Identification

Phase conductor	one, two or three ridges
Neutral conductor	four ridges
Messenger (if insulated)	No identification mark

Bending Radius

10 x Overall diameter

Standard and References

IS 8130:2013
IS 398 (Part 4)
IS 5831
IS 7098-2
IS 14255:1995

Test Voltage

21000 V AC

Compliance

Conductor resistance	IS 8130
Elongation test	IS 5831
Tensile strength	IS 5831

POLYCAB Aerial Bunched Cable (ABC)

Overhead Power Distribution Cable, 6.35/11KV(E) AC

Phase Conductor + Messenger(Bare)					
Construction n x mm²	Insulation thickness mm	Phase conductor Overall diameter mm	messenger Overall diameter mm	Weight (Approx.)	Minimum Breaking load of messenger KN
3 x 25 + 1 x 50	3.60	20.10	9.11	1487	15.5
3 x 35 + 1 x 50	3.60	21.24	9.11	1660	15.5
3 x 50 + 1 x 70	3.60	22.83	10.77	1969	21.6
3 x 70 + 1 x 70	3.60	24.48	10.77	2266	21.6
3 x 95 + 1 x 80	3.60	26.28	11.49	2647	24.7
3 x 120 + 1 x 95	3.60	27.89	12.55	3027	29.4
3 x 150 + 1 x 125	3.60	29.97	14.36	3585	38.5
3 x 185 + 1 x 125	3.60	31.72	14.36	4020	38.5
3 x 240 + 1 x 150	3.60	34.17	15.75	4750	46.3
3 x 300 + 1 x 185	3.60	36.58	17.49	5547	57.1

Phase Conductor + Messenger(Insulated)						
Construction n x mm²	Insulation thickness mm		Phase conductor Overall diameter mm	messenger Overall diameter mm	Weight (Approx.)	Minimum Breaking load of messenger KN
	Phase mm	Messenger mm				
3 x 25 + 1 x 50	3.60	3.60	20.10	16.3	1643	15.5
3 x 35 + 1 x 50	3.60	3.60	21.24	16.3	1816	15.5
3 x 50 + 1 x 70	3.60	3.60	22.83	18.0	2145	21.6
3 x 70 + 1 x 70	3.60	3.60	24.48	18.0	2442	21.6
3 x 95 + 1 x 80	3.60	3.60	26.28	18.7	2832	24.7
3 x 120 + 1 x 95	3.60	3.60	27.89	19.7	3225	29.4
3 x 150 + 1 x 125	3.60	3.60	29.97	21.6	3804	38.5
3 x 185 + 1 x 125	3.60	3.60	31.72	21.6	4240	38.5
3 x 240 + 1 x 150	3.60	3.60	34.17	23.0	4987	46.3
3 x 300 + 1 x 185	3.60	3.60	36.58	24.7	5805	57.1

POLYCAB Aerial Bunched Cable (ABC)

Overhead Power Distribution Cable, 6.35/11KV(E) AC

Electrical characteristics

Current carrying capacity and maximum DC conductor resistance.

Construction (Phase + Messenger) n x mm²	Maximum DC conductor resistance at 20°C		Reactance Ω/km	Current carrying capacity in Air @ 40°C Amp.
	Phase Ω/km	Messenger Ω/km		
3 x 25 + 1 x 50	1.2	0.663	0.135	119
3 x 35 + 1 x 50	0.868	0.663	0.129	143
3 x 50 + 1 x 70	0.641	0.474	0.118	171
3 x 70 + 1 x 70	0.443	0.474	0.112	213
3 x 95 + 1 x 80	0.32	0.416	0.107	258
3 x 120 + 1 x 95	0.253	0.349	0.103	298
3 x 150 + 1 x 125	0.206	0.268	0.100	335
3 x 185 + 1 x 125	0.164	0.268	0.0970	384
3 x 240 + 1 x 150	0.125	0.223	0.0935	446
3 x 300 + 1 x 185	0.1	0.181	0.0902	503

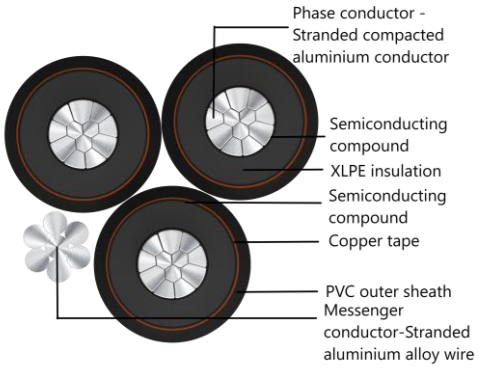
De-Rating Factor

De-ratting factor for various ambient temperature

Air-Temperature	25°C	30°C	35°C	40°C	45°C	50°C	55°C	60°C
De-rating factor	1.14	1.1	1.05	1	0.95	0.89	0.84	0.77

POLYCAB Aerial Bunched Cable (ABC)

Overhead Power Distribution Cable, 19/33KV(E) AC



Application

POLYCAB Aerial Bunched Cable (ABC) is recommended as overhead distribution feeder in rural or residential areas and hill areas where underground installation is not possible.

Voltage Rating

19/33 KV(E)

Operation Temperature

Max.: 90˚C

Configuration

Three phase system cable with insulated messenger or with bare messenger

Construction

- Phase conductor
  - Stranded compacted aluminium conductor to IS 8130, Class 2
  - Screened by semiconducting compound
  - Insulated with XLPE (Cross linked polyethylene)
  - Screened by semiconducting compound
  - Wrapped with copper tape
  - Sheathed with PVC sheath
- Messenger conductor
  - Stranded circular or compacted heat-treated aluminium-magnesium alloy wire to IS 398 (part 4)
  - Insulated with in-house developed compounded XLPE (if required)

Core Identification

Phase conductor	one, two or three ridges
Neutral conductor	four ridges
Messenger (if insulated)	No identification mark

Bending Radius

10 x Overall diameter

Standard and References

IS 8130:2013
IS 398 (Part 4)
IS 5831
IS 7098-2
IS 14255:1995

Test Voltage

63000 V AC

Compliance

Conductor resistance	IS 8130
Elongation test	IS 5831
Tensile strength	IS 5831

POLYCAB Aerial Bunched Cable (ABC)

Overhead Power Distribution Cable, 19/33KV(E) AC

Phase Conductor + Messenger (Bare)					
Construction n x mm²	Insulation thickness mm	Phase conductor Overall diameter mm	messenger Overall diameter mm	Weight (Approx.)	Minimum Breaking load of messenger KN
3 x 25 + 1 x 95	8.80	30.90	12.55	3100	29.39
3 x 35 + 1 x 100	8.80	32.04	12.85	3345	30.82
3 x 50 + 1 x 125	8.80	33.63	14.36	3749	38.50
3 x 70 + 1 x 125	8.80	35.28	14.36	4131	38.50
3 x 95 + 1 x 150	8.80	37.08	15.75	4648	46.32
3 x 120 + 1 x 150	8.80	38.69	15.75	5068	46.32
3 x 150 + 1 x 185	8.80	40.77	17.49	5760	57.12
3 x 185 + 1 x 185	8.80	42.52	17.49	6286	57.12
3 x 240 + 1 x 240	8.80	45.37	19.93	7362	74.12
3 x 300 + 1 x 240	8.80	47.78	19.93	8194	74.12

Phase Conductor + Messenger (Insulated)						
Construction n x mm²	Insulation thickness mm		Phase conductor Overall diameter mm	messenger Overall diameter mm	Weight (Approx.)	Minimum Breaking load of messenger KN
	Phase mm	Messenger mm				
3 x 25 + 1 x 95	8.80	8.80	30.90	30.1	3738	29.39
3 x 35 + 1 x 100	8.80	8.80	32.04	30.4	3992	30.82
3 x 50 + 1 x 125	8.80	8.80	33.63	32.0	4442	38.50
3 x 70 + 1 x 125	8.80	8.80	35.28	32.0	4823	38.50
3 x 95 + 1 x 150	8.80	8.80	37.08	33.4	5382	46.32
3 x 120 + 1 x 150	8.80	8.80	38.69	33.4	5802	46.32
3 x 150 + 1 x 185	8.80	8.80	40.77	35.1	6546	57.12
3 x 185 + 1 x 185	8.80	8.80	42.52	35.1	7072	57.12
3 x 240 + 1 x 240	8.80	8.80	45.37	37.5	8221	74.12
3 x 300 + 1 x 240	8.80	8.80	47.78	37.5	9053	74.12

POLYCAB Aerial Bunched Cable (ABC)

Overhead Power Distribution Cable, 19/33KV(E) AC

Electrical characteristics

Current carrying capacity and maximum DC conductor resistance.

Nominal cross sectional area mm²	Maximum DC conductor resistance at 20°C		Reactance Ω/km	Current carrying capacity in Air @ 40°C Amp.
	Phase Ω/km	Messenger Ω/km		
3 x 25 + 1 x 95	1.2	0.349	0.162	
3 x 35 + 1 x 100	0.868	0.333	0.154	146
3 x 50 + 1 x 125	0.641	0.268	0.143	177
3 x 70 + 1 x 125	0.443	0.268	0.135	220
3 x 95 + 1 x 150	0.32	0.223	0.129	264
3 x 120 + 1 x 150	0.253	0.223	0.123	303
3 x 150 + 1 x 185	0.206	0.181	0.119	340
3 x 185 + 1 x 185	0.164	0.181	0.115	387
3 x 240 + 1 x 240	0.125	0.139	0.111	449
3 x 300 + 1 x 240	0.1	0.139	0.107	501

De-Rating Factor

De-ratting factor for various ambient temperature.

Air-Temperature	25°C	30°C	35°C	40°C	45°C	50°C	55°C	60°C
De-rating factor	1.14	1.1	1.05	1	0.95	0.89	0.84	0.77