POLYCAB

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Polycab Uninyvin Cable

CONTENT

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POLYCAB WIRES & CABLES

Reliable and safe supply of electricity is crucial to lead our life and the growth of any business, community, or country. This supply of electricity can only be managed through high quality, durable, reliable and efficient wires & cables.

Polycab India Ltd, a Super brand manufacturer of wire & cables having wide range of product practically in every application and voltage grade from 0.6 KV to 220 KV, serving to the world continuously since last 50 years with it's most economic, reliable and efficient product for safe transmission of electricity without much hazards and earned the trust of millions of customers over last 5 decades. It caters to a range of industries viz; Utilities, Power generation, transmission & distribution, oil refineries, OEMS, EPC Contractors, Nuclear power generation and many more with the supply of variety of power, control, instrumentation, communication, and Nyvin Cable.

Polycab, the largest manufacturer of wires & cables, having multilocation activity with high degree of backward integration, a comprehensive product portfolio, strong brand position and robust distribution network riding on key differentiators like product innovation, superior quality and easy availability.

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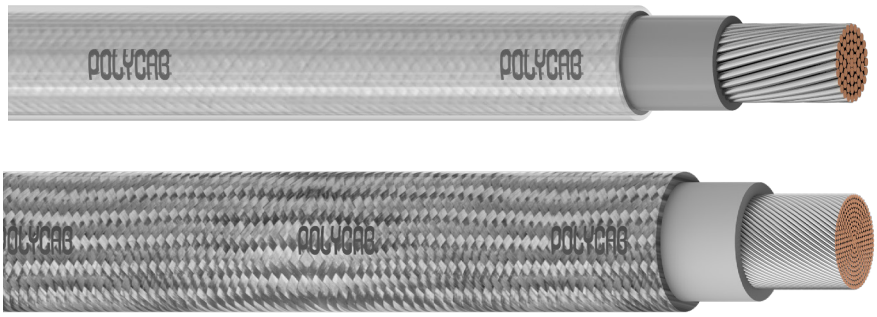
POLYCAB UNINYVIN
Single Core Flexible Uninyvin Cables, 600V AC



Unique Features

- **High Flexibility**
- Heat Resistant
- High Mechanical Strength
- Resistant to Oils & water
- Resistant to Acids & Chemicals
- Abrasion resistant

Application
POLYCAB Uninyvin Single core Flexible Cables are used for continuous operating conditions where heat resistance is major concern. This is highly suitable for UPS / Inverter systems, DG sets, control panels, data centers, battery interlinks, transformers, Solar power equipment, HVAC systems and electric motors application.

Voltage Rating
600 V

Operation Temperature
-35˚C to 105°C

Construction
- Annealed Tinned Flexible copper conductor as per IS 10241-3/1987.
- Thermoplastic High Temperature PVC Insulation as per IS 10241:1987, Part-3.
- Glass Fibre Yarn Braid.
- Transparent Nylon sheath (Up to 12 AWG)
- Nylon Braid & Lacquered (10 AWG and above)

Core Identification
White

Bending Radii
12 x Overall Diameter

Standard and References
IS 8130:2013
IS 10241:1987-Part 3

Voltage Test
1500 Vrms AC

Spark Test
3KV – up to & including Uninyvin 8
4KV – Above Uninyvin 8

Compliance

Conductor resistance	IS 10241:1987-Part 3
Insulation resistance	IS 10241:1987-Part 3
Resistance to Fluids	IS 10241:1987-Part 3

REACH COMPLIANCE
RoHS

Our Accreditation

ISO 9001 ISO 14001 ISO 45001

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POLYCAB UNINYVIN

Single Core Flexible Uninyvin Cables, 600V AC

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Product Code	No. of Cores	Cross Sectional Area AWG	Cross Sectional Area mm²	Min. Insulation Thickness mm	Min. Sheath Thickness mm	Overall Diameter mm	
						Min.	Max.
	1	22	0.347	0.23	0.076	1.8	2
	1	20	0.556	0.23	0.076	2	2.3
	1	18	0.966	0.23	0.076	2.3	2.5
	1	16	1.171	0.23	0.076	2.5	2.8
	1	14	2.05	0.28	0.076	3	3.4
	1	12	3.22	0.28	0.076	3.5	3.8
	1	10	5.33	0.38	0.127	4.6	5
	1	8	8.76	0.38	0.127	5.9	6.3
	1	6	13.3	0.38	0.127	7.3	7.6
	1	4	21.5	0.48	0.127	8.8	9.3
	1	2	33.3	0.48	0.127	10.5	11
	1	1	40.7	0.56	0.127	11.7	12.2
	1	0	53	0.64	0.127	13	13.7
	1	2/0	68.3	0.69	0.127	14.6	15.4
	1	3/0	84.2	0.76	0.127	16.1	16.9
	1	4/0	109	0.79	0.127	17.9	18.7

Electrical characteristics

Current carrying capacity and maximum DC conductor resistance.

No. of Cores	Cross Sectional Area AWG	Max. DC Conductor Resistance at 20°C Ω/Km	Max. Current Rating Amp.			
			Single Cable	3-bunched cable	7-bunched cable	12-bunched cable
1	22	54.3	11	7	5	4
1	20	33.9	14	9	7	5
1	18	19.5	18	13	10	6
1	16	16.1	21	15	11	7
1	14	9.2	31	24	17	12
1	12	5.85	43	30	22	15
1	10	3.53	61	47	36	25
1	8	2.15	87	65	49	36
1	6	1.42	115	87	65	-
1	4	0.877	160	120	92	-
1	2	0.565	200	155	120	-
1	1	0.463	220	165	130	-
1	0	0.355	240	185	168‡	-
1	2/0	0.276	270	210/240†	190‡	-
1	3/0	0.223	300	235/265†	210‡	-
1	4/0	0.173	350	270/305†	245‡	-

These current ratings are based on a temperature raise of 40°C and allow for an ambient temperature of 65°C
The above tables are in accordance with IS 10241/1987, Part-3 †Denotes two cables only ‡Denotes five cables only

De-rating factor

De-rating factor for various ambient temperature.

Ambient temperature	40	45	50	55	60	65	70	75	80	85
Derating factor	1.0	0.96	0.92	0.88	0.83	0.78	0.75	0.73	0.68	0.62

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POLYCAB UNINYVINAL
Single Core Flexible Uninyvinal Cables, 600V AC

Unique Features

- Resistant to oil & water
- Resistant to Acids & chemicals
- Abrasion resistant

Application
POLYCAB Uninyvinal Single core Flexible Cables are used for continuous operating conditions where heat resistance is major concern. This is highly suitable for UPS / Inverter systems, DG sets, control panels, data centres, battery interlinks, transformers, Solar power equipment, HVAC systems and electric motors application.

Voltage Rating
600 V

Operation Temperature
-35˚C to 105°C

Construction
- Aluminium bunched conductor to IS 10241-3
- Insulated with High Temperature PVC as per IS 10241:1987-Part 3
- Glass fibre braiding
- Nylon braid & Lacquered

Core Identification
White

Bending Radii
12 x Overall Diameter

Standard and References
IS 10241:1987-Part 3

Voltage Test
1500 Vrms AC

Spark Test
3KV – up to & including Uninyvinal 8
4KV – Above Uninyvinal 8

Compliance

Conductor resistance	IS 10241:1987-Part 3
Insulation resistance	IS 10241:1987-Part 3
Resistance to Fluids	IS 10241:1987-Part 3

REACH COMPLIANCE RoHS

Our Accreditation

ISO 9001 ISO 14001 ISO 45001 NABL ABS IRS

POLYCAB UNINYVINAL

Single Core Flexible Uninyvinal Cables, 600V AC

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Product Code	No. of Cores	Conductor Size AWG	Conductor Size mm²	Insulation thickness mm	Overall Diameter mm	
					Min.	Max.
	1	8	8.31	0.508	6.4	5.8
	1	6	14.2	0.508	7.7	7.2
	1	4	21.3	0.584	9.1	8.6
	1	2	34.1	0.584	10.9	10.4
	1	0	53.9	0.711	13.7	12.6
	1	00	69.3	0.711	15.2	14.5
	1	000	84.7	0.838	17	16.3
	1	0000	107	0.838	18.4	17.7

Electrical characteristics

Current carrying capacity and maximum DC conductor resistance.

Conductor Size	*Maximum Current Ratting Ampere				Max. DC Conductor Resistance at 20°C
AWG	Single cable in free air	3-Bunched cable in free air	7-Bunched cable in free air	12-Bunched cable in free air	Ω/Km
8	61	47	36	25	3.587
6	87	65	49	36	2.100
4	115	87	65	-	1.400
2	160	120	92	-	0.879
0	200	155	120	-	0.554
00	220	165	130	-	0.436
000	240	185	168‡	-	0.358
0000	270	210/240†	190‡	-	0.279

These current ratings are based on a temperature raise of 40°C and allow for an ambient temperature of 65°C;
*The values of Uninyvinal cables have not been confirmed experimentally
†Denotes two cables only ‡Denotes five cables only

De-rating factor

De-rating factor for various ambient temperature.

Ambient temperature	40	45	50	55	60	65	70	75	80	85
Derating factor	1.0	0.96	0.92	0.88	0.83	0.78	0.75	0.73	0.68	0.62

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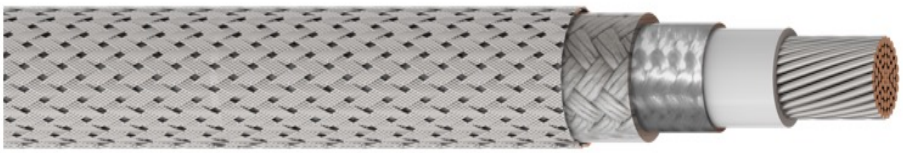
POLYCAB UNINYVINMET
Single Core Flexible Uninyvinmet Cables, 600V AC



Unique Features

- High current carrying capacity
- High insulation resistant
- Resistant to oil & water
- Resistant to Acids & chemicals
- Abrasion resistant

Application
POLYCAB Uninyvinmet Single core Flexible Cables are used for airplane wiring in air craft and ships, it is also suitable to use for operating at higher temperature zone.

Voltage Rating
600 V

Operation Temperature
-35˚C to 105°C

Construction
- Annealed Tinned bunched copper conductor to IS 10241-3
- Insulated with High Temperature PVC as per IS 10241:1987-Part 3
- Glass fibre braiding
- Nylon braid & Lacquered
- Tinned copper wire braiding

Core Identification
White

Bending Radii
12 x Overall Diameter

Standard and References
IS 10241:1987-Part 3

Voltage Test
1500 Vrms AC

Spark Test
3KV

Compliance

Conductor resistance	IS 10241:1987-Part 3
Insulation resistance	IS 10241:1987-Part 3
Resistance to Fluids	IS 10241:1987-Part 3

REACH COMPLIANCE RoHS

Our Accreditation

ISO 9001 ISO 14001 ISO 45001

NABL ABS IRS

POLYCAB UNINYVINMET
Single Core Flexible Uninyvinmet Cables, 600V AC

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Product Code	No. of Cores	Conductor Size AWG	Min. insulation thickness mm	Braiding wire dia. mm	Insulation thickness mm	Overall Diameter mm	
						Min.	Max.
	1	14	2.05	0.279	0.193	4.4	3.8
	1	12	3.22	0.279	0.193	4.8	4.2
	1	10	5.33	0.381	0.193	6.0	5.4
	1	8	8.76	0.381	0.193	7.3	6.7

Electrical characteristics

Current carrying capacity and maximum DC conductor resistance.

Conductor Size	*Maximum Current Ratting Ampere				Max. DC Conductor Resistance at 20°C
AWG	Single cable in free air	3-Bunched cable in free air	7-Bunched cable in free air	12-Bunched cable in free air	Ω/Km
14	31	24	17	12	9.2
12	43	30	22	15	5.85
10	61	47	36	25	3.532
8	87	65	49	36	2.154

These current ratings are based on a temperature raise of 40°C and allow for an ambient temperature of 65°C;

De-rating factor

De-rating factor for various ambient temperature.

Ambient temperature	40	45	50	55	60	65	70	75	80	85	90	95	100
Derating factor	1.0	0.96	0.92	0.88	0.83	0.78	0.75	0.73	0.68	0.62	0.53	0.48	0.3

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