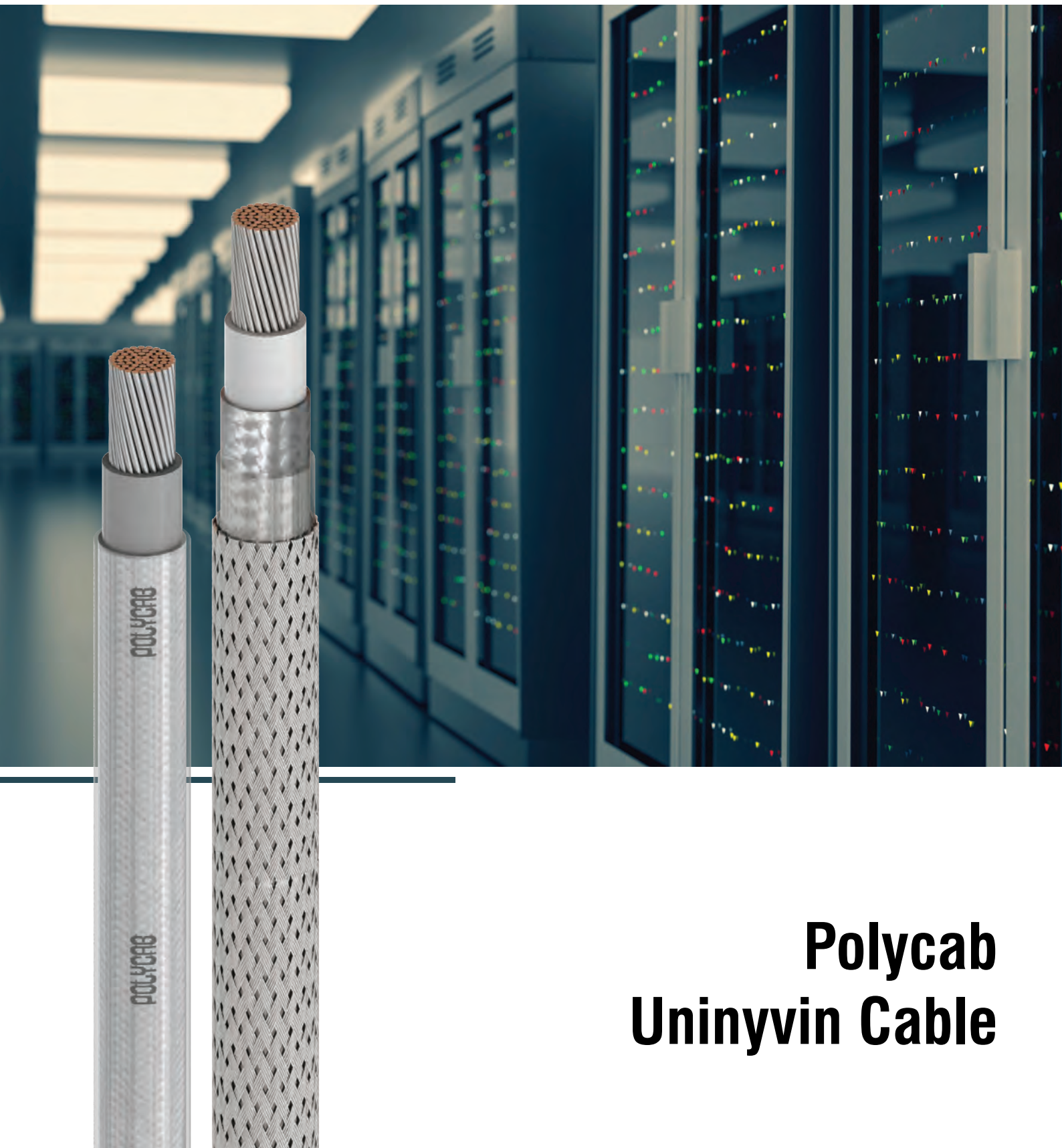


POLYCAB



Polycab Uninyvin Cable

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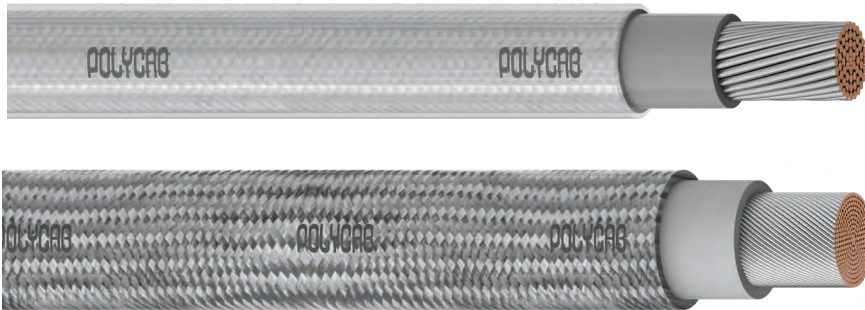


POLYCAB WIRES & CABLES

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.



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

Our Certification



POLYCAB UNINYVIN

Single Core Flexible Uninyvin Cables, 600V AC

POLYCAB

| Product Code | No. of Cores | Cross Sectional Area AWG | Cross Sectional Area mm ² | 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 |



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 |

Our Certification



POLYCAB UNINYVINAL

Single Core Flexible Uninyvinal Cables, 600V AC

POLYCAB

| Product Code | No. of Cores | Conductor Size AWG | Conductor Size mm ² | 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 Rating Ampere | | | | Max. DC Conductor Resistance at 20°C |
|----------------|--------------------------------|-----------------------------|-----------------------------|------------------------------|--------------------------------------|
| | 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;

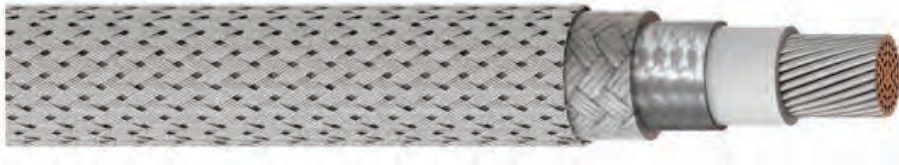
*The values of Uninyvinal cables have not been confirmed experimentally

†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 |

**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

Our Certification

| 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 AWG | *Maximum Current Rating Ampere | | | | Max. DC Conductor Resistance at 20°C |
|-----------------------|-----------------------------------|--------------------------------|--------------------------------|---------------------------------|---|
| | 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 |



POLYCAB

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