



Is your cable overheating?



When electricity is passed through a cable, it is bound to heat up the cable. The sheathing materials have an inherent continuous operating temperature value. E.g. for PVC type A it is 70°C. Accelerated ageing of the material started taking place when the cable temperature exceeded the specified operating temperature on a regular basis. This leads to reduction in the life of the cable.

After continuous overheating over a prolonged time period, the insulation material may potentially breakdown causing phase to phase short circuit trip which could lead to a fire hazard.

Mentioned below are some of the causes for overheating of the cable

* **Conductor resistance is higher than required** causing the cable to overheat during operation. This usually happens when the installed cable is not manufactured as per the requirement. Hence buying cables from non reputed makes should be avoided.

One of our customers had experienced such a problem. He asked us to test the cable he had purchased. It was a Power Cable 3.5 C x 50 sq.mm. as per IS 7098. What we observed is mentioned below

Particulars	Required	Observed
Resistance	0.387 Ω/ Km at 20°C	0.422 Ω/ Km at 20°C
Calculate Area based on resistance	50 sq.mm.	45.5 sq.mm.

* **Cable insulation material is of poor quality**, resulting in poor insulation resistance, causing the cable to heat further.



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* **Cable size selection improper.** When a cable is subjected to a load current higher than the specified current carrying cable of the cable, the cable starts overheating. E.g If the required current carrying capacity is 155A the following cable should be selected

Particulars	3.5 x 35 sq.mm.	3.5 x 50 sq.mm
Current Carrying Capacity in Air (A)	147	179
The size that should be selected		

* please note for the sake of argument Voltage drop and other electrical parameters are being ignored

* **Cable installation is not proper.** The cables may be arranged too densely or near a heat source which affects the normal heat dissipation of the cable.



Udey Pyrocables' cable design life is a min. of 25 years if correctly selected, handled and installed. For such an investment, we believe it is conservative to install a product which you can fully rely on and works beyond the designed life.



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Udey Pyrocables - Introduction

One of the biggest problems in the nascent days of the cable manufacturing sector was availability of quality specialized cables. Indian suppliers of such cables were scarce and could not supply the desired quality. Alternatively, importing these cables was possible but they were too expensive with high delivery periods. In order to solve this problem Udey Pyrocables was founded back in 1976. We pioneered the manufacturing of Thermocouple Extension Cables, Instrumentation Signal cable & Pneumatic Multi-tube bundle in India.

Even today we follow the same ideology and try to bridge the gap by **supplying excellent quality, affordable prices and reasonable delivery schedules of scarcely available products domestically**. Some of the newer products that we're supplying with this objective are VFD cables, Bus cables, Solar Cables, VDE standard control cable & Polyurethane Cables.

We **specialize in providing tailor made service** for each of our client's requirements and would love to work in association with you to develop better experience with regards to the cable design, cable quality & purchasing experience.

Udey Pyrocables manufactures a wide range of cables on the latest modernized machines to produce quality cables. We have an in-house testing laboratory which meets the requirements of International Standards and can conduct Physical, Routine, Acceptance, Type Tests, FRLS, Halogen free tests etc. all the Instruments are **NABL calibrated**. **Our Plant is located at Lonavala with a total area of 10 acres (100 KMs from Mumbai and 60 KMs from Pune in Maharashtra).**

Our company is **ISO 9001:2015 registered, ISI & CE certified** having approvals with eminent consultants & contractors. Safety and quality are of prime importance to us and in order to ensure the same testing is conducted at every stage of production so that every cable leaving our plant is perfect. We have worked with and delivered outstanding service and products to some of the biggest companies in India & beyond (exporting to 15 countries including the US, Japan, Singapore, Egypt, Middle East etc)

We have complete professional Management with an experienced team of engineers, we take care from our offer to the order placement where cable is designed as per your site requirements and conditions, job cards are made and QA Plan is submitted to you where eve stage our QC department ensures complete checks on every process to full stage of readiness, to shipment.



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Product Range

Power & Control Cables

Standard: IS 7098 & IS 1554
Conductor: Al., Cu., ATC
Size: 1.5 - 400 sq.mm.
XLPE/ PVC insulated
Armoured/ Unarmoured
Extruded/ Taped
Range - Upto 1.1 kV & 1.9/ 3.3 kV

Flexibles & Housing wiring

Standard: IS 694
Conductor: Cu., ATC
Size: 0.5 - 400 sq.mm.
PVC/ ZHLS/ FRLS

Instrumentation, Signal & RTD cable

Standard: BS 5308, BS EN 50288-7, IEC 189, EIL 6-52-46, EIL 6-52-51, IEC 60092-375, 376, BS EN 50288 PART-7, VDE 0815, VG 95218, NEK 606
Conductor: Cu., ATC
Size: 0.5 - 2.5 sq.mm.
Shielding: Al-Mylar + drain/ ATC braid
Individual-Overall/ Overall
Armoured/ Unarmoured
PVC/ FR/ FRLS/ ZHLS/ Silicon Rubber/ PTFE/
Fiberglass/ Kapton

Thermocouple Cable

Standards: ANSI 96.1, IEC 584-3, BS 1843, IS 8784, DIN 43714, EIL 6-52-46
Conductor: J, K, E, T, R, S, B, N
Size: 0.5 - 2.5 sq.mm.
Shielding: Al-Mylar + drain/ ATC braid
Individual-Overall/ Overall
Armoured/ Unarmoured
PVC/ FR/ FRLS/ ZHLS/ Silicon Rubber/ PTFE/
Fiberglass/ Kapton

Fire Resistant Cable (FS Cable)

Standards: BS 7846
Conductor: ATC, ABC
Size: 1.5 - 400 sq.mm.
Fire Barrier Tape: Mica Glass Tape
Armoured/ Unarmoured
XLPE/ Silicon - ZHLS

Communication Cables

Profibus Cable
Profinet Cable
Foundation Fieldbus Cable
Modbus Cable
DeviceNet Cable
Can Bus Cable



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	Optical Fiber Cable Cat 5e, 6 & 7
Control Cables As per VDE	VDE 0207 LiYY LiYCY LiYCY PUR LiYCY-TP Li2YCY Pimf YY Cable CY Shielded Control cable SY Cable
VFD Cable	Conductor: Cu., ATC, Al. Size: 1.5 - 400 sq.mm. Ground Conductors - 1 or 3 Insulation: XLPE/ PVC Shielding: Al foil + ATC braid/ Copper Tape Individual-Overall/ Overall PVC/ FRLS/ ZHLS
Uninyvin Cable	Conductor: ATC HR PVC, Glass Fiber, Nylon Fiber, Nylon Lacquer
Heat resistant Cable	Based on the peak temperature and operating temperature these cables are designed. Material options - Silicon Rubber/ PTFE/ PFA/ FEP/ PEEK/ Kapton/ Fiber Glass etc
Solar Cables	Standards: 2pfg 1169 Conductor: ATC Size: 2.5 - 400 sq.mm.
Robotic Cables	Conductor: Class 5 or Class 6 ABC Insulation: PE, TPE, EPR Sheathing: PU Shielding: ATC braid (Optional)