



Conductor Write-up

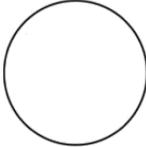
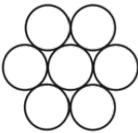
Conductor Standard

IS 8130, IEC 60288, HD 383

Conductor Material

Instrument cable conductors are generally bare copper, solid, stranded or flexible in compliance with IEC publication 334/BS 5308/ IS 8130 / International standard for the resistance of copper. Conductor may also be tinned.

Conductor Design & Characteristics

Criteria	Solid Class 1	Stranded Class 2	Multi Stranded Class 5
Construction			
No of Strands	1 Strand	7 Strands	No of strands is decided on the basis of strand size. Max strand size 0.26 mm
Conductor Resistance at 20°C	12.1 Ω/ kM Lowest resistance for a particular size	12.2 Ω/ kM Slightly higher resistance than solid	13.1 Ω/ kM Highest resistance for a particular size
Flexibility	Poor	Good	Excellent
Diameter	Smallest final size	Slightly bigger than Solid	Biggest final size
Ease of installation	Poor	Good	Good

* Assumption made while preparing the table: Conductor size 1.5 sq.mm.



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Conductor Coatings

Material	Properties	Peak Temperature
Tinned	<ul style="list-style-type: none">* Eliminates soldering problem* Protects the conductor material from the insulation (eg. Silicone Rubber)* Prevents oxidation of Copper at high temperature	150°C
Silver	<ul style="list-style-type: none">* Higher electropositive than Copper so in case of electro corrosion takes place Copper will stay protected* High temperature coating	200°C
Nickel	<ul style="list-style-type: none">* Soldering happens readily at high temperatures also* Electrolytic corrosion does not take place at higher temperatures	300°C

Conductor Selection Criteria

* Type of Installation - For fixed installation Solid (Class 1) conductor is preferred, for continuous flexing and bending Multi Stranded (Class 5) conductor is preferred

* Ambient Temperature

* Distance - If the current/ signal needs to cover a long distance from one to the other end, voltage distance plays an important role in deciding the size of the conductor as longer the length greater the voltage drop.

* Ambient Environment - For example in a corrosive environment Tinned Copper is preferred



Conductor Write-up

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.



Conductor Write-up

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



Conductor Write-up

	Can Bus Cable 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)