TRANPHU
WIRE & CABLE

TRẦN PHÚ - TRAFUCO
PROFILE & CATALOGUE

Table of content

TRAN PHU ELECTRIC MECHANICAL JOINT STOCK COMPANY

- 41 Phuong Liet, Thanh Xuan, Hanoi
- Tran Danh Tuyen, Long Bien, Hanoi

Message from CEO

Dear Valued Customers!
First of all, Tran Phu Electric Mechanical Joint Stock Company(TRAFUCO) would like to extent to you our sincere greetings and wish you health, happiness and success.

Tran Phu Electric Mechanical Joint Stock Company was established in 1984. Through over 30 years of evolvement and development, electric wires and cables with Tran Phu brand has continued to confirm its leading position as a well-known brand - Vietnam national brand, which is trusted by domestic customers, achieved European award on quality and selected by many global corporations as the strategic investment partners.

The outstanding advantage of Tran Phu wires and cables is "Product quality" which is highly received by the market. In addition, price and the ability to fulfil customer demand in the fastest and best possible way also makes us highly competitive.

With a "Time challenge endurance", Tran Phu wires and cables have accompanied the Electricity industry in almost all of the major domestic constructions, for example the cross country 500KV transmission, electric network improvement projects, electricity projects for rural areas, residential buildings in high-end urban areas, etc.

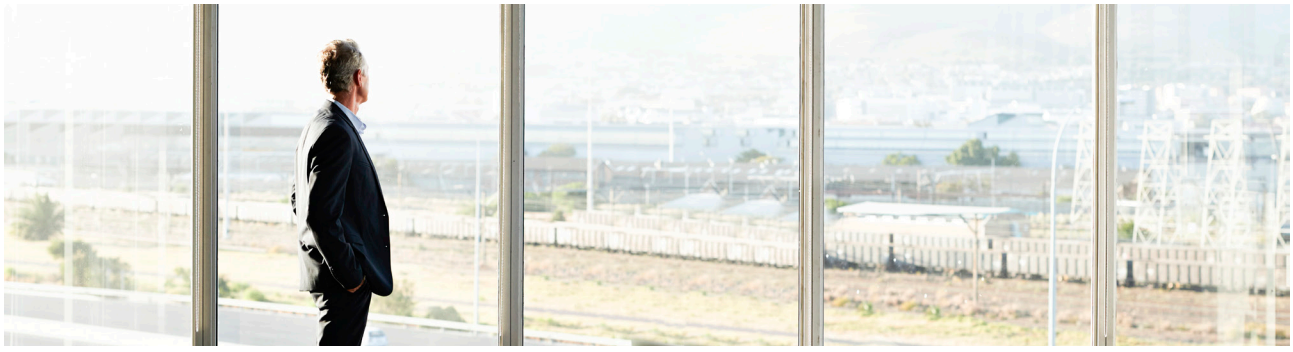
We always comply with business principles and ethical standards and commit that all of our marketable products satisfy the national standards of Vietnam (TCVN), Europe (IEC/ DIN/ VDE), America (UL, ASTM), Japan (JIS), etc.

Tran Phu wires & cables offer outstanding values: Good electro-conductivity - Energy saving - Electric safety.

Place your confidence in us as the trusted partnerin building your success.

Best regards!

Grow our business in a way that makes us proud



Core values

With proper development orientation and clear direction since the first days of establishment, Tran Phu Electric Mechanical JSC has always paid attention to human resource and technology, appreciated all ideas and initiatives, advance in science and technology, providing customers with sustainable values and trust.

Vision

Tran Phu Electric Mechanical JSC aims to become one of the leading company in the field of electric wires and cables production in the region. We are not stopping innovate and diversify our product range, ensure company's reputation, product's quality, business's effectiveness and satisfy all demands from the customers.

Mission

We are determined and committed to the mission of providing high quality products and services, guaranteed to bring consumers products which meet international quality standards, contributed to the industrialization and modernization of the country.

Manufacturing capacity

15.000 Tons/Year

Household Wires

5.000 Tons/Year

Bare copper cables

5.000 Tons/Year

Bare aluminum cables

10.000 Tons/Year

Low-voltage insulated copper cables

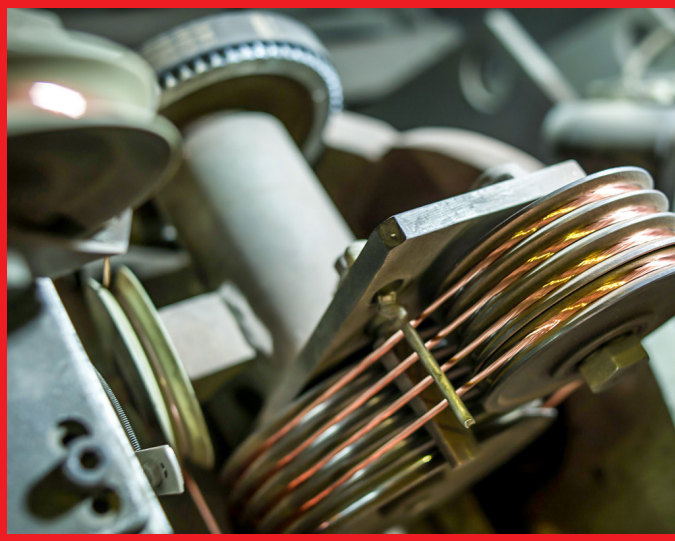
5.000 Tons/Year

Low-voltage insulated aluminum cables

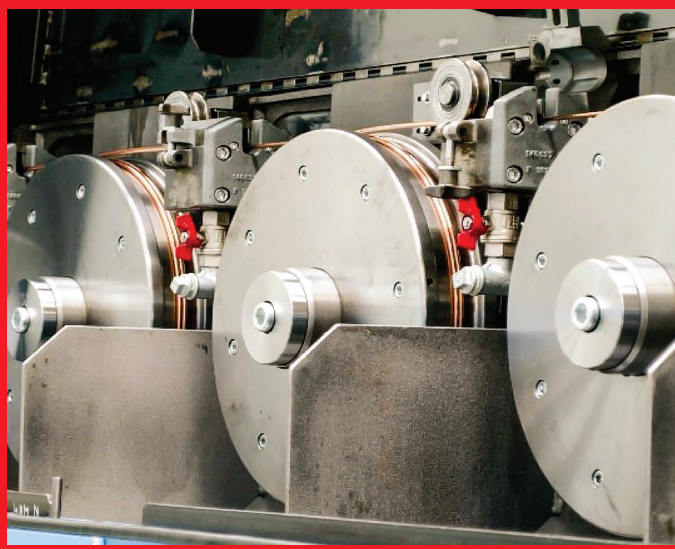
Partners & Customers

Production line using cutting-edge technology

Cutting-edge machines and manufacturing technology transferred from countries with the most advanced manufacturing industries in Europe (such as Germany, Italy, Finland, Austria), which contributes to products with the best technical quality in the market, satisfying the most strict standards locally and internationally.




FRISCH



High quality Material

Utilizing advanced technologies from European countries, Tran Phu rely on inputs which are carefully selected from the most trust-worthy suppliers in the domestic and global market, with the pure copper content of 99.99%, aluminum content of 99.7%, non-toxic PVC, XLPE plastics.

Imported LME copper with pure content of 99.99%

Environment - Friendly manufacturing process

The whole reliance on imported materials, together with modern manufacturing process without toxic chemical emissions which might cause environment pollution and pose threats to human health.

Achievements


CỘNG HÒA XÃ HỘI CHỦ NGHĨA VIỆT NAM
CHỦ TỊCH
NƯỚC CỘNG HÒA XÃ HỘI CHỦ NGHĨA VIỆT-NAM
THƯỞNG
HUÂN CHƯƠNG LAO ĐỘNG
HẠNG Nhất
Cán bộ, công nhân viên
Công ty Cơ điện Trần Phú

FIRST-CLASS LABOUR ORDER


CỘNG HÒA XÃ HỘI CHỦ NGHĨA VIỆT NAM
HỘI ĐỒNG NHÀ NƯỚC
NƯỚC CỘNG HÒA XÃ HỘI CHỦ NGHĨA VIỆT NAM
THƯỞNG
HUÂN CHƯƠNG CHIẾN CÔNG
HẠNG Nhì
Lực lượng tự vệ Cơ khí xây dựng Trần Phú

SECOND-CLASS DEFENSE ORDER


CỘNG HÒA XÃ HỘI CHỦ NGHĨA VIỆT NAM
CHỦ TỊCH
NƯỚC CỘNG HÒA XÃ HỘI CHỦ NGHĨA VIỆT NAM
THƯỞNG
HUÂN CHƯƠNG CHIẾN CÔNG
HẠNG BA
Công ty Cơ điện Trần Phú

THIRD-CLASS DEFENSE ORDER


CỘNG HÒA XÃ HỘI CHỦ NGHĨA VIỆT NAM
CHỦ TỊCH
NƯỚC CỘNG HÒA XÃ HỘI CHỦ NGHĨA VIỆT-NAM
TẶNG
HUÂN CHƯƠNG ĐỘC LẬP
HẠNG ... Ba
CÔNG TY CƠ ĐIỆN TRẦN PHÚ

THIRD-CLASS INDEPEN-DENCE ORDER

Quality - Related awards

Awarded the Vietnam high quality product title for 8 consecutive years (2009 - 2017)

Top 500 biggest private companies - VNR500 in 2016

Certificate of "Top 20 golden products in integration period" in 2010

Certificate of Vietnam national brand (2014-2018)

European prize on qualiy, awarded in Paris, France (2006)

Other prestigious merits, orders, prizes and cups, etc.

Certificates

TỔNG CỤC TIÊU CHUẨN ĐO LƯỜNG CHẤT LƯỢNG
TRUNG TÂM CHỨNG NHẬN PHÙ HỢP (QUACERT)

GIẤY CHỨNG NHẬN

Chứng nhận Hệ thống Quản lý Chất lượng của

CÔNG TY CỔ PHẦN CƠ ĐIỆN TRẦN PHÚ - TRAFUCO

Trụ sở: Số 41, phố Phương Liệt, phường Phương Liệt, quận Thanh Xuân, Hà Nội, Việt Nam
Nhà máy Cáp đồng lực: Lô A2, khu công nghiệp Phúc Điền, xã Cẩm Phúc, huyện Cẩm Giàng, tỉnh Hải Dương, Việt Nam

đã được đánh giá và xác nhận phù hợp với yêu cầu của tiêu chuẩn

TCVN ISO 9001:2015 / ISO 9001:2015

Phạm vi được chứng nhận: Sản xuất, kinh doanh dây và cáp điện
Số Giấy chứng nhận: HT 538/5.17.19
Hiệu lực Giấy chứng nhận: từ ngày 14/11/2017 đến ngày 13/11/2020
Ngày chứng nhận lần đầu: 09/08/2003

TỔNG CỤC TRƯỞNG — ThS. Trần Văn Vinh
CHỦ TỊCH — TS. Phạm Hồng
GIÁM ĐỐC — ThS. Phạm Lê Cường

QUACERT – 8 Hoàng Quốc Việt, Cầu Giấy, Hà Nội, Việt Nam.
Hiệu lực của Giấy chứng nhận này có thể được kiểm tra tại www.quacert.gov.vn và www.jas-anz.org/register

DIRECTORATE FOR STANDARDS, METROLOGY AND QUALITY (STAMEQ)
VIETNAM CERTIFICATION CENTRE (QUACERT)

CERTIFICATE

This is to certify that the Quality Management System of

TRAN PHU ELECTRIC MECHANICAL JOINT STOCK COMPANY - TRAFUCO

Head Office: No 41, Phuong Liet Street, Phuong Liet Ward, Thanh Xuan District, Hanoi, Vietnam
Power Cable Factory: Lot A2, Phuc Dien Industrial Zone, Cam Phuc Commune, Cam Giang District, Hai Duong Province, Vietnam

has been assessed and found to conform with the requirements of the following standard

TCVN ISO 9001:2015 / ISO 9001:2015

Certification Scope: Manufacture, Trade of Electrical Wires and Cables
Certificate Number: HT 538/5.17.19
The validity of this Certificate: from 14 November 2017 to 13 November 2020
Original Certification: 09 August 2003

The Director General of STAMEQ — MSc. Tran Van Vinh
The Chairman of the Certification Board — Dr. Pham Hong
The Director of QUACERT — MSc. Pham Le Cuong

QUACERT – 8 Hoang Quoc Viet, Cau Giay, Hanoi, Vietnam.
The validity of this certificate can be checked at website: www.quacert.gov.vn and www.jas-anz.org/register

TỔNG CỤC TIÊU CHUẨN ĐO LƯỜNG CHẤT LƯỢNG
TRUNG TÂM KỸ THUẬT TIÊU CHUẨN ĐO LƯỜNG CHẤT LƯỢNG 1

DIRECTORATE FOR STANDARDS METROLOGY AND QUALITY
QUALITY ASSURANCE AND TESTING CENTER 1

GIẤY CHỨNG NHẬN PHÙ HỢP QUY CHUẨN KỸ THUẬT
CERTIFICATE OF CONFORMITY TO TECHNICAL REGULATION

Số/No: HQ.17-0387-00

Chứng nhận sản phẩm/this is to certify that:
Dây và cáp điện

Nhãn hiệu thương mại/trade mark: TRAFUCO - TRANPHU WIRE & CABLE

Loại/Style: Chi tiết theo danh mục

Kiểu/Model: Chi tiết theo danh mục

Được sản xuất tại/produced in:
CÔNG TY CỔ PHẦN CƠ ĐIỆN TRẦN PHÚ

Địa chỉ/address:
Số 41 phố Phương Liệt, phường Phương Liệt, quận Thanh Xuân, Hà Nội

Phù hợp với Quy chuẩn kỹ thuật quốc gia/conforms to:
SỬA ĐỔI 1:2016 QCVN 4:2009/BKHCN
VÀ ĐƯỢC PHÉP SỬ DỤNG DẤU HỢP QUY (CR)
and can bear technical regulation mark

Phương thức chứng nhận/system certify:
Phương thức 5
(Thông tư số 28/2012/TT-BKHCN ngày 12/12/2012 của Bộ Khoa học và Công nghệ)

Giấy chứng nhận và Dấu phù hợp quy chuẩn kỹ thuật có giá trị từ/this certificate and the mark is valid from 26/07/2017 đến/to 26/07/2020

GIÁM ĐỐC / Director
Kiều Đức Thụ

Quatest1 - Số 8, Đường Hoàng Quốc Việt, Quận Cầu Giấy, Hà Nội, Việt Nam - Tel: (84-4) 3.8361399, Fax: (84-4) 3.8361199

QUALITY CONTROL PASSED

PASSED QUALITY CONTROL TOP GTA GLOBAL trade alliance VERIFIED BY CCI

CHỨNG NHẬN
ĐÁNH GIÁ QUỐC TẾ ĐỘC LẬP
International Independent Assessment Certificate

minh chứng/ attests that:

CÔNG TY CỔ PHẦN CƠ ĐIỆN TRẦN PHÚ
Tran Phu Electric Mechanical Joint Stock Company

Số 41 phố Phương Liệt, phường Phương Liệt, quận Thanh Xuân, TP. Hà Nội, Việt Nam
No. 41 Phuong Liet street, Phương Liet ward, Thanh Xuan district, Ha Noi city, Vietnam

phù hợp với chuẩn mực QC : 2018
has been record assessed and comply with standard QC : 2018

QUALITY CONTROL - KIỂM SOÁT CHẤT LƯỢNG

nhóm ngành / for the following commodity group:

SẢN XUẤT DÂY VÀ CÁP ĐIỆN
Production of Electric Wires and Cables

Approval by: GLOBAL GTA trade alliance
Assessed by:
Issued at Vietnam by: INSTITUTE FOR ECONOMIC RESEARCH

VN-QC-002
Ngày cấp/ Date of Issue: 16/07/2018
Ngày hết hạn/ Date of Expiry: 16/07/2019
Mã công nhận/ Global GTA business code: 0100106063

Geoffrey Cox, QC., Director Project, Global GTA
Ngo Quang Bien Ph.D., Rector Institute for Economic Research

Please refer to https://www.globalgta.com/enterprise-/approved-business-code/
88 Wood Street, 11th floors, London, EC2V 7RS, United Kingdom, W: www.globalgta.com, E: helpdesk@globalgta.com

CUSTOMER SATISFACTION Excellence

Excellence CUSTOMER SATISFACTION TOP GLOBAL trade alliance VERIFIED BY CCI

CHỨNG NHẬN
ĐÁNH GIÁ QUỐC TẾ ĐỘC LẬP
International Independent Assessment Certificate

minh chứng/ attests that:

CÔNG TY CỔ PHẦN CƠ ĐIỆN TRẦN PHÚ
Tran Phu Electric Mechanical Joint Stock Company

Số 41 phố Phương Liệt, phường Phương Liệt, quận Thanh Xuân, TP. Hà Nội, Việt Nam
No. 41 Phuong Liet street, Phương Liet ward, Thanh Xuan district, Ha Noi city, Vietnam

doanh nghiệp xuất sắc phù hợp với chuẩn mực:
business excellence has been record assessed and comply with standard:

CHỈ SỐ HÀI LÒNG KHÁCH HÀNG - CSI:2018
Customer Satisfaction Index - CSI:2018

nhóm ngành / for the following commodity group:

SẢN XUẤT DÂY VÀ CÁP ĐIỆN
Production of Electric Wires and Cables

Approval by: GLOBAL GTA trade alliance
Geoffrey Cox, QC.,
Director Project, Global GTA

Assessed by: Assessment Certification International (Germany-EU)
VN-CSI-008
Ngày cấp/ Date of Issue: 16/07/2018
Ngày hết hạn/ Date of Expiry: 16/07/2019
Mã công nhận/ Global GTA business code: 0100106063

Issued at Vietnam by: INSTITUTE FOR ECONOMIC RESEARCH
Ngo Quang Bien Ph.D., Rector
Institute for Economic Research

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QUALITY SAFETY

Best Practice QUALITY + SAFETY TOP GLOBAL trade alliance VERIFIED BY CCI

CHỨNG NHẬN
ĐÁNH GIÁ QUỐC TẾ ĐỘC LẬP
International Independent Assessment Certificate

minh chứng/ attests that:

CÔNG TY CỔ PHẦN CƠ ĐIỆN TRẦN PHÚ
Tran Phu Electric Mechanical Joint Stock Company

Số 41 phố Phương Liệt, phường Phương Liệt, quận Thanh Xuân, TP. Hà Nội, Việt Nam
No. 41 Phuong Liet street, Phương Liet ward, Thanh Xuan district, Ha Noi city, Vietnam

phù hợp với chuẩn mực CCI : 2018
has been record assessed and comply with standard Consumer's Confidence Index 2018

QUALITY SAFETY - AN TOÀN CHẤT LƯỢNG

nhóm ngành / for the following commodity group:

SẢN XUẤT DÂY VÀ CÁP ĐIỆN
Production of Electric Wires and Cables

Approval by: GLOBAL GTA trade alliance
Geoffrey Cox, QC.,
Director Project, Global GTA

Assessed by: Assessment Certification International (Germany-EU)
VN-CCI-011
Ngày cấp/ Date of Issue: 16/07/2018
Ngày hết hạn/ Date of Expiry: 16/07/2019
Mã công nhận/ Global GTA business code: 0100106063

Issued at Vietnam by: INSTITUTE FOR ECONOMIC RESEARCH
Ngo Quang Bien Ph.D., Rector
Institute for Economic Research

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High Quality

High Quality SERVICE TOP GLOBAL trade alliance VERIFIED BY CCI

CHỨNG NHẬN
ĐÁNH GIÁ QUỐC TẾ ĐỘC LẬP
International Independent Assessment Certificate

minh chứng/ attests that:

CÔNG TY CỔ PHẦN CƠ ĐIỆN TRẦN PHÚ
Tran Phu Electric Mechanical Joint Stock Company

Số 41 phố Phương Liệt, phường Phương Liệt, quận Thanh Xuân, TP. Hà Nội, Việt Nam
No. 41 Phuong Liet street, Phương Liet ward, Thanh Xuan district, Ha Noi city, Vietnam

phù hợp với chuẩn mực chỉ số chất lượng dịch vụ QSI:2018
has been record assessed and comply with standard Quality Service Index 2018

DỊCH VỤ CHẤT LƯỢNG CAO - QSI:2018

nhóm ngành / for the following commodity group:

SẢN XUẤT DÂY VÀ CÁP ĐIỆN
Production of Electric Wires and Cables

Approval by: GLOBAL GTA trade alliance
Geoffrey Cox, QC.,
Director Project, Global GTA

Assessed by: Assessment Certification International (Germany-EU)
VN-QSI-004
Ngày cấp/ Date of Issue: 16/07/2018
Ngày hết hạn/ Date of Expiry: 16/07/2019
Mã công nhận/ Global GTA business code: 0100106063

Issued at Vietnam by: INSTITUTE FOR ECONOMIC RESEARCH
Ngo Quang Bien Ph.D., Rector
Institute for Economic Research

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ISO 9001

ISO/QMS 9001
QUALITY ASSURANCE SYSTEM

CHỨNG NHẬN
ĐÁNH GIÁ QUỐC TẾ ĐỘC LẬP
International Independent Assessment Certificate

minh chứng/ attests that:

CÔNG TY CỔ PHẦN CƠ ĐIỆN TRẦN PHÚ
Tran Phu Electric Mechanical Joint Stock Company

Số 41 phố Phương Liệt, phường Phương Liệt, quận Thanh Xuân, thành phố Hà Nội, Việt Nam
No. 41, Phuong Liet street, Phuong Liet ward, Thanh Xuan district, Ha Noi city, Vietnam

phù hợp với các yêu cầu của hệ thống QAS 2018
has been record assessed and comply with requirements of quality assurance system 2018

BẢO ĐẢM CHẤT LƯỢNG - QUALITY ASSURANCE

cho nhóm ngành hàng sau / for the following commodity group:

SẢN XUẤT DÂY VÀ CÁP ĐIỆN
PRODUCTION OF ELECTRIC WIRES AND CABLES

GLOBAL GTA trade alliance
Geoffrey Cox, QC.,
Director Project, Global GTA

VN-QAS-001-08/18
Ngày cấp/ Date of Issue: 16/08/2018
Ngày hết hạn/ Date of Expiry: 16/08/2019
Mã công nhận/ Global GTA business code: 0100106063

Ngo Quang Bien, Ph.D.,
Vice Chairman, APQ Union

ABA PACIFIC QUALITY

Please refer to http://www.globalgta.com/enterprise_(approved business code)
68 Wood Street, 11th floors, London, EC2V 7RS, United Kingdom, W. www.globalgta.com, E. help&desk@globalgta.com

Outstanding projects

- North-South 500KV transmission network
- Construction of Vietnam Airlines's Golden Lotus lounge & VIP lounge for Noi Bai Air Services JSC
- Construction of EVN Cua Bac Building - Hanoi project
- Construction of Ministry of Police's building
- Construction of Information Technology Division for General Strategic Advices - Ministry of National Defense - Xuan Dinh - Tu Liem - Hanoi
- Provincial community house, Nursing hospital, Coc Leu market, Lao Cai
- Headquarter of People's Council, People's Committee, Bac Can Provicne
- Trung Van urban area - Tu Liem - Hanoi
- Construction of several Muong Thanh hotels
- Construction of H2A + 2B residential buildings, Linh Dam
- Construction of Cienco 5 Thanh Ha - Ha Dong residential building
- Construction of working offices for Vinaconex 3

- Improvement and construction of Dong Da Secondary School - Hanoi
- Construction of Tam Coc Hotel - Ninh Binh
- Construction of Granit tiles factory - Thach Ban - Bac Giang
- Construction of Phuong Dong General Hospital - Phuc Dien - Tu Liem - Hanoi
- Construction of National Northern Reserves Division in Bac Thai region - Thai Nguyen city
- Construction of Thanh Hoa Audit Building
- Construction of lightnings for Dai Lai Golf Court - Vinh Phuc
- Construction of working offices for Division 25 (Directorate 2) My Dinh - Hanoi
- Construction of Military Forensic Institute - Yen Linh - Thanh Tri - Hanoi
- Construction of Centre for reserves and information technology development - BIDV Hung Yen
- Construction of Centre for Police training in crime investigation - Xuan Phuong - Tu Liem - Hanoi

Noi Bai Airport

Outstanding projects

Ministry of Police building

New Parliament Building

Thang Long Lexus Garage

Vincom Ba Trieu

Catalogue(*)

MAIN PRODUCTS

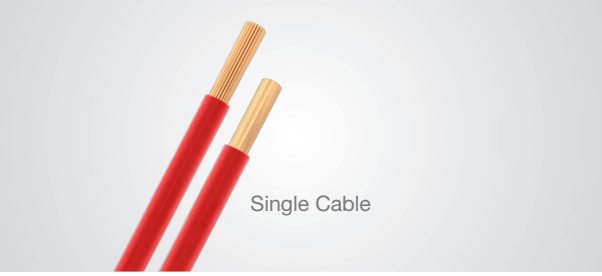
(*) Specifications in this catalog are subject to change without notice
All electrical wires and cables pictures in this catalogue are for illustrative purposes

”

In case you are looking for products which are not included in this documents, or having specific products requirements, kindly contact our Business Team!

Photo is for illustrative purposes

SINGLE CABLE, COPPER CONDUCTOR, PVC INSULATION



Technical characteristics

- Color of PVC:

Red
Blue
White
Yellow
Green-Yellow

Applied Standard: **TCVN 6610-3 (IEC 60227-3), TCVN 6612 (IEC 60228)**

Type - Nom. area	Rated voltage	Conductor		Nom. Insul. thickness	Approx. overall diameter (*)	Min. resistance of insulation at 70°C	Approx. weight of cable (*)
		Structure	Max. DC resis-tance at 20°C				
mm^2	V	No./mm	Ω/Km	mm	mm	MΩ.Km	Kg/Km
Flexible wire - Conductor level 5							
1x 0,75	300/500	24/0,20	26,0	0,6	2,4	0,011	11,9
1x1,0	300/500	32/0,20	19,5	0,6	2,6	0,010	14,7
1x1,5	450/750	30/0,25	13,3	0,7	3,0	0,010	21,0
1x2,5	450/750	50/0,25	7,98	0,8	3,7	0,009	33,0
1x4,0	450/750	80/0,25	4,95	0,8	4,2	0,007	48,5
1x6,0	450/750	120/0,25	3,30	0,8	4,8	0,006	68,2
1x10	450/750	200/0,25	1,91	1,0	6,4	0,0056	111
Solid wire - Conductor level 2							
1x1,5	450/750	7/0,52	12,1	0,7	3,0	0,010	20,7
1x2,5	450/750	7/0,67	7,41	0,8	3,6	0,009	32,6
1x4,0	450/750	7/0,85	4,61	0,8	4,2	0,009	48,1
1x6,0	450/750	7/1,04	3,08	0,8	4,7	0,0065	67,9
Solid wire - Conductor level 1							
1x 0,75	300/500	1/0,98	24,5	0,6	2,2	0,012	11,1
1x1,0	300/500	1/1,15	18,1	0,6	2,4	0,011	14,1
1x1,5	450/750	1/1,40	12,1	0,7	2,8	0,011	20,5
1x2,5	450/750	1/1,80	7,41	0,8	3,4	0,010	32,3
1x4,0	450/750	1/2,25	4,61	0,8	3,9	0,0085	46,7
1x6,0	450/750	1/2,75	3,08	0,8	4,4	0,0070	66,1

▶ (*) Reference value - This is an estimated value for design purposes, transportation and storage products. Not a value to evaluate the quality of the products

MULTICORE CABLE, COPPER CONDUCTOR, PVC INSULATED, PVC OVERSHEATH

Applied Standard: **TCVN 6610-5 (IEC 60227-5), TCVN 6612 (IEC 60228)**

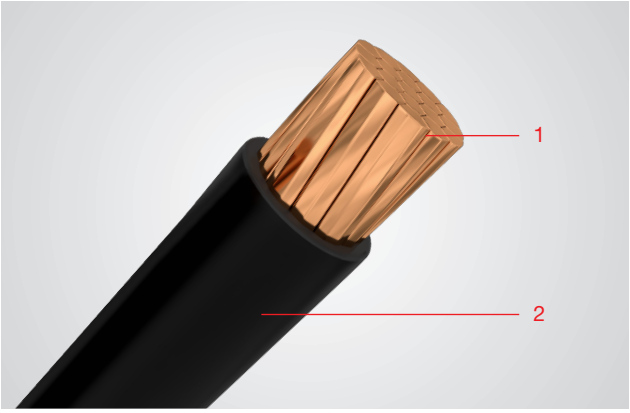
Type - Nom. area	Rated voltage	Conductor		Nom. Insul. thickness	Nom. Sheath thickness	Approx. overall dia. /dimensions (*)	Min. resistance of insulation at 700C	Approx. weight of cable
		Structure	Max. DC resistance at 20°C					
mm^2	V	No./mm	Ω/Km	mm	mm	mm	MΩ.Km	Kg/Km
VCm - D								
2x0,75	300/500	24/0,20	26,0	0,6	0,8	4,0x6,4	0,011	44,0
2x1,0	300/500	32/0,20	19,5	0,6	0,8	4,2x6,7	0,010	51,0
2x1,5	300/500	30/0,25	13,3	0,7	0,8	4,7x7,6	0,010	66,6
2x2,5	300/500	50/0,25	7,98	0,8	1,0	5,7x9,4	0,009	104
2x4,0	300/500	80/0,25	4,95	0,8	1,1	6,5x10,6	0,007	143
2x6,0	300/500	120/0,25	3,30	0,8	1,2	7,2x12,0	0,006	193
3x0,75	300/500	24/0,20	26,0	0,6	0,8	4,0x8,8	0,011	60,9
VCm - DK								
2x1,0	300/500	32/0,20	19,5	0,6	0,8	4,2x10,0	0,010	55,3
2x1,5	300/500	30/0,25	13,3	0,7	0,8	4,6x10,7	0,010	71,1
2x2,5	300/500	50/0,25	7,98	0,8	1,0	5,8x13,0	0,009	111
VCm - T								
3x1,5	300/500	30/0,25	13,3	0,7	0,9	8,7	0,010	94,5
3x2,5	300/500	50/0,25	7,98	0,8	1,1	10,5	0,009	146
4x1,5	300/500	30/0,25	13,3	0,7	1,0	9,7	0,010	123
4x2,5	300/500	50/0,25	7,98	0,8	1,1	11,5	0,009	183

Applied Standard: TCVN 6610-3 (IEC 60227-3), TCVN 6612 (IEC 60228)

Type - Nom. area	Rated voltage	Conductor		Nom. Insul. thickness	Approx. overall dia. /dimensions	Min. resistance of insulation at 70°C	Approx. weight of cable
		Structure	Max. DC resistance at 20°C				
mm^2	V	No./mm	Ω/Km	mm	mm	MΩ.Km	Kg/Km
VCm - X							
2x0,5	300/500	16/0,20	39,0	0,6	2,6x5,2	0,016	21,8
2x0,75	300/500	24/0,20	26,0	0,6	2,8x5,6	0,014	27,8

▶ (*) Reference value - This is an estimated value for design purposes, transportation and storage products. Not a value to evaluate the quality of the products

LOW VOLTAGE CABLE - COPPER CONDUCTOR, PVC INSULATION (CV - 0,6/1kV)



Technical characteristics

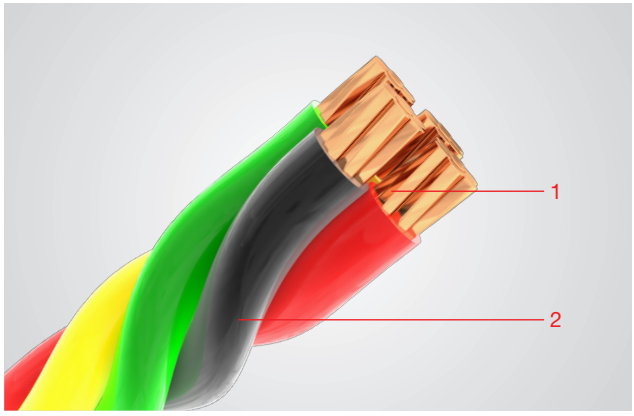
- Structure:
  + 1: Copper conductor
  + 2: PVC Insulation
- Rated voltage) U_0/U: 0,6/1 kV
- Maximum conductor temperature for normal operation: 70^{0}C
- Maximum conductor temperature for short-circuit (5s maximum duration):
  + 160^{0}C with nominal area up to 300mm^2
  + 140^{0}C with nominal area larger than 300mm^2

Applied Standard: **TCVN 5935-1 (IEC 60502-1), TCVN 6612 (IEC 60228)**

Conductor				Nom. Insul. thickness	Approx. overall Diameter (*)	Approx. weight (*)
Nominal cross sectional area	Form of conductor	Approx. diameter (*)	Max. DC resistance at 20^{0}C			
mm^2	-	mm	Ohm/Km	mm	mm	Kg/Km
1,5	N.C	1,56	12,10	0,8	3,2	23
2,5	N.C	2,01	7,41	0,8	3,6	33
4	N.C	2,55	4,61	1,0	4,6	53
6	N.C	3,12	3,08	1,0	5,1	74
10	C.C	3,8	1,83	1,0	5,8	110
16	C.C	4,9	1,15	1,0	6,9	167
25	C.C	6,2	0,727	1,2	8,6	265
35	C.C	7,1	0,524	1,2	9,5	351
50	C.C	8,6	0,387	1,4	11,4	513
70	C.C	10,1	0,268	1,4	12,9	679
95	C.C	11,7	0,193	1,6	14,9	924
120	C.C	13,1	0,153	1,6	16,3	1.129
150	C.C	14,6	0,124	1,8	18,2	1.417
185	C.C	16,3	0,0991	2,0	20,3	1.774
240	C.C	18,3	0,0754	2,2	22,7	2.223
300	C.C	20,8	0,0601	2,4	25,6	2.901

- (*): Reference value - This is an estimated value for design purposes, transportation and storage products. Not a value to evaluate the quality of the products
- N.C: Non-compacted Copper Conductor
  C.C: Compacted Copper Conductor

LOW VOLTAGE CABLE - MULTIPLEX CABLE, COPPER CONDUCTOR, PVC INSULATION (CuD - 0,6/1kV)



Technical characteristics

- Structure:
  + 1: Copper conductor
  + 2: PVC Insulation
- Rated voltage U_0/U: 0,6/1 kV
- Maximum conductor temperature for normal operation: 70^{0}C
- Maximum conductor temperature for short-circuit (5s maximum duration):
  + 160^{0}C with nominal area up to 300mm^2
  + 140^{0}C with nominal area larger than 300mm^2

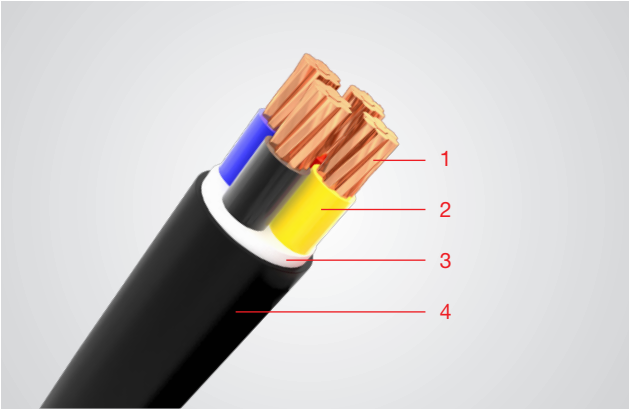
Applied Standard: **TCVN 5935-1 (IEC 60502-1), TCVN 6612 (IEC 60228)**

Conductor				Insul. thickness	Approx. overall diameter of cable		Approx. weight of cable (*)	
Nominal cross sectional area	Form of conductor	Approx. diameter	Max. DC resistance at 20^{0}C		DUPLEX Cable (2 cores)	QUADRUPLEX Cable (4 cores)	DUPLEX Cable (2 cores)	QUADRUPLEX Cable (4 cores)
mm^2	No/mm	mm	Ohm/Km	mm	mm		Kg/Km	
6	N.C	3,12	3,08	1,0	10,2	12,4	152	304
10	C.C	3,8	1,83	1,0	11,6	14,0	219	439
16	C.C	4,9	1,15	1,0	13,8	16,7	331	661
25	C.C	6,2	0,727	1,2	17,2	20,8	518	1.036
35	C.C	7,1	0,524	1,2	19,0	23,0	698	1.396
50	C.C	8,6	0,387	1,4	22,8	27,6	944	1.889

▶ (*): Reference value - This is an estimated value for design purposes, transportation and storage products. Not a value to evaluate the quality of the products

▶ N.C: Non-compacted Copper Conductor
C.C: Compacted Copper Conductor

LOW VOLTAGE CABLE - COPPER CONDUCTOR, PVC INSULATION, PVC OVERSHEATH (CVV - 0,6/1kV)



Technical characteristics

- Structure:
  + 1: Copper conductor
  + 2: PVC Insulation
  + 3: Filler
  + 4: PVC Oversheath
- Rated voltage U_0/U: 0,6/1 kV
- Maximum conductor temperature for normal operation: 70^{0}C
- Maximum conductor temperature for short-circuit (5s maximum duration):
  + 160^{0}C with nominal area up to 300mm^2
  + 140^{0}C with nominal area larger than 300mm^2

Applied Standard: **TCVN 5935-1 (IEC 60502-1), TCVN 6612 (IEC 60228)**

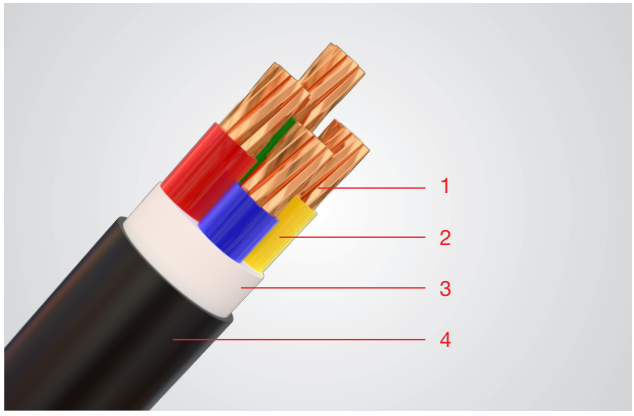
1 to 4 core cable																
Conductor				Nom. Insul. thick-ness	Nom. Sheath thickness				Approx. overall dia. of cable (*)				Approx. weight of cable (*)			
Nom. area	Form of conductor	Approx. diameter (*)	Max. RDC at 20^{0}C		1C	2C	3C	4C	1C	2C	3C	4C	1C	2C	3C	4C
mm^2	-	mm	Ω/Km	mm	mm				mm				Kg/Km			
1,5	N.C	1,56	12,10	0,8	1,4	1,8	1,8	1,8	6,0	9,9	10,8	11,6	55	143	160	191
2,5	N.C	2,01	7,41	0,8	1,4	1,8	1,8	1,8	6,4	10,8	11,8	12,7	68	179	202	245
4	N.C	2,55	4,61	1,0	1,4	1,8	1,8	1,8	7,4	12,7	13,8	15,0	95	255	286	352
6	N.C	3,12	3,08	1,0	1,4	1,8	1,8	1,8	7,9	13,8	15,1	16,4	119	319	362	450
10	C.C	3,8	1,83	1,0	1,4	1,8	1,8	1,8	8,7	15,4	16,7	18,2	161	425	493	620
16	C.C	4,9	1,15	1,0	1,4	1,8	1,8	1,8	9,8	17,5	19,0	20,8	226	592	696	885
25	C.C	6,2	0,727	1,2	1,4	1,8	1,8	1,8	11,5	21,3	22,7	24,9	336	771	1.042	1.335
35	C.C	7,1	0,524	1,2	1,4	1,8	1,8	1,8	12,4	23,2	24,7	27,2	428	972	1.328	1.711
50	C.C	8,6	0,387	1,4	1,4	1,8	1,8	1,9	14,3	27,0	28,8	32,0	603	1.362	1.879	2.448
70	C.C	10,1	0,268	1,4	1,4	1,9	1,9	2,0	15,8	30,2	32,3	35,9	780	1.765	2.447	3.191
95	C.C	11,7	0,193	1,6	1,5	2,0	2,1	2,2	18,0	34,4	37,0	41,1	1.047	2.352	3.297	4.301
120	C.C	13,1	0,153	1,6	1,5	2,1	2,2	2,3	19,4	37,4	40,2	44,7	1.263	2.844	3.992	5.216
150	C.C	14,6	0,124	1,8	1,6	2,2	2,3	2,5	21,5	41,4	44,5	49,7	1.575	3.531	4.969	6.521
185	C.C	16,3	0,0991	2,0	1,7	2,4	2,5	2,6	23,8	45,9	49,4	54,8	1.961	4.398	6.194	8.098
240	C.C	18,3	0,0754	2,2	1,8	2,5	2,7	2,9	26,4	50,9	54,9	61,3	2.442	5.458	7.729	10.138
300	C.C	20,8	0,0601	2,4	1,9	2,7	2,8	3,1	29,5	57,1	61,4	68,7	3.161	7.051	9.969	13.125

Applied Standard: **TCVN 5935-1 (IEC 60502-1), TCVN 6612 (IEC 60228)**

3 phases + 1 neutral cable													
Nom. area	Phase core					Neutral core					Nom. Sheath thick-ness	Approx. overall dia. of cable (*)	Approx. weight of cable (*)
	Nom. area of conduc-tor	Form of conduc-tor	Approx. diameter of conductor (*)	Nom. Insul. thick-ness	Max. RDC at 20°C	Nom. area of con-ductor	Form of con-ductor	Approx. diam-eter of conduc-tor (*)	Nom. Insul. thick-ness	Max. RDC at 20°C			
-	mm²	-	mm	mm	Ω/Km	mm²	-	mm	mm	Ω/Km	mm	mm	Kg/Km
3x4+1x2,5	4	N.C	2,55	1,0	4,61	2,5	N.C	2,01	0,8	7,41	1,8	14,4	325
3x6+1x4	6	N.C	3,12	1,0	3,08	4	N.C	2,55	1,0	4,61	1,8	16,0	426
3x10+1x6	10	C.C	3,8	1,0	1,83	6	N.C	3,12	1,0	3,08	1,8	17,8	578
3x16+1x10	16	C.C	4,9	1,0	1,15	10	C.C	3,8	1,0	1,83	1,8	20,2	818
3x25+1x16	25	C.C	6,2	1,2	0,727	16	C.C	4,9	1,0	1,15	1,8	23,9	1.221
3x35+1x16	35	C.C	7,1	1,2	0,524	16	C.C	4,9	1,0	1,15	1,8	25,6	1.501
3x50+1x25	50	C.C	8,6	1,4	0,387	25	C.C	6,2	1,2	0,727	1,9	30,3	2.170
3x50+1x35	50	C.C	8,6	1,4	0,387	35	C.C	7,1	1,2	0,524	1,9	30,9	2.266
3x70+1x35	70	C.C	10,1	1,4	0,268	35	C.C	7,1	1,2	0,524	2,0	33,8	2.824
3x70+1x50	70	C.C	10,1	1,4	0,268	50	C.C	8,6	1,4	0,387	2,0	35,0	3.009
3x95+1x50	95	C.C	11,7	1,6	0,193	50	C.C	8,6	1,4	0,387	2,1	38,8	3.827
3x95+1x70	95	C.C	11,7	1,6	0,193	70	C.C	10,1	1,4	0,268	2,2	39,9	4.031
3x120+1x70	120	C.C	13,1	1,6	0,153	70	C.C	10,1	1,4	0,268	2,2	42,4	4.697
3x150+1x95	150	C.C	14,6	1,8	0,124	95	C.C	11,7	1,6	0,193	2,4	47,5	5.953
3x185+1x95	185	C.C	16,3	2,0	0,0991	95	C.C	11,7	1,6	0,193	2,5	51,4	7.134
3x185+1x120	185	C.C	16,3	2,0	0,0991	120	C.C	13,1	1,6	0,153	2,6	52,5	7.388
3x240+1x120	240	C.C	18,3	2,2	0,0754	120	C.C	13,1	1,6	0,153	2,7	57,0	8.868
3x240+1x150	240	C.C	18,3	2,2	0,0754	150	C.C	14,6	1,8	0,124	2,8	58,4	9.221
3x300+1x150	300	C.C	20,8	2,4	0,0601	150	C.C	14,6	1,8	0,124	2,9	63,8	11.426
3x300+1x185	300	C.C	20,8	2,4	0,0601	185	C.C	16,3	2,0	0,0991	3,0	65,3	11.858

- (*): Reference value - This is an estimated value for design purposes, transportation and storage products. Not a value to evaluate the quality of the products
- N.C: Non-compacted Copper Conductor
  C.C: Compacted Copper Conductor

LOW VOLTAGE CABLE - COPPER CONDUCTOR, XLPE INSULATION, PVC OVERSHEATH (CXV - 0,6/1kV)



Technical characteristics

- Structure:
  - + 1: Soft copper conductor
  - + 2: XLPE(a) Insulation
  - + 3: Filler
  - + 4: PVC Oversheath
- Rated voltage U_0/U: 0,6/1 kV
- Maximum conductor temperature for normal operation: 90°C
- Maximum conductor temperature for short-circuit (5s maximum duration) : 250°C

Applied Standard: **TCVN 5935-1 (IEC 60502-1), TCVN 6612 (IEC 60228)**

Conductor				Nom. Insul. thickness	Nom. Sheath thickness				Approx. overall dia. of cable (*)				Approx. weight of cable (*)			
Nom. area	Form of con-ductor	Approx. diameter	Max. RDC at 20°C		1C	2C	3C	4C	1C	2C	3C	4C	1C	2C	3C	4C
mm²	-	mm	Ω/Km	mm	mm				mm				Kg/Km			
1,5	N.C	1,56	12,10	0,7	1,4	1,8	1,8	1,8	5,8	9,5	10,4	11,2	49	128	141	171
2,5	N.C	2,01	7,41	0,7	1,4	1,8	1,8	1,8	6,2	10,4	11,4	12,3	62	162	181	223
4	N.C	2,55	4,61	0,7	1,4	1,8	1,8	1,8	6,8	11,5	12,5	13,6	80	210	239	297
6	N.C	3,12	3,08	0,7	1,4	1,8	1,8	1,8	7,3	12,6	13,8	14,9	103	269	310	391
10	C.C	3,8	1,83	0,7	1,4	1,8	1,8	1,8	8,1	14,2	15,4	16,8	143	370	434	554
16	C.C	4,9	1,15	0,7	1,4	1,8	1,8	1,8	9,2	16,3	17,7	19,4	205	527	627	810
25	C.C	6,2	0,727	0,9	1,4	1,8	1,8	1,8	10,9	20,1	21,4	23,5	307	703	950	1.238
35	C.C	7,1	0,524	0,9	1,4	1,8	1,8	1,8	11,8	22,0	23,4	25,8	397	898	1.227	1.607
50	C.C	8,6	0,387	1,0	1,4	1,8	1,8	1,8	13,5	25,4	27,1	29,9	558	1.253	1.731	2.278
70	C.C	10,1	0,268	1,1	1,4	1,8	1,9	2,0	15,2	28,8	31,0	34,4	734	1.643	2.300	3.050
95	C.C	11,7	0,193	1,1	1,5	1,9	2,0	2,1	17,0	32,2	34,6	38,5	978	2.170	3.050	4.052
120	C.C	13,1	0,153	1,2	1,5	2,0	2,1	2,3	18,6	35,6	38,3	42,8	1.193	2.660	3.746	5.000
150	C.C	14,6	0,124	1,4	1,6	2,2	2,3	2,4	20,7	39,8	42,8	47,6	1.492	3.336	4.698	6.243
185	C.C	16,3	0,0991	1,6	1,6	2,3	2,4	2,6	22,8	44,1	47,4	52,9	1.850	4.146	5.848	7.805
240	C.C	18,3	0,0754	1,7	1,7	2,5	2,6	2,8	25,2	48,9	52,6	58,6	2.304	5.163	7.288	9.725
300	C.C	20,8	0,0601	1,8	1,8	2,6	2,7	3,0	28,1	54,5	58,6	65,6	2.985	6.642	9.414	12.600

▶ (*): Reference value - This is an estimated value for design purposes, transportation and storage products.
Not a value to evaluate the quality of the products
(a): Color tape or color XLPE

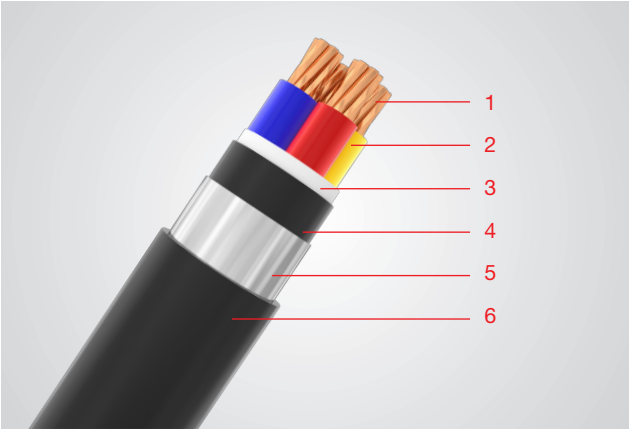
▶ N.C: Non-compacted Copper Conductor
C.C: Compacted Copper Conductor

Applied Standard: **TCVN 5935-1 (IEC 60502-1), TCVN 6612 (IEC 60228)**

3 phases + 1 neutral cable													
Nom. area	Phase core					Neutral core					Nom. Sheath thick-ness	Approx. overall dia. of cable (*)	Approx. weight of cable (*)
	Nom. area of con-ductor	Form of con-ductor	Approx. diameter of con-ductor	Nom. Insul. thick-ness	Max. RDC at 20°C	Nom. area of conduc-tor	Form of con-ductor	Approx. diameter of con-ductor	Nom. Insul. thickness	Max. RDC at 20°C			
-	mm^2	-	mm	mm	Ω/Km	mm^2	-	mm	mm	Ω/Km	mm	mm	Kg/Km
3x4+1x2,5	4	N.C	2,55	0,7	4,61	2,5	N.C	2,01	0,7	7,41	1,8	13,2	280
3x6+1x4	6	N.C	3,12	0,7	3,08	4	N.C	2,55	0,7	4,61	1,8	14,6	353
3x10+1x6	10	C.C	3,8	0,7	1,83	6	N.C	3,12	0,7	3,08	1,8	16,3	512
3x16+1x10	16	C.C	4,9	0,7	1,15	10	C.C	3,8	0,7	1,83	1,8	18,7	724
3x25+1x16	25	C.C	6,2	0,9	0,727	16	C.C	4,9	0,7	1,15	1,8	22,5	1.120
3x35+1x16	35	C.C	7,1	0,9	0,524	16	C.C	4,9	0,7	1,15	1,8	24,2	1.391
3x50+1x25	50	C.C	8,6	1,0	0,387	25	C.C	6,2	0,9	0,727	1,8	28,3	1.992
3x50+1x35	50	C.C	8,6	1,0	0,387	35	C.C	7,1	0,9	0,524	1,8	28,9	2.085
3x70+1x35	70	C.C	10,1	1,1	0,268	35	C.C	7,1	0,9	0,524	1,9	32,2	2.639
3x70+1x50	70	C.C	10,1	1,1	0,268	50	C.C	8,6	1,0	0,387	1,9	33,2	2.809
3x95+1x50	95	C.C	11,7	1,1	0,193	50	C.C	8,6	1,0	0,387	2,1	36,5	3.583
3x95+1x70	95	C.C	11,7	1,1	0,193	70	C.C	10,1	1,1	0,268	2,1	37,5	3.769
3x120+1x70	120	C.C	13,1	1,2	0,153	70	C.C	10,1	1,1	0,268	2,2	40,6	4.455
3x150+1x95	150	C.C	14,6	1,4	0,124	95	C.C	11,7	1,1	0,193	2,3	45,2	5.617
3x185+1x95	185	C.C	16,3	1,6	0,0991	95	C.C	11,7	1,1	0,193	2,5	49,4	6.768
3x185+1x120	185	C.C	16,3	1,6	0,0991	120	C.C	13,1	1,2	0,153	2,5	50,3	6.998
3x240+1x120	240	C.C	18,3	1,7	0,0754	120	C.C	13,1	1,2	0,153	2,6	54,5	8.387
3x240+1x150	240	C.C	18,3	1,7	0,0754	150	C.C	14,6	1,4	0,124	2,7	55,9	8.722
3x300+1x150	300	C.C	20,8	1,8	0,0601	150	C.C	14,6	1,4	0,124	2,8	61,0	10.815
3x300+1x185	300	C.C	20,8	1,8	0,0601	185	C.C	16,3	1,6	0,0991	2,9	62,4	11.227

- (*): Reference value - This is an estimated value for design purposes, transportation and storage products. Not a value to evaluate the quality of the products
- N.C: Non-compacted Copper Conductor
  C.C: Compacted Copper Conductor

LOW VOLTAGE CABLE - COPPER CONDUCTOR, XLPE INSULATION, METALLIC TAPE ARMOUR, PVC OVERSHEATH (CXV/DATA - 0,6/1kV & CXV/DSTA - 0,6/1kV)



Technical characteristics

- Structure:
  - + 1: Soft copper conductor
  - + 2: XLPE(a) Insulation
  - + 3: Filler
  - + 4: PVC Inner sheath
  - + 5: Aluminum tape armouring for single core
    Steal tape armouring for 2 to 4 cores
  - + 6: PVC Oversheath
- Rated voltage U_0/U: 0,6/1 kV
- Maximum conductor temperature for normal operation: 90^0C
- Maximum conductor temperature for short-circuit (5s maximum duration) : 250^0C

Applied Standard: **TCVN 5935-1 (IEC 60502-1), TCVN 6612 (IEC 60228)**

1 core cable with aluminium tape amour (DATA); 2 to 4 core cable with steel tape amour (DSTA)																								
Conductor				Nom. Insul. thick-ness	Nom. Inner Sheath thickness				Nom. Thickness of amour tape				Nom. Sheath thickness				Approx. overall dia. of cable (*)				Approx. weight of cable (*)			
Nom. area	Form of con-ductor	Approx. diamete (*)	Max. RDC at 20°C		1C	2C	3C	4C	1C	2C	3C	4C	1C	2C	3C	4C	1C	2C	3C	4C	1C	2C	3C	4C
mm^2	-	mm	Ω/Km	mm	mm				mm				mm				mm				Kg/Km			
2,5	N.C	2,01	7,41	0,7	1,0	1,0	1,0	1,0	0,50	0,2	0,2	0,2	1,4	1,8	1,8	1,8	10,2	13,2	14,2	15,1	129	292	324	372
4	N.C	2,55	4,61	0,7	1,0	1,0	1,0	1,0	0,50	0,2	0,2	0,2	1,4	1,8	1,8	1,8	10,8	14,3	15,3	16,4	150	352	395	461
6	N.C	3,12	3,08	0,7	1,0	1,0	1,0	1,0	0,50	0,2	0,2	0,2	1,4	1,8	1,8	1,8	11,3	15,4	16,6	17,7	177	448	481	569
10	C.C	3,8	1,83	0,7	1,0	1,0	1,0	1,0	0,50	0,2	0,2	0,2	1,4	1,8	1,8	1,8	12,1	17,0	18,2	19,6	221	543	625	752
16	C.C	4,9	1,15	0,7	1,0	1,0	1,0	1,0	0,50	0,2	0,2	0,2	1,4	1,8	1,8	1,8	13,2	19,1	20,5	22,2	289	726	846	1.035
25	C.C	6,2	0,727	0,9	1,0	1,0	1,0	1,0	0,50	0,2	0,2	0,2	1,4	1,8	1,8	1,8	14,9	22,9	24,2	26,3	402	951	1.213	1.505
35	C.C	7,1	0,524	0,9	1,0	1,0	1,0	1,0	0,50	0,2	0,2	0,2	1,4	1,8	1,8	1,8	15,8	24,8	26,2	28,6	497	1.168	1.515	1.896
50	C.C	8,6	0,387	1,0	1,0	1,0	1,0	1,0	0,50	0,2	0,2	0,2	1,4	1,8	1,8	1,9	17,5	28,2	29,9	32,9	668	1.564	2.062	2.622
70	C.C	10,1	0,268	1,1	1,0	1,0	1,2	1,2	0,50	0,2	0,2	0,2	1,5	1,9	1,9	2,0	19,4	31,8	34,2	37,6	864	2.012	2.713	3.456
95	C.C	11,7	0,193	1,1	1,0	1,2	1,2	1,2	0,50	0,2	0,2	0,5	1,6	2,0	2,1	2,2	21,2	35,6	38,0	43,1	1.120	2.616	3.530	4.931
120	C.C	13,1	0,153	1,2	1,0	1,2	1,2	1,4	0,50	0,5	0,5	0,5	1,6	2,1	2,2	2,4	22,8	40,2	42,9	47,8	1.346	3.539	4.685	6.013
150	C.C	14,6	0,124	1,4	1,0	1,2	1,4	1,4	0,50	0,5	0,5	0,5	1,7	2,3	2,4	2,5	24,9	44,4	47,8	52,6	1.660	4.311	5.794	7.356
185	C.C	16,3	0,0991	1,6	1,0	1,4	1,4	1,4	0,50	0,5	0,5	0,5	1,7	2,4	2,5	2,7	27,0	49,1	52,4	57,9	2.031	5.275	7.060	9.022
240	C.C	18,3	0,0754	1,7	1,0	1,4	1,6	1,6	0,50	0,5	0,5	0,5	1,8	2,6	2,7	2,9	29,4	53,9	58,0	64,0	2.500	6.407	8.688	11.121
300	C.C	20,8	0,0601	1,8	1,0	1,6	1,6	1,6	0,50	0,5	0,5	0,5	1,9	2,7	2,9	3,1	32,3	59,9	64,2	71,0	3.202	8.092	10.999	14.129

▶ (*): Reference value - This is an estimated value for design purposes, transportation and storage products.
Not a value to evaluate the quality of the products
(a): Color tape or color XLPE

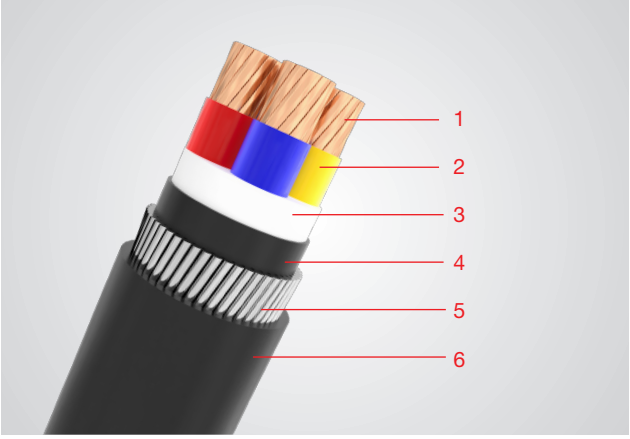
▶ N.C: Non-compacted Copper Conductor
C.C: Compacted Copper Conductor

Applied Standard: **TCVN 5935-1 (IEC 60502-1), TCVN 6612 (IEC 60228)**

3 phases + 1 neutral cable with steel tape amour (DSTA)															
Nom. area	Phase core					Neutral core					Nom. Inner Sheath thickness	Nom. Thickness of amour tape	Nom. Sheath thickness	Approx. overall dia. of cable (*)	Approx. weight of cable (*)
	Nom. area of conduc-tor	Form of conduc-tor	Approx. diameter of conductor (*)	Nom. Insul. thickness	Max. RDC at 20°C	Nom. area of conduc-tor	Form of conduc-tor	Approx. diameter of con-ductor (*)	Nom. Insul. thick-ness	Max. RDC at 20°C					
-	mm^2	-	mm	mm	Ω/Km	mm^2	-	mm	mm	Ω/Km	mm	mm	mm	mm	Kg/Km
3x4+1x2,5	4	N.C	2,55	0,7	4,61	2,5	N.C	2,01	0,7	7,41	1,0	0,2	1,8	15,7	439
3x6+1x4	6	N.C	3,12	0,7	3,08	4	N.C	2,55	0,7	4,61	1,0	0,2	1,8	17,4	542
3x10+1x6	10	C.C	3,8	0,7	1,83	6	N.C	3,12	0,7	3,08	1,0	0,2	1,8	18,9	706
3x16+1x10	16	C.C	4,9	0,7	1,15	10	C.C	3,8	0,7	1,83	1,0	0,2	1,8	21,5	964
3x25+1x16	25	C.C	6,2	0,9	0,727	16	C.C	4,9	0,7	1,15	1,0	0,2	1,8	25,3	1.386
3x35+1x16	35	C.C	7,1	0,9	0,524	16	C.C	4,9	0,7	1,15	1,0	0,2	1,8	27,0	1.678
3x50+1x25	50	C.C	8,6	1,0	0,387	25	C.C	6,2	0,9	0,727	1,0	0,2	1,8	31,1	2.327
3x50+1x35	50	C.C	8,6	1,0	0,387	35	C.C	7,1	0,9	0,524	1,0	0,2	1,9	31,9	2.443
3x70+1x35	70	C.C	10,1	1,1	0,268	35	C.C	7,1	0,9	0,524	1,2	0,2	2,0	35,6	3.076
3x70+1x50	70	C.C	10,1	1,1	0,268	50	C.C	8,6	1,0	0,387	1,2	0,2	2,0	36,6	3.259
3x95+1x50	95	C.C	11,7	1,1	0,193	50	C.C	8,6	1,0	0,387	1,2	0,5	2,1	40,9	4.434
3x95+1x70	95	C.C	11,7	1,1	0,193	70	C.C	10,1	1,1	0,268	1,2	0,5	2,2	42,1	4.664
3x120+1x70	120	C.C	13,1	1,2	0,153	70	C.C	10,1	1,1	0,268	1,2	0,5	2,3	45,2	5.422
3x150+1x95	150	C.C	14,6	1,4	0,124	95	C.C	11,7	1,1	0,193	1,4	0,5	2,4	50,2	6.747
3x185+1x95	185	C.C	16,3	1,6	0,0991	95	C.C	11,7	1,1	0,193	1,4	0,5	2,6	54,4	7.999
3x185+1x120	185	C.C	16,3	1,6	0,0991	120	C.C	13,1	1,2	0,153	1,4	0,5	2,6	55,3	8.253
3x240+1x120	240	C.C	18,3	1,7	0,0754	120	C.C	13,1	1,2	0,153	1,6	0,5	2,8	60,1	9.842
3x240+1x150	240	C.C	18,3	1,7	0,0754	150	C.C	14,6	1,4	0,124	1,6	0,5	2,8	61,3	10.182
3x300+1x150	300	C.C	20,8	1,8	0,0601	150	C.C	14,6	1,4	0,124	1,6	0,5	2,9	66,4	12.405
3x300+1x185	300	C.C	20,8	1,8	0,0601	185	C.C	16,3	1,6	0,0991	1,6	0,5	3,0	67,8	12.853

- (*): Reference value - This is an estimated value for design purposes, transportation and storage products. Not a value to evaluate the quality of the products
- N.C: Non-compacted Copper Conductor
  C.C: Compacted Copper Conductor

LOW VOLTAGE CABLE - COPPER CONDUCTOR, XLPE INSULATION, GALVANIZED STEEL WIRE ARMOUR, PVC OVERSHEATH (CXV/SWA - 0,6/1kV)



Technical characteristics

- Structure:
  - + 1: Soft copper conductor
  - + 2: XLPE(a) Insulation
  - + 3: Filler
  - + 4: PVC Inner sheath
  - + 5: Galvanized steel wire armour
  - + 6: PVC Oversheath
- Rated voltage U_0/U: 0,6/1 kV
- Maximum conductor temperature for normal operation: 90^{0}C
- Maximum conductor temperature for short-circuit (5s maximum duration) : 250^{0}C

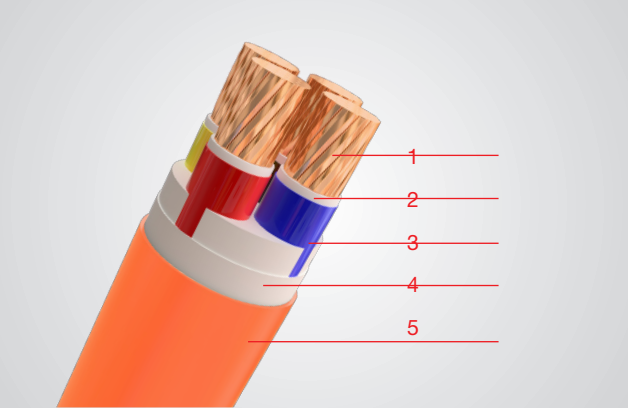
Applied Standard: **TCVN 5935-1 (IEC 60502-1), TCVN 6612 (IEC 60228)**

Conductor				Nom. Insul. thick-ness	Nom. Inner Sheath thickness			Nom. diameter of amour wire			Nom. Sheath thickness			Approx. overall dia. of cable (*)			Approx. weight of cable (*)		
Nom. area	Form of conductor	Approx. diameter (*)	Max. RDC at 20^{0}C		2C	3C	4C	2C	3C	4C	2C	3C	4C	2C	3C	4C	2C	3C	4C
mm^2	-	mm	Ω/Km	mm	mm			mm			mm			mm			Kg/Km		
4	N.C	2,55	4,61	0,7	1,0	1,0	1,0	0,8	1,25	1,25	1,8	1,8	1,8	16,5	18,0	19,0	455	630	710
6	N.C	3,12	3,08	0,7	1,0	1,0	1,0	1,25	1,25	1,25	1,8	1,8	1,8	18,5	19,0	20,5	650	740	850
10	N.C	4,05	1,83	0,7	1,0	1,0	1,0	1,25	1,25	1,25	1,8	1,8	1,8	20,5	21,0	22,5	810	940	1.095
16	N.C	5,10	1,15	0,7	1,0	1,0	1,0	1,25	1,6	1,6	1,8	1,8	1,8	22,5	24,0	26,0	1.015	1.345	1.580
25	N.C	6,42	0,727	0,9	1,0	1,0	1,0	1,6	1,6	1,6	1,8	1,8	1,8	26,5	28,0	30,0	1.495	1.790	2.140
35	N.C	7,56	0,524	0,9	1,0	1,0	1,0	1,6	1,6	1,6	1,8	1,9	1,9	29,0	30,5	33,0	1.795	2.210	2.675
50	C.C	8,1	0,387	1,0	1,0	1,0	1,0	1,6	1,6	2,0	1,9	1,9	2,1	30,5	32,0	36,5	2.115	2.630	3.545
70	C.C	9,8	0,268	1,1	1,0	1,2	1,2	2,0	2,0	2,0	2,0	2,1	2,2	35,5	38,0	41,0	2.945	3.755	4.580
95	C.C	11,4	0,193	1,1	1,2	1,2	1,2	2,0	2,0	2,5	2,1	2,2	2,4	39,0	41,5	47,0	3.710	4.710	6.245
120	C.C	12,9	0,153	1,2	1,2	1,2	1,4	2,0	2,0	2,5	2,3	2,3	2,6	43,0	45,5	52,0	4.435	5.640	7.610
150	C.C	14,4	0,124	1,4	1,2	1,4	1,4	2,5	2,5	2,5	2,4	2,5	2,7	48,5	51,5	56,5	5.650	7.270	9.010
185	C.C	15,9	0,0991	1,6	1,4	1,4	1,4	2,5	2,5	2,5	2,6	2,7	2,9	53,0	56,0	62,0	6.760	8.690	10.895
240	C.C	18,4	0,0754	1,7	1,4	1,6	1,6	2,5	2,5	2,5	2,7	2,9	3,1	58,5	63,0	69,0	8.325	10.870	13.635
300	C.C	20,5	0,0601	1,8	1,6	1,6	1,6	2,5	2,5	3,15	2,9	3,0	3,3	64,0	68,0	76,5	9.980	13.010	17.365

▶ (*): Reference value - This is an estimated value for design purposes, transportation and storage products. Not a value to evaluate the quality of the products
(a): Color tape or color XLPE

▶ N.C: Non-compacted Copper Conductor
C.C: Compacted Copper Conductor

LOW VOLTAGE CABLE - FIRE RESISTANT CABLE, COPPER CONDUCTOR, MICA TAPE, XLPE INSULATION, FR-PVC OVERSHEATH (CXV/FR - 0,6/1kV)



Technical characteristics

- Structure:
  - + 1: Soft copper conductor
  - + 2: Mica tape
  - + 3: XLPE(a) Insulation
  - + 4: Filler
  - + 5: FR-PVC Oversheath
- Rated voltage U_0/U: 0,6/1 kV
- Maximum conductor temperature for normal operation: 90°C
- Maximum conductor temperature for short-circuit (5s maximum duration) : 250°C
- Cables are subjected to fire at 950°C for 3 hours
- The fire resistant cables have a significant reduced tendency to propagate fire. The cables must self-extinguish after removing the fire source.

Applied Standard: TCVN 5935-1 (IEC 60502-1), TCVN 6612 (IEC 60228), IEC 60331-21 / BS 6387, IEC 60332-1 / BS 4066-1, IEC 60332-3 / BS 4066-3

1 to 4 core cable																
Conductor				Nom. Insul. thickness	Nom. Sheath thickness				Approx. overall dia. of cable (*)				Approx. weight of cable (*)			
Nom. area	Form of conduc-tor	Approx. diameter (*)	Max. RDC at 20°C		1C	2C	3C	4C	1C	2C	3C	4C	1C	2C	3C	4C
mm^2	-	mm	Ω/Km	mm	mm				mm				Kg/Km			
4	N.C	2,55	4,61	0,7	1,4	1,8	1,8	1,8	8,0	14,5	15,0	16,5	95	230	290	355
6	N.C	3,12	3,08	0,7	1,4	1,8	1,8	1,8	8,5	15,5	16,5	18,0	120	285	365	450
10	N.C	4,05	1,83	0,7	1,4	1,8	1,8	1,8	9,5	17,5	18,5	20,0	165	390	510	640
16	N.C	5,10	1,15	0,7	1,4	1,8	1,8	1,8	10,5	19,5	20,5	22,5	230	535	710	900
25	N.C	6,42	0,727	0,9	1,4	1,8	1,8	1,8	12,5	23,0	24,5	27,0	335	775	1.040	1.335
35	N.C	7,56	0,524	0,9	1,4	1,8	1,8	1,8	13,5	25,0	27,0	29,5	435	995	1.355	1.745
50	C.C	8,1	0,387	1,0	1,4	1,8	1,8	1,8	14,0	26,5	28,5	31,5	550	1.250	1.720	2.225
70	C.C	9,8	0,268	1,1	1,4	1,8	1,9	2,0	16,0	30,5	32,5	36,5	760	1.705	2.385	3.110
95	C.C	11,4	0,193	1,1	1,5	1,9	2,0	2,1	18,0	34,0	36,5	40,5	1.020	2.265	3.190	4.170
120	C.C	12,9	0,153	1,2	1,5	2,0	2,1	2,3	19,5	37,5	40,0	45,0	1.260	2.815	3.970	5.215
150	C.C	14,4	0,124	1,4	1,6	2,2	2,3	2,4	21,5	41,5	45,0	49,5	1.550	3.470	4.890	6.395
185	C.C	15,9	0,0991	1,6	1,6	2,3	2,4	2,6	23,5	45,5	49,0	54,5	1.910	4.280	6.045	7.940
240	C.C	18,4	0,0754	1,7	1,7	2,5	2,6	2,8	26,5	51,5	55,5	61,5	2.475	5.540	7.840	10.295
300	C.C	20,5	0,0601	1,8	1,8	2,6	2,7	3,0	29,0	56,0	60,5	67,5	3.070	6.835	9.695	12.775

▶ (*): Reference value - This is an estimated value for design purposes, transportation and storage products. Not a value to evaluate the quality of the products
(a): Color tape or color XLPE

▶ N.C: Non-compacted Copper Conductor
C.C: Compacted Copper Conductor

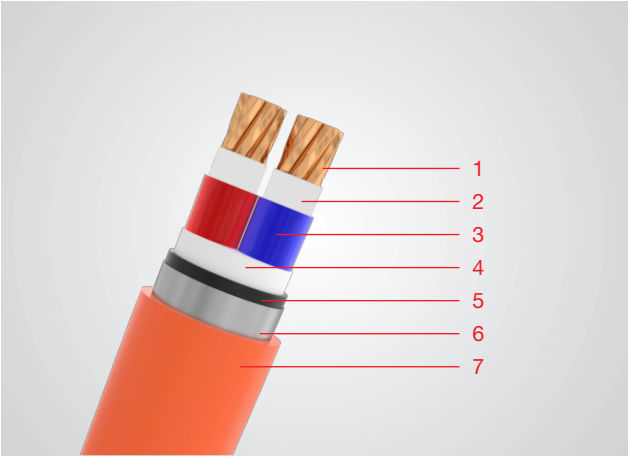
LOW VOLTAGE CABLE - FIRE RESISTANT CABLE, COPPER CONDUCTOR, MICA TAPE, XLPE INSULATION, FR-PVC OVERSHEATH (CXV/FR - 0,6/1kV)

Applied Standard: TCVN 5935-1 (IEC 60502-1), TCVN 6612 (IEC 60228), IEC 60331-21 / BS 6387, IEC 60332-1 / BS 4066-1, IEC 60332-3 / BS 4066-3

3 phases + 1 neutral cable										
Phase core				Neutral core				Nom. Sheath thickness (*)	Approx. overall dia. of cable (*)	Approx. weight of cable (*)
Nom. area of conductor	Form of conductor	Nom. Insul. thickness	Max. RDC at 20°C	Nom. area of conductor	Form of conductor	Nom. Insul. thickness	Max. RDC at 20°C			
mm²	-	mm	Ω/Km	mm²	-	mm	Ω/Km	mm	mm	Kg/Km
6	N.C	0,7	3,08	4	N.C	0,7	4,61	1,8	17,5	425
10	N.C	0,7	1,83	6	N.C	0,7	3,08	1,8	19,5	590
16	N.C	0,7	1,15	10	N.C	0,7	1,83	1,8	22,0	835
25	N.C	0,9	0,727	16	N.C	0,7	1,15	1,8	25,5	1.225
35	N.C	0,9	0,524	16	N.C	0,7	1,15	1,8	28,0	1.530
35	N.C	0,9	0,524	25	N.C	0,9	0,727	1,8	29,0	1.640
50	C.C	1,0	0,387	25	N.C	0,9	0,727	1,8	30,0	1.995
50	C.C	1,0	0,387	35	N.C	0,9	0,524	1,8	31,0	2.100
70	C.C	1,1	0,268	35	N.C	0,9	0,524	1,9	34,5	2.750
70	C.C	1,1	0,268	50	C.C	1,0	0,387	1,9	35,0	2.870
95	C.C	1,1	0,193	50	C.C	1,0	0,387	2,1	38,5	3.680
95	C.C	1,1	0,193	70	C.C	1,1	0,268	2,1	39,5	3.900
120	C.C	1,2	0,153	70	C.C	1,1	0,268	2,2	42,5	4.665
120	C.C	1,2	0,153	95	C.C	1,1	0,193	2,2	43,5	4.930
150	C.C	1,4	0,124	70	C.C	1,1	0,268	2,3	46,5	5.545
150	C.C	1,4	0,124	95	C.C	1,1	0,193	2,3	47,5	5.810
185	C.C	1,6	0,0991	95	C.C	1,1	0,193	2,5	51,0	6.970
185	C.C	1,6	0,0991	120	C.C	1,2	0,153	2,5	52,0	7.230
240	C.C	1,7	0,0754	120	C.C	1,2	0,153	2,6	57,5	8.965
240	C.C	1,7	0,0754	150	C.C	1,4	0,124	2,7	58,5	9.290
240	C.C	1,7	0,0754	185	C.C	1,6	0,0991	2,7	60,0	9.670
300	C.C	1,8	0,0601	150	C.C	1,4	0,124	2,8	63,0	11.115

- (*): Reference value - This is an estimated value for design purposes, transportation and storage products. Not a value to evaluate the quality of the products
- N.C: Non-compacted Copper Conductor
  C.C: Compacted Copper Conductor

LOW VOLTAGE CABLE - FIRE RESISTANT CABLE, COPPER CONDUCTOR, MICA TAPE, XLPE INSULATION, METALLIC TAPE ARMOUR, FR-PVC OVERSHEATH (CXV/DATA/FR & CXV/DSTA/FR - 0,6/1kV)



Technical characteristics

- Structure:
  + 1: Soft copper conductor
  + 2: Mica tape
  + 3: XLPE(a) Insulation
  + 4: Filler
  + 5: PVC Inner sheath
  + 6: Aluminum tape armouring for single core
    Steal tape armouring for 2 to 4 cores
  + 7: FR-PVC Oversheath
- Rated voltage U_0/U: 0,6/1 kV
- Maximum conductor temperature for normal operation: 90°C
- Maximum conductor temperature for short-circuit (5s maximum duration) : 250°C
- Cables are subjected to fire at 950°C for 3 hours
- The fire resistant cables have a significant reduced tendency to propagate fire. The cables must self-extinguish after removing the fire source.

Applied Standard: **TCVN 5935-1 (IEC 60502-1), TCVN 6612 (IEC 60228), IEC 60331-21 / BS 6387, IEC 60332-1 / BS 4066-1, IEC 60332-3 / BS 4066-3**

1 core cable with aluminium tape amour (DATA); 2 to 4 core cable with steel tape amour (DSTA)																								
Conductor				Nom. Insul. thick-ness	Nom. Inner Sheath thickness				Nom. Thickness of amour tape				Nom. Sheath thickness				Approx. overall dia. of cable (*)				Approx. weight of cable (*)			
Nom. area	Form of conduc-tor (*)	Approx. diameter (*)	Max. RDC at 20°C		1C	2C	3C	4C	1C	2C	3C	4C	1C	2C	3C	4C	1C	2C	3C	4C	1C	2C	3C	4C
mm²	-	mm	Ω/Km	mm	mm				mm				mm				mm				Kg/Km			
4	N.C	2,55	4,61	0,7	1,0	1,0	1,0	1,0	0,5	0,2	0,2	0,2	1,8	1,8	1,8	1,8	13,0	17,0	18,0	19,0	225	405	475	555
6	N.C	3,12	3,08	0,7	1,0	1,0	1,0	1,0	0,5	0,2	0,2	0,2	1,8	1,8	1,8	1,8	13,5	18,5	19,0	20,5	255	475	565	670
10	N.C	4,05	1,83	0,7	1,0	1,0	1,0	1,0	0,5	0,2	0,2	0,2	1,8	1,8	1,8	1,8	14,5	20,0	21,0	23,0	315	605	735	885
16	N.C	5,10	1,15	0,7	1,0	1,0	1,0	1,0	0,5	0,2	0,2	0,2	1,8	1,8	1,8	1,8	15,5	22,0	23,5	25,5	395	775	965	1.180
25	N.C	6,42	0,727	0,9	1,0	1,0	1,0	1,0	0,5	0,2	0,2	0,2	1,8	1,8	1,8	1,8	17,0	25,5	27,0	29,5	520	1.055	1.340	1.660
35	N.C	7,56	0,524	0,9	1,0	1,0	1,0	1,0	0,5	0,2	0,2	0,2	1,8	1,8	1,8	1,8	18,0	28,0	29,5	32,5	635	1.305	1.685	2.105
50	C.C	8,1	0,387	1,0	1,0	1,0	1,0	1,0	0,5	0,2	0,2	0,2	1,8	1,8	1,9	1,9	19,0	29,5	31,5	34,5	765	1.575	2.080	2.625
70	C.C	9,8	0,268	1,1	1,0	1,0	1,2	1,2	0,5	0,2	0,2	0,5	1,8	1,9	2,0	2,1	21,0	33,5	36,0	41,0	995	2.095	2.835	4.020
95	C.C	11,4	0,193	1,1	1,0	1,2	1,2	1,2	0,5	0,2	0,5	0,5	1,8	2,0	2,2	2,3	22,5	37,0	41,0	45,0	1.385	2.735	4.120	5.200
120	C.C	12,9	0,153	1,2	1,0	1,2	1,2	1,4	0,5	0,5	0,5	0,5	1,8	2,2	2,3	2,4	24,0	42,0	45,0	50,0	1.530	3.775	4.995	6.380
150	C.C	14,4	0,124	1,4	1,0	1,2	1,4	1,4	0,5	0,5	0,5	0,5	1,8	2,3	2,4	2,6	26,0	46,0	50,0	55,0	1.835	4.505	6.055	7.710
185	C.C	15,9	0,0991	1,6	1,0	1,4	1,4	1,4	0,5	0,5	0,5	0,5	1,8	2,5	2,6	2,7	28,0	51,0	54,5	59,5	2.220	5.490	7.345	9.350
240	C.C	18,4	0,0754	1,7	1,0	1,4	1,6	1,6	0,5	0,5	0,5	0,5	1,9	2,6	2,8	3,0	31,0	56,5	61,0	67,0	2.820	6.870	9.360	11.985
300	C.C	20,5	0,0601	1,8	1,0	1,6	1,6	1,6	0,5	0,5	0,5	0,5	1,9	2,8	2,9	3,1	33,0	62,0	66,0	73,0	3.430	8.380	11.355	14.585

▶ (*): Reference value - This is an estimated value for design purposes, transportation and storage products.
Not a value to evaluate the quality of the products
(a): Color tape or color XLPE

▶ N.C: Non-compacted Copper Conductor
C.C: Compacted Copper Conductor

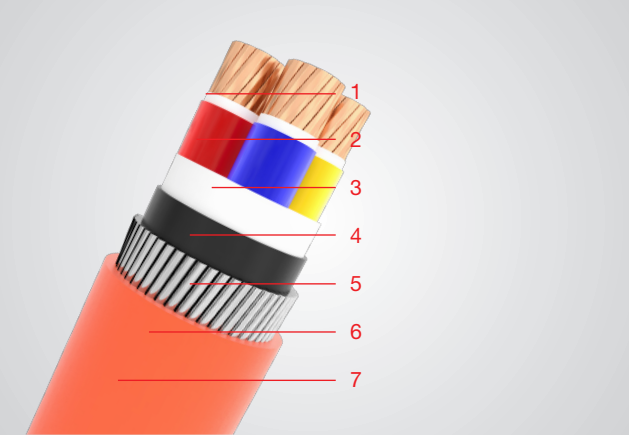
LOW VOLTAGE CABLE - FIRE RESISTANT CABLE, COPPER CONDUCTOR, MICA TAPE, XLPE INSULATION, METALLIC TAPE ARMOUR, FR-PVC OVERSHEATH (CXV/DATA/FR & CXV/DSTA/FR - 0,6/1kV)

Applied Standard: TCVN 5935-1 (IEC 60502-1), TCVN 6612 (IEC 60228), IEC 60331-21 / BS 6387, IEC 60332-1 / BS 4066-1, IEC 60332-3 / BS 4066-3

3 phases + 1 neutral cable with steel tape amour (DSTA)												
Phase core				Neutral core				Nom. Inner Sheath thickness	Thickness of amour tape	Nom. Sheath thickness	Approx. overall dia. of cable (*)	Approx. weight of cable (*)
Nom. area of conductor	Form of conductor	Nom. Insul. thickness	Max. RDC at 20°C	Nom. area of conductor	Form of conductor	Nom. Insul. thickness	Max. RDC at 20°C					
mm²	-	mm	Ω/Km	mm²	-	mm	Ω/Km	mm	mm	mm	mm	Kg/Km
50	C.C	1,0	0,387	25	N.C	0,9	0,727	1,0	0,2	1,9	33,0	2.410
70	C.C	1,1	0,268	35	N.C	0,9	0,524	1,2	0,2	2,0	38,0	3.255
95	C.C	1,1	0,193	50	C.C	1,0	0,387	1,2	0,5	2,2	43,0	4.710
120	C.C	1,2	0,153	70	C.C	1,1	0,268	1,2	0,5	2,3	47,5	5.810
150	C.C	1,4	0,124	70	C.C	1,1	0,268	1,4	0,5	2,5	51,5	6.855
185	C.C	1,6	0,0991	95	C.C	1,1	0,193	1,4	0,5	2,6	56,0	8.390

- (*): Reference value - This is an estimated value for design purposes, transportation and storage products. Not a value to evaluate the quality of the products
- N.C: Non-compacted Copper Conductor
  C.C: Compacted Copper Conductor

LOW VOLTAGE CABLE - FIRE RESISTANT CABLE, COPPER CONDUCTOR, MICA TAPE, XLPE INSULATION, GALVANIZED STEEL WIRE ARMOUR, FR-PVC OVERSHEATH (CXV/SWA/FR - 0,6/1kV)



Technical characteristics

- Structure:
  + 1: Soft copper conductor
  + 2: Mica tape
  + 3: XLPE(a) Insulation
  + 4: Filler
  + 5: PVC Inner sheath
  + 6: Galvanized steel wire armour
  + 7: FR-PVC Oversheath
- Rated voltage U_0/U: 0,6/1 kV
- Maximum conductor temperature for normal operation: 90^{0}C
- Maximum conductor temperature for short-circuit (5s maximum duration) : 250^{0}C
- Cables are subjected to fire at 950^{0}C for 3 hours
- The fire resistant cables have a significant reduced tendency to propagate fire. The cables must self-extinguish after removing the fire source.

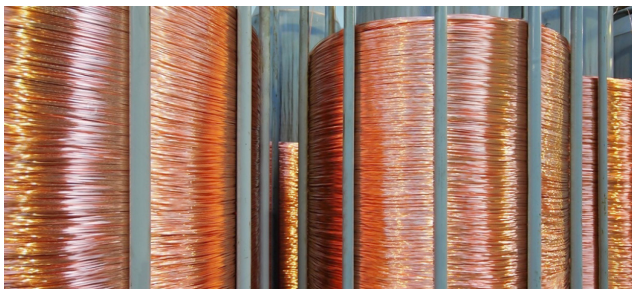
Applied Standard: TCVN 5935-1 (IEC 60502-1), TCVN 6612 (IEC 60228), IEC 60331-21 / BS 6387, IEC 60332-1 / BS 4066-1, IEC 60332-3 / BS 4066-3

Conductor				Nom. Insul. thick-ness	Nom. Inner Sheath thickness			Nom. diameter of amour wire			Nom. Sheath thickness			Approx. overall dia. of cable (*)			Approx. weight of cable (*)		
Nom. area	Form of con-ductor	Approx. diame-ter (*)	Max. RDC at 20^{0}C		2C	3C	4C	2C	3C	4C	2C	3C	4C	2C	3C	4C	2C	3C	4C
mm^2	-	mm	Ω/Km	mm	mm			mm			mm			mm			Kg/Km		
4	N.C	2,55	4,61	0,7	1,0	1,0	1,0	1,25	1,25	1,25	1,8	1,8	1,8	19,5	20,0	21,5	660	740	840
6	N.C	3,12	3,08	0,7	1,0	1,0	1,0	1,25	1,25	1,25	1,8	1,8	1,8	20,5	21,5	23,0	750	850	985
10	N.C	4,05	1,83	0,7	1,0	1,0	1,0	1,25	1,25	1,25	1,8	1,8	1,8	22,5	23,5	25,0	915	1.060	1.240
16	N.C	5,10	1,15	0,7	1,0	1,0	1,0	1,25	1,25	1,60	1,8	1,8	1,8	25,5	25,5	28,5	1.120	1.330	1.735
25	N.C	6,42	0,727	0,9	1,0	1,0	1,0	1,60	1,60	1,60	1,8	1,8	1,8	28,5	30,0	32,5	1.625	1.950	2.320
35	N.C	7,56	0,524	0,9	1,0	1,0	1,0	1,60	1,60	1,60	1,8	1,8	1,9	31,0	32,5	35,5	1.925	2.340	2.845
50	C.C	8,1	0,387	1,0	1,0	1,0	1,0	1,60	1,60	2,00	1,9	1,9	2,1	32,5	35,5	38,5	2.250	2.780	3.700
70	C.C	9,8	0,268	1,1	1,0	1,2	1,2	2,00	2,00	2,00	2,0	2,1	2,2	37,0	40,0	43,5	3.100	3.930	4.815
95	C.C	11,4	0,193	1,1	1,2	1,2	1,2	2,00	2,00	2,00	2,1	2,2	2,3	41,0	43,5	47,5	3.880	4.900	6.065
120	C.C	12,9	0,153	1,2	1,2	1,2	1,4	2,00	2,00	2,50	2,3	2,3	2,5	45,0	47,5	54,0	4.605	5.865	7.860
150	C.C	14,4	0,124	1,4	1,2	1,4	1,4	2,50	2,50	2,50	2,4	2,5	2,7	50,5	54,0	59,0	5.880	7.535	9.310
185	C.C	15,9	0,0991	1,6	1,4	1,4	1,4	2,50	2,50	2,50	2,6	2,7	2,8	55,0	58,5	64,0	6.995	8.955	11.120
240	C.C	18,4	0,0754	1,7	1,4	1,6	1,6	2,50	2,50	3,15	2,7	2,9	3,1	60,5	65,0	73,0	8.530	11.150	14.845

▶ (*): Reference value - This is an estimated value for design purposes, transportation and storage products. Not a value to evaluate the quality of the products
(a): Color tape or color XLPE

▶ N.C: Non-compacted Copper Conductor
C.C: Compacted Copper Conductor

ELECTROTECHNICAL ROUND COPPER WIRE



Technical characteristics

- Made from cathode copper sheet with high purity (Cu ≥ 99,99%) on OUTOKUMPU casting system (Finland) and NIEHOFF, HENRICH drawing-annealing systems (Germany).

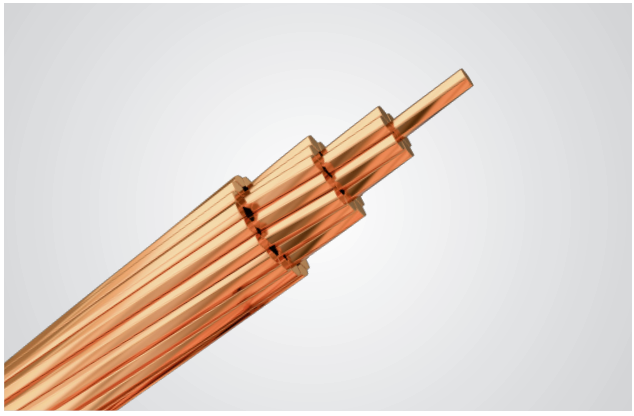
Applied Standard: **TCVN 5933-1995**

Nominal diameter (mm)	Tolerance (±mm)	Min. tensile strength (kG/mm²)			Min. elongation (%)			Max. resistivity at 20°C (Ohm. mm²/m)		Approx weight (Kg/ Km) (*)
		Cm	Cc	Ctt	Cm	Cc	Ctt	Cm	Cc, Ctt	
0,15	0,003	20-28	40	-	18	0,5	-	0,01724	0,0180	0,157
0,20	0,003	20-28	40	-	20	0,6	-	0,01724	0,0180	0,280
0,25	0,005	20-28	40	-	20	0,6	-	0,01724	0,0180	0,437
0,30	0,005	20-28	40	-	20	0,6	-	0,01724	0,0180	0,629
0,35	0,007	20-28	40	-	20	0,6	-	0,01724	0,0180	0,856
0,38	0,007	20-28	40	-	20	0,6	-	0,01724	0,0180	1,009
0,40	0,007	20-28	40	-	20	0,6	-	0,01724	0,0180	1,118
0,45	0,010	20-28	40	-	20	0,6	-	0,01724	0,0180	1,415
0,50	0,010	20-28	40	-	20	0,6	-	0,01724	0,0180	1,748
0,60	0,010	20-28	40	-	25	0,6	-	0,01724	0,0180	2,516
0,71	0,015	20-28	40	-	25	0,6	-	0,01724	0,0180	3,524
0,80	0,015	20-28	40	-	25	0,6	-	0,01724	0,0180	4,474
0,90	0,015	20-28	40	-	25	0,6	-	0,01724	0,0180	5,662
1,00	0,02	20-28	40	-	30	0,6	-	0,01724	0,0180	6,990
1,10	0,02	20-28	40	-	30	1,6	-	0,01724	0,0178	8,458
1,50	0,02	20-28	40	-	30	1,6	-	0,01724	0,0178	15,73
2,00	0,02	20-28	40	44	30	1,6	1,5	0,01724	0,0178	27,96
2,51	0,02	20-28	40	44	30	1,6	1,5	0,01724	0,0177	44,04
2,60	0,02	20-28	40	-	30	1,6	-	0,01724	0,0177	47,25
2,80	0,02	20-28	40	-	30	1,6	-	0,01724	0,0177	54,80
3,00	0,03	20-28	40	44	30	1,6	1,5	0,01724	0,0177	62,91
3,53	0,03	20-27	38	43	30	1,5	1,5	0,01724	0,0177	87,10
3,80	0,03	20-27	38	-	30	1,5	-	0,01724	0,0177	100,9
4,00	0,04	20-27	38	43	30	1,5	1,5	0,01724	0,0177	111,8
4,41	0,04	20-27	38	-	30	1,5	-	0,01724	0,0177	135,9
4,50	0,04	20-27	38	-	30	1,5	-	0,01724	0,0177	141,5
6,00	0,05	20-26	36	-	35	2,0	-	0,01724	0,0177	251,6
8,00	0,06	20-26	36	-	35	2,0	-	0,01724	0,0177	447,4

▶ (*): Reference value - This is an estimated value for design purposes, transportation and storage products. Not a value to evaluate the quality of the products

▶ Cm: soft copper wire
Cc: Hard copper wire
Ctt: Copper wire used for communication cable

BARE COPPER CONDUCTORS



Technical characteristics

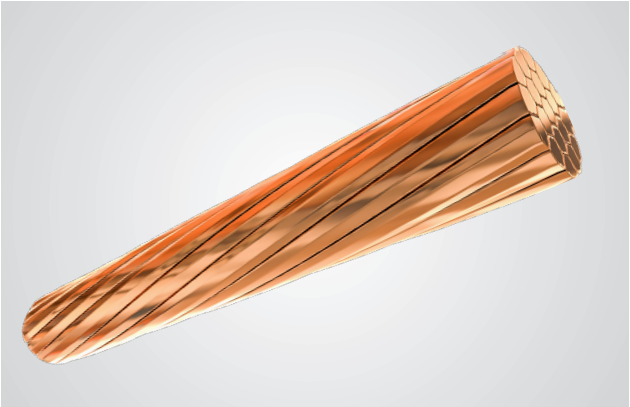
- These conductors are formed by several copper wires, being stranded in concentric layers. All the wires have the same nominal diameter.

Applied Standard: **TCVN 5064-1994/SĐ1:1995**

Nominal cross area	Construction	Approx. overall diameter (*)	Approx. weight (*)	Min. breaking load	Max. DC resistance at 20°C
mm^2	No/mm	mm	Kg/Km	N	Ohm/Km
16	7/1,70	5,10	143	6.031	1,1573
25	7/2,13	6,39	224	9.463	0,7336
35	7/2,51	7,53	311	13.141	0,5238
50	7/3,00	9,0	444	17.455	0,3688
70	19/2,13	10,7	612	27.115	0,2723
95	19/2,51	12,6	850	37.637	0,1944
120	19/2,80	14,0	1.057	46.845	0,1560
150	19/3,15	15,8	1.338	55.151	0,1238
185	37/2,51	17,6	1.657	73.303	0,1001
240	37/2,84	19,9	2.122	93.837	0,0789
300	37/3,15	22,1	2.610	107.422	0,0637
400	37/3,66	25,6	3.523	144.988	0,0471

▶ (*) Reference value - This is an estimated value for design purposes, transportation and storage products.
Not a value to evaluate the quality of the products

COMPACTED COPPER CONDUCTORS



Technical characteristics

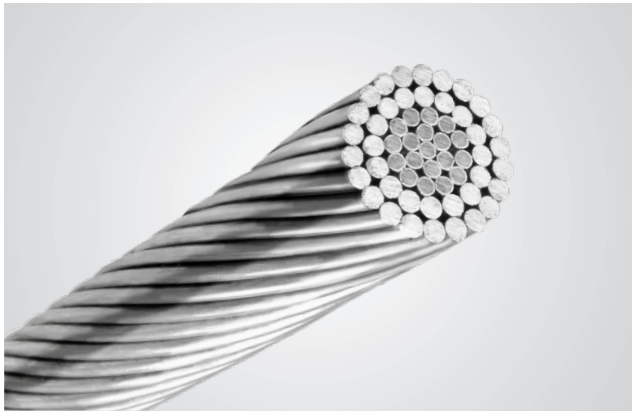
- These conductors are formed by several copper wires, being stranded compacted in concentric layers.

Applied Standard: **TCVN 6612 (IEC 60228)**

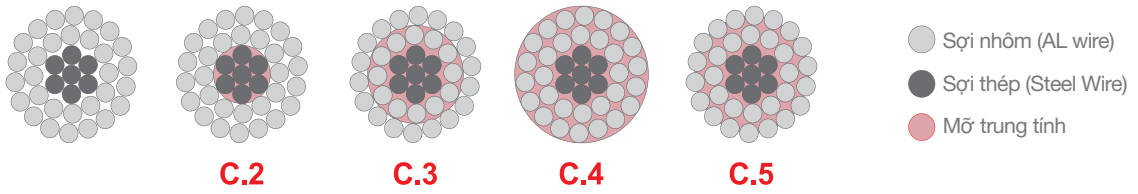
Nominal cross area	Construction	Approx. overall diameter (*)	Approx. weight (*)	Max. DC resistance at 20°C
mm²	No.	mm	Kg/Km	Ohm/Km
10	7	3,8	86,5	1,83
16	7	4,9	138,9	1,15
25	7	6,2	215,4	0,727
35	7	7,1	302,0	0,524
50	7	8,6	427,4	0,387
70	19	10,1	600,0	0,268
95	19	11,7	819,0	0,193
120	19	13,1	1.016,0	0,153
150	19	14,6	1.279,0	0,124
185	37	16,3	1.601,0	0,0991
240	37	18,3	2.067,5	0,0754
300	61	20,8	2.628,0	0,0601
400	61	23,3	3.384,9	0,0470

▶ (*) Reference value - This is an estimated value for design purposes, transportation and storage products.
Not a value to evaluate the quality of the products

ALUMINIUM CONDUCTOR STEEL REINFORCED FOR OVERHEAD POWER TRANSMISSION LINE (ACSR)



In order to reduce the risk of corrosion in some environment (forex: in coast or in corrosive regions), ACSR shall be greased according to IEC 61089-1997. There are four cases of grease applications:
- Case 1: Steel core only greased (figure C.2)
- Case 2: All the conductor is greased except the outer layer (figure C.3)
- Case 3: All the conductor is greased including the outer layer (figure C.4)
- Case 4: All the conductor is greased except the outer surface of the wires in the outer layer (figure C.5)



C.2 C.3 C.4 C.5

Applied Standard: **IEC 61089**

Nom. Area (Alu./ Steel)	Structure		Overall Dia (*)	Cond. weight without grease (*)	Grease weight (*)				Min. breaking load	Max.DC Res. at 20°C
	Alu.	Steel			C.2	C.3	C.4	C.5		
mm²	No./mm		mm	Kg/Km	Kg/Km				kN	Ω/Km
16/2,7	6/1,84	1/1,84	5,53	64,4	-	-	3,3	0,7	6,45	1,7934
25/4,2	6/2,30	1/2,30	6,91	100,9	-	-	5,1	1,1	9,71	1,1478
40/6,7	6/2,91	1/2,91	8,74	161,5	-	-	8,1	1,8	15,33	0,7174
63/10	6/3,66	1/3,66	11,0	254,4	-	-	12,8	2,8	22,37	0,4555
100/16	6/4,61	1/4,61	13,8	403,8	-	-	20,3	4,5	35,50	0,2869
125/7	18/2,97	1/2,97	14,7	397,9	-	8,4	25,3	13,8	30,14	0,2304
125/20	26/2,47	7/1,92	15,7	503,9	3,5	13,2	28,8	18,9	48,54	0,2310
160/9	18/3,36	1/3,36	16,8	509,3	-	10,8	32,4	17,7	37,42	0,1800
160/26	26/2,80	7/2,18	17,7	644,9	4,6	17,1	37,1	24,4	61,34	0,1805
200/11	18/3,76	1/3,76	18,8	636,7	-	13,5	40,6	22,2	45,00	0,1440
200/32	26/3,13	7/2,43	19,8	806,2	5,7	21,2	46,1	30,3	74,69	0,1444
250/25	22/3,80	7/2,11	20,8	880,6	4,3	22,7	54,9	33,8	72,16	0,1154
250/41	26/3,50	7/2,72	21,8	1.007,7	7,1	26,6	57,8	37,9	93,37	0,1155
315/21	45/2,99	7/1,99	23,8	1.039,6	3,8	37,9	67,8	49,7	82,08	0,0917
315/51	26/3,93	7/3,05	24,9	1.269,7	8,9	33,4	72,6	47,7	114,02	0,0917
400/27	45/3,36	7/2,24	26,9	1.320,1	4,8	48,0	85,8	63,0	102,23	0,0722
400/51	54/3,07	7/3,07	27,6	1.510,3	9,0	54,1	90,2	68,9	130,30	0,0723
450/31	45/3,57	7/2,38	28,6	1.485,2	5,4	54,2	96,9	71,1	111,82	0,0642
450/58	54/3,26	7/3,26	29,3	1.699,1	10,2	61,0	101,7	77,7	146,58	0,0643
500/34	45/3,76	7/2,51	30,1	1.650,2	6,0	60,3	107,7	79,1	124,25	0,0578
500/64	54/3,43	7/3,43	30,9	1.887,9	11,1	66,4	110,3	84,5	162,87	0,0578

▶ (*) Reference value - This is an estimated value for design purposes, transportation and storage products. Not a value to evaluate the quality of the products

ALUMINIUM CONDUCTOR STEEL REINFORCED FOR OVERHEAD POWER TRANSMISSION LINE (ACSR)

Applied Standard: **TCVN 5064-1994/SĐ1:1995**

Nom. Area (Alu./ Steel)	Structure		Overall Dia. (*)	Cond. weight without grease (*)	Grease weight (*)				Min. breaking load	Max. DC Res. at 20°C
	Alu.	Steel			C.2	C.3	C.4	C.5		
mm^2	No./mm		mm	Kg/Km	Kg/Km				N	Ω/Km
10/1,8	6/1,50	1/1,50	4,5	42,7	-	-	2,2	0,5	4.089	2,7064
16/2,7	6/1,85	1/1,85	5,6	64,9	-	-	3,3	0,7	6.220	1,7818
25/4,2	6/2,30	1/2,30	6,9	100,3	-	-	5,1	1,1	9.296	1,1521
35/6,2	6/2,80	1/2,80	8,4	148,0	-	-	7,5	1,6	13.524	0,7774
50/8,0	6/3,20	1/3,20	9,6	195,0	-	-	9,8	2,2	17.112	0,5951
70/11	6/3,80	1/3,80	11,4	276,0	-	-	13,8	3,0	24.130	0,4218
70/72	18/2,20	19/2,20	15,4	755,0	13,9	-	27,8	20,8	96.826	0,4194
95/16	6/4,50	1/4,50	13,5	385,0	-	-	19,4	4,3	33.369	0,3007
95/141	24/2,20	37/2,20	19,8	1357	27,8	-	46,3	37,0	180.775	0,3146
120/19	26/2,40	7/1,85	15,2	471,0	3,3	12,2	26,7	19,5	41.521	0,2440
120/27	30/2,20	7/2,20	15,4	523,0	4,6	13,9	27,8	20,8	49.465	0,2531
150/19	24/2,80	7/1,85	16,8	554,0	3,3	14,3	32,7	23,5	46.307	0,2046
150/24	26/2,70	7/2,10	17,1	599,0	4,2	15,8	34,4	25,1	52.279	0,2039
150/34	30/2,50	7/2,50	17,5	675,0	6,0	17,9	35,9	26,9	62.643	0,2061
185/24	24/3,15	7/2,10	18,9	705,0	4,2	18,5	42,2	30,3	58.075	0,1540
185/29	26/2,98	7/2,30	18,8	728,0	5,1	18,9	41,3	30,1	62.055	0,1591
185/43	30/2,80	7/2,80	19,6	846,0	7,5	22,5	45,0	33,7	77.767	0,1559
185/128	54/2,10	37/2,10	23,1	1.525,0	25,3	42,2	63,3	52,7	183.816	0,1543
240/32	24/3,60	7/2,40	21,6	921,0	5,5	24,1	55,1	39,6	75.050	0,1182
240/39	26/3,40	7/2,65	21,6	952,0	6,7	25,3	54,9	40,1	80.895	0,1222
240/56	30/3,20	7/3,20	22,4	1.106,0	9,8	29,4	58,8	44,1	98.253	0,1197
300/39	24/4,00	7/2,65	24,0	1.132,0	6,7	29,3	67,2	48,2	90.574	0,0958
300/48	26/3,80	7/2,95	24,1	1.186,0	8,3	31,2	67,9	49,6	100.623	0,0978
300/66	30/3,50	19/2,10	24,5	1.313,0	12,7	36,1	71,2	53,7	117.520	0,1000
300/67	30/3,50	7/3,50	24,5	1.323,0	11,7	35,2	70,3	52,7	126270	0,1000
330/30	48/2,98	7/2,30	24,8	1.152,0	5,1	41,3	72,1	56,7	88.848	0,0861
330/43	54/2,80	7/2,80	25,2	1.255,0	7,5	45,0	75,0	60,0	103.784	0,0869
400/18	42/3,40	7/1,85	26,0	1.199,0	3,3	42,3	78,4	60,4	85.600	0,0758
400/51	54/3,05	7/3,05	27,5	1.490,0	8,9	53,4	89,0	71,2	120.481	0,0733
400/64	26/4,37	7/3,40	27,7	1.572,0	11,1	41,5	90,3	65,9	129.183	0,0741
400/93	30/4,15	7/2,50	29,1	1.851,0	17,9	51,3	101,1	76,2	173.715	0,0711

Applied Standard: **DIN 48204**

Nom. Area (Alu./ Steel)	Structure		Overall Dia. (*)	Cond. weight without greaseb (*)	Grease weight (*)				Min. breaking load	Max. DC Res. at 20ºC
	Alu.	Steel			C.2	C.3	C.4	C.5		
mm^2	No./mm		mm	Kg/Km	Kg/Km				daN	Ω/Km
16/2,5	6/1,80	1/1,80	5,4	62	-	-	3,1	0,7	595	1,8780
25/4,0	6/2,25	1/2,25	6,8	97	-	-	4,8	1,1	920	1,2002
35/6,0	6/2,70	1/2,70	8,1	140	-	-	7,0	1,5	1.265	0,8352
44/32,0	14/2,00	7/2,40	11,2	372	5,5	-	13,9	9,7	4.500	0,6573
50/8,0	6/3,20	1/3,20	9,6	196	-	-	9,8	2,2	1.710	0,5946
50/30	12/2,33	7/2,33	11,7	378	5,2	-	15,6	10,4	4.380	0,5643
70/12	26/1,85	7/1,44	11,7	284	2,0	7,5	16,2	11,8	2.680	0,4130
95/15	26/2,15	7/1,67	13,6	383	2,7	10,0	21,8	15,9	3.575	0,3058
95/55	12/3,20	7/3,20	16,0	712	9,8	-	29,4	19,6	7.935	0,2992
105/75	14/3,10	19/2,25	17,5	891	14,5	-	35,3	24,9	10.845	0,2735
120/20	26/2,44	7/1,90	15,5	494	3,5	13,0	28,2	20,6	4.565	0,2374
120/70	12/3,60	7/3,60	18,0	901	12,4	-	37,2	24,8	10.000	0,2364
125/30	30/2,33	7/2,33	16,3	591	5,2	15,6	31,2	23,4	5.760	0,2259
150/25	26/2,70	7/2,10	17,1	605	4,2	15,8	34,4	25,1	5.525	0,1939
170/40	30/2,70	7/2,70	18,9	794	7,0	20,9	41,8	31,4	7.675	0,1682
185/30	26/3,00	7/2,33	19,0	746	5,2	19,5	42,4	30,9	6.620	0,1571
210/35	26/3,20	7/2,49	20,3	850	5,9	22,3	48,4	35,3	7.490	0,1380
210/50	30/3,00	7/3,00	21,0	981	8,6	25,8	51,7	38,7	9.390	0,1362
230/30	24/3,50	7/2,33	21,0	877	5,2	22,7	51,9	37,3	7.310	0,1249
240/40	26/3,45	7/2,68	21,9	987	6,9	25,8	56,1	40,9	8.640	0,1188
265/35	24/3,74	7/2,49	22,4	1.002	5,9	25,9	59,3	42,6	8.305	0,1094
300/50	26/3,86	7/3,00	24,5	1.236	8,6	32,3	70,3	51,3	10.700	0,09487
305/40	54/2,68	7/2,68	24,1	1.160	6,9	41,2	68,7	55,0	9.940	0,09490
340/30	48/3,00	7/2,33	25,0	1.180	5,2	42,4	73,9	58,1	9.290	0,08509
380/50	54/3,00	7/3,00	27,0	1.453	8,6	51,7	86,1	68,9	12.310	0,07573
385/35	48/3,20	7/2,49	26,7	1.344	5,9	48,4	84,4	66,4	10.480	0,07478
435/55	54/3,20	7/3,20	28,8	1.653	9,8	58,8	98,0	78,4	13.645	0,06656
450/40	48/3,45	7/2,68	28,7	1.561	6,9	56,1	97,8	76,9	12.075	0,06434
490/65	54/3,40	7/3,40	30,6	1.866	11,1	66,4	110,6	88,5	15.310	0,05896
495/35	45/3,74	7/2,49	29,9	1.646	5,9	59,3	106,1	82,7	12.180	0,05846
510/45	48/3,68	7/2,87	30,7	1.778	7,9	64,3	112,0	88,2	13.665	0,05655

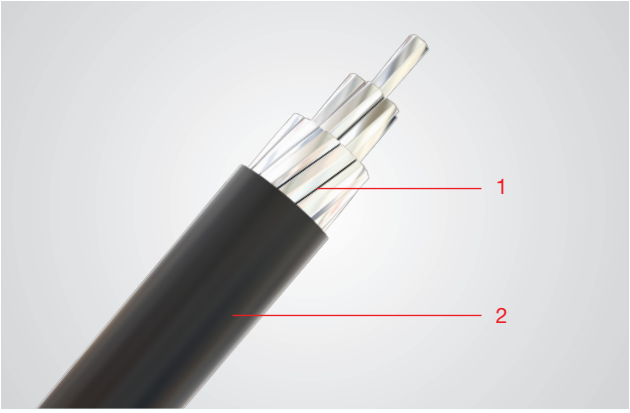
▶ (*) Reference value - This is an estimated value for design purposes, transportation and storage products.
Not a value to evaluate the quality of the products

ALUMINIUM CONDUCTOR STEEL REINFORCED FOR OVERHEAD POWER TRANSMISSION LINE (ACSR)

Applied Standard: **ASTM B232**

Code name	Conductor size	Structure		Overall Dia.	Cond. weight without grease (*)	Grease weight (*)				Min. breaking load	Max. DC Res. at 20ºC
		Alu.	Steel			C.2	C.3	C.4	C.5		
-	AWG or MCM	No./mm		mm	Kg/Km	Kg/Km				daN	Ω/Km
Turkey	6	6/1,68	1/1,68	5,04	54	-	-	2,7	0,6	524	2,1586
Swan	4	6/2,12	1/2,12	6,36	85	-	-	4,3	0,9	832	1,3557
Swanate	4	7/1,96	1/2,61	6,53	100	-	-	4,3	0,9	1.053	1,3557
Sparrow	2	6/2,67	1/2,67	8,01	136	-	-	6,8	1,5	1.270	0,8535
Sparate	2	7/2,47	1/3,30	8,24	159	-	-	6,8	1,5	1.611	0,8535
Robin	1	6/3,00	1/3,00	9,00	171	-	-	8,6	1,9	1.585	0,6767
Raven	1/0	6/3,37	1/3,37	10,11	216	-	-	10,9	2,4	1.932	0,5364
Quail	2/0	6/3,78	1/3,78	11,34	273	-	-	13,7	3,0	2.362	0,4255
Pigeon	3/0	6/4,25	1/4,25	12,75	343	-	-	17,3	3,8	2.941	0,3373
Penguin	4/0	6/4,77	1/4,77	14,31	433	-	-	21,8	4,8	3.706	0,2675
Waxwing	266,8	18/3,09	1/3,09	15,45	431	-	9,1	27,4	18,3	3.027	0,2133
Partridge	266,8	26/2,57	7/2,00	16,28	546	3,8	14,4	31,2	22,8	5.029	0,2143
Ostrich	300	26/2,73	7/2,12	17,28	614	4,3	16,1	35,1	25,6	5.652	0,1906
Merlin	336,4	18/3,47	1/3,47	17,35	544	-	11,5	34,6	23,0	3.823	0,1691
Linnet	336,4	26/2,89	7/2,25	18,31	689	4,8	18,2	39,5	28,9	6.271	0,1699
Oriole	336,4	30/2,69	7/2,69	18,83	784	6,9	20,8	41,5	31,1	7.745	0,1704
Chickadee	397,5	18/3,77	1/3,77	18,85	642	-	13,6	40,8	27,2	4.399	0,1431
Brant	397,5	24/3,27	7/2,18	19,61	762	4,5	19,9	45,5	32,7	6.469	0,1438
Ibis	397,5	26/3,14	7/2,44	19,88	814	5,7	21,4	46,5	33,9	7.211	0,1438
Lark	397,5	30/2,92	7/2,92	20,44	927	8,2	24,5	48,9	36,7	8.869	0,1442
Pelican	477	18/4,14	1/4,14	20,70	771	-	16,4	49,2	32,8	5.216	0,1193
Flicker	477	24/3,58	7/2,39	21,49	915	5,5	23,9	54,6	39,3	7.666	0,1199
Hawk	477	26/3,44	7/2,67	21,79	978	6,8	25,6	55,7	40,6	8.665	0,1199
Hen	477	30/3,20	7/3,20	22,40	1.112	9,8	29,4	58,8	44,1	10.534	0,1201
Osprey	556,5	18/4,47	1/4,47	22,35	899	-	19,1	57,3	38,2	6.088	0,1022
Parackeet	556,5	24/3,87	7/2,58	23,22	1.067	6,4	27,9	63,7	45,8	8.822	0,1027
Dove	556,5	26/3,72	7/2,89	23,55	1.140	8,0	30,0	65,2	47,6	10.103	0,1027
Eagle	556,5	30/3,46	7/3,46	24,21	1.298	11,5	34,4	68,7	51,5	12.292	0,1030
Peacok	605	24/4,03	7/2,69	24,20	1.160	6,9	30,3	69,2	49,8	9.588	0,0945
Squab	605	26/3,87	7/3,01	24,51	1.240	8,7	32,5	70,8	51,6	10.841	0,0945
Wood Duck	605	30/3,61	7/3,61	25,25	1.411	12,5	37,4	74,8	56,1	12.884	0,0947
Teal	605	30/3,61	19/2,16	25,24	1.399	13,4	38,1	75,3	56,7	13.359	0,0947
Kingbird	636	18/4,78	1/4,78	23,88	1.028	-	21,9	65,6	43,7	6.956	0,08945
Rook	636	24/4,14	7/2,76	24,84	1.219	7,3	31,9	72,9	52,4	10.083	0,08989
Grosbeak	636	26/3,97	7/3,09	25,15	1.302	9,1	34,3	74,6	54,4	11.180	0,08989
Scoter	636	30/3,70	7/3,70	25,88	1.484	13,1	39,3	78,6	58,9	13.544	0,09011
Egret	636	30/3,70	19/2,22	25,90	1.470	-	32,8	65,6	49,2	14.055	0,09011
Swift	636	36/3,38	1/3,38	23,62	958	7,6	33,3	76,1	54,7	6.052	0,08945
Flamingo	666,6	24/4,23	7/2,82	25,40	1.278	9,6	35,8	78,0	56,9	10.566	0,08577
Gannet	666,6	26/4,07	7/3,16	25,76	1.365	8,2	35,6	81,6	58,6	11.733	0,08577
Stilt	715,5	24/4,39	7/2,92	26,31	1.372	8.2	35.6	81.6	52.0	11.335	0,07989

LOW VOLTAGE CABLE - ALUMINUM CONDUCTOR, PVC INSULATION (AV - 0,6/1kV)



Technical characteristics

- Structure:
  + 1: Aluminum conductor
  + 2: PVC Insulation
- Rated voltage U_0/U: 0,6/1 kV
- Maximum conductor temperature for normal operation: 70^{0}C
- Maximum conductor temperature for short-circuit 5s maximum duration:
  + 160^{0}C with nominal area up to and include 300mm^2
  + 140^{0}C with nominal area larger than 300mm^2

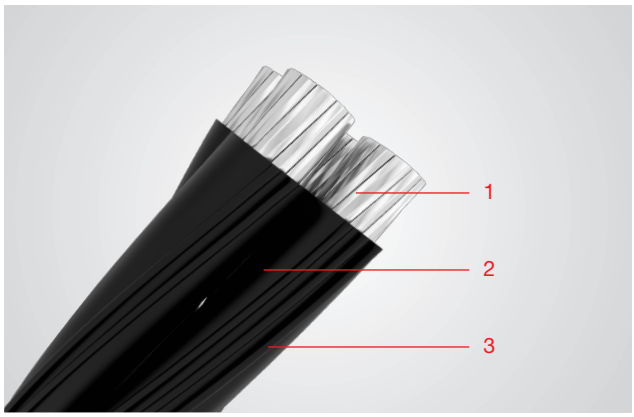
Applied Standard: **TCVN 5935-1 (IEC 60502-1), TCVN 6612 (IEC 60228)**

Conductor			Nom. Insul. thickness	Approx. overall Diameter	Max. DC resis-tance at 20^{0}C	Approx. weight (*)
Nominal cross sectional area	Form of conductor	Approx. diameter				
mm^2	-	mm	mm	mm	Ohm/Km	Kg/Km
10	C.C	3,8	1,0	5,8	3,08	49
16	C.C	4,7	1,0	6,7	1,91	69
25	C.C	6,0	1,2	8,4	1,20	107
35	C.C	7,0	1,2	9,4	0,868	138
50	C.C	8,2	1,4	11,0	0,641	188
70	C.C	9,8	1,4	12,6	0,443	255
95	C.C	11,6	1,6	14,8	0,320	349
120	C.C	13,2	1,6	16,4	0,253	427
150	C.C	14,5	1,8	18,1	0,206	526
185	C.C	16,0	2,0	20,0	0,164	661
240	C.C	18,3	2,2	22,7	0,125	856
300	C.C	20,8	2,4	25,6	0,100	1.074
400	C.C	23,3	2,6	28,5	0,0778	1.361

▶ (*): Reference value - This is an estimated value for design purposes, transportation and storage products. Not a value to evaluate the quality of the products

▶ C.C: Compacted Copper Conductor

LOW VOLTAGE CABLE - ALUMINUM CONDUCTOR, XLPE INSULATION (LV-ABC - 0,6/1kV)



Technical characteristics

- Structure:
  + 1: Aluminum conductor
  + 2: XLPE Insulation
  + 3: Identification rib
- Rated voltage U_0/U: 0,6/1 kV
- Maximum conductor temperature for normal operation: 80^{0}C
- Maximum conductor temperature for short-circuit 5s maximum duration: 250^{0}C

Applied Standard: **TCVN 6447-1998/ AS 3560-91**

No.	Characteristics	Unit	Nominal cross sectional area of conductor							
			16	25	35	50	70	95	120	150
1	No. of core	Core	2/3/4	2/3/4	2/3/4	2/3/4	2/3/4	2/3/4	2/3/4	2/3/4
2	Form of conductor	-	Circular compacted, concentric stranding							
3	No. of wires in conductor	Wires	7	7	7	7	19	19	19	19
4	Dia. of conductor - Min. - Max.	 mm mm	 4,5 4,8	 5,8 6,1	 6,8 7,2	 8,0 8,4	 9,6 10,1	 11,3 11,9	 12,8 13,5	 14,1 14,9
5	Max. DC resistance of conductor at 20^{0}C	Ω/Km	1,91	1,20	0,868	0,641	0,443	0,320	0,253	0,206
6	Min. breaking load of conductor	kN	2,2	3,5	4,9	7,0	9,8	13,3	16,8	21,0
7	Min. average thickness of insulation	mm	1,3	1,3	1,3	1,5	1,5	1,7	1,7	1,7
8	Approx. weight of 1 core (*)	Kg/Km	68	98	129	178	239	324	399	494

▶ (*) Reference value - This is an estimated value for design purposes, transportation and storage products. Not a value to evaluate the quality of the products

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In case you are looking for products which are not included in this documents, or having specific products requirements, kindly contact our Business Team!

TRANPHU ELECTRIC MECHANICAL JOINT STOCK COMPANY

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