at the heart of every project

MESC CABLES

مسك

MESC

INDEX

INTRODUCTION

Middle East Specialized Cables Company (MESC), the number one Instrumentation and Special Cables manufacturer in the Middle East.

Middle East Specialized Cable Co. (MESC) was founded as a privately owned in Riyadh in 1993 to cater the growing industry of specialized cables in the region. It started rolling its machines in 1994 and selling in 1995. After consolidating its presence in KSA as the market leader, MESC succeeded in penetrating other market in GCC, Middle East, North Africa, Europe and USA. In 2007 it became a joint stock company and its shares floated on Saudi Stock market.

Over the years, MESC has expanded its production to cover all types and ranges of cables by acquiring existing companies, establishing new companies and joint ventures. Its products range includes the Industrial, Instrumentation and process Control Cable, Special Cable (BMS), Low Voltage Power cables, Medium Voltage Power cables, Overhead lines, Offshore Cables, Railway Signaling and power cables and any types of customized cables manufactured as per the customers' needs and specifications.

MESC plants, located respectively in Saudi Arabia, Jordan and UAE consist of ultra-modern facilities, high tech machinery and well- equipped laboratories, built for conducting various routing and type tests.

MESC operate with clearly defined and documented quality systems set in accordance with the guidelines of ISO9001, ISO14001 and ISO 45001 for all activities right from the selection of row material suppliers, schedule planning, production, testing and to delivery of cables, with a policy aiming for total customer satisfaction. The Medium Voltage Cables are produced in the technical collaboration of Fujikura Japan. MESC products are manufactured to international standards, tested and certified by prestigious institutions such as: 3P (Denmark), BASEC, BSI, (UK), Cables Technology Laboratories Inc. (USA), CSA (Canada), IMQ, (Italy), KEMA (Netherland), Jordanian Institution for Standard and Meteorology (JQM), Saudi Arabian Standards Organization (SASO), UL (USA), VDE (Germany), Warrington Fire Research (UK).

MESC products are approved by all oil, gas, petrochemical, power and desalination utilities in the MENA region, such as: Aramco, Sabic, STC, SEC (KSA), Kuwait Oil Co. (KOS), KNPC (Kuwait), Qatar Petroleum, MEW (Qatar), ADCO, GASCO, ADNOC, ADMA -OPCO, ZADCO, TAKRERER, DEWA, FEWA, SEWA, ADGAS, (UAE), MESC are also approved by many major international EPC contractors such as: ABB, ABV Rock Group, Bechtel, Daelim Engineering co., Doosan Heavy Industries, Fisia Italiamapianti, Fluor Daniel, Hyundai Engineering & construction Co., JGC Corporation, NPCC, Siemens, SK Engineering, Snamprogetti, Technicas, Technip, Toyo Engineering Co. and many other.

مسك
MESC

MESC- UAE

Middle East Specialized Cables (MESC) LLC, UAE was established in 2008. The plant is located at Al Ghail Industrial Park in Ras Al Khaimah, UAE. The factory is spread over an area of 54,000 square meters which houses the production facility, offices, workshops facilities, and warehouse.

The new ultra-modern manufacturing facility started its operations in 2010, and was officially inaugurated by His Highness Sheikh Saud bin Saqr Al Qasimi, Supreme Council Member and Ruler of Ras Al Khaimah.

The plant has an advanced laboratory with extensive range of test and measurement equipment specifically for the flame retardant control and power cables, fire resistant instrumentation cables, and low smoke halogen free cables. Moreover, MESC has the ability to design cables which comply with all major international standards such as IEC, BS, DIN VDE, ICEA, UL, etc. The RAK facility has also achieved the ISO 9001, ISO 14001 and ISO 45001 certifications, and operates with clearly defined and documented quality system set in accordance with the guidelines of ISO with its policy aiming for total customer satisfaction.

MESC RAK is an ESMA-certified facility, and an approved and certified vendor of UAE federal agencies such as Ministry of Public Works, FEWA, SEWA, ADWEA, Bahrain's EWA, Kuwait's MEW, GASCO, ZADCO and other established contractors and consultants.

MANUFACTURING FACILITIES

MANUFACTURING FACILITIES

CERTIFICATIONS & APPROVALS

LICENSE FOR THE USE OF
EMIRATES QUALITY MARK (AL-ALAMA)

License No: 0119-13/Q19-03-000038
Issue Date: 06 October 2019
Valid Until: 05 October 2022
Issued to: MIDDLE EAST SPECIALIZED CABLES (MESC) LLC
P.O. Box 12566, Ras Al Khaimah, United Arab Emirates

Product for which the License is granted: LOW VOLTAGE WIRES AND CABLES
Product Description: See attached Schedule of Certification
Standard: See attached Schedule of Certification

Emirates Authority For Standardization & Metrology

LICENSE FOR THE USE OF
EMIRATES QUALITY MARK (AL-ALAMA)

License No: 19-03-10260/Q19-03-000001
Issue Date: 07-March-2019
Valid Until: 06-March-2022
Issued to: Middle East Specialized Cables (MESC) LLC
P.O. Box 12566, Ras Al Khaimah, United Arab Emirates

Based on the Emirates Product Certification Scheme Agreement No. 19-03-10260/Q19-03-000001 for the following:

Product for which the License is granted: Data and Communication Cables
Product Description: See Attached Schedule of Certification
Standard: See Attached Schedule of Certification

SGS

Notified body by Emirates Authority for Standardization & Metrology

TÜV NORD

CERTIFICATE

Management system as per ISO 45001 : 2018

Middle East Specialized Cables - MESC
(Member of MESC Group)
P. O. Box 12566, Rakia Industrial Park, Al Ghail
Ras Al Khaimah
United Arab Emirates

MESC

Manufacture and sale of industrial, instrumentation, process control, data, system, coaxial, telephone, fire resistant, railway signal, offshore, low voltage power and control cables at Ras Al Khaimah - UAE Plant

IAF DAkkS

TÜV NORD

CERTIFICATE

Management system as per ISO 9001 : 2015

Middle East Specialized Cables - MESC
(Member of MESC Group)
P. O. Box 12566, Rakia Industrial Park, Al Ghail
Ras Al Khaimah
United Arab Emirates

MESC

Manufacture and sale of industrial, instrumentation, process control, data, system, coaxial, telephone, fire resistant, railway signal, offshore, low voltage power and control cables at Ras Al Khaimah - UAE Plant

IAF DAkkS

TÜV NORD

CERTIFICATE

Management system as per ISO 14001 : 2015

Middle East Specialized Cables - MESC
(Member of MESC Group)
P. O. Box 12566, Rakia Industrial Park, Al Ghail
Ras Al Khaimah
United Arab Emirates

MESC

Manufacture and sale of industrial, instrumentation, process control, data, system, coaxial, telephone, fire resistant, railway signal, offshore, low voltage power and control cables at Ras Al Khaimah - UAE Plant

IAF DAkkS

شهادة الأداء البيئي

Environmental Performance Certificate

Ministry of Environment & Water awards the Environmental Performance Certificate to **MIDDLE EAST SPECIALIZED CABLES (MESC) LLC** Ras Al Khaimah – Al Ghail, for its outstanding environmental performance during 2013 and its efforts to assure sustainable environment.

تمنح وزارة البيئة والمياه شهادة الأداء البيئي لـ **الشرق الأوسط للكابلات المتخصصة (مسك) ذ م م** - رأس الخيمة - الغيل لأدائها البيئي المتميز لعام 2013 وحرصها على ضمان بيئة مستدامة.

ENVIRONMENTAL

Dr. Rashid Ahmed Bin Fahad
Minister of Environment & Water

مسك
MESC


Emirates Authority for Standardization & Metrology (ESMA)

CERTIFICATE OF CONFORMITY

EMIRATES QUALITY MARK

MIDDLE EAST SPECIALIZED CABLES (MESC) LLC

LOW VOLTAGE WIRES AND CABLES


Emirates Authority For Standardization & Metrology

CERTIFICATE OF CONFORMITY

EMIRATES QUALITY MARK

Certificate No. 19-03-10260/O19-03-000001 Issue Date: 07-March-2019 Valid Until: 06-March-2022

The Emirates Authority for Standardization & Metrology (ESMA)

Middle East Specialized Cables (MESC) LLC

P.O. Box 12566, Ras Al Khaimah, United Arab Emirates

Data and Communication Cables

SGS


MATERIAL PRE-QUALIFICATION - APPROVAL

COMPANY	MIDDLE EAST SPECIALIZED CABLES LLC

SL. NO.	PRODUCT DESCRIPTION	MANUFACTURER	APPROVED ON
1	LV CABLES	MIDDLE EAST SPECIALIZED CABLES LLC U.A.E.	

SUPPLIER MANAGEMENT LEAD

DIRECTOR OF PURCHASES, CONTRACTS & STORES


MIDDLE EAST SPECIALIZED CABLES (MESC)


To: M/s. MIDDLE EAST SPECIALIZED CABLES LLC - RAK BRANCH

Subject: Pre-qualification Status of M/s. MIDDLE EAST SPECIALIZED CABLES LLC - RAK BRANCH


Sharjah Electricity & Water Authority

هيئة كهرباء ومياه الشارقة

M/S Middle East Specialized Cables Co. (MESC)

Subject: Pre-Qualification Certificate


EWA

Electricity Distribution Directorate

January 16th, 2019

FAX

Subject: Equipment Approval

LV Cable, Make: M/s Middle East Specialized Cables(MESC) LLC, UAE

Name of the Project: General

Regards,

Khalid Jassim Mohamed Sowayed

Chief, Engineering Services


UNITED ARAB EMIRATES

MINISTRY OF INFRASTRUCTURE DEVELOPMENT

ZAYED

Supplier Certificate

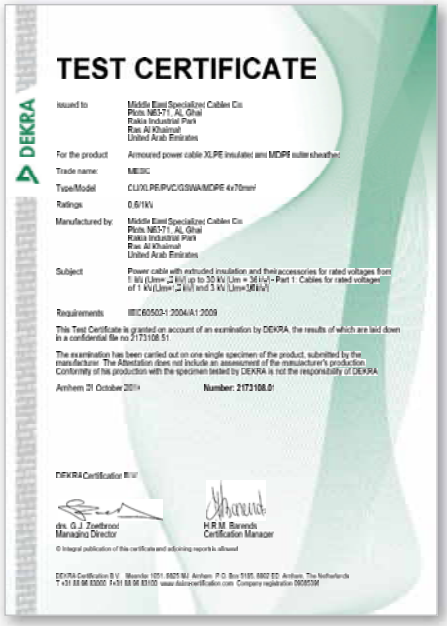
Registration No.	150228_3
Commercial Name	Middle East Specialized Cables (MESC) LLC
Address	Ras Al Khaimah
Phone	(07) 258 9090
PO Box	12566
Fax	(07) 258 9191

MESC

CERTIFICATIONS & APPROVALS


KEMA Quality

TEST CERTIFICATE


DEKRA

TEST CERTIFICATE

Issued to: Middle East Specialized Cables Co.
Plots NB3-71, Al Ghal
Rakia Industrial Park
Ras Al Khaimah
United Arab Emirates

For the product: Armoured power cable XLPE insulated and MDPE outer sheathed

Trade name: MESC

Type/Model: CU/XLPE/PVC/GSWA/MDPE 4x70mm²

Ratings: 0.6/1kV

Manufactured by: Middle East Specialized Cables Co.
Plots NB3-71, Al Ghal
Rakia Industrial Park
Ras Al Khaimah
United Arab Emirates

Subject: Power cable with extruded insulation and their accessories for rated voltages from 1 kV (Um= 2 kV) up to 35 kV (Um = 36 kV) - Part 1: Cables for rated voltages of 1 kV (Um= 2 kV) and 3 kV (Um=3.6kV)

Requirements: IEC 60502-1: 2004/A1: 2009

This Test Certificate is granted on account of an examination by DEKRA, the results of which are laid down in a confidential file no 2173108.51

The examination has been carried out on one single specimen of the product, submitted by the manufacturer. The Attestation does not include an assessment of the manufacturer's production. Conformity of his production with the specimen tested by DEKRA is not the responsibility of DEKRA.

Arnhem 21 October 2011 — Number: 2173108.01

DEKRA Certification B.V.

drs. G.J. Zoetbrood
Managing Director

H.R.M. Barends
Certification Manager

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DEKRA

TEST CERTIFICATE

Issued to: Middle East Specialized Cables Co.
Rakia Industrial Park
Plots NB3-71
Al Ghal
Ras Al Khaimah
United Arab Emirates

For the product: Non-sheathed cable with PVC insulation for 90°C

Trade name: MESC

Type/Model: (NYA) CU/PVC 16 SQMM

Ratings: 450/750 V

Manufactured by: Middle East Specialized Cables Co.
Rakia Industrial Park
Plots NB3-71
Al. Ghal
Ras Al Khaimah
United Arab Emirates

Subject: Polyvinylchloride insulated cables of rated voltages up to and including 450/750 V. Part 3: Non-sheathed cables for fixed wiring

Requirements: IEC 60227-3:1993 -A1:1997

Remarks: The tested cable meets the requirements of the IEC 60227-1:1993 +A1:1997

DR request of the client the PVC insulation has been tested as PVC/B instead of PVC/C as required according IEC 60227-1:2007 table 1

This Test Certificate is granted on account of an examination by DEKRA, the results of which are laid down in a confidential file no 2160813.55

The examination has been carried out on one single specimen of the product, submitted by the manufacturer. The Attestation does not include an assessment of the manufacturer's production. Conformity of his production with the specimen tested by DEKRA is not the responsibility of DEKRA

Arnhem 01 March 2011 — Number: 2160813.03

DEKRA Certification B.V.

drs. G.J. Zoetbrood
Managing Director

H.R.M. Barends
Certification Manager

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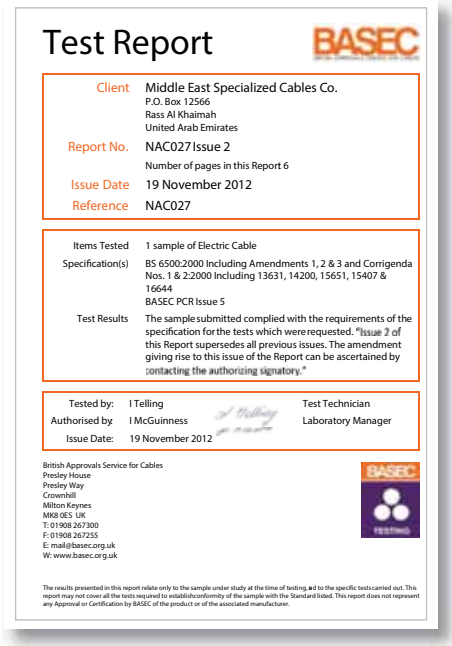
Test Report

BASEC

Client	Middle East Specialized Cables Co. P.O. Box 12566 Rass Al Khaimah United Arab Emirates
Report No.	NAC027 Issue 2 Number of pages in this Report 6
Issue Date	19 November 2012
Reference	NAC027

Items Tested	1 sample of Electric Cable
Specification(s)	BS 6500:2000 Including Amendments 1, 2 & 3 and Corrigenda Nos. 1 & 2:2000 Including 13631, 14200, 15651, 15407 & 16644 BASEC PCR Issue 5
Test Results	The sample submitted complied with the requirements of the specification for the tests which were requested. "Issue 2 of this Report supersedes all previous issues. The amendment giving rise to this issue of the Report can be ascertained by contacting the authorizing signatory."

Tested by:	I Telling	Test Technician
Authorised by	I McGuinness	Laboratory Manager
Issue Date:	19 November 2012	

British Approvals Service for Cables
Presley House
Presley Way
Crownhill
Milton Keynes
MK8 0ES UK
T: 01908 267300
F: 01908 267255
E: mail@basec.org.uk
W: www.basec.org.uk

The results presented in this report relate only to the sample under study at the time of testing, and to the specific tests carried out. This report may not cover all the tests required to establishconformity of the sample with the Standard listed. This report does not represent any Approval or Certification by BASEC of the product or of the associated manufacturer.


KEMA Quality

TEST CERTIFICATE


DEKRA

TEST CERTIFICATE

Issued to: Middle East Specialized Cables (MESC)
Rakia Industrial Park
Plots NB3-71,Al Ghal
Ras Al Khaimah
United Arab Emirates

For the product: 5-core marmoured street lighting cables

Trade name: MESC

Type/Model: CU/PVC/PVC 2x35+2x16 SQ.MM

Ratings: 600/1000 Volts

Manufactured by: Middle East Specialized Cables (MESC)
Rakia Industrial Park
Plots. NB3-71Al Ghal
Ras Al Khaimah
United Arab Emirates

Requirements: MEW Technical specifications for 600/1000 V. 5 core unarmoured street lighting cables. The standard is partial based on the IEC 60502-1 and BS 6746

Remarks: The tested cable meets the requirements of the Government of Kuwait (MEW 261/2010) Ministry of Electricity & Water

This Test Certificate is granted on account of an examination by DEKRA, the results of which are laid down in a confidential file no 2169472.52

The examination has been carried out on one single specimen of the product, submitted by the manufacturer. The Attestation does not include an assessment of the manufacturer's production. Conformity of his production with the specimen tested by DEKRA is not the responsibility of DEKRA.

This DEKRA Test Certificate is valid until 31 May 2017

Arnhem, 29 May 2014 — Number: 2169472.01

DEKRA Certification B.V.

drs. G.J. Zoetbrood
Managing Director

H.R.M. Barends
Certification Manager

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KEMA

مسك
MESC

LPCB

Exova

CERTIFICATIONS & APPROVALS

TEST CERTIFICATE

DEKRA

Issued to: Middle East Specialized Cales Co
Rakia Industrial Park
Plots N63-71 Al Ghal
Ras Al Khaimah
United Arab Emirates

For the product: Power cable, PVC insulated and PVC sheathed

Trade name: MESC

Type/Model: CU/PVC/PVC 1cx1.5 mm²

Ratings: 0.6/1 kV

Manufactured by: Middle East Specialized Cales Co
Rakia Industrial Park
Plots N63-71 Al Ghal
Ras Al Khaimah
United Arab Emirates

Subject: Power cables with extruded insulation and their accessories for rated voltages from 1 kV up to 30 kV Part 1: Cables for rated voltages of 1 kV and 3 kV

Requirements: IEC 60502-1 2004/A1 2006
MEW Kuwait, Year 2011/2012 specification

Remarks: The tested cable meets the requirement of the IEC 60502-1 2004/A1 2006
MEW Kuwait, Year 2011/2012 specification

This Test Certificate is granted on account of an examination by DEKRA, the results of which are laid down in Test Report no.2157733.01

The examination has been carried out on one single specimen of the product, submitted by the manufacturer. The Attestation does not include an assessment of the manufacturer's production. Conformity of his production with the specimen tested by DEKRA is not the responsibility of DEKRA.

Arnhem, 7 February 2011 Number: 2157733.07

DEKRA Certification B.V.

drs. G.J. Zeelbrood
Managing Director

H.R.M. Barendt
Certification Manager

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T +31 26 356 2000 F +31 26 352 5800 www.dekra-certification.com Company registration 09085396

TEST CERTIFICATE

DEKRA

Issued to: Middle East Specialized Cables (MESC)
Rakia Industrial Park
Plot No. N63-71
Al Ghai
Ras Al Khaimah
United Arab Emirates

For the product: Power cable with XLPE insulations and PVC sheathed

Trade name: MESC

Type/Model: CU/XLPE/PVC/LC/PVC/SWA/PVC 12c x 2.5 mm²

Ratings: 0.6/1 kV

Manufactured by: Middle East Specialized Cables (MESC)
Rakia Industrial Park
Plot No. N63-71
Al Ghai
Ras Al Khaimah
United Arab Emirates

Subject: power cables with insulation and their accessories for rated voltages from 1kV up to 30 kV Part1: Cables for rated voltages of 1kV and 3 kV

Requirements: IEC 60502-1 2004 +A1 2009

Remarks: The tested cable meets the requirements of the IEC 60502-1 (2004) + A1 (2009)

This Test Certificate is granted on account of an examination by DEKRA, the results of which are laid down in Test Report no.2160813.51

The examination has been carried out on one single specimen of the product, submitted by the manufacturer. The Attestation does not include an assessment of the manufacturer's production. Conformity of his production with the specimen tested by DEKRA is not the responsibility of DEKRA.

Arnhem, 1 September 2010 Number: 2160813.01

DEKRA Certification B.V.

drs. G.J. Zeelbrood
Managing Director

H.R.M. Barendt
Certification Manager

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TEST CERTIFICATE

DEKRA

Issued to: Middle East Specialized Cables Co
Rakia Industrial Park
Plots N63-71 Al Ghai
Ras Al Khaimah
United Arab Emirates

For the product: Multi-element metallic cables used in analogue and digital communication and control - Sectional specification for instrumentation and control cables

Trade name: MESC

Type/Model: CU/MICA/FRXLPE/PVC/LC/PVC/DSTA/PVC HOX Shield 5Pa1.5 mm²

Ratings: 500 V

Manufactured by: Middle East Specialized Cables Co
Rakia Industrial Park
Plots N63-71 Al Ghai
Ras Al Khaimah
United Arab Emirates

Requirements: EN 50288-1 2003 and EN 50288-7 2005

Remarks: The tested product meets the requirements

This Test Certificate is granted on account of an examination by DEKRA, the results of which are laid down in a confidential file no 2160664.02

The examination has been carried out on one single specimen of the product, submitted by the manufacturer. The Attestation does not include an assessment of the manufacturer's production. Conformity of his production with the specimen tested by DEKRA is not the responsibility of DEKRA.

Arnhem, 15 December 2010 Number: 2160664.02

DEKRA Certification B.V.

drs. G.J. Zeelbrood
Managing Director

H.R.M. Barendt
Certification Manager

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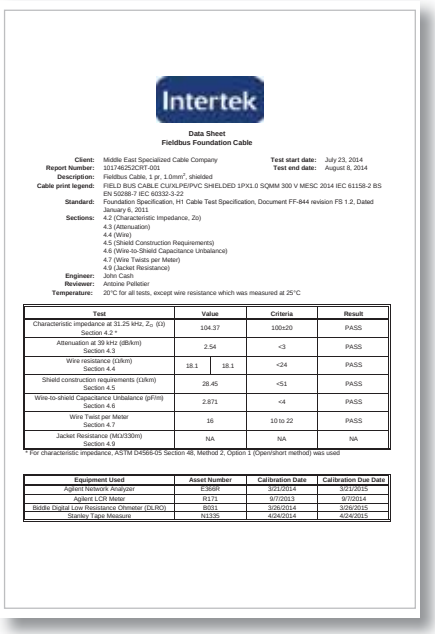


Intertek

Data Sheet
Fieldbus Foundation Cable

Client: Middle East Specialized Cable Company
Report Number: 10174625CRT-001
Description: Fieldbus Cable, 1 pr, 1.0mm², shielded
Cable print legend: FIELD BUS CABLE CU/XLPE/PVC SHIELDED 1PX1.0 SQMM 300 V MESC 2014 IEC 61158-2 BS EN 50288-7 IEC 60332-3-22
Standard: Foundation Specification, H1 Cable Test Specification, Document FF-844 revision FS 1.2, Dated January 6, 2011
Sections: 4.2 (Characteristic Impedance, Zo)
4.3 (Attenuation)
4.4 (Wire)
4.5 (Shield Construction Requirements)
4.6 (Wire-to-Shield Capacitance Unbalance)
4.7 (Wire Twists per Meter)
4.9 (Jacket Resistance)
Engineer: John Cash
Reviewer: Antoine Pelletier
Temperature: 20°C for all tests, except wire resistance which was measured at 25°C

Test start date: July 23, 2014
Test end date: August 8, 2014

Test	Value		Criteria	Result
Characteristic impedance at 31.25 kHz, Z_o, (Ω) Section 4.2 *	104.37		100±20	PASS
Attenuation at 39 kHz (dB/km) Section 4.3	2.54		<3	PASS
Wire resistance (Ω/km) Section 4.4	18.1	18.1	<24	PASS
Shield construction requirements (Ω/km) Section 4.5	28.45		<51	PASS
Wire-to-shield Capacitance Unbalance (pF/m) Section 4.6	2.871		<4	PASS
Wire Twist per Meter Section 4.7	16		10 to 22	PASS
Jacket Resistance (MΩ/330m) Section 4.9	NA		NA	NA

* For characteristic impedance, ASTM D4566-05 Section 48, Method 2, Option 1 (Open/short method) was used

Equipment Used	Asset Number	Calibration Date	Calibration Due Date
Agilent Network Analyzer	E366R	3/21/2014	3/21/2015
Agilent LCR Meter	R171	9/7/2014	9/7/2014
Biddle Digital Low Resistance Ohmeter (DLRO)	8031	3/26/2014	3/26/2015
Stanley Tape Measure	N1335	4/24/2014	4/24/2015

LPCB

www.redoubt.com

Certificate of Product Approval
Certificate Number: 1286a Issue: 01

LPCB

MIDDLE EAST SPECIALIZED CABLES CO
Second Industrial City
Phase 3
PO Box-585
Riyadh
SAUDI ARABIA

is authorised to use the LPCB mark in association with the product(s) listed in this certificate and appendix having complied with the requirements of the standard(s) detailed below.

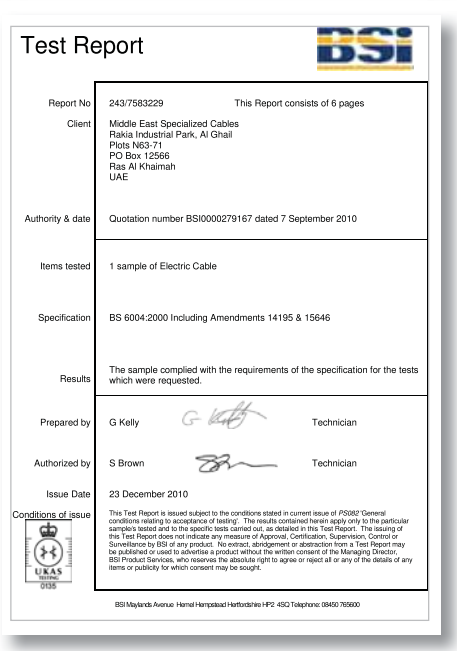
Product(s)
Cable Types as listed below:
PYRO-3
See Certificate Appendix for details

Standard(s) (see Appendix for details)
BS 7629-1:2008
BS 6387:2013 CWZ
EN 50200:2006 (Class PH30)
EN 50200:2006 Annex E (30 mins)
EN 50267-2-1:1999
BS 5839-1:2013 (Clause 26.2d Standard)
EN 60332-3-24:2009

This Certificate is maintained and held in force through regular surveillance activities and subject to the corresponding ISO 9001 Certificate being maintained.

David Hoare, Certification Manager — 10 March 2015 — 10 March 2015

BF1345 Rev. 0.3 Page 1 of 2 © BRE Global Ltd. 2015



Test Report

BSI

Report No	243/7583229 This Report consists of 6 pages
Client	Middle East Specialized Cables Rakia Industrial Park, Al Ghail Plots N63-71 PO Box 12566 Ras Al Khaimah UAE
Authority & date	Quotation number BSI0000279167 dated 7 September 2010
Items tested	1 sample of Electric Cable
Specification	BS 6004:2000 Including Amendments 14195 & 15646
Results	The sample complied with the requirements of the specification for the tests which were requested.
Prepared by	G Kelly Technician
Authorized by	S Brown Technician
Issue Date	23 December 2010
Conditions of issue	This Test Report is issued subject to the conditions stated in current issue of PS082 'General conditions relating to acceptance of testing'. The results contained herein apply only to the particular sample/s tested and to the specific tests carried out, as detailed in this Test Report. The issuing of this Test Report does not indicate any measure of Approval, Certification, Supervision, Control or Surveillance by BSI of any product. No extract, abridgement or abstraction from a Test Report may be published or used to advertise a product without the written consent of the Managing Director, BSI Product Services, who reserves the absolute right to agree or reject all or any of the details of any items or publicity for which consent may be sought.

UKAS Testing 0135

BSI Maylands Avenue Hemel Hempstead Hertfordshire HP2 4SQ Telephone: 08450 765600

Intertek

DEKRA

BSI British Standards

مسك
MESC

PVC INSULATED NON SHEATHED SINGLE CORE CABLE
RATED TEMPERATURE* 70°C & 90°C

SPECIFICATION: BS EN 50525-2-31 & IEC 60227-3

APPLICATION

These cables are used for the purpose of lighting in residential and commercial building in surface mounted or embedded conduits. Suitable for earth DC when fixed installation inside appliances, switch gear and control gear.

CONSTRUCTION

Conductor	Plain Annealed Copper to IEC60228, Solid Conductor corresponds to Class 1, Stranded Conductor correspond to Class 2.
Insulation	PVC Type TI 1 Rated 70°C as per BS EN 50363-3 PVC Type TI 3 Rated 90°C as per BS EN 50363-3
Printing Text	MESC CU/PVC "SIZE" "VOLTAGE GRADE" "RATED TEMPERATURE" "YEAR" COUNTRY OF ORIGIN

TECHNICAL DATA

Voltage Grade	300/500 V up to 1.0 mm2, 450/750 V for 1.5 mm2 & above.
Flame Retardant	IEC 60332-1
Minimum Bending Radius	6 x Over all Diameter.

TABLE

CONDUCTOR CROSS SECTIONAL AREA (mm^2)	CLASS OF CONDUCTOR	INSULATION THICKNESS (mm)	APPROX OVERALL DIA. (mm)	APPROX. WEIGHT (kg/km)	CONDUCTOR RESISTANCE AT 20 °C (MAX.) Ω/Km	CURRENT CARRING CAPACITY AT 30 °C IN FREE AIR (1 PHASE) Amp.	CURRENT CARRING CAPACITY AT 30 °C IN FREE AIR (3 PHASE) Amp.
0.5	1	0.6	2.1	9	36.0	--	--
0.75	1	0.6	2.2	11	24.5	--	--
1	1	0.6	2.4	14	18.1	17	16
1.5	1	0.7	2.9	21	12.1	21	20
2.5	1	0.8	3.5	33	7.41	30	26
4	1	0.8	3.9	48	4.61	40	36
6	1	0.8	4.4	67	3.08	50	45
1.5	2	0.7	3.1	22	12.1	21	20
2.5	2	0.8	3.7	34	7.41	30	26
4	2	0.8	4.2	51	4.61	40	36
6	2	0.8	4.8	71	3.08	50	45
10	2	1.0	7.2	119	1.83	68	61
16	2	1.0	7.2	170	1.15	90	81
25	2	1.2	8.9	281	0.727	118	106
35	2	1.2	10.1	379	0.524	145	130
50	2	1.4	11.8	509	0.387	175	160
70	2	1.4	13.6	717	0.268	220	200
95	2	1.6	16.0	990	0.193	270	240
120	2	1.6	17.6	1227	0.153	310	280
150	2	1.8	19.5	1510	0.124	355	320
185	2	2.0	21.8	1892	0.0991	405	365

Correction factors for ambient temperature.

Ambient temperature	35	40	45	50	55	60	65
Correction factor	0.94	0.87	0.79	0.71	0.61	0.50	0.35

Available Color: Black, Blue, Brown, Green, Grey, Orange, Pink, Red, Turquoise, Violet, White & Green/Yellow. Other colors are available upon request

Packing: Packing is available in Coil/Reel/Drum with Meters/Yards/Feet. Other lengths are available upon request.

Special Feature*: Cables are also available with Rated temperature 105°C confirming to UL Standard.

CENELEC CODE

USAGE	General Purpose	Heat Resisting (90°C)
Fixed Wiring	H07V-U, H07V-R	H07V2-U, H07V2-R
Internal Wiring	H05V-U, H05V-R	H05V2-U, H05V2-R

FLEX PVC INSULATED NON SHEATHED SINGLE CORE CABLE
RATED TEMPERATURE* 70°C & 90°C

SPECIFICATION: BS EN 50525-2-31 & IEC 60227-5

APPLICATION

These cables are used for the purpose of lighting in residential and commercial building in surface mounted or embedded conduits. Suitable for earth DC when fixed installation inside appliances, switch gear and control gear.

CONSTRUCTION

Conductor	Plain annealed copper flexible as per class 5 of IEC 60228.
Insulation	PVC type TI 1 as per BS EN 50363-3 PVC type TI 3 as per BS EN 50363-3
Printing Text	MESC CU/PVC "SIZE" "VOLTAGE GRADE" "RATED TEMPERATURE" "YEAR" COUNTRY OF ORIGIN

TECHNICAL DATA

Voltage Grade	300/500 V up to 1.0 mm^2, 450/750 V for 1.5 mm^2 & above.
Flame Retardant	IEC 60332-1
Minimum Bending Radius	6 x Over all Diameter.

TABLE

CONDUCTOR CROSS SECTIONAL AREA (mm^2)	CLASS OF CONDUCTOR	INSULATION THICKNESS (mm)	APPROX OVERALL DIA. (mm)	APPROX. WEIGHT (kg/km)	CONDUCTOR RESISTANCE AT 20 °C (MAX.) Ω/Km	CURRENT CARRING CAPACITY AT 30 °C IN FREE AIR (ONE PHASE) Amp.	CURRENT CARRING CAPACITY AT 30 °C IN FREE AIR (THREE PHASE) Amp.
0.5	5	0.6	2.2	9	39.0	--	--
0.75	5	0.6	2.4	12	26.0	--	--
1	5	0.6	2.6	15	19.5	17	16
1.5	5	0.7	3.0	21	13.3	21	20
2.5	5	0.8	3.6	33	7.98	30	26
4	5	0.8	4.2	49	4.95	40	36
6	5	0.8	4.8	69	3.30	50	45
10	5	1.0	6.1	116	1.91	68	61
16	5	1.0	7.1	173	1.21	90	81
25	5	1.2	8.8	266	0.780	118	106
35	5	1.2	10.0	364	0.554	145	130
50	5	1.4	11.9	520	0.386	175	160
70	5	1.4	13.9	756	0.272	220	200
95	5	1.6	15.9	996	0.206	270	240
120	5	1.6	17.6	1257	0.161	310	280
150	5	1.8	19.7	1572	0.129	355	320
185	5	2.0	21.9	1964	0.106	405	365

Correction factors for ambient temperature.

Ambient temperature	35	40	45	50	55	60	65
Correction factor	0.94	0.87	0.79	0.71	0.61	0.50	0.35

Available Color: Black, Blue, Brown, Green, Grey, Orange, Pink, Red, Turquoise, Violet, White & Green/Yellow. Other colors are available upon request

Packing: Packing is available in Coil/Reel/Drum with Meters/Yards/Feet. Other lengths are available upon request.

Special Feature*: Cables are also available with Rated temperature 105°C confirming to UL Standard.

CENELEC CODE

USAGE	General Purpose	Heat Resisting (90°C)
Fixed Wiring	H07V-K	H07V2-K
Internal Wiring	H05V-K	H05V2-K

PVC INSULATED NON SHEATHED SINGLE CORE CABLE
RATED TEMPERATURE* 70°C & 90°C
TYPE BK & CK SPECIFICATION: BS 6231

APPLICATION

Type BK & CK: These cables are used for wiring of switch, control, metering, relay and Instrument Panels of Power Switchgear and for internal connections in rectifier equipment, motor Starters and Controllers.

CONSTRUCTION

Conductor	Plain annealed copper flexible as per class 5 of IEC 60228.
Insulation	PVC Type TI 1 Rated 70°C as per BS EN 50363-3.(Type BK) PVC Type TI 3 Rated 90°C as per BS EN 50363-3.(Type CK)
Printing Text	Type BK : "TYPE BK" "SIZE" " CU/PVC 600/1000 V " "YEAR" COUNTRY OF ORIGIN Type CK : "TYPE CK" "SIZE" CU/PVC HEAT RESISTING 90 " 600/1000 V" "YEAR" COUNTRY OF ORIGIN

TECHNICAL DATA

Voltage Grade	600/1000 Volts.
Flame Retardant	IEC 60332-1
Minimum Bending Radius	6 x Over all Diameter.

TABLE

CONDUCTOR CROSS SECTIONAL AREA (mm²)	CLASS OF CONDUCTOR	INSULATION THICKNESS (mm)	APPROX OVERALL DIA. (mm)	APPROX. WEIGHT (kg/ km)	CONDUCTOR RESISTANCE AT 20 °C (MAX.) Ω/Km	CURRENT CARRING CAPACITY AT 30 °C IN FREE AIR (1 PHASE) Amp.	CURRENT CARRING CAPACITY AT 30 °C IN FREE AIR (3 PHASE) Amp.
1	5	0.8	3.0	20	19.5	--	--
1.5	5	0.8	3.2	24	13.3	26	23
2.5	5	0.8	3.7	35	7.98	35	30
4	5	0.8	4.2	51	4.95	46	40
6	5	0.8	4.8	71	3.30	58	50
10	5	1.0	6.2	119	1.91	79	69
16	5	1.0	7.9	179	1.21	105	91
25	5	1.2	9.7	277	0.780	140	122
35	5	1.2	11.1	375	0.554	174	151
50	5	1.4	13.1	535	0.386	212	184
70	5	1.4	15.7	774	0.272	269	234
95	5	1.6	17.9	1022	0.206	331	288
120	5	1.6	19.8	1284	0.161	386	336
150	5	1.8	22.1	1604	0.129	442	385

Correction factors for ambient temperature.

Ambient temperature	10	15	20	25	30	35	40	45	50
Correction factor	1.22	1.17	1.12	1.07	1.0	0.94	0.87	0.79	0.71

Available Color: Black, Blue, Brown, Green, Grey, Orange, Pink, Red, Turquoise, Violet, White & Green/Yellow.
Other colors are available upon request

Packing: Packing is available in Coil/Reel/Drum with Meters/Yards/Feet. Other lengths are available upon request.

Special Feature*: Type CK is also known as Tri-rated Equipment Wire Rated
BS 6231: 90°C, 600/1000 V; UL 1015: 105°C, 600 V and CSA c 22.2: 105°C, 600V

LOW SMOKE ZERO HALOGEN INSULATED SINGLE CORE WIRING CABLE RATED TEMPERATURE 90°C

SPECIFICATION: BS EN 50525-3-41

APPLICATION

These cables are used for the purpose of lighting in residential and commercial building in surface mounted or embedded conduits. Suitable for earth DC when fixed installation inside appliances, switch gear and control gear.

CONSTRUCTION

Conductor	Plain annealed copper stranded as per class 2 of IEC 60228.
Insulation	Low Smoke Zero Halogen Compound Type EI 5 as per BS EN 50363-5
Printing Text	MESC CU/LSZH "SIZE" "450/750 V " "RATED TEMPERATURE" "YEAR" COUNTRY OF ORIGIN

TECHNICAL DATA

Voltage Grade	450/750 V.
Flame Retardant	IEC 60332-1
Halogen Acid Gas	MAX. 0.5% to IEC 60754-1
Light Transmittance	≥ 60% to IEC 61034-2
Minimum Bending Radius	6 x Over all Diameter.

TABLE

CONDUCTOR CROSS SECTIONAL AREA (mm²)	CLASS OF CONDUCTOR	INSULATION THICKNESS (mm)	APPROX OVERALL DIA. (mm)	APPROX. WEIGHT (kg/km)	CONDUCTOR RESISTANCE AT 20 °C (MAX.) Ω/Km	CURRENT CARRING CAPACITY AT 30 °C IN FREE AIR (1 PHASE) Amp.	CURRENT CARRING CAPACITY AT 30 °C IN FREE AIR (3 PHASE) Amp.
1.5	2	0.7	3.1	22	12.1	21	20
2.5	2	0.8	3.7	34	7.41	30	26
4	2	0.8	4.2	51	4.61	40	36
6	2	0.8	4.8	71	3.08	50	45
10	2	1.0	7.2	119	1.83	68	61
16	2	1.0	7.2	170	1.15	90	81
25	2	1.2	8.9	281	0.727	118	106
35	2	1.2	10.1	379	0.524	145	130
50	2	1.4	11.8	509	0.387	175	160
70	2	1.4	13.6	717	0.268	220	200
95	2	1.6	16.0	990	0.193	270	240
120	2	1.6	17.6	1227	0.153	310	280
150	2	1.8	19.5	1510	0.124	355	320
185	2	2.0	21.8	1892	0.0991	405	365

Correction factors for ambient temperature.

Ambient temperature	35	40	45	50	55	60	65
Correction factor	0.94	0.87	0.79	0.71	0.61	0.50	0.35

Available Color: Black, Blue, Brown, Green, Grey, Orange, Pink, Red, Turquoies, Violet, White & Green/Yellow.
Other colors are available upon request.

Packing: Packing is available in Coil/Reel/Drum with Meters/Yards/Feet. Other lengths are available upon request.

MULTI CORE FLEXIBLE PVC INSULATED PVC SHEATHED CABLE RATED TEMPERATURE* 70°C & 90°C

SPECIFICATION: BS EN 50525-2-11

APPLICATION

These cables are used for wiring of switch, control, metering, relay and instrument panels of power switchgear and for internal connections in rectifier equipment, motor starters and controllers.

CONSTRUCTION

Conductor	Plain annealed copper flexible as per class 5 of IEC 60228.
Insulation	PVC Type TI 2 Rated 70°C as per BS EN 50363-3. PVC Type TI 3 Rated 90°C as per BS EN 50363-3.
Color Code	Two core: Blue & Brown. Three core: Green/Yellow, Blue & Brown. Four core: Green/Yellow, Black, and Blue & Brown.
Assembly	Cores twisted together to make a round assembly with fillers wherever necessary.
Outer Sheath	PVC Type TM 2 as per BS EN 50363-4-1 & PVC Type TM 3 as per BS EN 50363-4-1. Outer Sheath color shall be White. Other color can be supplied on request.

TECHNICAL DATA

Voltage Grade	300/300 V R.M.S.
Flame Retardant	IEC 60332-1
Minimum Bending Radius	6 x Over all Diameter.
Max. Short Circuit Temperature	160°C (max. duration 5 sec.)

TABLE

NO OF CORE	CONDUCTOR CRESS SECTIONAL AREA (mm²)	INSULATION THICKNESS (mm)	OUTER SHEATH THICKNESS (mm)	APPROX OVERALL DIA. (mm)	APPROX. WEIGHT (kg/km)	CONDUCTOR RESISTANCE AT 20 °C (MAX.) Ω/Km	CURRENT CARRING CAPACITY AT 30 °C IN FREE AIR (1 PHASE) Amp.	CURRENT CARRING CAPACITY AT 30 °C IN FREE AIR (3 PHASE) Amp.
2	0.50	0.5	0.6	5.2	40	39.0	3	3
2	0.75	0.5	0.6	5.7	49	26.0	6	6
3	0.50	0.5	0.6	5.6	48	39.0	3	3
3	0.75	0.5	0.6	6.0	60	26.0	6	6
4	0.50	0.5	0.6	6.1	58	39.0	3	3
4	0.75	0.5	0.6	6.6	71	26.0	6	6

Correction factors for ambient temperature.

Ambient temperature	35	40	45	50	55
Correction factor	0.96	0.92	0.87	0.71	0.50

Packing: Packing is available in Coil/Reel/Drum with Meters/Yards/Feet.
Other lengths are available upon request.

Special Feature*: This cable is also available with Rated temperature 105 °C confirming to UL-Standard.

CENELEC CODE:

USAGE	70°C	90°C
Light duty	H03VV-F	H03V2V2-F

MULTI CORE FLEXIBLE PVC INSULATED PVC SHEATHED CABLE
RATED TEMPERATURE* 70°C & 90°C

SPECIFICATION: BS EN 50525-2-11 & IEC 60227-5

APPLICATION

These cables are useful for use in dry or damp locations for medium duties in domestic premises, kitchens and offices. Suitable for washing machines, refrigerators etc. Can be used for cooking and heating appliances provided that the cable does not come in contact with the hot parts.

CONSTRUCTION

Conductor	Plain annealed copper flexible as per class 5 of IEC 60228.
Insulation	PVC Type TI 2 Rated 70°C as per BS EN 50363-3. PVC Type TI 3 Rated 90°C as per BS EN 50363-3.
Color Code	Two core: Blue & Brown. Three core: Green/Yellow, Blue & Brown. Four core: Green/Yellow, Black, and Blue & Brown. Five core: Green/Yellow, Black, Blue, Brown & Black.
Assembly	Cores twisted together to make a round assembly with fillers wherever necessary.
Outer Sheath	PVC Type TM 2 as per BS EN 50363-4-1 & PVC Type TM 3 as per BS EN 50363-4-1. Outer Sheath color shall be White, But any other color can be supplied on request.

TECHNICAL DATA

Voltage Grade	300/500 V R.M.S.
Flame Retardant	IEC 60332-1
Minimum Bending Radius	6 x Over all Diameter.
Max. Short Circuit Temperature	160°C (max. duration 5 sec.)

TABLE

NO OF CORE	CONDUCTOR CRESS SECTIONAL AREA (mm²)	INSULATION THICKNESS (mm)	OUTER SHEATH THICKNESS (mm)	APPROX OVERALL DIA. (mm)	APPROX. WEIGHT (kg/km)	CONDUCTOR RESISTANCE AT 20 °C (MAX.) Ω/Km	CURRENT CARRING CAPACITY AT 30 °C IN FREE AIR (1 PHASE) Amp.	CURRENT CARRING CAPACITY AT 30 °C IN FREE AIR (3 PHASE) Amp.
2	0.75	0.6	0.8	6.5	61	26.0	6	6
2	1.0	0.6	0.8	6.8	70	19.5	10	10
2	1.5	0.7	0.8	7.7	91	13.3	16	16
2	2.5	0.8	1.0	9.4	139	7.98	25	20
2	4	0.8	1.1	10.7	192	4.95	32	25
3	0.75	0.6	0.8	6.9	73	26.0	6	6
3	1.0	0.6	0.8	7.2	85	19.5	10	10
3	1.5	0.7	0.9	8.4	114	13.3	16	16
3	2.5	0.8	1.1	10.2	175	7.98	25	20
3	4	0.8	1.2	11.6	244	4.95	32	25
4	0.75	0.6	0.9	7.7	91	26.0	6	6
4	1.0	0.6	0.9	8.1	106	19.5	10	10
4	1.5	0.7	1.0	9.3	142	13.3	16	16
4	2.5	0.8	1.1	11.1	211	7.98	25	20
4	4	0.8	1.2	12.6	297	4.95	32	25
5	0.75	0.6	0.9	8.4	112	26.0	6	6
5	1.0	0.6	0.9	8.8	131	26.0	10	10
5	1.5	0.7	1.1	10.4	181	19.5	16	16
5	2.5	0.8	1.2	12.4	268	13.3	25	20
5	4	0.8	1.4	13.8	356	4.95	32	25

Correction factors for ambient temperature.

Ambient temperature	35	40	45	50	55
Correction factor	0.96	0.92	0.87	0.71	0.50

Packing: Packing is available in Coil/Reel/Drum with Meters/Yards/Feet. Other lengths are available upon request.
Special Feature*: This cable is also available with Rated temperature 105 °C confirming to UL-Standard.

CENELEC CODE:

USAGE	70°C	90°C	USAGE	70°C	90°C
Light duty	H03VV-F	H03V2V2-F	Ordinary Duty	H05VV-F	H05V2V2-F

MULTI CORE FLEXIBLE PVC INSULATED PVC SHEATHED CABLE RATED TEMPERATURE 70°C & 90°C

SPECIFICATION: Adapted from VDE-0281 & VDE-0250

APPLICATION

This flexible control cable is suitable for all electrical installations in dry or humid locations, under industrial conditions, but not in the open air. Applications include machine tool manufacture, power stations, heating and air conditioning installations etc.

CONSTRUCTION

Conductor	Plain annealed copper flexible as per class 5 of IEC 60228.
Insulation	PVC Type TI 2 Rated 70°C as per BS EN 50363-3. PVC Type TI 3 Rated 90°C as per BS EN 50363-3.
Color Code	Two core: Blue & Brown. Three core: Green/Yellow, Blue & Brown. Four core: Green/Yellow, Black, and Blue & Brown. Five core: Green/Yellow, Black, Blue, Brown & Black.
Assembly	Cores twisted together to make a round assembly with fillers wherever necessary.
Outer Sheath	PVC Type TM 2 as per BS EN 50363-4-1 & PVC Type TM 3 as per BS EN 50363-4-1. Outer Sheath color shall be White, But any other color can be supplied on request.

TECHNICAL DATA

Voltage Grade	450/750 V R.M.S.
Flame Retardant	IEC 60332-1
Minimum Bending Radius	12 x Over all Diameter.
Max. Short Circuit Temperature	160ºC (max. duration 5 sec.)

TABLE

NO OF CORE	CONDUCTOR CRESS SECTIONAL AREA (mm²)	INSULATION THICKNESS (mm)	OUTER SHEATH THICKNESS (mm)	APPROX OVERALL DIA. (mm)	APPROX. WEIGHT (kg/km)	CONDUCTOR RESISTANCE AT 20 °C (MAX.) Ω/Km	CURRENT CARRING CAPACITY AT 30 °C IN AIR Amp.
2	6	0.8	1.0	12.0	257	3.30	44
2	10	1.0	1.1	14.7	402	1.91	60
2	16	1.0	1.1	17.5	589	1.21	79
2	25	1.2	1.2	21.4	896	0.780	104
2	35	1.2	1.2	24.4	1204	0.554	127
3	6	0.8	1.0	12.8	322	3.30	43
3	10	0.8	1.1	16.4	534	1.91	59
3	16	1.0	1.2	19.3	781	1.21	78
3	25	1.2	1.2	22.8	1148	0.780	102
3	35	1.2	1.4	26.0	1550	0.554	125
4	6	0.8	1.0	14.0	396	3.30	42
4	10	1.0	1.2	17.9	657	1.91	57
4	16	1.0	1.2	21.0	965	1.21	76
4	25	1.2	1.4	25.6	1465	0.780	100
4	35	1.2	1.4	28.5	1932	0.554	122
5	6	0.8	1.1	15.4	363	3.30	41
5	10	1.0	1.2	20.3	818	1.91	56
5	16	1.0	1.2	23.1	1158	1.21	75
5	25	1.2	1.4	28.1	1761	0.780	98
5	35	1.2	1.6	32.0	2378	0.554	120

Correction factors for ambient temperature.

Ambient temperature	35	40	45	50	55	60	65
Correction factor	0.94	0.87	0.79	0.71	0.61	0.50	0.35

Packing: Packing is available in Coil/Reel/Drum with Meters/Yards/Feet.
Other lengths are available upon request.

PVC INSULATED PVC SHEATHED FLAT CABLES WITH EARTH CONTINUITY (E.C.C)

SPECIFICATION: BS EN 50525-2-11

APPLICATION

Mainly for domestic and industrial wiring where there is little risk of mechanical damage.

CONSTRUCTION

Conductor	Plain annealed Solid copper as per Class 1 to IEC 60228.
Insulation	PVC Type TI-1 as per BS EN 50363-3. Two Cores lay parallel with bare ECC at center and sheathed.
Color Code	Blue & Brown
Over Sheath	PVC Type TM-1 as per BS EN 50363-4.1.Outer Sheath color shall be Grey .Other color are also available on request.

TECHNICAL DATA

Temperature Range	- 25°C to 70°C.
Voltage Rating	300/500 V_{RMS}

TABLE

NO OF CORE	CONDUCTOR CROSS SECTIONAL AREA (mm^2)	ECC CONDUCTOR CROSS SECTIONAL AREA (mm^2)	INSULATION THICKNESS (mm)	OUTER SHEATH THICKNESS (mm)	APPROX OVERALL DIA. LOWER LIMIT (mm)	APPROX OVERALL DIA. UPPER LIMIT (mm)	APPROX. WEIGHT (kg/km)	CONDUCTOR RESISTANCE AT 20 °C (MAX.) Ω/Km	*CURRENT CARRING CAPACITY AT 30 °C IN FREE AIR (1 PHASE) Amp.	*CURRENT CARRING CAPACITY AT 30 °C IN FREE AIR (3 PHASE) Amp.
2	1.5	1	0.7	0.9	4.2 X 8.0	5.0 X 9.2	88	18.1	20	17
2	2.5	1.5	0.7	0.9	5.2 X 9.6	6.0 X 11.2	135	12.1	27	24

Packing: Packing is available in Coil/Reel/Drum with Meters/Yards/Feet.
Other lengths are available upon request.

Note: Detail Please Refer the Technical Information Section.

PVC INSULATED PVC SHEATHED CABLE FLAT TWIN AND THREE CORE

SPECIFICATION: BS EN50252-2-31

APPLICATION

These cables are used in dry or damp locations for fixed installation. Suitable for Installation in walls, on boards or embedded in plaster.

CONSTRUCTION

Conductor	Plain annealed copper as per class 1 or class 2 of IEC-60228.
Insulation	PVC Type TI-1 as per BS EN 50363-3. Two Cores laid parallel with bare ECC at center and sheathed.
Color Code	Twin core: Red & Black. Three core: Red, Yellow (Centre core) and Blue.
Over Sheath	PVC Type TM-1 as per BS EN 50363-4.1.Outer Sheath color shall be Grey .Other color are also available on request.

TECHNICAL DATA

Temperature Range	- 25°C to 70°C.
Voltage Rating	300/500 V_{RMS}

TABLE

NO OF CORE	CONDUCTOR CROSS SECTIONAL AREA (mm²)	CLASS OF CONDUCTOR	INSULATION THICKNESS (mm)	OUTER SHEATH THICKNESS (mm)	APPROX OVERALL DIA. (mm)	APPROX. WEIGHT (kg/km)	CONDUCTOR RESISTANCE AT 20 °C (MAX.) Ω/Km	*CURRENT CARRING CAPACITY AT 20 °C IN GROUND Amp.	*CURRENT CARRING CAPACITY AT 30 °C IN AIR Amp.
2	1.0	1	0.6	0.9	6.8 X 4.4	53	18.1	--	--
2	1.5	1	0.7	0.9	7.7 X 4.8	70	12.1	32	20
2	2.5	1	0.8	0.9	8.9 X 5.4	100	7.41	42	27
2	4	1	0.8	1.0	10.1 X 6.1	139	4.61	54	37
2	6	1	0.8	1.0	11.1 X 6.6	185	3.08	68	48
2	1.5	2	0.7	0.9	8.1 X 5.0	76	12.1	32	20
2	2.5	2	0.8	1.0	9.5 X 5.9	110	7.41	42	27
2	4	2	0.8	1.0	10.7 X 6.4	148	4.61	54	37
2	6	2	0.8	1.1	12.0 X 7.2	201	3.08	68	48
2	10	2	1.0	1.2	14.9 X 8.8	319	1.83	90	66
2	16	2	1.0	1.3	17.3 X 10.1	461	1.15	116	89
3	1.0	1	0.6	0.9	9.2 X 4.4	76	18.1	--	--
3	1.5	1	0.7	0.9	10.5 X 4.8	102	12.1	26	18
3	2.5	1	0.8	1.0	12.6 X 5.7	152	7.41	34	35
3	4	2	0.8	1.1	15.1 X 6.7	224	4.61	44	34
3	6	2	0.8	1.1	16.8 X 7.2	296	3.08	56	43
3	10	2	1.0	1.2	21.1 X 8.8	474	1.83	75	60
3	16	2	1.0	1.3	24.5 X 10.1	686	1.15	98	80

Packing: Packing is available in Coil/Reel/Drum with Meters/Yards/Feet.
Other lengths are available upon request.

Note: Detail Please Refer the Technical Information Section.

POWER AND CONTROL, SINGLE & MULTI CORE, UNARMORED CABLE

CU/ XLPE/PVC SPECIFICATION: IEC 60502-1

APPLICATION

Can be used indoors or outdoors in the cable duct, cable trays, conduits or underground in the power and switching station, local distributers system Industrial plant and commercial building

CONSTRUCTION

Conductor	Stranded annealed plain circular copper to Class 2 of IEC 60228.
Insulation	Cross linked Polyethylene (XLPE) to IEC 60502-1
Color Code	Single Core - Black or Natural Two Core - Red & Black Three Core - Red, Yellow & Blue Four Core - Red, Yellow, Blue & Black for Cable Five & above Core - Black cores with Number printing
Cabling#	Cores are assembled in a concentric layer with filler (if necessary) for up to 4 Cores. Assembly with 5 cores or more is wrapped with a polyester tape with filler (if necessary)..
Over sheath	Flame retardant PVC Type ST-2 as per IEC 60502-1 and confirming to IEC 60332-1.The color of the sheath shall be Black. Other sheath colors are also available on request.
Marking on the sheath	CU/XLPE/PVC NO OF CORES C X....MM2 600/1000V MESC YEAR IEC 60502-1 LENGTH METER MARKING

TECHNICAL DATA

Temperature Range	- 5°C to 90°C
Voltage Rating	600/1000 V
Voltage Withstand (V/Minute)	3500 RMS / 5 or 8400 DC / 5
Min. Bending Radius (mm)	4 X Cable Overall Diameter (Up to 25 mm Over all Diameter of cable) 6 X Cable Overall Diameter (Above 25 mm Over all Diameter of cable)
Max Short Circuit Temp (°C)	250 (for 5 Second Maximum)

TABLE

No Of Core (Nos.)	Cond-Uctor Cross Sect Ional Area (Mm^2)	Insu-Lation Thick-Ness (Mm)	Outer Sheath Thick-Ness (Mm)	Approx Over-All Dia. (Mm)	Approx. Weight Of Cable (Kg/Km)	Dc Cond. Res. At 20 Deg. C Max. (Ohm/Km)	Ac Cond. Res. At 90 Deg. C Max. (Ohm/Km)	Inductance At 50 60Hz (Milih /Km)	Inductive Reactance At 50 - 60Hz (Ohm/Km)	Impedance At 50 - 60Hz & At 90 Deg. C (Ohm/Km)	Cond. Short Circuit Current Rating (Kamp/Sec)	*Current Carring Capacity At 20 °C In Ground Amp.	*Current Carring Capacity At 30 °C In Air Amp.
1	1.5	0.7	1.4	5.9	51	12.1	15.43	0.336	0.106	15.43	0.21	38	32
1	2.5	0.7	1.4	6.3	63	7.41	9.45	0.314	0.099	9.449	0.35	51	43
1	4	0.7	1.4	6.8	80	4.61	5.88	0.295	0.093	5.879	0.56	66	56
1	6	0.7	1.4	7.4	105	3.08	3.93	0.281	0.088	3.928	0.85	82	71
1	10	0.7	1.4	8.3	150	1.83	2.33	0.266	0.084	2.335	1.41	109	96
1	16	0.7	1.4	9.3	211	1.15	1.47	0.255	0.080	1.469	2.26	139	128
1	25	0.9	1.4	11.0	312	0.727	0.927	0.255	0.080	0.930	3.53	179	173
1	35	0.9	1.4	12.1	411	0.524	0.668	0.248	0.078	0.673	4.95	213	212
1	50	1.0	1.4	13.7	539	0.387	0.493	0.245	0.077	0.499	7.07	251	258
1	70	1.1	1.4	15.7	749	0.268	0.342	0.242	0.076	0.268	9.90	307	328
1	95	1.1	1.5	17.7	1007	0.193	0.25	0.236	0.074	0.257	13.44	366	404
1	120	1.2	1.5	19.9	1271	0.153	0.20	0.228	0.072	0.208	16.98	416	471
1	150	1.4	1.6	22.1	1560	0.124	0.16	0.225	0.071	0.173	21.22	465	541

No Of Core (Nos.)	Cond-Uctor Cross Sect Ional Area (Mm^2)	Insu-Lation Thick-Ness (Mm)	Outer Sheath Thick-Ness (Mm)	Approx Over-All Dia. (Mm)	Approx. Weight Of Cable (Kg/Km)	Dc Cond. Res. At 20 Deg. C Max. (Ohm/Km)	Ac Cond. Res. At 90 Deg. C Max. (Ohm/Km)	Inductance At 50 60Hz (Milih /Km)	Inductive Reactance At 50 - 60Hz (Ohm/Km)	Impedance At 50 - 60Hz & At 90 Deg. C (Ohm/Km)	Cond. Short Circuit Current Rating (Kamp/Sec)	*Current Carring Capacity At 20 °C In Ground Amp.	*Current Carring Capacity At 30 °C In Air Amp.
2	1.5	0.7	1.8	9.8	133	12.1	15.43	0.336	0.106	15.43	0.21	37	26
3	1.5	0.7	1.8	10.3	154	12.1	15.43	0.336	0.106	15.43	0.21	30	24
3	2.5	0.7	1.8	11.2	196	7.41	9.45	0.314	0.099	9.449	0.35	40	32
3	4	0.7	1.8	12.3	256	4.61	5.88	0.295	0.093	5.879	0.56	52	42
3	6	0.7	1.8	13.6	340	3.08	3.93	0.281	0.088	3.928	0.85	64	53
3	10	0.7	1.8	15.5	490	1.83	2.33	0.266	0.084	2.335	1.41	86	73
3	16	0.7	1.8	17.7	698	1.15	1.47	0.255	0.080	1.469	2.26	111	96
3	25	0.9	1.8	21.3	1047	0.727	0.927	0.255	0.080	0.930	3.53	143	130
3	35	0.9	1.8	23.8	1388	0.524	0.668	0.248	0.078	0.673	4.95	173	160
3	50	1.0	1.8	27.1	1825	0.387	0.493	0.245	0.077	0.499	7.07	205	195
3	70	1.1	1.9	31.6	2562	0.268	0.342	0.242	0.076	0.268	9.90	252	247
3	95	1.1	2.0	35.8	3436	0.193	0.25	0.236	0.074	0.257	13.44	303	305
4	1.5	0.7	1.8	11.1	182	12.1	15.43	0.336	0.106	15.43	0.21	30	24
4	2.5	0.7	1.8	12.1	235	7.41	9.45	0.314	0.099	9.449	0.35	40	32
4	4	0.7	1.8	13.3	311	4.61	5.88	0.295	0.093	5.879	0.56	52	42
4	6	0.7	1.8	14.7	416	3.08	3.93	0.281	0.088	3.928	0.85	64	53
4	10	0.7	1.8	16.9	611	1.83	2.33	0.266	0.084	2.335	1.41	86	73
4	16	0.7	1.8	19.4	881	1.15	1.47	0.255	0.080	1.469	2.26	111	96
4	25	0.9	1.8	23.4	1326	0.727	0.927	0.255	0.080	0.930	3.53	143	130
4	35	0.9	1.8	26.1	1769	0.524	0.668	0.248	0.078	0.673	4.95	173	160
4	50	1.0	1.8	29.9	2330	0.387	0.493	0.245	0.077	0.499	7.07	205	195
4	70	1.1	2.0	35.0	3286	0.268	0.342	0.242	0.076	0.268	9.90	252	247
4	95	1.1	2.1	39.6	4411	0.193	0.25	0.236	0.074	0.257	13.44	303	305
5	1.5	0.7	1.8	12.1	200	12.1	15.43	0.336	0.106	15.43	0.21	21	18
5	2.5	0.7	1.8	13.2	256	7.41	9.45	0.314	0.099	9.449	0.35	28	24
5	4	0.7	1.8	14.6	342	4.61	5.88	0.295	0.093	5.879	0.56	36	31
5	6	0.7	1.8	16.2	460	3.08	3.93	0.281	0.088	3.928	0.85	45	39
5	10	0.7	1.8	18.6	675	1.83	2.33	0.266	0.084	2.335	1.41	60	54
5	16	0.7	1.8	21.4	978	1.15	1.47	0.255	0.080	1.469	2.26	77	72
5	25	0.9	1.8	25.9	1474	0.727	0.927	0.255	0.080	0.930	3.53	100	97
5	35	0.9	1.8	29.0	1967	0.524	0.668	0.248	0.078	0.673	4.95	121	120
5	50	1.0	1.9	33.4	2606	0.387	0.493	0.245	0.077	0.499	7.07	143	146
6	1.5	0.7	1.8	13.0	228	12.1	15.43	0.336	0.106	15.43	0.21	30	24
7	1.5	0.7	1.8	13.0	244	12.1	15.43	0.336	0.106	15.43	0.21	18	15
8	1.5	0.7	1.8	14.4	278	12.1	15.43	0.336	0.106	15.43	0.21	18	15
10	1.5	0.7	1.8	16.1	333	12.1	15.43	0.336	0.106	15.43	0.21	15	13
12	1.5	0.7	1.8	16.6	391	12.1	15.43	0.336	0.106	15.43	0.21	15	13
14	1.5	0.7	1.8	17.4	428	12.1	15.43	0.336	0.106	15.43	0.21	13	12
15	1.5	0.7	1.8	18.3	456	12.1	15.43	0.336	0.106	15.43	0.21	13	12
16	1.5	0.7	1.8	18.3	476	12.1	15.43	0.336	0.106	15.43	0.21	13	12
18	1.5	0.7	1.8	19.2	527	12.1	15.43	0.336	0.106	15.43	0.21	13	12
19	1.5	0.7	1.8	19.2	543	12.1	15.43	0.336	0.106	15.43	0.21	12	10

No Of Core (Nos.)	Cond-Uctor Cross Sect Ional Area (Mm^2)	Insu-Lation Thick-Ness (Mm)	Outer Sheath Thick-Ness (Mm)	Approx Over-All Dia. (Mm)	Approx. Weight Of Cable (Kg/Km)	Dc Cond. Res. At 20 Deg. C Max. (Ohm/Km)	Ac Cond. Res. At 90 Deg. C Max. (Ohm/Km)	Inductance At 50 60Hz (Milih /Km)	Inductive Reactance At 50 - 60Hz (Ohm/Km)	Impedance At 50 - 60Hz & At 90 Deg. C (Ohm/Km)	Cond. Short Circuit Current Rating (Kamp/Sec)	*Current Carring Capacity At 20 °C In Ground Amp.	*Current Carring Capacity At 30 °C In Air Amp.
20	1.5	0.7	1.8	20.2	572	12.1	15.43	0.336	0.106	15.43	0.21	12	10
22	1.5	0.7	1.8	21.3	632	12.1	15.43	0.336	0.106	15.43	0.21	12	10
24	1.5	0.7	1.8	22.3	672	12.1	15.43	0.336	0.106	15.43	0.21	10	9
25	1.5	0.7	1.8	22.3	693	12.1	15.43	0.336	0.106	15.43	0.21	10	9
26	1.5	0.7	1.8	22.3	714	12.1	15.43	0.336	0.106	15.43	0.21	10	9
30	1.5	0.7	1.8	23.6	806	12.1	15.43	0.336	0.106	15.43	0.21	10	9
32	1.5	0.7	1.8	24.4	854	12.1	15.43	0.336	0.106	15.43	0.21	10	9
35	1.5	0.7	1.8	25.4	925	12.1	15.43	0.336	0.106	15.43	0.21	10	9
36	1.5	0.7	1.8	25.4	939	12.1	15.43	0.336	0.106	15.43	0.21	10	9
40	1.5	0.7	1.8	26.4	1032	12.1	15.43	0.336	0.106	15.43	0.21	9	8
50	1.5	0.7	1.8	29.5	1254	12.1	15.43	0.336	0.106	15.43	0.21	9	8
61	1.5	0.7	1.9	31.8	1513	12.1	15.43	0.336	0.106	15.43	0.21	7	7
6	2.5	0.7	1.8	14.3	298	7.41	9.45	0.314	0.099	9.449	0.35	28	24
7	2.5	0.7	1.8	14.3	324	7.41	9.45	0.314	0.099	9.449	0.35	24	21
8	2.5	0.7	1.8	15.9	369	7.41	9.45	0.314	0.099	9.449	0.35	24	21
10	2.5	0.7	1.8	17.8	445	7.41	9.45	0.314	0.099	9.449	0.35	20	17
12	2.5	0.7	1.8	18.3	520	7.41	9.45	0.314	0.099	9.449	0.35	20	17
14	2.5	0.7	1.8	19.2	587	7.41	9.45	0.314	0.099	9.449	0.35	18	16
15	2.5	0.7	1.8	20.2	614	7.41	9.45	0.314	0.099	9.449	0.35	18	16
16	2.5	0.7	1.8	20.2	643	7.41	9.45	0.314	0.099	9.449	0.35	18	16
18	2.5	0.7	1.8	21.3	718	7.41	9.45	0.314	0.099	9.449	0.35	18	16
19	2.5	0.7	1.8	21.3	744	7.41	9.45	0.314	0.099	9.449	0.35	16	14
20	2.5	0.7	1.8	22.5	787	7.41	9.45	0.314	0.099	9.449	0.35	16	14
22	2.5	0.7	1.8	23.6	851	7.41	9.45	0.314	0.099	9.449	0.35	16	14
24	2.5	0.7	1.8	24.8	923	7.41	9.45	0.314	0.099	9.449	0.35	14	12
25	2.5	0.7	1.8	24.8	953	7.41	9.45	0.314	0.099	9.449	0.35	14	12
26	2.5	0.7	1.8	24.8	984	7.41	9.45	0.314	0.099	9.449	0.35	14	12
30	2.5	0.7	1.8	26.2	1111	7.41	9.45	0.314	0.099	9.449	0.35	14	12
32	2.5	0.7	1.8	27.3	1184	7.41	9.45	0.314	0.099	9.449	0.35	14	12
35	2.5	0.7	1.8	28.3	1278	7.41	9.45	0.314	0.099	9.449	0.35	14	12
36	2.5	0.7	1.8	28.3	1307	7.41	9.45	0.314	0.099	9.449	0.35	14	12
40	2.5	0.7	1.8	29.5	1438	7.41	9.45	0.314	0.099	9.449	0.35	12	11
50	2.5	0.7	1.9	33.3	1781	7.41	9.45	0.314	0.099	9.449	0.35	12	11
61	2.5	0.7	2.0	35.7	2143	7.41	9.45	0.314	0.099	9.449	0.35	10	9

*More detail please refers the "Technical Information" Section.
Not Applicable for single core cable

Note: Other Special Sheath Materials are also available with IEC 60332-3 CAT C, UV /Sunlight resistance/ Oil Resistance.

Sector shape conductor cable is available from 25mm²

POWER & CONTROL, MULTI CORE, ARMORED CABLE

CU/ XLPE/PVC/SWA/PVC SPECIFICATION: IEC 60502-1

APPLICATION

Can be used indoors or outdoors in the cable duct, cable trays, conduits or underground location under mechanical stresses in the power and switching station, local distribution system, industrial plant and commercial building.

CONSTRUCTION

Conductor	Stranded annealed plain circular copper to Class 2 of IEC 60228.
Insulation	Cross linked Polyethylene (XLPE) to IEC 60502-1
Color Code	Two Core - Red & Black Three Core- Red, Yellow & Blue Four Core - Red, Yellow, Blue & Black Five & above Core - Black cores with Number printing
Cabling	Cores are assembled in a concentric layer with filler (if necessary) for up to 4 Cores. Assembly with 5 cores or more is wrapped with a polyester tape with filler (if necessary).
Inner Sheath	Flame Retardant PVC Compatible to Conductor Operating Temperature In Black Color.
Wire Armor	A single layer of galvanized steel wire armor to BS EN 10257-1 is applied over the Inner sheath.
Over sheath	Flame retardant PVC Type ST-2 as per IEC 60502-1 and confirming to IEC 60332-1.The color of the sheath shall be Black. Other sheath colors are also available on request.
Marking on the sheath	CU/XLPE/SWA/PVC NO OF CORES C X....MM2 600/1000V MESC YEAR IEC 60502-1 LENGTH METER MARKING

TECHNICAL DATA

Temperature Range	- 5°C to 90°C
Voltage Rating	600/1000 V
Voltage Withstand (V/Minute)	3500 RMS / 5 or 8400 DC / 5
Min. Bending Radius (mm)	12 X Cable Overall Diameter
Max Short Circuit Temp (°C)	250 (for 5 Second Maximum)

TABLE

NO OF CORE (Nos.)	CONDUCTOR CROSS SECTIONAL AREA (mm^2)	INSULATION THICKNESS (mm)	INNER SHEATH THICKNESS (mm)	DIA. OVER INNER SHEATH (mm)	ARMOR WIRE DIA. (mm)	DIA. OVER ARMOR (mm)	OUTER SHEATH THICKNESS (mm)	APPROX OVERALL DIA. (mm)	APPROX. WEIGHT OF CABLE (kg/km)	DC Cond. Res. at 20 Deg. C Max. (Ohm/Km)	AC Cond. Res. at 90 Deg. C Max. (Ohm/Km)	Inductance at 50 60Hz (miliH/Km)	Inductive Reactance at 50 - 60Hz (Ohm/Km)	Impedance at 50 - 60Hz & at 90 Deg. C (Ohm/Km)	Cond. Short Circuit current Rating (Kamp/Sec)	*CURRENT CARRING CAPACITY AT 20 °C IN GROUND Amp.	*CURRENT CARRING CAPACITY AT 30 °C IN AIR Amp.
2	1.5	0.7	1.0	8.4	0.9	10.2	1.8	13.8	353	12.1	15.43	0.336	0.106	15.43	0.21	37	26
2	2.5	0.7	1.0	9.2	0.9	11.0	1.8	14.6	400	7.41	9.45	0.314	0.099	9.449	0.35	49	35
2	4	0.7	1.0	10.2	0.9	12.0	1.8	15.6	467	4.61	5.88	0.295	0.093	5.879	0.56	67	46
2	6	0.7	1.0	11.4	0.9	13.2	1.8	16.8	559	3.08	3.93	0.281	0.088	3.928	0.85	78	59
2	10	0.7	1.0	13.2	1.25	15.7	1.8	19.3	808	1.83	2.33	0.266	0.084	2.335	1.41	103	80
2	16	0.7	1.0	15.3	1.25	17.8	1.8	21.4	1020	1.15	1.47	0.255	0.080	1.469	2.26	131	107
2	25	0.9	1.0	18.6	1.6	21.8	1.8	25.4	1518	0.727	0.927	0.255	0.080	0.930	3.53	168	145
2	35	0.9	1.0	20.9	1.6	24.1	1.8	27.7	1850	0.524	0.668	0.248	0.078	0.673	4.95	199	177
2	50	1.0	1.0	24.0	1.6	27.2	1.8	30.8	2284	0.387	0.493	0.245	0.077	0.499	7.07	238	216
2	70	1.1	1.0	27.9	1.6	31.1	2.0	35.1	2991	0.268	0.342	0.242	0.076	0.268	9.90	292	274
2	95	1.1	1.2	32.0	2.0	36.0	2.1	40.2	4071	0.193	0.25	0.236	0.074	0.257	13.44	349	339
3	1.5	0.7	1.0	8.9	0.9	10.7	1.8	14.3	382	12.1	15.43	0.336	0.106	15.43	0.21	30	24
3	2.5	0.7	1.0	9.8	0.9	11.6	1.8	15.2	444	7.41	9.45	0.314	0.099	9.449	0.35	40	32
3	4	0.7	1.0	10.9	0.9	12.7	1.8	16.3	526	4.61	5.88	0.295	0.093	5.879	0.56	52	42
3	6	0.7	1.0	12.2	0.9	14.0	1.8	17.6	638	3.08	3.93	0.281	0.088	3.928	0.85	64	53
3	10	0.7	1.0	14.1	1.25	16.6	1.8	20.2	932	1.83	2.33	0.266	0.084	2.335	1.41	86	73
3	16	0.7	1.0	16.3	1.25	18.8	1.8	22.4	1203	1.15	1.47	0.255	0.080	1.469	2.26	111	96
3	25	0.9	1.0	19.9	1.6	23.1	1.8	26.7	1788	0.727	0.927	0.255	0.080	0.930	3.53	143	130
3	35	0.9	1.0	22.4	1.6	25.6	1.8	29.2	2209	0.524	0.668	0.248	0.078	0.673	4.95	173	160
3	50	1.0	1.0	25.7	1.6	28.9	1.9	32.7	2778	0.387	0.493	0.245	0.077	0.499	7.07	205	195
3	70	1.1	1.2	30.4	2.0	34.4	2.0	38.4	3958	0.268	0.342	0.242	0.076	0.268	9.90	252	247
3	95	1.1	1.2	34.4	2.0	38.4	2.2	42.8	5013	0.193	0.25	0.236	0.074	0.257	13.44	303	305
4	1.5	0.7	1.0	9.7	0.9	11.5	1.8	15.1	425	12.1	15.43	0.336	0.106	15.43	0.21	30	24
4	2.5	0.7	1.0	10.7	0.9	12.5	1.8	16.1	499	7.41	9.45	0.314	0.099	9.449	0.35	40	32
4	4	0.7	1.0	11.9	0.9	13.7	1.8	17.3	602	4.61	5.88	0.295	0.093	5.879	0.56	52	42
4	6	0.7	1.0	13.3	1.25	15.8	1.8	19.4	834	3.08	3.93	0.281	0.088	3.928	0.85	64	53
4	10	0.7	1.0	15.5	1.25	18.0	1.8	21.6	1091	1.83	2.33	0.266	0.084	2.335	1.41	86	73
4	16	0.7	1.0	18.0	1.6	21.2	1.8	24.8	1562	1.15	1.47	0.255	0.080	1.469	2.26	111	96
4	25	0.9	1.0	22.0	1.6	25.2	1.8	28.8	2144	0.727	0.927	0.255	0.080	0.930	3.53	143	130
4	35	0.9	1.0	24.7	1.6	27.9	1.9	31.7	2674	0.524	0.668	0.248	0.078	0.673	4.95	173	160
4	50	1.0	1.0	28.5	1.6	31.7	2.0	35.7	3399	0.387	0.493	0.245	0.077	0.499	7.07	205	195
4	70	1.1	1.2	33.6	2.0	37.6	2.1	41.8	4811	0.268	0.342	0.242	0.076	0.268	9.90	252	247
4	95	1.1	1.2	38.0	2.0	42.0	2.3	46.6	6171	0.193	0.25	0.236	0.074	0.257	13.44	303	305
5	1.5	0.7	1.0	10.7	0.9	12.5	1.8	16.1	464	12.1	15.43	0.336	0.106	15.43	0.21	21	18
5	2.5	0.7	1.0	11.8	0.9	13.6	1.8	17.2	546	7.41	9.45	0.314	0.099	9.449	0.35	28	24
5	4	0.7	1.0	13.2	1.25	15.7	1.8	19.3	760	4.61	5.88	0.295	0.093	5.879	0.56	36	31
5	6	0.7	1.0	14.8	1.25	17.3	1.8	20.9	916	3.08	3.93	0.281	0.088	3.928	0.85	45	39
5	10	0.7	1.0	17.2	1.25	19.7	1.8	23.3	1204	1.83	2.33	0.266	0.084	2.335	1.41	60	54
5	16	0.7	1.0	20.0	1.6	23.2	1.8	26.8	1719	1.15	1.47	0.255	0.080	1.469	2.26	77	72
5	25	0.9	1.0	24.5	1.6	27.7	1.8	31.3	2372	0.727	0.927	0.255	0.080	0.930	3.53	100	97
5	35	0.9	1.0	27.6	1.6	30.8	1.9	34.6	2997	0.524	0.668	0.248	0.078	0.673	4.95	121	120
5	50	1.0	1.2	32.2	2.0	36.2	2.1	40.4	4086	0.387	0.493	0.245	0.077	0.499	7.07	143	146
6	1.5	0.7	1.0	11.6	0.9	13.4	1.8	17.0	512	12.1	15.43	0.336	0.106	15.43	0.21	30	24
7	1.5	0.7	1.0	11.6	0.9	13.4	1.8	17.0	528	12.1	15.43	0.336	0.106	15.43	0.21	18	15
8	1.5	0.7	1.0	13.0	1.25	15.5	1.8	19.1	684	12.1	15.43	0.336	0.106	15.43	0.21	18	15
10	1.5	0.7	1.0	14.7	1.25	17.2	1.8	20.8	789	12.1	15.43	0.336	0.106	15.43	0.21	15	13
12	1.5	0.7	1.0	15.2	1.25	17.7	1.8	21.3	860	12.1	15.43	0.336	0.106	15.43	0.21	15	13
14	1.5	0.7	1.0	16.0	1.25	18.5	1.8	22.1	918	12.1	15.43	0.336	0.106	15.43	0.21	13	12

NO OF CORE (Nos.)	CONDUCTOR CROSS SECTIONAL AREA (mm²)	INSULATION THICKNESS (mm)	INNER SHEATH THICKNESS (mm)	DIA. OVER INNER SHEATH (mm)	ARMOR WIRE DIA. (mm)	DIA. OVER ARMOR (mm)	OUTER SHEATH THICKNESS (mm)	APPROX OVERALL DIA. (mm)	APPROX. WEIGHT OF CABLE (kg/km)	DC Cond. Res. at 20 Deg. C Max. (Ohm/Km)	AC Cond. Res. at 90 Deg. C Max. (Ohm/Km)	Inductance at 50 60Hz (miliH/Km)	Inductive Reactance at 50 - 60Hz (Ohm/Km)	Impedance at 50 - 60Hz & at 90 Deg. C (Ohm/Km)	Cond. Short Circuit current Rating (Kamp/Sec)	*CURRENT CARRING CAPACITY AT 20 °C IN GROUND Amp.	*CURRENT CARRING CAPACITY AT 30 °C IN AIR Amp.
15	1.5	0.7	1.0	16.9	1.25	19.4	1.8	23.0	974	12.1	15.43	0.336	0.106	15.43	0.21	13	12
16	1.5	0.7	1.0	16.9	1.25	19.4	1.8	23.0	994	12.1	15.43	0.336	0.106	15.43	0.21	13	12
18	1.5	0.7	1.0	17.8	1.25	20.3	1.8	23.9	1070	12.1	15.43	0.336	0.106	15.43	0.21	13	12
19	1.5	0.7	1.0	17.8	1.25	20.3	1.8	23.9	1086	12.1	15.43	0.336	0.106	15.43	0.21	12	10
20	1.5	0.7	1.0	18.8	1.6	22.0	1.8	25.6	1274	12.1	15.43	0.336	0.106	15.43	0.21	12	10
22	1.5	0.7	1.0	19.9	1.6	23.1	1.8	26.7	1359	12.1	15.43	0.336	0.106	15.43	0.21	12	10
24	1.5	0.7	1.0	20.9	1.6	24.1	1.8	27.7	1451	12.1	15.43	0.336	0.106	15.43	0.21	10	9
25	1.5	0.7	1.0	20.9	1.6	24.1	1.8	27.7	1472	12.1	15.43	0.336	0.106	15.43	0.21	10	9
26	1.5	0.7	1.0	20.9	1.6	24.1	1.8	27.7	1493	12.1	15.43	0.336	0.106	15.43	0.21	10	9
30	1.5	0.7	1.0	22.2	1.6	25.4	1.8	29.0	1625	12.1	15.43	0.336	0.106	15.43	0.21	10	9
32	1.5	0.7	1.0	23.0	1.6	26.2	1.8	29.8	1696	12.1	15.43	0.336	0.106	15.43	0.21	10	9
35	1.5	0.7	1.0	24.0	1.6	27.2	1.8	30.8	1790	12.1	15.43	0.336	0.106	15.43	0.21	10	9
36	1.5	0.7	1.0	24.0	1.6	27.2	1.8	30.8	1818	12.1	15.43	0.336	0.106	15.43	0.21	10	9
40	1.5	0.7	1.0	25.0	1.6	28.2	1.9	32.0	1950	12.1	15.43	0.336	0.106	15.43	0.21	9	8
50	1.5	0.7	1.0	28.1	1.6	31.3	2.0	35.3	2306	12.1	15.43	0.336	0.106	15.43	0.21	9	8
61	1.5	0.7	1.2	30.6	2.0	34.6	2.1	38.8	2930	12.1	15.43	0.336	0.106	15.43	0.21	7	7
6	2.5	0.7	1.0	12.9	1.25	15.4	1.8	19.0	704	7.41	9.45	0.314	0.099	9.449	0.35	28	24
7	2.5	0.7	1.0	12.9	1.25	15.4	1.8	19.0	730	7.41	9.45	0.314	0.099	9.449	0.35	24	21
8	2.5	0.7	1.0	14.5	1.25	17.0	1.8	20.6	824	7.41	9.45	0.314	0.099	9.449	0.35	24	21
10	2.5	0.7	1.0	16.4	1.25	18.9	1.8	22.5	950	7.41	9.45	0.314	0.099	9.449	0.35	20	17
12	2.5	0.7	1.0	16.9	1.25	19.4	1.8	23.0	1037	7.41	9.45	0.314	0.099	9.449	0.35	20	17
14	2.5	0.7	1.0	17.8	1.25	20.3	1.8	23.9	1116	7.41	9.45	0.314	0.099	9.449	0.35	18	16
15	2.5	0.7	1.0	18.8	1.6	22.0	1.8	25.6	1315	7.41	9.45	0.314	0.099	9.449	0.35	18	16
16	2.5	0.7	1.0	18.8	1.6	22.0	1.8	25.6	1345	7.41	9.45	0.314	0.099	9.449	0.35	18	16
18	2.5	0.7	1.0	19.9	1.6	23.1	1.8	26.7	1459	7.41	9.45	0.314	0.099	9.449	0.35	18	16
19	2.5	0.7	1.0	19.9	1.6	23.1	1.8	26.7	1485	7.41	9.45	0.314	0.099	9.449	0.35	16	14
20	2.5	0.7	1.0	21.1	1.6	24.3	1.8	27.9	1567	7.41	9.45	0.314	0.099	9.449	0.35	16	14
22	2.5	0.7	1.0	22.2	1.6	25.4	1.8	29.0	1664	7.41	9.45	0.314	0.099	9.449	0.35	16	14
24	2.5	0.7	1.0	23.4	1.6	26.6	1.8	30.2	1781	7.41	9.45	0.314	0.099	9.449	0.35	14	12
25	2.5	0.7	1.0	23.4	1.6	26.6	1.8	30.2	1812	7.41	9.45	0.314	0.099	9.449	0.35	14	12
26	2.5	0.7	1.0	23.4	1.6	26.6	1.8	30.2	1842	7.41	9.45	0.314	0.099	9.449	0.35	14	12
30	2.5	0.7	1.0	24.8	1.6	28.0	1.9	31.8	2042	7.41	9.45	0.314	0.099	9.449	0.35	14	12
32	2.5	0.7	1.0	25.9	1.6	29.1	1.9	32.9	2146	7.41	9.45	0.314	0.099	9.449	0.35	14	12
35	2.5	0.7	1.0	26.9	1.6	30.1	1.9	33.9	2262	7.41	9.45	0.314	0.099	9.449	0.35	14	12
36	2.5	0.7	1.0	26.9	1.6	30.1	1.9	33.9	2299	7.41	9.45	0.314	0.099	9.449	0.35	14	12
40	2.5	0.7	1.0	28.1	1.6	31.3	2.0	35.3	2479	7.41	9.45	0.314	0.099	9.449	0.35	12	11
50	2.5	0.7	1.2	32.1	2.0	36.1	2.1	40.3	3252	7.41	9.45	0.314	0.099	9.449	0.35	12	11
61	2.5	0.7	1.2	34.3	2.0	38.3	2.2	42.7	3718	7.41	9.45	0.314	0.099	9.449	0.35	10	9

*Detail Please Refer the Technical Information Section.

Note: Other Special Sheath Materials are also available with IEC 60332-3 CAT C, UV /Sunlight resistance/ Oil Resistance.

Sector shape conductor cable is available from 25mm²

POWER & CONTROL, MULTI CORE, SCREENED CABLE

CU/ XLPE/PVC/CUT/PVC SPECIFICATION: IEC 60502-1

APPLICATION

Can be used indoors or outdoors in the cable duct, cable trays, conduits or underground in power and switching station, local distribution system, industrial plant and commercial building.

CONSTRUCTION

Conductor	Stranded annealed plain circular copper to Class 2 of IEC 60228.
Insulation	Cross linked Polyethylene (XLPE) to IEC 60502-1
Color Code	Two Core - Red & Black Three Core- Red, Yellow & Blue Four Core - Red, Yellow, Blue & Black Five & above Core - Black cores with Number printing
Cabling	Cores are assembled in a concentric layer with filler (if necessary) for up to 4 Cores. Assembly with 5 cores or more is wrapped with a polyester tape with filler (if necessary).
Inner Sheath	Flame Retardant PVC Compatible to Conductor Operating Temperature In Black Color.
Metallic Screen	The screen shall consist of copper tape (50µm) applied helically over the inner covering for 100% coverage and with a suitable overlap.
Over sheath	Flame retardant PVC Type ST-2 as per IEC 60502-1 and confirming to IEC 60332-1.The color of the sheath shall be Black. Other sheath colors are also available on request.
Marking on the sheath	CU/XLPE/PVC NO OF CORES C X....MM2 600/1000V MESC YEAR IEC 60502-1 LENGTH METER MARKING

TECHNICAL DATA

Temperature Range	- 5°C to 90°C
Voltage Rating	600/1000 V
Voltage Withstand (V/Minute)	3500 RMS / 5 or 8400 DC / 5
Min. Bending Radius (mm)	12 X Cable Overall Diameter
Max Short Circuit Temp (°C)	250 (for 5 Second Maximum)

MESC

TABLE

NO OF CORE (Nos.)	CONDUCTOR CROSS SECTIONAL AREA (mm^2)	INSULATION THICKNESS (mm)	INNER SHEATH THICKNESS (mm)	DIA. OVER INNER SHEATH (mm)	METALLIC SCREEN THICKNESS (mm)	DIA. OVER METALLIC SCREEN (mm)	OUTER SHEATH THICKNESS (mm)	APPROX OVERALL DIA. (mm)	APPROX. WEIGHT OF CABLE (kg/km)	DC Cond. Res. at 20 Deg. C Max. (Ohm/Km)	AC Cond. Res. at 90 Deg. C Max. (Ohm/Km)	Inductance at 50 60Hz (miliH/Km)	Inductive Reactance at 50 - 60Hz (Ohm/Km)	Impedance at 50 - 60Hz & at 90 Deg. C (Ohm/Km)	Cond. Short Circuit current Rating (Kamp/Sec)	*CURRENT CARRING CAPACITY AT 20 °C IN GROUND Amp.	*CURRENT CARRING CAPACITY AT 30 °C IN AIR Amp.
2	1.5	0.7	1.0	8.4	0.05	8.6	1.8	11.5	187	12.1	15.43	0.336	0.106	15.43	0.21	37	26
2	2.5	0.7	1.0	9.2	0.05	9.4	1.8	12.3	223	7.41	9.45	0.314	0.099	9.449	0.35	49	35
2	4	0.7	1.0	10.2	0.05	10.4	1.8	13.3	275	4.61	5.88	0.295	0.093	5.879	0.56	67	46
2	6	0.7	1.0	11.4	0.05	11.6	1.8	14.5	346	3.08	3.93	0.281	0.088	3.928	0.85	78	59
2	10	0.7	1.0	13.2	0.05	13.4	1.8	16.3	471	1.83	2.33	0.266	0.084	2.335	1.41	103	80
2	16	0.7	1.0	15.3	0.05	15.5	1.8	18.4	642	1.15	1.47	0.255	0.080	1.469	2.26	131	107
2	25	0.9	1.0	18.6	0.05	18.8	1.8	21.7	925	0.727	0.927	0.255	0.080	0.930	3.53	168	145
2	35	0.9	1.0	20.9	0.05	21.1	1.8	24.0	1192	0.524	0.668	0.248	0.078	0.673	4.95	199	177
2	50	1.0	1.0	24.0	0.05	24.2	1.8	27.1	1544	0.387	0.493	0.245	0.077	0.499	7.07	238	216
2	70	1.1	1.0	27.9	0.05	28.1	1.9	31.1	2109	0.268	0.342	0.242	0.076	0.268	9.90	292	274
2	95	1.1	1.0	31.6	0.05	31.8	2.0	35.0	2779	0.193	0.25	0.236	0.074	0.257	13.44	349	339
3	1.5	0.7	1.0	8.9	0.05	9.1	1.8	12.0	210	12.1	15.43	0.336	0.106	15.43	0.21	30	24
3	2.5	0.7	1.0	9.8	0.05	10.0	1.8	12.9	257	7.41	9.45	0.314	0.099	9.449	0.35	40	32
3	4	0.7	1.0	10.9	0.05	11.1	1.8	14.0	323	4.61	5.88	0.295	0.093	5.879	0.56	52	42
3	6	0.7	1.0	12.2	0.05	12.4	1.8	15.3	415	3.08	3.93	0.281	0.088	3.928	0.85	64	53
3	10	0.7	1.0	14.1	0.05	14.3	1.8	17.2	574	1.83	2.33	0.266	0.084	2.335	1.41	86	73
3	16	0.7	1.0	16.3	0.05	16.5	1.8	19.4	794	1.15	1.47	0.255	0.080	1.469	2.26	111	96
3	25	0.9	1.0	19.9	0.05	20.1	1.8	23.0	1162	0.727	0.927	0.255	0.080	0.930	3.53	143	130
3	35	0.9	1.0	22.4	0.05	22.6	1.8	25.5	1518	0.524	0.668	0.248	0.078	0.673	4.95	173	160
3	50	1.0	1.0	25.7	0.05	25.9	1.8	28.8	1972	0.387	0.493	0.245	0.077	0.499	7.07	205	195
3	70	1.1	1.0	30.0	0.05	30.2	1.9	33.2	2724	0.268	0.342	0.242	0.076	0.268	9.90	252	247
3	95	1.1	1.0	34.0	0.05	34.2	2.0	37.4	3620	0.193	0.25	0.236	0.074	0.257	13.44	303	305
4	1.5	0.7	1.0	9.7	0.05	9.9	1.8	12.7	241	12.1	15.43	0.336	0.106	15.43	0.21	30	24
4	2.5	0.7	1.0	10.7	0.05	10.9	1.8	13.7	298	7.41	9.45	0.314	0.099	9.449	0.35	40	32
4	4	0.7	1.0	11.9	0.05	12.1	1.8	15.0	384	4.61	5.88	0.295	0.093	5.879	0.56	52	42
4	6	0.7	1.0	13.3	0.05	13.5	1.8	16.4	496	3.08	3.93	0.281	0.088	3.928	0.85	64	53
4	10	0.7	1.0	15.5	0.05	15.7	1.8	18.6	703	1.83	2.33	0.266	0.084	2.335	1.41	86	73
4	16	0.7	1.0	18.0	0.05	18.2	1.8	21.0	981	1.15	1.47	0.255	0.080	1.469	2.26	111	96
4	25	0.9	1.0	22.0	0.05	22.2	1.8	25.0	1447	0.727	0.927	0.255	0.080	0.930	3.53	143	130
4	35	0.9	1.0	24.7	0.05	24.9	1.8	27.8	1902	0.524	0.668	0.248	0.078	0.673	4.95	173	160
4	50	1.0	1.0	28.5	0.05	28.7	1.9	31.7	2499	0.387	0.493	0.245	0.077	0.499	7.07	205	195
4	70	1.1	1.0	33.2	0.05	33.4	2.0	36.6	3465	0.268	0.342	0.242	0.076	0.268	9.90	252	247
4	95	1.1	1.0	37.6	0.05	37.8	2.2	41.4	4634	0.193	0.25	0.236	0.074	0.257	13.44	303	305
5	1.5	0.7	1.0	10.7	0.05	10.9	1.8	13.8	266	12.1	15.43	0.336	0.106	15.43	0.21	21	18
5	2.5	0.7	1.0	11.8	0.05	12.0	1.8	14.9	328	7.41	9.45	0.314	0.099	9.449	0.35	28	24
5	4	0.7	1.0	13.2	0.05	13.4	1.8	16.3	422	4.61	5.88	0.295	0.093	5.879	0.56	36	31
5	6	0.7	1.0	14.8	0.05	15.0	1.8	17.9	548	3.08	3.93	0.281	0.088	3.928	0.85	45	39
5	10	0.7	1.0	17.2	0.05	17.4	1.8	20.3	776	1.83	2.33	0.266	0.084	2.335	1.41	60	54
5	16	0.7	1.0	20.0	0.05	20.2	1.8	23.1	1094	1.15	1.47	0.255	0.080	1.469	2.26	77	72
5	25	0.9	1.0	24.5	0.05	24.7	1.8	27.6	1614	0.727	0.927	0.255	0.080	0.930	3.53	100	97
5	35	0.9	1.0	27.6	0.05	27.8	1.8	30.6	2116	0.524	0.668	0.248	0.078	0.673	4.95	121	120
5	50	1.0	1.0	31.8	0.05	32.0	2.0	35.2	2795	0.387	0.493	0.245	0.077	0.499	7.07	143	146
6	1.5	0.7	1.0	11.6	0.05	11.8	1.8	14.7	299	12.1	15.43	0.336	0.106	15.43	0.21	30	24
7	1.5	0.7	1.0	11.6	0.05	11.8	1.8	14.7	315	12.1	15.43	0.336	0.106	15.43	0.21	18	15
8	1.5	0.7	1.0	13.0	0.05	13.2	1.8	16.1	356	12.1	15.43	0.336	0.106	15.43	0.21	18	15
10	1.5	0.7	1.0	14.7	0.05	14.9	1.8	17.8	421	12.1	15.43	0.336	0.106	15.43	0.21	15	13

NO OF CORE (Nos.)	CONDUCTOR CROSS SECTIONAL AREA (mm²)	INSULATION THICKNESS (mm)	INNER SHEATH THICKNESS (mm)	DIA. OVER INNER SHEATH (mm)	METALLIC SCREEN THICKNESS (mm)	DIA. OVER METALLIC SCREEN (mm)	OUTER SHEATH THICKNESS (mm)	APPROX OVERALL DIA. (mm)	APPROX. WEIGHT OF CABLE (kg/km)	DC Cond. Res. at 20 Deg. C Max. (Ohm/Km)	AC Cond. Res. at 90 Deg. C Max. (Ohm/Km)	Inductance at 50 60Hz (milH/Km)	Inductive Reactance at 50 - 60Hz (Ohm/Km)	Impedance at 50 - 60Hz & at 90 Deg. C (Ohm/Km)	Cond. Short Circuit current Rating (Kamp/Sec)	*CURRENT CARRING CAPACITY AT 20 °C IN GROUND Amp.	*CURRENT CARRING CAPACITY AT 30 °C IN AIR Amp.
12	1.5	0.7	1.0	15.2	0.05	15.4	1.8	18.3	482	12.1	15.43	0.336	0.106	15.43	0.21	15	13
14	1.5	0.7	1.0	16.0	0.05	16.2	1.8	19.1	523	12.1	15.43	0.336	0.106	15.43	0.21	13	12
15	1.5	0.7	1.0	16.9	0.05	17.1	1.8	19.9	551	12.1	15.43	0.336	0.106	15.43	0.21	13	12
16	1.5	0.7	1.0	16.9	0.05	17.1	1.8	19.9	571	12.1	15.43	0.336	0.106	15.43	0.21	13	12
18	1.5	0.7	1.0	17.8	0.05	18.0	1.8	20.9	631	12.1	15.43	0.336	0.106	15.43	0.21	13	12
19	1.5	0.7	1.0	17.8	0.05	18.0	1.8	20.9	647	12.1	15.43	0.336	0.106	15.43	0.21	12	10
20	1.5	0.7	1.0	18.8	0.05	19.0	1.8	21.9	682	12.1	15.43	0.336	0.106	15.43	0.21	12	10
22	1.5	0.7	1.0	19.9	0.05	20.1	1.8	22.9	742	12.1	15.43	0.336	0.106	15.43	0.21	12	10
24	1.5	0.7	1.0	20.9	0.05	21.1	1.8	24.0	793	12.1	15.43	0.336	0.106	15.43	0.21	10	9
25	1.5	0.7	1.0	20.9	0.05	21.1	1.8	24.0	814	12.1	15.43	0.336	0.106	15.43	0.21	10	9
26	1.5	0.7	1.0	20.9	0.05	21.1	1.8	24.0	834	12.1	15.43	0.336	0.106	15.43	0.21	10	9
30	1.5	0.7	1.0	22.2	0.05	22.4	1.8	25.2	927	12.1	15.43	0.336	0.106	15.43	0.21	10	9
32	1.5	0.7	1.0	23.0	0.05	23.2	1.8	26.1	986	12.1	15.43	0.336	0.106	15.43	0.21	10	9
35	1.5	0.7	1.0	24.0	0.05	24.2	1.8	27.1	1063	12.1	15.43	0.336	0.106	15.43	0.21	10	9
36	1.5	0.7	1.0	24.0	0.05	24.2	1.8	27.1	1079	12.1	15.43	0.336	0.106	15.43	0.21	10	9
40	1.5	0.7	1.0	25.0	0.05	25.2	1.8	28.1	1175	12.1	15.43	0.336	0.106	15.43	0.21	9	8
50	1.5	0.7	1.0	28.1	0.05	28.3	1.9	31.4	1428	12.1	15.43	0.336	0.106	15.43	0.21	9	8
61	1.5	0.7	1.0	30.2	0.05	30.4	1.9	33.4	1676	12.1	15.43	0.336	0.106	15.43	0.21	7	7
6	2.5	0.7	1.0	12.9	0.05	13.1	1.8	16.0	376	7.41	9.45	0.314	0.099	9.449	0.35	28	24
7	2.5	0.7	1.0	12.9	0.05	13.1	1.8	16.0	402	7.41	9.45	0.314	0.099	9.449	0.35	24	21
8	2.5	0.7	1.0	14.5	0.05	14.7	1.8	17.5	451	7.41	9.45	0.314	0.099	9.449	0.35	24	21
10	2.5	0.7	1.0	16.4	0.05	16.6	1.8	19.5	542	7.41	9.45	0.314	0.099	9.449	0.35	20	17
12	2.5	0.7	1.0	16.9	0.05	17.1	1.8	20.0	619	7.41	9.45	0.314	0.099	9.449	0.35	20	17
14	2.5	0.7	1.0	17.8	0.05	18.0	1.8	20.9	692	7.41	9.45	0.314	0.099	9.449	0.35	18	16
15	2.5	0.7	1.0	18.8	0.05	19.0	1.8	21.9	723	7.41	9.45	0.314	0.099	9.449	0.35	18	16
16	2.5	0.7	1.0	18.8	0.05	19.0	1.8	21.9	753	7.41	9.45	0.314	0.099	9.449	0.35	18	16
18	2.5	0.7	1.0	19.9	0.05	20.1	1.8	23.0	834	7.41	9.45	0.314	0.099	9.449	0.35	18	16
19	2.5	0.7	1.0	19.9	0.05	20.1	1.8	23.0	859	7.41	9.45	0.314	0.099	9.449	0.35	16	14
20	2.5	0.7	1.0	21.1	0.05	21.3	1.8	24.1	903	7.41	9.45	0.314	0.099	9.449	0.35	16	14
22	2.5	0.7	1.0	22.2	0.05	22.4	1.8	25.3	979	7.41	9.45	0.314	0.099	9.449	0.35	16	14
24	2.5	0.7	1.0	23.4	0.05	23.6	1.8	26.5	1057	7.41	9.45	0.314	0.099	9.449	0.35	14	12
25	2.5	0.7	1.0	23.4	0.05	23.6	1.8	26.5	1087	7.41	9.45	0.314	0.099	9.449	0.35	14	12
26	2.5	0.7	1.0	23.4	0.05	23.6	1.8	26.5	1118	7.41	9.45	0.314	0.099	9.449	0.35	14	12
30	2.5	0.7	1.0	24.8	0.05	25.0	1.8	27.9	1253	7.41	9.45	0.314	0.099	9.449	0.35	14	12
32	2.5	0.7	1.0	25.9	0.05	26.1	1.8	28.9	1324	7.41	9.45	0.314	0.099	9.449	0.35	14	12
35	2.5	0.7	1.0	26.9	0.05	27.1	1.8	30.0	1431	7.41	9.45	0.314	0.099	9.449	0.35	14	12
36	2.5	0.7	1.0	26.9	0.05	27.1	1.8	30.0	1462	7.41	9.45	0.314	0.099	9.449	0.35	14	12
40	2.5	0.7	1.0	28.1	0.05	28.3	1.9	31.3	1605	7.41	9.45	0.314	0.099	9.449	0.35	12	11
50	2.5	0.7	1.0	31.7	0.05	31.9	2.0	35.1	1968	7.41	9.45	0.314	0.099	9.449	0.35	12	11
61	2.5	0.7	1.0	33.9	0.05	34.1	2.1	37.5	2344	7.41	9.45	0.314	0.099	9.449	0.35	10	9

***Detail Please Refer the Technical Information Section**

Note: Other Special Sheath Materials are also available with IEC 60332-3 CAT C, UV /Sunlight resistance/ Oil Resistance.

POWER, MULTI CORE, ARMORED CABLE

CU/ XLPE/PVC/SWA/PVC SPECIFICATION: BS 5467

APPLICATION

Can be used indoors or outdoors in the cable duct, cable trays, conduits or underground location under mechanical stresses in the power and switching station, local distribution system, industrial plant and commercial building.

CONSTRUCTION

Conductor	Circular Stranded Compact Annealed Plain Copper to Class 2 of IEC 60228.
Insulation	Cross linked Polyethylene (XLPE) Type GP8 as per BS 7655 1.2
Color Code #	Two Core - Brown, blue Three Core - Brown, black, grey Four Core - Blue, brown, black, grey
Cabling / Laying up	Cores are assembled in a concentric layer.
Inner Sheath / Bedding	Flame Retardant PVC in Black Color compatible to operating temperature of conductor.
Wire Armour	A single layer of galvanized steel wire armor applied over the inner sheath.
Over sheath	Flame Retardant PVC Type 9 to BS 7655 4.2 and confirming to IEC60332-1. The color of the sheath shall be Black. Other sheath colors are also available on request.
Embossing on outer Sheath (refer note 1)	ELECTRIC CABLE 600/1000V BS 5467 NO. OF CORES X SIZE MESC YEAR LENGTH METER MARKING

TECHNICAL DATA

Temperature Range	- 5°C to 90°C
Voltage Rating	600/1000 V
Voltage Withstand (V/Minute)	3500 RMS / 5
Min. Bending Radius (mm)	8 X Cable Overall Diameter
Max Short Circuit Temp (°C)	250 (for 5 Second Maximum)

TABLE

NO OF CORE (Nos.)	CONDUCTOR CROSS SECTIONAL AREA (mm²)	INSULATION THICKNESS (mm)	INNER SHEATH THICKNESS (mm)	DIA. OVER INNER SHEATH (mm)	ARMOR WIRE DIA. (mm)	DIA. OVER ARMOR (mm)	OUTER SHEATH THICKNESS (mm)	APPROX OVERALL DIA. (mm)	APPROX. WEIGHT OF CABLE (kg/ km)	DC Cond. Res. at 20 Deg. C Max. (Ohm/Km)	AC Cond. Res. at 90 Deg. C Max. (Ohm/Km)	Inductance at 50 60Hz (miliH/Km)	Inductive Reactance at 50 - 60Hz (Ohm/Km)	Impedance at 50 - 60Hz & at 90 Deg. C (Ohm/Km)	Cond. Short Circuit current Rating (Kamp/Sec)	*CURRENT CARRING CAPACITY AT 20 °C IN GROUND Amp.	*CURRENT CARRING CAPACITY AT 30 °C IN AIR Amp.
2	16	0.7	0.8	14.3	1.25	16.8	1.5	19.8	940	1.15	1.47	0.255	0.080	1.469	2.26	131	107
2	25	0.9	0.8	17.3	1.25	19.8	1.6	23.0	1286	0.727	0.927	0.255	0.080	0.930	3.53	168	145
2	35	0.9	1.0	19.8	1.6	23.0	1.7	26.4	1770	0.524	0.668	0.248	0.078	0.673	4.95	199	177
3	16	0.7	0.8	15.3	1.25	17.8	1.6	21.0	1115	1.15	1.47	0.255	0.080	1.469	2.26	111	96
4	16	0.7	0.8	16.8	1.25	19.3	1.6	22.6	1336	1.15	1.47	0.255	0.080	1.469	2.26	111	96

#Other Insulation colour is available on request.

*Detail Please Refer the Technical Information Section.

Note:

1. The Marking on outer sheath shall be embossed and the text shall appear on two lines for above 15mm cable diameter and one line for 15mm & below cable diameter along the cable axis approximately equally spaced around the circumference. The letters & figures shall be upright block characters with a minimum height of 3 mm.

2. Other Special Sheath Materials are also available with IEC 60332-3 CAT C, UV /Sunlight resistance/ Oil Resistance.

POWER, MULTI CORE, ARMORED CABLE

CU/ XLPE/PVC SWA/PVC SPECIFICATION: BS 5467

Application	Can be used indoors or outdoors in the cable duct, cable trays, conduits or underground location under mechanical stresses in the power and switching station, local distribution system, industrial plant and commercial building.

CONSTRUCTION

Conductor	Stranded annealed plain circular copper to Class 2 of IEC 60228.
Insulation	Cross linked Polyethylene (XLPE) Type GP8 as per BS 7655 1.2
Color Code	Two Core - Brown, blue Three Core - Brown, black, grey Four Core - Blue, brown, black, grey Five Core - Green-and-yellow, blue, brown, black, grey
Cabling / Laying up	Cores are assembled in a concentric layer with filler (if necessary) for up to 4 Cores. Assembly with 5 cores or more is wrapped with a polyester tape with filler (if necessary).
Inner Sheath / Bedding	Flame Retardant PVC in Black Color compatible to operating temperature of conductor.
Wire Armour	A single layer of galvanized steel wire armor applied over the inner sheath.
Over sheath	Flame Retardant PVC Type 9 to BS 7655 4.2 and confirming to IEC60332-1. The color of the sheath shall be Black. Other sheath colors are also available on request.
Embossing on outer Sheath (refer note 1)	ELECTRIC CABLE 600/1000V BS 5467 NO. OF CORES X SIZE MESC YEAR LENGTH METER MARKING

TECHNICAL DATA

Temperature Range	- 5°C to 90°C
Voltage Rating	600/1000 V
Voltage Withstand (V/Minute)	3500 RMS / 5
Min. Bending Radius (mm)	8 X Cable Overall Diameter
Max Short Circuit Temp (°C)	250 (for 5 Second Maximum)

TABLE

NO OF CORE (Nos.)	CONDUCTOR CROSS SECTIONAL AREA (mm^2)	INSULATION THICKNESS (mm)	INNER SHEATH THICKNESS (mm)	DIA. OVER INNER SHEATH (mm)	ARMOR WIRE DIA. (mm)	DIA. OVER ARMOR (mm)	OUTER SHEATH THICKNESS (mm)	APPROX OVERALL DIA. (mm)	APPROX. WEIGHT OF CABLE (kg/ km)	DC Cond. Res. at 20 Deg. C Max. (Ohm/Km)	AC Cond. Res. at 90 Deg. C Max. (Ohm/Km)	Inductance at 50 60Hz (miliH/Km)	Inductive Reactance at 50 - 60Hz (Ohm/Km)	Impedance at 50 - 60Hz & at 90 Deg. C (Ohm/Km)	Cond. Short Circuit current Rating (Kamp/Sec)	*CURRENT CARRING CAPACITY AT 20 °C IN GROUND Amp.	*CURRENT CARRING CAPACITY AT 30 °C IN AIR Amp.
2	1.5	0.6	0.8	7.6	0.9	9.4	1.3	12.4	291	12.1	15.43	0.336	0.106	15.43	0.21	37	26
2	2.5	0.7	0.8	8.9	0.9	10.7	1.4	13.8	363	7.41	9.45	0.314	0.099	9.449	0.35	49	35
2	4	0.7	0.8	9.9	0.9	11.7	1.4	14.8	428	4.61	5.88	0.295	0.093	5.879	0.56	67	46
2	6	0.7	0.8	11.1	0.9	12.9	1.4	16.0	517	3.08	3.93	0.281	0.088	3.928	0.85	78	59
2	10	0.7	0.8	13.2	0.9	15.0	1.5	18.3	692	1.83	2.33	0.266	0.084	2.335	1.41	103	80
3	1.5	0.6	0.8	8.1	0.9	9.9	1.3	12.8	321	12.1	15.43	0.336	0.106	15.43	0.21	30	24
3	2.5	0.7	0.8	9.3	0.9	11.1	1.4	14.0	392	7.41	9.45	0.314	0.099	9.449	0.35	40	32
3	4	0.7	0.8	10.6	0.9	12.4	1.4	15.6	471	4.61	5.88	0.295	0.093	5.879	0.56	52	42
3	6	0.7	0.8	11.8	0.9	13.6	1.4	16.8	569	3.08	3.93	0.281	0.088	3.928	0.85	64	53
3	10	0.7	0.8	13.8	1.25	16.3	1.5	19.7	855	1.83	2.33	0.266	0.084	2.335	1.41	86	73
4	1.5	0.6	0.8	8.7	0.9	10.5	1.3	13.1	357	12.1	15.43	0.336	0.106	15.43	0.21	30	24
4	2.5	0.7	0.8	10.2	0.9	12.0	1.4	14.8	453	7.41	9.45	0.314	0.099	9.449	0.35	40	32
4	4	0.7	0.8	11.4	0.9	13.2	1.4	16.1	557	4.61	5.88	0.295	0.093	5.879	0.56	52	42
4	6	0.7	0.8	12.9	1.25	15.4	1.5	18.4	787	3.08	3.93	0.281	0.088	3.928	0.85	64	53
4	10	0.7	0.8	15.0	1.25	17.5	1.5	20.6	1039	1.83	2.33	0.266	0.084	2.335	1.41	86	73
5	1.5	0.6	0.8	9.2	0.9	11.1	1.4	13.5	363	12.1	15.43	0.336	0.106	15.43	0.21	21	18
5	2.5	0.7	0.8	10.9	0.9	12.7	1.4	15.2	448	7.41	9.45	0.314	0.099	9.449	0.35	28	24
5	4	0.7	0.8	12.3	0.9	14.1	1.5	16.8	568	4.61	5.88	0.295	0.093	5.879	0.56	36	31
5	6	0.7	0.8	13.9	1.25	16.4	1.5	19.1	799	3.08	3.93	0.281	0.088	3.928	0.85	44	39
5	10	0.7	0.8	16.4	1.25	18.9	1.6	21.7	1082	1.83	2.33	0.266	0.084	2.335	1.41	60	54
5	16	0.7	1.0	19.5	1.6	22.7	1.7	25.5	1596	1.15	1.47	0.255	0.080	1.469	2.26	77	72
5	25	0.9	1.0	23.9	1.6	27.1	1.8	30.2	2230	0.727	0.927	0.255	0.080	0.930	3.53	100	97
5	35	0.9	1.0	27.1	1.6	30.2	1.9	33.5	2835	0.524	0.668	0.248	0.078	0.673	4.95	121	120
5	50	1.0	1.2	31.6	2.0	35.6	2.0	39.0	3877	0.387	0.493	0.245	0.077	0.499	7.07	143	146

*Detail Please Refer the Technical Information Section.

Note:

1. The Marking on outer sheath shall be embossed and the text shall appear on two lines for above 15mm cable diameter and one line for 15mm & below cable diameter along the cable axis approximately equally spaced around the circumference. The letters & figures shall be upright block characters with a minimum height of 3 mm.

2. Other Special Sheath Materials are also available with IEC 60332-3 CAT C, UV /Sunlight resistance/ Oil Resistance.

CONTROL, MULTI CORE, ARMORED CABLE

CU/ XLPE/PVC/SWA/PVC SPECIFICATION: BS 5467

APPLICATION

Can be used indoors or outdoors in the cable duct, cable trays, conduits or underground location under mechanical stresses in the power and switching station, local distribution system, industrial plant and commercial building.

CONSTRUCTION

Conductor	Stranded Annealed Plain Copper to Class 2 of IEC 60228.
Insulation	Cross linked Polyethylene (XLPE) Type GP8 as per BS 7655 1.2
Color Code	Black cores with number printing on each core
Cabling / Laying up	Cores are assembled in a concentric layer with suitable filler & wrapped with a polyester tape.
Inner Sheath / Bedding	Flame Retardant PVC in Black Color compatible to operating temperature of conductor.
Wire Armour	A single layer of galvanized steel wire armor applied over the inner sheath.
Over sheath	Flame Retardant PVC Type 9 to BS 7655 4.2 and confirming to IEC60332-1. The color of the sheath shall be Black. Other sheath colors are also available on request.
Embossing on outer Sheath (refer note 1)	ELECTRIC CABLE 600/1000V AUX BS 5467 NO. OF CORES X SIZE MESC YEAR LENGTH METER MARKING

TECHNICAL DATA

Temperature Range	- 5°C to 90°C
Voltage Rating	600/1000 V
Voltage Withstand (V/Minute)	3500 RMS / 5
Min. Bending Radius (mm)	6 X Cable Overall Diameter
Max Short Circuit Temp (°C)	250 (for 5 Second Maximum)

TABLE

NO OF CORE (Nos.)	CONDUCTOR CROSS SECTIONAL AREA (mm^2)	INSULATION THICKNESS (mm)	INNER SHEATH THICKNESS (mm)	DIA. OVER INNER SHEATH (mm)	ARMOR WIRE DIA. (mm)	DIA. OVER ARMOR (mm)	OUTER SHEATH THICKNESS (mm)	APPROX OVERALL DIA. (mm)	APPROX. WEIGHT OF CABLE (kg/ km)	DC Cond. Res. at 20 Deg. C Max. (Ohm/Km)	AC Cond. Res. at 90 Deg. C Max. (Ohm/Km)	Inductance at 50 60Hz (miliH/Km)	Inductive Reactance at 50 - 60Hz (Ohm/Km)	Impedance at 50 - 60Hz & at 90 Deg. C (Ohm/Km)	Cond. Short Circuit current Rating (Kamp/Sec)	*CURRENT CARRING CAPACITY AT 20 °C IN GROUND Amp.	*CURRENT CARRING CAPACITY AT 30 °C IN AIR Amp.
7	1.5	0.6	0.8	10.5	0.9	12.3	1.4	15.2	449	12.1	15.43	0.336	0.106	15.43	0.21	18	15
12	1.5	0.6	0.8	13.9	1.25	16.4	1.5	19.4	740	12.1	15.43	0.336	0.106	15.43	0.21	15	12
19	1.5	0.6	0.8	16.3	1.25	18.8	1.6	22.0	970	12.1	15.43	0.336	0.106	15.43	0.21	12	10
27	1.5	0.6	1.0	20.0	1.6	23.2	1.7	26.7	1416	12.1	15.43	0.336	0.106	15.43	0.21	9	8
37	1.5	0.6	1.0	22.5	1.6	25.7	1.7	29.1	1715	12.1	15.43	0.336	0.106	15.43	0.21	9	8
48	1.5	0.6	1.0	25.8	1.6	29.0	1.8	32.6	2060	12.1	15.43	0.336	0.106	15.43	0.21	7	7
7	2.5	0.7	0.8	12.5	0.9	14.3	1.4	17.7	621	7.41	9.45	0.314	0.099	9.449	0.35	24	20
12	2.5	0.7	0.8	16.6	1.25	19.1	1.6	22.9	1041	7.41	9.45	0.314	0.099	9.449	0.35	20	17
19	2.5	0.7	1.0	20.0	1.6	23.2	1.7	27.2	1572	7.41	9.45	0.314	0.099	9.449	0.35	16	14
27	2.5	0.7	1.0	24.0	1.6	27.2	1.8	31.5	2002	7.41	9.45	0.314	0.099	9.449	0.35	14	12
37	2.5	0.7	1.0	27.0	1.6	30.2	1.8	34.5	2429	7.41	9.45	0.314	0.099	9.449	0.35	14	12
48	2.5	0.7	1.2	31.4	2.0	35.4	2.0	40.2	3309	7.41	9.45	0.314	0.099	9.449	0.35	10	9
7	4.0	0.7	0.8	14.2	1.25	16.7	1.5	20.3	880	4.61	5.88	0.295	0.093	5.879	0.56	31	27
12	4.0	0.7	1.0	19.3	1.6	22.5	1.6	26.3	1465	4.61	5.88	0.295	0.093	5.879	0.56	26	28
19	4.0	0.7	1.0	22.7	1.6	25.9	1.7	29.9	1945	4.61	5.88	0.295	0.093	5.879	0.56	20	18
27	4.0	0.7	1.0	27.4	1.6	30.6	1.9	35.1	2535	4.61	5.88	0.295	0.093	5.879	0.56	18	16
37	4.0	0.7	1.2	31.2	2.0	35.2	2.0	40.0	3480	4.61	5.88	0.295	0.093	5.879	0.56	18	16
48	4.0	0.7	1.2	35.9	2.0	39.9	2.1	44.9	4245	4.61	5.88	0.295	0.093	5.879	0.56	13	12

*Detail Please Refer the Technical Information Section.

Note:

1. The Marking on outer sheath shall be embossed and the text shall appear on two lines for above 15mm cable diameter and one line for 15mm & below cable diameter along the cable axis approximately equally spaced around the circumference. The letters & figures shall be upright block characters with a minimum height of 3 mm.

2. Other Special Sheath Materials are also available with IEC 60332-3 CAT C, UV /Sunlight resistance/ Oil Resistance.

POWER, MULTI CORE, ARMORED CABLE

CU/ XLPE/PVC/SWA/PVC SPECIFICATION: BS 5467

APPLICATION

Can be used indoors or outdoors in the cable duct, cable trays, conduits or underground location under mechanical stresses in the power and switching station, local distribution system, industrial plant and commercial building.

CONSTRUCTION

Conductor	Stranded Compacted Sector Shape Annealed Plain Copper to Class 2 of IEC 60228.
Insulation	Cross linked Polyethylene (XLPE) Type GP8 as per BS 7655 1.2
Color Code #	Three Core - Brown, black, grey Four Core - Blue, brown, black, grey
Cabling / Laying up	Cores are assembled in a concentric layer and assembly is wrapped with a polyester tape.
Inner Sheath / Bedding	Flame Retardant PVC in Black Color compatible to operating temperature of conductor.
Wire Armour	A single layer of galvanized steel wire armor applied over the inner sheath.
Over sheath	Flame Retardant PVC Type 9 to BS 7655 4.2 and confirming to IEC60332-1. The color of the sheath shall be Black. Other sheath colors are also available on request.
Embossing on outer Sheath (refer note 1)	ELECTRIC CABLE 600/1000V BS 5467 NO. OF CORES X SIZE MESC YEAR LENGTH METER MARKING

TECHNICAL DATA

Temperature Range	- 5°C to 90°C
Voltage Rating	600/1000 V
Voltage Withstand (V/Minute)	3500 RMS / 5
Min. Bending Radius (mm)	8 X Cable Overall Diameter
Max Short Circuit Temp (°C)	250 (for 5 Second Maximum)

TABLE

NO OF CORE (Nos.)	CONDUCTOR CROSS SECTIONAL AREA (mm^2)	INSULATION THICKNESS (mm)	INNER SHEATH THICKNESS (mm)	DIA. OVER INNER SHEATH (mm)	ARMOR WIRE DIA. (mm)	DIA. OVER ARMOR (mm)	OUTER SHEATH THICKNESS (mm)	APPROX OVERALL DIA. (mm)	APPROX. WEIGHT OF CABLE (kg/km)	DC Cond. Res. at 20 Deg. C Max. (Ohm/Km)	AC Cond. Res. at 90 Deg. C Max. (Ohm/Km)	Inductance at 50 60Hz (miliH/Km)	Inductive Reactance at 50 - 60Hz (Ohm/Km)	Impedance at 50 - 60Hz & at 90 Deg. C (Ohm/Km)	Cond. Short Circuit current Rating (Kamp/Sec)	*CURRENT CARRING CAPACITY AT 20 °C IN GROUND Amp.	*CURRENT CARRING CAPACITY AT 30 °C IN AIR Amp.
3	25	0.9	1.0	16.6	1.6	19.8	1.7	23.3	1483	0.727	0.927	0.255	0.080	0.930	3.53	143	130
3	35	0.9	1.0	18.5	1.6	21.7	1.8	25.3	1849	0.524	0.668	0.248	0.078	0.673	4.95	173	160
3	50	1.0	1.0	21.3	1.6	24.5	1.8	28.2	2299	0.387	0.493	0.245	0.077	0.499	7.07	205	195
3	70	1.1	1.0	24.4	1.6	27.6	1.9	31.5	3001	0.268	0.342	0.242	0.076	0.268	9.90	252	247
3	95	1.1	1.2	27.7	2.0	31.7	2.1	35.9	4111	0.193	0.25	0.236	0.074	0.257	13.44	303	305
4	25	0.9	1.0	19.6	1.6	22.8	1.7	26.3	1845	0.727	0.927	0.255	0.080	0.930	3.53	143	130
4	35	0.9	1.0	21.9	1.6	25.1	1.8	28.8	2331	0.524	0.668	0.248	0.078	0.673	4.95	173	160
4	50	1.0	1.0	25.4	1.6	28.6	1.9	32.4	2965	0.387	0.493	0.245	0.077	0.499	7.07	205	195
4	70	1.1	1.2	29.6	2.0	33.6	2.1	37.8	4214	0.268	0.342	0.242	0.076	0.268	9.90	252	247
4	95	1.1	1.2	33.2	2.0	37.2	2.2	41.6	5356	0.193	0.25	0.236	0.074	0.257	13.44	303	305

#Other Insulation colour is available on request.
*Detail Please Refer the Technical Information Section.
Note:

1. The Marking on outer sheath shall be embossed and the text shall appear on two lines for above 15mm cable diameter and one line for 15mm & below cable diameter along the cable axis approximately equally spaced around the circumference. The letters & figures shall be upright block characters with a minimum height of 3 mm.
2. Other Special Sheath Materials are also available with IEC 60332-3 CAT C, UV /Sunlight resistance/ Oil Resistance.

SINGLE & MULTI CORE RUBBER CABLE (HO7RN-F)

SPECIFICATION: BS EN 50525-2.21 / BS 7919

APPLICATION

These heavy duty rubber sheathed cables are suitable for use in dry, damp and wet locations in open air and in workshops having an explosive atmosphere for medium mechanical stresses. Suitable for use with industrial and agricultural appliances, heating installations, electric tools and also for transportable motors and machines. Also suitable for fixed installations on plaster, in temporary residential buildings and for wiring of constructional components like lifts and cranes. Can be used up to 1000 volts for fixed installation and as rotor connection cable for motors.

CONSTRUCTION

Conductor	Plain annealed copper flexible as per class 5 of IEC 60228.
Insulation	Rubber Type EI 4 as per BS EN 50363-1.
Color Code	Single core : Black Two core : Blue & Brown. Three core : Green, Blue & Brown. Four core : Green, Black, and Blue & Brown. Five core : Green, Black, Blue, Brown & Black. Six & Above : In the outer layer one core coloured Light Blue, the consecutive core coloured Brown and The other cores coloured Black. In the other layers one core coloured Brown and the other Cores coloured Black.
Assembly#	Cores twisted together to make a round assembly. Where center filler is required it is composed of cotton. A binder tape is applied over the assembly if required.
Outer Sheath	Black coloured rubber Type EM 2 as per BS EN 50363-2-1.Sheath material is oil resistant and flame retardant as per IEC-60332-1. The sheath shall fill the outer interstices between the cores

TECHNICAL DATA

Temperature Range	- 30°C to 60°C
Voltage Rating	450/750 V
Min. Bending Radius (mm)	4 X Over all Diameter (for fixed installation) 5 X Over all Diameter (for guiding over roller)

TABLE

NO OF CORE (Nos.)	CONDUCTOR CROSS SECTIONAL AREA (mm^2)	INSULATION THICKNESS (mm)	OUTER SHEATH THICKNESS (mm)	APPROX OVERALL DIA. (mm)	APPROX. WEIGHT (kg/km)	CONDUCTOR RESISTANCE AT 20 °C (MAX.) Ω/Km	CURRENT CARRING CAPACITY AT 30 °C IN FREE AIR (ONE PHASE) Amp.	CURRENT CARRING CAPACITY AT 30 °C IN FREE AIR (THREE PHASE) Amp.
1	1.5	0.8	1.4	6.2	52	13.3	15	--
1	2.5	0.9	1.4	6.8	67	7.98	20	--
1	4	1.0	1.5	7.8	94	4.95	33	--
1	6	1.0	1.6	6.	122	3.30	42	--
1	10	1.2	1.8	10.4	190	1.91	57	--
1	16	1.2	1.9	11.6	260	1.21	76	--
1	25	1.4	2	13.5	375	0.780	100	--
1	35	1.4	2.2	15.1	497	0.554	120	--
1	50	1.6	2.4	17.5	691	0.386	150	--
1	70	1.6	2.6	19.8	956	0.272	180	--
1	95	1.8	2.8	22.3	1240	0.206	220	--
2	1	0.8	1.3	8.7	97	19.5	10	--

NO OF CORE (Nos.)	CONDUCTOR CROSS SECTIONAL AREA (mm^2)	INSULATION THICKNESS (mm)	OUTER SHEATH THICKNESS (mm)	APPROX OVERALL DIA. (mm)	APPROX. WEIGHT (kg/km)	CONDUCTOR RESISTANCE AT 20 °C (MAX.) Ω/Km	CURRENT CARRING CAPACITY AT 30 °C IN FREE AIR (ONE PHASE) Amp.	CURRENT CARRING CAPACITY AT 30 °C IN FREE AIR (THREE PHASE) Amp.
2	1.5	0.8	1.5	9.6	120	13.3	15	--
2	2.5	0.9	1.7	11.3	173	7.98	20	--
2	4	1.0	1.8	1.0	239	4.95	33	--
2	6	1.0	2.0	14.6	315	3.30	42	--
2	10	1.2	3.1	19.7	565	1.91	57	--
2	16	1.2	3.3	22.2	761	1.21	76	--
2	25	1.4	3.6	26.2	1098	0.780	100	--
3	1	0.8	1.4	9.4	118	19.5	10	10
3	1.5	0.8	1.6	10.3	146	13.3	15	15
3	2.5	0.9	1.8	12.1	210	7.98	20	20
3	4	1.0	1.9	14.0	297	4.95	33	28
3	6	1.0	2.1	15.6	390	3.30	42	36
3	10	1.2	3.3	21.2	704	1.91	57	49
3	16	1.2	3.5	23.8	956	1.21	76	66
4	1	0.8	1.0	10.4	145	19.5	10	10
4	1.5	0.8	1.7	11.3	177	13.3	15	15
4	2.5	0.9	1.9	13.3	257	7.98	20	20
4	4	1.0	2.0	15.4	364	4.95	33	28
4	6	1.0	2.3	17.4	490	3.30	42	36
4	10	1.2	3.4	23.0	851	1.91	57	49
4	16	1.2	3.6	25.9	1167	1.21	76	66
5	1	0.8	1.6	11.4	175	19.5	10	10
5	1.5	0.8	1.8	12.5	217	13.3	15	15
5	2.5	0.9	2.0	14.7	313	7.98	20	20
5	4	1.0	2.2	17.1	447	4.95	33	28
5	6	1.0	2.5	19.3	600	3.30	42	36
5	10	1.2	3.6	25.4	1034	1.91	57	49
6	1.5	0.8	2.5	15.1	301	13.3	10	--
12	1.5	0.8	2.9	19.7	528	13.3	7	--
18	1.5	0.8	3.2	23.1	743	13.3	6	--
24	1.5	0.8	3.5	26.9	971	13.3	6	--
6	2.5	0.9	2.7	17.5	423	7.98	14	--
12	2.5	0.9	3.1	22.8	747	7.98	10	--
18	2.5	0.9	3.5	27.0	1069	7.98	9	--
6	4	1.0	2.9	20.1	590	4.95	24	--
12	4	1.0	3.5	26.8	1074	4.95	17	--

If more than 3 conductors are loaded simultaneously, the current rating must be adjust with following factor:

Ambient temperature	5	7	8	12	18	24
Correction factor	0.73	0.65	0.62	0.53	0.45	0.40

Correction factors for ambient temperature.

Ambient temperature	35	40	45	50	55
Correction factor	0.91	0.82	0.71	0.57	0.41

#Assembly of core is not applicable for single core.

Packing: Packing is available in Coil/Reel/Drum with Meters/Yards/Feet.
Other lengths are available upon request.

FIRE RESISTANT CABLE 300/500V

SCREENED, LOW SMOKE HALOGEN FREE SHEATH

SPECIFICATION: BS 7629-1, BS 5839-1, BS EN 50200 & BS 6387

APPLICATION

Used for fire alarm system, voice alarm system, emergency lighting for the building.

CONSTRUCTION

Conductor	Plain annealed solid copper as per class 1 of IEC 60228.
Insulation	Cross-Linked Thermosetting Type EI 2 as per BS EN 50363-1.
Color Code	Two core : Brown & Blue. Three core : Brown, Black & Grey. Four core : Blue, Brown, Black & Grey.
Assembly	Cores are assembled in the color sequence as mentioned above, A nonmetallic tape is applied over the assembly.
Screen	A laminated metallic tape, with minimum metal part of 10 µm is applied longitudinally with a minimum overlap of 1 mm and firmly bonded to the outer sheath. Metallic element of tape is in contact with the uninsulated circuit protective conductor. Protective conductor is annealed tinned copper with the same nominal cross section as the circuit conductor.
Outer Sheath	Extruded Red Low smoke Halogen free compound Type LTS3 as per BS 7655-6.1.
Marking Example	MESC PYRO-SI Size 300/500 V BS 7929-1.

TECHNICAL DATA

Temp Range	30°C to 105°C
Voltage Grade	300/500 V
Dielectric strength test	2000 V_{AC} for 1 minute (core to core & core to screen)

FIRE PERFORMANCE

Fire resistance	BS 6387 C W Z, BSEN 50200 PH30 & BSEN 50200 Annexure E
Flame retardance	IEC 60332-1-2 on single core and IEC 60332-3-24 [CAT C] for bunch cable
Corrosive & acid gas emission	≤ 0.5 % (BS EN 50267-2-1)
Smoke Emission (Transmission value)	≥ 80 % (BS EN 61034-2)
Limiting Oxygen index (outer sheath)	≥ 30% (ASTM D2863)

NO OF CORE (Nos.)	CONDUCTOR CROSS SECTIONAL AREA (mm²)	INSULATION THICKNESS (mm)	OUTER SHEATH THICKNESS (mm)	APPROX OVERALL DIA. (mm)	APPROX. WEIGHT (kg/ km)	CONDUCTOR RESISTANCE AT 20 °C (MAX.) Ω/Km
2	1.0	0.6	0.9	7.6	82	18.1
3	1.0	0.6	0.9	8.0	100	12.1
4	1.0	0.6	1.0	8.8	120	7.41
2	1.5	0.7	0.9	8.5	105	18.1
3	1.5	0.7	0.9	9.0	131	12.1
4	1.5	0.7	1.0	9.9	160	7.41
2	2.5	0.8	1.0	9.9	151	18.1
3	2.5	0.8	1.0	10.5	187	12.1
4	2.5	0.8	1.1	11.5	230	7.41

Packing: Packing is available in Coil/Reel/Drum with Meters/Yards/Feet.
Other lengths are available upon request.

* LPCB Cable Type tested at MESC - KSA

UTP CAT 6

Technical Data for Non-Plenum LAN Cable — Category - 6

APPLICATION

These cables are intended to be used for low loss extended frequency data systems that operate up to 250 MHz.

Reference Specifications	TIA/EIA-568-B.2-1 & UL444
Type Designation	UTP CAT 6- Unshielded Twisted Pairs. NEC TYPE CM
Construction	4 Pairs 23 AWG Solid Copper, polyethylene Insulated,twisted pairs assembled with a center separator and Grey PVC jacketed.

Sl No.	Technical Parameter			Unit	Requirement	
1	Characteristic Impedance(Up to 100 MHz)			Ohm	100+/-15	(Nom)
2	Attenuation (ATT)			dB/100m		
a)	At frequency of	1.00	MHz		2.10	(Max)
b)	At frequency of	4.00	MHz		4.00	(Max)
c)	At frequency of	8.00	MHz		5.70	(Max)
d)	At frequency of	10.00	MHz		6.30	(Max)
e)	At frequency of	16.00	MHz		8.00	(Max)
f)	At frequency of	20.00	MHz		9.00	(Max)
g)	At frequency of	25.00	MHz		10.10	(Max)
h)	At frequency of	31.25	MHz		11.40	(Max)
i)	At frequency of	62.50	MHz		16.50	(Max)
j)	At frequency of	100.00	MHz		21.30	(Max)
k)	At frequency of	200.00	MHz		31.50	(Max)
l)	At frequency of	250.00	MHz		35.90	(Max)
3	Return Loss (RL)			(dB)		
a)	At frequency of	1.00	MHz		20.00	(Min)
b)	At frequency of	4.00	MHz		23.01	(Min)
c)	At frequency of	8.00	MHz		24.52	(Min)
d)	At frequency of	10.00	MHz		25.00	(Min)
e)	At frequency of	16.00	MHz		25.00	(Min)
f)	At frequency of	20.00	MHz		25.00	(Min)
g)	At frequency of	25.00	MHz		24.32	(Min)
h)	At frequency of	31.25	MHz		23.64	(Min)
i)	At frequency of	62.50	MHz		21.54	(Min)
j)	At frequency of	100.00	MHz		20.11	(Min)
k)	At frequency of	125.00	MHz		19.43	(Min)
l)	At frequency of	150.00	MHz		18.87	(Min)
m)	At frequency of	200	MHz		18.00	(Min)
n)	At frequency of	250.00	MHz		17.32	(Min)
4	Near End Cross Talk (NEXT)			(dB)		
a)	At frequency of	1.00	MHz		74.30	(Min)
b)	At frequency of	4.00	MHz		65.26	(Min)
c)	At frequency of	8.00	MHz		60.75	(Min)
d)	At frequency of	10.00	MHz		59.30	(Min)
e)	At frequency of	16.00	MHz		56.24	(Min)
f)	At frequency of	20.00	MHz		54.78	(Min)
g)	At frequency of	25.00	MHz		53.33	(Min)
h)	At frequency of	31.25	MHz		51.88	(Min)
i)	At frequency of	62.50	MHz		47.36	(Min)
j)	At frequency of	100.00	MHz		44.30	(Min)
k)	At frequency of	125.00	MHz		42.85	(Min)
l)	At frequency of	150.00	MHz		41.66	(Min)
m)	At frequency of	200.00	MHz		39.78	(Min)
n)	At frequency of	250.00	MHz		38.33	(Min)

Sl No.	Technical Parameter			Unit	Requirement	
5	Equal Leval Far End Cross Talk (ELFEXT)			(dB)		
a)	At frequency of	1.00	MHz		67.80	(Min)
b)	At frequency of	4.00	MHz		55.76	(Min)
c)	At frequency of	8.00	MHz		49.74	(Min)
d)	At frequency of	10.00	MHz		47.80	(Min)
e)	At frequency of	16.00	MHz		43.72	(Min)
f)	At frequency of	20.00	MHz		41.78	(Min)
g)	At frequency of	25.00	MHz		39.84	(Min)
h)	At frequency of	31.25	MHz		37.90	(Min)
i)	At frequency of	62.50	MHz		31.88	(Min)
j)	At frequency of	100.00	MHz		27.80	(Min)
k)	At frequency of	125.00	MHz		25.86	(Min)
l)	At frequency of	150.00	MHz		24.28	(Min)
m)	At frequency of	200.00	MHz		21.78	(Min)
n)	At frequency of	250.00	MHz		19.84	(Min)
6	Power Sum Near End Cross Talk (PSNEXT)			(dB)		
a)	At frequency of	1.00	MHz		72.30	(Min)
b)	At frequency of	4.00	MHz		63.27	(Min)
c)	At frequency of	8.00	MHz		58.75	(Min)
d)	At frequency of	10.00	MHz		57.30	(Min)
e)	At frequency of	16.00	MHz		54.24	(Min)
f)	At frequency of	20.00	MHz		52.78	(Min)
g)	At frequency of	25.00	MHz		51.33	(Min)
h)	At frequency of	31.25	MHz		49.88	(Min)
i)	At frequency of	62.50	MHz		45.36	(Min)
j)	At frequency of	100.00	MHz		42.30	(Min)
k)	At frequency of	125.00	MHz		40.84	(Min)
l)	At frequency of	150.00	MHz		39.66	(Min)
m)	At frequency of	200.00	MHz		37.78	(Min)
n)	At frequency of	250.00	MHz		36.33	(Min)
7	Power Sum Equal Level End Cross Talk (PSELFEXT)			(dB)		
a)	At frequency of	1.00	MHz		64.80	(Min)
b)	At frequency of	4.00	MHz		52.76	(Min)
c)	At frequency of	8.00	MHz		46.74	(Min)
d)	At frequency of	10.00	MHz		44.80	(Min)
e)	At frequency of	16.00	MHz		40.72	(Min)
f)	At frequency of	20.00	MHz		38.78	(Min)
g)	At frequency of	25.00	MHz		36.84	(Min)
h)	At frequency of	31.25	MHz		34.90	(Min)
i)	At frequency of	62.50	MHz		28.88	(Min)
j)	At frequency of	100.00	MHz		24.80	(Min)
k)	At frequency of	125.00	MHz		22.86	(Min)
l)	At frequency of	150.00	MHz		21.28	(Min)
m)	At frequency of	200.00	MHz		18.78	(Min)
n)	At frequency of	250.00	MHz		16.84	(Min)
8	Operating Temperature			°C	-20 to 80	
9	Approximate Overall Diameter			mm	5.7	
10	Approximate Weight			Kg/Km	44	

TECHNICAL INFORMATION

0.6/1 KV CABLES CURRENT CARRYING CAPACITY (AMPERE)

Nominal Cross Section sq.mm	For PVC Insulated Cables						
	3 & 4 Core Cables		2 Core Cables		Single Core Cables		5 Core & above
	In Ground	In Air	In Ground	In Air	In Ground	In Air	
1.5	26	18.5	32	20	40	26	For Multi core cables see below table
2.5	34	25	42	27	54	35	
4	44	34	54	37	70	46	
6	56	43	68	48	90	58	
10	75	60	90	66	122	79	
16	98	80	116	89	160	105	
25	128	106	150	118	206	140	
35	157	131	181	145	249	174	
50	185	159	215	176	296	212	
70	228	202	264	224	365	269	
95	275	244	317	271	438	331	
120	313	282	360	314	499	386	
150	353	324	406	361	561	442	
185	399	371	458	412	637	511	
240	464	436	537	484	743	612	
300	524	481	609	549	843	707	
400	600	560	729	657	986	859	
500	-	-	-	749	1125	1000	

Nominal Cross Section sq.mm	For XLPE Insulated Cables						
	3 & 4 Core Cables		2 Core Cables		Single Core Cables		5 Core & above
	In Ground	In Air	In Ground	In Air	In Ground	In Air	
1.5	30	24	37	26	38	32	For Multi core cables see below table
2.5	40	32	49	35	51	43	
4	52	42	67	46	66	56	
6	64	53	78	59	82	71	
10	86	73	103	80	109	96	
16	111	96	131	107	139	128	
25	143	130	168	145	179	173	
35	173	160	199	177	213	212	
50	205	195	238	216	251	258	
70	252	247	292	274	307	328	
95	303	305	349	339	366	404	
120	346	355	398	395	416	471	
150	390	407	449	453	465	541	
185	441	469	506	521	526	626	
240	511	551	591	612	610	749	
300	580	638	674	728	689	864	
400	663	746	806	875	788	1018	
500	-	-	-	-	889	1173	

Above current carrying capacities are based on the following conditions:

Laying in Conduit

Ambient temperature : 30deg C
Load factor : 1.0

Laying in air

Ambient temperature : 30deg C
Load factor : 1.0

Cables are protected from direct sunlight.

Laying in soil

Ambient temperature : 20deg C
Load factor : 0.7
Thermal resistivity of the soil : 1 K.m/W
Depth of lying : 70 cm
Flat formation clearance : 7 cm

Rating factors for multicore cables

No. of Cores	5	7	10	14	19	24	40	61
Factors in Ground	0.7	0.6	0.5	0.45	0.4	0.35	0.3	0.25
Factors in Air	0.75	0.65	0.55	0.5	0.45	0.4	0.35	0.3

TECHNICAL INFORMATION

0.6/1 KV CABLES CURRENT CARRYING CAPACITY

For cable installation in other conditions, the current rating can be determined by the use of various rating factors given hereunder:

INSTALLATION IN GROUND

A. Factors for variation in ambient temperature and thermal resistivity of the soil.

Insulation Type	Thermal Resistivity of the soil K.m/W	0.7		1.0		**1.5**		**2.5**
	Load Factor Þ	0.7	1.0	0.7	1.0	**0.7**	**1.0**	**0.7-1.0**
	Soil Temperature							
XLPE	10	1.16	1.05	1.05	0.98	0.95	0.91	0.86
	15	1.14	1.03	1.02	0.95	0.92	0.89	0.84
	20	1.12	1	1	0.93	0.9	0.86	0.81
	25			0.98	0.9	0.87	0.84	0.78
	30			0.95	0.88	0.84	0.81	0.75
	35					0.82	0.78	0.72
	40							0.68
PVC	10	1.19	1.06	1.06	0.97	0.94	0.89	0.83
	15	1.17	1.03	1.03	0.94	0.91	0.86	0.79
	20	1.14	1.01	1	0.91	0.87	0.83	0.76
	25			0.97	0.88	0.84	0.79	0.72
	30			0.94	0.85	0.8	0.76	0.68
	35					0.77	0.72	0.63
	40							0.59

B. Factors for grouping in soil Single core cables in flat formation Clearance between systems: 7 cm.

Insulation Type	Load Factor	0.7				**1.0**
	Thermal Resistivity of the soil K.m/W	0.7	1.0	1.5	2.5	**0.7-2.5**
	No. of systems in the trench					
XLPE	1	0.99	1	1.01	1.03	0.85
	2	0.86	0.87	0.88	0.88	0.71
	3	0.77	0.77	0.78	0.79	0.62
	4	0.73	0.73	0.74	0.74	0.58
	5	0.69	0.7	0.7	0.71	0.55
	6	0.67	0.68	0.68	0.69	0.53
	8	0.64	0.65	0.65	0.65	0.52
	10	0.62	0.63	0.63	0.63	0.49
PVC	1	0.98	1	1.01	1.02	0.85
	2	0.86	0.87	0.88	0.89	0.71
	3	0.77	0.78	0.79	0.79	0.62
	4	0.73	0.74	0.74	0.75	0.58
	5	0.7	0.7	0.71	0.71	0.55
	6	0.68	0.68	0.69	0.69	0.53
	8	0.65	0.65	0.65	0.66	0.51
	10	0.63	0.63	0.63	0.64	0.49

TECHNICAL INFORMATION

0.6/1 KV CABLES CURRENT CARRYING CAPACITY

C. Factors for grouping in soil Single core cables in trefoil formation Clearance between systems: 7 cm, 25 cm

Insulation Type	Load Factor			0.7						1.0	
	Thermal Resistivity of the soil K.m/W	0.7		1.0		1.5		2.5		0.7-2.5	
	Clearance (cm)	7	25	7	25	7	25	7	25	7	25
	No. of systems in the trench Þ										
XLPE	1	0.99	0.99	1	1	1.01	1.01	1.03	1.03	0.87	0.87
	2	0.84	0.89	0.85	0.89	0.86	0.9	0.87	0.91	0.71	0.75
	3	0.74	0.81	0.75	0.82	0.76	0.82	0.76	0.83	0.61	0.67
	4	0.69	0.78	0.7	0.78	0.7	0.79	0.71	0.79	0.56	0.64
	5	0.65	0.74	0.66	0.75	0.66	0.75	0.67	0.76	0.52	0.6
	6	0.62	0.72	0.63	0.73	0.63	0.73	0.64	0.74	0.5	0.59
	8	0.58	0.7	0.59	0.7	0.59	0.7	0.59	0.71	0.46	0.56
	10	0.56	0.68	0.56	0.68	0.56	0.68	0.57	0.69	0.44	0.54
PVC	1	0.99	0.99	1	1	1.01	1.01	1.01	1.01	0.87	0.87
	2	0.84	0.89	0.85	0.9	0.86	0.91	0.87	0.92	0.71	0.75
	3	0.74	0.82	0.75	0.82	0.76	0.83	0.77	0.84	0.61	0.67
	4	0.69	0.78	0.7	0.79	0.71	0.79	0.71	0.8	0.56	0.64
	5	0.65	0.75	0.66	0.76	0.66	0.76	0.67	0.77	0.52	0.6
	6	0.62	0.73	0.63	0.74	0.64	0.74	0.64	0.75	0.5	0.59
	8	0.58	0.7	0.59	0.71	0.59	0.71	0.6	0.72	0.46	0.56
	10	0.55	0.69	0.56	0.69	0.56	0.69	0.57	0.7	0.44	0.54

D. Factors for grouping in soil 3, 4 & 5 core cables laid side by side Clearance between cables: 7 cm

Insulation Type	Load Factor	0.7				1
	Thermal Resistivity of the soil K.m/W	0.7	1	1.5	2.5	0.7-2.5
	No. of systems in the trench Þ					
XLPE	1	0.99	1	1.01	1.02	0.89
	2	0.84	0.85	0.86	0.87	0.72
	3	0.74	0.75	0.77	0.77	0.62
	4	0.69	0.7	0.71	0.72	0.57
	5	0.65	0.66	0.67	0.67	0.53
	6	0.63	0.63	0.64	0.65	0.51
	8	0.59	0.59	0.6	0.6	0.47
	10	0.56	0.56	0.57	0.57	0.44
PVC	1	0.94	1	1.01	1.02	0.89
	2	0.85	0.86	0.87	0.88	0.72
	3	0.75	0.76	0.77	0.78	0.62
	4	0.7	0.71	0.72	0.73	0.57
	5	0.66	0.67	0.68	0.68	0.53
	6	0.64	0.64	0.65	0.65	0.51
	8	0.59	0.6	0.61	0.61	0.47
	10	0.57	0.57	0.58	0.58	0.44

E. Factors relating to depth of laying

DEPTH (Mtr)	FACTORS
0.5	1.03
0.7	1
1	0.96
1.2	0.93
1.5	0.91

TECHNICAL INFORMATION

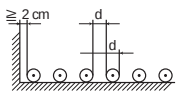
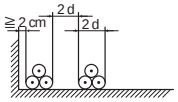
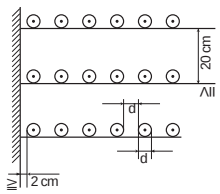
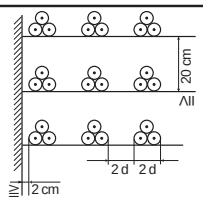
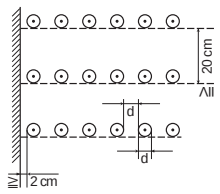
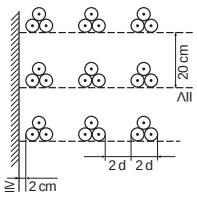
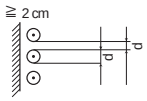
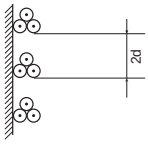
0.6/1 KV CABLES CURRENT CARRYING CAPACITY

INSTALLATION IN GROUND

A Factors for variation in ambient temperature:

AIR TEMPERATURE		10	15	20	25	30	35	40	45	50
INSULATION	XLPE	1.15	1.12	1.08	1.4	1	0.96	0.91	0.87	0.82
	PVC	1.22	1.17	1.12	1.07	1	0.94	0.87	0.79	0.71

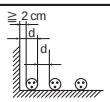
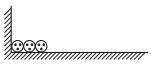
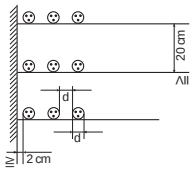
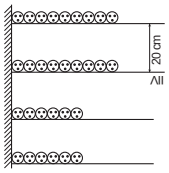
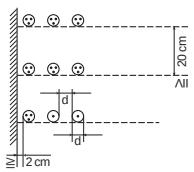
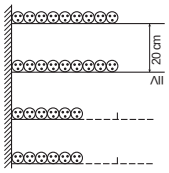
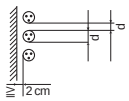
B. Factors for grouping in air. Single core cables in three phase systems.

Arrangement of cables		In flat formation,clearance = cable diameter d Distance from wall ≥ 2 cm				In flat formation,clearance = 2d Distance from wall ≥ 2 cm			
Number of systems side by side		1	2	3		1	2	3	
Laying on the ground		0,92	0,89	0,88		0,95	0,90	0,88	
Number of troughs									
Laying on cable troughs (restricted air circulation)	1	0,92	0,89	0,88		0,95	0,90	0,88	
	2	0,87	0,84	0,83		0,90	0,85	0,83	
	3	0,84	0,82	0,81		0,88	0,83	0,81	
	6	0,82	0,80	0,79		0,86	0,81	0,79	
Number of grills									
Laying on cable grills (unrestricted air circulation)	1	1,00	0,97	0,96		1,00	0,98	0,96	
	2	0,97	0,94	0,93		1,00	0,95	0,93	
	3	0,96	0,93	0,92		1,00	0,94	0,92	
	6	0,94	0,91	0,90		1,00	0,93	0,90	
Number of systems above each other		1	2	3		1	2	3	
Arranged on frameworks or at walls		0,94	0,91	0,89		0,89	0,86	0,84	

TECHNICAL INFORMATION

0.6/1 KV CABLES FACTORS FOR CURRENT CARRYING CAPACITY

C. Factors for grouping in air. Multicore cables in three face systems.

Arrangement of cables		clearance = cable diameter d Distance from wall 2 cm						Cables touching each other and in contact with the wall					
Number of cables side by side		1	2	3	6	9		1	2	2	6	9	
Laying on the ground		0,95	0,90	0,88	0,85	0,84		0,90	0,84	0,80	0,75	0,73	
Number of troughs													
Laying on cable troughs (restricted air circulation)	1	0,95	0,90	0,88	0,85	0,84		0,95	0,84	0,80	0,75	0,73	
	2	0,90	0,85	0,83	0,81	0,80		0,95	0,80	0,76	0,71	0,69	
	3	0,88	0,83	0,81	0,79	0,78		0,95	0,78	0,74	0,70	0,68	
	6	0,86	0,81	0,79	0,77	0,76		0,95	0,76	0,72	0,68	0,66	
Number of grills													
Laying on cable grills (unrestricted air circulation)	1	1,00	0,98	0,96	0,93	0,92		0,95	0,84	0,80	0,75	0,73	
	2	1,00	0,95	0,93	0,90	0,89		0,95	0,80	0,76	0,71	0,69	
	3	1,00	0,94	0,92	0,89	0,88		0,95	0,78	0,74	0,70	0,68	
	6	1,00	0,93	0,90	0,87	0,86		0,95	0,76	0,72	0,68	0,66	
Number of cables above each other		1	2	3	6	9		1	2	3	6	9	
Arranged on frameworks or at walls		1,00	0,93	0,90	0,87	0,86		0,95	0,78	0,73	0,68	0,66	

TECHNICAL INFORMATION

MAXIMUM PULLING TENSIONS

The maximum tension must not be exceeded when pulling a cable into ducts and conduits:

A. Using a pulling eye:
Tm = 7.16 X n X A
Tm = Maximum tension, (Kg)
n = No of conductors
A = Area of each conductor, sq. mm

B. Using a cable grip:
Tg = p x k x t x (D - t)
Tg = Maximum Tension, (Kg)
t = Jacket thickness, mm
D = Cable overall diameter, mm
k = 0.7 Kg/sq.mm for PVC, PE & Neoprene

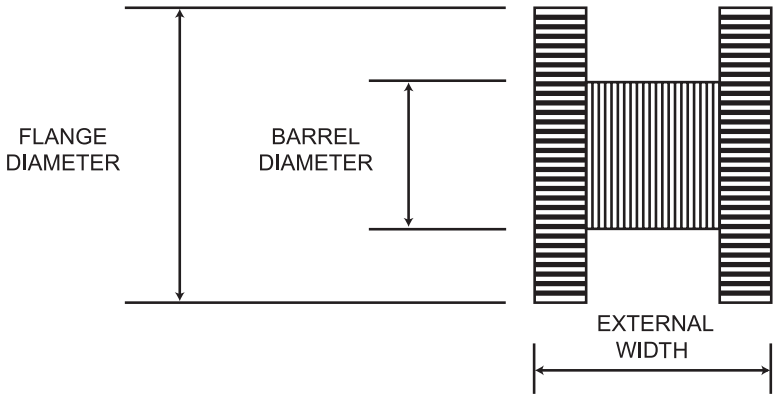
The tension required to pull the cable in a straight duct can be calculated as follows:

Ts = L x w x f
Ts = Tension required to pull cable, Kg.
L = Length of cable, m
w = Weight of cable, Kg/m
f = Co-ef efficient of friction

Coefficient of friction			
Duct Material	Jacket Material		
	PE	PVC	Neoprene
Asbestos Cement	0.56	0.56	0.68
Rigid PVC	0.34	0.52	0.53
Metal	0.36	0.55	0.6

TECHNICAL INFORMATION

M.E.S.C. WOODEN REEL DETAILS



DIMENSIONS AND WEIGHTS

REEL SIZE	FLANGE DIAMETER (mm)	BARREL DIAMETER (mm)	EXTERNAL WIDTH (mm)	EMPTY REEL WT (APPROX.) (KG.)
D - 5	500	250	372	9
D - 6	630	315	472	14
D - 7	710	355	522	18
D - 8	800	400	572	25
D - 9	900	450	632	32
D - 10	1000	500	726	40
D - 11	1100	560	806	60
D - 12	1250	630	896	85
D - 14	1400	710	996	105
D - 16	1600	800	1120	175

GUIDELINES FOR SELECTION OF REELS

Reel Size	Cable length = 1000 Meter Cable ¯ Range mm			Cable Length = 500 Meter Cable ¯ Range mm		
D-5	Up to		4.4	Up to		6.6
D-6	4.5	to	7.4	6.7	to	10.5
D-7	7.5	to	9.2	10.6	to	13
D-8	9.3	to	11.3	13.1	to	15.8
D-9	11.4	to	13.6	15.9	to	19.4
D-10	13.7	to	16	19.5	to	23.4
D-11	16.1	to	19.3	23.5	to	27.2
D-12	19.4	to	24	27.3	to	33
D-14	24.1	to	28.6	33.1	to	39.6
D-16	28.7	to	35.4	39.6	to	47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