

دوكاب Ducab

DuFlex كابلات RV - K DuFlex RV - K Cables



حلول متقدمة للكابلات من خلال التقنية والابداع
Advanced Cable Solutions Through Technology and Innovation

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INTRODUCTION

Established in 1979, Ducab is the leading cable manufacturing company in the region and is equally owned by the Governments of Dubai and Abu Dhabi. Ducab has three major manufacturing facilities that support its continuous growth, one in Jebel Ali and two in Abu Dhabi Industrial City. Ducab-HV, inaugurated in November 2011, is a joint venture between Ducab, ADWEA and DEWA offering High Voltage cable systems up to 400 kV. Ducab-HV will sell cable systems in the voltage range 66kV (66,000 Volts) to 400kV (400,000 Volts) covering the highest voltage currently used in the GCC.

To meet the growing demand of customers around the region and the world, Ducab continues to expand its world-class facilities across the Middle East, North Africa, Europe and India. Ducab prides itself on setting and maintaining the highest quality standards of power cables. Experienced and highly skilled employees operate state-of-the-art equipment, and conduct extensive testing at every phase of production.

When it comes to advanced cable solutions, Ducab continues its status as the superbrand across the world in 40 countries. Ducab product range covers High Voltage cables up to 400kV, Ducab Powerplus Medium Voltage cables up to 33kV, Low Voltage power cables, Control & Auxiliary, Wiring and Lead-Sheathed cables, Ducab Smokemaster - Low Smoke Zero Halogen cables, and Ducab Flam BICC (Fire Resistance cables), DuFlex cables, THHN/THWN cables, Instrumentation and Pilot cables, RuBICC - H07RN-F Rubber Flexibles, cable components and cable accessories, Drum Handling & Installation of Cables, as well as copper rod manufactured in Ducab's own copper rod plant.

This catalogue provides working information on Ducab DuFlex RV-K cables. Separate catalogues are available for the remaining range of Ducab Cables.

ORDERING ADVICE

Due to the wide range of cables in the catalogue, it is advisable, when ordering, to provide as much information as possible. Please use the following table as a guide:

1. Cable standard / specification number.
2. Voltage designation.
3. Number of cores.
4. Conductor size and type/class.
5. Colour of outer sheath.
6. Length of cables required and individual drum lengths.*
7. Any other special requirement, e.g. drum weight limitation, etc.

* Cables are normally supplied in lengths of 100 metres, 500 metres and 1000 metres depending on conductor size. Other lengths can be supplied if required.

TECHNICAL ADVISORY SERVICE

For any specialist advice and assistance on the entire Ducab product range contact the Technical Department, Dubai Cable Company (Private) Limited, P. O. Box 11529, Dubai, U. A. E., Tel: 971-4-8158888, Fax: 971-4-8158111.

CUSTOMER SERVICE

Ducab is the premier cable manufacturer in the United Arab Emirates and, since 1979, has been meeting the requirements of customers throughout the GCC, Middle East and Asian markets. Ducab cables are preferred for the following reasons:

PRODUCT QUALITY



Ducab is committed to supplying its customers with the highest quality of product and of service. Ducab's cables have been type approved by recognized certifying bodies such as BASEC UK (British Approval Service for Cables), Lloyd's Register of the UK, KEMA Netherland, LPCB UK (Loss Prevention Certification Board), ESMA (Emirates Authority for standardization and Metrology). They fully conform to BS, IEC other international and national specifications.

In addition, Ducab was presented with the Dubai Quality Award 1994, for the best local industrial company of the year. Ducab won Dubai Quality Gold Category award twice, in 1998 and in 2004.

The Gold Award rewards the most distinguished companies which are judged to be world class and Ducab is the only manufacturing company in the region to win such acclaim.

Ducab has won the Sheikh Mohammed Bin Rashid Al Maktoum (MRM) Business Excellence Award in manufacturing category in 2009. Recognizing quality products and services, Ducab has also won the Superbrand award for 4 years consecutively from 2009.

RELIABILITY

Specifying the right cable for a particular application is the first step. The key to reliability however, is in the manufacturing process. The cable must be free from material and manufacturing defects, and weaknesses that will be revealed in service.

Ducab constantly monitors its manufacturing processes and operates stringent quality assurance procedures to give long term reliability. This is of vital significance where cables are to be installed in locations where future access would be difficult and this is where Ducab's reputation and resources give peace of mind.

PERFORMANCE

Optimum cable performance can be provided only by a company such as Ducab, with access to the latest developments in materials technology. In addition, Ducab's knowledge of application requirements throughout the Middle and Far East is an assurance of high performance.

Our experienced Technical Staff can provide guidance on cable selection and installation and can ensure that you get the right cable for the job.

HEALTH & SAFETY MANAGEMENT SYSTEM CERTIFIED TO OHSAS 18001



Ducab is able to maintain a close watch on world developments in cable technology and regulations and therefore ensure that its products are designed and constructed to be hazard-free under the prescribed conditions of use.

Ducab uses only tried and tested materials and processes in full compliance with all relevant British and International Standards. Our cables are therefore manufactured for safe use without risk to health on the understanding that users will exercise the same degree of care in their selection and application.



Safety is an important issue for Ducab, and the strictest standards are adhered to throughout the company. Ducab is proud of its safety record and has been awarded RoSPA (Royal Society for the Prevention of Accidents) Gold Awards for safety from 1991 to 1999. From 2000 onward, Ducab was awarded the prestigious President's Award for Health and

Safety which is a recognition of Ducab winning 10 consecutive annual Gold awards and acknowledges Ducab's total commitment to health and safety. In 2002, Ducab was declared the joint winner of the Manufacturing Industry Sector Award from RoSPA.

Ducab is the first organisation in the Middle East to receive accreditation to OHSAS 18001 by BASEC (British Approvals Service for Cables). Certification to OHSAS 18001 provides a recognisable Occupational Health and Safety Management standard against which an organisation's management systems can be assessed and certified. Based on the structure of OHSAS 18001, the standard requires continual improvement in health and safety related activities.

QUALITY MANAGEMENT SYSTEM CERTIFIED TO ISO 9001



Ducab's Quality Management System conforms to the ISO 9001 International Quality System Standard and is certified by BASEC (British Approvals Service for Cables), a specialist certifying body for cables who are an internationally recognised quality authority accredited in the UK and throughout the world.

Certification to the ISO 9001 International standard demonstrates that Ducab has drawn up written procedures to ensure full compliance with all requirements of the standard and that these procedures are followed by every department in the company, thus ensuring that goods leaving Ducab's factory are of the highest quality and meet each customer's requirements in every respect.

Ducab is particularly proud to have achieved certification to the stringent ISO 9001 standard as it is an independent conformation that the company designs, manufactures and tests cables consistently to accepted standards. ISO 9001 is widely used throughout Europe, and is therefore a reassurance to Ducab's customers that the products and service supplied by the company are equal to the best in the world.

ENVIRONMENTAL MANAGEMENT SYSTEM CERTIFIED TO ISO 14001

Ducab's Environmental Management System conforms to the ISO 14001 International Environmental Management Standard and is certified by BASEC who are an internationally recognised certifying authority accredited in the UK and throughout Europe.

Certification to the ISO 14001 International standard shows that Ducab has a well defined structure and established working practices aimed at limiting its impact on the environment. Measurement and monitoring of effects, issuing work instructions, training of personnel and taking corrective actions are all essential elements to limiting the impact on the environment.

Ducab has set improvement targets to reduce the significant environmental impacts associated with its activities.

Ducab is proud to be the first cable manufacturer in the region to achieve certification to ISO 14001 and this certification along with its quality, business success and safety record demonstrates that Ducab is a world class organisation and can hold its head up to any business community throughout the world.



BASEC CERTIFICATION

Ducab is also proud to hold a Process capability certification issued by BASEC (British Approvals Service for Cables) for several cables in its product range.

DUCAB SHAREEK

Ducab's customer satisfaction programme is designed to ensure that customers receive a consistently high level of service from Ducab's dedicated staff.



INTRODUCTION TO RV-K CABLE

DUCAB made RV-K cables are designed as per IEC 60502-1 for outdoor and indoor applications where flexible power cable is required. Due to cable flexibility they can be easily installed in difficult layouts. Substantial time is saved for installing these cables due to ease of handling and hence these cables have low installation cost.

Designation:

- R – XLPE insulation
- V – PVC sheath
- K – Flexible conductor

Application: These are suitable for all type of low voltage industrial connections and building installation. These can be easily fixed on cable trays or fixed on walls. They also can be used for buried applications with mechanical protection. Due to XLPE insulation the cable can be used for higher current rating.

Main Characteristics:

Conductor	Plain annealed flexible class 5 copper conductor to IEC / BS EN 60228
Insulation	XLPE with suitable colour for core identification
Core identification	One core – Black Two core – Blue, Brown Three core – Green/Yellow, Blue, Brown Four core - Green/Yellow, Brown, Black, Grey OR Green/Yellow, Blue, Brown, Black Five core - Green/Yellow, Blue, Brown, Black, Grey Any other core identification as per client request can be provided.
Sheath	Lead free PVC with Black colour as standard, other colours available upon request. PVC sheath is resistant to oils and hydrocarbons.
Cable Operating Temperature	Maximum 90°C Minimum -15°C
Voltage	600/1000 V
Bending radius	5 x Cable diameter
Short circuit temperature	250°C
Cable standard	IEC 60502-1
Flame retardant	IEC 60332-1
Weather resistant	Very good
Water immersion	Cable suitable for total immersion in water as per AD7 immersion

Derating factors:

The de-rating factors for different ambient air temperature are as follows:

Temperature in °C	25	30	35	40	45	50
Factor	1.02	1.0	0.96	0.91	0.87	0.82

The de-rating factors for different ground temperature are as follows:

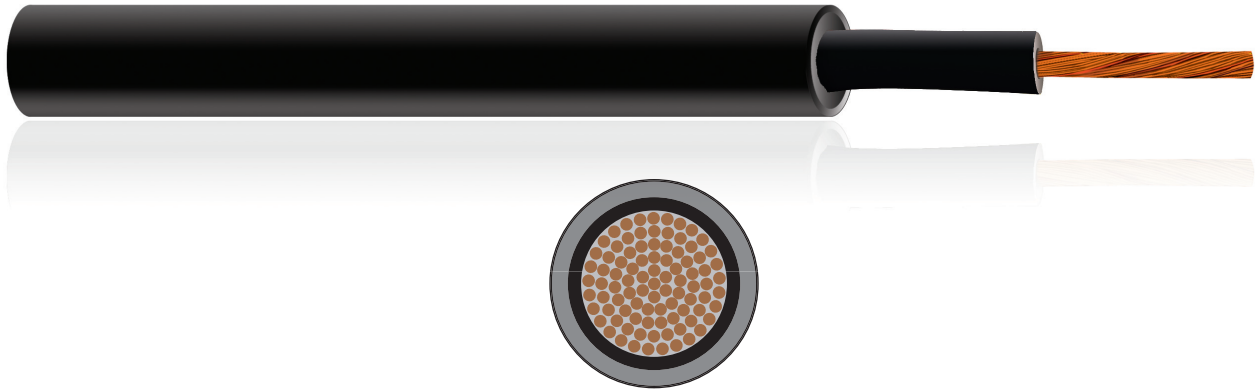
Temperature in °C	10	15	20	25	30	35	40
Factor	1.03	1.0	0.96	0.92	0.89	0.85	0.82

The de-rating factors for different soil thermal resistivity are as follows:

Thermal resistivity in °C. m/W	1.0	1.2	1.5	2.0	2.5
Factor	1.04	1.0	0.93	0.84	0.77

ONE CORE: FLEXIBLE COPPER CONDUCTOR, XLPE INSULATED AND PVC OVERSHEATHED

SYSTEM VOLTAGE: 600/1000V



DIMENSIONAL DATA OF SINGLE CORE CABLE

Table 1

Nominal area of conductor (Sq. mm)	Insulation nominal thickness (mm)	Sheath nominal thickness (mm)	Approx. Outer diameter (mm)	Approx. Weight of cable (Kg/Km.)
1.5	0.7	1.4	5.1	37
2.5	0.7	1.4	5.6	50
4	0.7	1.4	6.2	66
6	0.7	1.4	6.7	86
10	0.7	1.4	8.7	128
16	0.7	1.4	7.7	187
25	0.9	1.4	10.4	284
35	0.9	1.4	11.6	371
50	1	1.4	13.2	507
70	1.1	1.4	15	708
95	1.1	1.5	17	944
120	1.2	1.5	18.8	1177
150	1.4	1.6	21	1444
185	1.6	1.6	23.2	1799
240	1.7	1.7	26.2	2365
300	1.8	1.8	28.8	2919
400	2	1.9	32.7	3716
500	2.2	2.0	36.7	4762
630	2.4	2.2	41.9	6202

Core identification is black, any other colour can be provided as per customer request
Minimum allowable bending radius: 5 x outer diameter.

ELECTRICAL DATA OF SINGLE CORE CABLE

Table 2

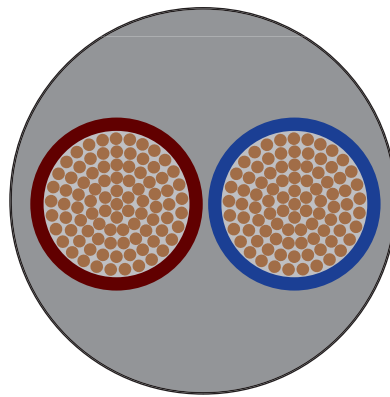
Nominal area of conductor (Sq. mm)	Max. Continuous Current Carrying Capacity When Laid in :		Max. DC Resistance (Ohm/km)	Max. AC Resistance (Ohm/km)	Max. conductor short circuit capacity for 1sec: (kA)	Voltage drop (for 3-phase circuits) mv/Amp/mt
	Air (A.)	Ground (A.)				
1.5	23	34	13.30	17.21	0.215	29.81
2.5	30	45	7.98	10.33	0.358	17.89
4	40	58	4.95	6.41	0.572	11.10
6	53	71	3.30	4.27	0.86	7.40
10	72	95	1.91	2.47	1.43	4.28
16	97	123	1.21	1.57	2.29	2.72
25	127	157	0.780	1.009	3.58	1.76
35	158	190	0.554	0.717	5.01	1.25
50	209	230	0.386	0.499	7.2	0.88
70	266	283	0.272	0.352	10.0	0.63
95	316	324	0.206	0.267	13.6	0.48
120	369	375	0.161	0.208	17.2	0.39
150	427	426	0.129	0.167	21.5	0.32
185	483	474	0.106	0.137	26.5	0.27
240	572	553	0.0801	0.1036	34.3	0.22
300	659	629	0.0641	0.0829	42.9	0.19
400	780	728	0.0486	0.0629	57.2	0.17
500	883	820	0.0384	0.0497	71.5	0.15
630	1026	953	0.0287	0.0371	90.1	0.14

CONDITIONS OF INSTALLATIONS

Soli thermal resistivity	°C m/W	1.2
Ground temperature	°C	15
Air temperature	°C	30
Burial depth	meters	0.5

TWO CORE: FLEXIBLE COPPER CONDUCTOR, XLPE INSULATED AND PVC OVERSHEATHED

SYSTEM VOLTAGE : 600/1000V



DIMENSIONS AND WEIGHTS OF TWO CORES CABLE

Table 3

Nominal area of conductor (Sq. mm)	Insulation nominal thickness (mm)	Sheath nominal thickness (mm)	Approx. Outer diameter (mm)	Approx. Weight of cable (Kg/Km.)
1.5	0.7	1.8	8.9	104
2.5	0.7	1.8	9.8	137
4	0.7	1.8	11.0	183
6	0.7	1.8	12.2	239
10	0.7	1.8	14.0	347
16	0.7	1.8	16.1	500

Core identification are (Blue, Brown), any colour can be provided as per customer request Minimum allowable bending radius : 5 x Outer Diameter

ELECTRICAL DATA OF TWO CORE CABLE

Table 4

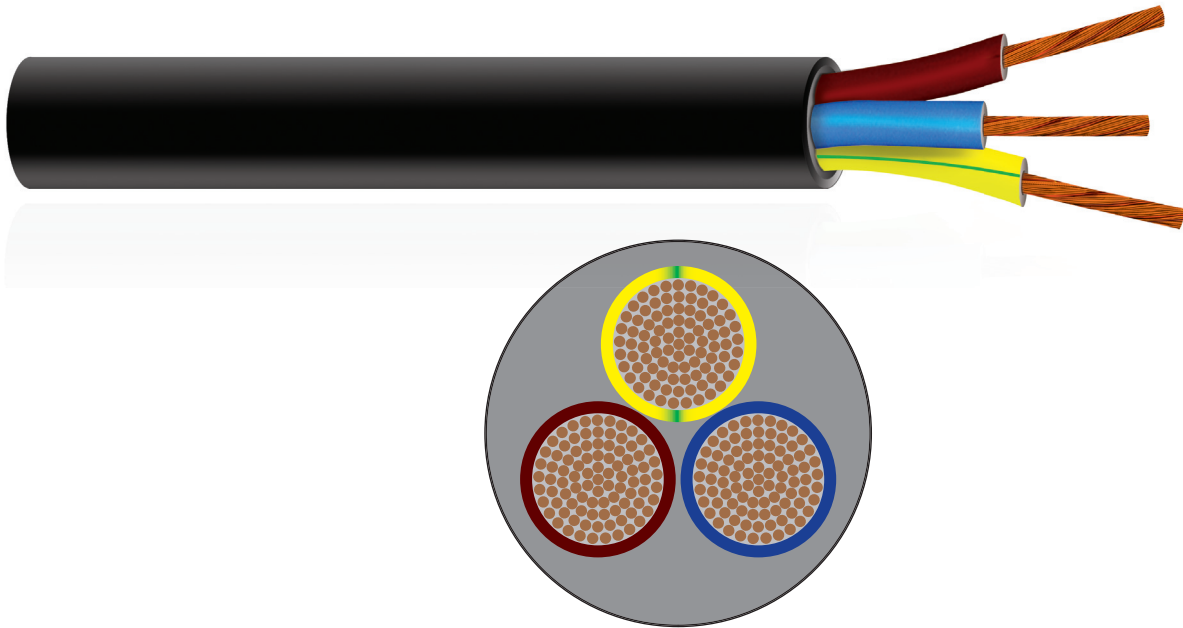
Nominal area of conductor (Sq. mm)	Max. Continuous Current Carrying Capacity When Laid in :		Max. DC Resistance (Ohm/km)	Max. AC Resistance (Ohm/km)	Max. conductor short circuit capacity for 1sec: (kA)	Voltage drop (for 3-phase circuits) mv/Amp/mt
	Air (A.)	Ground (A.)				
1.5	25	36	13.3	17	0.215	34.0
2.5	34	47	7.98	10.20	0.358	20.4
4	45	62	4.95	6.33	0.572	12.7
6	59	77	3.30	4.22	0.858	8.4
10	82	104	1.91	2.44	1.430	4.9
16	112	136	1.21	1.55	2.288	3.1

CONDITIONS OF INSTALLATIONS

Soli thermal resistivity	°C m/W	1.2
Ground temperature	°C	15
Air temperature	°C	30
Burial depth	meters	0.5

THREE CORE: FLEXIBLE COPPER CONDUCTOR, XLPE INSULATED AND PVC OVERSHEATHED

SYSTEM VOLTAGE : 600/1000V



DIMENSIONS AND WEIGHTS OF THREE CORES CABLE

Table 5

Nominal area of conductor (Sq. mm)	Insulation nominal thickness (mm)	Sheath nominal thickness (mm)	Approx. Outer diameter (mm)	Approx. Weight of cable (Kg/Km.)
1.5	0.7	1.8	9.4	120
2.5	0.7	1.8	10.4	163
4	0.7	1.8	11.7	221
6	0.7	1.8	12.9	293
10	0.7	1.8	14.9	434
16	0.7	1.8	17.1	636
25	0.9	1.8	20.8	974
35	0.9	1.8	23.4	1273
50	1	1.8	26.8	1741
70	1.1	1.9	30.9	2444

Core identification are (Green/Yellow, Blue, Brown), any other colour can be provided as per customer request Minimum allowable bending radius: 5 x outer diameter

ELECTRICAL DATA OF THREE CORE CABLE

Table 6

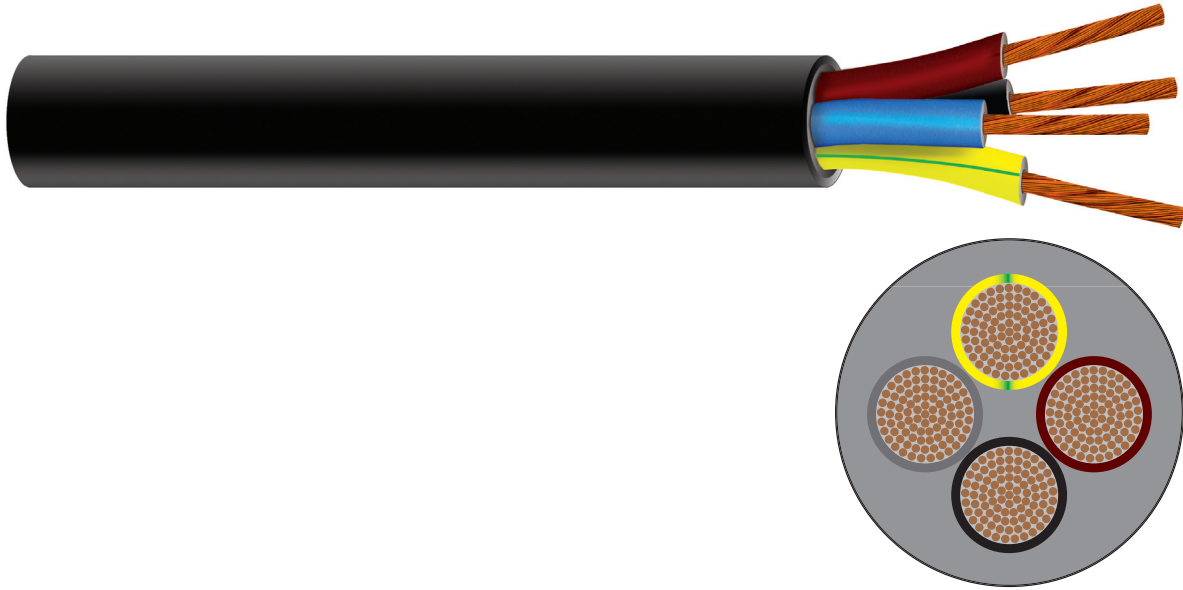
Nominal area of conductor (Sq. mm)	Max. Continuous Current Carrying Capacity When Laid in :		Max. DC Resistance (Ohm/km)	Max. AC Resistance (Ohm/km)	Max. conductor short circuit capacity for 1sec: (kA)	Voltage drop (for 3-phase circuits) mv/Amp/mt
	Air (A.)	Ground (A.)				
1.5	25	31	13.30	16.9	0.215	29.3
2.5	32	41	7.98	10.2	0.358	17.6
4	43	54	4.95	6.3	0.572	10.9
6	55	68	3.30	4.2	0.858	7.3
10	77	90	1.91	2.4	1.43	4.2
16	97	117	1.21	1.5	2.29	2.7
25	123	140	0.780	1.0	3.58	1.7
35	154	176	0.554	0.7	5.01	1.2
50	192	215	0.386	0.5	7.15	0.9
70	244	263	0.272	0.3	10.0	0.6

CONDITIONS OF INSTALLATIONS

Soli thermal resistivity	°C m/W	1.2
Ground temperature	°C	15
Air temperature	°C	30
Burial depth	meters	0.5

FOUR CORE: FLEXIBLE COPPER CONDUCTOR, XLPE INSULATED AND PVC OVERSHEATHED

SYSTEM VOLTAGE : 600/1000V



DIMENSIONS AND WEIGHTS OF FOUR CORES CABLE

Table 7

Nominal area of conductor (Sq. mm)	Insulation nominal thickness (mm)	Sheath nominal thickness (mm)	Approx. Outer diameter (mm)	Approx. Weight of cable (Kg/Km.)
1.5	0.7	1.8	10.1	141
2.5	0.7	1.8	11.3	195
4	0.7	1.8	12.7	267
6	0.7	1.8	14.1	358
10	0.7	1.8	16.3	537
16	0.7	1.8	18.8	795
25	0.9	1.8	23	1223
35	0.9	1.8	25.8	1603
50	1	1.8	29.7	2201
70	1.1	2.0	34.5	3115
95	1.1	2.1	39.1	4142
120	1.2	2.3	43.8	5200
150	1.4	2.4	48.9	6397
185	1.6	2.6	54.1	8000
240	1.7	2.8	61.6	10510

Core identification are (Green/Yellow, Brown, Black, Grey OR Green/Yellow, Blue, Brown, Black), any other colour can be provided as per customer request
 Minimum allowable bending radius: 5 x outer diameter

ELECTRICAL DATA OF FOUR CORE CABLE

Table 8

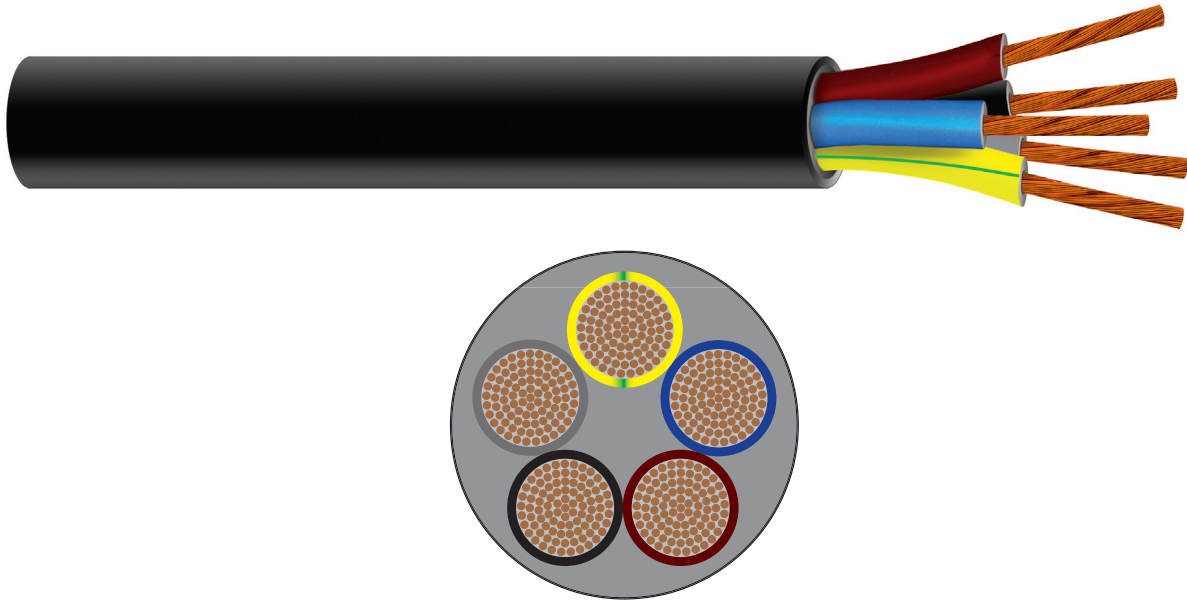
Nominal area of conductor (Sq. mm)	Max. Continuous Current Carrying Capacity When Laid in :		Max. DC Resistance (Ohm/km)	Max. AC Resistance (Ohm/km)	Max. conductor short circuit capacity for 1sec: (kA)	Voltage drop (for 3-phase circuits) mv/Amp/mt
	Air (A.)	Ground (A.)				
1.5	24	31	13.30	16.9	0.215	29.3
2.5	32	41	7.98	10.2	0.358	17.6
4	43	54	4.95	6.3	0.57	10.9
6	54	67	3.30	4.2	0.86	7.3
10	76	90	1.91	2.4	1.43	4.2
16	97	117	1.21	1.47	2.29	2.5
25	123	140	0.780	0.927	3.58	1.7
35	154	175	0.554	0.668	5.01	1.2
50	192	215	0.386	0.494	7.2	0.9
70	244	263	0.272	0.342	10.0	0.6
95	288	305	0.206	0.247	13.6	0.5
120	337	356	0.161	0.197	17.2	0.4
150	391	397	0.129	0.160	21.5	0.3
185	441	450	0.106	0.128	26.5	0.3
240	522	524	0.0801	0.0989	34.4	0.2

CONDITIONS OF INSTALLATIONS

Soli thermal resistivity	°C m/W	1.2
Ground temperature	°C	15
Air temperature	°C	30
Burial depth	meters	0.5

FIVE CORE: FLEXIBLE COPPER CONDUCTOR, XLPE INSULATED AND PVC OVERSHEATHED

SYSTEM VOLTAGE : 600/1000V



DIMENSIONS AND WEIGHTS OF FIVE CORES CABLE

Table 9

Nominal area of conductor (Sq. mm)	Insulation nominal thickness (mm)	Sheath nominal thickness (mm)	Approx. Outer diameter (mm)	Approx. Weight of cable (Kg/Km.)
1.5	0.7	1.8	11.0	166
2.5	0.7	1.8	12.3	231
4	0.7	1.8	13.9	320
6	0.7	1.8	15.4	430
10	0.7	1.8	17.9	651
16	0.7	1.8	20.7	968
25	0.9	1.8	25.3	1493
35	0.9	1.8	28.5	1962
50	1	1.9	33	2718

Core identification are (Green/Yellow, Blue, Brown, Black, Grey), any other colour can be provided as per customer request

Minimum allowable bending radius: 5 x outer diameter

ELECTRICAL DATA OF FIVE CORE CABLE

Table 10

Nominal area of conductor (Sq. mm)	Max. Continuous Current Carrying Capacity When Laid in :		Max. DC Resistance (Ohm/km)	Max. AC Resistance (Ohm/km)	Max. conductor short circuit capacity for 1sec: (kA)	Voltage drop (for 3-phase circuits) mv/Amp/mt
	Air (A.)	Ground (A.)				
1.5	25	31	13.30	17.15	0.215	29.7
2.5	32	41	7.98	10.29	0.358	17.8
4	43	54	4.95	6.38	0.572	11.1
6	55	68	3.30	4.26	0.858	7.37
10	77	90	1.91	2.46	1.43	4.27
16	97	117	1.21	1.56	2.29	2.70
25	123	140	0.780	1.01	3.58	1.74
35	154	176	0.554	0.71	5.01	1.24
50	192	215	0.386	0.50	7.15	0.86

CONDITIONS OF INSTALLATIONS

Soli thermal resistivity	°C m/W	1.2
Ground temperature	°C	15
Air temperature	°C	30
Burial depth	meters	0.5

دوكاب Ducab

Ducab Offices and Joint Ventures

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