BBS CABLES®
more than safety

BBS Cables
Environment Friendly
Cables

Technical Catalogue

First Edition : January, 2011
Second Edition : June, 2012
Re-print : December, 2013
Third Edition : January, 2016
Fourth Edition : December, 2017
Re-print : July, 2018
Re-print : December, 2018

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Factory: Jaina Bazar, Telehate, Sreepur, Gazipur, Bangladesh

*This **Technical Catalogue** has been compiled by **BBS Cables Ltd.** to support engineers with the most common data on cables in accordance with National and International Standards. For further query related to Cables, Wires & Conductors please refer to our **Technical Department**.*

*This **Technical Catalogue** may contain some typing or printing errors. Readers are requested to consider these errors (if any) cordially and suggest us to improve the quality. Your valuable suggestions will be accepted affectionately.*

Welcome To BBS CABLES

BBS Cables Ltd., a sister concern of **Bangladesh Building Systems Ltd. (BBSL)** which is a leading Pre-Engineered Steel Building Manufacturers in Bangladesh, has been incorporated in 2009. **BBS Cables Ltd.** is looking forward to managing expertise and obtaining technology to provide better engineering solutions through supplying quality electrical Cables, Wires, Conductors and better Customer Service. Now at the eve of the 21st century globalization, electric power has become an integral part for infrastructural development. With the rapid urbanization from corner to corner worldwide, the necessity of transmitting power assumes significant for sustainable industrial growth. So, our objective is to manufacture electrical Cables, Wires and Conductors of the highest quality and provide unparallel Customer Service to contribute to our national economic growth. We strongly believe that the relentless effort to quality and continuous improvement is the only key to long term success.

Our factory is located at **Sreepur, Gazipur, Bangladesh** which is equipped with state of the art technology machineries to manufacture and test all types of quality Cables, Wires and Conductors in conformity with the latest version of National and International Standards e.g. International Electro-technical Commission (IEC), German Standard (VDE), British Standard (BS), Bangladesh Standard (BDS), Australian Standard (AS), Indian Standard (IS) and also meet up the specific requirements of the customer. We believe in a world that is safe and sound for us and also for our next generation.

Board of Directors

Engr. Mohammad Badrul Hassan
Chairman

Master's in Advance Engineering Management (BUET)
Bachelor of Technology in Civil Engineering (I.I.T. Kanpur, India)

Director, Helix Wire & Cable Industries Ltd.
Director, BBS Metallurgic Industries Ltd.
Director, BBS Infrastructure Ltd.
Director, Bangladesh Building Systems Ltd. (BBSL)
Director, Xiamen Reflective Insulations Ltd.
Director, Speed Builders & Engineers Ltd.
Managing Director, BBS Distribution Ltd.

Engr. Abu Noman Howlader
Managing Director

B.Sc. in Mechanical Engineering (BUET)

Managing Director, Helix Wire & Cable Industriest Ltd.
Managing Director, BBS Metallurgic Industries Ltd.
Managing Director, Bangladesh Building Systems Ltd. (BBSL)
Managing Director, Xiamen Reflective Insulations Ltd.
Managing Director, Speed Builders & Engineers Ltd.
Director, BBS Infrastructure Ltd.
Director, BBS Distribution Ltd.

Engr. Hasan Morshed Chowdhury
Director

B.Sc. in Civil Engineering (BUET)

Director, Helix Wire & Cable Industries Ltd.
Chairman, Bangladesh Building Systems Ltd. (BBSL)
Director, BBS Metallurgic Industries Ltd.
Director, Xiamen Reflective Insulations Ltd.
Managing Director, BBS Infrastructure Ltd.
Director, BBS Distribution Ltd.

Engr. Mohammad Ruhul Majid
Director

B.Sc. in Civil Engineering (BUET)

Director, Helix Wire & Cable Industries Ltd.
Director, BBS Metallurgic Industries Ltd.
Director, Bangladesh Building Systems Ltd. (BBSL)
Director, Xiamen Reflective Insulations Ltd.
Director, BBS Infrastructure Ltd.
Director, BBS Distribution Ltd.

Md. Ashraf Ali Khan
Director

Bachelor of Arts from Rajshahi University

Director, Helix Wire & Cable Industries Ltd.
Director, BBS Metallurgic Industries Ltd.
Director, Bangladesh Building Systems Ltd. (BBSL)
Director, Xiamen Reflective Insulations Ltd.
Director, BBS Infrastructure Ltd.
Director, BBS Distribution Ltd.

Product Range

PVC Insulated/ FR Skin Coated Copper/Aluminium House Wiring/Domestic Cables

PVC/XLPE Insulated, PVC Sheathed Power and Control Cables with or without Armour

XLPE Insulated, PVC Sheathed Power Cables up to 33 KV voltage

Various Types of FR, FRLS, FiR-750°C, LSHF Cables, HR-105°C , House Wiring & Power Cables.

Various Types of PE insulated Telecommunication Cables, Co-axial Cables, Drop Wires

Pre-assembled Insulated Aluminium Cables with ACSR messenger wire

Bare Aluminium & Copper Conductors and Wires with or without Annealing

Insulated or Bare Aluminium Stranded Conductors (AAC)

Aluminium Conductor Steel Re-Inforced (ACSR)

All Aluminium Alloy Conductors (AAAC)

Copper Wire Braided, Al-Mylar Tape Shielded, Pair Shielded and Overall Shielded Cables

Customized Cables, Wires, and Conductors as per Customers Requirement

Product Design

Our expert team is able to design and customize cables to suit specific customers requirement. To ensure the quality of our cables, our qualified engineers use the latest technology and equipments to test and monitor the entire production process. In today's market no product can expect sell effectively if it is not rooted in sound engineering designed. **BBS CABLES** are designed and manufactured with the latest national and international standards.

Product Test

Using the latest technology and equipment **BBS Cables Ltd.** carries out a full range of Routine and Type Tests as per BS, IEC, VDE and other National and International Standards. In the manufacturing process we maintain stringent quality assurance procedures to give long term reliability and peace of mind.

Health, Safety & Environment

To maintain health and safety standards, regular training is provided to all of our employees that covers special hazards, how to protect oneself, causes accidents at work, preventing slips and falls and how to use tools and machine safety. **BBS Cables Ltd.** uses only tried and tested materials and follow the processes in full compliance with all relevant National and International Standards to protect and preserve the environment.

Factors to be Considered in Cables Selection Process

Installation: The area of installation whether indoor, outdoor, underground, or aerial is critical in the choice of cable because the exposures to various elements may affect the performance and safety of cable. This is where the characteristics of insulation play an important part.

Voltage Rating: Determine the size of the conductor and the thickness and type of insulation.

Conductor Size: The current load, KVA load and kilowatt load are governed by voltage drop besides the heating and power factors. These must be known before determining the conductor size.

Ampacity Limitation: The maximum current a cable can safely carry without exceeding the capacity of the insulation or jacketed material.

External Condition: The presence of other sources of heat located in the installation, such as pipes, corrosive agents, structural materials and other cables can cause increase in the temperature of cables.

Optimum cable performance can be obtained from a cable such as **BBS CABLES**, with access to the latest developments in conductor, insulation, and protective materials technology. Our experienced Technical staff can provide guidance on cable selection and installation and can ensure that you get the right cables for your job.

Basic Cable Laying Instructions

Power Cables up to nominal voltage of 30 KV are suitable for indoor, outdoor, direct burial in earth as well as in water or in concrete. The installation must be carried out carefully, avoiding any impact on the properties of the cable & followings have to be considered,

- Protection against direct sun irradiation
- Laying on solid, smooth and free of stones ground or bedding in sand or stone free soil
- Protection against mechanical damage
- Protection against chemical and thermos influence

The maximum permitted pulling force during installation is $P = S \times A$

Where, $S = 50\ N/m^2$ and A = Sum of the cross section of all copper conductors. All turns of the installation line shall be well shaped and equipped with rolls.

The bending radius of single core cables shall not be smaller than $15 \times D_A$, for multi-core cables $12 \times D_A$.

The minimum installation temperature for the cables is $-5^{\circ}C$ for cables with PVC Sheath and $-20^{\circ}C$ for cables with PE Sheath. This value refers to the cable temperature, not the environmental temperature.

The inner diameter of ducts and tubes should not be less than $1.5 \times D_A$, if more than one cable per tube is installed, they should not tight each other.

Underground cables should be buried at least 60 cm under the surface, the depth of cables under roadways not less than 80 cm.

Fixing of Cables

If cables are installed horizontally on walls, ceiling or trays by clamps, the distance between fixing $20 \times D_A$, but not more than 80 cm. For vertical installation the distance may be increased, but not more than 150 cm. Compression of the cable must be strictly avoided. Single-core cables must be fixed with non-magnetic clamps only.

Meter Marking

According to the standard cables with diameter > 10 mm must carry a meter mark. The marks may have a tolerance of 1%, but they are not calibrated. Incomplete or missing marks (on short distances) may not be claimed. For defining the delivery length only calibrated measuring equipment has to be used.

Contents

Contents

Abbreviations

Abbreviation	Interpretation
N	According to VDE Standard
B	According to British Standard
Y	Insulation or Sheath of Thermoplastic based on PVC
A	Aluminium
NA	Cable With Al Conductor
A	Insulated Single Core Cable
M	Sheathed Cable
MH	Medium Hand-held Equipment Cable
I	International Colour Code
F	Flat Cable
E	Earth Continuity Conductor
F	Galvanized Steel Flat wire armouring
C	Concentric Conductor of Copper
R	Galvanized Steel Round wire armouring
Gb	Helical Galvanized Steel Tape
I	According To BS-2004 (Imperial System)
re	Conductor of Single Solid wire having Circular Cross-section
rm	Conductor of Multiple Stranded wires having Circular Cross-section
sm	Conductor of Multiple Stranded wires having Sector Shaped Cross-section
cm	Compacted Circular Stranded Conductor
se	Sector Shaped Solid
2X	Cross-linked Polyethylene (XLPE)
S	Shield of Copper
SE	For Multi core Cables With Individual Screens
Ra	Round Aluminium wire armoured
H	Non-metallic Semi-Conducting Screen over Conductor & over Insulation
2Y	Polyethylene (PE) Insulation
FR	Flame Retandant
FRLS	Flame Retandant Low Smoke
LSHF	Low Smoke Halogen Free
FiR	Fire Resistant

Abbreviations

Abbreviation	Interpretation
BDS	Bangladesh Standard
IEC	International Electrotechnical Commission
VDE	Union of German Electrical Engineer
BS	British Standard
ASTM	American Society for Testing and Material
ICEA	Insulated Cable Engineers Associana
NEMA	National Electric Manufacturers Association
JIS	Japanese Industrial Standard
SNI	Standards National Indonesia
DIN	Deutsche Industrial Norms
ANSI	American National Standard Institution (USA)
AS	Australian Standard (Australia)
BSI	British Standard Institution (Great Britain)
BV	Bureau Veritas (France)
CATV	Community Antenna Television (International)
CEBEC	Committee Electrotecnique Beige (Belgium)
CEE	International Commission on Rules for the Approval of Electrical Equipment
CEI	Commission Electrotechnique International
CENELEC	Committee European de Normalization Electrotechnique
CSA	Canadian Standard Association (Canada)
DEMKO	Denmarks Electric Material Kontrol
DKE	Deutsches Electrotechnique Kommission in DIN & VDE (Germany)
EN	European Standards (Germany)
HN	Harmonisation des Normes (france)
IEE	Institute of Electrical Engineers (Great Britain)
IEEE	Institute of Electrical & Electronics Engineers (Great Britain)
ISO	International Organization for Standardization
MIL	Military Specification (USA)
NEC	National Electrical Code (USA)
NF	Normes Francaises (France)
NFC	Normes Francaises Class C (France)
SAE	Society of Automotive Engineers
SEK	Svenska Elektriska Kommission (Sweden)
SEV	Switzerlands Electrotechnical Verein (Switzerland)
UL	Underwriters Laboratories (USA)
UNI	Unificazione National Italiana (Italy)
VDEW	Verband Deutscher Elecktrotechniker W (Germany)

BBS CABLES®
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FR & FRLS PVC INSULATED BUILDING WIRES

BBS CABLES®
more than safety

BYA-FR/ BAYA-FR
450/750V
SINGLE CORE
BDS 900 & BS: 6004

Application: Flame Retardant (FR) cables resist the spreading of fire in a new area by having behavior in fire under defined conditions which is proven by passing the test as per IEC 60332. The uses of FR cables are especially important today because modern homes, with the increase in electrical product alone, present a greater risk of fire damage. In addition,usage of FR cables is a component to protect the public, particularly more vulnerable population including the elders, children in Schools & College, Hospital and more populated areas.

Construction: *1. Annealed Copper/ Aluminium Conductor 2. Virgin FR PVC Insulation 3. Color Coated PVC*

Colour:

PHYSICAL DATA								*ELECTRICAL DATA*					
Cross Sectional Area	**No. & approx. diameter of wire Cu/Al**	**Shape of Conductor**	**Nominal thickness of insulation**	**Overall diameter**		**Approx. weight of cable**		**Max. DC resistance of conductor at 20° C**		**Current rating at 35° C in conduit**		**Current rating at 35° C in air**	
				lower limit	**upper limit**	Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm²	nos./mm	-	mm	mm	mm	kg/km	kg/km	ohm/km	ohm/km	amps	amps	amps	amps
1x1.0	1/1.13	re	0.7	2.5	3.0	16	-	18.1	-	13	-	16	-
1x1.0	3/0.65	rm	0.7	2.5	3.0	17	-	18.1	-	13	-	16	-
1x1.3	3/0.74	rm	0.7	2.6	3.2	20	12	14.03	22.95	15	10	19	12
1x1.5	1/1.38	re	0.7	2.6	3.2	22	12	12.1	-	16	-	20	-
1x1.5	7/0.52	rm	0.7	2.7	3.3	23	13	12.1	18.1	16	11	20	13
1x1.5	3/0.80	rm	0.7	2.7	3.3	23	13	12.1	18.1	16	11	20	13
1x2.0	3/0.91	rm	0.8	3.1	3.8	30	17	9.11	15.18	20	13	25	15
1x2.5	1/1.78	re	0.8	3.2	3.9	32	17	7.41	-	22	-	28	-
1x2.5	7/0.67	rm	0.8	3.3	4.0	33	19	7.41	12.1	22	15	28	18
1x3.0	7/0.74	rm	0.8	3.5	4.3	40	21	5.99	9.84	26	17	31	20
1x4.0	7/0.85	rm	0.8	3.8	4.6	51	25	4.61	7.41	30	20	37	24
1x4.5	7/0.91	rm	0.8	3.9	4.7	56	28	3.89	6.51	32	21	39	25
1x6.0	7/1 .04	rm	0.8	4.3	5.2	71	34	3.08	4.61	38	25	47	31
1x7.0	7/1.12	rm	1.0	4.5	5.8	85	41	2.61	4.29	42	27	51	33
1x9.5	7/1 .32	rm	1.0	5.4	6.5	113	52	1.86	3.09	50	32	61	39
1x10	7/1 .35	rm	1.0	5.6	6.7	117	53	1.83	3.08	52	34	63	41
1x14.5	7/1.63	rm	1.0	6.2	7.5	164	72	1.23	2.03	65	40	79	50
1x16	7/1.70	rm	1.0	6.4	7.8	179	77	1.15	1.91	70	45	85	55

KEY

70°c Maximum Operating Temperature
160°c Maximum Short Circuit Temperature
Flame Retardant IEC 60332-1-2
Reduced Fire Propagation IEC60332-3-24
Internal Wiring
In Conduit
Indoor Under Plaster in Conduit
Pb Lead Free
Test Voltage (AC) (2kV-2.5 kV)
High Insulation Resistance
OXYGEN INDEX 29% & ABOVE

Note :

1. Current ratings are valid for cables laid under defined conditions at page no.93. For current ratings at deviated conditions apply correction factors as given on page no.93.

BBS CABLES®
more than safety

BYA-FR/ BAYA-FR
450/750V
SINGLE CORE
BDS 900 & BS: 6004

Application: Flame Retardant (FR) cables resist the spreading of fire in a new area by having behavior in fire under defined conditions which is proven by passing the test as per IEC 60332. The uses of FR cables are especially important today because modern homes, with the increase in electrical product alone, present a greater risk of fire damage. In addition,usage of FR cables is a component to protect the public, particularly more vulnerable population including the elders, children in Schools & College, Hospital and more populated areas.

Construction: *1. Annealed Copper/ Aluminium Conductor 2. Virgin FR PVC Insulation 3. Color Coated PVC*

Colour:

PHYSICAL DATA								*ELECTRICAL DATA*					
Cross Sectional Area	**No. & approx. diameter of wire Cu/Al**	**Shape of Conductor**	**Nominal thickness of insulation**	**Overall diameter**		**Approx. weight of cable**		**Max. DC resistance of conductor at 20 ° C**		**Current rating at 35° C in conduit**		**Current rating at 35° C in air**	
				lower limit	**upper limit**	Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm²	nos./mm	-	mm	mm	mm	kg/km	kg/km	ohm/km	ohm/km	amps	amps	amps	amps
1x25	7/2.14	rm	1.2	8.1	9.7	276	116	0.727	1.20	91	60	110	72
1x35	min. 6	rm	1.2	9.0	10.9	373	153	0.524	0.868	112	73	136	88
1x50	min. 6	rm	1.4	10.8	12.8	532	216	0.387	0.641	136	88	164	107
1x70	min. 12	rm	1.4	12.1	14.6	732	285	0.268	0.443	173	112	207	137
1 x95	min. 15	rm	1.6	14.1	17.1	985	382	0.193	0.320	216	140	253	165
1x120	min. 18/15	rm	1.6	15.6	18.8	1227	470	0.153	0.253	244	158	291	188
1x150	min. 18/15	rm	1.8	17.3	20.9	1535	572	0.124	0.206	-	-	333	217
1x185	min. 30	rm	2.0	19.3	23.3	1891	705	0.0991	0.164	-	-	381	248
1x240	min. 34/30	rm	2.2	22.0	26.6	2458	910	0.0754	0.125	-	-	452	295
1x300	min. 34/30	rm	2.4	24.5	29.6	3055	1125	0.0601	0.100	-	-	526	342
1x400	min. 53	rm	2.6	27.5	33.2	4078	1505	0.047	0.0778	-	-	639	416
1x500	min. 53	rm	2.8	30.5	36.9	5048	1865	0.0366	0.0605	-	-	752	489
1x630	min. 53	rm	2.8	34.0	41.1	6363	2310	0.0283	0.0469	-	-	855	556

KEY

70°C Maximum Operating Temperature
160°C Maximum Short Circuit Temperature
Flame Retardant IEC 60332-1-2
Reduced Fire Propagation IEC60332-3-24
Internal Wiring
In Conduit
Indoor Under Plaster in Conduit
Pb Lead Free
Test Voltage (AC) (2kV-2.5 kV)
High Insulation Resistance
OXYGEN INDEX 29% & ABOVE

Note :

1. Current ratings are valid for cables laid under defined conditions at page no. 93. For current ratings at deviated conditions apply correction factors as given on page no. 93.

BYA-FRLS/ BAYA-FRLS
450/750V
SINGLE CORE
BDS 900 & BS: 6004

Application: Flame Retardant Low Smoke (FRLS) cables are most widely used among all cables. Law voltage FRLS cables are used in electrical power distribution substations for industrials application. In addition, usage of FRLS Cables is a component are to protect the public, particularly more vulnerable population,Schools & Colleges, Hospitals and more populated areas.

Construction: *1. Annealed Copper/Aluminium Conductor. 2. Flame Retardant Low Smoke (FRLS) PVC iInsulation.*

Colour:

PHYSICAL DATA								*ELECTRICAL DATA*					
Cross Sectional Area	**No. & approx. diameter of wire Cu/Al**	**Shape of Conductor**	**Nominal thickness of insulation**	**Overall diameter**		**Approx. weight of cable**		**Max. DC resistance of conductor at 20° C**		**Current rating at 35° C in conduit**		**Current rating at 35° C in air**	
				lower limit	**upper limit**	Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm²	nos./mm	-	mm	mm	mm	kg/km	kg/km	ohm/km	ohm/km	amps	amps	amps	amps
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1x1.0	3/0.65	rm	0.7	2.5	3.0	17	-	18.1	-	13	-	16	-
1x1.3	3/0.74	rm	0.7	2.6	3.2	20	12	14.03	22.95	15	10	19	12
1x1.5	1/1.38	re	0.7	2.6	3.2	22	12	12.1	-	16	-	20	-
1x1.5	7/0.52	rm	0.7	2.7	3.3	23	13	12.1	18.1	16	11	20	13
1x1.5	3/0.80	rm	0.7	2.7	3.3	23	13	12.1	18.1	16	11	20	13
1x2.0	3/0.91	rm	0.8	3.1	3.8	30	17	9.11	15.18	20	13	25	15
1x2.5	1/1.78	re	0.8	3.2	3.9	32	17	7.41	-	22	-	28	-
1x2.5	7/0.67	rm	0.8	3.3	4.0	33	19	7.41	12.1	22	15	28	18
1x3.0	7/0.74	rm	0.8	3.5	4.3	40	21	5.99	9.84	26	17	31	20
1x4.0	7/0.85	rm	0.8	3.8	4.6	51	25	4.61	7.41	30	20	37	24
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1x10	7/1 .35	rm	1.0	5.6	6.7	117	53	1.83	3.08	52	34	63	41
1x14.5	7/1.63	rm	1.0	6.2	7.5	164	72	1.23	2.03	65	40	79	50
1x16	7/1.70	rm	1.0	6.4	7.8	179	77	1.15	1.91	70	45	85	55

KEY

70°c Maximum Operating Temperature
160°c Maximum Short Circuit Temperature
Flame Retardant IEC 60332-1-2
Reduced Fire Propagation IEC60332-3-24
Internal Wiring
In Conduit
Indoor Under Plaster in Conduit
Pb Lead Free
Test Voltage (AC) (2kV-2.5 kV)
Low Toxicity
Low Smoke Emission IEC 61034-1&2

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BBS CABLES®
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BYA/BAYA FRLS

450/750V
SINGLE CORE
BDS 900 & BS: 6004

Application: Flame Retardant Low Smoke (FRLS) cables are most widely used among all cables. Law voltage FRLS cables are used in electrical power distribution substations for industrials application. In addition, usage of FRLS Cables is a component are to protect the public, particularly more vulnerable population,Schools & Colleges, Hospitals and more populated areas.

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Colour:

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core x mm²	nos./mm	-	mm	mm	mm	kg/km	kg/km	ohm/km	ohm/km	amps	amps	amps	amps
1x25	7/2.14	rm	1.2	8.1	9.7	276	116	0.727	1.20	91	60	110	72
1x35	min. 6	rm	1.2	9.0	10.9	373	153	0.524	0.868	112	73	136	88
1x50	min. 6	rm	1.4	10.8	12.8	532	216	0.387	0.641	136	88	164	107
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1x240	min. 34/30	rm	2.2	22.0	26.6	2458	910	0.0754	0.125	-	-	452	295
1x300	min. 34/30	rm	2.4	24.5	29.6	3055	1125	0.0601	0.100	-	-	526	342
1x400	min. 53	rm	2.6	27.5	33.2	4078	1505	0.047	0.0778	-	-	639	416
1x500	min. 53	rm	2.8	30.5	36.9	5048	1865	0.0366	0.0605	-	-	752	489
1x630	min. 53	rm	2.8	34.0	41.1	6363	2310	0.0283	0.0469	-	-	855	556

KEY

70°c Maximum Operating Temperature
160°c Maximum Short Circuit Temperature
Flame Retardant IEC 60332-1-2
Reduced Fire Propagation IEC60332-3-24
Internal Wiring
In Conduit
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Test Voltage (AC) (2kV-2.5 kV)
Low Toxicity
Low Smoke Emission IEC 61034-1&2

Note :

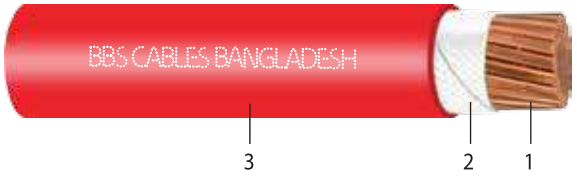
1. Current ratings are valid for cables laid under defined conditions at page no.93. For current ratings at deviated conditions apply correction factors as given on page no.93.

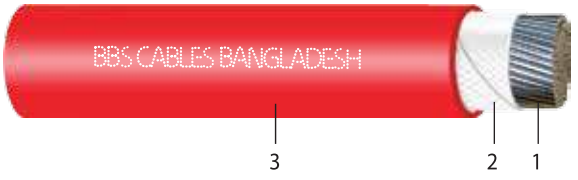
BBS CABLES®
more than safety

FIRE SURVIVAL BUILDING WIRES

BYA-FiR/ BAYA-FiR
450/750V
Single Core
BS 6004 & IEC 60331

Applicaton: These cables are designed for emergency lighting, fire alarms and essential equipment in fire situations where an uninterrupted power supply has to be guaranteed.
During fire, electric circuits and the associated lighting may be damaged. Power and data communications may be suspended. Human safety may depend on continued operation of lighting, elevators and escalators, fire fighting water pumps, fire alarm and ventilation fans. The conductor is manufactured with a specially designed heat barrier and fire resistant insulation which resists the fire to reach conductor surface. The cable continues to remain into operation at high temperatures like 650°C, 750°C & 950°C as per various conditions of operation and applications.



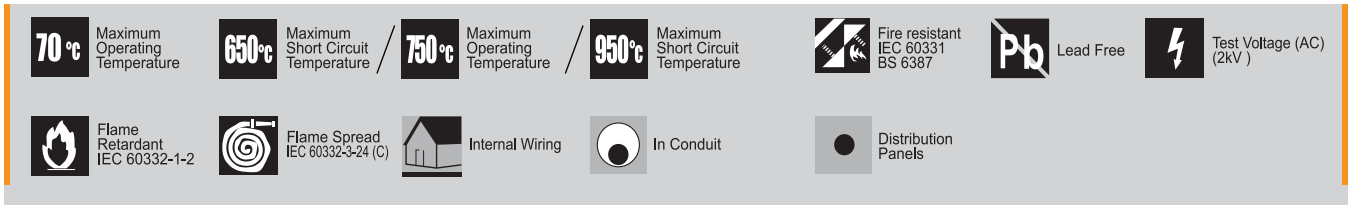


Construction: *1. Annealed Copper/ Aluminium Conductor 2. Mica Tape Synthetic/Glass over Conductor 3. Flame Retardant (FR) PVC Insulation.*

Colour:

PHYSICAL DATA							*ELECTRICAL DATA*					
Cross Sectional Area	**No.& approx. diameter of wire Cu/Al**	**Shape of Conductor**	**Nominal Thickness of Insulation**	**Approx. Overall Diameter**	**Approx. Weight of Cable**		**Max. DC Resistance of Conductor at 20°C**		**Current rating at 35°C in conduit**		**Current rating at 35°C in air**	
					Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm²	nos./mm		mm	mm	kg/km	kg/km	ohm/km	ohm/km	amps	amps	amps	amps
1x1.5	1/1.38	re	0.7	3.2	25	16	12.1	18.1	16	-	20	-
1x1.5	7/0.52	rm	0.7	3.3	26	17	12.1	18.1	16	11	20	13
1x2.5	1/1.78	re	0.8	3.8	38	22	7.41	12.1	22	-	28	-
1x2.5	7/0.67	rm	0.8	4.0	39	24	7.41	12.1	22	15	28	18
1x4.0	7/0.85	rm	0.8	4.5	56	32	4.61	7.41	30	20	37	24
1x6.0	7/1.04	rm	0.8	5.2	77	39	3.08	4.61	38	25	47	31
1x10	7/1.35	rm	1.0	6.5	125	62	1.83	3.08	52	34	63	41
1x16	7/1.70	rm	1.0	7.5	186	85	1.15	1.91	70	45	85	55
1x25	7/2.14	rm	1.2	9.3	290	133	0.727	1.20	91	60	110	72
1x35	Min 6	rm	1.2	10.0	376	158	0.524	0.868	112	73	136	88
1x50	Min 6	rm	1.4	11.6	524	230	0.387	0.641	136	88	164	107
1x70	Min 12	rm	1.4	13.2	715	298	0.268	0.443	173	112	207	137
1x95	Min 15	rm	1.6	15.7	970	404	0.193	0.320	216	140	253	165
1x120	Min. 18/15	rm	1.6	16.9	1200	480	0.153	0.253	244	158	291	188
1x150	Min. 18/15	rm	1.8	19.0	1517	610	0.124	0.206	-	-	333	217
1x185	Min. 30	rm	2.0	21.0	1858	740	0.0991	0.164	-	-	381	248
1x240	Min. 34/30	rm	2.2	24.1	2425	968	0.0754	0.125	-	-	452	295
1x300	Min. 34/30	rm	2.4	26.5	3003	1176	0.0601	0.100	-	-	526	342
1x400	Min. 53	rm	2.6	30.1	4000	1562	0.0470	0.0778	-	-	639	416
1x500	Min. 53	rm	2.8	33.3	4950	1900	0.0366	0.0605	-	-	752	489
1x630	Min. 53	rm	2.8	37.0	6185	2320	0.0283	0.0469	-	-	855	556

KEY



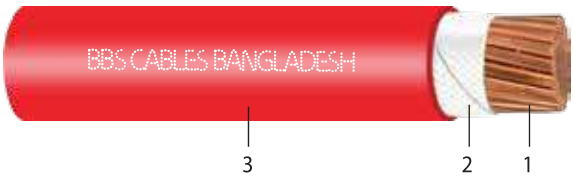
Note :

1. Current ratings are valid for cables laid in under defined conditions at page no. 93. For current ratings are deviated conditions apply correction factors as given on page no. 93.

BBS CABLES
more than safety

BYA-FiR/
BAYA-FiR
450/750V
Single Core
BS 6004 & IEC 60331

Applicaton: These cables are designed for emergency lighting, fire alarms and essential equipment in fire situations where an uninterrupted power supply has to be guaranteed.
During fire, electric circuits and the associated lighting may be damaged. Power and data communications may be suspended. Human safety may depend on continued operation of lighting, elevators and escalators, fire fighting water pumps, fire alarm and ventilation fans. The conductor is manufactured with a specially designed heat barrier and fire resistant insulation which resists the fire to reach conductor surface. The cable continues to remain into operation at high temperatures like 650°C, 750°C & 950°C as per various conditions of operation and applications.

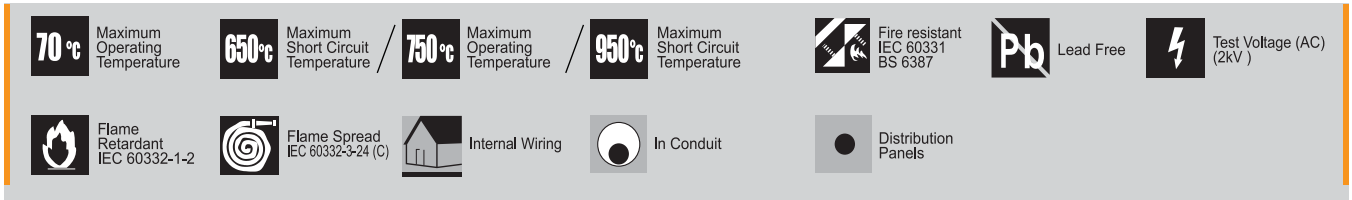


Construction: *1. Annealed Copper/ Aluminium Conductor 2. Mica Tape Synthetic/Glass over Conductor 3. Flame Retardant Low Smoke (FRLS) PVC Insulation.*

Colour:

PHYSICAL DATA							*ELECTRICAL DATA*					
Cross Sectional Area	**No.& approx. diameter of wire Cu/Al**	**Shape of Conductor**	**Nominal Thickness of Insulation**	**Approx. Overall Diameter**	**Approx. Weight of Cable**		**Max. DC Resistance of Conductor at 20°C**		**Current rating at 35°C in conduit**		**Current rating at 35°C in air**	
					Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm²	nos./mm		mm	mm	kg/km	kg/km	ohm/km	ohm/km	amps	amps	amps	amps
1x1.5	1/1.38	re	0.7	3.2	25	16	12.1	18.1	16	-	20	-
1x1.5	7/0.52	rm	0.7	3.3	26	17	12.1	18.1	16	11	20	13
1x2.5	1/1.78	re	0.8	3.8	38	22	7.41	12.1	22	-	28	-
1x2.5	7/0.67	rm	0.8	4.0	39	24	7.41	12.1	22	15	28	18
1x4.0	7/0.85	rm	0.8	4.5	56	32	4.61	7.41	30	20	37	24
1x6.0	7/1.04	rm	0.8	5.2	77	39	3.08	4.61	38	25	47	31
1x10	7/1.35	rm	1.0	6.5	125	62	1.83	3.08	52	34	63	41
1x16	7/1.70	rm	1.0	7.5	186	85	1.15	1.91	70	45	85	55
1x25	7/2.14	rm	1.2	9.3	290	133	0.727	1.20	91	60	110	72
1x35	Min 6	rm	1.2	10.0	376	158	0.524	0.868	112	73	136	88
1x50	Min 6	rm	1.4	11.6	524	230	0.387	0.641	136	88	164	107
1x70	Min 12	rm	1.4	13.2	715	298	0.268	0.443	173	112	207	137
1x95	Min 15	rm	1.6	15.7	970	404	0.193	0.320	216	140	253	165
1x120	Min. 18/15	rm	1.6	16.9	1200	480	0.153	0.253	244	158	291	188
1x150	Min. 18/15	rm	1.8	19.0	1517	610	0.124	0.206	-	-	333	217
1x185	Min. 30	rm	2.0	21.0	1858	740	0.0991	0.164	-	-	381	248
1x240	Min. 34/30	rm	2.2	24.1	2425	968	0.0754	0.125	-	-	452	295
1x300	Min. 34/30	rm	2.4	26.5	3003	1176	0.0601	0.100	-	-	526	342
1x400	Min. 53	rm	2.6	30.1	4000	1562	0.0470	0.0778	-	-	639	416
1x500	Min. 53	rm	2.8	33.3	4950	1900	0.0366	0.0605	-	-	752	489
1x630	Min. 53	rm	2.8	37.0	6185	2320	0.0283	0.0469	-	-	855	556

KEY



Note :

1. Current ratings are valid for cables laid in under defined conditions at page no. 93. For current ratings are deviated conditions apply correction factors as given on page no. 93.

BBS CABLES®
more than safety

BUILDING WIRES
LSHF / LSZH / LSOH
INSULATED

Cu/LSHF & Al/LSHF
450/750V
Single Core
BS 7211

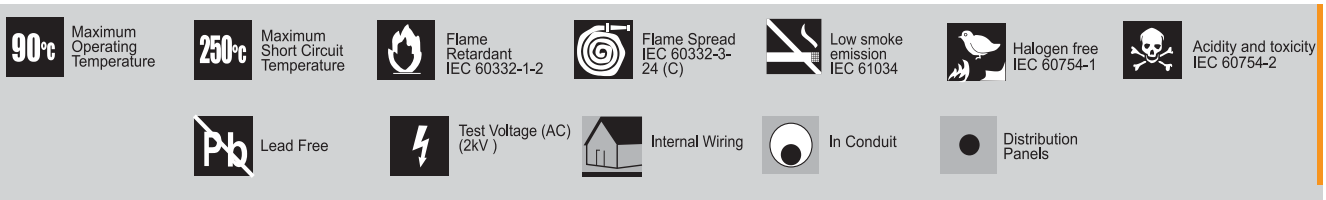
Applicaton: Electrical safety is a function of five characteristics viz. smoke, hazardous gas generation, rate of heat release, flame spread and rate of burning. In case of fire in a closed area, trapped people are unable to find the exit due to emission of thick black smoke and lose consciousness due to the inhalation of toxic fumes before they can evacuate for safety. The advantage of low smoke and low acid gas generation are additional and critical features avilable with LSHF / LSZH / LSOH wires in comparison with FR (Flame Resistant) wires which do not provide these properties.

Construction: *1. Annealed Copper/Aluminium Conductor 2. LSHF Insulation.*

Colour:

PHYSICAL DATA						ELECTRICAL DATA							
Cross Sectional Area	No. & approx. diameter of wire Cu/Al	Shape of Conductor	Nominal Thickness of Insulation	Overall diameter		Approx. Weight of Cable		Max. DC Resistance of Conductor at 20 ° C		Current rating at 35° C in conduit		Current rating at 35° C in air	
				Lower Limit	Higher Limit	Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm²	nos./mm	-	mm	mm	mm	kg/km	kg/km	ohm/km	ohm/km	amps	amps	amps	amps
1x1.0	1/1.13	re	0.7	2.5	3.0	16	-	18.1	-	13	-	16	-
1x1.0	3/0.65	rm	0.7	2.5	3.0	17	-	18.1	-	13	-	16	-
1x1.3	3/0.74	rm	0.7	2.6	3.2	20	12	14.03	22.95	15	10	19	12
1x1.5	1/1.38	re	0.7	2.6	3.2	22	12	12.1	-	16	-	20	-
1x1.5	7/0.52	rm	0.7	2.7	3.4	23	13	12.1	18.1	16	11	20	13
1x1.5	3/0.80	rm	0.7	2.7	3.4	23	13	12.1	18.1	16	11	20	13
1x2.0	3/0.91	rm	0.8	3.1	3.8	30	17	9.11	15.18	20	13	25	15
1x2.5	1/1.78	re	0.8	3.2	4.0	32	17	7.41	-	22	-	28	-
1x2.5	7/0.67	rm	0.8	3.3	4.1	33	19	7.41	12.1	22	15	28	18
1x3.0	7/0.74	rm	0.8	3.5	4.3	40	21	5.99	9.84	26	17	31	20
1x4.0	7/0.85	rm	0.8	3.8	4.7	51	25	4.61	7.41	30	20	37	24
1x4.5	7/0.91	rm	0.8	3.9	4.7	56	28	3.89	6.51	32	21	39	25
1x6.0	7/1.04	rm	0.8	4.3	5.4	71	34	3.08	4.61	38	25	47	31
1x7.0	7/1.12	rm	1.0	4.5	5.8	85	41	2.61	4.29	42	27	51	33
1x9.5	7/1.32	rm	1.0	5.4	6.5	113	52	1.86	3.09	50	32	61	39
1x10	7/1.35	rm	1.0	5.6	7.0	117	53	1.83	3.08	52	34	63	41
1x14.5	7/1.63	rm	1.0	6.2	7.5	164	72	1.23	2.03	65	40	79	50
1x16	7/1.70	rm	1.0	6.4	8.0	179	77	1.15	1.91	70	45	85	55

KEY



Note :

1. Current ratings are valid for cables laid in under defined conditions at page no. 93. For current ratings are deviated conditions apply correction factors as given on page no. 93.

BBS CABLES®
more than safety

Cu/LSHF & Al/LSHF
450/750V
Single Core
BS 7211

Applicaton: Electrical safety is a function of five characteristics viz. smoke, hazardous gas generation, rate of heat release, flame spread and rate of burning. In case of fire in a closed area, trapped people are unable to find the exit due to emission of thick black smoke and lose consciousness due to the inhalation of toxic fumes before they can evacuate for safety. The advantage of low smoke and low acid gas generation are additional and critical features avilable with LSHF / LSZH / LSOH wires in comparison with FR (Flame Resistant) wires which do not provide these properties.

Construction: *1. Annealed Copper/Aluminium Conductor 2. LSHF Insulation.*

Colour:

PHYSICAL DATA								*ELECTRICAL DATA*					
Cross Sectional Area	**No. & approx. diameter of wire Cu/Al**	**Shape of Conductor**	**Nominal Thickness of Insulation**	**Overall diameter**		**Approx. Weight of Cable**		**Max. DC Resistance of Conductor at 20 ˚C**		**Current rating at 35˚C in conduit**		**Current rating at 35˚C in air**	
				Lower Limit	**Higher Limit**	Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm²	nos./mm	-	mm	mm	mm	kg/km	kg/km	ohm/km	ohm/km	amps	amps	amps	amps
1x25	7/2.14	rm	1.2	8.1	10.1	276	116	0.727	1.200	91	60	110	72
1x35	min 6	rm	1.2	9.0	11.3	373	153	0.524	0.868	112	73	136	88
1x50	min 6	rm	1.4	10.6	13.2	532	216	0.387	0.641	136	88	164	107
1x70	min 12	rm	1.4	12.1	15.1	732	285	0.268	0.443	173	112	207	137
1x95	min 15	rm	1.6	14.1	17.6	985	382	0.193	0.320	216	140	253	165
1x120	min 18/15	rm	1.6	15.6	19.4	1227	470	0.153	0.253	244	158	291	188
1x150	min 18/15	rm	1.8	17.3	21.6	1535	572	0.124	0.206	-	-	333	217
1x185	min 30	rm	2.0	19.3	24.1	1891	705	0.00991	0.164	-	-	381	248
1x240	min 34/30	rm	2.2	22.0	27.5	2458	910	0.0754	0.125	-	-	452	295
1x300	min 34/30	rm	2.4	24.5	30.6	3055	1125	0.0601	0.100	-	-	526	342
1x400	min 53	rm	2.6	27.5	34.3	4078	1505	0.047	0.0778	-	-	639	416
1x500	min 53	rm	2.8	30.5	38.2	5048	1865	0.0366	0.0605	-	-	752	489
1x630	min 53	rm	2.8	34.0	42.5	6063	2310	0.00283	0.0469	-	-	855	556

KEY

90°c Maximum Operating Temperature
250°c Maximum Short Circuit Temperature
Flame Retardant IEC 60332-1-2
Flame Spread IEC 60332-3-24 (C)
Low smoke emission IEC 61034
Halogen free IEC 60754-1
Acidity and toxicity IEC 60754-2
Pb Lead Free
Test Voltage (AC) (2kV)
Internal Wiring
In Conduit
Distribution Panels

Note :

1. Current ratings are valid for cables laid in under defined conditions at page no. 93. For current ratings are deviated conditions apply correction factors as given on page no. 93.

BBS CABLES®
more than safety

PVC INSULATED BUILDING WIRES

BYA/BAYA
450/750V
SINGLE CORE
BDS 900
& BS: 6004

Application: Suitable for surface mounted or concealed steel conduits or trunking. Also suitable for field protected installation in and appliance up to 1000 V a.c or upto 750 V to earth d.c.

Construction: *1. Annealed Copper/ Aluminium Conductor 2. PVC Insulation.*

Colour:

PHYSICAL DATA								*ELECTRICAL DATA*					
Cross Sectional Area	**No. & approx. diameter of wire Cu/Al**	**Shape of Conductor**	**Nominal thickness of insulation**	**Overall diameter**		**Approx. weight of cable**		**Max. DC resistance of conductor at 20° C**		**Current rating at 35° C in conduit**		**Current rating at 35° C in air**	
				lower limit	**upper limit**	Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm²	nos./mm	-	mm	mm	mm	kg/km	kg/km	ohm/km	ohm/km	amps	amps	amps	amps
1x1.0	1/1.13	re	0.7	2.5	3.0	16	-	18.1	-	13	-	16	-
1x1.0	3/0.65	rm	0.7	2.5	3.0	17	-	18.1	-	13	-	16	-
1x1.3	3/0.74	rm	0.7	2.6	3.2	20	12	14.03	22.95	15	10	19	12
1x1.5	1/1.38	re	0.7	2.6	3.2	22	12	12.1	-	16	-	20	-
1x1.5	7/0.52	rm	0.7	2.7	3.3	23	13	12.1	18.1	16	11	20	13
1x1.5	3/0.80	rm	0.7	2.7	3.3	23	13	12.1	18.1	16	11	20	13
1x2.0	3/0.91	rm	0.8	3.1	3.8	30	17	9.11	15.18	20	13	25	15
1x2.5	1/1.78	re	0.8	3.2	3.9	32	17	7.41	-	22	-	28	-
1x2.5	7/0.67	rm	0.8	3.3	4.0	33	19	7.41	12.1	22	15	28	18
1x3.0	7/0.74	rm	0.8	3.5	4.3	40	21	5.99	9.84	26	17	31	20
1x4.0	7/0.85	rm	0.8	3.8	4.6	51	25	4.61	7.41	30	20	37	24
1x4.5	7/0.91	rm	0.8	3.9	4.7	56	28	3.89	6.51	32	21	39	25
1x6.0	7/1 .04	rm	0.8	4.3	5.2	71	34	3.08	4.61	38	25	47	31
1x7.0	7/1.12	rm	1.0	4.5	5.8	85	41	2.61	4.29	42	27	51	33
1x9.5	7/1 .32	rm	1.0	5.4	6.5	113	52	1.86	3.09	50	32	61	39
1x10	7/1 .35	rm	1.0	5.6	6.7	117	53	1.83	3.08	52	34	63	41
1x14.5	7/1.63	rm	1.0	6.2	7.5	164	72	1.23	2.03	65	40	79	50
1x16	7/1.70	rm	1.0	6.4	7.8	179	77	1.15	1.91	70	45	85	55

KEY

70°c Maximum Operating Temperature
160°c Maximum Short Circuit Temperature
Flame Retardant IEC 60332-1-2
Rigid
Internal Wiring
In Conduit
Indoor Under Plaster in Conduit
Pb Lead Free
Test Voltage (AC) (2kV-2.5 kV)
Installation Temperature Min 5°C
Distribution Panels

Note :

1. Current ratings are valid for cables laid under defined conditions at page no. 93. For current ratings at deviated conditions apply correction factors as given on page no. 93.

BBS CABLES®
more than safety

BYA/BAYA
450/750V
SINGLE CORE
BDS 900
& BS: 6004

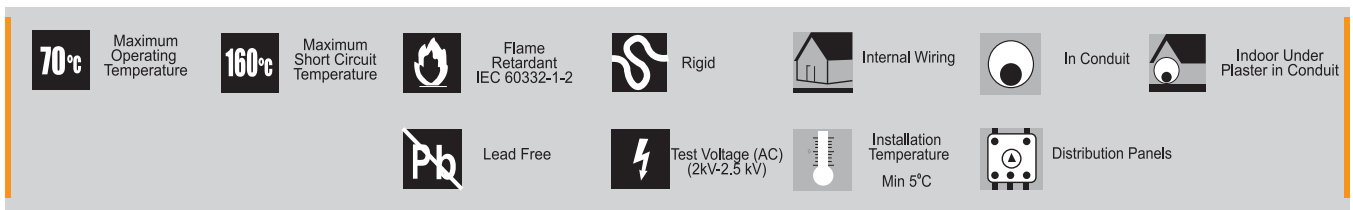
Application: Suitable for surface mounted or concealed steel conduits or trunking. Also suitable for field protected installation in and appliance up to 1000 V a.c or upto 750 V to earth d.c.

Construction: *1. Annealed Copper/ Aluminium Conductor 2. PVC Insulation.*

Colour:

PHYSICAL DATA								*ELECTRICAL DATA*					
Cross Sectional Area	**No. & approx. diameter of wire Cu/Al**	**Shape of Conductor**	**Nominal thickness of insulation**	**Overall diameter**		**Approx. weight of cable**		**Max. DC resistance of conductor at 20 ° C**		**Current rating at 35° C in conduit**		**Current rating at 35° C in air**	
				lower limit	**upper limit**	Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm²	nos./mm	-	mm	mm	mm	kg/km	kg/km	ohm/km	ohm/km	amps	amps	amps	amps
1x25	7/2.14	rm	1.2	8.1	9.7	276	116	0.727	1.20	91	60	110	72
1x35	min. 6	rm	1.2	9.0	10.9	373	153	0.524	0.868	112	73	136	88
1x50	min. 6	rm	1.4	10.8	12.8	532	216	0.387	0.641	136	88	164	107
1x70	min. 12	rm	1.4	12.1	14.6	732	285	0.268	0.443	173	112	207	137
1 x95	min. 15	rm	1.6	14.1	17.1	985	382	0.193	0.320	216	140	253	165
1x120	min. 18/15	rm	1.6	15.6	18.8	1227	470	0.153	0.253	244	158	291	188
1x150	min. 18/15	rm	1.8	17.3	20.9	1535	572	0.124	0.206	-	-	333	217
1x185	min. 30	rm	2.0	19.3	23.3	1891	705	0.0991	0.164	-	-	381	248
1x240	min. 34/30	rm	2.2	22.0	26.6	2458	910	0.0754	0.125	-	-	452	295
1x300	min. 34/30	rm	2.4	24.5	29.6	3055	1125	0.0601	0.100	-	-	526	342
1x400	min. 53	rm	2.6	27.5	33.2	4078	1505	0.047	0.0778	-	-	639	416
1x500	min. 53	rm	2.8	30.5	36.9	5048	1865	0.0366	0.0605	-	-	752	489
1x630	min. 53	rm	2.8	34.0	41.1	6363	2310	0.0283	0.0469	-	-	855	556

KEY



Note :

1. Current ratings are valid for cables laid under defined conditions at page no 93 . For current ratings at deviated conditions apply correction factors as given on page no 93 .

BYM/BAYM
300/500 V
SINGLE CORE
BDS 900
& BS: 6004

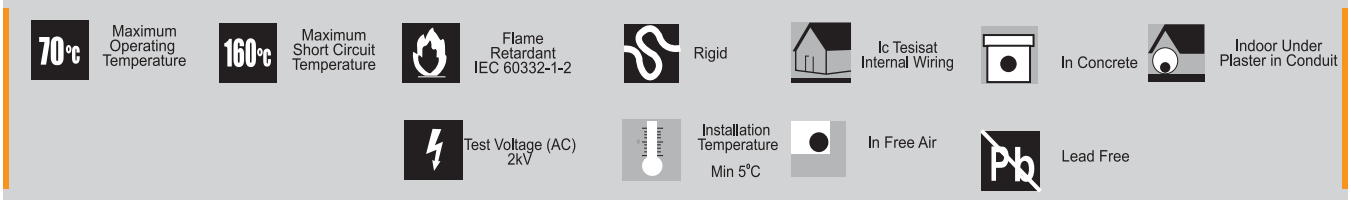
Application: Suitable for fixed installations in dry or damp premises clipped direct to a surface or on a cable tray unenclosed and also for use in non metallic conduit (PVC).

Construction: *1. Annealed Copper/ Aluminium Conductor 2. PVC Insulation 3. Grey PVC outer Sheath.*

Colour:

PHYSICAL DATA									*ELECTRICAL DATA*					
Cross Sectional Area	**No. & approx. diameter of wire Cu/Al**	**Shape of Conductor**	**Nominal thickness of insulation**	**Nominal thickness of sheath**	**Overall diameter**		**Approx. weight of cable**		**Max. DC resistance of conductor at 20 °C**		**Current rating at 35° C in conduit**		**Current rating at 35 °C in air**	
					lower limit	**upper limit**	Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm²	nos./mm	-	mm	mm	mm	mm	kg/km	kg/km	ohm/km	ohm/km	amps	amps	amps	amps
1x1.0	1/1.13	re	0.6	0.8	3.8	4.5	25	-	18.1	-	13	-	16	-
1x1.0	3/0.65	rm	0.6	0.8	3.8	4.5	26	-	18.1	-	13	-	16	-
1x1.3	3/0.74	rm	0.7	0.8	4.2	4.9	34	26	14.03	22.95	15	10	19	12
1x1.5	1/1.38	re	0.7	0.8	4.2	4.9	32	-	12.1	-	16	-	20	-
1x1.5	7/0.52	rm	0.7	0.8	4.2	4.9	33	27	12.1	18.1	16	11	20	14
1x1.5	3/0.80	rm	0.7	0.8	4.2	4.9	33	27	12.1	18.1	16	11	20	14
1x2.0	3/0.91	rm	0.7	0.8	4.6	5.4	44	32	9.11	15.18	20	12	25	15
1x2.5	1/1.78	re	0.8	0.8	4.8	5.8	45	-	7.41	-	22	-	28	-
1x2.5	7/0.67	rm	0.8	0.8	4.8	5.8	46	36	7.41	12.1	22	15	28	19
1x3.0	7/0.74	rm	0.8	0.8	5.1	6.1	60	41	5.99	9.84	26	17	31	20
1x4.0	7/0.85	rm	0.8	0.9	5.4	6.8	73	48	4.61	7.41	30	21	37	25
1x4.5	7/0.91	rm	0.8	0.9	5.6	7.0	81	52	3.89	6.51	32	22	39	26
1x6.0	7/1.04	rm	0.8	0.9	6.0	7.4	96	59	3.08	4.61	38	26	47	32
1x7.0	7/1.12	rm	0.8	0.9	6.5	7.8	107	64	2.61	4.29	42	27	51	33
1x9.5	7/1.32	rm	1.0	0.9	7.0	8.7	145	82	1.86	3.09	50	32	61	40
1x10	7/1.35	rm	1.0	0.9	7.2	8.8	147	84	1.83	3.08	52	36	63	43
1x14.5	7/1.63	rm	1.0	1.0	8.0	10.0	206	113	1.23	2.03	65	40	79	50
1x16	7/1.70	rm	1.0	1.0	8.40	10.5	218	117	1.15	1.91	70	46	85	55
1 x25	7/2.14	rm	1.2	1.1	10.0	12.5	328	169	0.727	1.2	91	59	110	72
1x35	19/1.53	rm	1.2	1.1	11.0	13.5	432	211	0.524	0.868	112	73	136	88

KEY



Note :

1. Current ratings are valid for cables laid under defined conditions at page no. 93. For current ratings at deviated conditions apply correction factors as given on page no. 93.

BBS CABLES®
more than safety

BYM/BAYM

300/500V
TWIN CORE
BDS 900
& BS: 6004

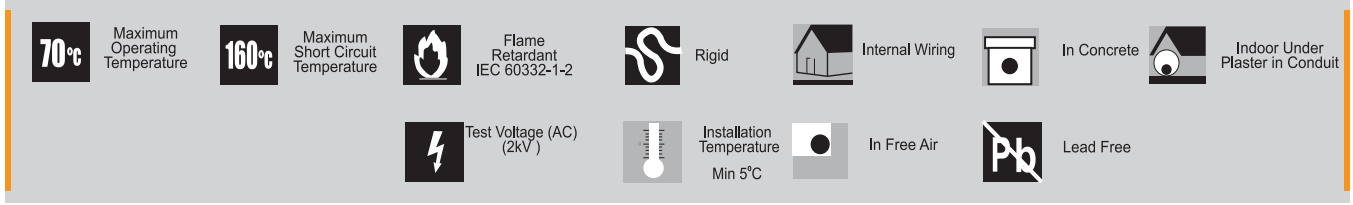
Application: Suitable for fixed installations in dry or damp premises clipped direct to a surface or on a cable tray unenclosed and also for use in non metallic conduit (PVC).

Construction: *1. Annealed Copper/ Aluminium Conductor 2. PVC Insulation 3. PVC Inner Sheath 4. Grey PVC outer Sheath.*

Colour:

PHYSICAL DATA									*ELECTRICAL DATA*					
Cross Sectional Area	**No. & approx. diameter of wire Cu/Al**	**Shape of Conductor**	**Nominal thickness of insulation**	**Nominal thickness of sheath**	**Overall diameter**		**Approx. weight of cable**		**Max. DC resistance of conductor at 20 ° C**		**Current rating at 30° C in conduit**		**Current rating at 35° C in air**	
					lower limit	**upper limit**	Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm²	nos./mm	-	mm	mm	mm	mm	kg/km	kg/km	ohm/km	ohm/km	amps	amps	amps	amps
2x1.0	1/1.13	re	0.6	1.2	7.6	8.8	93	-	18.1	-	13	-	15	-
2x1.0	3/0.65	rm	0.6	1.2	7.6	8.8	102	-	18.1	-	13	-	15	-
2x1.5	1/1.38	re	0.7	1.2	8.4	10	119	-	12.1	18.1	16	11	18	13
2x1.5	7/0.52	rm	0.7	1.2	9.0	10.2	121	100	12.1	18.1	16	11	18	13
2x1.5	3/0.80	rm	0.7	1.2	9.0	10.2	121	100	12.1	18.1	16	11	18	13
2x2.5	1/1.78	re	0.8	1.2	9.6	11.5	165	-	7.41	12.1	22	16	26	18
2x2.5	7/0.67	rm	0.8	1.2	10.4	11.8	167	134	7.41	12.1	22	16	26	18
2x4	7/0.85	rm	0.8	1.2	10.5	12.5	228	178	4.61	7.41	30	21	33	23
2x6	7/1.04	rm	0.8	1.2	11.5	14.0	294	219	3.08	4.61	37	26	43	30
2x10	7/1.35	rm	1.0	1.4	15.0	17.5	485	359	1.83	3.08	50	35	60	42
2x16	7/1.70	rm	1.0	1.4	16.5	20.0	673	471	1.15	1.91	66	43	80	52
2x25	7/2.14	rm	1.2	1.4	20.5	24.0	1004	685	0.727	1.20	75	49	88	57
2x35	19/1.53	rm	1.2	1.6	23.0	27.5	1347	906	0.524	0.868	92	60	108	70

KEY



Note :

1. Current ratings are valid for cables laid under defined conditions at page no. 93. For current ratings at deviated conditions apply correction factors as given on page no. 93.

BYM/BAYM
300/500V
THREE CORE
BDS 900
& BS: 6004

Application: Suitable for fixed installations in dry or damp premises clipped direct to a surface or on a cable tray unenclosed and also for use in non metallic conduit (PVC).

Construction: *1. Annealed Copper/ Aluminium Conductor 2. PVC Insulation 3. PVC Inner Sheath 4. Grey PVC outer Sheath.*

Colour:

PHYSICAL DATA									*ELECTRICAL DATA*					
Cross Sectional Area	**No. & approx. diameter of wire Cu/Al**	**Shape of Conductor**	**Nominal thickness of insulation**	**Nominal thickness of sheath**	**Overall diameter**		**Approx. weight of cable**		**Max. DC resistance of conductor at 20° C**		**Current rating at 35° C in conduit**		**Current rating at 35° C in air**	
					lower limit	**upper limit**	Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm²	nos./mm	-	mm	mm	mm	mm	kg/km	kg/km	ohm/km	ohm/km	amps	amps	amps	amps
3x1.0	1/1.13	re	0.6	1.2	7.8	9.2	106	-	18.1	-	11	-	12	-
3x1.0	3/0.65	rm	0.7	1.2	7.8	9.2	115	-	18.1	-	11	-	12	-
3x1.5	1/1.38	re	0.7	1.2	8.8	10.5	139	-	12.1	18.1	15	10	16	11
3x1.5	7/0.52	rm	0.7	1.2	9.2	10.8	142	111	12.1	18.1	15	10	16	11
3x1.5	3/0.80	rm	0.8	1.2	9.2	10.8	142	111	12.1	18.1	15	10	16	11
3x2.5	1/1.78	re	0.8	1.2	10.0	12.0	195	-	7.41	12.1	20	14	22	15
3x2.5	7/0.67	rm	0.8	1.2	10.5	12.5	198	149	7.41	12.1	20	14	22	15
3x4	7/0.85	rm	0.8	1.2	11.0	13.0	268	193	4.61	7.41	27	19	30	21
3x6	7/1.04	rm	0.8	1.4	12.5	15.5	386	273	3.08	4.61	33	23	37	26
3x10	7/1.35	rm	1.0	1.4	15.5	19.0	590	400	1.83	3.08	46	32	51	36
3x16	7/1.70	rm	1.0	1.4	18.0	21.5	856	553	1.15	1.91	58	38	67	44
3x25	7/2.14	rm	1.2	1.6	22.0	26.0	1272	794	0.727	1.20	66	43	77	50
3x35	19/1.53	rm	1.2	1.6	24.5	29.0	1685	1023	0.524	0.868	81	53	90	59

KEY

70°c Maximum Operating Temperature
160°c Maximum Short Circuit Temperature
Flame Retardant IEC 60332-1-2
Rigid
Internal Wiring
In Concrete
Indoor Under Plaster in Conduit
Test Voltage (AC) (2kV)
Installation Temperature Min 5°C
In Free Air
Pb Lead Free

Note :

1. Current ratings are valid for cables laid under defined conditions at page no. 93. For current ratings at deviated conditions apply correction factors as given on page no. 93.

BBS CABLES®
more than safety

BYM/BAYM
300/500 V
FOUR CORE
BDS 900
& BS: 6004

Application: Suitable for fixed installations in dry or damp premises clipped direct to a surface or on a cable tray unenclosed and also for use in non metallic conduit (PVC).

Construction: *1. Annealed Copper/ Aluminium Conductor 2. PVC Insulation 3. PVC Inner Sheath 4. Grey PVC outer Sheath.*

Colour:

PHYSICAL DATA									*ELECTRICAL DATA*					
Cross Sectional Area	**No. & approx. diameter of wire Cu/Al**	**Shape of Conductor**	**Nominal thickness of insulation**	**Nominal thickness of sheath**	**Overall diameter**		**Approx. weight of cable**		**Max. DC resistance of conductor at 20 °C**		**Current rating at 35 °C in conduit**		**Current rating at 35 °C in air**	
					lower limit	**upper limit**	Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm²	nos./mm		mm	mm	mm	mm	kg/km	kg/km	ohm/km	ohm/km	amps	amps	amps	amps
4x1.0	1/1.13	re	0.6	1.2	8.4	9.8	124	-	18.1	-	11	-	12	-
4x1.0	3/0.65	rm	0.6	1.2	8.4	9.8	151	-	18.1	-	11	-	12	-
4x1.5	1/1.38	re	0.7	1.2	9.6	11.5	164	-	12.1	18.1	15	10	16	11
4x1.5	7/0.52	rm	0.7	1.2	10.0	12.0	168	127	12.1	18.1	15	10	16	11
4x1.5	3/0.80	rm	0.7	1.2	10.0	12.0	168	127	12.1	18.1	15	10	16	11
4x2.5	1/1.78	re	0.8	1.2	11.0	13.0	224	-	7.41	12.1	20	14	22	15
4x2.5	7/0.67	rm	0.8	1.2	11.5	13.5	228	161	7.41	12.1	20	14	22	15
4x4	7/0.85	rm	0.8	1.4	12.0	14.5	342	241	4.61	7.41	27	19	30	21
4x6	7/1.04	rm	0.8	1.4	14.0	17.0	464	314	3.08	4.61	33	23	37	26
4x10	7/1.35	rm	1.0	1.4	17.0	20.5	719	466	1.83	3.08	46	32	51	36
4x16	7/1.70	rm	1.0	1.4	20.0	23.5	1051	647	1.15	1.91	58	38	67	44
4x25	7/2.14	rm	1.2	1.6	24.5	28.5	1600	963	0.727	1.20	66	43	77	50
4x35	19/1.53	rm	1.2	1.6	27.0	32.0	2085	1202	0.524	0.868	81	53	90	59

KEY

70°C Maximum Operating Temperature
160°C Maximum Short Circuit Temperature
Flame Retardant IEC 60332-1-2
Rigid
Internal Wiring
In Concrete
Indoor Under Plaster in Conduit
Test Voltage (AC) (2kV)
Installation Temperature Min 5°C
In Free Air
Pb Lead Free

Note :

1. Current ratings are valid for cables laid under defined conditions at page no. 93. For current ratings at deviated conditions apply correction factors as given on page no. 93.

BYFY/BAYFY
300/500 V
TWIN CORE
BDS 900
& BS: 6004

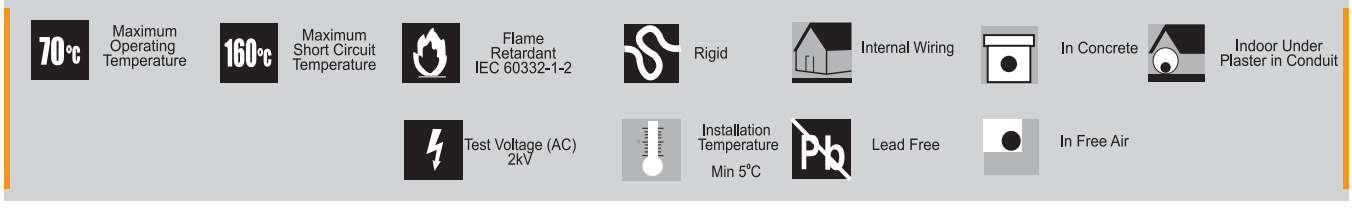
Application: Suitable for fixed installations in dry or damp premises clipped direct to a surface or on a cable tray unenclosed and also for use in non metallic conduit (PVC).

Construction: *1. Annealed Copper/ Aluminium Conductor 2. PVC Insulation & Cores Laid in Flat Form, 3. Grey PVC outer Sheath.*

Colour:

PHYSICAL DATA								*ELECTRICAL DATA*					
Cross Sectional Area	**No. & approx. diameter of wire Cu/Al**	**Shape of Conductor**	**Nominal thickness of insulation**	**Nominal thickness of sheath**	**Approx. Cable diameter**	**Approx. weight of cable**		**Max. DC resistance of conductor at 20 ° C**		**Current rating at 35 ° C in conduit**		**Current rating at 35° C in air**	
						Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm²	nos. /mm		mm	mm	mm	kg/km	kg/km	ohm/km	ohm/km	amps	amps	amps	amps
2x1.0	1/1.13	re	0.6	0.9	7.4x4.7	53	-	18.1	-	13	-	15	-
2x1.0	3/0.65	rm	0.6	0.9	7.6x4.8	58	-	18.1	-	13	-	15	-
2x 1.3	3/0.74	rm	0.7	0.9	8.3x5.3	69	52	14.03	22.95	15	9	17	11
2x1.5	1/1.38	re	0.7	0.9	8.4x5.4	72	-	12.10	18.10	16	13	18	15
2x1.5	7/0.52	rm	0.7	0.9	8.4x5.4	77	46	12.10	18.10	16	13	18	15
2x1.5	3/0.80	rm	0.7	0.9	8.4x5.4	77	46	12.10	18.10	16	13	18	15
2x2.0	3/0.91	rm	0.7	0.9	9.4x5.8	99	65	9.11	15.18	20	14	23	16
2x2.5	1/1.78	re	0.8	1.0	9.8x6.2	100	-	7.41	12.10	22	16	26	20
2x2.5	7/0.67	rm	0.8	1.0	9.8x6.2	104	67	7.41	12.10	22	16	26	20
2x3.0	7/0.74	rm	0.8	1.0	11.2x6.7	127	89	5.99	9.84	24	17	28	21
2x4.0	7/0.85	rm	0.8	1.0	11.5x7.2	152	102	4.61	7.41	30	22	33	26
2x4.5	7/0.91	rm	0.8	1.0	11.8x7.5	165	108	3.89	6.51	32	23	38	27
2x6.0	7/1.04	rm	0.8	1.1	13.0x8.0	205	130	3.08	4.61	37	27	43	35

KEY



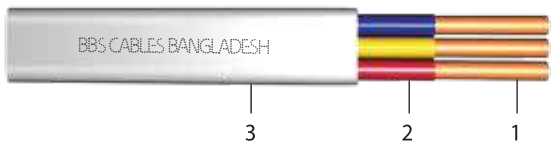
Note :

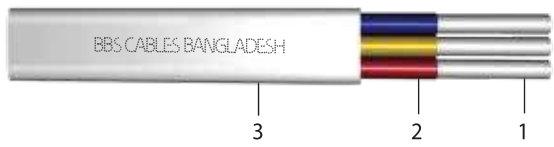
1. Current ratings are valid for cables laid under defined conditions at page no. 93. For current ratings at deviated conditions apply correction factors as given on page no. 93.

BBS CABLES®
more than safety

BYFY/BAYFY
300/500 V
THREE CORE
BDS 900
& BS: 6004

Application: Suitable for fixed installations in dry or damp premises clipped direct to a surface or on a cable tray unenclosed and also for use in non metallic conduit (PVC).



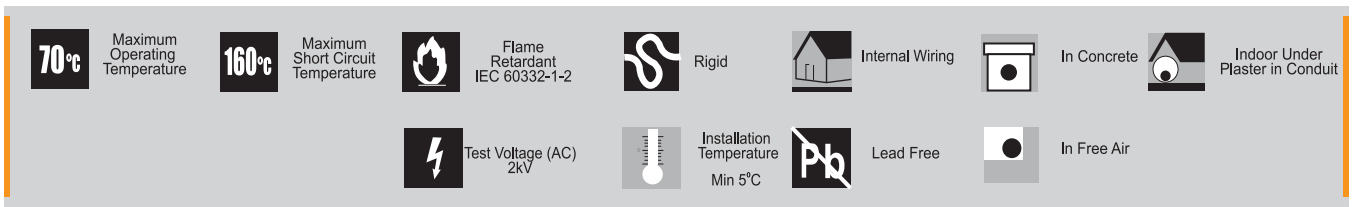


Construction: *1. Annealed Copper/ Aluminium Conductor 2. PVC Insulation & Cores Laid in Flat Form 3. Grey PVC outer Sheath.*

Colour:

PHYSICAL DATA								*ELECTRICAL DATA*					
Cross Sectional Area	**No. & approx. diameter of wire Cu/Al**	**Shape of Conductor**	**Nominal thickness of insulation**	**Nominal thickness of sheath**	**Approx. Cable diameter**	**Approx. weight of cable**		**Max. DC resistance of conductor at 20 ° C**		**Current rating at 35 ° C in conduit**		**Current rating at 35° C in air**	
						Cu	Al	Cu	Al	Cu	Al	Cu	Al
Core xmm^2	nos. /mm	-	mm	mm	mm	kg/km	kg/km	ohm/km	ohm/km	amps	amps	amps	amps
3x1.0	1/1.13	re	0.6	0.9	9.8x4.7	78	-	18.1	-	11	-	12	-
3x1.0	3/0.65	rm	0.6	0.9	10.4x4.8	87	-	18.1	-	11	-	12	-
3x1.5	1/1.38	re	0.7	0.9	1 1 .5x5.4	104	-	12.1	18.1	15	12	16	13
3x1.5	7/0.52	rm	0.7	0.9	1 1 .5x5.4	112	68	12.1	18.1	15	12	16	13
3x1.5	3/0.80	rm	0.7	0.9	11.5x5.4	112	68	12.1	18.1	15	12	16	13
3x2.5	1/1.78	re	0.8	0.9	13.5x6.2	150	-	7.41	12.1	20	16	22	17
3x2.5	7/0.67	rm	0.8	1.0	13.5x6.2	162	99	7.41	12.1	20	16	22	17
3 x 4	7/0.85	rm	0.8	1.1	16.5x7.4	229	154	4.61	7.41	33	24	30	25
3 x 6	7/1.04	rm	0.8	1.1	18.0x8.0	301	188	3.08	4.61	37	30	37	30

KEY

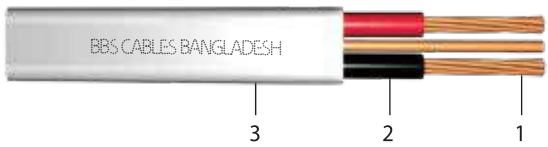


Note :

1. Current ratings are valid for cables laid under defined conditions at page no. 92. For current ratings at deviated conditions apply correction factors as given on page no. 93.

BYFYE
300/500 V
TWO CORE
BDS 900
& BS: 6004

Application: Suitable for fixed installations in dry or damp premises and for installation, on boards and in channels or embedded in plaster.



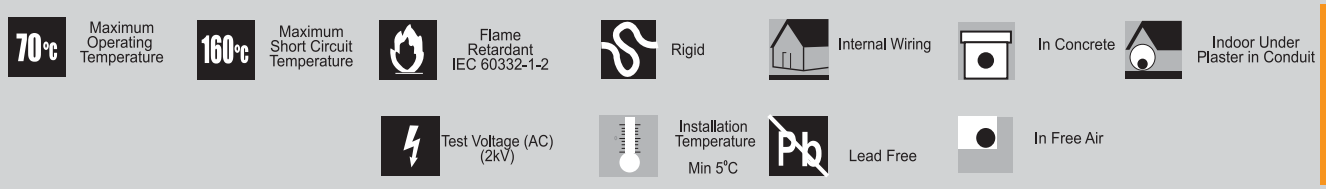
Construction: *1. Annealed Copper/ Aluminium Conductor 2. PVC Insulation & Cores Laid in Flat Form With ECC 3. Grey PVC outer Sheath.*

Colour:

PHYSICAL & ELECTRICAL DATA

Nominal cross sectional area of conductor	No. & approx. diameter of wire	Shape of Conductor	Nominal thickness of insulation	Nominal thickness of sheath	Max overall dimentions	No. & nominal Diameter of wires in ECC	Max. DC resistance of conductor at 20°C	Approx. weight of cable	Current rating	
									Enclosed in conduit at 35° C	Clipped to surface or cable tray at 35° C
core x mm²	no./mm	-	mm	mm	mm	no./mm	ohms/km	kg/km	amps	amps
2 x 1.0	1/1.13	re	0.6	0.9	9.2x5.0	1/1.13	18.1	68	13	15
2 x 1.5	1/1.38	re	0.7	0.9	10.2x5.4	1/1.13	12.1	81	16	18
2 x 2.5	1/1.78	re	0.8	1.0	12.0x6.4	1/1.13	7.41	114	22	26
2x4.0	7/0.85	rm	0.8	1.0	13.5x7.2	1/1.38	4.61	177	30	33
2x6.0	7/1.04	rm	0.8	1.1	15.5x8.0	1/1.78	3.08	244	37	43

KEY



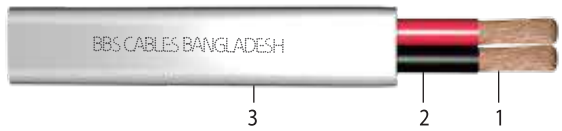
Note :

1. Current ratings are valid for cables laid under defined conditions at page no. 93. For current ratings at deviated conditions apply correction factors as given on page no. 93.

BBS CABLES®
more than safety

FLEXIBLE CABLES
300/500V
Single/Two core
BDS-899 & BS-6500

Application: Suitable for dry places where mechanical stresses do not exist, at the connections of mobile equipments



Construction: *1. Annealed Flexible Copper Conductor 2. PVC Insulation 3. Grey PVC outer sheath.*

SINGLE CORE

PHYSICAL & ELECTRICAL DATA

Cross Sectional Area of Conductor	No. and size of wires	No. and size of wires	Nominal Thickness of Insulation	Overall diameter of each core	Approx. weight	Max. DC resistance at 20°C	Current rating at 35°C	
							In conduit	In air
mm²	nos./mm	nos./inch	mm	mm	kg/km	Ohm/km	Amps	Amps
0.40	14/0.193	14/.0076	0.6	2.26	8.0	47.33	2	3
0.65	23/0.193	23/.0076	0.6	2.57	12.4	28.79	5	6
1.20	40/0.193	40/.0076	0.6	2.84	16.9	16.56	11	13
2.00	70/0.193	70/.0076	0.6	3.43	23.6	9.46	16	18

TWO CORE (T/T)

PHYSICAL & ELECTRICAL DATA

Cross Sectional Area of Conductor	No. and size of wires	No. and size of wires	Nominal Thickness of Insulation	Overall diameter of each core	Approx. weight	Max. DC resistance at 20°C	Current rating at 35°C	
							In conduit	In air
mm²	nos./mm	nos./inch	mm	mm	kg/km	Ohm/km	Amps	Amps
2x0.40	14/0.193	14/.0076	0.6	2.26	16.0	47.33	2	3
2x0.65	23/0.193	23/.0076	0.6	2.57	24.8	28.79	5	6
2x1.20	40/0.193	40/.0076	0.6	2.84	33.9	16.56	11	13
2x2.00	70/0.193	70/.0076	0.6	3.43	47.2	9.46	16	18

TWIN CORE (F/T)

PHYSICAL & ELECTRICAL DATA

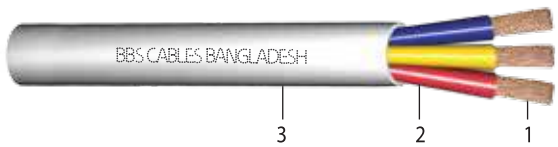
Cross Sectional Area of Conductor	No. and size of wires	Nominal Thickness of Insulation	Nominal Thickness of Sheath	Overall diameter of each core	Approx. weight	Max. DC resistance at 20°C	Current rating at 35°C	
							In conduit	In air
mm²	nos./mm	mm	mm	mm	kg/km	Ohm/km	Amps	Amps
2x0.40	14/0.193	0.6	0.8	3.9x6.1	36.0	47.33	3	4
2x0.65	23/0.193	0.6	0.8	4.0x6.4	45.0	28.79	6	8

Note :

1. Current ratings are valid for cables laid under defined conditions at page no. 93.For current ratings at deviated conditions apply correction factors as given on page no. 93.

FLEXIBLE CABLES
300/500V
Two/ Three core
BDS-899 & BS-6500

Application: Suitable for dry places where mechanical stresses do not exist, at the connections of mobile equipments



Construction: *1. Annealed Flexible Copper Conductor 2. PVC Insulation 3. Grey PVC outer sheath.*

Colour:

TWIN CORE

PHYSICAL & ELECTRICAL DATA

Nominal Cross Sectional Area of Conductor	No.& Nominal Diameter of Wires	Nominal Thickness of Insulation	Nominal Thickness of Sheath	Approx. Overall Diameter	Max. DC Resistance of Conductor at 20° C	Approx. Weight of Cable	Current Rating at 35°C	
							In Conduit	In Air
nos. x mm²	nos. / mm	mm	mm	mm	ohm/km	kg/km	amps	amps
2 x 0.4	14/0.19	0.6	0.8	6.1	47.33	49	3	4
2 x 0.5	17/0.19	0.6	0.8	6.3	39.00	54	3	4
2 x 0.65	23/0.19	0.6	0.8	6.5	28.79	60	6	7
2 x 0.75	26/0.19	0.6	0.8	6.8	26.00	64	7	8
2 x 1.0	34/0.19	0.6	0.8	7.2	19.50	74	10	11
2 x 1.2	40/0.19	0.6	0.8	7.4	16.56	78	13	15
2 x 1.5	51/0.19	0.7	0.8	8.0	13.30	99	15	17
2 x 2.0	70/0.19	0.7	1.0	9.1	9.46	127	18	20
2 x 2.5	86/0.19	0.8	1.0	9.8	7.98	151	20	22
2 x 3.0	110/0.19	0.8	1.1	10.6	6.01	174	24	26
2 x 4.0	75/0.26	0.8	1.1	11.0	4.95	200	25	27

THREE CORE

PHYSICAL & ELECTRICAL DATA

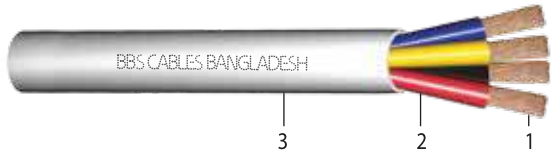
Nominal Cross Sectional Area of Conductor	No.& Nominal Diameter of Wires	Nominal Thickness of Insulation	Nominal Thickness of Sheath	Approx. Overall Diameter	Max. DC Resistance of Conductor at 20° C	Approx. Weight of Cable	Current Rating at 35°C	
							In Conduit	In Air
nos. x mm²	nos. / mm	mm	mm	mm	ohm/km	kg/km	Amp	Amp
3 x 0.4	14/0.19	0.6	0.8	6.4	47.33	58	2	3
3 x 0.5	17/0.19	0.6	0.8	6.7	39.00	64	3	4
3 x 0.65	23/0.19	0.6	0.8	6.9	28.79	71	6	7
3 x 0.75	26/0.19	0.6	0.8	7.2	26.00	76	7	8
3 x 1.0	34/0.19	0.6	0.8	7.5	19.50	88	10	11
3 x 1.2	40/0.19	0.6	0.9	8.0	16.56	99	13	15
3 x 1.5	51/0.19	0.7	0.9	8.8	13.30	124	15	17
3 x 2.0	70/0.19	0.7	1.1	10.0	9.46	160	18	20
3 x 2.5	86/0.19	0.8	1.1	10.4	7.98	183	20	22
3 x 3.0	110/0.19	0.8	1.2	11.5	6.01	222	24	26
3 x 4.0	75/0.26	0.8	1.2	12.0	4.95	254	25	27

Note :

1. Current ratings are valid for cables laid under defined conditions at page no. 93. For current ratings at deviated conditions apply correction factors as given on page no . 93.

FLEXIBLE CABLES
300/500V
Four core
BDS-899 & BS-6500

Application: Suitable for dry places where mechanical stresses do not exist, at the connections of mobile equipments



Construction: *1. Annealed Flexible Copper Conductor 2. PVC Insulation 3. Grey PVC outer sheath.*

Colour:

FOUR CORE

PHYSICAL & ELECTRICAL DATA

Nominal Cross Sectional Area of Conductor	No.& Nominal Diameter of Wires	Nominal Thickness of Insulation	Nominal Thickness of Sheath	Approx. Overall Diameter	Max. DC Resistance of Conductor at 20° C	Approx. Weight of Cable	Current Rating at 35° C	
							In Conduit	In Air
nos. x mm²	nos. / mm	mm	mm	mm	ohm/km	kg/km	amps	amps
4 x 0.4	14/0.19	0.6	0.8	7.0	47.33	68	2	3
4 x 0.5	17/0.19	0.6	0.8	7.3	39.00	77	3	4
4 x 0.65	23/0.19	0.6	0.8	7.6	28.79	85	6	7
4 x 0.75	26/0.19	0.6	0.8	7.8	26.00	93	7	8
4 x 1.0	34/0.19	0.6	0.9	8.4	19.50	113	10	11
4 x 1.2	40/0.19	0.6	1.0	8.8	16.56	124	13	15
4 x 1.5	51/0.19	0.7	1.0	9.8	13.30	158	15	17
4 x 2.0	70/0.19	0.7	1.1	10.8	9.46	194	18	20
4 x 2.5	86/0.19	0.8	1.1	11.6	7.98	231	20	22
4 x 3.0	110/0.19	0.8	1.2	12.5	6.01	274	24	26
4 x 4.0	75/0.26	0.8	1.2	13.0	4.95	315	25	27

KEY

70°c Maximum Operating Temperature

160°c Maximum Short Circuit Temperature

Flame Retardant IEC 60332-1-2

Flexible

Mobile Household Appliances

Pb Lead Free

Test Voltage (AC) (3.5 kV)

Installation Temperature Min 5°C

Note :

1. Current ratings are valid for cables laid under defined conditions at page no. 93. For current ratings at deviated conditions apply correction factors as given on page no. 93.

BBS CABLES®
more than safety

PVC INSULATED LT CABLES

NYY/NAYY
600/1000 V
SINGLE CORE
VDE 0271

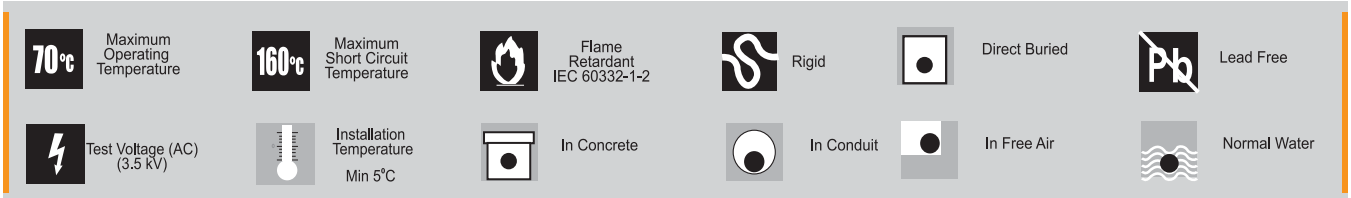
Application: Suitable for indoor, outdoor, underground and in water for continuous permissible service voltage of 720/1200 Volts.

Construction: *1. Annealed Copper/Aluminium Conductor 2. PVC Insulation 3. Black PVC outer Sheath.*

Colour: ●

PHYSICAL DATA								*ELECTRICAL DATA*					
Cross Sectional Area	**No. & approx. dia. of wire Cu/Al**	**Shape of Conductor**	**Nominal thickness of insulation**	**Nominal thickness of sheath**	**Overall diameter (approx)**	**Approx. weight of cable**		**Max. DC resistance of conductor at 20 °C**		**Current rating at 30 °C in ground**		**Current rating at 35° C in air**	
						Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm²	nos./mm	-	mm	mm	mm	kg/km	kg/km	ohm/km	ohm/km	amps	amps	amps	amps
1x1.5	1/1.38	re	0.8	1.8	6.6	55	-	12.1	18.1	27	-	22	-
1x1.5	7/0.52	rm	0.8	1.8	6.8	58	-	12.1	18.1	27	-	22	-
1x2.5	1/1.78	re	0.8	1.8	7.2	70	-	7.41	12.1	36	-	30	-
1x2.5	7/0.68	rm	0.8	1.8	7.4	75	-	7.41	12.1	36	-	30	-
1 x 4	7/0.85	rm	1.0	1.8	8.2	106	80	4.61	7.41	47	37	39	31
1 x 6	7/1.04	rm	1.0	1.8	8.7	132	92	3.08	4.61	59	48	50	41
1x10	7/1.35	rm	1.0	1.8	9.7	182	118	1.83	3.08	78	60	69	53
1x16	7/1.70	rm	1.0	1.8	10.7	252	150	1.15	1.91	100	78	94	73
1 x25	7/2.14	rm	1.2	1.8	12.4	363	202	0.727	1.2	130	101	125	97
1 x35	min. 6	rm	1.2	1.8	13.7	470	248	0.524	0.868	155	120	160	124
1 x50	min. 6	rm	1.4	1.8	15.6	645	332	0.387	0.641	185	144	195	151
1 x70	min. 12	rm	1.4	1.8	17.3	858	420	0.268	0.443	225	175	245	190
1 x95	min. 15	rm	1.6	1.8	19.4	1129	530	0.193	0.32	270	210	300	232
1X120	min. 18/15	rm	1.6	1.8	21	1384	628	0.153	0.253	310	240	350	272
1x150	min. 18/15	rm	1.8	1.8	23.1	1709	780	0.124	0.206	350	270	405	314
1x185	min. 30	rm	2.0	2.0	25.6	2097	932	0.0991	0.164	390	302	460	357
1 x240	min. 34/30	rm	2.2	2.0	28.6	2708	1190	0.0754	0.125	450	349	555	430
1 x300	min. 34/30	rm	2.4	2.0	31.3	3405	1248	0.0601	0.1	515	386	640	448
1x400	min. 53	rm	2.6	2.2	35.3	4408	1952	0.047	0.0778	585	439	770	540
1 x500	min. 53	rm	2.8	2.2	38.0	5436	2340	0.0366	0.0605	680	510	900	630
1 x630	min. 53	rm	2.8	2.2	42.0	6780	2780	0.0283	0.0469	800	600	1030	721
1 x800	min. 53	rm	2.8	2.4	46.2	8510	3195	0.0221	0.0367	945	708	1160	812
1X1000	min. 53	rm	3.0	2.6	51.1	10530	3350	0.0176	0.0291	1095	821	1310	917

KEY



Note :

1. Current ratings are valid for cables laid under defined conditions at page no. 94. For current ratings at deviated conditions apply correction factors as given on page no. 95-99
2. For compact conductors and lugs refer to page no. 108-109

BBS CABLES®
more than safety

YY/AYY
600/1000V
SINGLE CORE
IEC 60502-1

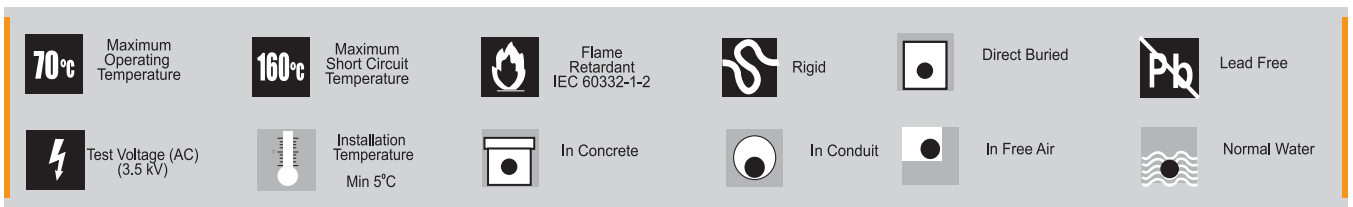
Application : Suitable for indoor, outdoor, underground and in water for continuous permissible service voltage of 720/1200 Volts.

Construction: *1. Annealed Copper / Aluminium Conductor 2. PVC Insulation 3 Black PVC outer Sheath.*

Colour: ●

PHYSICAL DATA								*ELECTRICAL DATA*					
Cross Sectional Area	**No. & approx. dia. of wire Cu/Al**	**Shape of Conductor**	**Nominal thickness of insulation**	**Nominal thickness of sheath**	**Approx. Cable diameter**	**Approx. weight of cable**		**Max. DC resistance of conductor at 20°C**		**Current rating at 30°C in ground**		**Current rating at 35°C in air**	
						Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm²	nos./mm		mm	mm	mm	kg/km	kg/km	ohm/km	ohm/km	amps	amps	amps	amps
1x1.5	1/1.38	re	0.8	1.4	6.0	50	-	12.1	18.1	27	-	22	-
1x1.5	7/0.52	rm	0.8	1.4	6.3	53	-	12.1	-	27	-	22	-
1x2.5	1/1.78	re	0.8	1.4	6.5	65	-	7.41	-	36	-	30	-
1x2.5	7/0.68	rm	0.8	1.4	6.7	68	-	7.41	-	36	-	30	-
1 x 4	7/0.85	rm	1.0	1.4	7.7	95	64	4.61	7.41	47	37	39	31
1 x 6	7/1.04	rm	1.0	1.4	8.4	120	75	3.08	4.61	59	48	50	41
1x10	7/1.35	rm	1.0	1.4	9.2	171	97	1.83	3.08	78	60	69	53
1x1 6	7/1.70	rm	1.0	1.4	10.5	246	127	1.15	1.91	100	78	94	73
1 x25	7/2.14	rm	1.2	1.4	11.6	348	175	0.727	1.2	130	101	125	97
1 x35	min. 6	rm	1.2	1.4	12.7	453	218	0.524	0.868	155	120	160	124
1 x50	min. 6	rm	1.4	1.4	14.5	624	290	0.387	0.641	185	144	195	152
1 x70	min. 12	rm	1.4	1.4	16.1	831	362	0.268	0.443	225	175	245	191
1 x95	min. 15	rm	1.6	1.5	18.2	1104	488	0.193	0.320	270	210	300	233
1x120	min. 18/15	rm	1.6	1.5	19.7	1357	580	0.153	0.253	310	240	350	272
1x150	min. 18/15	rm	1.8	1.6	21.9	1689	708	0.124	0.206	350	270	405	314
1x185	min. 30	rm	2.0	1.7	24.1	2070	875	0.0991	0.164	390	302	460	358
1 x240	min. 34/30	rm	2.2	1.8	26.9	2650	1115	0.0754	0.125	450	349	555	431
1 x300	min. 34/30	rm	2.4	1.9	29.8	3289	1375	0.0601	0.100	515	386	640	448
1x400	min. 53	rm	2.6	2.0	33.5	4314	1720	0.047	0.0778	585	439	770	540
1 x500	min. 53	rm	2.8	2.1	38.0	5350	2125	0.0366	0.0605	680	510	900	630
1 x630	min. 53	rm	2.8	2.2	42.0	6780	2620	0.0283	0.0469	800	600	1030	721
1 x800	min. 53	rm	2.8	2.3	46.2	8510	3195	0.0221	0.0367	945	708	1160	812
1x1000	min. 53	rm	3.0	2.5	51.1	10530	3890	0.0176	0.0291	1095	821	1310	917

KEY



Note :

1. Current ratings are valid for cables laid under defined conditions at page no. 94. For current ratings at deviated conditions apply correction factors as given on page no. 95-99
2. For compact conductors and lugs refer to page no. 108-109

NYY/YY
NAYY/AYY
600/1000 V
TWO CORE
VDE-0271 & IEC-60502-1

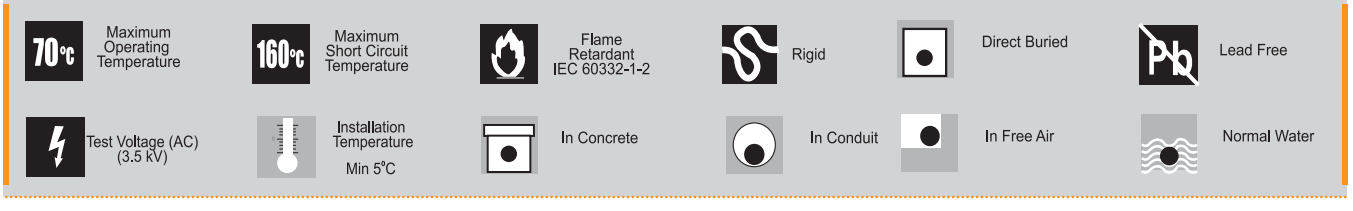
Application : Suitable for indoor, outdoor, underground and in water for continuous permissible service voltage of 720/1200 Volts.

Construction: *1. Annealed Copper / Aluminium Conductor 2. PVC Insulation 3. PVC inner Sheath 4 Black PVC outer Sheath.*

Colour:

PHYSICAL DATA								*ELECTRICAL DATA*					
Cross Sectional Area	**No. & approx. dia. of wire Cu/Al**	**Shape of Conductor**	**Nominal thickness of insulation**	**Nominal thickness of sheath**	**Approx. Cable diameter**	**Approx. weight of cable**		**Max. DC resistance of conductor at 20°C**		**Current rating at 30°C in ground**		**Current rating at 35°C in air**	
						Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm²	nos./mm	-	mm	mm	mm	kg/km	kg/km	ohm/km	ohm/km	amps	amps	amps	amps
2x1.5	1/1.38	re	0.8	1.8	11.0	165	-	12.1	18.1	25	-	19	-
2x1.5	7/0.52	rm	0.8	1.8	11.2	170	-	12.1	18.1	25	-	19	-
2x2.5	1/1.78	re	0.8	1.8	12.4	205	-	7.41	12.10	34	-	27	-
2x2.5	7/0.67	rm	0.8	1.8	12.8	215	-	7.41	12.10	34	-	27	-
2x4	7/0.85	rm	1.0	1.8	14.5	305	223	4.61	7.41	44	35	35	28
2x6	7/1.04	rm	1.0	1.8	15.6	375	257	3.08	4.61	55	45	45	37
2x10	7/1.35	rm	1.0	1.8	17.5	509	314	1.83	3.08	74	57	62	48
2x16	7/1.70	rm	1.0	1.8	19.5	691	390	1.15	1.91	97	75	84	65
2x25	7/2.14	rm	1.2	1.8	23.5	1044	518	0.727	1.20	125	97	110	86
2x35	19/1.53	rm	1.2	1.8	26.0	1330	620	0.524	0.868	150	117	140	109

KEY



Note :

1. Current ratings are valid for cables laid under defined conditions at page no. 94. For current ratings at deviated conditions apply correction factors as given on page no. 95-99

BBS CABLES
more than safety

NYY/YY
NAYY/AYY
600/1000 V
THREE CORE
VDE-0271 & IEC-60502-1

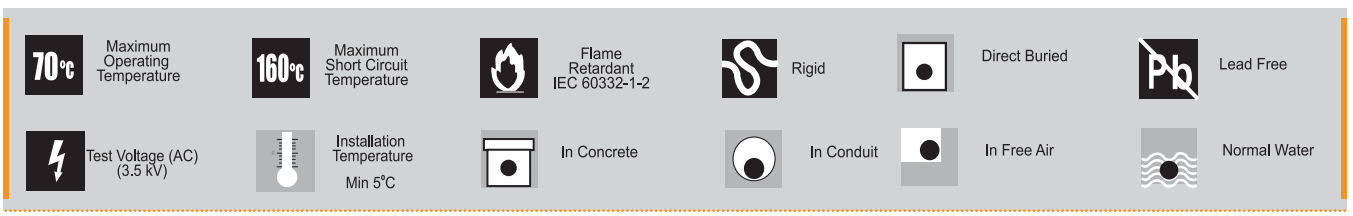
Application : Suitable for indoor, outdoor, underground and in water for continuous permissible service voltage of 720/1200 Volts.

Construction: *1. Annealed Copper / Aluminium Conductor 2. PVC Insulation 3. PVC inner Sheath 4. Black PVC outer Sheath.*

Colour:

PHYSICAL DATA								*ELECTRICAL DATA*					
Cross Sectional Area	**No. & approx. dia. of wire Cu/Al**	**Shape of Conductor**	**Nominal thickness of insulation**	**Nominal thickness of sheath**	**Approx. Cable diameter**	**Approx. weight of cable**		**Max. DC resistance of conductor at 20°C**		**Current rating at 30°C in ground**		**Current rating at 35°C in air**	
						Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm^2	nos./mm	-	mm	mm	mm	kg/km	kg/km	ohm/km	ohm/km	amps	amps	amps	amps
3x1.5	1/1.38	re	0.8	1.8	11.5	195	-	12.1	18.1	22.0	-	16	-
3x1.5	7/0.52	rm	0.8	1.8	11.8	200	-	12.1	18.1	22.0	-	16	-
3x2.5	1/1.78	re	0.8	1.8	12.7	250	-	7.41	12.1	30.0	-	23	-
3x2.5	7/0.67	rm	0.8	1.8	13.2	260	-	7.41	12.1	30.0	-	23	-
3x4	7/0.85	rm	1.0	1.8	15.0	360	260	4.61	7.41	38	30	32	25
3x6	7/1.04	rm	1.0	1.8	16.4	460	305	3.08	4.61	48	39	41	34
3x10	7/1.35	rm	1.0	1.8	18.5	625	379	1.83	3.08	64	49	56	43
3x16	7/1.70	rm	1.0	1.8	21.0	920	480	1.15	1.91	83	64	75	58
3x25	7/2.14	rm	1.2	1.8	25.0	1320	652	0.727	1.20	110	86	98	76
3x35	min. 6	sm	1.2	1.8	24.2	1400	804	0.524	0.868	130	101	120	93
3x50	min. 6	sm	1.4	1.8	25.9	1815	1045	0.387	0.641	155	120	150	116
3x70	min. 12	sm	1.4	2.0	29.2	2444	1325	0.268	0.443	190	148	190	148
3x95	min. 15	sm	1.6	2.1	33.4	3350	1735	0.193	0.320	225	175	230	179
3x120	min. 18/15	sm	1.6	2.2	36.3	4110	2040	0.153	0.253	260	202	270	210
3x150	min.18/15	sm	1.8	2.3	39.5	5100	2475	0.124	0.206	295	229	305	237
3x185	min. 30	sm	2.0	2.5	43.5	6260	3040	0.0991	0.164	330	257	350	272
3x240	min.34/30	sm	2.2	2.7	48.8	7900	3795	0.0754	0.125	385	299	410	318
3x300	min.34/30	sm	2.4	2.9	54.1	10000	4700	0.0601	0.100	425	329	470	364

KEY

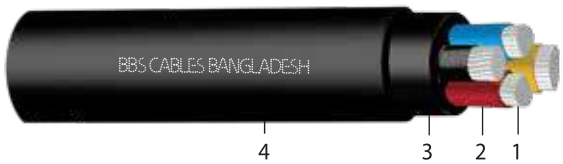


Note :

1. Current ratings are valid for cables laid under defined conditions at page no. 94. For current ratings at deviated conditions apply correction factors as given on page no. 95-99

NYY/YY
NAYY/AYY
600/1000 V
THREE & HALF CORE
VDE-0271 & IEC-60502-1

Application : Suitable for indoor, outdoor, underground and in water for continuous permissible service voltage of 720/1200 Volts.

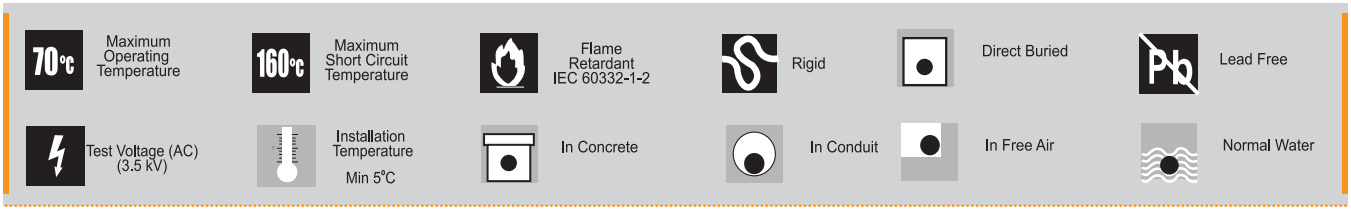


Construction: *1. Annealed Copper / Aluminium Conductor 2. PVC Insulation 3. PVC inner Sheath 4. Black PVC outer Sheath.*

Colour:

PHYSICAL DATA								*ELECTRICAL DATA*					
Cross Sectional Area	**No. & approx. dia. of wire Cu/Al**	**Shape of Conductor**	**Nominal thickness of insulation**	**Nominal thickness of sheath**	**Approx. Cable diameter**	**Approx. weight of cable**		**Max. DC resistance of conductor at 20°C**		**Current rating at 30°C in ground**		**Current rating at 35°C in air**	
						Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm²	nos.		mm	mm	mm	kg/km	kg/km	ohm/km	ohm/km	amps	amps	amps	amps
3x25+16	min. 6	rm/rm	1.2	1.8	27.0	1400	910	0.727/1.15	1.20/1.91	110	86	98	76
	min. 6		1.0										
3x35+16	min. 6	sm/rm	1.2	1.8	26.2	1580	920	0.524/1.15	0.868/1.91	130	101	120	93
	min. 6		1.0										
3x50+25	min. 6	sm/rm	1.4	1.9	28.5	2180	1200	0.387/0.727	0.641/1.20	155	120	150	116
	min. 6		1.2										
3x70+35	min. 12	sm/rm	1.4	2.0	32.5	2910	1505	0.268/0.524	0.443/0.868	190	148	190	148
	min. 6		1.2										
3x95+50	min. 15	sm/rm	1.6	2.2	38.0	3950	2000	0.193/0.387	0.32/0.641	225	175	230	179
	min. 6		1.4										
3x120+70	min. 18/15	sm/rm	1.6	2.3	40.8	5050	2390	0.153/0.268	0.253/0.443	260	202	270	210
	min. 12		1.4										
3x150+70	min. 18/15	sm/rm	1.8	2.4	45.0	6020	2830	0.124/0.268	0.206/0.443	295	229	305	237
	min. 12		1.4										
3x185+95	min. 30	sm/rm	2.0	2.6	50.5	7450	3510	0.0991/0.193	0.164/0.320	330	257	350	272
	min. 15		1.6										
3x240+120	min. 34/30	sm/rm	2.2	2.8	56.0	9650	4360	0.0754/0.153	0.125/0.253	385	299	410	318
	min. 18/15		1.6										
3x300+150	min. 34/30	sm/rm	2.4	3.0	63.0	12100	5404	0.0601/0.124	0.100/0.206	425	329	470	364
	min. 18/15		1.8										

KEY



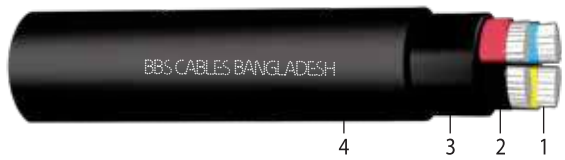
Note :

1. Current ratings are valid for cables laid under defined conditions at page no. 94. For current ratings at deviated conditions apply correction factors as given on page no. 95-99

BBS CABLES
more than safety

NYY/YY
NAYY/AYY
720/1200 V
FOUR CORE
VDE-0271 & IEC-60502-1

Application : Suitable for indoor, outdoor, underground and in water for continuous permissible service voltage of 720/1200 Volts.

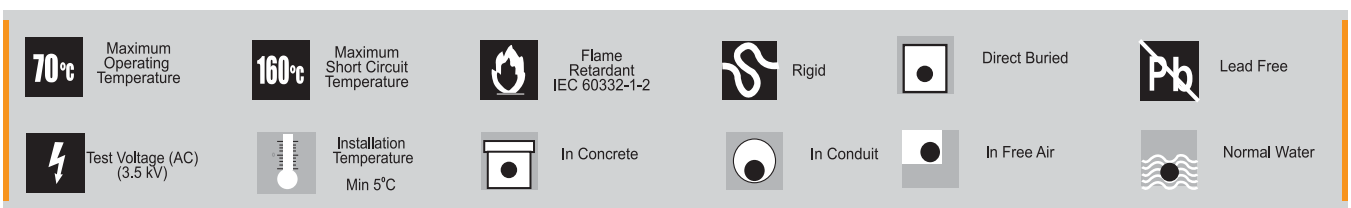


Construction: *1. Annealed Copper / Aluminium Conductor 2. PVC Insulation 3. PVC inner Sheath 4. Black PVC outer Sheath.*

Colour:

PHYSICAL DATA								*ELECTRICAL DATA*					
Cross Sectional Area	**No. & approx. dia. of wire Cu/Al**	**Shape of Conductor**	**Nominal thickness of insulation**	**Nominal thickness of sheath**	**Approx. Cable diameter**	**Approx. weight of cable**		**Max. DC resistance of conductor at 20°C**		**Current rating at 30°C in ground**		**Current rating at 35°C in air**	
						Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm²	nos./mm		mm	mm	mm	kg/km	kg/km	ohm/km	ohm/km	amps	amps	amps	amps
4x1.5	1/1.38	re	0.8	1.8	12.5	230		12.1	18.1	22		16	
4x1.5	7/0.52	rm	0.8	1.8	13.0	235		12.1		22		16	
4x2.5	1/1.78	re	0.8	1.8	14.0	305		7.41	12.1	30		23	
4x2.5	7/0.67	rm	0.8	1.8	14.6	312		7.41		30		23	
4 x4	7/0.85	rm	1.0	1.8	16.2	430	290	4.61	7.41	38	30	32	25
4x6	7/1.04	rm	1.0	1.8	17.5	540	345	3.08	4.61	48	39	41	34
4x10	7/1.35	rm	1.0	1.8	20.0	760	480	1.83	3.08	64	49	56	43
4x16	7/1.70	rm	1.0	1.8	23.2	1135	660	1.15	1.91	83	64	75	58
4x25	7/2.14	rm	1.2	1.8	27.6	1600	900	0.727	1.20	110	86	98	76
4x35	min. 6	sm	1.2	1.8	26.4	1800	985	0.524	0.868	130	101	120	93
4x50	min. 6	sm	1.4	1.9	29.0	2460	1310	0.387	0.641	155	120	150	116
4x70	min. 12	sm	1.4	2.1	33.5	3250	1700	0.268	0.443	190	148	190	148
4x95	min. 15	sm	1.6	2.2	38.4	4400	2190	0.193	0.320	225	175	230	179
4x120	min.18/15	sm	1.6	2.4	41.0	5500	2605	0.153	0.253	260	202	270	210
4x150	min.18/15	sm	1.8	2.5	45.2	6800	3210	0.124	0.206	295	229	305	237
4x185	min. 30	sm	2.0	2.7	50.5	8350	3890	0.0991	0.164	330	257	350	272
4x240	min.34/30	sm	2.2	2.9	56.0	10700	4925	0.0754	0.125	385	299	410	318
4x300	min. 34/30	sm	2.4	3.1	64.0	13200	5950	0.0601	0.100	425	329	470	364

KEY



Note :

1. Current ratings are valid for cables laid under defined conditions at page no. 94. For current ratings at deviated conditions apply correction factors as given on page no. 95-99

NYRaY/YRaY
NAYRaY/AYRaY
600/1000V
SINGLE CORE
VDE-0271 & IEC-60502-1

Application : Suitable for indoor, outdoor, underground and in water for continuous permissible service voltage of 720/1200 Volts.

Construction: *1. Annealed Copper/ Aluminium Conductor 2 . PVC Insulation 3. Round Aluminium wire Armour 4. Black PVC Sheath.*

Colour: ●

PHYSICAL DATA									*ELECTRICAL DATA*					
Cross Sectional Area	**No. & approx. dia. of wire Cu/Al**	**Shape of Conductor**	**Nominal thickness of insulation**	**Diameter of round armour wire**	**Nominal thickness of sheath**	**Approx. Cable diameter**	**Approx. weight of cable**		**Max. DC resistance of conductor at 20°C**		**Current rating at 30°C in ground**		**Current rating at 35°C in air**	
							Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm²	nos.		mm	mm	mm	mm	kg/km	kg/km	ohm/km	ohm/km	amps	amps	amps	amps
1x35	min. 6	rm	1.2	1.25	1.8	17.3	615	290	0.524	0.868	155	120	160	124
1x50	min. 6	rm	1.4	1.25	1.8	19.3	770	370	0.387	0.641	185	144	195	152
1x70	min. 12	rm	1.4	1.25	1.8	20.8	1000	455	0.268	0.443	225	175	245	191
1x95	min. 15	rm	1.6	1.25	1.8	23.3	1265	570	0.193	0.320	270	210	300	233
1x120	min. 18/15	rm	1.6	1.6	1.8	25.5	1575	680	0.153	0.253	310	240	350	272
1x150	min. 18/15	rm	1.8	1.6	1.8	27.5	1915	800	0.124	0.206	350	270	405	314
1x185	min. 30	rm	2.0	1.6	1.8	29.5	2325	950	0.0991	0.164	390	302	460	358
1x240	min. 34/30	rm	2.2	1.6	1.9	32.3	2920	1195	0.0754	0.125	450	349	555	431
1x300	min. 34/30	rm	2.4	2.0	2.0	36.0	3620	1485	0.0601	0.100	515	386	640	448
1x400	min. 53	rm	2.6	2.0	2.1	40.1	4675	1873	0.0470	0.0778	585	439	770	540
1x500	min. 53	rm	2.8	2.0	2.2	43.6	5725	2270	0.0366	0.0605	680	510	900	630
1x630	min. 53	rm	2.8	2.0	2.4	47.2	7025	2760	0.0283	0.0469	800	600	1030	721
1x800	min. 53	rm	2.8	2.5	2.5	54.4	8920	3465	0.0221	0.0367	945	708	1160	812
1x1000	min. 53	rm	3.0	2.5	2.7	59.3	11020	4250	0.0176	0.0291	1095	821	1310	917

KEY

70°c Maximum Operating Temperature

160°c Maximum Short Circuit Temperature

Flame Retardant IEC 60332-1-2

Rigid

Direct Buried

Pb Lead Free

Test Voltage (AC) (3.5 kV)

Installation Temperature Min 5°C

Normal Water

Note :

1. Current ratings are valid for cables laid under defined conditions at page no . 94. For current ratings at deviated conditions apply correction factors as given on page no . 95-99
2. For compact conductors and lugs refer to page no. 108-109

BBS CABLES
more than safety

NYFGbY/YFGY
NAYFGbY/AYFGY
600/1000V
THREE CORE
VDE-0271 & IEC-60502-1

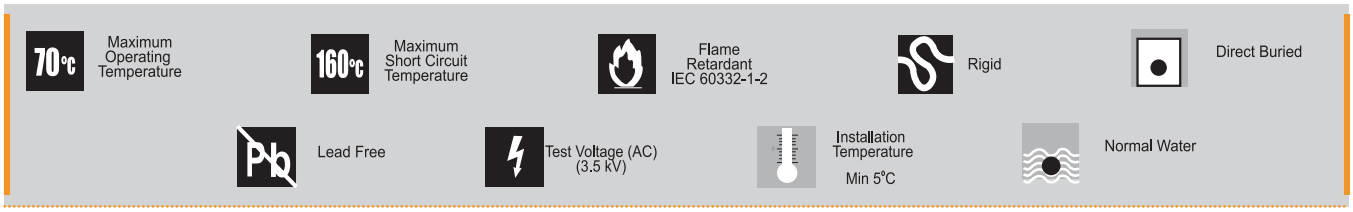
Application : Suitable for indoor, outdoor, underground and in water for continuous permissible service voltage of 720/1200 Volts.

Construction: *1. Annealed Copper/ Aluminium Conductor 2. PVC Insulation 3. PVC inner sheath 4. Galv. Steel strip armour 5. PVC outer Sheath.*

Colour:

PHYSICAL DATA									*ELECTRICAL DATA*					
Cross Sectional Area	**No. & approx. dia. of wire Cu/Al**	**Shape of Conductor**	**Nominal thickness of insulation**	**Dimension of steel stirip armour**	**Nominal thickness of sheath**	**Approx. Cable diameter**	**Approx. weight of cable**		**Max. DC resistance of conductor at 20°C**		**Current rating at 30°C in ground**		**Current rating at 35°C in air**	
							Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm²	nos./mm		mm	mm	mm	mm	kg/km	kg/km	ohm/km	ohm/km	amps	amps	amps	amps
3x25	7/2.14	rm	1.2	4x0.8	1.8	27.0	1800	1281	0.727	1.20	110	86	98	76
3x35	min. 6	sm	1.2	4x0.8	1.8	26.0	1900	1330	0.524	0.868	130	101	120	93
3x50	min. 6	sm	1.4	4x0.8	1.9	28.0	2500	1600	0.387	0.641	155	120	150	116
3x70	min. 12	sm	1.4	4x0.8	2.0	31.0	3115	1963	0.268	0.443	190	148	190	148
3x95	min. 15	sm	1.6	4x0.8	2.2	36.4	4325	2478	0.193	0.320	225	175	230	179
3x120	min. 18/15	sm	1.6	4x0.8	2.3	39.0	5220	2835	0.153	0.253	260	202	270	210
3x150	min. 18/15	sm	1.8	4x0.8	2.4	43.0	6375	3336	0.124	0.206	295	229	305	237
3x185	min. 30	sm	2.0	4x0.8	2.6	47.0	7650	3995	0.0991	0.164	330	257	350	272
3x240	min. 34/30	sm	2.2	4x0.8	2.8	53.0	9650	4864	0.0754	0.125	385	299	410	318
3x300	min. 34/30	sm	2.4	4x0.8	3.0	58.5	12080	5819	0.0601	0.100	425	329	470	364

KEY



Note :

1. Current ratings are valid for cables laid under defined conditions at page no . 94. For current ratings at deviated conditions apply correction factors as given on page no. 95-99

NYFGbY/YFGY
NAYFGbY/AYFGY
600/1000V
3.5 CORE
VDE-0271 & IEC-60502-1

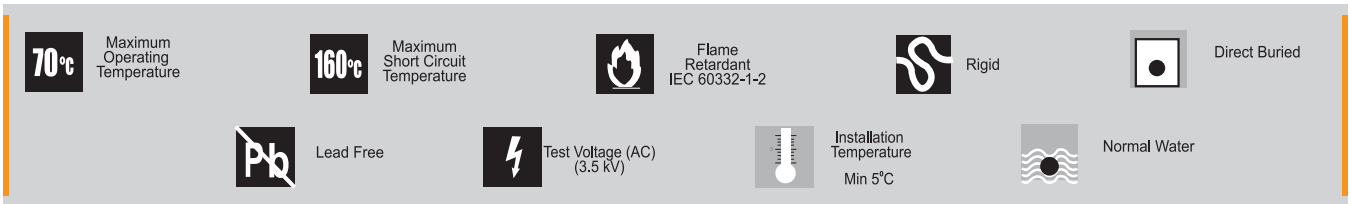
Application : Suitable for indoor, outdoor, underground and in water for continuous permissible service voltage of 720/1200 Volts.

Construction: *1. Annealed Copper/Aluminium Conductor 2. PVC Insulation 3. PVC Inner Sheath 4. Galv. Steel Strip Armour 5. PVC outer sheath.*

Colour:

PHYSICAL DATA									*ELECTRICAL DATA*					
Cross Sectional Area	**No. & approx. dia. of wire Cu/Al**	**Shape of Conductor**	**Nominal thickness of insulation**	**Dimension of steel stirip armour**	**Nominal thickness of sheath**	**Approx. Cable diameter**	**Approx. weight of cable**		**Max. DC resistance of conductor at 20°C**		**Current rating at 30°C in ground**		**Current rating at 35°C in air**	
							Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm²	nos.	mm	mm	mm	mm	mm	kg/km	kg/km	ohm/km	ohm/km	amps	amps	amps	amps
3x25+16	min. 6	rm/rm	1.2	4x0.8	1.8	28.9	2010	1434	0.727/1.15	1.20/1.91	110	86	98	76
	min. 6		1.0	4x0.8										
3x35+16	min. 6	sm/rm	1.2	4x0.8	1.8	28.3	2130	1402	0.524/1.15	0.868/1.91	130	101	120	93
	min. 6		1.0	4x0.8										
3x50+25	min. 6	sm/rm	1.4	4x0.8	1.9	32.2	3060	1804	0.387/0.727	0.641/1.20	155	120	150	116
	min. 6		1.2	4x0.8										
3x70+35	min. 12	sm/rm	1.4	4x0.8	2.1	36.1	3950	2176	0.268/0.524	0.443/0.868	190	148	190	148
	min. 6		1.2	4x0.8										
3x95+50	min. 15	sm/rm	1.6	4x0.8	2.2	41.0	5110	2775	0.193/0.387	0.32/0.641	225	175	230	179
	min. 6		1.4	4x0.8										
3x120+70	min. 18/15	sm/rm	1.6	4x0.8	2.3	44.4	6490	3323	0.153/0.268	0.253/0.443	260	202	270	210
	min. 12		1.4	4x0.8										
3x150+70	min. 18/15	sm/rm	1.8	4x0.8	2.4	48.3	7300	3723	0.124/0.268	0.206/0.443	295	229	305	237
	min. 12		1.4	4x0.8										
3x185+95	min. 30	sm/rm	2.0	4x0.8	2.6	53.5	9050	5019	0.0991/0.193	0.164/0.320	330	257	350	272
	min. 15		1.6	4x0.8										
3x240+120	min. 34/30	sm/rm	2.2	4x0.8	2.8	59.5	11100	5812	0.0754/0.153	0.125/0.253	383	299	410	318
	min. 18/15		1.6	4x0.8										
3x300+150	min. 34/30	sm/rm	2.4	4x0.8	3.0	68.0	14400	7009	0.0601/0.124	0.100/0.206	425	329	470	364
	min. 18/15		1.8	4x0.8										

KEY



Note :

1. Current ratings are valid for cables laid under defined conditions at page no. 94. For current ratings at deviated conditions apply correction factors as given on page no. 95-99

BBS CABLES®
more than safety

NYFGbY/YFGY
NAYFGbY/AYFGY
600/1000 V
FOUR CORE
VDE-0271 & IEC-60502-1

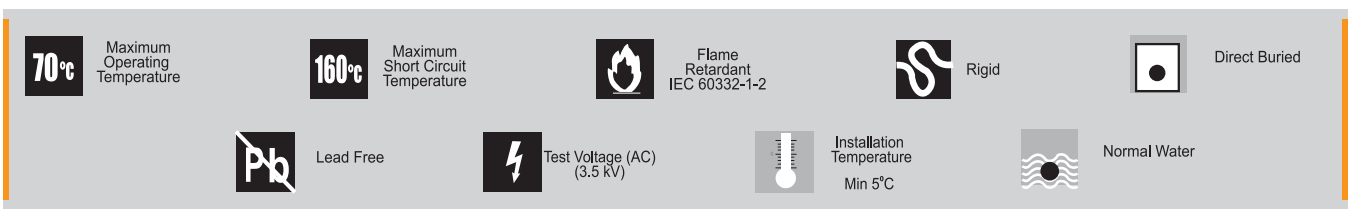
Application : Suitable for indoor, outdoor, underground and in water for continuous permissible service voltage of 720/1200 Volts.

Construction: *1. Annealed Copper/Aluminium Conductor 2. PVC Insulation 3. PVC Inner Sheath 4. Galv. Steel Strip Armour 5. PVC outer sheath.*

Colour:

PHYSICAL DATA									*ELECTRICAL DATA*					
Cross Sectional Area	**No. & approx. dia. of wire Cu/Al**	**Shape of Conductor**	**Nominal thickness of insulation**	**Dimension of steel stirip armour**	**Nominal thickness of sheath**	**Approx. Cable diameter**	**Approx. weight of cable**		**Max. DC resistance of conductor at 20°C**		**Current rating at 30°C in ground**		**Current rating at 35°C in air**	
							Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm²	nos.		mm	mm	mm	mm	kg/km	kg/km	ohm/km	ohm/km	amps	amps	amps	amps
4x25	min.6	rm	1.2	4x0.8	1.8	30.0	2100	1500	0.727	1.200	110	86	98	76
4x35	min.6	sm	1.2	4x0.8	1.8	29.2	2400	1580	0.524	0.868	130	101	120	93
4x50	min.6	sm	1.4	4x0.8	2.0	32.8	3280	2165	0.387	0.641	155	120	150	116
4x70	min.12	sm	1.4	4x0.8	2.1	37.5	4285	2614	0.268	0.443	190	148	190	148
4x95	min.15	sm	1.6	4x0.8	2.3	42.0	5500	3227	0.193	0.320	225	175	230	179
4x120	min.18/15	sm	1.6	4x0.8	2.4	44.4	6800	3687	0.153	0.253	260	202	270	210
4x150	min.18/15	sm	1.8	4x0.8	2.6	48.5	8180	4365	0.124	0.206	295	229	305	237
4x185	min. 30	sm	2.0	4x0.8	2.7	54.0	10250	5134	0.0991	0.164	330	257	350	272
4x240	min. 34/30	sm	2.2	4x0.8	3.0	60.8	12900	6292	0.0754	0.125	385	299	410	318
4x300	min. 34/30	sm	2.4	4x0.8	3.2	67.5	15400	7394	0.0601	0.100	425	329	470	364

KEY



Note :

1. Current ratings are valid for cables laid under defined conditions at page no . 94. For current ratings at deviated conditions apply correction factors as given on page no . 95-99

NYRGbY/YRGY
NAYRGbY/AYRGY

600/1000V
THREE CORE
VDE-0271 & IEC-60502-1

Application : Suitable for indoor, outdoor, underground and in water for continuous permissible service voltage of 720/1200 Volts.

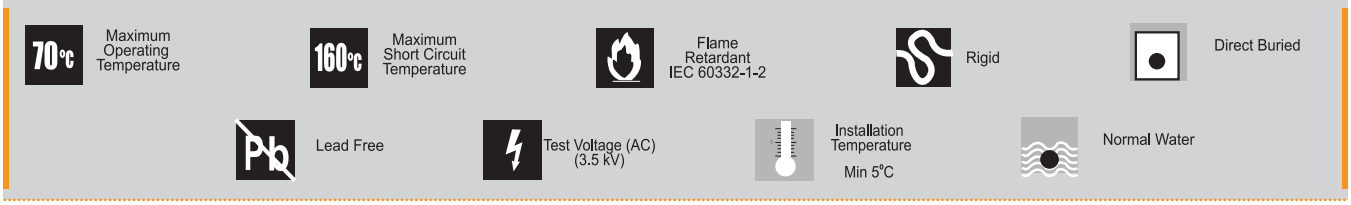
Construction: *1. Annealed Copper / Aluminium Conductor 2. PVC Insulation 3. PVC inner sheath 4. Round Galv. Steel wire armour 5. PVC outer sheath.*

Colour:

PHYSICAL DATA

Cross Sectional Area	No. & approx. dia. of wire Cu/Al	Shape of Conductor	Nominal thickness of insulation	Diameter of round armour wire	Nominal thickness of sheath	Approx. Cable diameter	Approx. weight of cable		Max. DC resistance of conductor at 20°C		Current rating at 30°C in ground		Current rating at 35°C in air	
							Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm²	nos.	-	mm	mm	mm	mm	kg/km	kg/km	ohm/km	ohm/km	amps	amps	amps	amps
3x25	min.6	rm	1.2	1.6	1.8	28.5	1755	1276	0.727	1.20	110	86	98	76
3x35	min.6	sm	1.2	1.6	1.8	27.8	2080	1415	0.524	0.868	130	101	120	93
3x50	min.6	sm	1.4	1.6	2.0	30.7	2650	1698	0.387	0.641	155	120	150	116
3x70	min.12	sm	1.4	2.0	2.1	34.6	3700	2362	0.268	0.443	190	148	190	148
3x95	min.15	sm	1.6	2.0	2.2	39.0	4750	2943	0.193	0.320	225	175	230	179
3x120	min.18/15	sm	1.6	2.0	2.3	42.1	5660	3382	0.153	0.253	260	202	270	210
3x150	min.18/15	sm	1.8	2.5	2.5	47.3	7265	4413	0.124	0.206	295	229	305	237
3x185	min.30	sm	2.0	2.5	2.7	50.5	8660	5149	0.0991	0.164	330	257	350	272
3x240	min.34/30	sm	2.2	2.5	2.9	57.0	10819	6245	0.0754	0.125	385	299	410	318
3x300	min.34/30	sm	2.4	2.5	3.1	61.0	12993	7204	0.0601	0.100	425	329	470	364

KEY



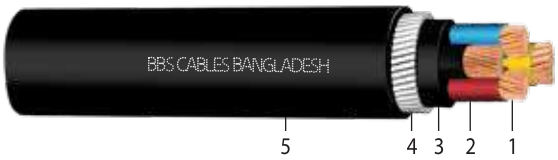
Note :

1. Current ratings are valid for cables laid under defined conditions at page no. 94. For current ratings at deviated conditions apply correction factors as given on page no. 95-99

BBS CABLES®
more than safety

NYRGbY/ YRGY
NAYRGbY/AYRGY
600/1000V
3.5 CORE
VDE-0271 & IEC-60502-1

Application : Suitable for indoor, outdoor, underground and in water for continuous permissible service voltage of 720/1200 Volts.



Construction: *1. Annealed Copper / Aluminium Conductor 2. PVC Insulation 3. PVC inner sheath 4. Round Galv. Steel wire armour 5. PVC outer sheath.*

Colour:

PHYSICAL DATA

Cross Sectional Area	No. & approx. dia. of wire Cu/Al	Shape of Conductor	Nominal thickness of insulation	Diameter of round armour wire	Nominal thickness of sheath	Approx. Cable diameter	Approx. weight of cable		Max. DC resistance of conductor of 20°C		Current rating of 30°C in ground		Current rating at 35°C	
							Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm²	nos.		mm	mm	mm	mm	kg/km	kg/km	ohm/km	ohm/km	amps	amps	amps	amps
3x25+16	mm.6	rm/rm	1.2	1.6	1.8	30.8	2010	1590	0.727/1.15	1.20/1.91	110	86	98	76
	min.6		1.0											
3x35+16	mm.6	sm/rm	1.2	1.6	1.9	30.1	2465	1698	0.524/1.15	0.868/1.91	130	101	120	93
	min.6		1.0											
3x50+25	min.6	sm/rm	1.4	2.0	2.0	33.5	3250	2140	0.387/0.727	0.641/1.20	155	120	150	116
	min.6		1.2											
3x70+35	min.12	sm/rm	1.4	2.0	2.1	38.7	4310	2752	0.268/0.524	0.443/0.868	190	148	190	148
	min.6		1.2											
3x95+50	min.15	sm/rm	1.6	2.0	2.3	43.3	5601	3480	0.193/0.387	0.32/0.641	225	175	230	179
	min.6		1.4											
3x120+70	min.18/15	sm/rm	1.6	2.5	2.5	48.0	7159	4435	0.153/0.268	0.253/0.443	260	202	270	210
	min.12		1.4											
3x150+70	min.18/15	sm/rm	1.8	2.5	2.6	51.2	8347	5049	0.124/0.268	0.206/0.443	295	229	305	237
	min.12		1.4											
3x185+95	min.30	sm/rm	2.0	2.5	2.7	56.1	10000	5888	0.0991/0.193	0.164/0.320	330	257	350	272
	min.15		1.6											
3x240+120	min.34/30	sm/rm	2.2	2.5	2.9	62.3	12383	7049	0.0754/0.153	0.125/0.253	385	299	410	318
	min.18/15		1.6											
3x300+150	min.34/30	sm/rm	2.4	2.5	3.1	68.2	15100	8380	0.0601/0.124	0.100/0.206	425	329	470	364
	min.18/15		1.8											

KEY

70°c Maximum Operating Temperature

160°c Maximum Short Circuit Temperature

Flame Retardant IEC 60332-1-2

Rigid

Direct Buried

Pb Lead Free

Test Voltage (AC) (3.5 kV)

Installation Temperature Min 5°C

Normal Water

Note :

1. Current ratings are valid for cables laid under defined conditions at page no. 94. For current ratings at deviated conditions apply correction factors as given on page no. 95-99

NYRGbY/ YRGY
NAYRGbY/AYRGY
600/1000V
FOUR CORE
VDE-0271 & IEC-60502-1

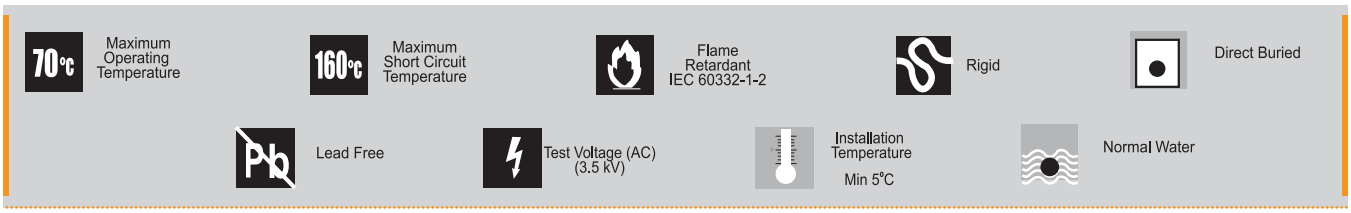
Application : Suitable for indoor, outdoor, underground and in water for continuous permissible service voltage of 720/1200 Volts.

Construction: *1. Annealed Copper / Aluminium Conductor 2. PVC Insulation 3. PVC inner sheath 4. Round Galv. Steel wire armour 5. PVC outer sheath.*

Colour:

PHYSICAL DATA									*ELECTRICAL DATA*					
Cross Sectional Area	**No. & approx. dia. of wire Cu/Al**	**Shape of Conductor**	**Nominal thickness of insulation**	**Diameter of round armour wire**	**Nominal thickness of sheath**	**Approx. Cable diameter**	**Approx. weight of cable**		**Max. DC resistance of conductor at 20°C**		**Current rating at 30°C in ground**		**Current rating at 35°C in air**	
							Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm²	nos.	-	mm	mm	mm	mm	kg/km	kg/km	ohm/km	ohm/km	amps	amps	amps	amps
4x25	min. 6	rm	1.2	1.6	1.8	30.0	2135	1497	0.727	1.200	110	86	98	76
4x35	min. 6	sm	1.2	1.6	1.9	30.1	2620	1733	0.524	0.868	130	101	120	93
4x50	min. 6	sm	1.4	2.0	2.1	34.5	3525	2257	0.387	0.641	155	120	150	116
4x70	min. 12	sm	1.4	2.0	2.2	39.5	4675	2892	0.268	0.443	190	148	190	148
4x95	min. 15	sm	1.6	2.5	2.4	45.2	6450	4044	0.193	0.320	225	175	230	179
4x120	min. 18/15	sm	1.6	2.5	2.5	48.6	7640	4601	0.153	0.253	260	202	270	210
4x150	min. 18/15	sm	1.8	2.5	2.7	52.0	9150	5348	0.124	0.206	295	229	305	237
4x185	min. 30	sm	2.0	2.5	2.9	58.3	11050	6369	0.0991	0.164	330	257	350	272
4x240	min. 34/30	sm	2.2	2.5	3.1	63.0	13850	7751	0.0754	0.125	385	299	410	318
4x300	min. 34/30	sm	2.4	2.5	3.3	70.1	17300	9581	0.0601	0.100	425	329	470	364

KEY



Note :

1. Current ratings are valid for cables laid under defined conditions at page no. 94. For current ratings at deviated conditions apply correction factors as given on page no. 95-99

BBS CABLES®
more than safety

NYY-1
600/1000V
MULTI CORE
VDE-0271 & IEC-60502-1

Application: Suitable for indoor, outdoor, underground and in water for continuous permissible service voltage of 720/1200 Volts.

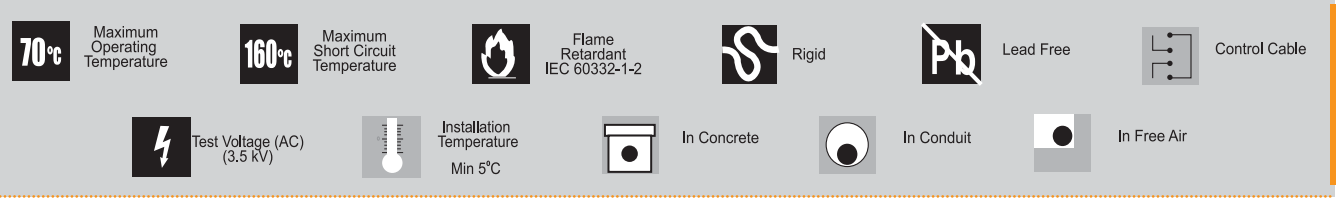
Construction: *1. Annealed Copper Conductor 2. PVC Insulation & multi cores laid up 3. PVC /PE Tapping 4. PVC outer sheath.*

Core Identification: Numbering

PHYSICAL & ELECTRICAL DATA

Cross Sectional Area	No. & approx. dia. of wire Cu/Al	Shape of Conductor	Nominal thickness of insulation	Nominal thickness of sheath	Approx Cable diameter	Approx weight of cable	Current rating at 30°C in ground	Current rating at 35°C in air
core x mm²	nos./mm		mm	mm	mm	kg/km	Amps	Amps
5x1.5	1/1.38	re	0.8	1.8	12.6	206	18	13
7x1.5	1/1.38	re	0.8	1.8	13.5	258	16	12
10x1.5	1/1.38	re	0.8	1.8	16.4	351	13	10
12x1.5	1/1.38	re	0.8	1.8	16.9	399	12	9
16x1.5	1/1.38	re	0.8	1.8	18.5	507	11	8
21x1.5	1/1.38	re	0.8	1.8	20.3	635	9	7
24x1.5	1/1.38	re	0.8	1.8	22.4	712	9	7
30x1.5	1/1.38	re	0.8	2.0	23.6	851	8	6
5x2.5	1/1.78	re	0.8	1.8	14.2	289	24	19
7x2.5	1/1.78	re	0.8	1.8	15.3	360	21	17
10x2.5	1/1.78	re	0.8	1.8	18.8	490	18	14
12x2.5	1/1.78	re	0.8	1.8	19.4	567	16	13
16x2.5	1/1.78	re	0.8	1.8	21.3	727	14	11
21x2.5	1/1.78	re	0.8	2.0	23.5	920	13	10
24x2.5	1/1.78	re	0.8	2.0	26.4	1059	12	9
30x2.5	1/1.78	re	0.8	2.0	27.8	1274	10	8
5x4	7/0.85	rm	1.0	1.8	16.8	402	31	25
7x4	7/0.85	rm	1.0	1.8	18.2	544	27	22
10x4	7/0.85	rm	1.0	1.8	22.7	708	23	19
12x4	7/0.85	rm	1.0	1.8	22.4	837	21	17

KEY



Note :

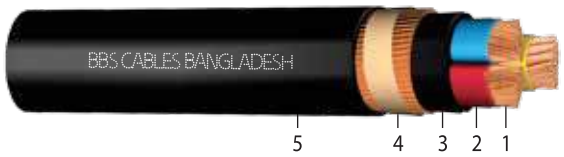
1. Current ratings are valid for cables laid under defined conditions at page no . 94. For current ratings at deviated conditions apply correction factors as given on page no. 95-99

NYCY/YCY

600/1000 V

VDE-0271 & IEC-60502-1

Application: Suitable for indoor, outdoor, underground and in water for continuous permissible service voltage of 720/1200 Volts.



Construction: *1. Annealed Copper Conductor 2. PVC Insulation 3. PVC inner sheath 4.Concentric copper conductor with helically copper tape binder 5. PVC outer sheath.*

Colour:

PHYSICAL DATA								*ELECTRICAL DATA*		
Cross Sectional Area	**No of wires Cu**	**Wires Shaped**	**No. & dia. of concentric conductor**	**Nominal thickness of insulation**	**Nominal thickness of Sheath**	**Approx. Cable diameter**	**Approx. weight of cable**	**Max. DC resistance of conductor at 20°C**	**Current rating at 30°C in ground**	**Current rating at 35°C in air**
mm^2	nos.	-	no./mm	mm	mm	mm	kg/km	ohm/km	amps	amps
3x25+16C	min. 6	rm		1.2	1.8	24.3	1302	0.727/1.15	110	98
			19/1.05							
3x35+16C	min. 6	sm		1.2	1.8	26.2	1623	0.524/1.15	130	120
			19/1.05							
3x50+25C	min. 6	sm		1.4	1.9	30.4	2266	0.387/0.727	155	150
			29/1.05							
3x70+35C	min. 12	sm		1.4	2.1	33.7	3011	0.268/0.524	190	190
			35/1.13							
3x95+50C	min. 15	sm		1.6	2.2	38.4	4005	0.193/0.387	225	230
			50/1.13							
3x120+70C	min. 18	sm		1.6	2.4	42.1	5031	0.153/0.268	260	270
			70/1.13							
3x150+70C	min. 18	sm		1.8	2.5	45.3	6013	0.124/0.268	295	305
			70/1.13							
3x185+95C	min. 30	sm		2.0	2.6	50.1	7458	0.0991/0.193	330	350
			67/1.35							
3x240+120C	min. 34	sm		2.2	2.8	55.8	9497	0.0754/0.153	385	410
			65/1.53							
3x300+150C	min. 34	sm		2.4	3.2	61.3	11730	0.0601/0.124	425	470
			72/1.63							

KEY

- 70°C — Maximum Operating Temperature
- 160°C — Maximum Short Circuit Temperature
- Flame Retardant IEC 60332-1-2
- Rigid
- Direct Buried
- Pb — Lead Free
- Test Voltage (AC) (3.5 kV)
- Installation Temperature Min 5°C

Note :

1. Current ratings are valid for cables laid under defined conditions at page no. 94. For current ratings at deviated conditions apply correction factors as given on page no. 95-99

BBS CABLES®
more than safety

SERVICE DROP CABLES
400 V
DUPLEX/ QUADUPLEX

Application: Suitable for outdoor as a service drop cable

Construction: *1. Annealed Copper / Aluminium Conductor 2. PVC Insulation 3. Two/Four cores laid up.*

Colour:

DUPLEX CABLES

PHYSICAL & ELECTRICAL DATA

Cross Sectional Area	No. and approximate diameter of wires	Nominal thickness of insulation	Approx. Cable diameter	Approx. weight of cable		Max. DC resistance at 20°C		Current rating at 35°C	
				Cu	Al	Cu	Al	Cu	Al
mm²	nos./mm	mm	mm	kg/km	kg/km	ohm/km	ohm/km	amps	amps
2.5 re/2.5 re	1 .78/1 .78	1.6	10.0	93		7.41/7.41	7.41/7.41	27	
4 rm/4 re	7x0.85/2.26	1.6	11.6	132		4.61/4.61	4.61/4.61	35	
6 rm/6 re	7x1.05/2.77	1.6	12.8	178		3.08/3.08	4.61/4.61	45	
6 rm/6 rm	7x1.05/7x1.05	1.6	12.9	180	105	3.08/3.08	3.08/3.08	45	37
10rm/10rm	7x1.35/7x1.35	1.6	14.6	262	136	1.83/1.83	1.91/1.91	62	47
16 rm/16 rm	7x1.71/7x1.71	1.6	16.6	382	180	1.15/1.15	1.20/1.20	84	65
25 rm/25 rm	7x2.14/7x2.14	1.6	19.2	563	244	0.727/0.727		110	85

QUADUPLEX CABLES

PHYSICAL & ELECTRICAL DATA

Cross Sectional Area	No. and approximate diameter of wires	Nominal thickness of insulation	Approx. Cable diameter	Approx. weight of cable		Max. DC resistance at 20°C		Current rating at 35°C	
				Cu	Al	Cu	Al	Cu	Al
mm²	nos./mm	mm	mm	kg/km	kg/km	ohm/km	ohm/km	amps	amps
3x4 rm/4 re	7x0.85/2.26	1.6	14.0	264		4.61/4.61	7.41/7.41	32	
3x6 rm/6 re	7x1.05/2.77	1.6	15.4	352		3.08/3.08	4.61/4.61	41	
3x6 rm/6 rm	7x1.05/7x1.05	1.6	15.5	356	205	3.08/3.08	4.61/4.61	41	34
3x10 rm/10 rm	7x1.35/7x1.35	1.6	17.6	524	270	1.83/1.83	3.08/3.08	56	43
3x16 rm/16rm	7x1.71/7x1.71	1.6	20.0	765	360	1.15/1.15	1.91/1.91	75	58
3x25 rm/25 rm	7x2.14/7x2.14	1.6	23.1	1127	488	0.727/0.727	1.20/1.20	98	76

KEY

70°c Maximum Operating Temperature

160°c Maximum Short Circuit Temperature

Flame Retardant IEC 60332-1-2

Rigid

Mobile Household Appliances

Indoor Under Plaster in Conduit

Note :

1. Current ratings are valid for cables laid under defined conditions at page no. 94. For current ratings at deviated conditions apply correction factors as given on page no. 95-99

Telephone Cable 200 V VDE-0815

Application : Suitable for telecommunication and signal circuits. They are suitable for expose or concealed conduit installation permissible voltage 200 V.

Construction: *1. Annealed Copper Conductor 2. PE Insulation & multi pair laid up 3. PT/PE Tapping 4. PVC outer sheath.*

Colour:

PE Insulated PVC Sheathed Telecommunication Cables

Number of core	Nominal Cross Sectional Area	Number and size of wires	Nominal Thickness of Insulation	Nominal Thickness of Sheath	Approximate overall diameter	Approximate weight
	mm^2	n/mm	mm	mm	mm	kg/km
1 Pair (2 core)	0.125	1/0.4	0.2	0.8	4.2	20.2
2 Pair (4 core)	0.125	1/0.4	0.2	0.8	4.3	24.4
3 Pair (6 core)	0.125	1/0.4	0.2	1.0	5.0	35.1
4 Pair (8 core)	0.125	1/0.4	0.2	1.2	6.6	54.3
5 Pair (10 core)	0.125	1/0.4	0.2	1.2	7.1	62.1
6 Pair (12 core)	0.125	1/0.4	0.2	1.4	7.7	73.3
7 Pair (14 core)	0.125	1/0.4	0.2	1.4	8.12	81
8 Pair (1 6 core)	0.125	1/0.4	0.2	1.4	8.25	82.5
10 Pair (20 core)	0.125	1/0.4	0.2	1.4	9.65	108
15 Pair (30 core)	0.125	1/0.4	0.2	1.4	12.7	147
20 Pair (40 core)	0.125	1/0.4	0.2	1.6	13.4	185
30 Pair (60 core)	0.125	1/0.4	0.2	1.6	15.00	303
1 Pair (2 core)	0.282	1/0.6	0.2	0.8	4.20	23.5
2 Pair (4 core)	0.282	1/0.6	0.2	0.8	4.32	30.0
3 Pair (6 core)	0.282	1/0.6	0.2	1.0	5.08	43.5
4 Pair (8 core)	0.282	1/0.6	0.2	1.2	6.60	65.5
5 Pair (10 core)	0.282	1/0.6	0.2	1.2	7.20	76.0
6 Pair (12 core)	0.282	1/0.6	0.2	1.4	7.80	90.0
7 Pair (14 core)	0.282	1/0.6	0.2	1.4	8.12	103.5
8 Pair (16 core)	0.282	1/0.6	0.2	1.4	8.25	107.0
10 Pair (20 core)	0.282	1/0.6	0.2	1.4	9.65	142.0
15 Pair (30 core)	0.282	1/0.6	0.2	1.4	12.82	187
20 Pair (40 core)	0.282	1/0.6	0.2	1.6	14.23	247
30 Pair (60 core)	0.282	1/0.6	0.2	1.6	16.77	358
50 Pair (100 cores)	0.282	1/0.6	0.2	1.6	20.20	535.0
100 Pair (200 cores)	0.282	1/0.6	0.2	1.6	27.00	942.0

KEY

70°c Maximum Operating Temperature

160°c Maximum Short Circuit Temperature

Rigid

Mobile Household Appliances

Direct Buried

Indoor Under Plaster in Conduit

Note :

1. Current ratings are valid for cables laid under defined conditions at page no. 94. For current ratings at deviated conditions apply correction factors as given on page no. 95-99

BBS CABLES
more than safety

Jumper Wire, Drop Wire & Coaxial Cable

200 V
MULTICORE
ITD S/WJ-1D1C 1994

Application: Suitable for telecommunication and signal circuits. They are suitable for expose or concealed conduit installation permissible voltage 200 V.

Construction: *1. Annealed Copper Conductor 2. PE Insulation.*

Jumper Wire

PHYSICAL DATA

Number of core	Nominal Cross Sectional Area	Number and size of wires	Nominal Thickness of Insulation	Approx. overall diameter	Approx. weight
	mm^2	no./mm	mm	mm	kg/km
2 core (1 pair)	0.123	9/0.132	0.2	2.3	6
4 core (2 pair)	0.123	9/0.132	0.2	2.8	12
6 core (3 pair)	0.123	9/0.132	0.2	3.5	18
8 core (4 pair)	0.123	9/0.132	0.2	2.65	24
10 core (5 pair)	0.123	9/0.132	0.2	4.00	30

PVC Insulated Drop Wire

PHYSICAL DATA

Number of core	Number and size of wires	Thickness of insulation	Approx. overall diameter	Approx. weight
	no./mm	mm	mm	kg/km
2 core (1 pair)	1/0.60	0.787	4.11x2.31	19.0
2 core (1pair)	1/0.90	1.05	6.3x3.0	31.5

PE Insulated Drop Wire.

PHYSICAL DATA

Number of core	Number and size of wires	Thickness of insulation	Approx. overall diameter	Approx. weight
	no./mm	mm	mm	kg/km
2 core (1 pair)	1/0.60	0.787	4.11x2.31	12
2 core (1pair)	1/0.90	1.05	6.3x3.0	25

PE Insulated PVC Sheathed Co-Axial Cables

Specification: Plain annealed copper conductor, polyethylene insulated with screen braided and PVC sheathed for use as aerial downleads in local and fringe reception areas at both Very High Frequency and Ultra High Frequency.

Code No.	Nominal Cross Sectional Area of Conductor	No. and nominal diameter of wire	Diameter of wire with dielectric insulation	Screen braid	Nominal Thicknes of Sheath	Approx. Overall diameter	Impedence	Approximate weight
	mm^2	no./mm	mm		mm	mm	ohm	kg/km
3/C	0.2	1/0.5	3.00	PAC	0.9	5.40	75	36
4/C	0.42	1/0.73	3.81	PAC	1.0	6.35	75	52
5/C	0.64	1/0.90	4.20	PAC	1.2	7.20	75	64
RG-6	0.78	1/1.00	4.30	PAC	1.2	7.50	75	70
6/C	1.23	1/1.25	5.46	PAC	1.2	8.20	75	84
RG-11	2.09	1/1.63	6.65	PAC	1.2	9.80	75	116

Welding Cables
200V
Single Core

Application: Suitable for Welding purpose

Construction: *1. Annealed Flexible Copper Conductor 2. PVC Tapping 3. Black PVC outer sheath.*

Colour: ●

PHYSICAL DATA					*ELECTRICAL DATA*	
Cross Section	**No. and diameter of wires**	**Nominal Thickness of Sheath**	**Approx. outer diameter**	**Approximate weight**	**Maximum DC resistance at 20°C**	**Current rating at maximum duty cycle of 60%**
mm^2	no./mm	mm	mm	kg/km	ohm/km	ampere
1 x 25 rm	471/0.26	2.0	12.30	326.0	0.780	169
1 x 35 rm	660/0.26	2.0	13.40	430.0	0.554	215
1 x 50 rm	942/0.26	2.0	15.30	575.0	0.386	264
1 x 70 rm	1319/0.26	2.2	18.00	779.0	0.272	330
1 x 95 rm	1790/0.26	2.2	19.70	935.0	0.206	405
1 x 120rm	608/0.50	2.2	23.20	1297.0	0.161	473

KEY

70°c Maximum Operating Temperature

160°c Maximum Short Circuit Temperature

Flame Retardant IEC 60332-1-2

Flexible

Note :

1. Current ratings are valid for cables laid under defined conditions at page no. 94. For current ratings at deviated conditions apply correction factors as given on page no. 95-99

BBS CABLES®
more than safety

NYYF
600/1000V
Single/Two Core
VDE-0271 & IEC-60502-1

Application: Suitable for temporary installations for power connection, decorative illumination, temporary site illumination.

Construction: *1. Annealed Flexible Copper Conductor 2. PVC Insulation 3. PVC Inner sheath 4. Black PVC outer sheath.*

Colour:

SINGLE CORE

PHYSICAL & ELECTRICAL DATA

Nominal Cross Sectional Area of Conductor	No. & Diameter of wire	Nominal thickness of insulation	Nominal thickness of sheath	Approx. overall Diameter	Approx. weight of cable	Max. DC resistance of conductor at 20°C	Current rating at 35°C
mm^2	nos./mm	mm	mm	mm	kg/km	Ohms/km	Amps
1 x 4rm	75/0.26	1.0	1.8	8.5	105	4.95	41
1 x 6 rm	113/0.26	1.0	1.8	9.1	135	3.3	52
1x 10 rm	189/0.26	1.0	1.8	10.2	185	1.91	72
1 x 1 6 rm	302/0.26	1.0	1.8	11.8	260	1.21	98
1 x 25 rm	471/0.26	1.2	1.8	13.6	370	0.78	131
1 x 35 rm	660/0.26	1.2	1.8	15.2	480	0.554	167
1 x 50 rm	942/0.26	1.4	1.8	17.6	668	0.386	204
1 x 70 rm	1319/0.26	1.4	1.8	19.2	880	0.272	256
1 x 95 rm	1790/0.26	1.6	1.8	21.8	1160	0.206	314
1 x 120rm	608/0.50	1.6	1.8	24·0	1420	0.161	366
1 x150rm	756/0.50	1.8	1.8	26.5	1772	0.129	423

TWO CORE

PHYSICAL & ELECTRICAL DATA

Nominal Cross Sectional Area of Conductor	No. & Diameter of wire	Nominal thickness of insulation	Nominal thickness of sheath	Approx. overall Diameter	Approx. weight of cable	Max. DC resistance of conductor at 20°C	Current rating at 35°C
mm^2	nos./mm	mm	mm	mm	kg/km	Ohms/km	Amps
2x 4 rm	75/0.26	1.0	1.8	13.8	290	4.95	37
2x 6 rm	113/0.26	1.0	1.8	15.2	375	3.30	48
2x10 rm	189/0.26	1.0	1.8	16.9	502	1.91	66
2 x 16 rm	302/0.26	1.0	1.8	19.0	700	1.21	90
2 x 25 rm	471/0.26	1.2	1.8	22.4	1060	0.78	121
2x35 rm	660/0.26	1.2	2.0	24.7	1360	0.554	154

Note :

1. Current ratings are valid for cables laid under defined conditions at page no . 94. For current ratings at deviated conditions apply correction factors as given on page no . 95-99

NYYF
600/1000V
3 & 4 Core
VDE-0271 & IEC-60502-1

Application: Suitable for temporary installations for power connection, decorative illumination, temporary site illumination.

Construction: *1. Annealed Flexible Copper Conductor 2. PVC Insulation 3. PVC Inner sheath 4. Black PVC outer sheath.*

Colour:

THREE CORE

PHYSICAL & ELECTRICAL DATA

Nominal Cross Sectional Area of Conductor	No. & Diameter of wire	Nominal thickness of insulation	Nominal thickness of sheath	Approx. overall Diameter	Approx. weight of cable	Max. DC resistance of conductor at 20°C	Current rating at 35°C
mm^2	no./mm	mm	mm	mm	kg/km	Ohms/km	Amps
3x 4rm	75/0.26	1.0	1.8	14.6	350	4.95	33
3 x 6 rm	113/0.26	1.0	1.8	16	450	3.30	43
3x10rm	189/0.26	1.0	1.8	18	630	1.91	58
3x16rm	302/0.26	1.0	1.8	20.4	940	1.21	78
3 x 25 rm	471/0.26	1.2	1.8	25.4	1320	0.78	102
3 x 35 rm	660/0.26	1.2	2.0	28.5	1760	0.554	125

FOUR CORE

PHYSICAL & ELECTRICAL DATA

Nominal Cross Sectional Area of Conductor	No. & Diameter of wire	Nominal thickness of insulation	Nominal thickness of sheath	Approx. overall Diameter	Approx. weight of cable	Max. DC resistance of conductor at 20°C	Current rating at 35°C
mm^2	no./mm	mm	mm	mm	kg/km	Ohms/km	Amps
4 x 4 rm	75/0.26	1.0	1.8	16.6	424	4.95	33
4 x 6 rm	113/0.26	1.0	1.8	18.4	530	3.30	43
4x10rm	189/0.26	1.0	1.8	20.7	750	1.91	58
4 X 16 rm	302/0.26	1.0	1.8	25.0	1145	1.21	78
4 x 25 rm	471/0.26	1.2	1.8	29.5	1690	0.78	102
4 x 35 rm	660/0.26	1.2	2.0	32.8	2150	0.554	125

KEY

70°C Maximum Operating Temperature

160°C Maximum Short Circuit Temperature

Flame Retardant IEC 60332-1-2

Flexible

Mobile Household Appliances

Pb Lead Free

Test Voltage (AC) (3.5 kV)

Installation Temperature Min 5°C

Note :

1. Current ratings are valid for cables laid under defined conditions at page no. 94. For current ratings at deviated conditions apply correction factors as given on page no. 95-99

BBS CABLES®
more than safety

XLPE INSULATED LT CABLES

2xY/A2xY
600/1000V
SINGLE CORE
IEC 60502-1

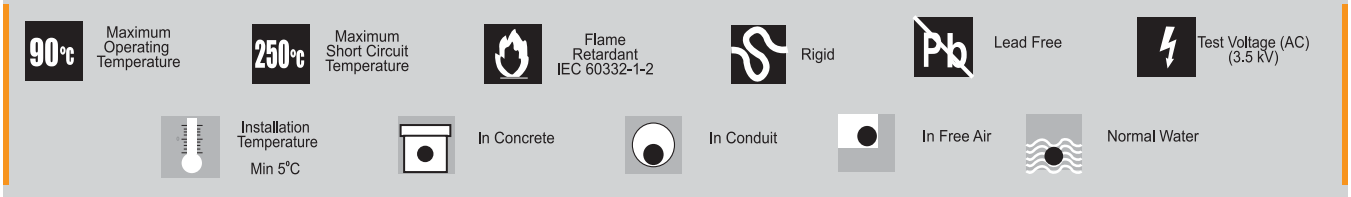
Application : Suitable for indoor, outdoor, underground and in water for continuous permissible service voltage of 720/1200 Volts.

Construction: *1. Annealed Copper / Aluminium Conductor 2. XLPE Insulation 3. Black PVC outer Sheath.*

Colour: ●

PHYSICAL DATA								*ELECTRICAL DATA*					
Cross Sectional Area	**No. & Approx. Dia. of Wire Cu/Al**	**Shape of Conductor**	**Nominal Thickness of Insulation**	**Nominal Thickness of Sheath**	**Approx. Cable Diameter**	**Approx. Weight of Cable**		**Max. DC Resistance of Conductor at 20°C**		**Current Rating at 30°c in Ground**		**Current Rating at 35°c in Air**	
						Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm²	nos./mm		mm	mm	mm	kg/km	kg/km	ohm/km	ohm/km	amps	amps	amps	amps
1x1.5	1/1.38	re	0.7	1.4	6.1	50		12.1	18.1	36		30	
1x1.5	7/0.52	rm	0.7	1.4	6.2	52		12.1	18.1	36		30	
1x2.5	1/1.78	re	0.7	1.4	6.5	63		7.41	12.1	47		39	
1x2.5	7/0.68	rm	0.7	1.4	6.6	65		7.41	12.1	47		39	
1 x 4	7/0.85	rm	0.7	1.4	7.3	95	55	4.61	7.41	59	47	50	39
1 x 6	7/1.04	rm	0.7	1.4	7.9	107	66	3.08	4.61	78	64	69	56
1x10	7/1.35	rm	0.7	1.4	8.8	155	85	1.83	3.08	100	77	94	72
1x16	7/1.70	rm	0.7	1.4	9.9	227	112	1.15	1.91	130	101	125	97
1 x25	7/2.14	rm	0.9	1.4	11.0	324	160	0.727	1.2	155	120	160	125
1 x35	min. 6	rm	0.9	1.4	12.1	425	200	0.524	0.868	185	144	195	150
1 x50	min. 6	rm	1.0	1.4	13.6	584	258	0.387	0.641	225	175	245	190
1 x70	min. 12	rm	1.1	1.4	15.4	788	335	0.268	0.443	270	210	300	233
1 x95	min. 15	rm	1.1	1.5	17.1	1041	430	0.193	0.32	310	240	350	272
1x120	min. 18/15	rm	1.2	1.5	18.8	1292	531	0.153	0.253	350	272	405	315
1x150	min. 18/15	rm	1.4	1.6	21.0	1611	640	0.124	0.206	390	302	460	357
1x185	min. 30	rm	1.6	1.6	23.0	1976	775	0.0991	0.164	450	350	555	430
1 x240	min. 34/30	rm	1.7	1.7	25.6	2528	985	0.0754	0.125	515	400	640	498
1 x300	min. 34/30	rm	1.8	1.8	28.3	3136	1210	0.0601	0.1	585	463	770	537
1x400	min. 53	rm	2.0	1.9	32.0	4130	1525	0.047	0.0778	680	509	900	626
1 x500	min. 53	rm	2.2	2.0	35.4	5134	1890	0.0366	0.0605	800	592	1030	731
1 x630	min. 53	rm	2.4	2.2	39.5	6415	2420	0.0283	0.0469	945	696	1160	837
1 x800	min. 53	rm	2.6	2.3	45.0	8116	3000	0.0221	0.0367	1095	821	1310	942
1x1000	min. 53	rm	2.8	2.4	50.0	10096	3650	0.0176	0.0291	1270	952	1480	1064

KEY



Note :

1. Current ratings are valid for cables laid under defined conditions at page no. 94. For current ratings at deviated conditions apply correction factors as given on page no. 95-99
2. For compact conductors and lugs refer to page no. 108-109.

BBS CABLES®
more than safety

2xY/A2xY
600/1000V
TWO CORE
IEC 60502-1

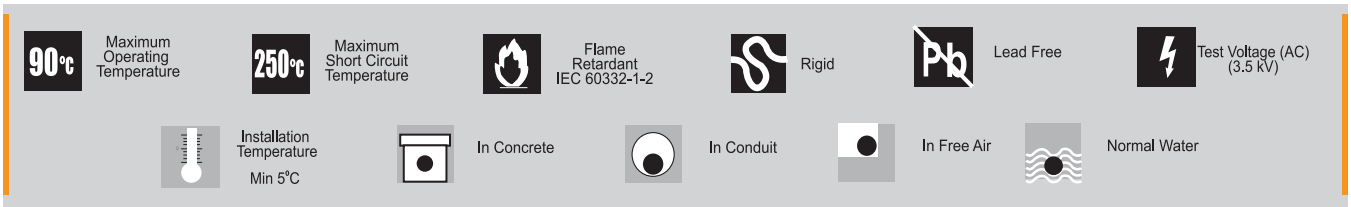
Application: Suitable for indoor, outdoor, underground and in water for continuous permissible service voltage of 720/1200 Volts.

Construction: *1. Annealed Copper / Aluminium conductor 2. XLPE Insulation 3. PVC Inner sheath 4. Black PVC outer sheath.*

Colour:

PHYSICAL DATA								*ELECTRICAL DATA*					
Cross Sectional Area	**No. & Approx. Dia. of Wire Cu/Al**	**Shape of Conductor**	**Nominal Thickness of Insulation**	**Nominal Thickness of Sheath**	**Approx. Cable Diameter**	**Approx. Weight of Cable**		**Max. DC Resistance of Conductor at 20°C**		**Current Rating at 30°C in Ground**		**Current Rating at 35°C in Air**	
						Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm²	nos. /mm	-	mm	mm	mm	kg/km	kg/km	ohm/km	ohm/km	amps	amps	amps	amps
2x1.5	1/1.38	re	0.7	1.8	11.2	155	-	12.1	18.1	34	-	27	-
2x1.5	7/0.52	rm	0.7	1.8	11.6	162	-	12.1	18.1	34	-	27	-
2x2.5	1/1.78	re	0.7	1.8	12.0	185	-	7.41	12.1	44	-	35	-
2x2.5	7/0.68	rm	0.7	1.8	12.5	195	-	7.41	12.1	44	-	35	-
2 x 4	7/0.85	rm	0.7	1.8	13.6	276	187	4.61	7.41	55	34	45	31
2 x 6	7/1.04	rm	0.7	1.8	14.8	349	218	3.08	4.61	74	40	62	40
2x1 0	7/1.35	rm	0.7	1.8	16.6	478	271	1.83	3.08	97	55	84	53
2x1 6	7/1.70	rm	0.7	1.8	18.1	654	341	1.15	1.91	125	73	110	70
2x25	7/2.14	rm	0.9	1.8	21.5	996	457	0.727	1.20	150	94	140	96
2x35	19/1.53	rm	0.9	1.8	23.7	1274	576	0.524	0.868	180	114	190	117

KEY



Note :

1. Current ratings are valid for cables laid under defined conditions at page no. 94. For current ratings at deviated conditions apply correction factors as given on page no. 95-99

2xY/A2xY
600/1000V
THREE CORE
IEC 60502-1

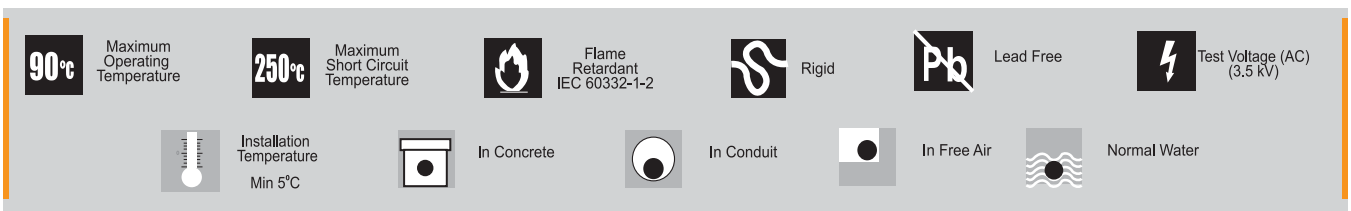
Application : Suitable for indoor, outdoor, underground and in water for continuous permissible service voltage of 720/1200 Volts.

Construction: *1. Annealed Copper / Aluminium conductor 2. XLPE Insulation 3. PVC Inner sheath 4. Black PVC outer sheath.*

Colour:

PHYSICAL DATA								*ELECTRICAL DATA*					
Cross Sectional Area	**No. & Approx. Dia. of Wire Cu/Al**	**Shape of Conductor**	**Nominal Thickness of Insulation**	**Nominal Thickness of Sheath**	**Approx. Cable Diameter**	**Approx. Weight of Cable**		**Max. Dc Resistance of Conductor at 20°C**		**Current Rating at 30°C in Ground**		**Current Rating at 35°C in Air**	
						Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm²	nos./mm		mm	mm	mm	kg/km	kg/km	ohm/km	ohm/km	amps	amps	amps	amps
3x1.5	1/1.38	re	0.7	1.8	11.8	182		12.1	18.1	30		23	
3x1.5	7/0.52	rm	0.7	1.8	12.2	190		12.1	18.1	30		23	
3x2.5	1/1.78	re	0.7	1.8	12.7	235		7.41	12.1	38		32	
3x2.5	7/0.68	rm	0.7	1.8	13.2	246		7.41	12.1	38		32	
3x4	7/0.85	rm	0.7	1.8	14.5	321	213	4.61	7.41	48	34	41	31
3x6	7/1.04	rm	0.7	1.8	15.6	421	252	3.08	4.61	64	40	56	40
3x10	7/1.35	rm	0.7	1.8	17.5	568	320	1.83	3.08	83	55	75	53
3x16	7/1.70	rm	0.7	1.8	19.6	805	410	1.15	1.91	110	73	98	70
3x25	7/2.14	rm	0.9	1.8	23.0	1100	500	0.727	1.20	130	94	120	96
3x35	min.6	sm	0.9	1.8	22.3	1237	576	0.524	0.868	155	114	150	117
3x50	min. 6	sm	1.0	1.8	25.1	1694	778	0.387	0.641	190	133	190	142
3x70	min. 12	sm	1.1	1.9	28.4	2315	983	0.268	0.443	225	164	230	179
3x95	min. 15	sm	1.1	2.0	32.2	3161	1253	0.193	0.32	260	196	270	221
3x120	min. 18/15	sm	1.2	2.1	35.3	3915	1570	0.153	0.253	295	223	305	257
3x150	min. 18/15	sm	1.4	2.3	38.7	4866	2000	0.124	0.206	330	249	350	292
3x185	min. 30	sm	1.6	2.4	42.5	5978	2470	0.0991	0.164	385	282	410	337
3x240	min. 34/30	sm	1.7	2.6	47.6	7534	3165	0.0754	0.125	425	327	470	400
3x300	min. 34/30	sm	1.8	2.8	53.1	9541	3840	0.0601	0.100	478	368	564	455

KEY



Note :

1. Current ratings are valid for cables laid under defined conditions at page no. 94. For current ratings at deviated conditions apply correction factors as given on page no. 95-99

BBS CABLES®
more than safety

2xY/A2xY
600/1000V
3.5 CORE
IEC 60502-1

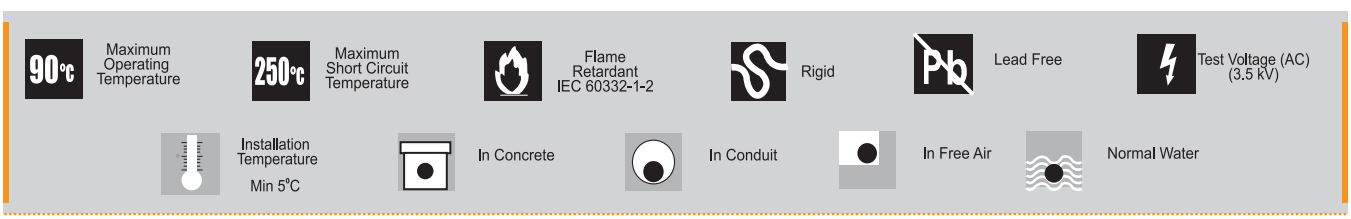
Application: Suitable for indoor, outdoor, underground and in water for continuous permissible service voltage of 720/1200 Volts.

Construction: *1. Annealed Copper / Aluminium conductor 2. XLPE Insulation 3. PVC Inner sheath 4. Black PVC outer sheath.*

Colour:

PHYSICAL DATA								*ELECTRICAL DATA*					
Cross Sectional Area	**No. & approx. dia. of wire Cu/Al**	**Shape of Conductor**	**Nominal thickness of insulation**	**Nominal thickness of sheath**	**Approx. Cable diameter**	**Approx. weight of cable**		**Max. DC resistance of conductor at 20°C**		**Current rating at 30°C in ground**		**Current rating at 35°C in air**	
						Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm²	nos.		mm	mm	mm	kg/km	kg/km	ohm/km	ohm/km	amps	amps	amps	amps
3x25+16	min. 6	rm/rm	0.9	1.8	21.7	1110	637	0.727/1.15	1.20/1.91	130	94	120	96
	min. 6		0.7										
3x35+16	min. 6	sm/rm	0.9	1.8	24.0	1412	702	0.524/1.15	0.868/1.91	155	114	150	117
	min. 6		0.7										
3x50+25	min. 6	sm/rm	1.0	1.8	27.0	2035	946	0.387/0.727	0.641/1.20	190	133	190	142
	min. 6		0.9										
3x70+35	min. 12	sm/rm	1.1	1.9	30.5	2753	1201	0.268/0.524	0.443/0.868	225	164	230	179
	min. 6		0.9										
3x95+50	min. 15	sm/rm	1.1	2.1	34.9	3721	1553	0.193/0.387	0.32/0.641	260	196	270	221
	min. 6		1.0										
3x120+70	min. 18/15	sm/rm	1.2	2.2	38.2	4912	1898	0.153/0.268	0.253/0.443	295	223	305	257
	min. 12		1.1										
3x150+70	min. 18/15	sm/rm	1.4	2.3	42.1	5673	2334	0.124/0.268	0.206/0.443	330	249	350	292
	min. 12		1.1										
3x185+95	min. 30	sm/rm	1.6	2.5	47.3	7105	2831	0.0991/0.193	0.164/0.320	385	282	410	337
	min. 15		1.1										
3x240+120	min. 34/30	sm/rm	1.7	2.7	53.8	9219	3601	0.0754/0.153	0.125/0.253	425	327	470	400
	min. 18/15		1.2										
3x300+150	min. 34/30	sm/rm	1.8	2.9	58.6	11563	4387	0.0601/0.124	0.100/0.206	478	368	564	455
	min. 18/15		1.4										

KEY

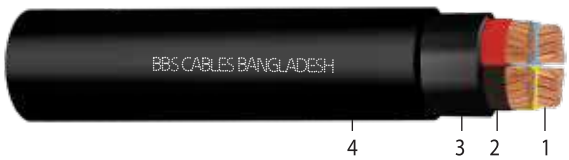


Note :

1. Current ratings are valid for cables laid under defined conditions at page no. 94. For current ratings at deviated conditions apply correction factors as given on page no. 95-99

2xY/A2xY
600/1000V
FOUR CORE
IEC 60502-1

Application : Suitable for indoor, outdoor, underground and in water for continuous permissible service voltage of 720/1200 Volts.

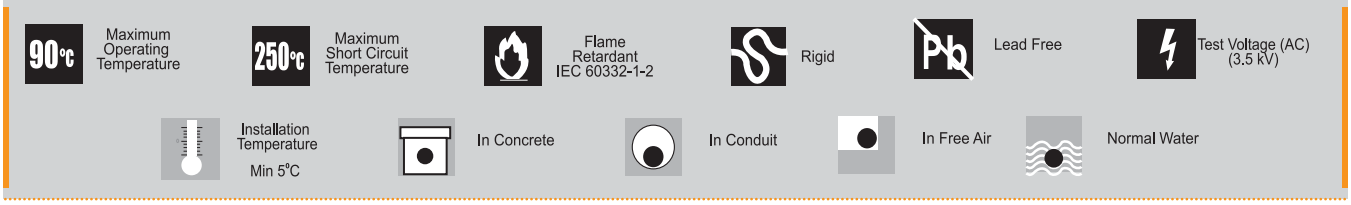


Construction: *1. Annealed Copper / Aluminium conductor 2. XLPE Insulation 3. PVC Inner sheath 4. Black PVC outer sheath.*

Colour:

PHYSICAL DATA								*ELECTRICAL DATA*					
Cross Sectional Area	**No. & approx. dia. of wire Cu/Al**	**Shape of Conductor**	**Nominal thickness of insulation**	**Nominal thickness of sheath**	**Approx. Cable diameter**	**Approx. weight of cable**		**Max. DC resistance of conductor at 20°C**		**Current rating at 30°C in ground**		**Current rating at 35°C in air**	
						Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm²	nos./mm		mm	mm	mm	kg/km	kg/km	ohm/km	ohm/km	amps	amps	amps	amps
4x1.5	1/1.38	re	0.7	1.8	12.1	212		12.1	18.1	30	-	23	-
4x1.5	7/0.52	rm	0.7	1.8	12.4	220		12.1	18.1	30	-	23	-
4x2.5	1/1.78	re	0.7	1.8	13.6	280		7.41	12.1	38	-	32	-
4x2.5	7/0.68	rm	0.7	1.8	14.1	288		7.41	12.1	38	-	32	-
4x4	7/0.85	rm	0.7	1.8	15.4	385	246	4.61	7.41	48	34	41	31
4x6	7/1.04	rm	0.7	1.8	16.8	488	295	3.08	4.61	64	40	56	40
4x10	7/1.35	rm	0.7	1.8	19.2	690	378	1.83	3.08	83	55	75	53
4x16	7/1.70	rm	0.7	1.8	21.5	1060	493	1.15	1.91	110	73	98	70
4x25	7/2.14	rm	0.9	1.8	23.4	1388	516	0.727	1.2	130	94	120	96
4x35	min. 6	sm	0.9	1.8	24.5	1624	735	0.524	0.868	155	114	150	117
4x50	min. 6	sm	1.0	1.9	27.3	2224	970	0.387	0.641	190	133	190	142
4x70	min. 12	sm	1.1	2.0	30.7	3078	1250	0.268	0.443	225	164	230	179
4x95	min. 15	sm	1.1	2.1	35.8	4068	1641	0.193	0.32	260	196	270	221
4x120	min. 18/15	sm	1.2	2.3	38.4	5090	1992	0.153	0.253	295	223	305	257
4x150	min. 18/15	sm	1.4	2.4	42.3	6308	2488	0.124	0.206	330	249	350	292
4x185	min. 30	sm	1.6	2.6	48.0	7974	3042	0.0991	0.164	385	282	410	337
4x240	min. 34/30	sm	1.7	2.8	53.6	10212	3917	0.0754	0.125	425	327	470	400
4x300	min. 34/30	sm	1.8	3.00	59.6	12588	4705	0.0601	0.10	578	368	564	455

KEY



Note :

1. Current ratings are valid for cables laid under defined conditions at page no. 94. For current ratings at deviated conditions apply correction factors as given on page no. 95-99

BBS CABLES®
more than safety

2xRaY/A2xRaY
600/1000V
SINGLE CORE
IEC 60502-1

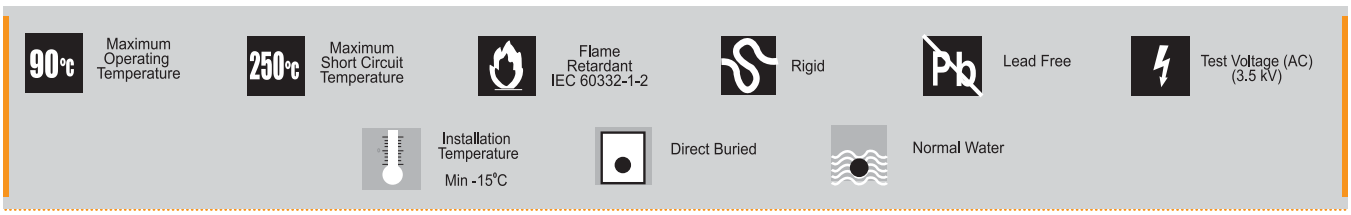
Application: Suitable for indoor, outdoor, underground and in water for continuous permissible service voltage of 720/1200 Volts.

Construction: *1. Annealed Copper / Aluminium conductor 2. XLPE Insulation 3. Round Aluminium wire Armour 4. PVC outer sheath.*

Colour: ●

PHYSICAL DATA									*ELECTRICAL DATA*					
Cross Sectional Area	**No. & Approx. Dia. of Wire Cu/Al**	**Shape of Conductor**	**Nominal Thickness of Insulation**	**Diameter of Round Armour Wire**	**Nominal Thickness of Sheath**	**Approx. Cable Diameter**	**Approx. Weight of Cable**		**Max. DC Resistance of Conductor of 20°C**		**Current Rating at 30°C in Ground**		**Current Rating at 35°C**	
							Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm²	nos.	-	mm	mm	mm	mm	kg/km	kg/km	ohm/km	ohm/km	amps	amps	amps	amps
1 x35	min. 6	rm	0.9	1.25	1.8	17.3	587	370	0.524	0.868	185	144	195	150
1 x50	min. 6	rm	1.0	1.25	1.8	19.3	730	456	0.387	0.641	225	175	245	190
1x70	min. 12	rm	1.1	1.25	1.8	20.8	957	550	0.268	0.443	270	210	300	233
1 x95	min. 15	rm	1.1	1.25	1.8	23.3	1202	655	0.193	0.32	310	240	350	272
1x120	min. 18/15	rm	1.2	1.6	1.8	25.5	1510	790	0.153	0.253	350	272	405	315
1x150	min. 18/15	rm	1.4	1.6	1.8	27.5	1837	930	0.124	0.206	390	302	460	357
1x185	min. 30	rm	1.6	1.6	1.8	29.5	2231	1085	0.0991	0.164	450	350	555	430
1x240	min. 34/30	rm	1.7	1.6	1.9	32.3	2798	1335	0.0754	0.125	515	400	640	498
1 x300	min. 34/30	rm	1.8	1.6	1.9	36.0	3467	1625	0.0601	0.1	585	463	770	537
1 x400	min. 53	rm	2.0	2.0	2.1	40.1	4491	2080	0.047	0.0778	680	509	900	686
1 x500	min. 53	rm	2.2	2.0	2.2	43.6	5509	2505	0.0366	0.0605	800	592	1030	785
1 x630	min. 53	rm	2.4	2.0	2.3	47.2	6809	3100	0.0283	0.0469	945	696	1160	855
1 x800	min. 53	rm	2.6	2.5	2.5	54.0	8695	3875	0.0221	0.0367	1095	821	1310	925
1x1000	min. 53	rm	2.8	2.5	2.7	58.9	10754	4735	0.0176	0.0291	1270	952	1480	1092

KEY



Note :

1. Current ratings are valid for cables laid under defined conditions at page no. 94. For current ratings at deviated conditions apply correction factors as given on page no. 95-99
2. For compact conductors and lugs refer to page no. 108-109.

2xFGY/A2xFGY
600/1000V
THREE CORE
IEC 60502-1

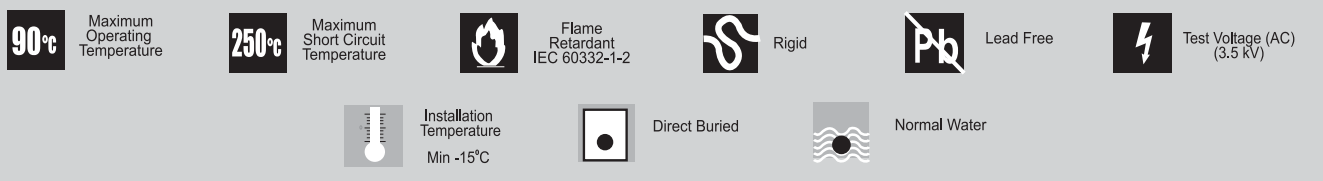
Application: Suitable for indoor, outdoor, underground and in water for continuous permissible service voltage of 720/1200 Volts.

Construction: *1. Annealed Copper / Aluminium conductor 2. XLPE Insulation 3. PVC inner sheath 4. Galv. Steel strip armour 5. PVC outer sheath.*

Colour:

PHYSICAL DATA									*ELECTRICAL DATA*					
Cross Sectional Area	**No. & Approx. Dia. of Wire Cu/Al**	**Shape of Conductor**	**Nominal Thickness of Insulation**	**Dimension of Flat Armour Wire**	**Nominal Thickness of Sheath**	**Approx. Cable Diameter**	**Approx. Weight of Cable**		**Max. DC Resistance of Conductor at 20°C**		**Current Rating at 30°C in Ground**		**Current Rating at 35°C in Air**	
							Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm²	nos.		mm	mm	mm	mm	kg/km	kg/km	ohm/km	ohm/km	amps	amps	amps	amps
3x25	min. 6	rm	0.9	4x0.8	1.8	24.8	1487	1071	0.727	1.20	130	94	120	96
3x35	min. 6	sm	0.9	4x0.8	1.8	25.4	1757	1117	0.524	0.868	155	114	150	117
3x50	min. 6	sm	1.0	4x0.8	1.9	27.2	2329	1394	0.387	0.641	190	133	190	142
3x70	min. 12	sm	1.1	4x0.8	2.0	30.4	2986	1690	0.268	0.443	225	164	230	179
3x95	min. 15	sm	1.1	4x0.8	2.1	35.2	4136	2053	0.193	0.320	260	196	270	221
3x120	min. 18/15	sm	1.2	4x0.8	2.2	38.0	5025	2410	0.153	0.253	295	223	305	257
3x150	min. 18/15	sm	1.4	4x0.8	2.4	42.2	6141	2862	0.124	0.206	330	249	350	292
3x185	min. 30	sm	1.6	4x0.8	2.5	46.0	7368	3398	0.0991	0.164	385	282	410	337
3x240	min. 34/30	sm	1.7	4x0.8	2.7	51.8	9584	4147	0.0754	0.125	425	327	490	400
3x300	min. 34/30	sm	1.8	4x0.8	2.9	56.5	11621	4900	0.0601	0.100	578	368	664	455

KEY



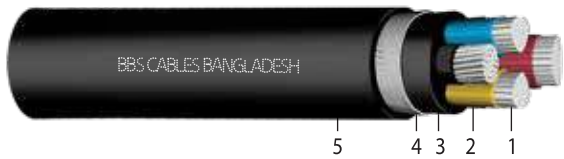
Note :

1. Current ratings are valid for cables laid under defined conditions at page no. 94. For current ratings at deviated conditions apply correction factors as given on page no. 95-99

BBS CABLES®
more than safety

2xFGY/A2xFGY
600/1000V
3.5 CORE
IEC 60502-1

Application: Suitable for indoor, outdoor, underground and in water for continuous permissible service voltage of 720/1200 Volts.



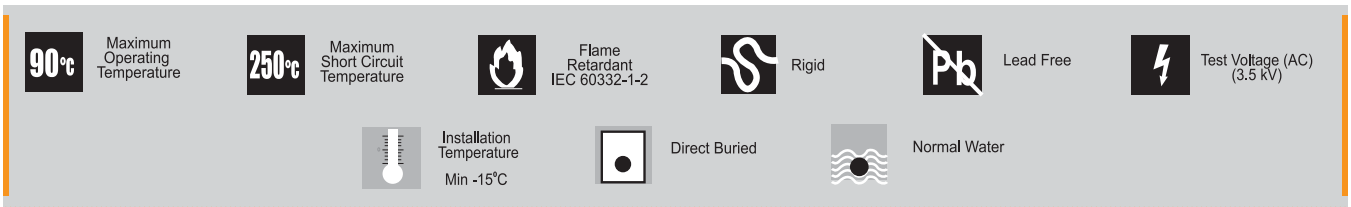
Construction: *1. Annealed Copper / Aluminium conductor 2. XLPE Insulation 3. PVC inner sheath 4. Galv. Steel strip armour 5. PVC outer sheath.*

Colour:

PHYSICAL DATA

Cross Sectional Area	No. & Approx. Dia. of Wire Cu/Al	Shape of Conductor	Nominal Thickness of Insulation	Dimension of Flat Armour Wire	Nominal Thickness of Sheath	Approx. Cable Diameter	Approx. Weight of Cable		Max. DC Resistance of Conductor of 20°C		Current Rating of 30°C in Ground		Current Rating at 35°C in Air	
							Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm²	nos.	-	mm	mm	mm	mm	kg/km	kg/km	ohm/km	ohm/km	amps	amps	amps	amps
3x25/16	min.6	rm/rm	0.9	4x0.8	1.8	25.9	1744	1299	0.727/1.15	1.20/1.91	130	94	120	96
	min.6		0.7											
3x35/16	min.6	sm/rm	0.9	4x0.8	1.8	27.7	2028	1236	0.524/1.15	0.868/1.91	155	114	150	117
	min.6		0.7											
3x50/25	min.6	sm/rm	1.0	4x0.8	1.9	31.2	2915	1507	0.387/0.727	0.641/1.20	190	133	190	142
	min.6		0.9											
3x70/35	min.12	sm/rm	1.1	4x0.8	2.0	35.3	3793	1823	0.268/0.524	0.443/0.868	225	164	230	179
	min.6		0.9											
3x95/50	min.15	sm/rm	1.1	4x0.8	2.2	40.0	4881	2262	0.193/0.387	0.32/0.641	260	196	270	221
	min.6		1.0											
3x120/70	min.18/15	sm/rm	1.2	4x0.8	2.3	43.4	6252	2698	0.153/0.268	0.253/0.443	295	223	305	257
	min.12		1.1											
3x150/70	min.18/15	sm/rm	1.4	4x0.8	2.4	47.3	7023	3205	0.124/0.268	0.206/0.443	330	249	350	292
	min.1 2		1.1											
3x185/95	min.30	sm/rm	1.6	4x0.8	2.6	52.7	8975	3808	0.0991/0.193	0.164/0.320	385	282	410	337
	min.15		1.1											
3x240/120	min.34/30	sm/rm	1.7	4x0.8	2.8	58.5	10669	4500	0.0754/0.153	0.125/0.253	425	327	490	400
	min.18/15		1.2											
3x300/150	min.34/30	sm/rm	1.8	4x0.8	2.9	66.6	13863	5435	0.0601/0.124	0.100/0.206	578	368	664	455
	min.18/15		1.4											

KEY



Note :

1. Current ratings are valid for cables laid under defined conditions at page no. 94. For current ratings at deviated conditions apply correction factors as given on page no. 95-99

2xFGY/A2xFGY
600/1000V
FOUR CORE
IEC 60502-1

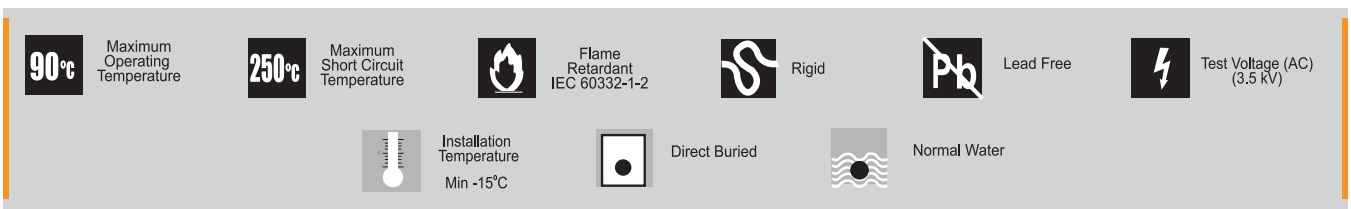
Application: Suitable for indoor, outdoor, underground and in water for continuous permissible service voltage of 720/1200 Volts.

Construction: *1. Annealed Copper / Aluminium conductor 2. XLPE Insulation 3. PVC inner sheath 4. Galv. Steel strip armour 5. PVC outer sheath.*

Colour:

PHYSICAL DATA									*ELECTRICAL DATA*					
Cross Sectional Area	**No. & approx. Dia. of Wire Cu/Al**	**Shape of Conductor**	**Nominal Thickness of Insulation**	**Dimension of Flat Armour Wire**	**Nominal Thickness of Sheath**	**Approx. Cable Diameter**	**Approx. Weight of Cable**		**Max. DC Resistance of Conductor at 20°C**		**Current Rating at 30°C in Ground**		**Current Rating at 35°C in Air**	
							Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm²	nos.		mm	mm	mm	mm	kg/km	kg/km	ohm/km	ohm/km	amps	amps	amps	amps
4x25	min. 6	rm	0.9	4x0.8	1.8	25.3	1903	1415	0.727	1.20	130	94	120	96
4x35	min. 6	sm	0.9	4x0.8	1.8	27.1	2219	1475	0.524	0.868	155	114	150	117
4x50	min. 6	sm	1.0	4x0.8	2.0	32	3119	1822	0.387	0.641	190	133	190	142
4x70	min. 12	sm	1.1	4x0.8	2.1	35.5	4113	2227	0.268	0.443	225	164	230	179
4x95	min. 15	sm	1.1	4x0.8	2.2	39.7	5378	2702	0.193	0.32	260	196	270	221
4x120	min. 18/15	sm	1.2	4x0.8	2.4	43.6	7140	3168	0.153	0.253	295	223	305	257
4x150	min. 18/15	sm	1.4	4x0.8	2.5	47.5	7868	3720	0.124	0.206	330	249	350	292
4x185	min. 30	sm	1.6	4x0.8	2.7	53	9874	4408	0.0991	0.164	385	282	410	337
4x240	min. 34/30	sm	1.7	4x0.8	2.9	59.8	12412	5347	0.0754	0.125	425	327	490	400
4x300	min. 34/30	sm	1.8	4x0.8	3.1	66.1	14788	6281	0.0601	0.100	578	368	664	445

KEY



Note :

1. Current ratings are valid for cables laid under defined conditions at page no. 94. For current ratings at deviated conditions apply correction factors as given on page no. 95-99

BBS CABLES®
more than safety

2xRGY/A2xRGY
600/1000V
THREE CORE
IEC 60502-1

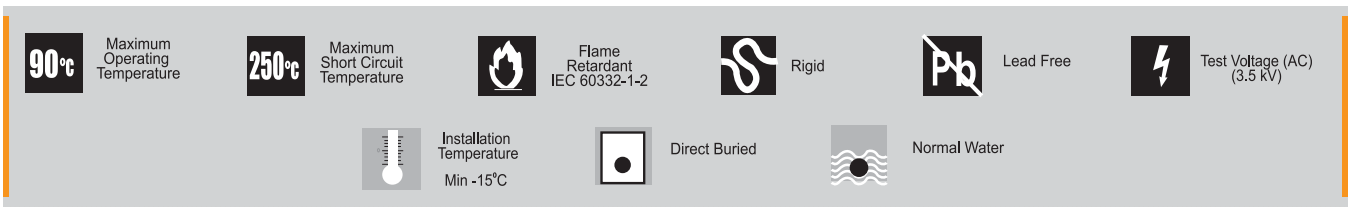
Application: Suitable for indoor, outdoor, underground and in water for continuous permissible service voltage of 720/1200 Volts.

Construction: *1. Annealed Copper / Aluminium conductor 2. XLPE Insulation 3. PVC inner sheath 4. Round Galv. Steel wire armour 5. PVC outer sheath.*

Colour:

PHYSICAL DATA									*ELECTRICAL DATA*					
Cross Sectional Area	**No. & Approx. Dia. of Wire Cu/Al**	**Shape of Conductor**	**Nominal Thickness of Insulation**	**Diameter of Round Armour Wire**	**Nominal Thickness of Sheath**	**Approx. Cable Diameter**	**Approx. Weight of Cable**		**Max. DC Resistance of Conductor at 20°C**		**Current Rating at 30°C in Ground**		**Current Rating at 35°C in Air**	
							Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm²	nos.		mm	mm	mm	mm	kg/km	kg/km	ohm/km	ohm/km	amps	amps	amps	amps
3x25	min. 6	rm	0.9	1.6	1.8	26.4	1682	1203	0.727	1.20	130	94	120	96
3x35	min. 6	sm	0.9	1.6	1.8	27.0	1991	1332	0.524	0.868	155	114	150	117
3x50	min. 6	sm	1.0	1.6	1.9	29.7	2529	1577	0.387	0.641	190	133	190	142
3x70	min. 12	sm	1.1	2.0	2.0	34.0	3571	2233	0.268	0.443	225	164	230	179
3x95	min. 15	sm	1.1	2.0	2.2	36.8	4561	2756	0.193	0.32	260	196	270	221
3x120	min. 18/15	sm	1.2	2.0	2.3	41.1	5465	3186	0.153	0.253	295	223	305	257
3x150	min. 18/15	sm	1.4	2.5	2.5	46.5	7031	4179	0.124	0.206	330	249	350	292
3x185	min. 30	sm	1.6	2.5	2.6	49.5	8378	4867	0.0991	0.164	385	282	410	337
3x240	min. 34/30	sm	1.7	2.5	2.8	55.8	10453	5879	0.0754	0.125	425	327	490	400
3x300	min. 34/30	sm	1.8	2.5	3.0	59.6	12534	6745	0.0601	0.100	578	368	664	455

KEY



Note :

1. Current ratings are valid for cables laid under defined conditions at page no. 94. For current ratings at deviated conditions apply correction factors as given on page no. 95-99

2xRGY/A2xRGY
600/1000V
3.5 CORE
IEC 60502-1

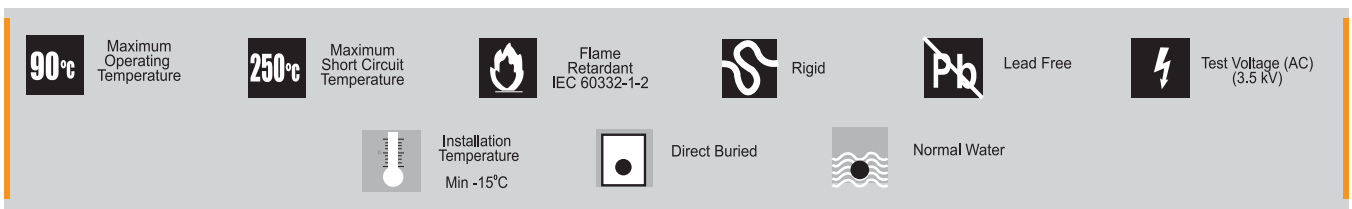
Application: Suitable for indoor, outdoor, underground and in water for continuous permissible service voltage of 720/1200 Volts.

Construction: *1. Annealed Copper / Aluminium conductor 2. XLPE Insulation 3. PVC inner sheath 4. Round Galv. Steel wire armour 5. PVC outer sheath.*

Colour:

PHYSICAL DATA									*ELECTRICAL DATA*					
Cross Sectional Area	**No. & Approx. dia. of Wire Cu/Al**	**Shape of Conductor**	**Nominal Thickness of Insulation**	**Diameter of Round Armour Wire**	**Nominal Thickness of Sheath**	**Approx. Cable Diameter**	**Approx. Weight of Cable**		**Max. DC Resistance of Conductor at 20°C**		**Current Rating at 30°C in Ground**		**Current Rating at 35°C in Air**	
							Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm²	nos.	-	mm	mm	mm	mm	kg/km	kg/km	ohm/km	ohm/km	amps	amps	amps	amps
3x25/16	min. 6	rm/rm	0.9	1.6	1.8	27.5	1919	1337	0.727/1.15	1.20/1.91	130	94	120	96
	min. 6		0.7											
3x35/16	min. 6	sm/rm	0.9	1.6	1.8	29.3	2363	1596	0.524/1.15	0.868/1.91	155	114	150	117
	min. 6		0.7											
3x50/25	min. 6	sm/rm	1.0	1.6	2.0	31.9	3105	1995	0.387/0.727	0.641/1.20	190	133	190	142
	min. 6		0.9											
3x70/35	min. 12	sm/rm	1.1	2.0	2.1	37.9	4153	2595	0.268/0.524	0.443/0.868	225	164	230	179
	min. 6		0.9											
3x95/50	min. 15	sm/rm	1.1	2.0	2.2	42.1	5372	3251	0.193/0.387	0.32/0.641	260	196	270	221
	min. 6		1.0											
3x120/70	min. 18/15	sm/rm	1.2	2.0	2.4	45.8	6921	4197	0.153/0.268	0.253/0.443	295	223	305	257
	min. 12		1.1											
3x150/70	min. 18/15	sm/rm	1.4	2.5	2.5	50.2	8070	4772	0.124/0.268	0.206/0.443	330	249	350	292
	min. 12		1.1											
3x185/95	min. 30	sm/rm	1.6	2.5	2.7	55.1	9655	5543	0.0991/0.193	0.164/0.320	385	282	410	337
	min. 15		1.1											
3x240/120	min. 34/30	sm/rm	1.7	2.5	2.9	61.1	11952	6618	0.0754/0.153	0.125/0.253	425	327	490	400
	min. 18/15		1.2											
3x300/150	min. 34/30	sm/rm	1.8	2.5	3.0	67.0	14563	7837	0.0601/0.124	0.100/0.206	578	368	664	455
	min. 18/15		1.4											

KEY



Note :

1. Current ratings are valid for cables laid under defined conditions at page no. 94. For current ratings at deviated conditions apply correction factors as given on page no. 95-99

BBS CABLES®
more than safety

2xRGY/A2xRGY
600/1000V
FOUR CORE
IEC 60502-1

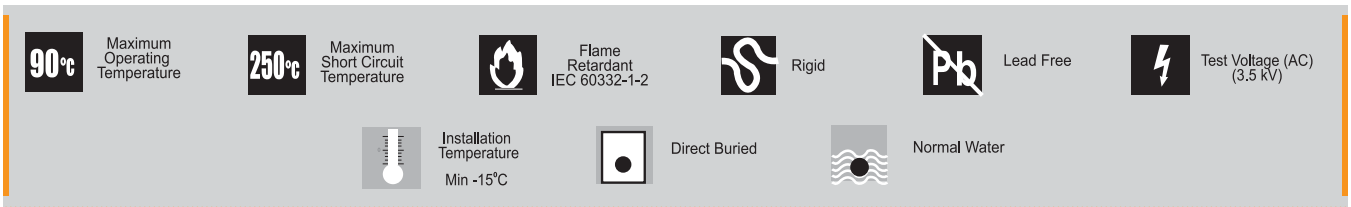
Application: Suitable for indoor, outdoor, underground and in water for continuous permissible service voltage of 720/1200 Volts.

Construction: *1. Annealed Copper / Aluminium conductor 2. XLPE Insulation 3. PVC inner sheath 4.Round Galv. Steel wire armour 5. PVC outer sheath.*

Colour:

PHYSICAL DATA									*ELECTRICAL DATA*					
Cross Sectional Area	**No. & Approx. Dia. of Wire Cu/Al**	**Shape of Conductor**	**Nominal Thickness of Insulation**	**Diameter of Round Armour Wire**	**Nominal Thickness of Sheath**	**Approx. Cable Diameter**	**Approx. Weight of Cable**		**Max. DC Resistance of Conductor at 20°C**		**Current Rating at 30°C in Ground**		**Current Rating at 35°C in Air**	
							Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm²	nos.		mm	mm	mm	mm	kg/km	kg/km	ohm/km	ohm/km	amps	amps	amps	amps
4x25	min. 6	rm	0.9	1.6	1.8	28.4	2038	1400	0.727	1.200	130	94	120	96
4x35	min. 6	sm	0.9	1.6	1.9	29.4	2509	1622	0.524	0.868	155	114	150	117
4x50	min. 6	sm	1.0	1.6	2.0	33.9	3364	2096	0.387	0.641	190	133	190	142
4x70	min. 12	sm	1.1	2.0	2.2	38.9	4503	2720	0.268	0.443	225	164	230	179
4x95	min. 1 5	sm	1.1	2.0	2.3	43.2	6198	3791	0.193	0.320	260	196	270	221
4x120	min. 18/15	sm	1.2	2.0	2.5	47.8	7380	4341	0.153	0.253	295	223	305	257
4x150	min. 18/15	sm	1.4	2.5	2.6	51.2	8838	5036	0.124	0.206	330	249	350	292
4x185	min. 30	sm	1.6	2.5	2.8	57.5	10674	5993	0.0991	0.164	385	282	410	337
4x240	min. 34/30	sm	1.7	2.5	3.0	62.4	13362	7263	0.0754	0.125	425	327	490	400
4x300	min. 34/30	sm	1.8	2.5	3.2	68.9	16888	8969	0.0601	0.100	578	368	664	455

KEY



Note :

1. Current ratings are valid for cables laid under defined conditions at page no. 94. For current ratings at deviated conditions apply correction factors as given on page no. 95-99

2xY-1
600/1000V
MULTI CORE
IEC 60502-1

Application: Suitable for indoor, outdoor, underground and in water for continuous permissible service voltage of 720/1200 Volts.

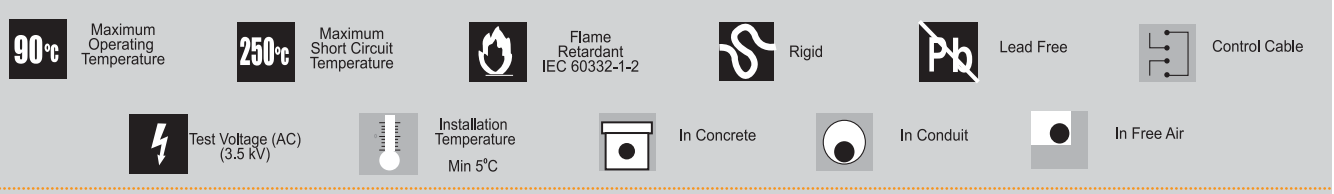
Construction: *1. Annealed Copper Conductor 2. XLPE Insulation & multi cores laid up 3. PVC/PE Tapping 4. PVC outer sheath.*

Core Identification: Numbering

PHYSICAL & ELECTRICAL DATA

Cross Sectional Area	No. and Approx. Diameter of Wire	Shape of Conductor	Nominal Thickness of Insulation	Nominal Thickness of Sheath	Approximate Cable Diameter	Approximate Weight of Cable	Current Rating at 30°C in Ground	Current Rating at 35°C in Air
core x mm²	nos./mm		mm	mm	mm	kg/km	amps	amps
5x1.5	1/1.38	re	0.7	1.8	11.6	175	20	14
7x1.5	1/1.38	re	0.7	1.8	12.4	215	18	13
10x1.5	1/1.38	re	0.7	1.8	15.2	290	14	11
12x1.5	1/1.38	re	0.7	1.8	15.7	335	13	10
16x1.5	1/1.38	re	0.7	1.8	16.4	410	12	9
21x1.5	1/1.38	re	0.7	1.8	19.0	525	10	8
24x1.5	1/1.38	re	0.7	1.8	21.0	600	10	8
30x1.5	1/1.38	re	0.7	1.8	22.0	720	9	7
5x2.5	1/1.78	re	0.7	1.8	12.8	230	26	21
7x2.5	1/1.78	re	0.7	1.8	13.7	282	23	19
10x2.5	1/1.78	re	0.7	1.8	17.1	388	20	15
12x2.5	1/1.78	re	0.7	1.8	17.4	460	18	14
16x2.5	1/1.78	re	0.7	1.8	18.2	570	15	12
21x2.5	1/1.78	re	0.7	1.8	21.0	750	14	11
24x2.5	1/1.78	re	0.7	1.8	23.5	850	13	10
30x2.5	1/1.78	re	0.7	1.8	24.8	1040	11	9
5x4	7/0.85	rm	0.7	1.8	14.8	335	33	27
7x4	7/0.85	rm	0.7	1.8	16.0	423	29	24
10x4	7/0.85	rm	0.7	1.8	19.9	589	25	21
12x4	7/0.85	rm	0.7	1.8	20.5	684	23	19

KEY



Note :

1. Current ratings are valid for cables laid under defined conditions at page no. 94. For current ratings at deviated conditions apply correction factors as given on page no. 95-99

BBS CABLES®
more than safety

FIRE SURVIVAL LT CABLES

NYY-FiR/NAYY- FiR
600/1000V
Single Core
VDE 0271/3.69, IEC 60502-1 & IEC 60331

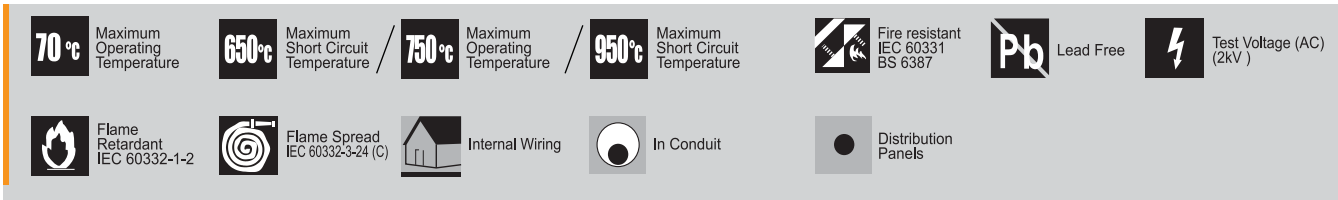
Applicaton: These cables are designed for emergency lighting, fire alarms and essential equipment in fire situations where an uninterrupted power supply has to be guaranteed.
During fire, electric circuits and the associated lighting may be damaged. Power and data communications may be suspended. Human safety may depend on continued operation of lighting, elevators and escalators, fire fighting water pumps, fire alarm and ventilation fans. The conductor is manufactured with a specially designed heat barrier and fire resistant insulation wich resists the fire to reach conductor surface. The cable continues to remain into operation at high temperatures like 650°C, 750°C & 950°C as per various conditions of operation and applications.

Construction: *1. Annealed Copper/Aluminium Conductor 2. Mica Tape Synthetic/Glass over Conductor 3. Flame Retardant (FR) PVC Insulation 4. Flame Retardant (FR) PVC Sheath*

Colour: *other colours available on request*

PHYSICAL DATA								ELECTRICAL DATA					
Cross Sectional Area	No.& approx. diameter of wire Cu/Al	Shape of Conductor	Nominal Thickness of Insulation	Nominal Thickness of Sheath	Approx. Overall Diameter	Approx. Weight of Cable		Max. DC Resistance of Conductor at 20°C		Current rating at 30°C in Ground		Current rating at 35°C in air	
						Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm²	nos./mm		mm	mm	mm	kg/km	kg/km	ohm/km	ohm/km	amps	amps	amps	amps
1x1.5	1/1.38	re	0.8	1.8	7.2	75	68	12.1	18.1	27	-	22	-
1x1.5	7/0.52	rm	0.8	1.8	7.4	78	70	12.1	18.1	27	-	22	-
1x2.5	1/1.78	re	0.8	1.8	7.6	90	75	7.41	12.1	36	-	30	-
1x2.5	7/0.68	rm	0.8	1.8	7.9	95	78	7.41	12.1	36	-	30	-
1x4.0	7/0.85	rm	1.0	1.8	8.7	126	100	4.61	7.41	47	37	39	31
1x6.0	7/1.04	rm	1.0	1.8	9.5	154	112	3.08	4.61	59	48	50	41
1x10	7/1.35	rm	1.0	1.8	10.4	200	135	1.83	3.08	78	60	69	53
1x16	7/1.70	rm	1.0	1.8	11.0	271	168	1.15	1.91	100	78	94	73
1x25	7/2.14	rm	1.2	1.8	13.2	390	220	0.727	1.20	130	101	125	97
1x35	min 6	rm	1.2	1.8	13.8	486	270	0.524	0.868	155	120	160	124
1x50	min 6	rm	1.4	1.8	15.6	652	360	0.387	0.641	185	144	195	151
1x70	min 12	rm	1.4	1.8	17.1	865	442	0.268	0.443	225	175	245	190
1x95	min 15	rm	1.6	1.8	19.4	1140	565	0.193	0.320	270	210	300	232
1x120	min 18/15	rm	1.6	1.8	21.1	1400	680	0.153	0.253	310	240	350	272
1x150	min 18/15	rm	1.8	1.8	23.1	1726	845	0.124	0.206	350	270	405	314
1x185	min 30	rm	2.0	2.0	25.6	2126	1002	0.0991	0.164	390	302	460	357
1x240	min 34/ 30	rm	2.2	2.0	28.2	2714	1490	0.0754	0.125	450	349	555	430
1x300	min 34/ 30	rm	2.4	2.0	31.0	3342	1505	0.0601	0.100	515	386	640	448
1x400	min 53	rm	2.6	2.2	35.0	4385	1947	0.0470	0.0778	585	439	770	540
1x500	min 53	rm	2.8	2.2	38.0	5400	2348	0.0366	0.0605	680	510	900	630
1x630	min 53	rm	2.8	2.2	42	6715	2830	0.0283	0.0469	800	600	1030	721
1x800	min 53	rm	2.8	2.4	48.9	8628	3490	0.0221	0.0367	945	708	1160	812
1x1000	min 53	rm	3.0	2.6	54.3	10800	4328	0.0176	0.0291	1095	821	1310	917

KEY



Note :

1. Current ratings are valid for cables laid in under defined conditions at page no. 94. For current ratings are deviated conditions apply correction factors as given on page no. 95-99.
2. For compact conductors and lugs refer to page no. 108-109.

BBS CABLES®
more than safety

2xY-FiR/A2xY- FiR
600/1000V
Single Core
IEC 60502-1, IEC 60331 & BS 6387

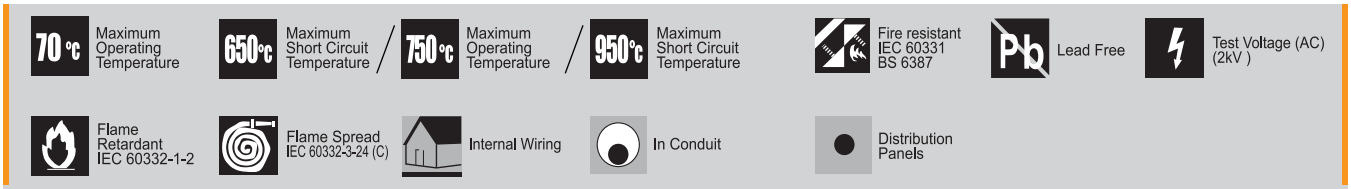
Applicaton: These cables are designed for emergency lighting, fire alarms and essential equipment in fire situations where an uninterrupted power supply has to be guaranteed.
During fire, electric circuits and the associated lighting may be damaged. Power and data communications may be suspended. Human safety may depend on continued operation of lighting, elevators and escalators, fire fighting water pumps, fire alarm and ventilation fans. The conductor is manufactured with a specially designed heat barrier and fire resistant insulation wich resists the fire to reach conductor surface. The cable continues to remain into operation at high temperatures like 650°C, 750°C & 950°C as per various conditions of operation and applications.

Construction: *1. Annealed Copper/Aluminium Conductor 2. Mica Tape Synthetic/Glass over Conductor 3. XLPE Insulation 4. Flame Retardant (FR) PVC Sheath*

Colour: ● *other colours available on request*

PHYSICAL DATA								*ELECTRICAL DATA*					
Cross Sectional Area	**No. & approx. dia. of wire Cu/Al**	**Shape of Conductor**	**Nominal Thickness of Insulation**	**Nominal Thickness of Sheath**	**Approx. Overall Diameter**	**Approx. weight of cable**		**Max. DC Resistance of Conductor at 20 °C**		**Current rating at 30 °C in Ground**		**Current rating at 35°C in air**	
						Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm²	nos./mm	-	mm	mm	mm	kg/km	kg/km	ohm/km	ohm/km	amps	amps	amps	amps
1x1.5	1/1.38	re	0.7	1.4	6.2	59	47	12.1	18.1	36		30	
1x1.5	7/0.52	rm	0.7	1.4	6.5	61	50	12.1	18.1	36		30	
1x2.5	1/1.78	re	0.7	1.4	6.7	73	55	7.41	12.1	47		39	
1x2.5	7/0.68	rm	0.7	1.4	6.9	76	58	7.41	12.1	47		39	
1x4.0	7/0.85	rm	0.7	1.4	7.5	96	68	4.61	7.41	59	47	50	39
1x6.0	7/1.04	rm	0.7	1.4	8.1	121	79	3.08	4.61	78	64	69	56
1x10	7/1.35	rm	0.7	1.4	9.0	166	100	1.83	3.08	100	77	94	72
1x16	7/1.70	rm	0.7	1.4	10.1	235	127	1.15	1.91	130	101	125	97
1x25	7/2.14	rm	0.9	1.4	11.8	342	178	0.727	1.20	155	120	160	125
1x35	min 6	rm	0.9	1.4	12.3	431	220	0.524	0.868	185	144	195	150
1x50	min 6	rm	1.0	1.4	13.7	585	277	0.387	0.641	225	175	245	190
1x70	min 12	rm	1.1	1.4	15.4	793	360	0.268	0.443	270	210	300	233
1x95	min 15	rm	1.1	1.5	17.1	1040	462	0.193	0.320	310	240	350	272
1x120	min 18/15	rm	1.2	1.5	18.8	1296	567	0.153	0.253	350	272	405	315
1x150	min 18/15	rm	1.4	1.6	21	1612	700	0.124	0.206	390	302	460	357
1x185	min 30	rm	1.6	1.6	23	1979	845	0.0991	0.164	450	350	555	430
1x240	min 34/ 30	rm	1.7	1.7	25.6	2537	1068	0.0754	0.125	515	400	640	498
1x300	min 34/ 30	rm	1.8	1.8	28.3	3140	1310	0.0601	0.100	585	463	770	537
1x400	min 53	rm	2	1.9	32	4137	1680	0.0470	0.0778	680	509	900	626
1x500	min 53	rm	2.2	2	35.4	5142	2055	0.0366	0.0605	800	592	1030	731
1x630	min 53	rm	2.4	2.2	39.5	6448	2565	0.0283	0.0469	945	696	1160	837
1x800	min 53	rm	2.6	2.3	48.1	8355	3220	0.0221	0.0367	1095	821	1310	942
1x1000	min 53	rm	2.8	2.4	53.5	10450	3950	0.0176	0.0291	1270	952	1480	1064

KEY

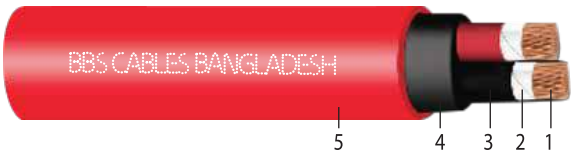


Note :

1. Current ratings are valid for cables laid in under defined conditions at page no. 94. For current ratings are deviated conditions apply correction factors as given on page no. 95-99.
2. For compact conductors and lugs refer to page no. 108-109.

2xY-FiR/A2xY- FiR
600/1000V
Two Core
IEC 60502-1, IEC 60331 & BS 6387

Applicaton: These cables are designed for emergency lighting, fire alarms and essential equipment in fire situations where an uninterrupted power supply has to be guaranteed.
During fire, electric circuits and the associated lighting may be damaged. Power and data communications may be suspended. Human safety may depend on continued operation of lighting, elevators and escalators, fire fighting water pumps, fire alarm and ventilation fans. The conductor is manufactured with a specially designed heat barrier and fire resistant insulation wich resists the fire to reach conductor surface. The cable continues to remain into operation at high temperatures like 650℃, 750℃ & 950℃ as per various conditions of operation and applications.



Construction: *1. Annealed Copper/Aluminium Conductor 2. Mica Tape Synthetic/Glass over Conductor 3. XLPE Insulation 4. Flame Retardant (FR) PVC Inner Sheath 5. Flame Retardant (FR) PVC Sheath*

Colour:

PHYSICAL DATA								*ELECTRICAL DATA*					
Cross Sectional Area	**No.& approx. diameter of wire Cu/Al**	**Shape of Conductor**	**Nominal Thickness of Insulation**	**Nominal Thickness of Sheath**	**Approx. Overall Diameter**	**Approx. Weight of Cable**		**Max. DC Resistance of Conductor at 20°C**		**Current rating at 30°C in ground**		**Current rating at 35°C in air**	
						Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm²	nos./mm		mm	mm	mm	kg/km	kg/km	ohm/km	ohm/km	amps	amps	amps	amps
2x1.5	1/1.38	re	0.7	1.8	13.2	210	190		18.1	34	-	27	-
2x1.5	7/0.52	rm	0.7	1.8	13.5	215	198	12.1	18.1	34	-	27	-
2x2.5	1/1.78	re	0.7	1.8	14.0	245	210	7.41	12.1	44	-	35	-
2x2.5	7/0.68	rm	0.7	1.8	14.4	252	220	7.41	12.1	44	-	35	-
2x4	7/0.85	rm	0.7	1.8	15.5	304	250	4.61	7.41	55	34	45	31
2x6	7/1.04	rm	0.7	1.8	16.6	365	280	3.08	4.61	74	40	62	40
2x10	7/1.35	rm	0.7	1.8	18.4	478	338	1.83	3.08	97	55	84	53
2x16	7/1.70	rm	0.7	1.8	20.6	640	426	1.15	1.91	125	73	110	70
2x25	7/2.14	rm	0.9	1.8	24.2	890	555	0.727	1.20	150	94	140	96
2x35	Min. 6	rm	0.9	1.8	25.3	1100	662	0.524	0.868	180	114	190	117

KEY

70 ℃ Maximum Operating Temperature
650℃ Maximum Short Circuit Temperature / 750 ℃ Maximum Operating Temperature / 950℃ Maximum Short Circuit Temperature
Fire resistant IEC 60331 BS 6387
Pb Lead Free
Test Voltage (AC) (2kV)
Flame Retardant IEC 60332-1-2
Flame Spread IEC 60332-3-24 (C)
Internal Wiring
In Conduit
Distribution Panels

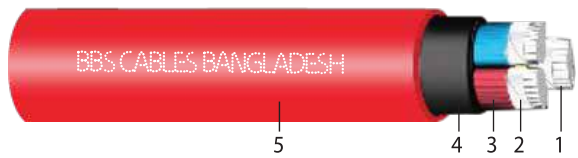
Note :

1. Current ratings are valid for cables laid in under defined conditions at page no. 94. For current ratings are deviated conditions apply correction factors as given on page no. 95-99.

BBS CABLES®
more than safety

2xY-FiR/A2xY- FiR
600/1000V
Three Core
IEC 60502-1

Applicaton: These cables are designed for emergency lighting, fire alarms and essential equipment in fire situations where an uninterrupted power supply has to be guaranteed.
During fire, electric circuits and the associated lighting may be damaged. Power and data communications may be suspended. Human safety may depend on continued operation of lighting, elevators and escalators, fire fighting water pumps, fire alarm and ventilation fans. The conductor is manufactured with a specially designed heat barrier and fire resistant insulation wich resists the fire to reach conductor surface. The cable continues to remain into operation at high temperatures like 650°C, 750°C & 950°C as per various conditions of operation and applications.



Construction: *1. Annealed Copper/Aluminium Conductor 2. Mica Tape Synthetic/Glass over Conductor 3. XLPE Insulation 4. Flame Retardant (FR) PVC Inner Sheath 5. Flame Retardant (FR) PVC Sheath*

Colour:

PHYSICAL DATA								*ELECTRICAL DATA*					
Cross Sectional Area	**No. & approx. dia. of wire Cu/Al**	**Shape of Conductor**	**Nominal Thickness of Insulation**	**Nominal Thickness of Sheath**	**Approx. Overall Diameter**	**Approx. weight of cable**		**Max. DC Resistance of Conductor at 20 °C**		**Current rating at 30 °C in ground**		**Current rating at 35° C in air**	
						Cu	Al	Cu	Al	Cu	Al	Cu	Al
	nos./mm	-	mm	mm	mm	kg/km	kg/km	ohm/km	ohm/km	amps	amps	amps	amps
core x mm²	1/1.38	re	0.7	1.8	13.8	235	198	12.1	18.1	30	-	23	-
3x1.5	7/0.52	rm	0.7	1.8	14.0	240	205	12.1	18.1	30	-	23	-
3x1.5	1/1.78	re	0.7	1.8	14.6	280	227	7.41	12.1	38	-	32	-
3x2.5	7/0.68	rm	0.7	1.8	14.9	286	235	7.41	12.1	38	-	32	-
3x2.5	7/0.85	rm	0.7	1.8	16.0	350	266	4.61	7.41	48	34	41	31
3x4	7/1.04	rm	0.7	1.8	17.4	438	315	3.08	4.61	64	40	56	40
3x6	7/1.35	rm	0.7	1.8	19.2	586	388	1.83	3.08	83	55	75	53
3x10	7/1.70	rm	0.7	1.8	21.5	805	490	1.15	1.91	110	73	98	70
3x16	7/2.14	rm	0.9	1.8	25.5	1160	667	0.727	1.2	130	94	120	96
3x25	min. 6	sm	0.9	1.8	26.0	1365	696	0.524	0.868	155	114	150	117
3x35	min. 6	sm	1	1.8	26.5	1850	895	0.387	0.641	190	133	190	142
3x50	min. 12	sm	1.1	1.9	30.2	2540	1197	0.268	0.443	225	164	230	179
3x70	min. 15	sm	1.1	2	33.8	3210	1502	0.193	0.32	260	196	270	221
3x95	min. 18/15	sm	1.2	2.1	37.4	4120	1837	0.153	0.253	295	223	305	257
3x120	min. 18/15	sm	1.4	2.3	41.5	5140	2305	0.124	0.206	330	249	350	292
3x150	min. 30	sm	1.6	2.4	44.4	6255	2748	0.0991	0.164	385	282	410	337
3x185	min. 34/30	sm	1.7	2.6	50.2	8095	3525	0.0754	0.125	425	327	470	400
3x240	min. 34/30	sm	1.8	2.8	54.5	9900	4220	0.0601	0.100	478	368	564	455

KEY

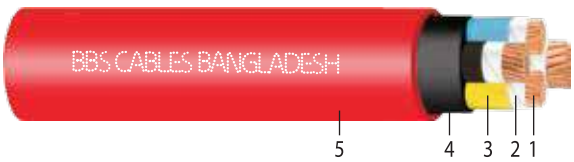
70 °C Maximum Operating Temperature
650°C Maximum Short Circuit Temperature / 750 °C Maximum Operating Temperature / 950°C Maximum Short Circuit Temperature
Fire resistant IEC 60331 BS 6387
Pb Lead Free
Test Voltage (AC) (2kV)
Flame Retardant IEC 60332-1-2
Flame Spread IEC 60332-3-24 (C)
Internal Wiring
In Conduit
Distribution Panels

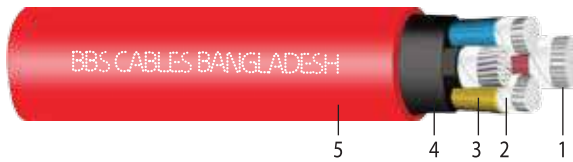
Note :

1. Current ratings are valid for cables laid in under defined conditions at page no. 94. For current ratings are deviated conditions apply correction factors as given on page no. 95-99.
2. For compact conductors and lugs refer to page no. 108-109.

2xY-FiR/A2xY- FiR
600/1000V
3.5 Core
IEC 60502-1

Applicaton: These cables are designed for emergency lighting, fire alarms and essential equipment in fire situations where an uninterrupted power supply has to be guaranteed.
During fire, electric circuits and the associated lighting may be damaged. Power and data communications may be suspended. Human safety may depend on continued operation of lighting, elevators and escalators, fire fighting water pumps, fire alarm and ventilation fans. The conductor is manufactured with a specially designed heat barrier and fire resistant insulation wich resists the fire to reach conductor surface. The cable continues to remain into operation at high temperatures like 650°C, 750°C & 950°C as per various conditions of operation and applications.





Construction: *1. Annealed Copper/Aluminium Conductor 2. Mica Tape Synthetic/Glass over Conductor 3. XLPE Insulation 4. Flame Retardant (FR) PVC Inner Sheath 5. Flame Retardant (FR) PVC Sheath*

Colour:

PHYSICAL DATA								*ELECTRICAL DATA*					
Cross Sectional Area	**No.& approx. diameter of wire Cu/Al**	**Shape of Conductor**	**Nominal Thickness of Insulation**	**Nominal Thickness of Sheath**	**Approx. Overall Diameter**	**Approx. Weight of Cable**		**Max. DC Resistance of Conductor at 20°C**		**Current rating at 30°C in Ground**		**Current rating at 35°C in air**	
						Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm²	nos./mm		mm	mm	mm	kg/km	kg/km	ohm/km	ohm/km	amps	amps	amps	amps
3x25+16	min. 6	rm/rm	0.9	1.8	25.8	1372	782	0.727/1.15	1.2/1.91	130	94	120	96
	min. 6		0.7										
3x35+16	min. 6	sm/rm	0.9	1.8	26.5	1630	860	0.524/1.15	0.868/1.91	155	114	150	117
	min. 6		0.7										
3x50+25	min. 6	sm/rm	1.0	1.8	28.3	2215	1098	0.387/0.727	0.641/0.868	190	133	190	142
	min. 6		0.9										
3x70+35	min. 12	sm/rm	1.1	1.9	34.0	3055	1502	0.268/0.524	0.443/0.524	225	164	230	179
	min. 6		0.9										
3x95+50	min. 15	sm/rm	1.1	2.1	37.1	3980	1885	0.193/0.387	0.32/0.641	260	196	270	221
	min. 6		1.0										
3x120+70	min. 18/15	sm/rm	1.2	2.2	40.5	5030	2330	0.153/0.268	0.253/0.443	295	223	305	257
	min. 12		1.1										
3x150+70	min. 18/15	sm/rm	1.4	2.3	44.0	5995	2762	0.124/0.268	0.206/0.443	330	249	350	292
	min. 12		1.1										
3x185+95	min. 30	sm/rm	1.6	2.5	49.4	7465	3388	0.0991/0.193	0.164/0.320	385	282	410	337
	min. 15		1.1										
3x240+120	min. 34/30	sm/rm	1.7	2.7	54.7	9545	4275	0.0754/0.153	0.125/0.253	425	327	470	400
	min. 18/15		1.2										
3x300+150	min. 34/30	sm/rm	1.8	2.9	60.6	11795	5170	0.0601/0.124	0.1/0.206	478	368	564	455
	min. 18/15		1.4										

KEY

70 °c Maximum Operating Temperature
650°c Maximum Short Circuit Temperature / 750 °c Maximum Operating Temperature / 950°c Maximum Short Circuit Temperature
Fire resistant IEC 60331 BS 6387
Pb Lead Free
Test Voltage (AC) (2kV)
Flame Retardant IEC 60332-1-2
Flame Spread IEC 60332-3-24 (C)
Internal Wiring
In Conduit
Distribution Panels

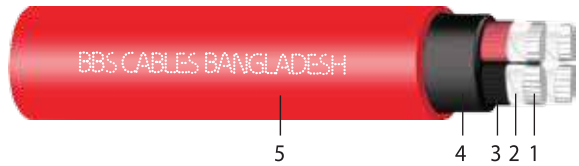
Note :

1. Current ratings are valid for cables laid in under defined conditions at page no. 94. For current ratings are deviated conditions apply correction factors as given on page no. 95-99.
2. For compact conductors and lugs refer to page no. 108-109.

BBS CABLES®
more than safety

2xY-FiR/A2xY- FiR
600/1000V
Four Core
IEC 60502-1

Applicaton: These cables are designed for emergency lighting, fire alarms and essential equipment in fire situations where an uninterrupted power supply has to be guaranteed.
During fire, electric circuits and the associated lighting may be damaged. Power and data communications may be suspended. Human safety may depend on continued operation of lighting, elevators and escalators, fire fighting water pumps, fire alarm and ventilation fans. The conductor is manufactured with a specially designed heat barrier and fire resistant insulation wich resists the fire to reach conductor surface. The cable continues to remain into operation at high temperatures like 650°C, 750°C & 950°C as per various conditions of operation and applications.



Construction: *1. Annealed Copper/Aluminium Conductor 2. Mica Tape Synthetic/Glass over Conductor 3. XLPE Insulation 4. Flame Retardant (FR) PVC Inner Sheath 5. Flame Retardant (FR) PVC Sheath*

Colour:

PHYSICAL DATA								*ELECTRICAL DATA*					
Cross Sectional Area	**No. & approx. dia. of wire Cu/Al**	**Shape of Conductor**	**Nominal Thickness of Insulation**	**Nominal Thickness of Sheath**	**Approx. Overall Diameter**	**Approx. weight of cable**		**Max. DC Resistance of Conductor at 20 ° C**		**Current rating at 30 ° C in Ground**		**Current rating at 35° C in air**	
						Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm²	nos./mm	-	mm	mm	mm	kg/km	kg/km	ohm/km	ohm/km	amps	amps	amps	amps
4x1.5	1/1.38	re	0.7	1.8	14.4	270	228	12.1	18.1	30	-	23	-
4x1.5	7/0.52	rm	0.7	1.8	14.9	280	242	12.1	18.1	30	-	23	-
4x2.5	1/1.78	re	0.7	1.8	15.5	330	265	7.41	12.1	38	-	32	-
4x2.5	7/0.68	rm	0.7	1.8	16.0	345	277	7.41	12.1	38	-	32	-
4x4	7/0.85	rm	0.7	1.8	17.3	418	315	4.61	7.41	48	34	41	31
4x6	7/1.04	rm	0.7	1.8	18.8	530	375	3.08	4.61	64	40	56	40
4x10	7/1.35	rm	0.7	1.8	21.0	726	466	1.83	3.08	83	55	75	53
4x16	7/1.70	rm	0.7	1.8	23.2	1005	593	1.15	1.91	110	73	98	70
4x25	7/2.14	sm	0.9	1.8	27.8	1452	812	0.727	1.2	130	94	120	96
4x35	min.6	sm	0.9	1.8	27.0	1772	879	0.524	0.868	155	114	150	117
4x50	min.6	sm	1	1.9	29.5	2380	1133	0.387	0.641	190	133	190	142
4x70	min.12	sm	1.1	2	35.2	3320	1560	0.268	0.443	225	164	230	179
4x95	min.15	sm	1.1	2.1	38.3	4308	1928	0.193	0.32	260	196	270	221
4x120	min.18/15	sm	1.2	2.3	42.2	5455	2420	0.153	0.253	295	223	305	257
4x150	min.18/15	sm	1.4	2.4	44.8	6705	2930	0.124	0.206	330	249	350	292
4x185	min.30	sm	1.6	2.6	51.2	8233	3567	0.0991	0.164	385	282	410	337
4x240	min.34/30	sm	1.7	2.8	56.0	10610	4530	0.0754	0.125	425	327	470	400
4x300	min.34/30	sm	1.8	3	62.8	13095	5495	0.0601	0.100	578	368	564	455

KEY

70 °c Maximum Operating Temperature
650°c Maximum Short Circuit Temperature / 750 °c Maximum Operating Temperature / 950°c Maximum Short Circuit Temperature
Fire resistant IEC 60331 BS 6387
Pb Lead Free
Test Voltage (AC) (2kV)
Flame Retardant IEC 60332-1-2
Flame Spread IEC 60332-3-24 (C)
Internal Wiring
In Conduit
Distribution Panels

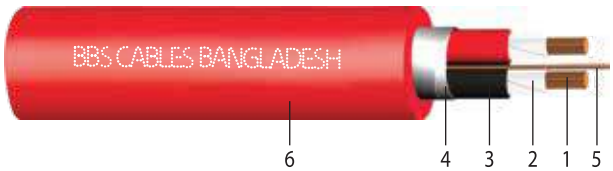
Note :

1. Current ratings are valid for cables laid in under defined conditions at page no. 94. For current ratings are deviated conditions apply correction factors as given on page no. 95-99.
2. For compact conductors and lugs refer to page no. 108-109.

Shielded Fire Alarm Cable

300/500V
Two Core
BS 7629-1, BS 6387 & IEC 60331

Applicaton: These cables are designed for emergency lighting, fire alarms and essential equipment in fire situations where an uninterrupted power supply has to be guaranteed.
During fire, electric circuits and the associated lighting may be damaged. Power and data communications may be suspended. Human safety may depend on continued operation of lighting, elevators and escalators, fire fighting water pumps, fire alarm and ventilation fans. The conductor is manufactured with a specially designed heat barrier and fire resistant insulation wich resists the fire to reach conductor surface. The cable continues to remain into operation at high temperatures like 650℃, 750℃ & 950℃ as per various conditions of operation and applications.



Construction: *1. Annealed Copper Conductor 2. Mica Glass Fire Barrier Tape over Conductor 3. Flame Retardant (FR) PVC Insulation 4. Al Mylar Tape Collective Shield 5. Solid Copper/ Tinned Copper Drain Wire 6. Flame Retardant Low Smoke (FRLS) / Low Smoke Halogen Free (LSHF) Outer Sheath*

Colour:

PHYSICAL DATA							*ELECTRICAL DATA*		
Cross Sectional Area of Conductor	**No. & Diameter of Wire in each Core**	**Shape of Conductor**	**Nominal Thickness of Insulation**	**Nominal Thickness of Sheath**	**Approx. Overall Diameter of Cable**	**Approx. Weight of Cable**	**Max.DC Resistance of Conductor at 20°C**	**Current rating at 30°C in Conduit**	**Current rating at 35°C in air**
Core × mm²	nos./mm	-	mm	mm			ohm/km	amps	amps
2 x 1.5	7/0.52	rm	0.7	1.0	mm	kg/km	12.1	14	22
2 x 2.5	7/0.67	rm	0.8	1.2	10.2	115	7.41	18	30

KEY

70 ℃ Maximum Operating Temperature
650℃ Maximum Short Circuit Temperature / 750 ℃ Maximum Operating Temperature / 950℃ Maximum Short Circuit Temperature
Fire resistant IEC 60331 BS 6387
Pb Lead Free
Test Voltage (AC) (2kV)
Flame Retardant IEC 60332-1-2
Flame Spread IEC 60332-3-24 (C)
Internal Wiring
In Conduit
Distribution Panels

BBS CABLES®
more than safety

LSHF / LSZH / LSOH
PVC INSULATED LT CABLES

LSHF Cables:

Low Smoke Halogen free or Low Smoke Zero Halogen (LSHF or LSZH or LSOH) is a material classification typically used for cable insulation & sheathing in the wire and cable industry. LSHF cable insulation & sheathing is composed of thermoplastic or thermoset compounds. When these cables comes in contact with a flame very little smoke is produced making this product ideal for applications where many people are confined in a certain place.

Abbreviation

Abbreviation	Interpretation
LSHF	Low Smoke Halogen Free
LSZH	Low Smoke Zero Halogen
LSOH	Low Smoke Zero Halogen

Application of LSHF Cables

LSHF cables are perfect for applications that require high performance and reliability while offering outstanding safety, so it can be typically used for:

Places inhabited by people with limited mobility	Places with unfamiliar building's layout	Places which are regularly densely populated
Care Homes	Shopping Malls	School & College
Hospitals & Clinics	Public Buildings	Hotel
Old Age Homes	Airport Terminals	Residential Compounds
	Cinemas & Theaters	Commercial Office
	Garments factory building	
	Cotton Spinning Mill	
	Jute Spinning Mill	

Why use LSHF Cables?

- **Halogen Free Products**
  Halogens are elements such as fluorine, chlorine, bromine and Iodine. Common cable insulation, such as PVC contains high amount of halogens. The C in PVC is chloride, which is an ion of chlorine. Halogens, under normal circumstances, are very stable and present no danger. Problem arises when they burn. A halogen-containing plastic can release hydrogen chloride, hydrogen fluoride and other dangerous gases when burned. When hydrogen chloride comes in contact with water, it forms hydrochloric acid, which is also dangerous.

- **No Emission of Toxic Gases**
  Eliminates the threat of inhaling toxic gases which reducing the damage to the human respiratory system.

- **Reduce the Smoke Emission to the Minimum**
  LSHF Cables emit white smoke in place of black smoke. When PVC cables burn they give off thick black smoke. This obviously creates a major problem as it can obscure escape routes and signage, restricting safe evacuation of a building and increasing panic & increases suffocation. White smoke gives affected people better chance to evacuate fire place.

- **Resistant to Ignition**
  It takes much more time than traditional cables to catch a fire, which facilitating the evacuation procedures.

- **Reduces the Flame Propagation**
  Its excellent flame retardant property prevents the fire from spreading through the place.

- **Easy to Install**
  LSHF sheath have a lower coefficient of friction than some non-LSHF sheaths, which can make the cable installation easier.

- **Green, Safe and Healthy**
  It offers the added benefit of being more environmentally-friendly.

BBS CABLES®
more than safety

Cu/LSHF/LSHF & Al/LSHF/LSHF
600/1000V
Single Core
VDE 0271/3.69

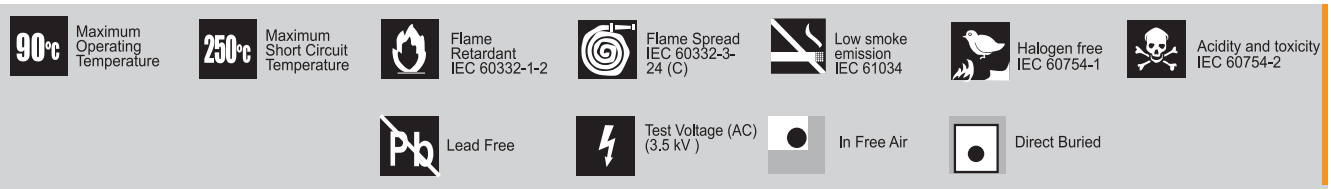
Applicaton: Electrical safety is a function of five characteristics viz. smoke, hazardous gas generation, rate of heat release, flame spread and rate of burning. In case of fire in a closed, trapped people are unable to find the exit due to emission of thick black smoke and lose consciousness due to the inhalation of toxic fumes before they can evacuated to safety. The advantage of low smoke and low acid gas generation are additional and critical features avilable with LSHF / LSZH / LSOH wires in comparison with FR (Flame Resistant) wires which do not provide these properties.

Construction: *1. Annealed Copper/Aluminium Conductor 2. LSHF Insulation 3. LSHF Outer Sheath*

Colour: ●

PHYSICAL DATA								*ELECTRICAL DATA*					
Cross Sectional Area	**No. & approx. dia. of wire Cu/Al**	**Shape of Conductor**	**Nominal Thickness of Insulation**	**Nominal Thickness of Sheath**	**Approx. Overall Diameter**	**Approx. weight of cable**		**Max. DC Resistance of Conductor at 20 °C**		**Current rating at 30 °C in ground**		**Current rating at 35° C in air**	
						Cu	Al	Cu	Al	Cu	Al	Cu	Al
	nos./mm	-	mm	mm	mm	kg/km	kg/km	ohm/km	ohm/km	amps	amps	amps	amps
core x mm²	1/1.38	re	0.8	1.8	6.6	55	-	12.1	18.1	27	-	22	-
1x1.5	7/0.52	rm	0.8	1.8	6.8	58	-	12.1	18.1	27	-	22	-
1x1.5	1/1.78	re	0.8	1.8	7.2	70	-	7.41	12.1	36	-	30	-
1x2.5	7/0.68	rm	0.8	1.8	7.4	75	-	7.41	12.1	36	-	30	-
1x2.5	7/0.85	rm	1.0	1.8	8.2	106	80	4.61	7.41	47	37	39	31
1x4.0	7/1.04	rm	1.0	1.8	8.7	132	92	3.08	4.61	59	48	50	41
1x6.0	7/1.35	rm	1.0	1.8	9.7	182	118	1.83	3.08	78	60	69	53
1x10	7/1.70	rm	1.0	1.8	10.7	252	150	1.15	1.91	100	78	94	73
1x16	7/2.14	rm	1.2	1.8	12.4	363	202	0.727	1.2	130	101	125	97
1x25	min 6	rm	1.2	1.8	13.7	470	248	0.524	0.868	155	120	160	124
1x35	min 6	rm	1.4	1.8	15.6	645	332	0.387	0.641	185	144	195	151
1x50	min 12	rm	1.4	1.8	17.3	858	420	0.268	0.443	225	175	245	190
1x70	min 15	rm	1.6	1.8	19.4	1129	530	0.193	0.32	270	210	300	232
1x95	min 18/15	rm	1.6	1.8	21.0	1384	628	0.153	0.253	310	240	350	272
1x120	min 18/15	rm	1.8	1.8	23.1	1709	780	0.124	0.206	350	270	405	314
1x150	min 30	rm	2.0	2.0	25.6	2097	932	0.0991	0.164	390	302	460	357
1x185	min 34/ 30	rm	2.2	2.0	28.6	2708	1190	0.0754	0.125	450	349	555	430
1x240	min 34/ 30	rm	2.4	2.0	31.3	3405	1248	0.0601	0.1	515	386	640	448
1x300	min 53	rm	2.6	2.2	35.3	4408	1952	0.047	0.0778	585	439	770	540
1x400	min 53	rm	2.8	2.2	38.0	5436	2340	0.0366	0.0605	680	510	900	630
1x500	min 53	rm	2.8	2.2	42.0	6780	2780	0.0283	0.0469	800	600	1030	721
1x630	min 53	rm	2.8	2.4	46.2	8510	3195	0.0221	0.0367	945	708	1160	812
1x800	min 53	rm	3.0	2.6	51.1	10530	3350	0.0176	0.0291	1095	821	1310	917

KEY

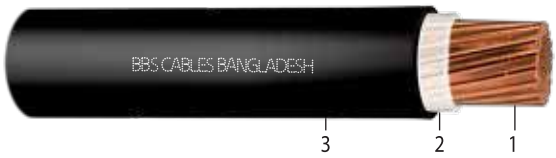


Note :

1. Current ratings are valid for cables laid in under defined conditions at page no. 94. For current ratings are deviated conditions apply correction factors as given on page no. 95-99.
2. For compact conductors and lugs refer to page no. 108-109

Cu/2xY/LSHF & Al/2xY/LSHF
600/1000V
Single Core
IEC 60502-1

Applicaton: Electrical safety is a function of five characteristics viz. smoke, hazardous gas generation, rate of heat release, flame spread and rate of burning. In case of fire in a closed, trapped people are unable to find the exit due to emission of thick black smoke and lose consciousness due to the inhalation of toxic fumes before they can evacuated to safety. The advantage of low smoke and low acid gas generation are additional and critical features avilable with LSHF / LSZH / LSOH wires in comparison with FR (Flame Resistant) wires which do not provide these properties.



Construction: *1. Annealed Copper/Aluminium Conductor 2. Halogen Free XLPE Insulation 3. LSHF Outer Sheath.*

Colour: ●

PHYSICAL DATA								*ELECTRICAL DATA*					
Cross Sectional Area	**No.& approx. diameter of wire Cu/Al**	**Shape of Conductor**	**Nominal Thickness of Insulation**	**Nominal Thickness of Sheath**	**Approx. Overall Diameter**	**Approx. Weight of Cable**		**Max. DC Resistance of Conductor at 20°C**		**Current rating at 30°C in ground**		**Current rating at 35°C in air**	
						Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm²	nos./mm		mm	mm	mm	kg/km	kg/km	ohm/km	ohm/km	amps	amps	amps	amps
1x1.5	1/1.38	re	0.7	1.4	6.1	50		12.1	18.1	36		30	
1x1.5	7/0.52	rm	0.7	1.4	6.2	52		12.1	18.1	36		30	
1x2.5	1/1.78	re	0.7	1.4	6.5	63		7.41	12.1	47		39	
1x2.5	7/0.68	rm	0.7	1.4	6.6	65		7.41	12.1	47		39	
1x4.0	7/0.85	rm	0.7	1.4	7.3	95	55	4.61	7.41	59	47	50	39
1x6.0	7/1.04	rm	0.7	1.4	7.9	107	66	3.08	4.61	78	64	69	56
1x10	7/1.35	rm	0.7	1.4	8.8	155	85	1.83	3.08	100	77	94	72
1x16	7/1.70	rm	0.7	1.4	9.9	227	112	1.15	1.91	130	101	125	97
1x25	7/2.14	rm	0.9	1.4	11.0	324	160	0.727	1.20	155	120	160	125
1x35	min 6	rm	0.9	1.4	12.1	425	200	0.524	0.868	185	144	195	150
1x50	min 6	rm	1.0	1.4	13.6	584	258	0.387	0.641	225	175	245	190
1x70	min 12	rm	1.1	1.4	15.4	788	335	0.268	0.443	270	210	300	233
1x95	min 15	rm	1.1	1.5	17.1	1041	430	0.193	0.32	310	240	350	272
1x120	min 18/15	rm	1.2	1.5	18.8	1292	531	0.153	0.253	350	272	405	315
1x150	min 18/15	rm	1.4	1.6	21.0	1611	640	0.124	0.206	390	302	460	357
1x185	min 30	rm	1.6	1.6	23.0	1976	775	0.0991	0.164	450	350	555	430
1x240	min 34/ 30	rm	1.7	1.7	25.6	2528	985	0.0754	0.125	515	400	640	498
1x300	min 34/ 30	rm	1.8	1.8	28.3	3136	1210	0.0601	0.100	585	463	770	537
1x400	min 53	rm	2	1.9	32.0	4130	1525	0.0470	0.078	680	509	900	626
1x500	min 53	rm	2.2	2.0	35.4	5134	1890	0.0366	0.061	800	592	1030	731
1x630	min 53	rm	2.4	2.2	39.5	6415	2420	0.0283	0.047	945	696	1160	837
1x800	min 53	rm	2.6	2.3	45.0	8116	3000	0.0221	0.037	1095	821	1310	942
1x1000	min 53	rm	2.8	2.4	50.0	10096	3650	0.0176	0.029	1270	952	1480	1064

KEY

90°c Maximum Operating Temperature
250°c Maximum Short Circuit Temperature
Flame Retardant IEC 60332-1-2
Flame Spread IEC 60332-3-24 (C)
Low smoke emission IEC 61034
Halogen free IEC 60754-1
Acidity and toxicity IEC 60754-2
Pb Lead Free
Test Voltage (AC) (3.5 kV)
In Free Air
Direct Buried

Note :

1. Current ratings are valid for cables laid in under defined conditions at page no. 94. For current ratings are deviated conditions apply correction factors as given on page no. 95-99.
2. For compact conductors and lugs refer to page no. 108-109

BBS CABLES
more than safety

Cu/2xY/LSHF & Al/2xY/LSHF
600/1000V
TWO CORE
IEC 60502-1

Applicaton: Electrical safety is a function of five characteristics viz. smoke, hazardous gas generation, rate of heat release, flame spread and rate of burning. In case of fire in a closed, trapped people are unable to find the exit due to emission of thick black smoke and lose consciousness due to the inhalation of toxic fumes before they can evacuated to safety. The advantage of low smoke and low acid gas generation are additional and critical features avilable with LSHF / LSZH / LSOH wires in comparison with FR (Flame Resistant) wires which do not provide these properties.

Construction: *1. Annealed Copper/Aluminium conductor 2. Halogen Free XLPE Insulation 3. Halogen Free Inner Sheath 4. LSHF Outer Sheath.*

Colour:

PHYSICAL DATA								*ELECTRICAL DATA*					
Cross Sectional Area	**No.& approx. diameter of wire Cu/Al**	**Shape of Conductor**	**Nominal Thickness of Insulation**	**Nominal Thickness of Sheath**	**Approx. Overall Diameter**	**Approx. Weight of cable**		**Max. DC Resistance of Conductor at 20°C**		**Current rating at 30°C in ground**		**Current rating at 35°C in air**	
						Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm^2	nos./mm	-	mm	mm	mm	kg/km	kg/km	ohm/km	ohm/km	amps	amps	amps	amps
2x1.5	1/1.38	re	0.7	1.8	11.2	155	-	12.1	18.1	34	-	27	-
2x1.5	7/0.52	rm	0.7	1.8	11.6	162	-	12.1	18.1	34	-	27	-
2x2.5	1/1.78	re	0.7	1.8	12.0	185	-	7.41	12.1	44	-	35	-
2x2.5	7/0.68	rm	0.7	1.8	12.5	195	-	7.41	12.1	44	-	35	-
2x4	7/0.85	rm	0.7	1.8	13.6	276	187	4.61	7.41	55	34	45	31
2x6	7/1.04	rm	0.7	1.8	14.8	349	218	3.08	4.61	74	40	62	40
2x10	7/1.35	rm	0.7	1.8	16.6	478	271	1.83	3.08	97	55	84	53
2x16	7/1.70	rm	0.7	1.8	18.1	654	341	1.15	1.91	125	73	110	70
2x25	7/2.14	rm	0.9	1.8	21.5	996	457	0.727	1.20	150	94	140	96
2x35	19/1.53	rm	0.9	1.8	23.7	1274	576	0.524	0.868	180	114	190	117

KEY

90°c Maximum Operating Temperature
250°c Maximum Short Circuit Temperature
Flame Retardant IEC 60332-1-2
Flame Spread IEC 60332-3-24 (C)
Low smoke emission IEC 61034
Halogen free IEC 60754-1
Acidity and toxicity IEC 60754-2
Pb Lead Free
Test Voltage (AC) (3.5kV)
In Free Air
Direct Buried

Note :

1. Current ratings are valid for cables laid in under defined conditions at page no. 94. For current ratings are deviated conditions apply correction factors as given on page no. 95-99.
2. For compact conductors and lugs refer to page no. 108-109

Cu/2xY/LSHF & Al/2xY/LSHF
600/1000V
Three Core
IEC 60502-1

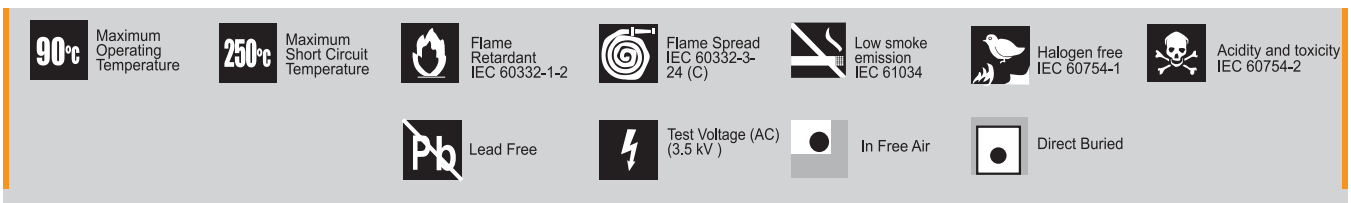
Applicaton: Electrical safety is a function of five characteristics viz. smoke, hazardous gas generation, rate of heat release, flame spread and rate of burning. In case of fire in a closed, trapped people are unable to find the exit due to emission of thick black smoke and lose consciousness due to the inhalation of toxic fumes before they can evacuated to safety. The advantage of low smoke and low acid gas generation are additional and critical features avilable with LSHF / LSZH / LSOH wires in comparison with FR (Flame Resistant) wires which do not provide these properties.

Construction: *1. Annealed Copper / Aluminium conductor 2. Halogen Free XLPE Insulation 3. Halogen Free Inner Sheath 4. LSHF Outer Sheath.*

Colour:

PHYSICAL DATA								*ELECTRICAL DATA*					
Cross Sectional Area	**No. & approx. dia. of wire Cu/Al**	**Shape of Conductor**	**Nominal thickness of insulation**	**Nominal thickness of sheath**	**Approx. Cable diameter**	**Approx. weight of cable**		**Max. DC resistance of conductor at 20°C**		**Current rating at 30°C in ground**		**Current rating at 35°C in air**	
						Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm²	nos./mm		mm	mm	mm	kg/km	kg/km	ohm/km	ohm/km	amps	amps	amps	amps
3x1.5	1/1.38	re	0.7	1.8	11.8	182	-	12.1	18.1	30	-	23	-
3x1.5	7/0.52	rm	0.7	1.8	12.2	190	-	12.1	18.1	30	-	23	-
3x2.5	1/1.78	re	0.7	1.8	12.7	235	-	7.41	12.1	38	-	32	-
3x2.5	7/0.68	rm	0.7	1.8	13.2	246	-	7.41	12.1	38	-	32	-
3x4	7/0.85	rm	0.7	1.8	14.5	321	213	4.61	7.41	48	34	41	31
3x6	7/1.04	rm	0.7	1.8	15.6	421	252	3.08	4.61	64	40	56	40
3x10	7/1.35	rm	0.7	1.8	17.5	568	320	1.83	3.08	83	55	75	53
3x16	7/1.70	rm	0.7	1.8	19.6	805	410	1.15	1.91	110	73	98	70
3x25	7/2.14	rm	0.9	1.8	23	1100	500	0.727	1.2	130	94	120	96
3x35	min. 6	sm	0.9	1.8	23	1237	576	0.524	0.868	155	114	150	117
3x50	min. 6	sm	1.0	1.8	25.1	1694	778	0.387	0.641	190	133	190	142
3x70	min. 12	sm	1.1	1.9	28.4	2315	983	0.268	0.443	225	164	230	179
3x95	min. 15	sm	1.1	2.0	32.2	3161	1253	0.193	0.32	260	196	270	221
3x120	min. 18/15	sm	1.2	2.1	35.3	3915	1570	0.153	0.253	295	223	305	257
3x150	min. 18/15	sm	1.4	2.3	38.7	4866	2000	0.124	0.206	330	249	350	292
3x185	min. 30	sm	1.6	2.4	42.5	5978	2470	0.099	0.164	385	282	410	337
3x240	min. 34/30	sm	1.7	2.6	47.6	7534	3165	0.075	0.125	425	327	470	400
3x300	min. 34/30	sm	1.8	2.8	53.1	9541	3840	0.06	0.1	478	368	564	455

KEY



Note :

1. Current ratings are valid for cables laid in under defined conditions at page no. 94. For current ratings are deviated conditions apply correction factors as given on page no. 95-99.
2. For compact conductors and lugs refer to page no. 108-109

BBS CABLES®
more than safety

Cu/2xY/LSHF & Al/2xY/LSHF
600/1000V
3.5 Cores
IEC 60502-1

Applicaton: Electrical safety is a function of five characteristics viz. smoke, hazardous gas generation, rate of heat release, flame spread and rate of burning. In case of fire in a closed, trapped people are unable to find the exit due to emission of thick black smoke and lose consciousness due to the inhalation of toxic fumes before they can evacuated to safety. The advantage of low smoke and low acid gas generation are additional and critical features avilable with LSHF / LSZH / LSOH wires in comparison with FR (Flame Resistant) wires which do not provide these properties.

Construction: *1. Annealed Copper/Aluminium conductor 2. Halogen Free XLPE Insulation 3. Halogen Free Inner sheath 4. LSHF Outer Sheath.*

Colour:

PHYSICAL DATA								*ELECTRICAL DATA*					
Cross Sectional Area	**No. & approx. diameter of wire Cu/Al**	**Shape of Conductor**	**Nominal Thickness of Insulation**	**Nominal Thickness of Sheath**	**Approx. Overall Diameter**	**Approx. Weight of Cable**		**Max. DC Resistance of Conductor at 20°C**		**Current rating at 30°C in Ground**		**Current rating at 35°C in air**	
						Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm²	nos./mm		mm	mm	mm	kg/km	kg/km	ohm/km	ohm/km	amps	amps	amps	amps
3x25+16	min. 6	rm/rm	0.9	1.8	21.7	1110	637	0.727/1.15	1.2/1.91	130	94	120	96
	min. 6		0.7										
3x35+16	min. 6	sm/rm	0.9	1.8	24.0	1412	702	0.524/1.15	0.868/1.91	155	114	150	117
	min. 6		0.7										
3x50+25	min. 6	sm/rm	1.0	1.8	27.0	2035	946	0.387/0.727	0.641/1.20	190	133	190	142
	min. 6		0.9										
3x70+35	min. 12	sm/rm	1.1	1.9	30.5	2753	1201	0.268/0.524	0.443/0.868	225	164	230	179
	min. 6		0.9										
3x95+50	min. 15	sm/rm	1.1	2.1	34.9	3721	1553	0.193/0.387	0.32/0.641	260	196	270	221
	min. 6		1.0										
3x120+70	min. 18/15	sm/rm	1.2	2.2	38.2	4912	1898	0.153/0.268	0.253/0.443	295	223	305	257
	min. 12		1.1										
3x150+70	min. 18/15	sm/rm	1.4	2.3	42.1	5673	2334	0.124/0.268	0.206/0.443	330	249	350	292
	min. 12		1.1										
3x185+95	min. 30	sm/rm	1.6	2.5	47.3	7105	2831	0.0991/0.193	0.164/0.320	385	282	410	337
	min. 15		1.1										
3x240+120	min. 34/30	sm/rm	1.7	2.7	53.8	9219	3601	0.0754/0.153	0.125/0.253	425	327	470	400
	min. 18/15		1.2										
3x300+150	min. 34/30	sm/rm	1.8	2.9	58.6	11563	4387	0.0601/0.124	0.1/0.206	478	368	564	455
	min. 18/15		1.4										

KEY

90°c Maximum Operating Temperature
250°c Maximum Short Circuit Temperature
Flame Retardant IEC 60332-1-2
Flame Spread IEC 60332-3-24 (C)
Low smoke emission IEC 61034
Halogen free IEC 60754-1
Acidity and toxicity IEC 60754-2
Pb Lead Free
Test Voltage (AC) (3.5 kV)
In Free Air
Direct Buried

Note :

1. Current ratings are valid for cables laid in under defined conditions at page no. 94. For current ratings are deviated conditions apply correction factors as given on page no. 95-99.
2. For compact conductors and lugs refer to page no. 108-109

Cu/2xY/LSHF & Al/2xY/LSHF
600/1000V
Four Core
IEC 60502-1

Applicaton: Electrical safety is a function of five characteristics viz. smoke, hazardous gas generation, rate of heat release, flame spread and rate of burning. In case of fire in a closed, trapped people are unable to find the exit due to emission of thick black smoke and lose consciousness due to the inhalation of toxic fumes before they can evacuated to safety. The advantage of low smoke and low acid gas generation are additional and critical features avilable with LSHF / LSZH / LSOH wires in comparison with FR (Flame Resistant) wires which do not provide these properties.

Construction: *1. Annealed Copper/Aluminium conductor 2. Halogen Free XLPE Insulation 3. Halogen Free Inner Sheath 4. LSHF Outer Sheath.*

Colour:

PHYSICAL DATA								*ELECTRICAL DATA*					
Cross Sectional Area	**No. & approx. diameter of wire Cu/Al**	**Shape of Conductor**	**Nominal Thickness of Insulation**	**Nominal Thickness of Sheath**	**Approx. Overall Diameter**	**Approx. Weight of Cable**		**Max. DC Resistance of Conductor at 20°C**		**Current rating at 30°C in Ground**		**Current rating at 35°C in air**	
						Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm²	nos./mm		mm	mm	mm	kg/km	kg/km	ohm/km	ohm/km	amps	amps	amps	amps
4x1.5	1/1.38	re	0.7	1.8	12.1	212		12.1	18.1	30	-	23	-
4x1.5	7/0.52	rm	0.7	1.8	12.4	220		12.1	18.1	30	-	23	-
4x2.5	1/1.78	re	0.7	1.8	13.6	280		7.41	12.1	38	-	32	-
4x2.5	7/0.68	rm	0.7	1.8	14.1	288		7.41	12.1	38	-	32	-
4x4	7/0.85	rm	0.7	1.8	15.4	385	246	4.61	7.41	48	34	41	31
4x6	7/1.04	rm	0.7	1.8	16.8	488	295	3.08	4.61	64	40	56	40
4x10	7/1.35	rm	0.7	1.8	19.2	690	378	1.83	3.08	83	55	75	53
4x16	7/1.70	rm	0.7	1.8	21.5	1060	493	1.15	1.91	110	73	98	70
4x25	7/2.14	rm	0.9	1.8	23.4	1388	516	0.727	1.2	130	94	120	96
4x35	min.6	sm	0.9	1.8	24.5	1624	735	0.524	0.868	155	114	150	117
4x50	min.6	sm	1.0	1.9	27.3	2224	970	0.387	0.641	190	133	190	142
4x70	min.12	sm	1.1	2.0	30.7	3078	1250	0.268	0.443	225	164	230	179
4x95	min.15	sm	1.1	2.1	35.8	4068	1641	0.193	0.32	260	196	270	221
4x120	min.18/15	sm	1.2	2.3	38.4	5090	1992	0.153	0.253	295	223	305	257
4x150	min.18/15	sm	1.4	2.4	42.3	6308	2488	0.124	0.206	330	249	350	292
4x185	min.30	sm	1.6	2.6	48	7914	3042	0.099	0.164	385	282	410	337
4x240	min.34/30	sm	1.7	2.8	53.6	10212	3917	0.075	0.125	425	327	470	400
4x300	min.34/30	sm	1.8	3.0	59.6	12588	4705	0.06	0.10	578	368	564	455

KEY

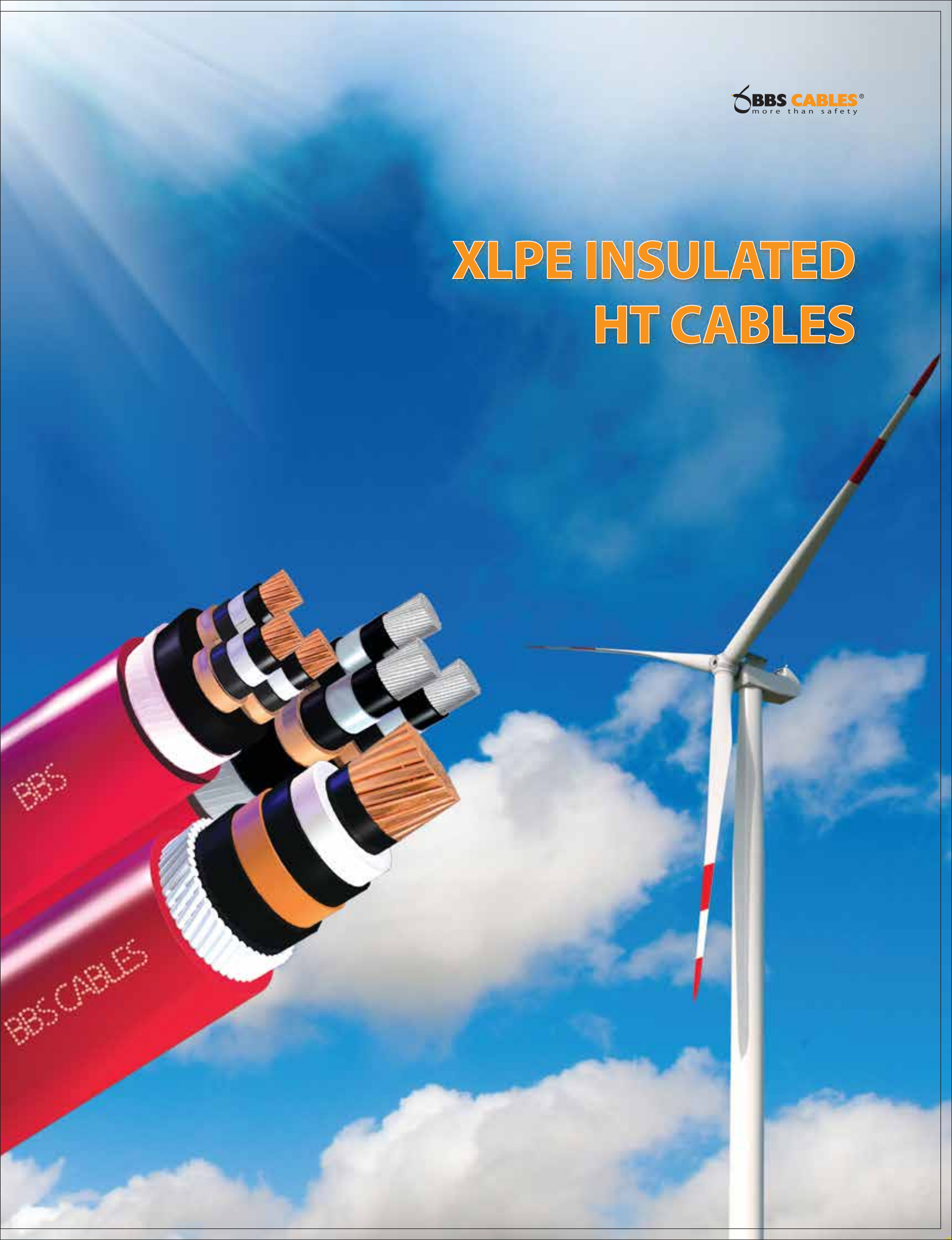
90°c Maximum Operating Temperature
250°c Maximum Short Circuit Temperature
Flame Retardant IEC 60332-1-2
Flame Spread IEC 60332-3-24 (C)
Low smoke emission IEC 61034
Halogen free IEC 60754-1
Acidity and toxicity IEC 60754-2
Pb Lead Free
Test Voltage (AC) (3.5 kV)
In Free Air
Direct Buried

Note :

1. Current ratings are valid for cables laid in under defined conditions at page no. 94. For current ratings are deviated conditions apply correction factors as given on page no. 95-99.
2. For compact conductors and lugs refer to page no. 108-109

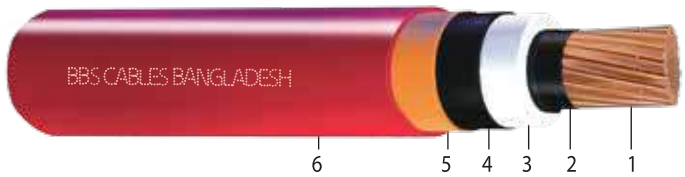
BBS CABLES®
more than safety

XLPE INSULATED HT CABLES



2×HSY
3.6/6(7.2) KV
IEC 60502-2

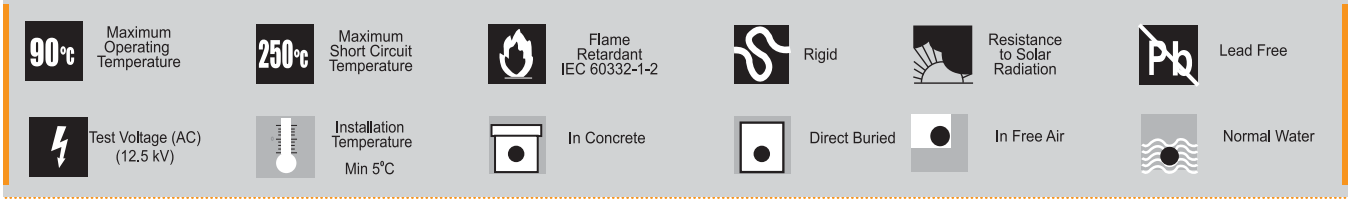
Application : Suitable for indoor, outdoor, underground and in water for continuous permissible service voltage of 3.8/6.6 KV



Construction : 1. *Annealed copper conductor 2. Inner semiconducting layer 3. XLPE insulation 4. Outer semiconducting layer 5. Metallic screen 6. PVC outer sheath.*

PHYSICAL DATA					*ELECTRICAL DATA*				
Nominal Conductor Area	**Nominal Insulation Thickness**	**Nominal Sheath Thickness**	**Approx. Overall Dia. of Cable**	**Approx. Weight of Cable**	**Maximum DC Resistance of Conductor at 20°C**	**Capacitance of Cable**	**Inductance of Cable**	**Current Rating in**	
								Ground at 20°C	**Air at 30°C**
No. × mm²	mm	mm	mm	Kg/Km	Ohm/Km	Micro F/Km	mH/Km	amps	amps
1×25	2.5	1.8	20.0	560	0.7270	0.27	0.433	155	160
1×35	2.5	1.8	21.0	680	0.5240	0.30	0.412	191	190
1×50	2.5	1.8	22.2	820	0.3870	0.33	0.384	226	229
1×70	2.5	1.8	23.8	1065	0.2680	0.37	0.363	280	285
1×95	2.5	1.8	25.5	1350	0.1930	0.42	0.344	332	350
1×120	2.5	1.8	26.5	1555	0.1530	0.46	0.330	378	410
1×150	2.5	1.8	28.0	1850	0.1240	0.49	0.320	425	468
1×185	2.5	1.8	29.7	2240	0.0991	0.54	0.309	480	542
1×240	2.6	1.9	32.5	2830	0.0754	0.58	0.300	554	640
1×300	2.8	2.0	35.5	3480	0.0601	0.60	0.294	625	732
1×400	3.0	2.1	39.5	4370	0.0470	0.64	0.285	716	850
1×500	3.2	2.2	42.6	5480	0.0366	0.65	0.281	792	978
1×630	3.2	2.3	47.3	6970	0.0283	0.73	0.272	902	1130
1×800	3.2	2.4	51.5	8960	0.0221	0.81	0.266	970	1290
1×1000	3.2	2.6	56.0	11150	0.01760	0.90	0.261	1040	1435

KEY



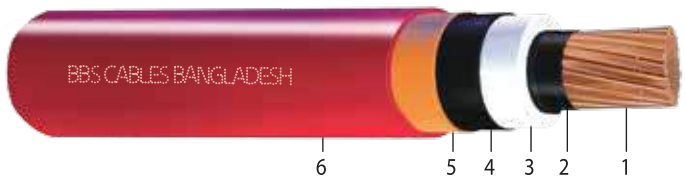
Note :

1. Current ratings are valid for cables laid under defined conditions at page no.100. For current ratings at deviated conditions apply correction factors as given on page no. 100-101.

BBS CABLES®
more than safety

2×HSY
6/10(12) KV
IEC 60502-2

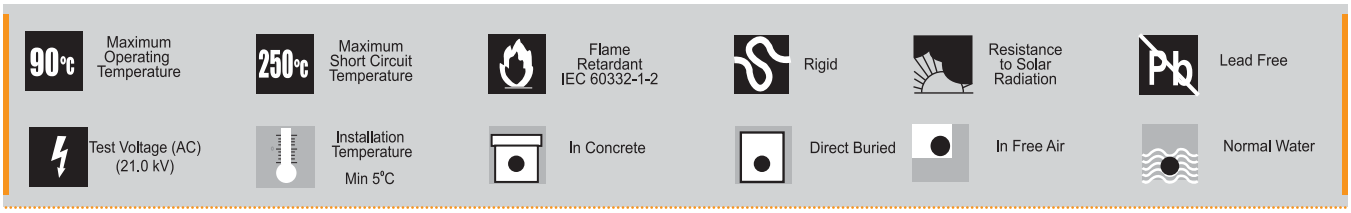
Application : Suitable for indoor, outdoor, underground and in water for continuous permissible service voltage of 6.35/11 KV



Construction : 1. *Annealed copper conductor 2. Inner semiconducting layer 3. XLPE insulation 4. Outer semiconducting layer 5. Metallic screen 6. PVC outer sheath.*

PHYSICAL DATA					*ELECTRICAL DATA*				
Nominal Conductor Area	**Nominal Insulation Thickness**	**Nominal Sheath Thickness**	**Approx. Overall Dia. of Cable**	**Approx. Weight of Cable**	**Maximum DC Resistance of Conductor at 20°C**	**Capacitance of Cable**	**Inductance of Cable**	**Current Rating in**	
								Ground at 20°C	**Air at 30°C**
No. × mm²	mm	mm	mm	Kg/Km	Ohm/Km	Micro F/Km	mH/Km	amps	amps
1 × 25	3.4	1.8	22.0	630	0.7270	0.21	0.452	155	160
1 × 35	3.4	1.8	23.0	750	0.5240	0.23	0.430	191	190
1 × 50	3.4	1.8	24.2	890	0.3870	0.26	0.401	226	229
1 × 70	3.4	1.8	25.8	1140	0.2680	0.29	0.379	280	285
1 × 95	3.4	1.8	27.6	1430	0.1930	0.33	0.359	332	350
1 × 120	3.4	1.8	29.0	1640	0.1530	0.35	0.344	378	410
1 × 150	3.4	1.8	30.5	1950	0.1240	0.38	0.333	425	468
1 × 185	3.4	1.9	32.5	2350	0.0991	0.42	0.323	480	542
1× 240	3.4	2.0	35.0	2940	0.0754	0.46	0.312	554	640
1 × 300	3.4	2.0	37.2	3570	0.0601	0.50	0.301	625	732
1 × 400	3.4	2.1	40.7	4430	0.0470	0.57	0.290	716	850
1 × 500	3.4	2.2	43.6	5520	0.0366	0.62	0.283	792	978
1 × 630	3.4	2.3	47.7	7000	0.0283	0.70	0.274	902	1130
1 × 800	3.4	2.5	52.0	9020	0.0221	0.77	0.268	970	1290
1 × 1000	3.4	2.6	56.2	11100	0.0176	0.85	0.262	1040	1435

KEY

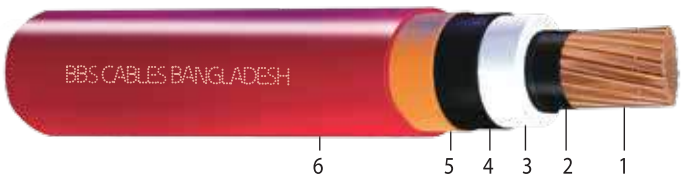


Note :

1. Current ratings are valid for cables laid under defined conditions at page no.100. For current ratings at deviated conditions apply correction factors as given on page no. 100-101.

2×HSY
8.7/15(17.5) KV
IEC 60502-2

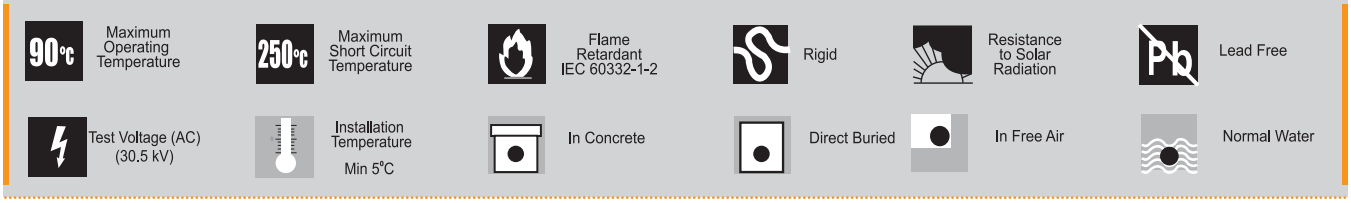
Application : Suitable for indoor, outdoor, underground and in water for continuous permissible service voltage of 9.4/16.25 KV



Construction : 1. *Annealed copper conductor 2. Inner semiconducting layer 3. XLPE insulation 4. Outer semiconducting layer 5. Metallic screen 6. PVC outer sheath.*

PHYSICAL DATA					*ELECTRICAL DATA*				
Nominal Conductor Area	Nominal Insulation Thickness	Nominal Sheath Thickness	Approx. Overall Dia. of Cable	Approx. Weight of Cable	Maximum DC Resistance of Conductor at 20°C	Capacitance of Cable	Inductance of Cable	Current Rating in	
								Ground at 20°C	Air at 30°C
No. × mm²	mm	mm	mm	Kg/Km	Ohm/Km	Micro F/Km	mH/Km	amps	amps
1 × 25	4.5	1.8	24.5	720	0.7270	0.17	0.473	157	163
1 × 35	4.5	1.8	25.4	840	0.5240	0.19	0.451	193	194
1 × 50	4.5	1.8	26.5	990	0.3870	0.21	0.420	228	232
1 × 70	4.5	1.8	28.2	1240	0.2680	0.23	0.396	282	288
1 × 95	4.5	1.8	30.0	1540	0.1930	0.26	0.376	334	353
1 × 120	4.5	1.9	31.7	1770	0.1530	0.28	0.361	380	413
1 × 150	4.5	1.9	33.0	2075	0.1240	0.30	0.355	427	471
1 × 185	4.5	2.0	35.0	2490	0.0991	0.33	0.339	482	545
1× 240	4.5	2.0	37.4	3070	0.0754	0.36	0.325	556	643
1 × 300	4.5	2.1	39.9	3730	0.0601	0.40	0.314	627	735
1 × 400	4.5	2.2	43.5	4650	0.0470	0.45	0.302	718	853
1 × 500	4.5	2.3	46.2	5760	0.0366	0.48	0.295	794	981
1 × 630	4.5	2.4	50.4	7275	0.0283	0.54	0.285	904	1133
1 × 800	4.5	2.5	54.3	9310	0.0221	0.60	0.277	972	1293
1 × 1000	4.5	2.7	59.0	11500	0.0176	0.66	0.271	1042	1438

KEY



Note :

1. Current ratings are valid for cables laid under defined conditions at page no.100. For current ratings at deviated conditions apply correction factors as given on page no. 100-101.

BBS CABLES®
more than safety

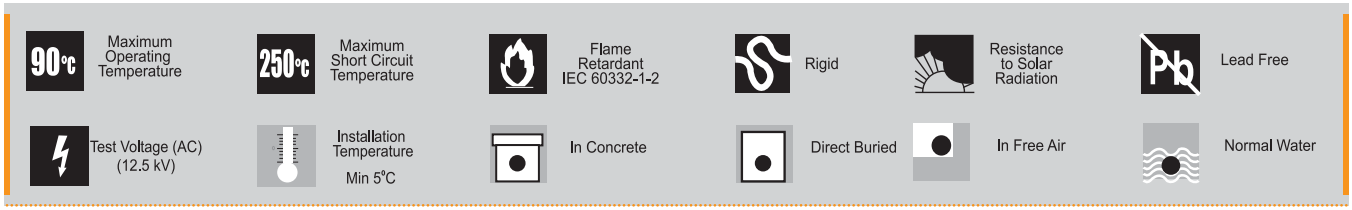
2×HSYRaY
3.6/6(7.2) KV
IEC 60502-2

Application : Suitable for indoor, outdoor, underground and in water for continuous permissible service voltage of 3.8/6.6 KV

Construction : 1. *Annealed copper conductor 2. Inner semiconducting layer 3. XLPE insulation 4. Outer semiconducting layer 5. Metallic screen 6. Separation sheath 7. Aluminium wire armour 8. PVC outer sheath.*

PHYSICAL DATA						*ELECTRICAL DATA*				
Nominal Conductor Area	Nominal Insulation Thickness	Nominal diameter of Al. wire Armour	Nominal Sheath Thickness	Approx. Overall Dia. of Cable	Approx. Weight of Cable	Maximum DC Resistance of Conductor at 20°C	Capacitance of Cable	Inductance of Cable	Current Rating in	
									Ground at 20°C	Air at 30°C
No. × mm²	mm	mm	mm	mm	Kg/Km	Ohm/Km	Micro F/Km	mH/Km	amps	amps
1 × 25	2.5	1.6	1.8	26.0	930	0.7270	0.27	0.486	152	157
1 × 35	2.5	1.6	1.8	27.0	1060	0.5240	0.30	0.463	184	186
1 × 50	2.5	1.6	1.8	28.0	1230	0.3870	0.33	0.432	221	224
1 × 70	2.5	1.6	1.8	30.0	1500	0.2680	0.37	0.408	274	279
1 × 95	2.5	1.6	1.9	32.0	1850	0.1930	0.42	0.388	325	343
1 × 120	2.5	1.6	1.9	33.5	2060	0.1530	0.46	0.371	370	402
1 × 150	2.5	1.6	2.0	35.0	2400	0.1240	0.49	0.361	417	459
1 × 185	2.5	2.0	2.0	37.0	2920	0.0991	0.54	0.352	470	531
1 × 240	2.6	2.0	2.1	40.3	3560	0.0754	0.58	0.340	543	627
1 × 300	2.8	2.0	2.2	43.2	4300	0.0601	0.60	0.330	613	717
1 × 400	3.0	2.0	2.3	47.2	5250	0.0470	0.64	0.319	702	833
1 × 500	3.2	2.5	2.5	52.0	6650	0.0366	0.65	0.318	776	958
1 × 630	3.2	2.5	2.6	56.2	7970	0.0283	0.73	0.307	884	1107
1 × 800	3.2	2.5	2.7	60.2	10365	0.0221	0.81	0.298	951	1264
1 × 1000	3.2	2.5	2.9	65.0	12750	0.0176	0.90	0.291	1019	1406

KEY



Note :

1. Current ratings are valid for cables laid under defined conditions at page no.100. For current ratings at deviated conditions apply correction factors as given on page no. 100-101.

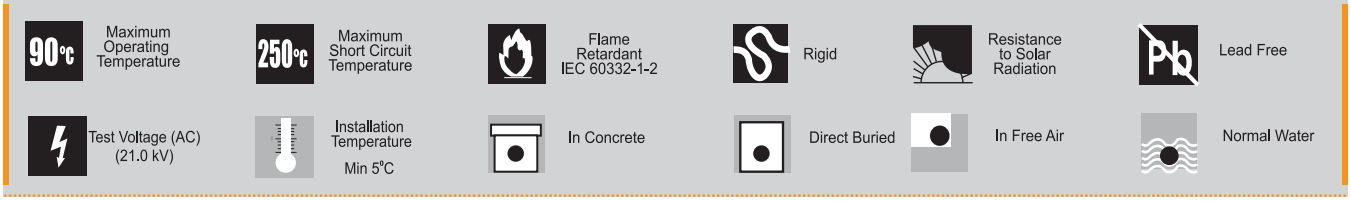
2×HSYRaY
6/10(12) KV
IEC 60502-2

Application : Suitable for indoor, outdoor, underground and in water for continuous permissible service voltage of 6.35/11 KV

Construction : 1. *Annealed copper conductor 2. Inner semiconducting layer 3. XLPE insulation 4. Outer semiconducting layer 5. Metallic screen 6. Separation sheath 7. Aluminium wire armour 8. PVC outer sheath.*

PHYSICAL DATA						*ELECTRICAL DATA*				
Nominal Conductor Area	Nominal Insulation Thickness	Nominal Diameter of Al. wire Armour	Nominal Sheath Thickness	Approx. Overall Dia. of Cable	Approx. Weight of Cable	Maximum DC Resistance of Conductor at 20°C	Capacitance of Cable	Inductance of Cable	Current Rating in	
									Ground at 20°C	Air at 30°C
No. × mm²	mm	mm	mm	mm	Kg/Km	Ohm/Km	Micro F/Km	mH/Km	amps	amps
1 × 25	3.4	1.6	1.8	28.0	1030	0.7270	0.21	0.501	152	157
1 × 35	3.4	1.6	1.8	29.0	1170	0.5240	0.23	0.478	184	186
1 × 50	3.4	1.6	1.8	30.0	1330	0.3870	0.26	0.446	221	224
1 × 70	3.4	1.6	1.9	32.0	1630	0.2680	0.29	0.422	274	279
1 × 95	3.4	1.6	1.9	34.0	1950	0.1930	0.33	0.400	325	343
1 × 120	3.4	1.6	2.0	35.5	2200	0.1530	0.35	0.384	370	402
1 × 150	3.4	2.0	2.1	38.0	2650	0.1240	0.38	0.378	417	459
1 × 185	3.4	2.0	2.1	40.0	3060	0.0991	0.42	0.364	470	531
1 × 240	3.4	2.0	2.2	42.3	3740	0.0754	0.46	0.350	543	627
1 × 300	3.4	2.0	2.2	44.5	4400	0.0601	0.50	0.336	613	717
1 × 400	3.4	2.0	2.4	48.3	5350	0.0470	0.57	0.323	702	833
1 × 500	3.4	2.5	2.5	52.5	6700	0.0366	0.62	0.319	776	958
1 × 630	3.4	2.5	2.6	57.0	7850	0.0283	0.70	0.308	884	1107
1 × 800	3.4	2.5	2.7	61.0	10450	0.0221	0.77	0.299	951	1264
1 × 1000	3.4	2.5	2.9	66.0	12810	0.0176	0.85	0.292	1019	1406

KEY



Note :

1. Current ratings are valid for cables laid under defined conditions at page no.100. For current ratings at deviated conditions apply correction factors as given on page no. 100-101.

BBS CABLES®
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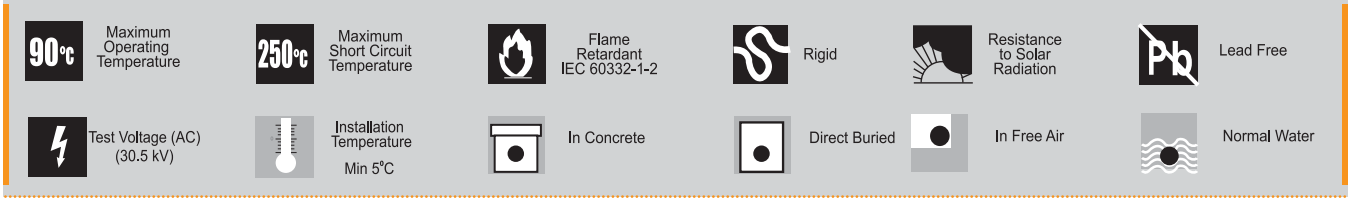
2×HSYRaY
8.7/15(17.5) KV
IEC 60502-2

Application : Suitable for indoor, outdoor, underground and in water for continuous permissible service voltage of 9.4/16.25 KV

Construction : 1. *Annealed copper conductor 2. Inner semiconducting layer 3. XLPE insulation 4. Outer semiconducting layer 5. Metallic screen 6. Separation sheath 7. Aluminium wire armour 8. PVC outer sheath.*

PHYSICAL DATA						*ELECTRICAL DATA*				
Nominal Conductor Area	**Nominal Insulation Thickness**	**Nominal Diameter of Al. wire Armour**	**Nominal Sheath Thickness**	**Approx. Overall Dia. of Cable**	**Approx. Weight of Cable**	**Maximum DC Resistance of Conductor at 20°C**	**Capacitance of Cable**	**Inductance of Cable**	**Current Rating in**	
									Ground at 20°C	**Air at 30°C**
No. × mm²	mm	mm	mm	mm	Kg/Km	Ohm/Km	Micro F/Km	mH/Km	amps	amps
1 × 25	4.5	1.6	1.8	30.5	1160	0.7270	0.17	0.518	154	160
1 × 35	4.5	1.6	1.9	31.5	1310	0.5240	0.19	0.495	186	188
1 × 50	4.5	1.6	1.9	33.0	1500	0.3870	0.21	0.462	223	227
1 × 70	4.5	1.6	1.9	34.5	1770	0.2680	0.23	0.437	276	282
1 × 95	4.5	2.0	2.0	37.5	2200	0.1930	0.26	0.419	327	346
1 × 120	4.5	2.0	2.1	39.0	2470	0.1530	0.28	0.403	372	405
1 × 150	4.5	2.0	2.1	40.5	2800	0.1240	0.30	0.390	418	462
1 × 185	4.5	2.0	2.2	42.0	3260	0.0991	0.33	0.376	472	534
1 × 240	4.5	2.0	2.3	45.0	3920	0.0754	0.36	0.362	545	630
1 × 300	4.5	2.0	2.3	47.2	4600	0.0601	0.40	0.348	614	720
1 × 400	4.5	2.5	2.5	52.0	5760	0.0470	0.45	0.339	704	836
1 × 500	4.5	2.5	2.6	55.0	6950	0.0366	0.48	0.329	778	961
1 × 630	4.5	2.5	2.7	59.3	8560	0.0283	0.54	0.317	886	1110
1 × 800	4.5	2.5	2.8	63.5	10750	0.0221	0.60	0.308	953	1267
1 × 1000	4.5	2.5	3.0	68.0	13100	0.0176	0.66	0.300	1021	1409

KEY



Note :

1. Current ratings are valid for cables laid under defined conditions at page no.100. For current ratings at deviated conditions apply correction factors as given on page no. 100-101.

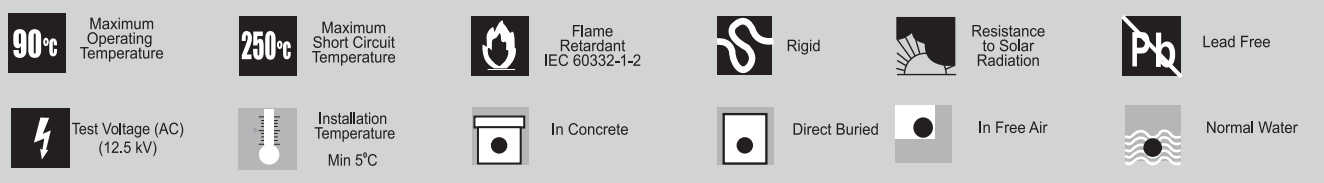
2×SEYY
3.6/6(7.2) KV
IEC 60502-2

Application : Suitable for indoor, outdoor, underground and in water for continuous permissible service voltage of 3.8/6.6 KV

Construction : 1. *Annealed copper conductor 2. Inner semiconducting layer 3. XLPE insulation 4. Outer semiconducting layer 5. Metallic screen 6. Separation sheath 7. PVC outer sheath.*

PHYSICAL DATA					*ELECTRICAL DATA*				
Nominal Conductor Area	**Nominal Insulation Thickness**	**Nominal Sheath Thickness**	**Approx. Overall Dia. of Cable**	**Approx. Weight of Cable**	**Maximum DC Resistance of Conductor at 20°C**	**Capacitance of Cable**	**Inductance of Cable**	**Current Rating in**	
								Ground at 20°C	**Air at 30°C**
No. ×mm²	mm	mm	mm	Kg/Km	Ohm/Km	Micro F/Km	mH/Km	amps	amps
3 × 25	2.5	2.1	42.0	2240	0.7270	0.27	0.387	146	148
3 × 35	2.5	2.1	44.0	2650	0.5240	0.30	0.369	184	185
3 × 50	2.5	2.2	47.0	3170	0.3870	0.33	0.343	220	220
3 × 70	2.5	2.3	51.0	4080	0.2680	0.37	0.325	272	273
3 × 95	2.5	2.5	55.5	5135	0.1930	0.42	0.309	327	336
3 × 120	2.5	2.6	58.5	5885	0.1530	0.46	0.297	366	382
3 × 150	2.5	2.7	62.0	6995	0.1240	0.49	0.289	415	440
3 × 185	2.5	2.8	66.0	8370	0.0991	0.54	0.280	460	508
3 × 240	2.6	3.0	72.0	10450	0.0754	0.58	0.273	532	586
3 × 300	2.8	3.2	79.0	12830	0.0601	0.60	0.267	573	617

KEY



Note :

1. Current ratings are valid for cables laid under defined conditions at page no.100. For current ratings at deviated conditions apply correction factors as given on page no. 100-101.

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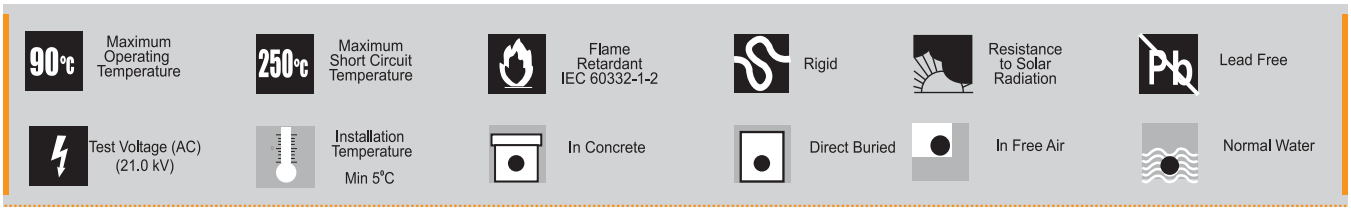
2×SEYY
6/10(12) KV
IEC 60502-2

Application : Suitable for indoor, outdoor, underground and in water for continuous permissible service voltage of 6.35/11 KV

Construction : 1. *Annealed copper conductor 2. Inner semiconducting layer 3. XLPE insulation 4. Outer semiconducting layer 5. Metallic screen 6. Separation sheath 7. PVC outer sheath.*

PHYSICAL DATA					*ELECTRICAL DATA*				
Nominal Conductor Area	**Nominal Insulation Thickness**	**Nominal Sheath Thickness**	**Approx. Overall Dia. of Cable**	**Approx. Weight of Cable**	**Maximum DC Resistance of Conductor at 20°C**	**Capacitance of Cable**	**Inductance of Cable**	**Current Rating in**	
								Ground at 20°C	**Air at 30°C**
No. × mm²	mm	mm	mm	Kg/Km	Ohm/Km	Micro F/Km	mH/Km	amps	amps
3 × 25	3.4	2.2	46.0	2560	0.7270	0.21	0.410	146	148
3 × 35	3.4	2.3	48.5	3055	0.5240	0.23	0.391	184	185
3 × 50	3.4	2.4	51.5	3600	0.3870	0.26	0.364	220	220
3 × 70	3.4	2.5	55.5	4495	0.2680	0.29	0.344	272	273
3 × 95	3.4	2.6	59.5	5555	0.1930	0.33	0.327	327	336
3 × 120	3.4	2.7	63.5	6380	0.1530	0.35	0.314	366	382
3 × 150	3.4	2.8	66.0	7465	0.1240	0.38	0.304	415	440
3 × 185	3.4	2.9	70.0	8865	0.0991	0.42	0.295	460	508
3 × 240	3.4	3.1	76.0	10925	0.0754	0.46	0.284	532	586
3 × 300	3.4	3.3	82.0	13230	0.0601	0.50	0.275	573	617

KEY



Note :

1. Current ratings are valid for cables laid under defined conditions at page no.100. For current ratings at deviated conditions apply correction factors as given on page no. 100-101.

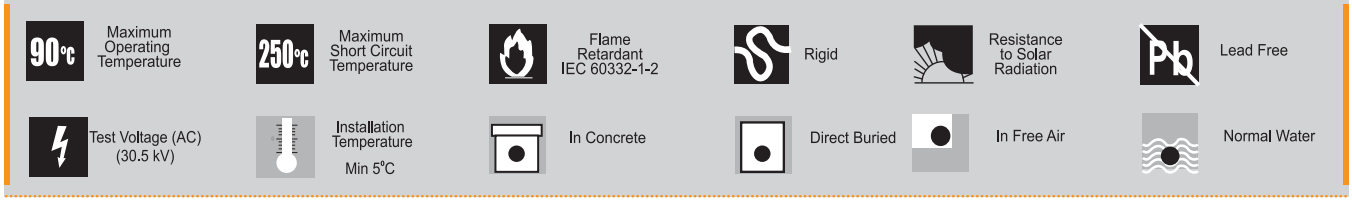
2×SEYY
8.7/15(17.5) KV
IEC 60502-2

Application : Suitable for indoor, outdoor, underground and in water for continuous permissible service voltage of 9.4/16.25 KV

Construction : 1. *Annealed copper conductor 2. Inner semiconducting layer 3. XLPE insulation 4. Outer semiconducting layer 5. Metallic screen 6. Separation sheath 7. PVC outer sheath.*

PHYSICAL DATA					*ELECTRICAL DATA*				
Nominal Conductor Area	**Nominal Insulation Thickness**	**Nominal Sheath Thickness**	**Approx. Overall Dia. of Cable**	**Approx. Weight of Cable**	**Maximum DC Resistance of Conductor at 20°C**	**Capacitance of Cable**	**Inductance of Cable**	**Current Rating in**	
								Ground at 20°C	**Air at 30°C**
No. × mm²	mm	mm	mm	Kg/Km	Ohm/Km	Micro F/Km	mH/Km	amps	amps
3 × 25	4.5	2.4	52.5	3075	0.7270	0.17	0.436	148	151
3 × 35	4.5	2.5	54.5	3540	0.5240	0.19	0.415	186	188
3 × 50	4.5	2.6	57.0	4120	0.3870	0.21	0.386	222	223
3 × 70	4.5	2.7	61.0	5095	0.2680	0.23	0.365	274	276
3 × 95	4.5	2.8	65.0	6190	0.1930	0.26	0.346	329	339
3 × 120	4.5	2.9	68.0	6995	0.1530	0.28	0.332	368	385
3 × 150	4.5	3.0	72.0	8110	0.1240	0.30	0.332	417	443
3 × 185	4.5	3.1	76.5	9550	0.0991	0.33	0.311	462	511
3 × 240	4.5	3.3	82.5	11720	0.0754	0.36	0.299	534	589
3 × 300	4.5	3.4	87.0	13960	0.0601	0.40	0.289	575	620

KEY



Note :

1. Current ratings are valid for cables laid under defined conditions at page no.100. For current ratings at deviated conditions apply correction factors as given on page no. 100-101.

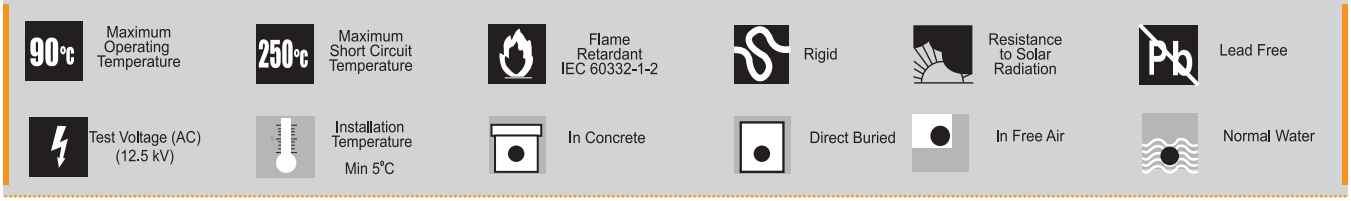
2×SEYFGY
3.6/6(7.2) KV
IEC 60502-2

Application : Suitable for indoor, outdoor, underground and in water for continuous permissible service voltage of 3.8/6.6 KV

Construction : 1. *Annealed copper conductor 2. Inner semiconducting layer 3. XLPE insulation 4. Outer semiconducting layer 5. Metallic screen 6. Separation sheath 7. Flat Steel wire armour with helical steel tape 8. PVC outer sheath.*

PHYSICAL DATA					*ELECTRICAL DATA*				
Nominal Conductor Area	**Nominal Insulation Thickness**	**Nominal Sheath Thickness**	**Approximate Overall Diameter of Cable**	**Approx. Weight of Cable**	**Maximum DC Resistance of Conductor at 20°C**	**Capacitance of Cable**	**Inductance of Cable**	**Current Rating in**	
								Ground at 20°C	**Air at 30°C**
No.× mm²	mm	mm	mm	Kg/Km	Ohm/Km	Micro F/Km	mH/Km	amps	amps
3 × 25	2.5	2.1	43.5	3080	0.7270	0.27	0.387	145	147
3 × 35	2.5	2.2	46.0	3560	0.5240	0.30	0.369	182	183
3 × 50	2.5	2.3	49.0	4160	0.3870	0.33	0.343	218	218
3 × 70	2.5	2.4	53.0	5120	0.2680	0.37	0.325	269	270
3 × 95	2.5	2.5	57.0	6260	0.1930	0.42	0.310	324	333
3 × 120	2.5	2.6	60.0	7130	0.1530	0.46	0.298	362	378
3 × 150	2.5	2.7	64.0	8270	0.1240	0.49	0.289	411	436
3 × 185	2.5	2.9	68.0	9780	0.0991	0.54	0.281	455	503
3 × 240	2.6	3.0	74.0	11900	0.0754	0.58	0.273	527	580
3 × 300	2.8	3.2	80.5	14450	0.0601	0.60	0.267	567	611

KEY



Note :

1. Current ratings are valid for cables laid under defined conditions at page no.100. For current ratings at deviated conditions apply correction factors as given on page no. 100-101.

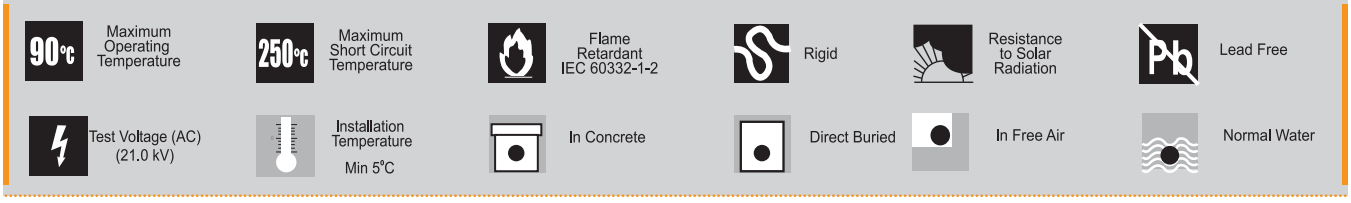
2×SEYFGY
6/10 (12) KV
IEC 60502-2

Application : Suitable for indoor, outdoor, underground and in water for continuous permissible service voltage of 6.35/11 KV

Construction : 1. *Annealed copper conductor 2. Inner semiconducting layer 3. XLPE insulation 4. Outer semiconducting layer 5. Metallic screen 6. Separation sheath 7. Flat Steel wire armour with helical steel tape 8. PVC outer sheath.*

PHYSICAL DATA					*ELECTRICAL DATA*				
Nominal Conductor Area	Nominal Insulation Thickness	Nominal Sheath Thickness	Approximate Overall Diameter of Cable	Approx. Weight of Cable	Maximum DC Resistance of Conductor at 20°C	Capacitance of Cable	Inductance of Cable	Current Rating in	
								Ground at 20°C	Air at 30°C
No. × mm²	mm	mm	mm	Kg/Km	Ohm/Km	Micro F/Km	mH/Km	amps	amps
3 × 25	3.4	2.2	47.5	3460	0.7270	0.21	0.410	145	147
3 × 35	3.4	2.3	50.5	4020	0.5240	0.23	0.391	182	183
3 × 50	3.4	2.4	53.5	4630	0.3870	0.26	0.363	218	218
3 × 70	3.4	2.6	57.0	5570	0.2680	0.29	0.344	269	270
3 × 95	3.4	2.7	61.5	6765	0.1930	0.33	0.327	324	333
3 × 120	3.4	2.8	65.0	7750	0.1530	0.35	0.313	362	378
3 × 150	3.4	2.9	68.0	8830	0.1240	0.38	0.304	411	436
3 × 185	3.4	3.0	72.5	10320	0.0991	0.42	0.294	455	503
3 × 240	3.4	3.2	77.5	12470	0.0754	0.46	0.284	527	580
3 × 300	3.4	3.3	83.0	14900	0.0601	0.50	0.275	567	611

KEY



Note :

1. Current ratings are valid for cables laid under defined conditions at page no.100. For current ratings at deviated conditions apply correction factors as given on page no. 100-101.

BBS CABLES®
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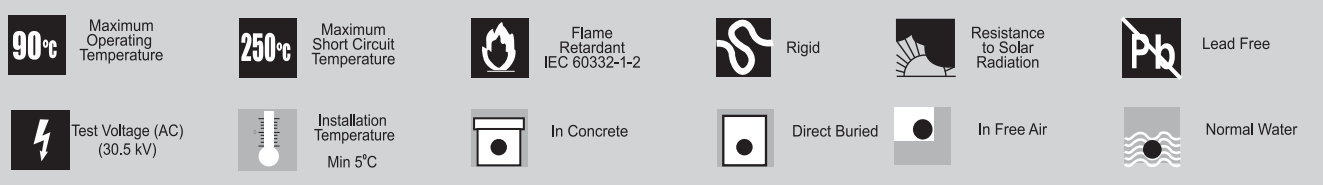
2×SEYFGY
8.7/15(17.5) KV
IEC 60502-2

Application : Suitable for indoor, outdoor, underground and in water for continuous permissible service voltage of 9.4/16.25 KV

Construction : 1. *Annealed copper conductor 2. Inner semiconducting layer 3. XLPE insulation 4. Outer semiconducting layer 5. Metallic screen 6. Separation sheath 7. Flat Steel wire armour with helical steel tape 8. PVC outer sheath.*

PHYSICAL DATA					*ELECTRICAL DATA*				
Nominal Conductor Area	**Nominal Insulation Thickness**	**Nominal Sheath Thickness**	**Approximate Overall Diameter of Cable**	**Approx. Weight of Cable**	**Maximum DC Resistance of Conductor at 20°C**	**Capacitance of Cable**	**Inductance of Cable**	**Current Rating in**	
								Ground at 20°C	**Air at 30°C**
No. × mm²	mm	mm	mm	Kg/Km	Ohm/Km	Micro F/Km	mH/Km	amps	amps
3 × 25	4.5	2.4	54.0	4100	0.7270	0.17	0.436	145	147
3 × 35	4.5	2.5	56.0	4620	0.5240	0.19	0.416	184	186
3 × 50	4.5	2.6	59.0	5250	0.3870	0.21	0.387	220	222
3 × 70	4.5	2.7	63.0	6280	0.2680	0.23	0.366	271	273
3 × 95	4.5	2.8	67.0	7500	0.1930	0.26	0.347	326	336
3 × 120	4.5	2.9	70.5	8420	0.1530	0.28	0.332	364	380
3 × 150	4.5	3.0	73.5	9550	0.1240	0.30	0.322	413	439
3 × 185	4.5	3.2	78.0	11100	0.0991	0.33	0.311	457	506
3 × 240	4.5	3.3	83.5	13400	0.0754	0.36	0.300	530	583
3 × 300	4.5	3.5	89.0	15700	0.0601	0.40	0.289	570	614

KEY



Note :

1. Current ratings are valid for cables laid under defined conditions at page no.100. For current ratings at deviated conditions apply correction factors as given on page no. 100-101.

2×SEYRGY
3.6/6(7.2) KV
IEC 60502-2

Application : Suitable for indoor, outdoor, underground and in water for continuous permissible service voltage of 3.8/6.6 KV

Construction : 1. *Annealed copper conductor 2. Inner semiconducting layer 3. XLPE insulation 4. Outer semiconducting layer 5. Metallic screen 6. Separation sheath 7. Round Steel wire armour 8. PVC outer sheath.*

PHYSICAL DATA						*ELECTRICAL DATA*				
Nominal Conductor Area	**Nominal Insulation Thickness**	**Nominal Diameter of round steel wire Armour**	**Nominal Sheath Thickness**	**Approx. Overall Dia. of Cable**	**Approx. Weight of Cable**	**Maximum DC Resistance of Conductor at 20°C**	**Capacitance of Cable**	**Inductance of Cable**	**Current Rating in**	
									Ground at 20°C	**Air at 30°C**
No. × mm²	mm	mm	mm	mm	Kg/Km	Ohm/Km	Micro F/Km	mH/Km	amps	amps
3 × 25	2.5	2.0	2.2	46.3	3650	0.7270	0.27	0.387	145	147
3 × 35	2.5	2.0	2.3	48.5	4160	0.5240	0.30	0.369	182	183
3 × 50	2.5	2.5	2.4	52.5	5190	0.3870	0.33	0.343	218	218
3 × 70	2.5	2.5	2.5	56.5	6300	0.2680	0.37	0.325	269	270
3 × 95	2.5	2.5	2.7	61.0	7520	0.1930	0.42	0.310	324	333
3 × 120	2.5	2.5	2.8	64.3	8440	0.1530	0.46	0.298	362	378
3 × 150	2.5	2.5	2.9	68.0	9670	0.1240	0.49	0.289	411	436
3 × 185	2.5	2.5	3.0	72.1	11240	0.0991	0.54	0.281	455	503
3 × 240	2.6	2.5	3.2	78.0	13560	0.0754	0.58	0.273	527	580
3 × 300	2.8	3.15	3.4	86.0	17100	0.0601	0.60	0.267	567	611

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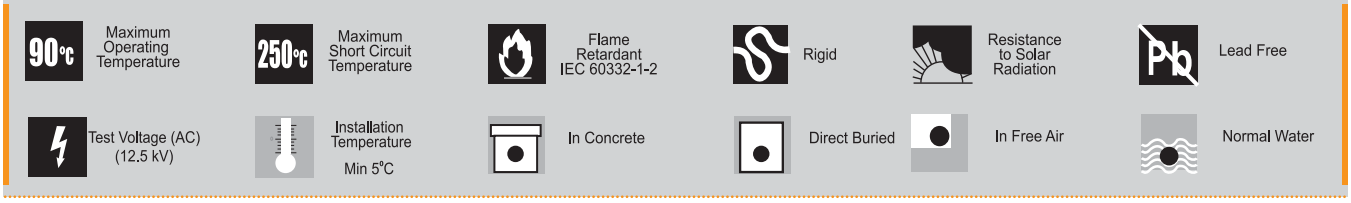

Note :

1. Current ratings are valid for cables laid under defined conditions at page no.100. For current ratings at deviated conditions apply correction factors as given on page no. 100-101.

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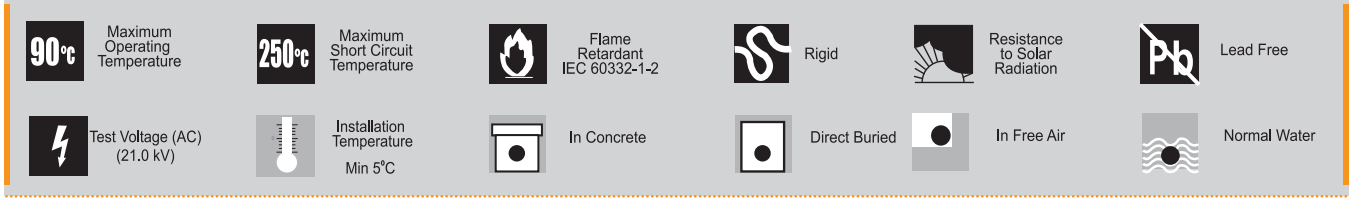
2×SEYRGY
6/10(12) KV
IEC 60502-2

Application : Suitable for indoor, outdoor, underground and in water for continuous permissible service voltage of 6.35/11 KV

Construction : 1. *Annealed copper conductor 2. Inner semiconducting layer 3. XLPE insulation 4. Outer semiconducting layer 5. Metallic screen 6. Separation sheath 7. Round Steel wire armour 8. PVC outer sheath.*

PHYSICAL DATA						*ELECTRICAL DATA*				
Nominal Conductor Area	**Nominal Insulation Thickness**	**Nominal diameter of round steel wire Armour**	**Nominal Sheath Thickness**	**Approx. Overall Dia. of Cable**	**Approx. Weight of Cable**	**Maximum DC Resistance of Conductor at 20°C**	**Capacitance of Cable**	**Inductance of Cable**	**Current Rating in**	
									Ground at 20°C	**Air at 30°C**
No. × mm²	mm	mm	mm	mm	Kg/Km	Ohm/Km	Micro F/Km	mH/Km	amps	amps
3 × 25	3.4	2.0	2.3	50.8	4130	0.7270	0.21	0.410	145	147
3 × 35	3.4	2.5	2.4	54.5	5195	0.5240	0.23	0.391	182	183
3 × 50	3.4	2.5	2.5	57.5	5835	0.3870	0.26	0.363	218	218
3 × 70	3.4	2.5	2.7	61.0	6920	0.2680	0.29	0.344	269	270
3 × 95	3.4	2.5	2.8	65.5	8140	0.1930	0.33	0.327	324	333
3 × 120	3.4	2.5	2.9	69.0	9130	0.1530	0.35	0.313	362	378
3 × 150	3.4	2.5	3.0	72.5	10340	0.1240	0.38	0.304	411	436
3 × 185	3.4	2.5	3.1	76.5	11940	0.0991	0.42	0.294	455	503
3 × 240	3.4	3.15	3.3	83.0	15070	0.0754	0.46	0.284	527	580
3 × 300	3.4	3.15	3.5	89.0	17690	0.0601	0.50	0.275	567	611

KEY



Note :

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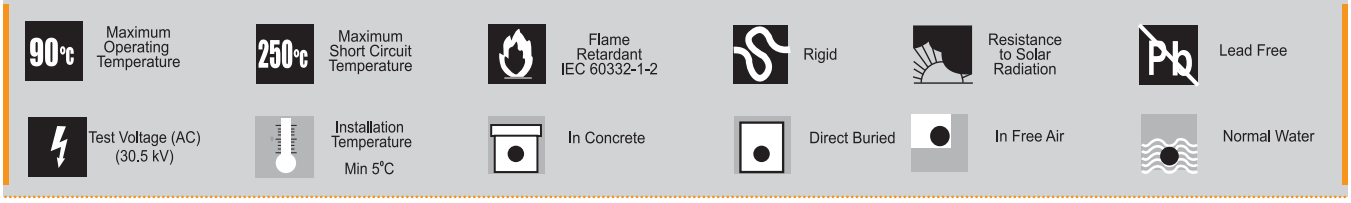
2×SEYRGY
8.7/15(17.5) KV
IEC 60502-2

Application : Suitable for indoor, outdoor, underground and in water for continuous permissible service voltage of 9.4/16.25 KV

Construction : 1. *Annealed copper conductor 2. Inner semiconducting layer 3. XLPE insulation 4. Outer semiconducting layer 5. Metallic screen 6. Separation sheath 7. Round Steel wire armour 8. PVC outer sheath.*

PHYSICAL DATA						*ELECTRICAL DATA*				
Nominal Conductor Area	**Nominal Insulation Thickness**	**Nominal diameter of round steel wire Armour**	**Nominal Sheath Thickness**	**Approx. Overall Dia. of Cable**	**Approx. Weight of Cable**	**Maximum DC Resistance of Conductor at 20°C**	**Capacitance of Cable**	**Indutance of Cable**	**Current Rating in**	
									Ground at 20°C	**Air at 30°C**
No. × mm²	mm	mm	mm	mm	Kg/Km	Ohm/Km	Micro F/Km	mH/Km	amps	amps
3 × 25	4.5	2.5	2.5	58.0	5310	0.7270	0.17	0.436	145	147
3 × 35	4.5	2.5	2.6	60.0	5900	0.5240	0.19	0.416	184	186
3 × 50	4.5	2.5	2.7	63.0	6590	0.3870	0.21	0.387	220	222
3 × 70	4.5	2.5	2.8	67.0	7730	0.2680	0.23	0.366	271	273
3 × 95	4.5	2.5	3.0	71.5	9025	0.1930	0.26	0.347	326	336
3 × 120	4.5	2.5	3.1	74.5	9990	0.1530	0.28	0.332	364	380
3 × 150	4.5	2.5	3.2	78.0	11220	0.1240	0.30	0.322	413	439
3 × 185	4.5	3.15	3.3	83.5	13750	0.0991	0.33	0.311	457	506
3 × 240	4.5	3.15	3.5	89.5	16190	0.0754	0.36	0.300	530	583
3 × 300	4.5	3.15	3.6	94.5	78740	0.0601	0.40	0.289	570	614

KEY



Note :

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A2xSEYFGY
6/10 (12) KV
IEC 60502-2

Application : Suitable for indoor, outdoor, underground and in water for continuous permissible service voltage of 6.35/11 KV

Construction : 1. *Annealed Aluminium copper conductor 2. Inner semiconducting layer 3. XLPE insulation 4. Outer semiconducting layer 5. Metallic screen 6. Separation sheath 7. Flat Steel wire armour with helical steel tape 8. PVC outer sheath.*

PHYSICAL DATA					*ELECTRICAL DATA*			
Nominal Conductor Area	**Minimum Insulation Thickness**	**Nominal Sheath Thickness**	**Approx. Overall Dia. of Cable**	**Approx. Weight of Cable**	**Maximum DC Resistance of Conductor at 20°C**	**Capacitance of Cable**	**Current Rating in**	
							Ground at 20°C	**Air at 30°C**
No. x mm2	mm	mm	mm	Kg/Km	Ohm/Km	Micro /Km	amps	amps
3 X 70	3.4	2.6	57.0	3655	0.443	0.298	205	233
3 X 95	3.4	2.7	61.5	4250	0.320	0.334	248	284
3 X 120	3.4	2.8	65.0	4735	0.253	0.365	285	315
3 X 150	3.4	2.9	68.0	5265	0.206	0.392	312	355
3 X 185	3.4	3.0	72.5	5975	0.164	0.430	345	400
3 X 240	3.4	3.2	77.5	6950	0.125	0.476	396	477
3 X 300	3.4	3.3	83.0	8055	0.100	0.524	435	512

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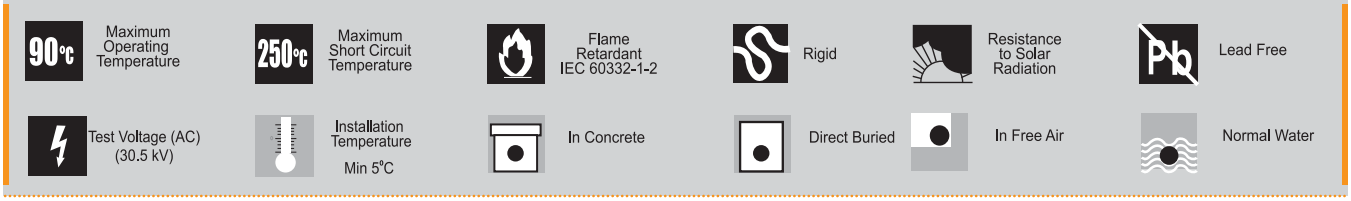

Note :

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OVERHEAD CONDUCTORS

AAC
BDS-1036, BS-215, Part-1 & IEC-207
ASTM B233

All Aluminium Conductors (AAC)

As per BS-215-1, BDS-1036, ASTM B230, B233

Code Name	Nominal Aluminium Area	Equivalent Copper Area	Number & Diameter of Al Wires		Overall Diameter of Conductor	Nominal Breaking Load	Max. DC Resistance at 20°C	Approx. Weight	Current Rating
-	mm^2	mm^2	no.	mm	mm	kgf	ohm/km	kg/km	amps
MIDGE	22	14.2	7	2.06	6.18	408	1.227	64	114
APHIS	25	16.1	3	3.35	7.20	419	1.081	73	139
GNAT	25	16.1	7	2.21	6.60	468	1.068	74	124
WEEVIL	30	19.4	3	3.66	7.80	496	0.9082	87	144
MOSQUITO	35	22.6	7	2.59	7.80	617	0.7731	102	147
LADYBIRD	40	25.8	7	2.79	8.40	701	0.6694	118	159
ANT	50	32.3	7	3.10	9.30	846	0.5419	145	181
FLY	60	38.7	7	3.40	10.20	1010	0.4505	174	199
BLUEBOTTLE	70	45.2	7	3.66	11.00	1156	0.3884	203	219
EARWIG	75	48.4	7	3.78	11.40	1218	0.3645	216	227
GRASSHOPPER	80	51.6	7	3.91	11.70	1303	0.3405	232	238
CLEGG	90	58.1	7	4.17	12.50	1482	0.2994	264	256
WASP	100	64.5	7	4.39	13.20	1632	0.2702	292	271
BEETLE	100	64.5	19	2.67	13.40	1776	0.2699	293	274
BEE	125	80.6	7	4.90	14.70	2033	0.2169	364	308
CRICKET	150	96.8	7	5.36	16.10	2432	0.1814	436	342
HORNET	150	96.8	19	3.25	16.30	2519	0.1825	435	346
CATERPILLER	175	113	19	3.53	17.70	2920	0.1547	513	380
CHAFER	200	129	19	3.78	18.90	3304	0.1349	588	414
SPIDER	225	145	19	3.99	20.00	3672	0.1214	655	439
COCKROACH	250	161	19	4.22	21.10	4120	0.1083	733	470
BUTTERFLY	300	194	19	4.65	23.30	4966	0.08916	890	528
MOTH	350	226	19	5.00	25.00	5748	0.07709	1029	572
DRONE	350	226	19	3.58	25.10	5858	0.07723	1027	572
LOCUST	400	258	19	5.36	26.80	6601	0.06714	1182	626
CENTIPEDE	400	258	37	3.78	26.50	6434	0.06944	1145	619
MAYBUG	450	290	37	4.09	28.60	7547	0.05921	1340	676
SCORPION	500	323	37	4.27	29.90	8156	0.05445	1461	710
CICADA	600	387	37	4.65	32.60	9682	0.04587	1732	784
TARANTULA	750	484	37	5.23	36.60	12247	0.03628	2192	899

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AAC-INS & AAC

BS-215, Part-1, BS-6485

Insulated All Aluminium Conductor (AAC-INS)

As per BS-215, Part-1, BS 6485, ASTM B230, B233

Code Name	Cross Sectional Area of Al	Strands & Wire Diameter	Dia. Of Bare Conductor	Minimum Thickness of Insulation	Approx. Overall Diameter	Nominal Breaking Load	Max. DC Resistance at 20°C	Approx. Weight of Ins. Cont	Current Rating
-	mm^2	no./mm	mm	mm	mm	kgf	ohm/km	kg/km	amps
MIDGE	23.3	7/2.06	6.18	0.8	8.2	408	1.227	95	106
GNAT	26.9	7/2.21	6.63	0.8	8.6	468	1.068	110	115
MOSQUITO	36.9	7/2.59	7.77	0.8	9.8	617	0.7731	143	134
ANT	52.8	7/3.10	9.30	0.8	11.3	846	0.5419	215	172
FLY	63.6	7/3.40	10.20	0.8	12.2	1010	0.4505	230	191
BLUE BOTTLE	73.6	7/3.66	10.98	0.8	13.0	1156	0.3884	261	210
EARWIG	78.6	7/3.78	11.34	0.8	13.4	1218	0.3645	315	218
GRASSHOPPER	84.1	7/3.91	11.73	0.8	13.8	1303	0.3405	292	228
CLEGG	95.6	7/4.17	12.51	0.8	14.6	1482	0.2994	330	245
WASP	106.0	7/4.39	13.17	0.8	15.5	1632	0.2702	389	260

All Aluminium Conductor (AAC)

As per BDS-1036, ASTM B 231 (Class-A &AA), IEC-207, ASTM B230, B233

Code Name	Nominal Aluminium Area		Number & Diameter of Al. Wires		Overall Diamter of Conductor	Nominal Breaking Load	Max. DC Resistance at 20°C	Approx Weight	Current Rating
-	AWG or MCM	mm	no.	mm	mm	kgf	ohm/km	kg/km	amps
ROSE	4	21.16	7	1.96	5.9	375	1.3620	58	104
IRIS	2	33.61	7	2.47	7.4	574	0.8574	92	136
POPPY	1/0	53.48	7	3.12	9.4	846	0.5390	148	180
ASTER	2/0	67.42	7	3.5	10.5	1066	0.4276	186	207
PHLOX	3/0	85.03	7	3.93	11.8	1291	0.3390	234	237
OXLIP	4/0	107.2	7	4.42	13.3	1628	0.2688	296	273
VALERIAN	250	126.7	19	2.91	14.6	2044	0.2275	348	305
DAISY	266.8	135.2	7	4.96	14.9	2053	0.2133	373	313
PEONY	300	152	19	3.19	16	2404	0.1896	419	340
TULIP	336.4	170.5	19	3.38	16.9	2697	0.1692	470	364
DAFFODIL	350	177.4	19	3.45	17.3	2805	0.1625	490	373
GOLDENTUFT	450	228	19	3.91	19.6	3462	0.1264	629	432
COSMOS	477	242	19	4.02	20.1	3670	0.1193	665	447
ZINNIA	500	253	19	4.12	20.6	3847	0.1137	698	459
DAHLIA	556.5	282	19	4.35	21.8	4282	0.1023	779	489

ACSR

BDS-1037
BS-215-2

Aluminium Conductor Steel Reinforced (ACSR)

As per BDS-1037, BS-215, Part-2&IEC209

Code Name	Cross Sectional Area		No. & Dia of Wire		Overall Diameter of Conductor	Colculated Breaking Load	Max.DC Resistance at 20°C	Approx. Weight of Conductor			Current Rating
	Condocutor	Al	Al	Steel				Condoctor	Al	Steel	
-	mm^2	mm^2	mm	mm	mm	kgf	ohm/km	kg/km	kg/km	kg/km	amps
SQUIRREL	24.46	20.97	6/2.11	1/2.11	6.33	806	1.37	85	58	27	109
GOPHER	30.60	26.23	6/2.36	1/2.36	7.08	979	1.093	106	72	34	126
WEASEL	36.86	31.6	6/2.59	1/2.59	7.77	1168	0.9077	108	73	35	134
FOX	42.79	36.66	6/2.79	1/2.79	8.37	1346	0.7827	149	101	48	147
FERRET	49.46	42.39	6/3.00	1/3.00	9.00	1550	0.6766	172	117	55	161
RABBIT	61.67	52.85	6/3.35	1/3.35	10.05	1876	0.5426	215	146	69	185
HORSE	116.16	73.36	12/2.79	7/2.79	13.95	6241	0.3936	538	202	336	268
RACOON	91.92	78.79	6/4.1	1/4.10	12.3	2774	0.3623	321	218	103	231
CAT	110.78	94.96	6/4.5	1/4.50	13.5	3335	0.3008	387	263	124	248
HARE	122.42	104.93	6/4.72	1/4.72	14.16	3671	0.2733	425	289	136	273
DOG	118.53	104.98	6/4.72	7/1 .57	14.15	3335	0.2733	395	289	106	273
TIGER	161.85	131.1	30/2.36	7/2.36	16.52	5914	0.2204	603	362	241	323
WOLF	194.94	158.06	30/2.59	7/2.59	18.13	7056	0.1828	726	436	290	355
DINGO	167.46	158.57	18/3.35	1/3.35	16.75	3640	0.1815	506	437	69	349
CARACAL	194.48	184.24	18/3.61	1/3.61	18.05	4181	0.1563	588	508	80	383
PANTHER	261.54	212.06	30/3.00	7/3.00	21.00	9402	0.1363	974	585	289	421
LION	293.87	238.27	30/3.18	7/3.18	22.26	10258	0.1212	1094	657	437	448
ELK	588.46	477.13	30/4.50	7/4.50	31.5	20211	0.06058	2190	1315	875	679

As per BDS -1037, ASTM B 232 & IEC-209

Code Name	Cross Sectional Area		No. & Dia of Wire		Overall Diameter of Conductor	Colculated Breaking Load	Max.DC Resistance at 20° C	Approx. weight of Conductor			Current Rating
	AWG or	Al	-	-				Condoctor	Al	Steel	
-	MCM	mm^2	mm	mm	mm	kgf	ohm/km	kg/km	kg/km	kg/km	amps
SWAN	4	21.15	6/2.12	1/2.12	6.36	846	1.356	85	58	27	105
SWALLOW	3	26.65	6/2.38	1/2.38	7.14	1040	1.076	108	73	35	121
SPARROW	2	33.58	6/2.67	1/2.67	8.01	1290	0.853	136	92	44	139
ROBIN	1	42.39	6/3.00	1/3.00	9	1620	0.6765	171	116	55	160
RAVEN	,1/0	53.48	6/3.37	1/3.37	10.11	1990	0.5364	216	147	69	183
QUAIL	,2/0	67.42	6/3.78	1/3.78	11.34	2400	0.4255	272	185	87	210
PIGEON	,3/0	85.03	6/4.25	1/4.25	12.75	3010	0.3373	345	234	111	241
PENGUIN	,4/0	107.23	6/4.77	1/4.77	14.31	3790	0.2676	433	294	139	276
WAXWING	266.8	135.16	6/3.09	1/3.09	15.45	3120	0.2133	430	372	58	319
OSTRICH	300	152.00	26/2.73	7/2.12	17.28	5760	0.1906	614	420	194	346
MERLIN	336.4	170.45	18/3.47	1/3.47	17.35	3940	0.1692	543	469	74	366
CHICKADEE	397.5	201.42	18/3.77	1/3.77	18.85	4510	0.1432	642	554	88	403
PELICAN	477	241.68	18/4.14	1/4.14	20.7	5330	0.1193	774	668	106	449
HAWK	477	241.68	26/3.44	7/2.68	21.8	8870	0.11682	977	667	310	455
HEN	477	241.68	30/3.20	7/3.20	22.4	10800	0.1202	1109	337	442	457
GROSBEAK	636	322.46	26/3.97	7/3.09	25.15	11400	0.08989	1302	893	409	538

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ACSR & Bare Aluminium Wire

Bare ACSR Conductor

As per ASTM B232, IEC 209, BDS-1037, BS-215-2

REB Item No.	Size	Code Name	Stranding & wire Diameter		Oveall Diameter	Minimum Breaking Load	Max DC Resistance at 20°C	Approx. Weight
			Steel	Aluminium				
			nos./cm	nos./cm	cm	kg	ohm/km	kg/km
D-I	3 AWG	SWALLOW	1 /.2379	6 / .23799	0.7137	1014	1.073758	108
D-2	1/0 AWG	RAVEN	1 /.3370	6 / .33705	1.0109	1926	0.535015	216
D-3	4/0 AWG	PENGUIN	1 / .4770	6 /. 47701	1.43	3760	0.267196	433
D-28	477 MCM	HAWK	7 / .2674	26 / .3439	2.1793	8845	0.11682	975

English Unit Equivalents

REB Item No.	Size	Code Name	Stranding & wire diameter		Oveall Diameter	Minimum Breaking Load	Max DC Resistance at 20°C	Approx. Weight
			Steel	Aluminium				
			nos./inch	nos./inch	inch	lbs	ohm/mile	lbs/mile
D-I	3 AWG	SWALLOW	1 / .0937	6 / .0937	0.281	2235	1.728	381
D-2	1/0 AWG	RAVEN	1 /.1327	6/.1327	0.398	4245	0.861	768
D-3	4/0 AWG	PENGUIN	1 /.1 878	6 /.1 878	0.563	8290	0.43	1537
D-28	477 MCM	HAWK	7 /.1053	26 /.1 354	0.858	19500	0.188	3468

Bare Aluminium Wire

As per ASTM B 230, B-609, B531, B193 & 233

Description	REB Item.	Size	Approximate Dia of Wire	Approximate Conductor Dia	Calculated Breaking Load	Max DC Reistance at 20°C	Approx. Weight
			nos./mm	mm	kg	ohm/km	kg/km
Hard drawn Aluminium Grounding wire	D-4	4AWG	1/5.189	5.189	342 (min)	1.336	57.2
Annealed Aluminium Tie wire	D-5	4AWG	1/5.189	5.189	167 (max)	1.325	57.2

MHD Copper & Service Drop Cable

Bare Copper Conductor and Wire

As per ASTM B3 & ASTM B2, ASTM B193

Description	REB Item.	Size	Approximate Dia. of Wire	Approximate Conductor Dia.	Calculated Breaking Load	Max DC Reistance at 20°C	Approx. Weight
			nos. /mm	mm	kg	ohm/km	kg/km
Annealed copper wire	D-6	6 AWG	1/4.115	4.115	346 (max)	1.321	118
MHD stranded copper conductor	D-7	3 AWG	3/3.360	7.254	1070	0.683	239
MHD stranded copper conductor	D-8	1/0 AWG	7/3.119	9.347	2155	0.338	483
MHD stranded copper conductor	D-9	4/0 AWG	7/4.420	13.259	3694	0.166	956
MHD stranded copper conductor	DS-10	2/0 AWG	19/2.130	10.64	2162	0.271	613
MHD stranded copper conductor	DS-9	4/0 AWG	19/2.680	13.41	4371	0.173	970
MHD stranded copper conductor	DS-37	350 MCM	37/2.470	17.30	5662	0.9898	1608
MHD stranded copper conductor	DS-38	500 MCM	37/2.951	20.6	10231	0.0700	2297
MHD stranded copper conductor	D-10	2/0 AWG	7/3.502	10.5	2694	0.2750	616

Pre-assembled XLPE Insulated Aluminium Conductors with ACSR Messenger Wire

As PER ASTM B231, B232, ICEA-S-66-524 (NEMA WC7)
Duplex and Quaduplex Cables

REB Item No.	Conductor AWG		Conductor Code Name		Number of Phase	Conductor Stranding & Approximate Diameter			Insulation Thickness (XLPE)	Overall Conductor Diameter		Max. DC. Resistance at 20°C		Approx. weight
	Phase	Neutral	Phase	Neutral		Phase	Neutral			Insulated phase each	Neutral	Phase	Neutral	
						AL	AL	Steel						
						nos./mm	nos./mm	nos./mm	mm	mm	mm	ohm/km	ohm/km	kg/km
D-11	6	6	PEACHBELL	TURKEY	1	7/1.56	6/1.68	1/1.68	45/1.143	6.97	5.04	2.169	2.1526	114
D-12	3	3	LILY	SWALLOW	1	7/2.20	6/2.38	1/2.38	45/1.143	8.89	7.14	1.0709	1.074	212
D-14	3	3	LILY	SWALLOW	3	7/2.20	6/2.38	1/2.38	45/1.143	8.89	7.14	1.0709	1.074	420
D-15	1/0	1/0	POPPY	RAVEN	3	7/3.12	6/3.37	1/3.37	60/1.524	12.41	10.11	0.5344	0.5344	835
D-20	4	4	ROSE	SWAN	3	7/1.96	6/2.12	1/2.12	45/1.143	8.17	6.36	1.3551	1.3522	340
D-24	4/0	4/0	OXLIP	PENGUIN	3	7/4.42	6/4.77	1/4.77	60/1.524	16.31	14.31	0.2667	0.2667	1580
D-25	6	6	PEACHBELL	TURKEY	3	7/1.56	6/1.68	1/1.68	45/1.143	6.91	5.04	2.169	2.157	230

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MHD INS Copper & AAC

Medium Hard Drawn XLPE Insulated Copper Conductor

As PER ASTM B2 & B8, ICEA-S-66-524 (NEMA WC7)

REB Item No.	Conductor Size	Number of Strands/mm	Insulation Thickness	Overall Diameter	Nominal Length		Approx. Weight	
			mils	mils	meter	feet	kgs	lbs
D-16	3 AWG	3/3.36	60	405	304.8	1000	88	194
D-17	1/0 AWG	7/3.12	62	481	804.7	2640	436	961
D-18	4/0 AWG	7/4.42	62	630	536.4	1760	563	1242
D-19	1000 MCM	61 /3.25	94	1306	228.6	750	1108	2442

Bare Aluminium Alloy Conductor

As PER ASTM B 98-90 & B 399-97

REB Item No.	Size	Code Name	Number of Strand	Strand Diameter		Conductor Overall Diameter		Conductor DC Resistance 20°C		Ultimate Conductor Strength	Approx. Weight
	kcmils			inch	mm	inch	mm	ohm/mile	ohm/km	kg	kg/km
D-29	77.47	AMES	7	0.1052	2.67	0.316	8.01	1.373	0.8532	1274	107.5
D-30	123.2	AZUSA	7	0.1327	3.37	0.398	10.11	0.861	0.5350	1937	171.0
D-31	246.9	ALLIANCE	7	0.1878	4.77	0.563	14.31	0.4308	0.2678	3884	342.6
D-32	559.5	DARIEN	19	1.1716	4.36	0.858	21.80	0.1900	0.1180	8522	776.3

HDPE Insulated ACSR Conductor

HDPE Insulated ACSR Conductor:

As per ASTM B 232 B 230 B 498

REB Item Code	Conductor Size	Strand & Wire Diameter		Insulation Thickness	Approx. Overall Diameter	Rated Breaking Strength	Max. DC Resistance at 20°C	Approx. Cable Weight
		Aluminum	Steel					
	AWG	no./mm	no./mm	mm	mm	kgf	ohm/km	Kg/km
D-59	2	6/2.67	1/2.67	3.81	15.65	1228	0.853	274
D-61	1/0	6/3.37	1/3.37	3.81	17.73	1887	0.535	380
D-62	4/0	6/4.77	1/4.77	3.81	21.93	3598	0.2672	645

PVC Insulated Aerial Cable

PVC Insulated Aerial Cable

As per ASTM B 230 B 231 B 232 B 498

REB Item Code	Conductor AWG		Number of Phase	Conductor Stranding & Diameter			Insulation Thickness (PVC)	Overall Conductor Diameter		Max. DC Resistance at 20°C		Approx. Cable Weight
				Phase	Neutral							
	Phase	Neutral		Al	Al	Steel		Insulated Phase	Neutral	Phase	Neutral	
				no./mm	no./mm	no./mm	mm	mm	mm	ohm/km	ohm/km	kg/km
D-63	6	6	1	7/1.56	6/1.68	1/1.68	1.524	7.72	5.04	2.17	2.157	140

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Stranded Galvanized Steel Wire / Earth Wire

Stranded Galvanized Steel Wire (Guy Wire) / Earth Wire

As per ASTM B 498-74 Class-A & BS-183

Code Name	Strands / Wire Diameter	Overall Diameter	Nominal Breaking Load	Approx. Cable Weight
	no. / mm	mm	kgf	Kg/km
Guy Wire	7 / 2.36	7.08	3885	240
Guy Wire	7 / 3.15	9.45	6400	430
Earth Wire	7 / 3.15	9.45	6400	430

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TECHNICAL DATA

CURRENT CARRYING CAPACITY OF CABLES MADE ACCORDING TO BDS 900 & BS 6004

1. DEFINED CONDITIONS:

The basis of the current ratings of cables has been so chosen for normal ambient temperature of 35° C and for normal laying conditions as follows:

A. For Groups of unenclosed systems of single core cables :

1) The horizontal clearance between the systems is around 150 mm and not less than six times the individual cables diameter or one time the overall width of the individual system
2) The vertical clearance between systems is not less than 150 mm.
3) If the numbers of systems are more four, they are installed in a horizontal plane.

B. For Groups of unenclosed multi core cables :

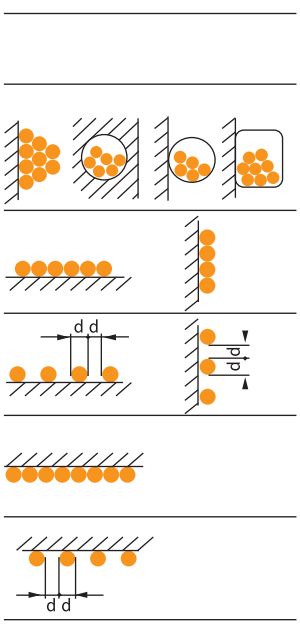
1) The horizontal clearance between the systems is around 150 mm and not less than six times the individual cables diameter
2) The vertical clearance between cables is not less than 150 mm
3) If the numbers of cables are more than four, they are installed in a horizontal plane

2. DEVIATED CONDITIONS

If the actual conditions of installations are not same as normal conditions the current rating given are to be multiplied with the rating factors as given below:

Ambient Temperature °C	25	30	35	40	45	50	55	60
Rating factors for cables having excess-current protection which will operate within four hours at 1.5times of the designed load current.	1.13	1.06	1.0	0.93	0.84	0.76	0.65	0.53
Rating factors for cables having no excess current protection as above	1.05	1.03	1.0	0.97	0.94	0.91	0.79	0.65

Rating Factors for the Grouping of Cables



Number of multicore cables or number of alternating and rotary current circuits for single-core cables (2 and 3 current carrying conductors)														
1	2	3	4	5	6	7	8	9	10	12	14	16	18	20
Laid in bundles directly on the wall, on the floor, in electro-installation ducts or conduits and on or in the wall														
1.0	0.80	0.70	0.65	0.60	0.57	0.54	0.52	0.50	0.48	0.45	0.43	0.41	0.39	0.38
Single-layer on the wall or on the floor in contact with one another														
1.0	0.85	0.79	0.75	0.73	0.72	0.72	0.71	0.70						
Single-layer on stand the wall or on the floor. Distance between two cables: diameter of cable														
1.0	0.94	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Single-layer under the ceiling in contact with one another														
0.95	0.81	0.72	0.68	0.66	0.64	0.63	0.62	0.61						
Single-layer under the ceiling. Distance between two cables: diameter of cable														
0.95	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85

1) according to IECTC 64 (Sec) 261. edition March 1979

CURRENT CARRYING CAPACITY OF CABLES MADE ACCORDING TO VDE 0271, IEC 60502-1

The current carrying capacity of cables should be limited in such a degree that all locations in cable system which causes the generated heat under given proportions to lead safely in the environment.

The heat flow depends on the inner heat-resistance between conductor and outer surface of the cable and as well as from the heat emission to the surroundings.

DEFINED CONDITIONS:

The basis of the current ratings has been so chosen that they, without considering any multiplication factor, are suitable for cable laid in our country under the following defined conditions:

Indication for calculation:

a) Cable Laying in Ground:

1) Temperature of the soil at the depth of laying = 30°C
2) Depth of laying = 70 cm
3) Cable way is covered with layers of sand and brick.
4) Thermal resistivity of the soil at continuous full loading of the cables = 120° C cm/W.
5) One single core d.c. cable installed separately, or one multi core cable installed separately, or three single core cables in three phase system installed in flat formation with clearance of 7 cm. or in trefoil formation, touching each other.
6) The cable way is through a pipe of length not more than 6 meters.

b) Cables Laying in Air:

1) Ambient air temperature = 35°C
2) One single core d.c cable installed separately free in air, or, one multi core cable-installed separately free in air, or, one three phase system, comprising cable three single core cables installed separately free in air in flat formation with a clearance of one diameter between individual single-core cables or in trefoil formation each individual single core cable being in touch with each other.
3) One single core d.c. cable, one multi core cable or one three phase system of three single core cables installed free in air with minimum clearance of.

a) 2 cm from floor, wall or roof of the room.
b) Twice the cable diameter between two cables and four times the cables diameter between two systems.
c) 30 cm vertically between layers installed one above the other.

4) Cable is protected against radiation of heat from sun or any other source.

Key Information for Current Carrying Capacity of Cable:

- Radiation of heats and solar influence must be taken into consideration, where a good air circulation is needed.
- A sufficient large distance is to be retained between the cables and the heating elements, because badly insulated heating elements often raise additionally the temperature of the cable
- Distance between the cable and the wall, floor or ceiling = 2 cm
- Distance between the cables being laid one above the other = 2 x D
- Distance between the cable systems being laid one above the other = 20 cm
- Distance between the cables being laid side by side = 2 x D
- Approx. Value of Specific Ground Thermal Resistivity

Very moist area	= 70°C. cm/w
Moist area	= 100°C. cm/w
Dry area	= 200°C. cm/w
Very dry area	= 300°C. cm/w

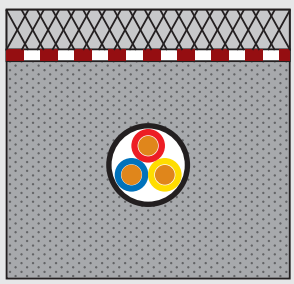
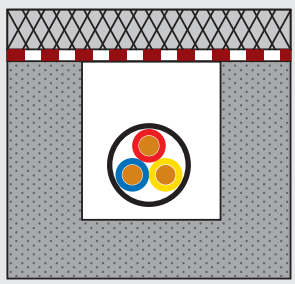
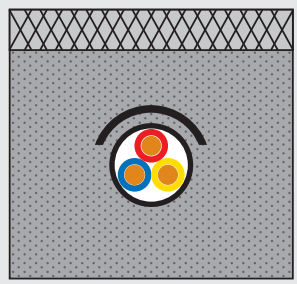
DEVIATED CONDITIONS FOR UNDERGROUND

If the actual condition of cable laying are not same as normal condition, the current rating value of cables are to be multiplied with rating factors given in the following tables:

Variation of Depth of Laying (Twin or Multi-Core Cables)

	Depth of Laying in cm									
	< 70	< 90	< 105	< 120	< 150	< 180	< 270	< 360	< 450	540 or more
Rating Factor	1	0.99	0.98	0.97	0.96	0.95	0.92	0.91	0.90	0.89

Rating Factors for Cables Laid in Sand

Condition of Laying		
Punned down sand and cover of bricks	Single-Core or multi- core cable lad in ground and added mechanical protection for cables with air gilled hollow.	Single-core or multi-core cables direct in the ground with added mechanical protection and hollow filled with sand.
		
Conversion factors for above		
1	0.80	0.86

Variation of Specific Thermal Resistivity of Soil for Cables : Factor A

	Specific Thermal Resistivity of Soil on °C Cm/ W						
	70	100	120	150	200	250	300
25 mm^2 & Below	1.18	1.07	1	0.93	0.83	0.77	0.71
35 mm^2 to 95 mm^2	1.22	1.08	1	0.93	0.82	0.75	0.69
120 mm^2 to 240 mm^2	1.23	1.08	1	0.93	0.82	0.74	0.69
3OO mm^2 & Above	1.25	1.09	1	0.93	0.82	0.74	0.69

Variation of Specific Thermal Resistivity of Soil for Cables : Factor B

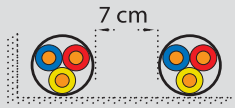
	Voltage E/Eo kV	Specific thermal resistivity of soil on °C cm / W						
		70	100	120	150	200	250	300
3 and 4 core cable	1/0.6	1	1	1	1	1	1	1
Twin core cable	1/0.6	0.97	0.99	1	1	1.01	1.01	1.02
Single core D.C.	1/0.6	0.97	0.99	1	1	1.01	1.01	1.02
3 core cable with each core shielded	6/3.5 10/5.8	0.96	O.99	1	1.01	1.O2	1.03	1.O4
3 unarmoured single core cable	1/0.6 6/3.5 10/5.8	1.01	1	1	0.98	0.97	0.97	0.96

For Variation of specific Thermal Resistivity of Soil, PVC Cables from 12O°C cm/W and current rating values in Table : 9 to 21 are to be multiplied by both the factor A and B to obtain the actual rating.

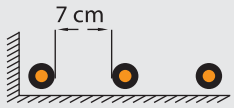
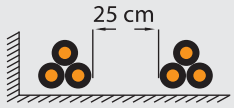
Variation Factors for Ambient Temperature of Cables Laid in Underground

	Voltage Eo/E kV	Ambient Temperature °C								
		15	20	25	30	35	40	45	50	55
Rating factor	0.6/1.0	1.18	1.12	1.07	1.00	0.95	0.87	0.79	0.70	0.60

Group Rating Factors for Multicore and Single - Core D.C. Cables in the Ground

Condition of laying	No. of Systems or Cables						
	2	3	4	5	6	8	10
Cables laid direct in the Ground in flat formation, clearance 7 cm (thickness of a brick) between the cables 	0.85	0.75	0.68	0.64	0.60	0.56	0.53

Group Rating Factors for Single - Core Cables in Three - Phase System in the Ground

Condition of laying	No. of Systems or Cables		
	2	3	4
Cables laid direct in the ground in flat formation, clearance 7 cm between systems and also between individual cables in each system 	0.82	0.74	0.68
Cables laid direct in the ground in trefoil formation, touching each other, clearance 25 cm between systems 	0.85	0.77	0.72

Multi-core Cable in Steel or Earthenware Pipe

	One Multi-core cabie in each pipe									
	Number of Pipe									
	1	2	3	4	5	6	7	8	9	10
Rating factor	0.82	0.74	0.70	0.67	0.65	0.63	0.62	0.60	0.59	0.58

DEVIATED CONDITIONS FOR AIR:

Rating Factors for Variation of Ambient Temperature for Cables Laid in Air

	Voltage Eo/E kV	Ambient Temperature °C						
		25	30	35	40	45	50	55
Rating factor	0.6/1.0	1.13	1.06	1.00	0.93	0.84	0.76	0.65

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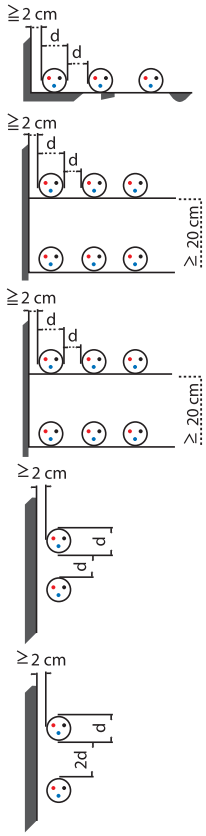
Group Rating Factors for Multicore Cables Laid in Air



Multicore cables in air
Arrangement of cables

Distance = Cable diameter d
Distance from the wall ≧2 cm

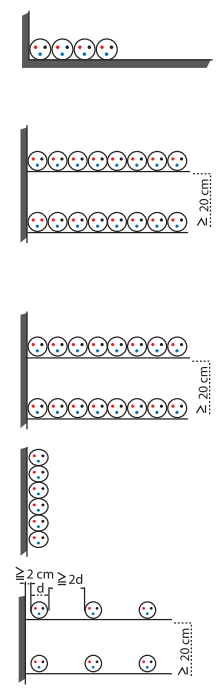
Number of cables side by side	1	2	3	6	9
Laid on the ground	0.95	0.90	0.88	0.85	0.84

	Number of troughs					
Laid on cable troughs (restricted air circulation)	1	0.95	0.90	0.88	0.85	0.84
	2	0.90	0,85	0.83	0.81	0.80
	3	0.88	0.83	0.81	0.79	0.78
	6	0.86	0.81	0.79	0.77	0.76
	Number of racks					
Laid on cable racks	1	1.00	0.98	0.96	0.93	0.92
	2	1.00	0.95	0.93	0.90	0.89
	3	1.00	0.94	0.92	0.89	0.88
	6	1.00	0.93	0.90	0.87	0.86

Number of cables laid one above the other	1	2	3	6	9
Arranged on structures or on the wall	1.00	0.93	0.90	0.87	0.86

Arrangement where reduction of current is not necessary.
This applies only when the cable temperature has no effect on the ambient temperature.

Number of cables laid side by side is not restricted.



Multicore cables in air
Arrangement of cables

Cables touching each other
Cable in contact with the wall

Number of cables side by side	1	2	3	6	9
Laid on the ground	0.90	0.84	0.80	0.75	0.73

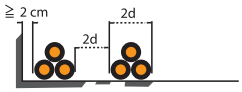
	Number of troughs					
Laid on cable troughs (restricted air circulation)	1	0.95	0.84	0.80	0.75	0.73
	2	0.95	0.80	0.76	0.71	0.68
	3	0.95	0.78	0.74	0.70	0.68
	6	0.95	0.76	0.72	0.68	0.66
	Number of racks					
Laid or, cable racks	1	0.95	0.84	0.80	0.75	0.73
	2	0.95	0.80	0.76	0.71	0.69
	3	0.95	0.78	0.74	0.70	0.68
	6	0.95	0.76	0.72	0.68	0.66

Number of cables laid one above the other	1	2	3	6	9
Arranged on structures or on the wall	0.95	0.78	0.73	0.68	0.66

Arrangement where reduction of current is not necessary.
This applies only when the cable temperature has no effect on the ambient temperature.

Number of cables laid side by side is not restricted.

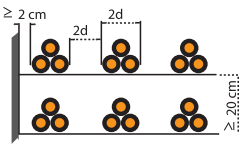
Group Rating Factors for Single-core Cables in Three Phase System in Air

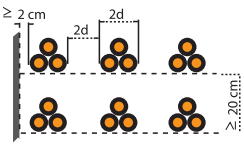


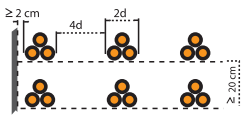
Single-core cable in air, trefoil formation

Arrangement of cables — Cables laid in trefoil formation = 2d
Distance from the wall ≥ 2 cm

Number of systems laid in flat formation		1	2	3
Laid on the ground		0.95	0.90	0.88
	Number of troughs			
Laid on cable troughs (restricted air circulation)	1	0.95	0.90	0.88
	2	0.90	0.85	0.83
	3	0.88	0.83	0.81
	6	0.86	0.81	0.79
	Number of racks			
Laid on cable racks	1	1.00	0.98	0.96
	2	1.00	0.95	0.93
	3	1.00	0.94	0.92
	6	1.00	0.93	0.90

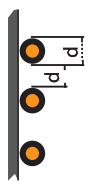






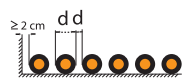
Arrangement where reduction of current is not necessary

This applies only when the cable temperature has no effect on the ambient temperature.



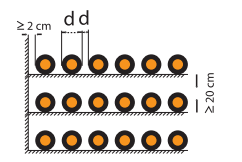
Number of systems laid one above the other	1	2	3
Arranged on structures or on the wall	0.89	0.86	0.84

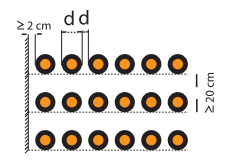
Single -core cable in air, Flat formation

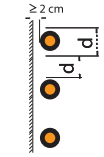


Arrangement of cables — Cables laid in Flat formation = d
Distance from the wall ≥ 2 cm

Number of systems		1	2	3
Laid on the floor		0.92	0.89	0.88
	Number of troughs			
Laid on cable troughs	1	0.92	0.89	0.88
	2	0.87	0.84	0.83
	3	0.84	0.82	0.81
	6	0.82	0.80	0.79
Laid on cable racks	Number of racks			
	1	1.00	0.97	0.96
	2	0.97	0.94	0.93
	3	0.96	0.93	0.92
	6	0.94	0.91	0.90







Number of systems laid one above the other	1	2	3
arranged on structures or on the wall	0.94	0.91	0.89

CURRENT CARRYING CAPACITY OF CABLES MADE ACCORDING TO IEC 60502-2

DEFINED CONDITIONS :

1. Maximum continuous conductor temperature 90°C
2. Ground temperature 20°C
3. Thermal resistivity of soil 100°C. cm/W
4. Ambient Air temperature 30°C
5. Depth of laying for direct burial in ground
   a) For cables up to 6/10(12) KV grade 900 mm
   b) For cables up to 8.7/15(17.5) KV grade 1050 mm
6. Type of installation :
   a) Single core cables installed in Trefoil formation
   b) Multicore cables installed singly.

DEVIATED CONDITIONS :

A. CABLES LAID DIRECT IN GROUND

a) Correction factors for variation in ground Temperature :

Ground Temperature (°C)	15	20	25	30	35	40	45
Rating Factor	1.04	1.00	0.96	0.93	0.89	0.85	0.81

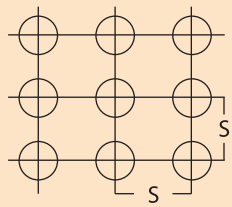
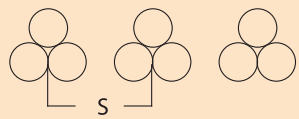
b) Correction factors for variation in Thermal resistivity of soil :

Thermal Resistivity of soil (°C.cm/W)	100	120	150	200	250	300
Rating Factor	1.00	0.94	0.84	0.75	0.68	0.62

c) Correction factors for various depth of Laying :

Depth of Laying (cm)	Up to 6/10 KV	8.7/15 KV
90	1.00	-
105	0.99	1.00
120	0.98	0.99
150	0.96	0.97
180 & above	0.95	0.96

d) Correction factors for grouping of cables :

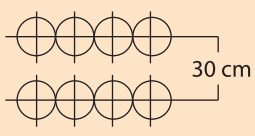
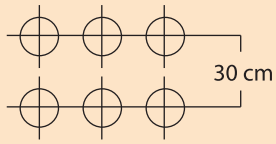
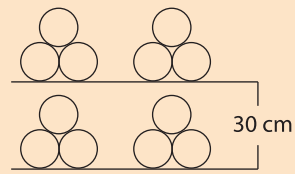
Number of cables/circuits in group	Multicore cables in horizontal formation 			Multicore cables in tier formation 			Multicore cables in trefoil touching formation (Three Cables per circuit) 		
	Touching	s=15 cm	s=30 cm	Touching	s=15 cm	s=30 cm	Touching	s=15 cm	s=30 cm
2	0.79	0.82	0.86	-	-	-	0.78	0.82	0.85
3	0.69	0.72	0.76	-	-	-	0.68	0.71	0.76
4	0.62	0.66	0.72	0.60	0.64	0.69	0.61	0.65	0.71
6	0.54	0.59	0.65	0.51	0.55	0.60	0.53	0.57	0.64

B. CABLES LAID ON RACKS IN AIR

a) Correction factors for variation in ambient Air Temperature :

Ambient Air Temperature (°C)	20	25	30	35	40	45	50
Rating Factor	1.07	1.04	1.00	0.96	0.91	0.86	0.83

b) Correction factors for grouping of cables :

Number of cables/circuits in group	Multicore cables in (touching) 				Multicore cables (Spacing between cables equal to diameter of cable) 				Single core cables in trefoil touching formation spacing between circuit equal to twice the diameter of cable 			
	Number of racks				Number of racks				Number of racks			
	1	2	3	6	1	2	3	6	1	2	3	6
1	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
2	0.84	0.80	0.78	0.76	0.98	0.95	0.94	0.93	0.98	0.95	0.94	0.93
3	0.80	0.76	0.74	0.72	0.96	0.93	0.92	0.90	0.96	0.93	0.92	0.90
6	0.76	0.71	0.70	0.68	0.93	0.90	0.89	0.87	-	-	-	-

MAXIMUM SHORT CIRCUIT CURRENT RATING OF CONDUCTOR

Maximum Conductor temperature under normal operation = 90° C

Maximum Conductor temperature during short circuit = 250° C

Conductor temperature at the beginning of short circuit (°C)	90	80	70	65	60	50
Short circuit current (A/mm^2)	143	149	154	157	159	165

The short circuit current for any duration (up to 5 sec) can be obtained from the following formula:

$$I_{SC} = \frac{K \times A}{\sqrt{t}}$$

Where, I_{SC} = Short Circuit Current (KA)

A = Area of conductor (sq. mm)

K = A constant combining temperature limits and properties of conductor & insulating materials

t = Duration of Short Circuit (Second)

Values of conductor/temperature constant K

Insulation Material	Conductor Material	Maximum Conductor Temperature in normal operation (^{0}c)	Maximum Conductor Short Circuit Temperature (^{0}c)	K Factor
PVC	Copper	70	160	0.115
PVC	Aluminium	70	160	0.076
XLPE	Copper	90	250	0.143
XLPE	Aluminium	90	250	0.094

VOLTAGE DROP FOR HT CABLES (VOLTAGE UP TO 17.5 KV)

VOLTAGE DROP PER CORE / PER AMP. / PER KM.

Conductor Area	3.6/6(7.2) KV		6/10(12) KV		8.7/15(17.5) KV	
	Unarmoured	Armoured	Unarmoured	Armoured	Unarmoured	Armoured
Noxmm²	V/core/A	V/core/A	V/core/A	V/core/A	V/core/A	V/core/A
1 x 25	0.948	0.950	0.949	0.951	0.950	0.952
1 x 35	0.688	0.691	0.689	0.692	0.691	0.694
1 x 50	0.514	0.517	0.515	0.519	0.516	0.520
1 x 70	0.364	0.369	0.366	0.370	0.367	0.372
1 x 95	0.271	0.277	0.273	0.279	0.276	0.282
1 x 120	0.223	0.229	0.225	0.231	0.228	0.234
1 x 150	0.189	0.196	0.191	0.199	0.195	0.202
1 x 185	0.161	0.169	0.163	0.172	0.166	0.174
1 x 240	0.135	0.144	0.138	0.147	0.141	0.150
1 x 300	0.121	0.129	0.122	0.131	0.125	0.134
1 x 400	0.108	0.117	0.109	0.118	0.113	0.123
1 x 500	0.100	0.111	0.101	0.111	0.104	0.114
1 x 630	0.093	0.103	0.094	0.103	0.097	0.106
1 x 800	0.088	0.098	0.089	0.098	0.092	0.101

Conductor Area	3.6/6(7.2) KV		6/10(12) KV		8.7/15(17.5) KV	
	Unarmoured	Armoured	Unarmoured	Armoured	Unarmoured	Armoured
Noxmm²	V/core/A	V/core/A	V/core/A	V/core/A	V/core/A	V/core/A
3 x 25	0.946	0.946	0.947	0.947	0.948	0.948
3 x 35	0.686	0.686	0.687	0.687	0.688	0.688
3 x 50	0.511	0.511	0.512	0.512	0.514	0.514
3 x 70	0.360	0.360	0.362	0.362	0.364	0.364
3 x 95	0.267	0.267	0.269	0.269	0.272	0.272
3 x 120	0.218	0.218	0.221	0.221	0.223	0.223
3 x 150	0.184	0.184	0.186	0.186	0.189	0.189
3 x 185	0.155	0.155	0.158	0.158	0.161	0.161
3 x 240	0.130	0.130	0.132	0.132	0.135	0.135
3 x 300	0.114	0.114	0.116	0.116	0.119	0.119

VOLTAGE DROP FOR LT CABLES (VOLTAGE UP TO 1.0 KV)

Nominal cross-sectional area	DC - System	Single-phase AC-System	Three-phase AC-System
(mm²)	(mV/A/m)	(mV/A/m)	(mV/A/m)
1.5	24.2	27.9	24.1
2.5	14.3	17.1	14.8
4	9.0	10.7	9.3
6	6.0	7.2	6.2
10	3.6	4.3	3.7
16	2.3	2.8	2.4
25	1.5	1.8	1.5
35	1.1	1.3	1.1
50	0.8	0.96	0.85
70	0.6	0.70	0.60
95	0.4	0.55	0.45
120	0.3	0.45	0.35
150	0.25	0.35	0.31
185	0.20	0.30	0.26
240	0.15	0.25	0.22
300	0.12	0.22	0.19
400	0.10	0.19	0.17

The voltage drop in a circuit, of which the cable forms a part, should not exceed 3 - 5% of the nominal voltage; e.g. 20.0 volts (5%) for a three-phase 400 volts supply. The above mentioned voltage drop is tabulated for a current of 1 ampere for a 1 metre run. For any cable length, the values need to be multiplied by the length of the cable (in metres) and by the current (in amperes).

Example:

Formula for the calculated voltage drop in mV/A/m:

$$e_{cal} = \frac{\text{permissible voltage drop (e)} \times 1000}{\text{current (I)} \times \text{length (l)}}$$

Installation length (L) : 300 m
Current (I) to carry : 80 A
Nominal voltage (U) : 400 V (Three-phase AC)
Permissible voltage drop (e) : 20.0 V (5% of 400 V)

$$e_{cal} = \frac{20.0\ V \times 1000}{80\ A \times 300\ m} = 0.83\ mV/A/m$$

Select a cross-section, such that the voltage drop is equal to or less than 0.83 mV/A/m from table 3. It has to be ensured that the selected cross-section will carry the current (see pages H5 up to H7).The corresponding cross-section will be 50 mm².

PHYSICAL & ELECTRICAL PROPERTIES OF COPPER & ALUMINIUM

Copper and aluminium are used in their highly refined form for the power conductors of cables. The total impurities contained in high conductivity copper should be less than 0.1% and for aluminium less than 0.5%. The measured conductivity of these metals will have its highest value when they are annealed. Hard drawn conductors will have conductivity that is several percentage points lower than the annealed value. Note that castings made of these materials will generally have conductivity slightly lower than their rolled and drawn forms.

The presence of oxygen in the form of oxides is the most common impurity. It slightly reduces the conductivity, malleability and ductility of the metal.

Following Table: shows some of the electrical and physical properties of these two metals. For use in most power cable applications these metals are formed into annealed conductors.

Property	Unit	Copper		Aluminium	
		Hard-drawn	Annealed	Hard-drawn	Annealed
Melting point	°C	1083	1083	658	658
Density	gm/cm^3	8.89	8.89	2.703	2.703
Tensile strength	kg/mm^2	34-47	20-28	15-20	,7-14
Electrical Resistivity at 20°C	$ohm\text{-}mm^2/m$	17.770	17.241	28.73	28.20
Electrical Conductivity at 20°C	% IACS	97	100	60	61
Temperature Co-efficient of resistance at 20°C, per unit of cons. Mass	-	0.00393	0.00393	0.00403	0.00403
Co-efficient of linear expansion	/°C	17×10^{-6}	17×10^{-6}	23×10^{-6}	23×10^{-6}
Thermal Conductivity	W/°C.cm	3.86	3.86	2.39	2.39
Specific heat	$J/°C.cm^3$	3.4	3.4	2.4	2.4

Formula for Electrical Calculation

To Calculate	Given	D. C.	A. C. Single phase	A. C. 3 phase
Current (A)	KW	$A = \frac{1000 \times KW}{V}$	$A = \frac{1000 \times KW}{V \times p.f.}$	$A = \frac{1000 \times KW}{1.73 \times V \times p.f.}$
Current (A)	KVA		$A = \frac{1000 \times KVA}{V}$	$A = \frac{1000 \times KVA}{1.73 \times V}$
Current (A)	HP	$A = \frac{746 \times HP}{V \times eff.}$	$A = \frac{746 \times HP}{V \times eff. \times p.f.}$	$A = \frac{746 \times HP}{1.73x\ eff. \times p.f. \times V}$
Power (KW)	V. A.	$KW = \frac{A \times V}{1000}$	$KW = \frac{A \times V \times p.f.}{1000}$	$KW = \frac{1.73 \times A \times V \times p.f.}{1000}$
Apparent Power (KVA)	V. A.		$KVA = \frac{A \times V}{1000}$	$KVA = \frac{1.73 \times A \times V}{1000}$

P.f. = Power factor of equipment or system under consideration.
eff. = Efficiency of motor or machinery.
V = line voltage.

Some Useful Rated Current

Average Induction Motor						
Nominal Motor Rating		1 Phase		3 Phase		
		110V	230V	380V	415V	440V
HP	KW	amp	amp	amp	amp	amp
1/2	0.37	7.8	3.7	1.2	1.1	1.0
3/4	0.55	10.4	5.0	1.6	1.5	1.4
1	0.75	13.2	6.3	2.0	1.9	1.8
1 1/2	1.1	19.2	9.2	3.0	2.8	2.6
2	1.5	25.0	12.2	3.9	3.6	3.4
3	2.2	37.0	17.9	5.8	5.3	5.0
5	3.7	59.0	28.0	9.2	8.4	7.9
7 1/2	5.5	84.0	40.0	13.1	11.9	11.3
10	7.5	109.0	52.0	16.8	15.4	14.5
15	11.0	157.0	75.0	24.0	22.0	21.0
20	15.0	-	-	32.0	29.0	27.0
30	22.0	-	-	46.0	42.0	40.0
50	37.0	-	-	75.0	69.0	65.0
75	55.0	-	-	111.0	102.0	96.0
100	75.0	-	-	146.0	134.0	126.0

Pure Resistive Load					
Power	1 Phase		3 Phase		
	110V	230V	380V	415V	440V
KW	amp	amp	amp	amp	amp
1	9.1	4.3	1.5	1.4	1.3
2	18.2	8.7	3.0	2.8	2.6
3	27.3	13.0	4.6	4.2	3.9
4	36.4	17.4	6.1	5.6	5.3
5	45.5	21.7	7.6	7.0	6.6
6	54.6	26.1	9.1	8.4	7.9
7	63.6	30.4	10.6	9.7	9.2
8	72.7	34.8	12.2	11.1	0.5
9	81.8	39.1	13.7	12.5	11.8
10	91.0	43.5	15.2	13.9	13.1
20	182	87.0	30.4	27.9	26.3
40	364	170.0	60.8	55.7	52.5
60	545	261.0	91.3	83.6	78.8
80	727	348.0	122.0	111.0	105.0
100	909	435.0	152.0	139.0	131.0

COMPARISON OF COPPER & ALUMINIUM CONDUCTORS

Particulars	Aluminium Annealed EC grade Take annealed Copper as100%	Copper (Annealed) Take annealed Aluminium as 100%
	%	%
For equal Cross sectional area and length		
Weight	30	329
Resistance	164	100
Breaking load (Approx.)	41	244
For equal weight and length		
Area	329	30
Diameter	180	55
Resistance	50	200
Breaking load (Approx.)	137	73
For equal resistance		
Area	164	61
Diameter	128	78
Weight	50	200
Breaking load (Approx.)	68	147
For equal current and temperature rise		
Weight	42	237
Diameter	119	84

MAX. SHORT CIRCUIT CURRENT CARRYING CAPACITY IN KA/SEC.

Nominal Cross-section area	Aluminium Conductor		Copper Conductor	
	Type of Insulation		Type of Insulation	
mm^2	PVC	XLPE	PVC	XLPE
2.5	0.19	0.24	0.28	0.36
4	0.30	0.38	0.45	0.57
6	0.46	0.56	0.68	0.85
10	0.76	0.94	1.13	1.43
16	1.22	1.50	1.81	2.29
25	1.90	2.35	2.83	3.57
35	2.66	3.29	3.96	5.01
50	3.80	4.70	5.65	7.15
70	5.32	6.58	7.91	10.01
95	7.22	8.93	10.74	13.58
120	9.12	11.28	13.56	17.16
150	11.40	14.10	16.95	21.45
185	14.06	17.39	20.91	26.45
240	18.24	22.56	27.12	34.32
300	22.80	28.20	33.90	42.90
400	30.40	37.60	45.20	57.20
500	38.00	47.00	56.50	71.50
630	47.88	59.22	71.19	90.09
800	60.80	75.20	90.40	114.40
1000	76.00	94.00	113.00	143.00

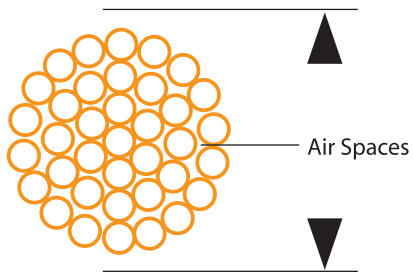
Difference Between Stranded Circular Conductor and Stranded Compact Circular Conductor

In the world of electrical conductors, there are several style that are used by electric utilities. The two common types of stranding that are using for power Cable. 1) Round wire conductor 2) Compact Conductor

Round wire conductor is the most common configuration that is used for bare conductor and insulated cable is made up of a number of the same size round wire that are cabled together (see Figure 1). This construction adds flexibility to the conductor, but the resulting air spaces that are introduced between the individual strands results in an overall increase in diameter of Cable.

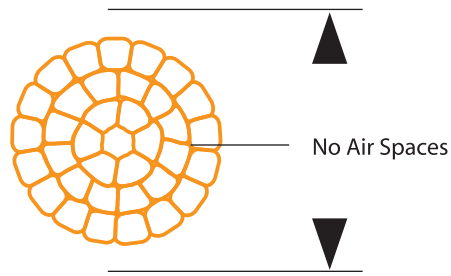
The first of the diameter reduction would be what is classified compact conductor. The individual strands of the conductor to reduce the total stranded diameter approximately 4% to 8% from the original diameter of the round wire conductor (see Figure 2). this type of conductor have no air spaces that are introduced between the individual strands. Compact conductor is made from EC grade scratch free and ensure excellent conductivity minimized electrical stress.

Figure 1



Concentric Round

Figure 2



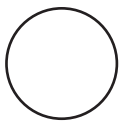
Compact

ABOUT CABLE LUGS

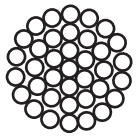
Compacted Conductors have a smaller diameter compared to standard stranded conductors, but their nominal cross sectional area is equivalent and a lug designated for the same cross sectional area must be used on the compacted conductor. Even though the lug will appear to fit more loosely, when crimped in accordance with the lug manufacturer's recommendations, the end result is the equivalent to the crimping of a standard conductor. Compacting the conductor by the cable manufacturer is just the action of pushing all the wires together, getting rid of the air gaps, ahead of time.

The general practice is for lug manufacturer's to manufacture a range of lug sizes that suits both the compacted and standard conductors. However, if there are any concerns, please consult your lug manufacturer.

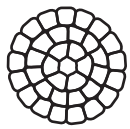
CONSTRUCTION FOR VARIOUS TYPE OF CONDUCTORS AS PER IEC 60228 : 2004



circular solid RE

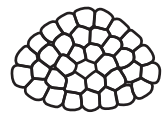


circular stranded RM



circular stranded compacted RM

sector-shaped solid SE



sector-shaped stranded SM

Nominal Cross Sectional Area	Max. Conductor DC Resistance at 20° C		NON COMPACTED CONDUCTOR		COMPACTED CONDUCTOR			SECTOR SHAPED CONDUCTOR	
			No. & Nominal Diameter of Wire	Nominal Conductor Diameter	No. of Wire in Conductor Cu/Al	Conductor Diameter		No. of Wire in Conductor Cu/Al	Nominal Conductor Depth
	Cu	Al			(Min.)	(Min.)	(Max.)	(Min.)	3C/4C
mm^2	Ohm/km	Ohm/km	no./mm	mm	no.	mm	mm	no.	mm
1.0	18.1	-	1/1.13	1.13	-	-	-	-	-
1.0	18.1	-	3/0.65	1.40	-	-	-	-	-
1.5	12.1	-	1/1.38	1.38	-	-	-	-	-
1.5	12.1	18.1	7/0.52	1.56	-	-	-	-	-
2.5	7.41	-	1/1.78	1.78	-	-	-	-	-
2.5	7.41	12.1	7/0.67	2.01	-	-	-	-	-
4	4.61	7.41	7/0.85	2.55	-	-	-	-	-
6	3.08	4.61	7/1.04	3.12	-	-	-	-	-
10	1.83	3.08	7/1.35	4.05	-	-	-	-	-
16	1.15	1.91	7/1.70	5.10	-	-	-	-	-
25	0.727	1.20	7/2.14	6.42	-	-	-	-	-
35	0.524	0.868	19/1.53	7.65	6	6.6	7.5	6	5.6/6.6
50	0.387	0.641	19/1.83	9.15	6	7.7	8.6	6	6.6/7.2
70	0.268	0.443	19/2.17	10.85	12	9.3	10.2	12	7.9/9.3
95	0.193	0.320	19/2.52	12.60	15	11.0	12.0	15	9.4/10.5
120	0.153	0.253	37/2.03	14.21	18/15	12.3	13.5	18/15	10.7/11.7
150	0.124	0.206	37/2.27	15.89	18/15	13.7	15.0	18/15	11.9/12.6
185	0.0991	0.164	37/2.52	17.64	30	15.3	16.8	30	12.8/14.4
240	0.0754	0.125	61/2.25	20.25	34/30	17.6	19.2	34/30	14.9/16.1
300	0.0601	0.100	61.2.52	22.68	34/30	19.7	21.6	34/30	16.5/18.6
400	0.0470	0.0778	61/2.89	26.01	53	22.3	24.6	53	19.5/21.6
500	0.0366	0.0605	61/3.23	29.07	53	25.3	27.6	-	-
630	0.0283	0.0469	127/2.52	32.76	53	28.7	32.5	-	-
800	0.0221	0.0367	127/2.85	37.05	53	32.6	36.7	-	-
1000	0.0176	0.0291	127/3.20	41.60	53	36.3	40.5	-	-

BBS CABLES®
more than safety

Measurement Comparison in Various Systems

Gauge System		Diameter		Cross Section Area			Weight of Copper
A. W. G.	S. W. G.	mm	mil	mm²	inch²	c.mil	kg/km
6/0	-	14.73	580	170.46	0.2642	336400	1515.4
5/0	-	13.11	516	134.92	0.2091	266156	1199.4
-	7/0	12.70	500	126.68	0.1964	250000	1126.2
-	6/0	11.79	464	109.09	0.1691	515296	969.8
4/0	-	11.68	460	107.22	0.1662	211600	953.2
-	5/0	10.97	432	94.56	0.1466	186624	840.7
3/0	-	10.41	410	85.16	0.1320	168100	757.2
-	4/0	10.16	400	81.70	0.1256	160000	720.7
-	3/0	9.449	372	70.12	0.1087	138384	623.4
2/0	-	9.271	365	67.51	0.1046	133255	600.1
-	2/0	8.839	348	61.36	0.09512	121104	545.5
0	-	8.255	325	53.52	0.08296	105625	475.8
-	0	8.230	324	53.19	0.08245	104976	472.9
-	1	7.620	300	45.60	0.07069	90000	405.4
1	-	7.341	289	42.22	0.06560	83521	376.2
-	2	7.010	276	38.60	0.06983	76176	343.71
2	-	6.553	258	33.94	0.05228	66564	299.8
-	3	6.401	252	32.18	0.04988	63504	286.1
-	4	5.893	232	27.27	0.04227	53824	242.5
3	-	5.817	229	26.57	0.04119	52441	236.2
-	5	5.385	212	22.77	0.03530	44944	202.5
4	-	5.182	204	21.09	0.03269	41616	187.5
-	6	4.877	192	18.68	0.02895	36864	166.1
5	-	4.623	182	16.78	0.02602	33124	149.2
-	7	4.470	176	15.70	0.02433	30976	139.5
6	-	4.115	162	13.30	0.02061	26244	118.2
-	8	4.065	160	12.97	0.02011	25600	115.3
7	9	3.658	144	10.507	0.01629	20736	93.41
8	10	3.251	128	8.302	0.01287	16384	73.80
-	11	2.948	116	6.818	0.01057	13456	60.61
9	-	2.896	114	6.585	0.01021	12996	58.54
-	12	2.642	104	5.480	0.008495	10816	48.72
10	-	2.591	102	5.272	0.008171	10404	46.87
-	13	2.337	92	4.284	0.006648	8464	38.08
11	-	2.311	91	4.196	0.006504	8281	37.30
12	-	2.057	81	3.325	0.005153	5661	29.55
-	14	2.032	80	3.243	0.005027	6400	28.83
13	15	1.828	72	2.627	0.004072	5184	23.35
14	16	1.626	64	2.075	0.003217	4096	18.45
15	-	1.448	57	1.646	0.002552	3249	14.64
-	17	1.422	56	1.589	0.002463	3136	14.13
16	-	1.295	51	1.318	0.002043	2601	11.72
-	18	1.291	48	1.168	0.001810	2304	10.38
17	-	1.143	45	1.026	0.001590	2025	9.122
18	19	1.016	40	0.8107	0.001257	1600	7.207
19	20	0.9144	36	0.6567	0.001018	1296	5.838
20	21	0.8128	32	0.5189	0.0008043	1024	4.613
21	-	0.7239	29	0.4156	0.0006379	810	3.695
-	22	0.7112	28	0.3973	0.0006158	784	3.532
22	-	0.6428	25	0.3243	0.0005027	640	2.883
-	23	0.6096	24	0.2919	0.0004524	576	2.595
23	-	0.5733	23	0.2588	0.0004013	509	2.301
-	24	0.5588	22	0.2453	0.0003801	484	2.181
24	-	0.5105	21	0.2047	0.0003173	404	1.82
-	25	0.5080	20	0.2021	0.0003142	400	1.797

Measurement Comparison in Various Systems

Gauge System		Diameter		Cross Section Area			Weight of Copper
A.W.G.	S.W.G.	mm	mil	mm²	inch²	c.mil	kg/km
-	26	0.4572	18.0	0.1642	0.0002545	324.0	1.460
25	-	0.4547	17.9	0.1624	0.0002516	320.4	1.443
26	-	0.4639	15.9	0.1281	0.0001986	252.8	1.139
-	27	0.4166	16.4	0.1363	0.0002118	268.9	1.212
-	28	0.3759	14.8	0.1110	0.0001720	219.0	0.9868
27	-	0.3607	14.2	0.1022	0.0001584	201.6	0.9083
-	29	0.3454	13.6	0.09372	0.0001453	184.9	0.8332
28	-	0.3211	12.6	0.08042	0.0001247	158.8	0.7149
-	30	0.3150	12.4	0.07791	0.0001203	153.8	0.7032
-	31	0.2946	11.6	0.05818	0.0001057	136.6	0.6061
29	-	0.2859	11.3	0.06470	0.0001003	127.7	0.5752
-	32	0.2743	10.8	0.05910	0.00009161	116.6	0.5254
30	33	0.2540	10.0	0.05067	0.00007854	100.0	0.4506
-	34	0.2337	9.2	0.04289	0.00006648	84.64	0.3813
31	-	0.2261	8.9	0.04041	0.00006221	79.21	0.3568
-	35	0.2134	8.4	0.03515	0.00005542	70.56	0.3125
32	-	0.2019	7.9	0.03203	0.00004964	63.21	0.2847
-	36	0.1930	7.6	0.02927	0.00004537	57.76	0.2602
33	-	0.1803	7.1	0.02555	0.00003959	50.41	0.2271
-	37	0.1727	6.8	0.02348	0.00003632	46.20	0.2087
34	-	0.1601	6.3	0.02010	0.00003117	39.69	0.1788
-	38	0.1524	6.0	0.01824	0.00002827	36.00	0.1622
35	-	0.1422	5.6	0.01587	0.00002463	31.86	0.1413
-	39	0.1321	5.2	0.01370	0.00002124	27.04	0.1218
36	-	0.1270	5.0	0.01267	0.00001964	25.00	0.1126
-	40	0.1219	4.8	0.01167	0.00001810	23.04	0.1038
37	-	0.1131	4.5	0.01005	0.00001557	19.83	0.08931
-	41	0.1118	4.4	0.00981	0.00001521	19.36	0.08721
38	42	0.1016	4.0	0.008107	0.00001257	16.00	0.07207
-	43	0.0914	3.6	0.006567	0.00001018	12.96	0.05838
39	-	0.0889	3.5	0.006207	0.000009621	12.25	0.05518
-	44	0.0813	3.2	0.005189	0.000008043	10.24	0.04613
40	-	0.0787	3.1	0.004870	0.000007548	9.61	0.04329
41	45	0.0711	2.8	0.003970	0.000006158	7.84	0.03529
42	-	0.0635	2.5	0.003167	0.000004909	6.25	0.02815
-	46	0.0610	2.4	0.002922	0.000004524	5.76	0.02593
43	-	0.0559	2.2	0.002454	0.000003801	4.48	0.02182
44	47	0.0508	2.0	0.002027	0.000003142	4.00	0.01802
45	-	0.0447	1.8	0.001569	0.000002433	3.10	0.01895
-	48	0.0406	1.6	0.001295	0.000002011	2.56	0.01150
46	-	0.0399	1.57	0.001250	0.000001936	2.46	0.01111
47	-	0.0356	1.40	0.0009954	0.000001539	1.96	0.008849
48	-	0.0315	1.24	0.0007793	0.000001208	1.54	0.006928
-	49	0.0305	1.20	0.0007306	0.000001131	1.44	0.006495
49	-	0.0282	1.11	0.0006246	0.0000009677	1.23	0.005563
-	50	0.0254	1.00	0.0005056	0.0000007854	1.00	0.004503
50	-	0.0251	0.99	0.0004948	0.0000007698	0.980	0.004399

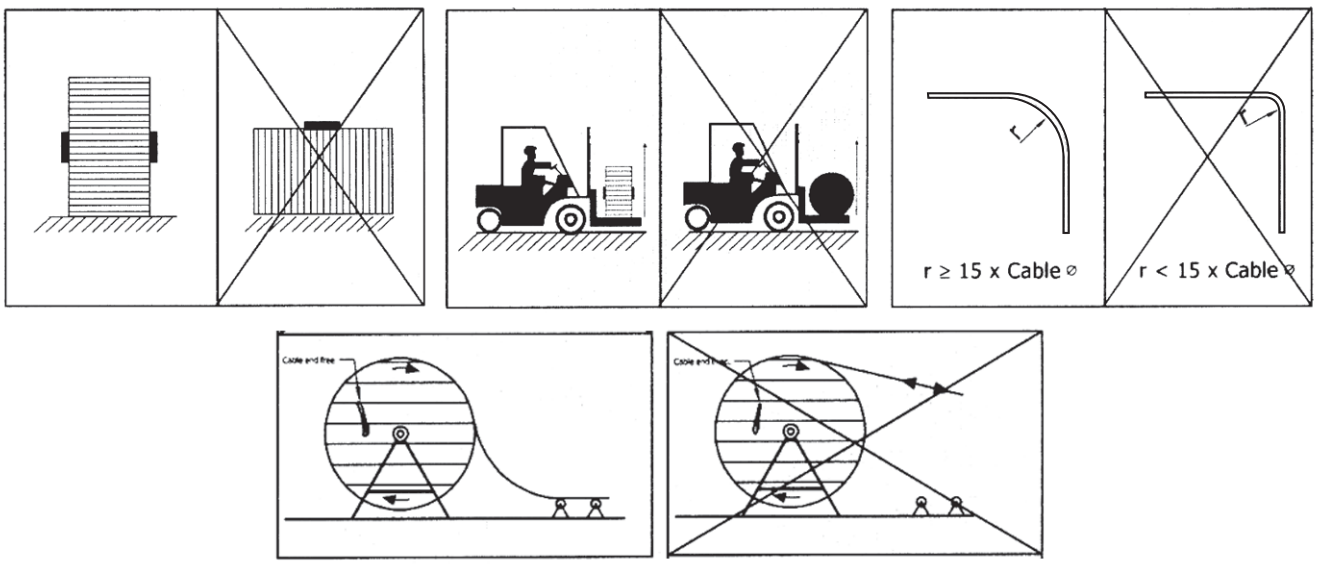
Note :
1 mil = 0.001 inch
S.W.G. = British Standard Wire Gauge
A.W.G. = American Standard Wire Gauge
1 c.mil = 0.7854×10^{-4} in²
1 c.mil is the area of a circle of 1 mil diameter

Mechanical, Thermal, Electrical and Chemical Properties of Insulation and Sheath Materials

Designations				Properties (guide values)												
				Mechanical			Thermical			Electrical			Chemical Resistance (guide values)			
Symbols	Material	VDE	Permissible Operating Temperature to VDE°C	Tensile Strength	Elongation	Resistance to Abrasion	Behavior at low Temp-eratures	Flame Resistance	Emission of Corrosive Gases During a Combustion	Specific Volume Resistance	Permittivity Constant	Factor of Loss	Oils - Fats	Solvents	Diluted Acids	Water
	Thermoplastics															
PVC	Polyvinyl Chloride Compounds	Y	70-105	12.5-25	125-350	average to good	moderate to good	average to good	hydrogen -chloride	10^{12}-10^{15}	4.0-6.5	10^{-2}-10^{-3}	moderate to average	moderate	good	average to good
LDPE	Low-density Polyethylene	2Y	70	10-20	400-600	average to good	good	bad	-	> 10^{16}	2.25-2.6	~10^{-4}	average	average to good	very good	very good
HDPE	High-density Polyethylene	2X	90	25-40	500-1000	good	good	bad	-	> 10^{16}	2.4-2.5	~10^{-4}	average	average to good	very good	very good
	foamed polyethylene	02Y	70	8-12	350-500		good	bad	-	~10^{17}	~1.6	~10^{-4}	average	average to good	very good	very good
PA	Polyamide	4Y	80	50-60	50-200	very good	good	good	-	~10^{15}	~4.0	~10^{-2}-10^{-3}	very good	good	very good	average
PUR	Polyurethane	11Y	80	35-50	500-700	very good	good	Moderate to average	-	~10^{12}	~6.0	~10^{-2}	good	good	moderate	average to good
	Elastomere															
VPE	Cross-linked Polyethylene	2X	90	12.5-20	300-450	average to good	good	bad	-	~10^{16}	2.3-2.6	~10^{-4}	average	average to good	very good	very good
NR SBR	Natural Rubber Styrene butadiene Rubber Comp	G	60	5.0-10.0	300-600	moderate to average	very good	bad	-	**	**	**	bad	bad	average	average to good
SIR	Silicone Rubber	2G	180	5.0-10.0	300-600	moderate	very good	moderate-good	-	~10^{-15}	~3.0	~10^{-3}	good	bad	moderate	very good
EPR	Ethyiene-propylene Rubber Compounds	3G	90	5.0-10.0	300-500	moderate to average	good	moderate-bad	-	~10^{12}-10-15	3.0-3.8	~10^{-2}-10^{-3}	moderate to average	moderate	good	very good to good
EVM	Ethylene-vinyl Acetate Copolymer Compounds	4G	120	8.0-12.0	200-350	moderate to average	good	moderate to average	-	~10^{13}	~6.0	~10^{-2}	moderate to average	moderate	average	good to average
CR	Polychloroprene Compounds	5G	60-90	5.0-20.0	500-800	average to good	moderate -good	good	hydrogen-chloride	**	**	**	good-very good	average	good	moderate
CM	Chlorinated Polyethylene Compounds	9G	80-100	8.0-20.0	350-650	average to good	moderate	good	hydrogen-chloride	**	**	**	good-very good	average	good	moderate
CSM	Chlorosulfonated Polyethylene Compounds	6G	100	8.0-20.0	400-700	average to good	moderate	good	hydrogen-chloride	**	**	**	good-very good	average	good	moderate
	Special Compounds															
	Cross-linked Flame Retardant Halogen-free Polymer Comp.	H	70-90	5.0-12	>125	moderate to average	average	good-very good	-	-10^{13}-10^{14}	~4	10^{-2}-10^{-3}	moderate to average	moderate	good	good
	Flame Retardant Halogen-free Polymer Compounds, not Cross-Linked	H	70-90	5.0-12	>125	moderate to average	average	good	-	-10^{12}-10^{14}	~4	~10^{-3}	average	average	good	average to good

USERS' GUIDELINE

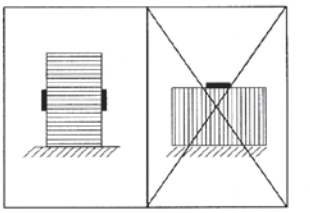
(Handling of Cables and Drums)



DRUMS HANDLING

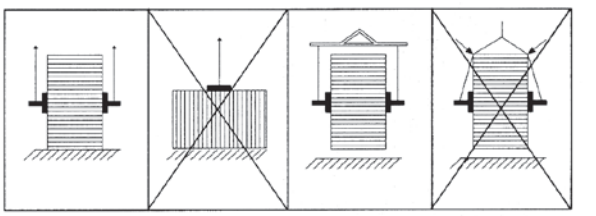
1.1 Position of Drums:

Drums must be handled only in the upright position, not on the flanges.



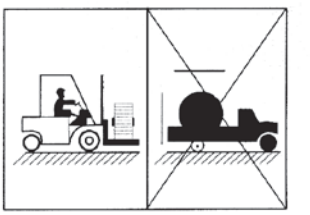
1.2 Loading:

Drums must be lifted only with mandrel or a chain through the central hole. It is important to use a spacing bar to leave a gap between the chain and the flanges of the drum. Do not lift more than one drum if its diameter is equal to or greater than 1.2 meters.



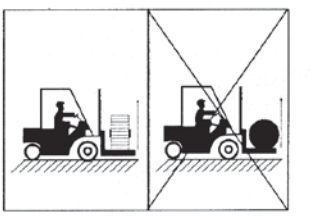
1.3 Unloading:

When unloading from vehicles (truck, ship, wagon etc.) the correct lifting gear must be used (forklift, truck, crane, etc.). Never drop drums, even from a small height.



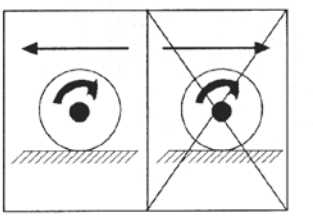
1.4 Handling by forklift:

If a forklift is used, always cradle both drum flanges between the forks. The forks must not bear on the unsupported laggings between flanges.



1.5 Rolling:

Drums are permitted to be rolled for short distances, the ground being smooth and free of injurious impediments, but only in the opposite direction of the arrow painted on flanges. If arrow sign is missed, drums may be rolled but only in the direction to cable winding, to keep cable from loosening the drum.



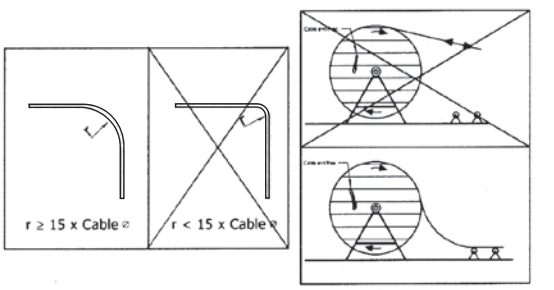
1.6 Paying-off the Cable:

When paying off a cable from a drum;

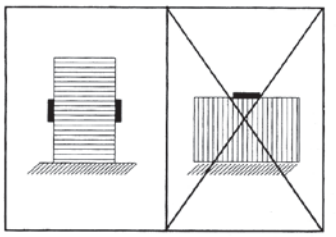
1) The lower end of the cable should be free.

2) Drums should be unreeled without exceeding the maximum allowed pulling force of the cable.

3) The minimum bending radius of the cable should be equal to or greater than 15 X outer diameter of the cable.

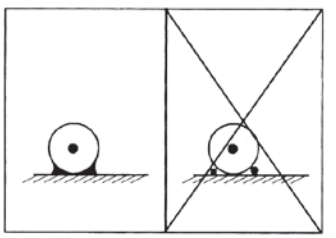


TRANSPORTATION REQUIREMENTS



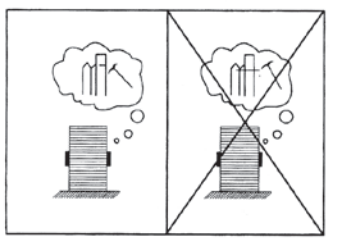
2.1 Position of the Drums:

Drums must be transported only in the upright position, not on the flanges. Never allow an unauthorized person to operate any lifting device or a mechanical transport.



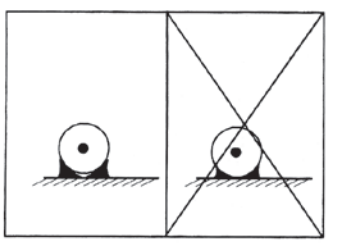
2.2 Fastening Drums:

Wedges must be used to retain drums. Wedges must be positioned at flanges' edges and not between flanges. The use of stones is forbidden. Where the load is unusual and is likely to need special care, ensure that all precautions are properly checked before the transport is allowed to move.



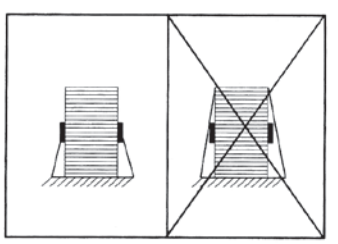
2.3 Use of Nails:

When nails are used to fasten drums on vehicles, be sure that the length of the nail is less than the thickness of the flange.



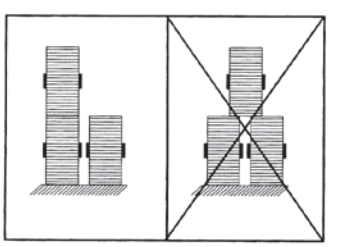
2.4 Larger Drums:

Drums with diameter greater than 1.6 meters must be supported by wedges and must not touch the vehicle's floor. Never use a lifting device or transport device for a weight which exceeds its permitted capacity.



2.5 Binding of the Drums:

Binding must be made with ropes crossing through the central hole and, if necessary, on the drum flanges. Binding with ropes only crossing the drum's edges is strictly forbidden.

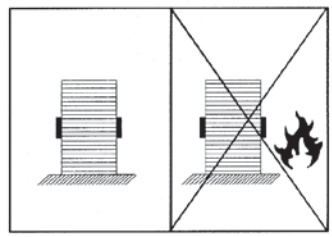


2.6 Multiple Drum Storage:

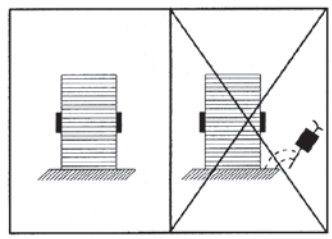
Multiple drum storage, either double or single layer must be obtained with flange to flange contact. Flanges contacting to unsupported part of lagings are forbidden.

STORAGE REQUIREMENTS

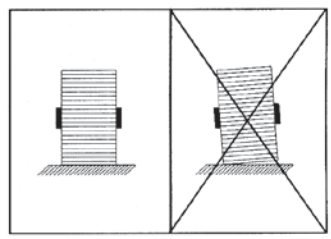
3.1 Do not store near heat sources.



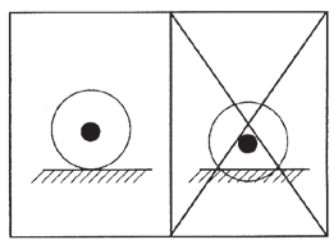
3.2 Do not store on vibrating surfaces. (Ship engine room etc.)



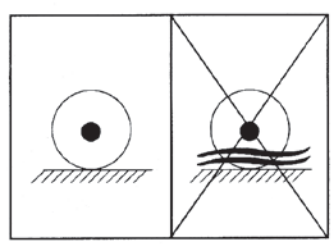
3.3 Do not store on irregular surfaces.



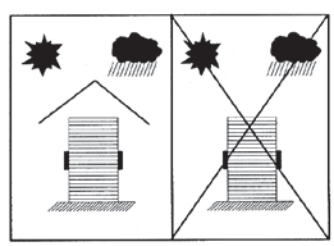
3.4 Do not store on soft surfaces.



3.5 Do not store on areas liable of flooding. All cable ends must be fully sealed at all times to prevent the ingress of water. It is preferable to store reels off the ground on timbers or other supports. In damp locations, it is advisable to allow at least 3 inches between reels to permit circulation of air.



3.6 If storage is likely to last more than 6 months, drums should be stored in order to be protected from effects like rain, sunlight etc.



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