
KĀBEL

About RR KABEL

RR Kabel is part of RR Global, a USD 850 Million conglomerate in the electrical sector with a presence in over 85 countries globally. Spread across multiple business verticals including Wires & Cables, we have always endeavored to create best quality products using the latest advances in wire design and engineering. RR Kabel offers the widest range of premium wires and cables for various residential, commercial, industrial and infrastructure purposes.

RR Kabel is a ISO 9001, ISO 14001, OHSAS 18001 and ISO 45001 certified company. RR Kabel has multiple product certifications from BIS (India), BASEC (UK), UL (USA), CSA (Canada), TUV, VDE (Germany) & ETL (USA).

Our laboratory is accredited to ISO/IEC 17025 for testing and our cables are tested for compliance to CE, CPR (Construction Product Regulation) as well.

With REACH (Registration Evaluation Authorisation of chemical substances) and RoHS (Restriction of Hazardous Substances) compliance, the materials used in various products are unique after an extensive research by various skilled professionals that make sure that every product adheres to all the guidelines and standards.

Wires and cables permeate through every aspect of our modern lifestyle, which commands uninterrupted and efficient electricity supply. From planes to trains, telecommunication to entertainment, satellites to Wifi - wires are the omnipresent, unsung heroes pulsating with electricity, bringing surroundings to life and bridging distances. Our diverse product offerings are nimble and energy efficient, minimizing losses, tending security and earning you savings through every millimetre it pervades. In our 20-year journey so far, we have been lauded with several product and system certifications and awards that speak for our quality and dependable wires, making us one of the best quality wire and cable company in India and abroad. Yet, we at RR Kabel, will not cease to excel in the wire and cable industry, through our diligent efforts and commitment to the creation of the best.

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APPENDIX

PVC INSULATED BUILDING WIRE (H07V-R)-6491X

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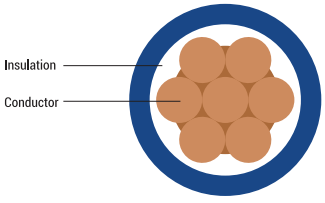

Application

The cables are suitable for power and lighting circuits and building wiring suitable for use in semi flush exposed conduits, embedded conduits and in closed installation ducts.

Standard

BS EN 50525-2-31. SABS 1507-2, SS 358 Part-3.

Technical Data

Voltage Rating : U_o / U - 450 / 750V
Harmonised Designation : 1.5 mm² to 630 mm² stranded class 2 - H07V-R
Temperature Range : -15°C to 70°C
Minimum Bending Radius
Upto 10 mm² : 3 X Overall Diameter.
16 & 25 mm² : 4 X Overall Diameter.
Above 25 mm² : 5 X Overall Diameter.

Cable Construction

Conductor : Plain annealed copper conductor 1.5 mm² to 630 mm² stranded class 2 complying with BS EN 60228, HD 383, IEC 60228
Insulation : PVC (Polyvinyl Chloride) compound type TI 1 complying with EN 50363-3, HD 21.1, IEC 60227-1, SABS 1411-2

Cable Design Parameters

Kindly complete the part numbers for these cables by adding the suffix (in place of 'xx') for the colour required:
02 - black, 03 - red, 04 - blue, 05 - yellow, 06 - green / yellow, 07 - white, 08 - violet, 09 - brown, 10 - orange, 11 - pink, 12 - grey.

Part Number	Nominal Cross Sectional Area (Sq. mm)	Nominal Insulation Thickness (mm)	Overall Diameter Lower Limit (mm)	Overall Diameter Upper Limit (mm)	Approx. Net Weight (kg/km)
01140101xx10	1.5	0.70	2.70	3.30	19
01140102xx10	2.5	0.80	3.33	4.00	33
01140103xx10	4	0.80	3.80	4.60	50
01140104xx10	6	0.80	4.30	5.20	74
01140105xx10	10	1.00	5.60	6.70	126
01140106xx10	16	1.00	6.40	7.80	184
01140107xx10	25	1.20	8.10	9.70	295
01140108xx10	35	1.20	9.00	10.90	375
01140109xx10	50	1.40	10.60	12.80	510
01140110xx10	70	1.40	12.10	14.60	710

Part Number	Nominal Cross Sectional Area (Sq. mm)	Nominal Insulation Thickness (mm)	Overall Diameter Lower Limit (mm)	Overall Diameter Upper Limit (mm)	Approx. Net Weight (kg/km)
01140111xx10	95	1.60	14.10	17.10	950
01140112xx10	120	1.60	15.60	18.80	1240
01140113xx10	150	1.80	17.30	20.90	1530
01140114xx10	185	2.00	19.30	23.30	1800
01140115xx10	240	2.20	22.00	26.60	2500
01140116xx10	300	2.40	24.50	29.60	2990
01140117xx10	400	2.60	27.50	33.20	3860
01140118xx10	500	2.80	30.50	36.90	4900
01140119xx10	630	2.80	34.00	41.10	6370

For current ratings refer table no. 3-1 & voltage drop refer table no. 3-2.

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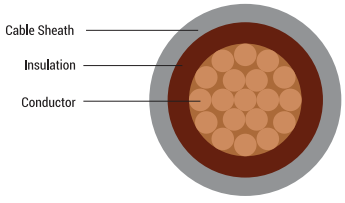

Application

The cables are suitable for power and lighting circuits and building wiring suitable for use in semi flush exposed conduits, embedded conduits and in closed installation ducts. Ideal for internal wiring of appliance.

Standard

BS 6004, EN 50363-3 with BS 7655-4.2 (Only for sheath).

Technical Data

Voltage Rating : 1.5 mm2 to 35 mm2 - 300 / 500V

Harmonised Designation :-15°C to 70 °C

Minimum Bending Radius

Upto 10 mm2 : 10 X Overall Diameter

16 & 35 mm2 : 12 X Overall Diameter

16 & 35 mm2 : 12 X Overall Diameter

Test Voltage : 2 kV for 15 min

Construction

Conductor :

Plain annealed copper conductor : 1.5 & 2.5 mm2 Class -1, 4.0 to 35 mm2 stranded Class 2 complying with BS EN 60228, HD 383, IEC 60228.

Insulation : PVC (Polyvinyl Chloride) compound type TI 1 complying with EN 50363-3

Sheath : PVC (Polyvinyl Chloride) compound type Type 6 complying with BS 7655-4.2

Insulation Colours : Blue and brown

Sheath Colour : Grey RAL 7001

Cable Design Parameters

Kindly complete the part numbers for these cables by adding the suffix (in place of 'xx') for the colour required: 04 - blue, 09 - brown.

Part Number	Nominal Cross Sectional Area (Sq. mm)	Nominal Insulation Thickness (mm)	Nominal Sheath Thickness (mm)	Overall Diameter Lower Limit (mm)	Overall Diameter Upper Limit (mm)	Approx. Net Weight (kg/km)
01150101xx10	1.5	0.70	0.80	4.20	5.00	37
01150102xx10	2.5	0.80	0.80	4.80	5.70	51
01150103xx10	4	0.80	0.90	5.50	6.70	75
01150104xx10	6	0.80	0.90	6.00	7.30	98
01150105xx10	10	1.00	0.90	7.30	8.80	152
01150106xx10	16	1.00	1.00	8.40	10.10	220
01150107xx10	25	1.20	1.10	10.00	12.10	336
01150108xx10	35	1.20	1.10	11.10	13.50	353

For current ratings refer table no. 3-1, for voltage drop refer table no. 3-2

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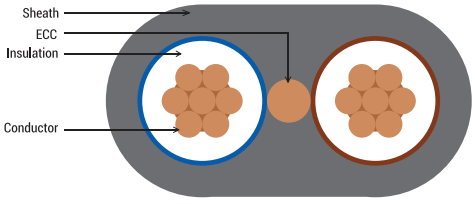

Conductors
Plain annealed copper conductor

Temperature Rating
-15 to +70° C

Insulation
PVC insulated one, two or three cores laid flat with an uninsulated circuit protective conductor.
Ref 6241/2/3Y BS 6004

Sheath Colour
Grey

Voltage Rating
300/500V

Minimum Bending Radius
Upto 10 mm : 3 x Overall diameter
Above 25 mm : 6 x Overall diameter

Part Number	Conductor Size Sq. mm	Stranding (mm)	No. of Cores	CPC Size Sq. mm	Weight (Kg/Km)	Overall Diameter (mm)
6241Y1BR	1.0	1/1.13	1	1.0	49	4.15 X 5.40
6241Y1/5BR	1.5	1/1.38	1	1.0	51	4.65 X 5.80
6242Y1	1.0	1/1.13	2	1.0	69	4.10 X 8.65
6242Y1/5BRBR	1.5	1/1.38	2	1.0	85	4.55 X 8.80
6242Y1/5	1.5	1/1.38	2	1.0	85	4.55 X 8.80
6242Y2/5	2.5	1/1.77	2	1.5	120	5.40 X 10.50
6242Y4	4.0	7/0.85	2	1.5	175	6.10 X 12.00
6242Y6	6.0	7/1.04	2	2.5	240	6.90 X 13.80
6242Y10	10.0	7/1.35	2	4.0	390	8.40 X 18.50
6242Y16	16.0	7/1.70	2	6.0	560	9.70 X 20.60
6243Y1	1.0	1/1.13	3	1.0	92	4.60 X 10.20
6243Y1/5	1.5	1/1.38	3	1.0	115	4.75 X 11.45
6243Y2/5	2.5	1/1.77	3	1.5	170	5.45 X 13.40

HALOGEN-FREE H07Z-R-6491B

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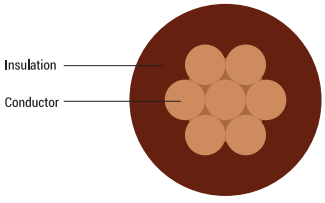

Application

The cables are suitable for conduit wiring , especially in installations where fire, smoke and toxic fumes create potential threat.

Standard

BS EN 50525-3-41.

Technical Data

Voltage Rating : Uo / U - 450 / 750V

Harmonised Designation : 1.5 mm2 to 630 mm2 stranded class 2 - H07Z-R

Temperature Range : -15°C to 90°C

Minimum Bending Radius
Upto 10 mm2 : 3 X Overall Diameter
16 & 25 mm2 : 4 X Overall Diameter
Above 25 mm2 : 5 X Overall Diameter

Cable Construction

Conductor : Plain annealed copper conductor 1.5 mm2 to 630 mm2 stranded Cl. 2 complying with EN 60228
Insulation : LSZH (Low Smoke Zero Halogen) Type EI5 according to BS EN 50363-5

Cable Design Parameters

Kindly complete the part numbers for these cables by adding the suffix (in place of 'xx') for the colour required:
02 - black, 03 - red, 04 - blue, 05 - yellow, 06 - green / yellow, 07 - white, 08 - violet, 09 - brown, 10 - orange, 11 - pink, 12 - grey.

Part Number	Nominal Cross Sectional Area (Sq. mm)	Nominal Insulation Thickness (mm)	Overall Diameter Lower Limit (mm)	Overall Diameter Upper Limit (mm)	Approx. Net Weight (kg/km)
01130101xx60	1.5	0.70	2.70	3.40	19
01130102xx60	2.5	0.80	3.30	4.10	33
01130103xx60	4	0.80	3.80	4.70	50
01130104xx60	6	0.80	4.30	5.40	74
01130105xx60	10	1.00	5.60	7.00	126
01130106xx60	16	1.00	6.40	8.00	184
01130107xx60	25	1.20	8.10	10.10	295
01130108xx60	35	1.20	9.00	11.30	375
01130109xx60	50	1.40	10.60	13.20	510
01130110xx60	70	1.40	12.10	15.10	710

Part Number	Nominal Cross Sectional Area (Sq. mm)	Nominal Insulation Thickness (mm)	Overall Diameter Lower Limit (mm)	Overall Diameter Upper Limit (mm)	Approx. Net Weight (kg/km)
01130111xx60	95	1.60	14.10	17.60	950
01130112xx60	120	1.60	15.60	19.40	1240
01130113xx60	150	1.80	17.30	21.60	1530
01130114xx60	185	2.00	19.30	24.10	1800
01130115xx60	240	2.20	22.00	27.50	2500
01130116xx60	300	2.40	24.50	30.60	2990
01130117xx60	400	2.60	27.50	34.30	3860
01130118xx60	500	2.80	30.50	38.20	4900
01130119xx60	630	2.80	34.00	42.50	6370

For current ratings refer table no. 2-1 & voltage drop refer table no. 2-2

H05Z-K & H07Z-K

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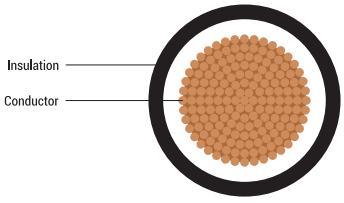

Application

Halogen-free single-core wires are used for installation in dry environments for wiring up lighting fixtures and units where valuable assets are to be protected from further damage resulting from fire. These cables may be installed on, in and beneath the plaster, as well as in closed installation ducts. The direct operating voltages is permitted up to 900 V against ground when they are used in rail-coaches. For the inner wiring of switch boards and distributors these are to be used with an alternating nominal voltage up to 1000V or a direct voltage up to 750V against ground.

Standard

BS EN 50525-3-41.

Technical Data

Nominal Voltage : H05Z-K UO / U 300 / 500V, H07Z-K UO / U 450 / 750V
Harmonised Designation : 0.5 mm2 to 1 mm2 - H05Z-K, 1.5 mm2 to 240 mm2 - H07Z-K
Temperature Range : -15°C to +90°C
Minimum Bending Radius
Cable diameter ≤ 8 mm : 4 x outer diameter
Approx. diameter > 8 to 12 mm: 5 x outer diameter
Approx. diameter > 12 mm: 6 x outer diameter
Test Voltage : 2500V

Construction

Conductor : Conductor Class 5 flexible plain/metal coated stranded according to EN 60228
Insulation : Insulation Polyolefin cross linked EI5 to EN 50363-5

Tests

Smoke density to acc. to EN 61034-2
Halogen free acc. to EN 50525-1, EN 60754-1
Corrosivity acc. to EN 60754-2
Ozone resistant according to EN 60811-2-1
Self-extinguishing and flame retardant according to EN 60332-1-2
LSOH = Low Smoke Zero Halogen-Free

Cable Design Parameters

Kindly complete the part numbers for these cables by adding the suffix (in place of 'xx') for the colour required:
01 - green, 02 - black, 03 - red, 04 - blue, 05 - yellow, 06 - green/yellow, 07 - white, 08 - violet, 09 - brown, 10 - orange, 11 - pink, 12 - grey.
By adding the suffix (in place of 'c') for the conductor type required:
0 = Annealed Bare Copper (ABC), 1= Annealed Tinned Copper (ATC)

	Part Number	Nominal Cross Sectional Area (Sq. mm)	Nominal Thicknes of Insulation (mm)	Mean Overall Diameter		Approx. Cable Weight (kg/km)
				Lower Limit (mm)	Upper Limit (mm)	
H05Z-K	02040101xx6c	0.5	0.6	1.9	2.4	9
	02040102xx6c	0.75	0.6	2.1	2.6	12
	02040103xx6c	1	0.6	2.2	2.8	15
H07Z-K	02040104xx6c	1.5	0.7	2.8	3.5	21
	02040105xx6c	2.5	0.8	3.4	4.3	33
	02040106xx6c	4	0.8	3.9	4.9	47
	02040107xx6c	6	0.8	4.4	5.5	66
	02040108xx6c	10	1.0	5.7	7.1	112
	02040109xx6c	16	1.0	6.7	8.4	169
	02040110xx6c	25	1.2	8.4	10.6	260
	02040111xx6c	35	1.2	9.7	12.1	358
	02040112xx6c	50	1.4	11.5	14.4	509
	02040113xx6c	70	1.4	13.2	16.61	701
	02040114xx6c	95	1.6	15.1	18.8	925
	02040115xx6c	120	1.6	16.7	20.9	1168
	02040116xx6c	150	1.8	18.6	23.3	1456
	02040117xx6c	185	2.0	20.6	25.8	1773
	02040118xx6c	240	2.2	23.5	29.4	2329

For current ratings refer table no. 2-1 & voltage drop refer table no. 2-2

6181XY - BS 7889

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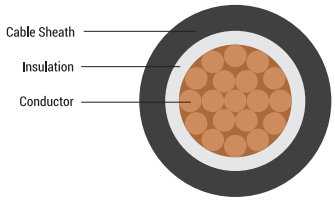

Application

The cables are suitable for power and lighting circuits and building wiring suitable for use in semi flush exposed conduits, embedded conduits and in closed installation ducts. Ideal for internal wiring of appliance.

Standard

BS 7889.

Technical Data

Voltage Rating : 1.5 mm2 to 630 mm2 - 600 / 1000V
Harmonised Designation :--15 °C to 90°C
Minimum Bending Radius
4.0 to 50 mm2 : 10 X Overall diameter
70 & 630 mm2 : 12 X Overall diameter
Test Voltage : 2 kV 15 min.

Cable Construction

Conductor :
Plain annealed copper conductor : 4 mm2 to 630 mm2 stranded class 2 complying with BS EN 60228, HD 383, IEC 60228
Insulation : GP8 conforming to BS 7655-1.3 (XLPE)
Sheath : Type 9 specified in BS 7655-4.2
Insulation Colours : Natural
Sheath Colour : Black

Cable Design Parameters

Part Number	Nominal Cross Sectional Area (Sq. mm)	Nominal Insulation Thickness (mm)	Nominal Sheath Thickness (mm)	Approx Overall Diameter (mm)	Approx. Net Weight (kg/km)
11600100004	4	0.70	1.40	8.0	107
11600100006	6	0.70	1.40	8.5	132
11600100010	10	0.70	1.40	9.5	181
11600100016	16	0.70	1.40	10.5	247
11600100025	25	0.90	1.40	12.0	358
11600100035	35	0.90	1.40	13.0	466
11600100050	50	1.00	1.40	14.0	545
11600100070	70	1.10	1.40	16.0	765
11600100095	95	1.10	1.50	18.0	1022
11600100120	120	1.20	1.50	20.0	1267
11600100150	150	1.40	1.60	22.0	1556
11600100185	185	1.60	1.60	24.0	1928
11600100240	240	1.70	1.70	27.0	2501
11600100300	300	1.80	1.80	29.0	3108
11600100400	400	2.00	1.90	32.0	3923
11600100500	500	2.20	2.00	36.0	4999
11600100630	630	2.40	2.20	40.0	6414

For current ratings refer table no. 2-1, for voltage drop refer table no. 2-2

BS 6231 CK 90°C

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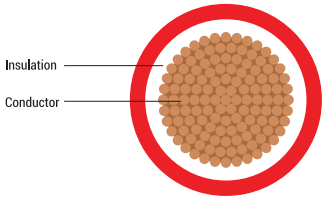

Application

High temperature, flame retardant cable designed for use in switch control, relay and instrumentation panels of power switchgear and for purposes such as internal connectors in rectifier equipment, motor starters and controllers.

Standard

BS6231 Type CK.

Technical Data

Voltage Rating : 600 / 1000V
Harmonised Designation : 90°C (105°C for 15,000 hours
Minimum Bending Radius
Cable diameter ≤ 8 mm : 4 x outer diameter
Approx. diameter > 8 to 12 mm: 5 x outer diameter
Approx. diameter > 12 mm: 6 x outer diameter
Test Voltage : 4000V

Construction

Conductor : Conductor Class 5 flexible plain/metal coated stranded according to EN 60228 cl. 5
Insulation : PVC (Polyvinyl Chloride) TI3 to BS EN 50363-3

Properties

PVC self-extinguishing and flame retardant according to EN 60332-1-2

Cable Design Parameters

Kindly complete the part numbers for these cables by adding the suffix (in place of 'xx') for the colour required:
01 - green, 02 - black, 03 - red, 04 - blue, 05 - yellow, 06 - green/yellow, 07 - white, 08 - violet, 09 - brown, 10 - orange, 11 - pink, 12 - grey.
By adding the suffix (in place of 'c') for the conductor type required:
0 = Annealed Bare Copper (ABC), 1 = Annealed Tinned Copper (ATC)

Part Number	Nominal Cross Sectional Area (Sq. mm)	Nominal Thicknes of Insulation (mm)	Mean Overall Diameter		Approx. Net Weight (kg/km)
			Lower Limit (mm)	Upper Limit (mm)	
02060101xx3c	0.5	0.8	2.4	3.0	11
02060102xx3c	0.75	0.8	2.6	3.1	14
02060103xx3c	1	0.8	2.7	3.3	16
02060104xx3c	1.5	0.8	3.0	3.6	21
02060105xx3c	2.5	0.8	3.4	4.1	32
02060106xx3c	4	0.8	3.9	4.8	46
02060107xx3c	6	0.8	4.4	5.3	64

Part Number	Nominal Cross Sectional Area (Sq. mm)	Nominal Thicknes of Insulation (mm)	Mean Overall Diameter		Approx. Net Weight (kg/km)
			Lower Limit (mm)	Upper Limit (mm)	
02060108xx3c	10	1.0	5.7	7.2	109
02060109xx3c	16	1.0	6.7	9.0	166
02060110xx3c	25	1.2	8.4	11.5	256
02060111xx3c	35	1.2	9.7	12.5	352
02060112xx3c	50	1.4	11.5	15.4	501
02060113xx3c	70	1.4	13.2	17.5	692
02060114xx3c	95	1.6	15.1	19.2	914
02060115xx3c	120	1.6	16.7	21.2	1155
02060116xx3c	150	1.8	18.6	23.9	1441
02060117xx3c	185	2.0	20.6	25.9	1754
02060118xx3c	240	2.2	23.5	28.9	2305

Note : These cable are also catered with compliance to AWM, UL 1015 and CSA C22.2 No. 210-11 as Trirated cable.
For current ratings refer table no. 1-1 & 1-2.

TRI RATED CABLE

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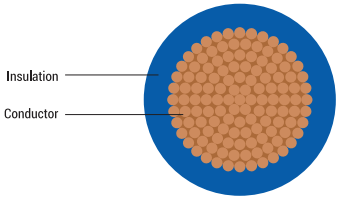

Application

These cables are used for internal wiring of panels and electrical equipment. These are used as connection wire in machines laid in protective tubes and flexible pipes and also for motors and transformers.

Technical Data

Standard : UL 1015, 758, CSA C 22.2 No 210 & BS 6231
Nominal Voltage : 600V
UL - Type AWM 105°C 600V
CSA - Type AWM 105°C 600V
BS 6231 CK type 90°C 600V / 1000 V
Test Voltage (Spark Test)
AWG 18 to 16 : 6kV
≥ AWG 8: 7.5kV
Temperature Range : Flexing -5°C to +105°C. Fixed installation -20°C to +105°C
Bending Radius :
Cable diameter ≤ 8 mm : 4 x outer diameter
Approx diameter > 8 to 12 mm : 5 x outer diameter
Approx diameter > 12 mm : 6 x outer diameter

Cable Construction

Stranded copper conductor / according to BS EN 60228, cl. 5
PVC-core insulation according to UL - Standard 1581, Class 43 and CSA - C22.2 No. 210 ULVW - 1 and CSA FT - 1, heat and damp resistant

Properties

Conditionally resistant to - Oils, Solvents, Acids, Dye
PVC self - extinguishing and flame retardant, test method to UL VW-1 and CSA FT 1 / FT 2
Flame retardant to EN 60332 - 1- 2

Cable Design Parameters

Kindly complete the part numbers for these cables by adding the suffix (in place of 'xx') for the insulation colour required:
01 - green, 02 - black, 03 - red, 04 - blue, 05 - yellow, 06 - green/yellow, 07 - white, 08 -Violet, 09 - brown, 10 - orange, 11 - pink, 12 - grey, 13 - light blue

Part Number	Nominal Cross Sectional Area (Sq. mm)	Nominal Insulation Thickness (mm)	Overall Diameter Lower Limit (mm)	Overall Diameter Upper Limit (mm)	Approx. Net Weight (kg/km)
06010101xx30	21	1 x 0.5	2.6	4.1	11.0
06010102xx30	19	1 x 0.75	2.8	6.1	13.5
06010103xx30	18	1 x 1	2.9	8.1	16.0
06010104xx30	16	1 x 1.5	3.2	11.7	21.0
06010105xx30	14	1 x 2.5	3.6	19.5	31.0
06010106xx30	12	1 x 4	4.1	31.5	45.0
06010107xx30	10	1 x 6	4.7	47.1	63.0
06010108xx30	8	1 x 10	6.3	81.6	111.0
06010109xx30	6	1 x 16	8.3	131.8	183.0
06010110xx30	4	1 x 25	9.6	204.8	267.0
06010111xx30	2	1 x 35	10.8	299.7	374.0
06010112xx30	1	1 x 50	13.2	416.8	531.0
06010113xx30	2/0	1 x 70	14.9	597.2	733.0
06010114xx30	3/0	1 x 95	16.4	774	928.0
06010115xx30	4/0	1 x 120	18	980	1156.0
06010116xx30	250 kcmil	1 x 150	20.3	1208.1	1439.0
06010117xx30	350 kcmil	1 x 185	22.4	1568.2	1834.0
06010118xx30	450 kcmil	1 x 240	24.7	2018.2	2324.0

For current ratings & voltage drop refer table no. 1-1 & 1-2.

H03/H05VVH2-F & H03/H05VV-F

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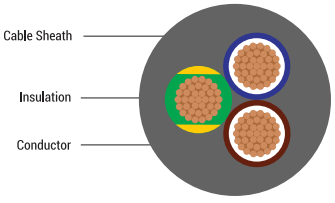

Application

Used in connections of household appliances, plant and machinery, wiring purposes and for manufacturing cords.

Standard

BS EN 50525-2-11, DIN EN 50525-2-11; VDE 0285-525-2-11, EN 50525-2-11.

Technical Data

Nominal Voltage : 300/500V (H05VV-F & H05VVH2-F); 300/300V (H03VV-F & H03VVH2-F)
Insulation Resistance : Min. 20 GΩ x cm
Temperature Range : Flexing -5°C to +70°C. Fixed Installation : -30°C to +70°C
Minimum Bending Radius: Flexing 7.5 x cable ø; Fixed installation 4 x cable ø
Test Voltage : 4000V
Breakdown Voltage : Min. 8000V

Cable Construction

Bare copper, fine wire conductors, as per EN 60228 Cl.5
PVC core insulation TI2, to EN 50363-3
Harmonised core colour to HD 308 (Refer Appendix Table No. 1-1)
Cores stranded in layers with optimal lay-length
PVC outer sheath TM2, to EN 50363-4.1

H05VV-F is also available in oil resistant variant as H05VV5-F
The outer sheath provided here is of special PVC, TM5 to BS EN 50363-4.1

Properties

PVC self-extinguishing and flame retardant according to EN 60332-1-2
Please complete the part numbers for these cables by adding the suffix (in place of 'z') for the sheath colour required:
1 - black (RAL 9005), 3 - grey (RAL 7001), 5 - white (RAL 9010). For Oil Resistant sheath kindly add 'OR' after the part nos

	Part Number	No. of Cores and Nominal Cross Sectional Area (Sq. mm)	Approx. Cable Diameter (mm)
H03VV-F	03030101021z	2 x 0.5	5.1
	03030102021z	2 x 0.75	5.5
	03030103021z	3 x 0.5	5.3
	03030104011z	3 G 0.5	5.3
	03030105021z	3 x 0.75	5.7
	03030106011z	3 G 0.75	5.7
	03030107021z	4 x 0.5	5.8

	Part Number	No. of Cores and Nominal Cross Sectional Area (Sq. mm)	Approx. Cable Diameter (mm)
	03030108011z	4 G 0.5	5.8
	03030109021z	4 x 0.75	6.3
	03030110011z	4 G 0.75	6.3
H03VVH2-F	03031111021z	2 x 0.5	5.1 x 3.2
	03031112021z	2 x 0.75	5.5 x 3.4
H05VVH2-F	03031113021z	2 x 0.75	6.3 x 4.0
	03031114021z	2 x 1	6.6 x 4.1
	03031115021z	2 x 1.5	7.7 x 4.7
H05VV-F	03030116021z	2 x 0.75	6.2
	03030117021z	2 x 1	6.4
	03030118021z	2 x 1.5	7.5
	03030119021z	2 x 2.5	9.1
	03030120021z	2 x 4	10.3
	03030121011z	3 G 0.75	6.6
	03030122021z	3 x 0.75	6.6
	03030123011z	3 G 1	6.9
	03030124021z	3 x 1	6.9
	03030125011z	3 G 1.5	8.1
	03030126021z	3 x 1.5	8.1
	03030127011z	3 G 2.5	9.7
	03030128021z	3 x 2.5	9.7
	03030129011z	3 G 4	11.2
	03030130021z	3 x 4	11.2
	03030131011z	4 G 0.75	7.1
	03030132021z	4 x 0.75	7.1
	03030133011z	4 G 1	7.5
	03030134021z	4 x 1	7.5
	03030135011z	4 G 1.5	9.1
	03030136021z	4 x 1.5	9.1
	03030137011z	4 G 2.5	10.7
	03030138021z	4 x 2.5	10.7
	03030139011z	4 G 4	12.2
	03030140021z	4 x 4	12.2
	03030141011z	5 G 0.75	8
	03030142021z	5 x 0.75	8
	03030143011z	5 G 1	8.4
	03030144021z	5 x 1	8.4

	Part Number	No. of Cores and Nominal Cross Sectional Area (Sq. mm)	Approx. Cable Diameter (mm)
	03030145011z	5 G 1.5	10.2
	03030146021z	5 x 1.5	10.2
	03030147011z	5 G 2.5	12.0
	03030148021z	5 x 2.5	12.0
	03030149011z	5 G 4	13.8
	03030150021z	5 x 4	13.8

Note :

*G = With green/yellow earth core
x = Without green/yellow earth core

Range Details

Cable Type	Size Range	
	BASEC	VDE
H03VVH2-F	-	0.50...0.75 mm² x 2C
H05VVH2-F	0.75 . . . . 1.5 mm² x 2C	0.75...1 mm² x 2C
H05VV-F	0.75...4 mm² x 2...5C	0.75...4 mm² x 2...3C

For current rating refer table no. 4-1 & for voltage drop refer table no. 4-2 of Appendix
For current rating conversation factor, refer table no. 4-3 of Appendix
For current rating to DIN VDE 0298-4, refer table no. 5 of Appendix

H03/H05V2V2H2-F & H03/H05V2V2-F

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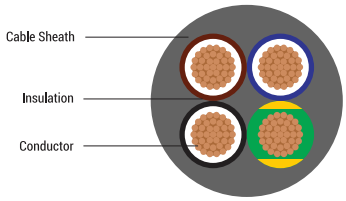

Application

Used in connections of household appliances and internal wiring purposes with high ambient temperatures and humid spaces

Standard

BS EN 50525-2-11.

Technical Data

Nominal Voltage : 300 / 500V (H05V2V2H2-F / H05V2V2-F); 300 / 300V (H03V2V2H2-F / H03V2V2-F)
Insulation Resistance : Min. 20 GΩ x cm
Temperature Range :
Flexing -5°C to +90°C
Fixed Installation -30°C to +90°C
Fixed Installation 5 x cable ø
Minimum Bending Radius
Flexing 7.5 x cable ø; Fixed installation 4 x cable ø
Test Voltage : 4000V
Breakdown Voltage : Min. 8000V

Cable Construction

Bare copper, fine wire conductors, as per EN 60228 Cl.5
PVC core insulation TI3, to EN 50363-3
Harmonised core colour to HD 308 (Refer Appendix Table No. 1-1)
Cores stranded in layers with optimal lay-length
PVC outer sheath TM3, to EN 50363-4.1

Properties

PVC self-extinguishing and flame retardant according to EN 60332-1-2

Cable Design Parameters

Please complete the part numbers for these cables by adding the suffix (in place of 'z') for the sheath colour required,
1 - black (RAL 9005), 3 - grey (RAL 7001), 5 - white (RAL 9010).

	Part Number	No. of Cores and Nominal Cross Sectional Area (Sq. mm)	Approx. Cable Diameter (mm)
H03VV-F	03050101023z	2 x 0.5	5.1
	03050102023z	2 x 0.75	5.5
	03050103023z	3 x 0.5	5.3
	03050104013z	3 G 0.5	5.3
	03050105023z	3 x 0.75	5.7
	03050106013z	3 G 0.75	5.7
	03050107023z	4 x 0.5	5.8
	03050108013z	4 G 0.5	5.8
	03050109023z	4 x 0.75	6.3
	03050110013z	4 G 0.75	6.3
H03V2 V2H2-F	03051111023z	2 x 0.5	5.1 x 3.2
	03051112023z	2 x 0.75	5.5 x 3.4

	Part Number	No. of Cores and Nominal Cross Sectional Area (Sq. mm)	Approx. Cable Diameter (mm)
H05V2V2H2-F	03051113023z	2 x 0.75	6.3 x 4.0
	03051114023z	2 x 1.0	6.6 x 4.1
	03051115023z	2 x 1.5	7.7 x 4.7
H05V2V2-F	03050116023z	2 x 0.75	6.2
	03050117023z	2 x 1.0	6.5
	03050118023z	2 x 1.5	7.5
	03050119023z	2 x 2.5	9.1
	03050120023z	2 x 4	10.3
	03050121023z	3 x 0.75	6.6
	03050122013z	3 G 0.75	6.6
	03050123023z	3 x 1.0	6.9
	03050124013z	3 G 1.0	6.9
	03050125023z	3 x 1.5	8.1
	03050126013z	3 G 1.5	8.1
	03050127023z	3 x 2.5	9.9
	03050128013z	3 G 2.5	9.9
	03050129023z	3 x 4	11.2
	03050130013z	3 G 4	11.2
	03050131023z	4 x 0.75	7.2
	03050132013z	4 G 0.75	7.2
	03050133023z	4 x 1.0	7.7
	03050134013z	4 G 1.0	7.7
	03050135023z	4 x 1.5	9
	03050136013z	4 G 1.5	9
	03050137023z	4 x 2.5	10.8
	03050138013z	4 G 2.5	10.8
	03050139023z	4 x 4	12.2
	03050140013z	4 G 4	12.2
	03050141023z	5 x 0.75	8
	03050142013z	5 G 0.75	8
	03050143023z	5 x 1.0	8.3
	03050144013z	5 G 1.0	8.3
	03050145023z	5 x 1.5	10
	03050146013z	5 G 1.5	10
	03050147023z	5 x 2.5	12
	03050148013z	5 G 2.5	12
	03050149023z	5 x 4	13.7
	03050150013z	5 G 4	13.7

Note :
***G = With green/yellow earth core**
x = Without green/yellow earth core
For current ratings refer table no. 4-1 & voltage drop refer table no. 4-2 of Appendix.
For current rating conversion factor, refer table no. 4-3 of Appendix.

STRANDED BARE COPPER CONDUCTOR

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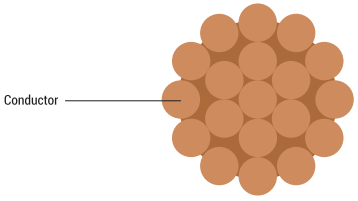

Application

The bare copper conductor is used as ground conductor, uninsulated hook up wires and jumpers.

Standard

IEC 60228, BS EN 60228

Technical Data

Description : Soft drawn plain annealed copper
Packing : In wooden drums

Cable Construction

The conductor consist of annealed bare copper wire which are stranded together
The construction of the conductor is in accordance to IEC 60228 and BS EN 60228

Cable Design Parameters

Part Number	Nominal Cross Sectional Area (Sq. mm)	Conductor Details		Approx. Conductor Diameter (mm)	Approx Net Weight (kg/km)
		No. of Strand	Max. DC Conductor Resistance at 20°C (Ω/Km)		
121101010000	16	7	1.15	5.01	141
121101020000	25	7	0.727	6.32	223
121101030000	35	7	0.524	7.41	309
121101040000	50	19	0.387	8.72	418
121101050000	70	19	0.268	10.53	604
121101060000	95	19	0.193	12.34	839
121101070000	120	37	0.153	13.91	1059
121101080000	150	37	0.124	15.45	1306
121101090000	185	37	0.0991	17.28	1634
121101100000	240	61	0.0754	19.84	2148
121101110000	300	61	0.0601	22.22	2695
121101120000	400	91	0.047	25.15	3446
121101130000	500	91	0.0366	28.49	4425
121101140000	630	91	0.0283	32.41	5723

*Tinned copper conductor can also be supplied on request

JZ-500

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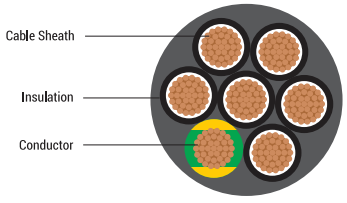


Application

These cables are used for flexible use for medium mechanical stresses with free movement without tensile stress of forced movements in dry, moist and wet rooms but not suitable for outdoor installation. Fit for measuring and control cables in tool machines, conveyor belts production lines in machinery production, in air-conditioning and steel production.

Standard

Requirement adapted to DIN VDE 0245, 0281, 0293, 0295

Technical Data

Nominal Voltage : U_0 / U 300 / 500V
Insulation Resistance : Min. 20 GΩ x cm
Temperature Range : Flexing -5°C to +70°C. Fixed installation -30°C to +70°C
Minimum Bending Radius : Flexing 7.5 x cable ø. Fixed installation 4 x cable ø
Test Voltage : 4000V
Breakdown Voltage : Min. 8000V

Cable Construction

Bare copper, fine wire conductors, to EN 60228 Cl.5. Core insulation of special PVC TI2 EN 50363-3.
Black core with continuous white numbering according to DIN VDE 0293. Green/yellow earth core in the outer layer (3 cores and above).
Cores stranded in layers with optimal lay-length. Outer sheath of special PVC, TM2 to EN 50363-4.1. Colour grey (RAL 7001).

Properties

PVC self-extinguishing and flame retardant according to EN 60332-1-2
JZ-500 is also available in oil resistant variant as JZ-500 OR. The outer sheath provided here is of special PVC, TM5 to EN 50363 -4.1
For Oil Resistant sheath kindly add 'OR' after the part nos.

Cable Design Parameters

Part Number	No. of Cores and Nominal Cross Sectional Area (Sq. mm)	Approx. Cable Diameter (mm)	Approx. Copper Weight (kg/km)	Approx. Cable Weight (kg/km)
030900211050	2 x 0.5	4.8	9.5	35
030900311050	3G 0.5	5.1	14.0	42
030900301050	3 x 0.5	5.1	14.2	42
030900411050	4G 0.5	5.6	19.0	51
030900401050	4 x 0.5	5.6	19.0	51
030900511050	5G 0.5	6.0	24.0	61
030900501050	5 x 0.5	6.0	24.0	61

Part Number	No. of Cores and Nominal Cross Sectional Area (Sq. mm)	Approx. Cable Diameter (mm)	Approx. Copper Weight (kg/km)	Approx. Cable Weight (kg/km)
030900611050	6G 0.5	6.6	28.5	74
030900711050	7G 0.5	6.6	33.5	76
030900701050	7 x 0.5	6.6	33.5	76
030900811050	8G 0.5	7.4	38.0	98
030900801050	8 x 0.5	7.4	38.0	98
030901011050	10G 0.5	8.4	47.5	124
030901211050	12G 0.5	8.7	57.0	133
030901201050	12 x 0.5	8.7	57.0	133
030901411050	14G 0.5	9.1	66.5	162
030901611050	16G 0.5	9.6	76.0	175
030901811050	18G 0.5	10.2	85.5	191
030902011050	20G 0.5	10.8	95.0	227
030902111050	21G 0.5	10.8	100.0	234
030902511050	25G 0.5	11.2	118.5	280
030903011050	30G 0.5	12.7	142.5	315
030903211050	32G 0.5	13.2	152.0	340
030903411050	34G 0.5	13.8	161.5	355
030904011050	40G 0.5	14.4	190.0	408
030904211050	42G 0.5	15.0	199.0	440
030905011050	50G 0.5	15.8	237.0	552
030905211050	52G 0.5	16.3	246.5	560
030906111050	61G 0.5	17.4	289.5	646
030906511050	65G 0.5	17.8	308.5	687
030908011050	80G 0.5	19.9	379.5	853
030910011050	100G 0.5	22.8	474.0	1085
030900201075	2 x 0.75	5.3	14.5	44
030900311075	3G 0.75	5.6	21.5	54
030900301075	3 x 0.75	5.6	21.5	54
030900411075	4G 0.75	6.2	28.5	71
030900401075	4 x 0.75	6.2	28.5	71
030900511075	5G 0.75	6.8	36.0	81
030900501075	5 x 0.75	6.8	36.0	81
030900611075	6G 0.75	7.4	43.0	100
030900601075	6 x 0.75	7.4	43.0	100
030900711075	7G 0.75	7.4	50.0	103
030900701075	7 x 0.75	7.4	50.0	103
030900811075	8G 0.75	8.3	57.0	142

Part Number	No. of Cores and Nominal Cross Sectional Area (Sq. mm)	Approx. Cable Diameter (mm)	Approx. Copper Weight (kg/km)	Approx. Cable Weight (kg/km)
030900801075	8 x 0.75	8.3	57.0	142
030900911075	9G 0.75	9.0	64.0	156
030901011075	10G 0.75	9.4	71.0	166
030901211075	12G 0.75	9.8	85.5	180
030901201075	12 x 0.75	9.8	85.5	180
030901411075	14G 0.75	10.3	100.0	205
030901511075	15G 0.75	10.9	107.0	230
030901811075	18G 0.75	11.5	128.0	260
030901911075	19G 0.75	11.5	135.0	270
030902011075	20G 0.75	12.2	142.5	300
030902111075	21G 0.75	12.2	149.5	311
030902511075	25G 0.75	12.6	178.0	376
030902711075	27G 0.75	13.9	192.0	405
030903211075	32G 0.75	15.0	228.0	455
030903411075	34G 0.75	15.6	242.0	470
030903711075	37G 0.75	15.6	263.0	515
030904011075	40G 0.75	16.3	284.5	532
030904111075	41G 0.75	17.0	292.0	570
030904211075	42G 0.75	17.0	299.0	600
030905011075	50G 0.75	18.0	356.0	690
030906111075	61G 0.75	19.7	434.0	835
030906511075	65G 0.75	20.3	462.5	890
030908011075	80G 0.75	22.9	569.0	1087
030910011075	100G 0.75	26.0	711.5	1410
030900200001	2 x 1	5.6	19.0	52
030900310001	3G 1	6.0	28.5	66
030900300001	3 x 1	6.0	28.5	66
030900410001	4G 1	6.6	38.0	82
030900400001	4 x 1	6.6	38.0	82
030900510001	5G 1	7.2	47.5	100
030900500001	5 x 1	7.2	47.5	100
030900610001	6G 1	7.9	57.0	122
030900710001	7G 1	7.9	66.5	142
030900700001	7 x 1	7.9	66.5	142
030900810001	8G 1	8.9	76.0	165

Part Number	No. of Cores and Nominal Cross Sectional Area (Sq. mm)	Approx. Cable Diameter (mm)	Approx. Copper Weight (kg/km)	Approx. Cable Weight (kg/km)
030900910001	9G 1	9.6	85.5	190
030901010001	10G 1	10.1	95.0	205
030901000001	10 x 1	10.1	95.0114.0	205
030901210001	12G 1	10.4	114.0	230
030901200001	12 x 1	10.4	133.0	230
030901410001	14G 1	11.0	152.0	258
030901610001	16G 1	11.6	171.0	293
030901810001	18G 1	12.3	171.0	330
030901800001	18 x 1	12.3	180.5	330
030901910001	19G 1	12.3	190.0	337
030902010001	20G 1	13.0	190.0	370
030902000001	20 x 1	13.0	199.5	370
030902110001	21G 1	13.0	228.0	383
030902410001	24G 1	13.5	237.5	420
030902510001	25G 1	13.5	237.5	435
030902500001	25 x 1	13.5	246.5	435
030902610001	26G 1	13.5	256.0	445
030902710001	27G 1	14.8	284.5	502
030903010001	30G 1	15.4	322.5	535
030903410001	34G 1	16.7	341.5	620
030903610001	36G 1	16.7	351.0	635
030903710001	37G 1	16.7	379.5	680
030904010001	40G 1	17.5	379.5	730
030904000001	40 x 1	17.5	389.0	730
030904110001	41G 1	18.2	398.5	740
030904210001	42G 1	18.2	474.5	749
030905010001	50G 1	19.3	531.0	870
030905610001	56G 1	20.5	578.5	972
030906110001	61G 1	21.2	616.5	1050
030906510001	65G 1	21.8	759.0	1112
030908010001	80G 1	24.3	948.5	1380
030910010001	100G 1	27.8	29.0	1767
030900201105	2 x 1.5	6.3	43.5	69
030900311105	3G 1.5	6.7	43.5	87
030900301105	3 x 1.5	6.7	58.0	87
030900411105	4G 1.5	7.3	58.0	107

Part Number	No. of Cores and Nominal Cross Sectional Area (Sq. mm)	Approx. Cable Diameter (mm)	Approx. Copper Weight (kg/km)	Approx. Cable Weight (kg/km)
030900401105	4 x 1.5	7.3	58.0	107
030900511105	5G 1.5	8.0	72.5	135
030900501105	5 x 1.5	8.0	72.5	135
030900611105	6G 1.5	8.8	86.7	162
030900711105	7G 1.5	8.8	101.0	168
030900701105	7 x 1.5	8.8	101.0	168
030900811105	8G 1.5	9.9	116.0	213
030900801105	8 x 1.5	9.9	116.0	213
030900911105	9G 1.5	10.8	130.0	248
030901011105	10G 1.5	11.3	145.0	263
030901111105	11G 1.5	11.3	159.0	278
030901211105	12G 1.5	11.7	173.5	295
030901201105	12 x 1.5	11.7	173.5	295
030901411105	14G 1.5	12.4	202.5	340
030901611105	16G 1.5	13.1	202.5	382
030901811105	18G 1.5	13.9	260.0	433
030902111105	21G 1.5	14.8	303.5	505
030902511105	25G 1.5	15.3	361.0	605
030902611105	26G 1.5	15.3	361.0	622
030903211105	32G 1.5	18.2	462.5	799
030903411105	34G 1.5	18.9	491.0	812
030904111105	41G 1.5	20.6	592.5	960
030905011105	50G 1.5	21.9	722.5	1240
030906111105	61G 1.5	24.0	881.5	1420
030906511105	65G 1.5	24.7	939.0	1570
030900201205	2 x 2.5	7.5	40.1	101
030900311205	3G 2.5	8.0	61.0	130
030900411205	4G 2.5	8.9	82.0	162
030900511205	5G 2.5	9.8	102.0	200
030900711205	7G 2.5	10.7	142.0	260
030901211205	12G 2.5	14.4	248.0	452
030901411205	14G 2.5	15.2	290.0	517
030901811205	18G 2.5	17.0	378.0	665
030902511205	25G 2.5	18.8	525.0	870
030903411205	34G 2.5	23.4	715.0	1250
030905011205	50G 2.5	27.0	1050.0	1810

Part Number	No. of Cores and Nominal Cross Sectional Area (Sq. mm)	Approx. Cable Diameter (mm)	Approx. Copper Weight (kg/km)	Approx. Cable Weight (kg/km)
030900310004	3G 4	96.0	96.0	185
030900410004	4G 4	128.0	128.0	230
030900510004	5G 4	159.5	159.5	286
030900710004	7G 4	223.5	223.5	370
030901110004	10G 4	325.0	325.0	608
030901210004	12G 4	383.0	383.0	660
030900310006	3G 6	144.0	144.0	277
030900410006	4G 6	12.2	191.5	354
030900510006	5G 6	13.5	239.5	441
030900710006	7G 6	14.8	335.0	574
030900310010	3G 10	13.1	244.5	436
030900410010	4G 10	14.5	326.0	548
030900510010	5G 10	16.0	407.5	676
030900710010	7G 10	17.7	570.5	892
030900410016	4G 16	17.8	543.0	860
030900510016	5G 16	19.7	678.5	1074
030900710016	7G 16	21.8	950.0	1392
030900410025	4G 25	21.9	844.5	1335
030900510025	5G 25	25.8	1055.5	1710
030900710025	7G 25	28.7	1478.0	2184
030900410035	4G 35	26.4	1189.0	1795
030900510035	5G 35	29.6	1486.5	2251

Note:

*G = Green/yellow earth core

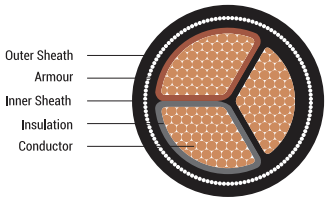
x = Without Green/yellow earth core (OZ)

*Important for assemblers: We supply any "desired length" as stranded cores without outer sheath, core insulation colour acc. to RAL 9005 with number combination acc. to customers requirement.

For current ratings to DIN VDE 0298-4 refer table no. 5 of Appendix.

POWER CABLE BS 5467

REACH | RoHS | CE



Application

Industrial wiring and mains distribution. Can be laid direct in the ground, or in ducts, clipped to surface, on trays or in free air. May be embedded in concrete.

Standard

BS 5467

Technical Data

Voltage Rating : 600/1000V
Minimum Bending Radius : 15 x Cable diameter
Maximum Conductor Temperature : 90°C

Construction

Single, two, three, four and five core cables. Stranded plain copper conductors, XLPE insulated, cores laid up, extruded PVC bedding, galvanised steel wire armoured (Aluminium wires for single cores) and PVC sheathed.
Core colours:
Single core : Brown or blue
Two core : Brown, blue
Three core : Brown, black, grey
Four core : Brown, black, grey, blue
Five code : Brown, black, grey, green/yellow, blue
(There is the option for core colour as per customer requirement)
Sheath Colour : Black (Other colour as per customer requirement)

Note : Where a conductor operates at a temperature exceeding 70°C it shall be ascertained that the equipment connected to the conductor is suitable for the conductor operating temperature (see regulation 512-1-2 of BS 7671, the 17th Edition of IEE Wiring Regulations).
Cables with reduced Flame Propagation and designs with alternative core identification are available to order.
Cables up to 1 x 300 Sq. mm, 2...4 x 400 Sq. mm BASEC Certified.

Cable Design Parameters

	Part Number	Nominal Cross Sectional Area (Sq. mm)	Insulation Thickness (mm)	Armour Wire Diameter (mm)	Approx. Dia. under Armour (mm)	Approx Overall Diameter (mm)	Approx Cable Weight (kg/km)	Maximum Resistance of Cable		Reactance at 50 Hz (O/km)	Impedance AC at 90°C (Ω/km)	Star Capacitance (µF/km)	Maximum Armour Resistance (Ω/km)
								DC at 20°C (Ω/km)	AC at 90°C (Ω/km)				
Single Core Aluminium Wire Armour	112600100050	50	1	0.9	12.7	17.5	800	0.387	0.4938	0.104	0.505	0.41	1.3
	112600100070	70	1.1	1.25	14.7	20.2	960	0.268	0.341	0.101	0.356	0.46	0.75
	112600100095	95	1.1	1.25	16.6	22.3	1240	0.193	0.2469	0.097	0.265	0.53	0.67
	112600100120	120	1.2	1.25	18.5	24.2	1510	0.153	0.1962	0.094	0.217	0.56	0.61
	112600100150	150	1.4	1.6	20.8	27.4	1900	0.124	0.1594	0.095	0.186	0.52	0.42
	112600100185	185	1.6	1.6	23.2	30	2320	0.0991	0.128	0.093	0.158	0.54	0.38
	112600100240	240	1.7	1.6	26	32.8	2930	0.0754	0.0985	0.09	0.134	0.59	0.34
	112600100300	300	1.8	1.6	28.6	35.6	3580	0.0601	0.0797	0.088	0.119	0.63	0.31

	Part Number	Nominal Cross Sectional Area (Sq. mm)	Insulation Thickness (mm)	Armour Wire Diameter (mm)	Approx. Dia. under Armour (mm)	Approx Overall Diameter (mm)	Approx Cable Weight (kg/km)	Maximum Resistance of Cable		Reactance at 50 Hz (O/km)	Impedance AC at 90°C (Ω/km)	Star Capacitance (μF/km)	Maximum Armour Resistance (Ω/km)
								DC at 20°C (Ω/km)	AC at 90°C (Ω/km)				
Two Core Steel Wire Armour	112600100400	400	2	2	32.4	40.4	4600	0.047	0.0635	0.089	0.109	0.62	0.22
	112600100500	500	2.2	2	36	44.2	5770	0.0366	0.0513	0.087	0.101	0.66	0.2
	112600100630	630	2.4	2	40.4	48.8	7250	0.0283	0.0419	0.085	0.095	0.7	0.18
	112600100800	800	2.6	2.5	45.6	55.4	9381	0.0221	0.0349	0.087	0.094	0.85	0.13
	112600101000	1000	2.8	2.5	50.6	60.6	11540	0.0176	0.0303	0.085	0.09	0.87	0.12
	112600201105	1.5	0.6	0.9	7. 3	12.1	302	12.1	15.428	0.104	15.428	0.23	10.2
	112600201205	2.5	0.7	0.9	8.5	13.6	346	7.41	9.448	0.101	9.449	0.25	8.8
	112600200004	4	0.7	0.9	9.4	14.7	410	4.61	5.878	0.099	5.879	0.27	7.9
	112600200006	6	0.7	0.9	10.5	15.9	499	3.08	3.927	0.094	3.928	0.3	7
	112600200010	10	0.7	0.9	12.3	18	648	1.83	2.333	0.093	2.335	0.32	6
	112600200016	16	0.7	1.25	14.3	20.4	978	1.15	1.466	0.088	1.469	0.35	3.7
	112600200025	25	0.9	1.25	14.7	20.4	1290	0.727	0.926	0.082	0.93	0.38	3.7
	112600200035	35	0.9	1.6	16.8	23.3	1500	0.524	0.6685	0.077	0.673	0.42	2.6
	112600200050	50	1	1.6	19	25.8	1890	0.387	0.494	0.076	0.5	0.45	2.3
	112600200070	70	1.1	1.6	22	29	2450	0.268	0.3412	0.075	0.349	0.49	2
	112600200095	95	1.1	2	25.1	33.1	3300	0.193	0.2471	0.074	0.258	0.55	1.4
	112600200120	120	1.2	2	27.9	36.1	4020	0.153	0.1964	0.072	0.209	0.57	1.3
	112600200150	150	1.4	2	30.9	39.3	4750	0.124	0.1597	0.073	0.176	0.57	1,20
	112600200185	185	1.6	2.5	34.9	44.7	6180	0.0991	0.1284	0.073	0.148	0.55	0.82
	112600200240	240	1.7	2.5	39	49	7570	0.0754	0.0989	0.072	0.122	0.6	0.73
	112600200300	300	1.8	2.5	43.3	53.5	9180	0.0601	0.0801	0.072	0.107	0.62	0.67
	112600200400	400	2	2.5	48.4	59	10500	0.047	0.0641	0.071	0.096	0.64	0.59
Three Core Steel Wire Armour	112600301105	1.5	0.6	0.9	7.8	12.6	330	12.1	15.428	0.104	15.428	0.23	9.5
	112600301205	2.5	0.7	0.9	9.2	14.1	390	7.41	9.448	0.101	9.449	0.25	8.2
	112600300004	4	0.7	0.9	10	15.3	464	4.61	5.878	0.099	5.879	0.27	7.5
	112600300006	6	0.7	0.9	11.2	16.6	568	3.08	3.927	0.094	3.928	0.3	6.7
	112600300010	10	0.7	1.25	13.1	19.5	866	1.83	2.333	0.093	2.335	0.32	4
	112600300016	16	0.7	1.25	15.3	21.6	1152	1.15	1.466	0.088	1.469	0.35	3.5
	112600300025	25	0.9	1.6	18.9	25.5	1800	0.727	0.926	0.082	0.93	0.37	2.5
	112600300035	35	0.9	1.6	21.3	28	2230	0.524	0.6685	0.077	0.673	0.42	2.3
	112600300050	50	1	1.6	21.7	28.5	2490	0.387	0.494	0.076	0.5	0.45	2
	112600300070	70	1.1	1.6	25.2	32.2	3290	0.268	0.3412	0.075	0.349	0.49	1.8
	112600300095	95	1.1	2	28.8	37	4440	0.193	0.2471	0.074	0.258	0.55	1.3
	112600300120	120	1.2	2	32	40.4	5470	0.153	0.1964	0.072	0.209	0.57	1.2
	112600300150	150	1.4	2.5	35.9	45.5	6930	0.124	0.1597	0.073	0.176	0.55	0.78
	112600300185	185	1.6	2.5	40	49.8	8350	0.0991	0.1284	0.073	0.148	0.55	0.71
	112600300240	240	1.7	2.5	44.9	55.1	10400	0.0754	0.0989	0.072	0.122	0.6	0.63
	112600300300	300	1.8	2.5	49.8	60.2	12600	0.0601	0.0801	0.072	0.107	0.62	0.58
	112600300400	400	2	2.5	55.8	66.6	14600	0.047	0.0641	0.071	0.096	0.64	0.52

	Part Number	Nominal Cross Sectional Area (Sq. mm)	Insulation Thickness (mm)	Approx. Dia. under Armour (mm)	Armour Wire Diameter (mm)	Approx Overall Diameter (mm)	Approx Cable Weight (kg/km)	Maximum Resistance of Cable		Reactance at 50 Hz (O/km)	Impedance AC at 90°C (Ω/km)	Star Capacitance (μF/km)	Maximum Armour Resistance (Ω/km)
								DC at 20°C (Ω/km)	AC at 90°C (Ω/km)				
Four Core Steel Wire Armour	112600401105	1.5	0.6	0.9	8.5	13.5	365	12.1	15.428	0.104	15.428	0.23	8.8
	112600401205	2.5	0.7	0.9	9.9	15	438	7.41	9.448	0.101	9.449	0.25	7.7
	112600400004	4.0	0.7	0.9	11	16.4	532	4.61	5.878	0.099	5.879	0.27	6.8
	112600400006	6.0	0.7	1.25	12.3	18.7	764	3.08	3.927	0.094	3.928	0.3	4.3
	112600400010	10.0	0.7	1.25	14.5	21.1	1013	1.83	2.333	0.093	2.336	0.32	3.7
	112600400016	16.0	0.7	1.25	17	22.9	1360	1.15	1.466	0.088	1.469	0.35	3.1
	112600400025	25.0	0.9	1.6	21	27.6	2160	0.727	0.926	0.082	0.93	0.37	2.3
	112600400035	35.0	0.9	1.6	23.6	30.4	2690	0.524	0.6685	0.077	0.673	0.42	2
	112600400050	50.0	1	1.6	25	32	3130	0.387	0.494	0.076	0.5	0.45	1.8
	112600400070	70.0	1.1	2	29.5	37.7	4500	0.268	0.3412	0.075	0.349	0.48	1.2
	112600400095	95.0	1.1	2	33.3	41.7	5600	0.193	0.2471	0.074	0.258	0.55	1.1
	112600400120	120.0	1.2	2.5	37.5	47.1	7400	0.153	0.1964	0.072	0.209	0.55	0.76
	112600400150	150.0	1.4	2.5	41.6	51.4	8780	0.124	0.1597	0.073	0.176	0.55	0.68
	112600400185	185.0	1.6	2.5	46.4	56.6	10630	0.0991	0.1284	0.073	0.148	0.55	0.61
	112600400240	240.0	1.7	2.5	52.6	63	13390	0.0754	0.0989	0.072	0.122	0.58	0.54
	112600400300	300.0	1.8	2.5	58	68.8	16290	0.0601	0.0801	0.072	0.107	0.62	0.49
	112600400400	400.0	2	3.15	65.4	78.1	19800	0.047	0.0641	0.071	0.096	0.63	0.35
Five Core Steel Wire Armour	112600501105	1.5	0.6	0.9	9.7	14.3	410	12.1	15.428	0.104	15.428	0.23	8.2
	112600501205	2.5	0.7	0.9	11.7	16.3	470	7.41	9.448	0.101	9.449	0.25	6.8
	112600500004	4.0	0.7	0.9	13	17.8	710	4.61	5.878	0.099	5.879	0.27	6.2
	112600500006	6.0	0.7	1.25	14.5	20	876	3.08	3.927	0.094	3.928	0.3	3.9
	112600500010	10.0	0.7	1.25	17.2	22.9	1165	1.83	2.333	0.093	2.336	0.32	3.4
	112600500016	16.0	0.7	1.6	20	26.6	1742	1.15	1.466	0.088	1.469	0.35	2.2
	112600500025	25.0	0.9	1.6	24.7	31.5	2323	0.727	0.926	0.082	0.93	0.37	1.8
	112600500035	35.0	0.9	1.6	27.8	34.8	2932	0.524	0.6685	0.077	0.673	0.42	1.6
	112600500050	50.0	1	2	32.4	40.4	4192	0.387	0.494	0.076	0.5	0.45	1.1
	112600500070	70.0	1.1	2	37.9	46.3	5336	0.268	0.3412	0.075	0.349	0.48	0.9

For current rating & voltage drop refer table no. 6-1 to 6-2

MULTICORE CONTROL CABLE STANDARD : BS 5467

Application

Industrial wiring for remote control and telemetry circuits etc. Can be laid direct in the ground, or in ducts, clipped to surface, on trays or in free air. May be embedded in concrete.

Technical Data

Voltage Rating : 600 / 1000V

Cable Construction

Multicore Cables : Stranded plain copper conductors, XLPE insulated, cores laid up, extruded PVC bedding, galvanised steel wire armoured and PVC sheathed

Core Colours : White with black numerals

Sheath Colour : Black. (Other Colour As per customer requirement)

Minimum Bending Radius : 12 x Cable Diameter

Maximum Conductor Temperature : 90°C

Note: Where a conductor operates at a temperature exceeding 70°C it shall be ascertained that the equipment connected to the conductor is suitable for the conduct or operating temperature (see regulation 512 - 1 - 2 of BS 7671, the 17th Edition of IEE Wiring Regulations).

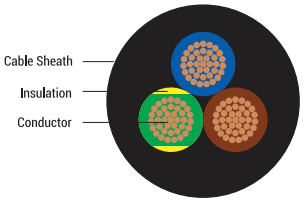
BASEC Certified up to and including 48 x 4 Sq. mm.

Cable Design Parameters

Part Number	Number of Cores	Nominal Cross Sectional Area (Sq. mm)	Approx. Diameter Under Armour (mm)	Approx. Diameter Over Armour (mm)	Approx. Overall Diameter (mm)	Approx. Net Weight (kg/km)
112600701105	7	1.5	10.2	12.1	15.2	470
112600701205	7	2.5	12.3	14.1	17.1	600
112600700004	7	4	14	16.5	19.7	890
112601201105	12	1.5	13.7	16.2	19.4	780
112601201205	12	2.5	16.3	18.8	22.4	1000
112601200004	12	4	19.1	22.2	25.7	1410
112601901105	19	1.5	16.2	18.7	22.2	1000
112601901205	19	2.5	19.9	23.1	26.6	1540
112601900004	19	4	22.5	25.7	29.3	1830
112602701105	27	1.5	20	23.2	26.7	1500
112602701205	27	2.5	24	27.2	30.7	1950
112602700004	27	4	27.5	30.7	34.4	2500
112603701105	37	1.5	22.3	25.5	29	1800
112603701205	37	2.5	26.9	30.1	33.8	2350
112603700004	37	4	31	35	39.2	3100
112604801105	48	1.5	25.4	28.6	32.7	2050
112604801205	48	2.5	31	35	39.3	3100
112604800004	48	4	35.3	39.3	44.1	4100

For current rating & voltage drop refer table no. 6-3 and 6-4

RV-K CABLE (CU / XLPE / PVC) FLEXIBLE



Application
A flexible power and control cable designed for fixed applications Manufactured with flexible conductors in order to facilitate easy installations Suitable for the distribution of low voltage power, indoors and outdoors. The high flexibility of this cable makes it particularly suitable for difficult layouts and the ease of handling saves time during installation.

Standards
UNE 21123-2, IEC 60502-1, EN 50265, IEC 60332-1

Conductor
Class 5 flexible plain to BS EN 60228:2005

Insulation
XLPE (Cross-Linked Polyethylene)

Voltage Rating
600/1000V

Core Identification
2 Cores : Blue, Brown
3 Cores including Earth Core : Blue, Brown, Green/Yellow
4 Cores including Earth Core : Brown, Black, Grey, Green/Yellow
5 Cores including Earth Core : Brown, Black, Grey, Green/Yellow Blue

Sheathing
PVC(Polyvinyl Chloride) Type ST2

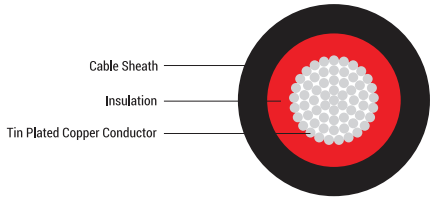
Temperature Rating
- 15°C to + 90°C

Minimum Bending Radius
5 x Overall diameter

Cable Design Parameters

No. of Cores x Nominal Cross Sectional Area Sq. mm	Nominal Thickness of Insulation mm	Nominal Overall Diameter mm	Nominal Weight Kg/Km
2 x 1.5	0.70	9.4	127
3 x 1.5	0.70	9.9	129
4 x 1.5	0.70	10.6	154
5 x 1.5	0.70	11.4	180
2 x 2.5	0.70	10.7	160
3 x 2.5	0.70	10.8	169
4 x 2.5	0.70	11.7	204
5 x 2.5	0.70	12.6	243
2 x 4.0	0.70	12.6	232
3 x 4.0	0.70	12.8	230
4 x 4.0	0.70	13	281
5 x 4.0	0.70	14.1	338
2 x 6.0	0.70	13.9	298
3 x 6.0	0.70	14.3	304
4 x 6.0	0.70	14.5	376
5 x 6.0	0.70	15.8	454
3 x 10.0	0.70	15.3	443
4 x 10.0	0.70	16.7	554
5 x 10.0	0.70	18.2	674
3 x 16.0	0.70	17.5	646
4 x 16.0	0.70	19.2	816
5 x 16.0	0.70	21.0	998

SOLAR CABLES



Application

Solar cables are intented for use in photovoltaic power supply systems and similar applications as free hanging, movable, fixed installation and buried in ground in constructional covered systems. The cables can be used indoor, outdoor, in hazard explosion areas, in industry and agriculture. They are suitable for applications in equipment with protective insulation (protecting Class 2).

Standard

Adapted to PV systems, EN 50618:2015.

Thermal parameters

Max. Permissible Ambient Temperature : +90°C (stationary and in motion)
Max. Permissible Operating Temperature of The Conductor :
+120°C, Interpretation according to IEC 60216 : permanent temperature
120°C for 20,000 h (= 2.3 years), at max. 90°C permanent temperature (= 30 years)
Short - Circuit Temperature : +200°C (at the conductor max. 5 sec.)
Damp - Heat Test : According to EN 60068 - 2 - 78. 1,000h at 90°C and 85% humidity
Min. Permissible Ambient Temperature : -40°C (stationary and in motion)
Resistance to Cold :
Bending test at low temperature according to DIN EN 60811 - 1 - 4, Impact test similar to DIN EN 50305
Minimum Bending Radius : Fixed Installation approx. 4 x cable Ø

Electrical Parameters

Voltage Rating : AC 0.6 / 1.0 kV
Max. PV - System Voltage : DC up to 2.0 kV possible
Max. Permissible Operating Voltage in AC Systems : 0.7 / 1.2 kV
Max. Permissible Operating Voltage in DC Systems : 0.9 / 1.8 kV
Test Voltage : AC 6 kV / DC 10 kV (15 min.)

Mechanical Parameters

Tensile Load :15 N / mm² in operation. 50 N/mm² during installation
Shrinkage Test : According to EN 60811 - 1 - 3
Shore-Hardness : 85 shore A according to DIN EN 53505
Pressure Test at High Temperature : According to EN 60811 - 3 - 1
Dynamic Penetration Test : According to requirements for cables for PV systems, DKE / VDE 411.2.3

Chemical Parameters

Mineral Oil Resistance : 24h, 100°C according to DIN VDE 0473 - 811 - 2 - 1, DIN EN 60811-2-1
Acid and Alkaline Resistance : According to EN 60811-2-1
7 days, 23°C (N-Oxalic Acid, N-Sodium Hydroxide)
Ammonia Resistance : 30 days in saturated ammonia atmosphere (internal testing)
Weather Resistance : Ozone resistance according to DIN EN 50396 test Type B, HD 22.2 test Type B UV - resistance according to UL 1581 (Xenon - Test), ISO 4892 - 2 (Method A) and HD 506/A1-2.4.20
Absorption of water (gravimetric) according to DIN VDE 0473-811-1-3, DIN EN 60811 - 1 - 3
Behavior in Case of Fire :
Flame propagation
Single cable according to DIN VDE 0482 Part 332 - 1 - 2, DIN EN 60332 - 1 - 2
Multiple cable according to DIN VDE 0482 Part 266 - 2 - 5, DIN EN 50305 - 9

Low smoke emission according to DIN VDE 0482 Part 268 - 2
DIN EN 50268-2 (light transmittance > 70%)
Corrosivity according to DIN EN 50267 - 2 - 2
Toxicity according to DIN EN 50305, ITC - index < 3

Cable Construction

Conductor : Fine Wire Tinned Copper Conductor according to BS EN 60228:2005 cl. 5
Insulation : UV resistant, cross linkable, halogen free, flame retardant compound for core insulation
Core Identification : Red, black or natural
Sheath : UV resistant, cross linkable, halogen free, flame retardant compound for Sheath over insulation
Cable Colour : Red, Black, Black with Red Strip

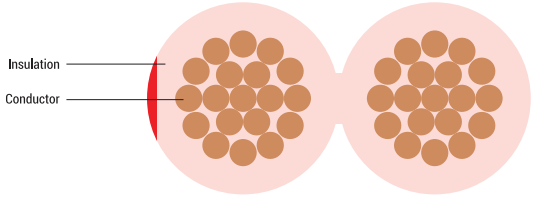
Please complete the part numbers for these cables by adding the suffix (in place of 'xx') for the insulation colour required as per the list:
02 - black, 03 - red, 13 - natural.

Cable Design Parameters

Part Number	Nominal Cross-Sectional (Sq. mm)	Insulation Thickness (mm)	Cable Sheath Thickness (mm)	Approx. Cable Diameter (mm)	Current carrying capacity according to method of installation			Max. Conductor Resistance at 20°C, (Ω/Km)
					Single cable free in air (A)	Single cable on a surface (A)	Two loaded cables touching, on a surface (A)	
12010101xx01	1.5	0.70	0.80	4.66	30	29	24	13.7
12010102xx01	2.5	0.70	0.80	5.09	41	39	33	8.21
12010103xx01	4	0.70	0.80	5.59	55	52	44	5.09
12010104xx01	6	0.70	0.80	6.13	70	67	57	3.39
12010105xx01	10	0.70	0.80	7.07	98	93	79	1.95
12010106xx01	16	0.70	0.90	8.32	132	125	107	1.24
12010107xx01	25	0.90	1.00	10.14	176	167	142	0.795
12010108xx01	35	0.90	1.10	11.49	218	207	176	0.565
12010109xx01	50	1.00	1.20	13.33	276	262	221	0.393
12010110xx01	70	1.10	1.20	15.19	347	330	278	0.277
12010111xx01	95	1.10	1.30	16.94	416	395	333	0.210
12010112xx01	120	1.20	1.30	18.71	488	464	390	0.164
12010113xx01	150	1.40	1.40	20.86	566	538	453	0.132
12010114xx01	185	1.60	1.60	23.24	644	612	515	0.108
12010115xx01	240	1.70	1.70	26.14	755	736	620	0.0817

SPEAKER CABLE

REACH I RoHS I CE



Application

Speaker cables are highly recommended for use in connecting speakers, public address system for clear and distortion free voice with low dB loss.

Cable Construction

The cables are manufactured with bright annealed plain flexible electrolytic grade copper conductor, bunched compactly, insulated with specially formulated PVC compound. Each core is uniquely designed for easy identification. In order to offer uniform capacitance throughout length the distance between the two conductors is maintained uniformly.

Colour Availability : Transparent / black / white with red tracer for polarity identification. Also available in grey

Packing : The delivery length is available in 90 mtr. coils

Thermal parameters

Cable Design Parameters

Kindly complete the part numbers for these cables by adding the suffix (in place of 'xx') for colour required:

00 - Transparent, 02 - black, 07 - white, 12 - grey

Mechanical Parameters

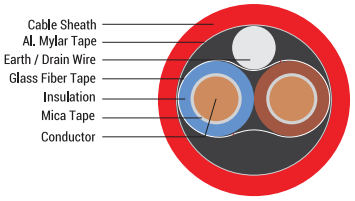
Conductor Construction				Maximum Overall Dimensions (W X H) (mm)
Part Number	Equivalent AWG	Nominal Cross Sectional Area (Sq. mm)	Max. DC Conductor Resistance at 20°C (Ω/km)	
01090101xx10	22	0.5	39.0	4.2 x 2.1
01090102xx10	19	0.75	26.0	4.7 x 2.4
01090103xx10	18	1.0	19.5	5.7 x 2.9
01090104xx10	16	1.5	13.3	6.0 x 3.0
01090105xx10	14	2.5	7.98	7.0 x 3.6
01090106xx10	12	4.0	4.95	8.4 x 4.1
01090107xx10	10	6.0	3.30	9.6 x 4.7

Recommended length

Wire Size	2Ω load	4Ω load	6Ω load	8Ω load
22 AWG	3ft (0.9m)	6ft (1.8m)	9ft (2.7m)	12ft (3.6m)
19 AWG	5ft (1.5m)	10ft (3m)	15ft (4.5m)	20ft (6m)
18 AWG	8ft (2.4m)	16ft (4.9m)	24ft (7.3m)	32ft (9.7m)
16 AWG	12ft (3.6m)	24ft (7.3m)	36ft (11m)	48ft (15m)
14 AWG	20ft (6.1m)	40ft (12m)	60ft (18m)	80ft (24m)
12 AWG	30ft (9.1m)	60ft (18m)	90ft (27m)	120ft (36m)
10 AWG	50ft (15m)	100ft (30m)	150ft (46m)	200ft (61m)

FIRE ALARM CABLES

REACH I RoHS I CE



Application

These cables are used in high rise buildings, commercial complexes, schools and educational institutions, hospitals, etc. for the connection with security systems like smoke detectors, emergency lightings, exit signboards and fire command center. These cables are used where the fire safety is utmost important.

Standard

BS 7629-1, BS EN 50200

Technical Data

Voltage Rating : 300/500V
Temperature Range : -30°C to + 70°C (The cable should not be flexed when either the ambient or cable temperature is below 0°C)
Minimum Bending Radius : 6D

Cable Type - 1

FFX200 05mSOZ1-R - CU/MGT/SR/OSCR/LSZH 300/500V Class 2

Cable Construction

Plain annealed copper conductor to BS EN 60228, class 2
Primary insulation of glass mica fire resistant tape
Secondary insulation of high performance silicone rubber
EI 2 to BS 7655 Section 1.1.
Core colours :
2 Core : blue, brown
3 Core : blue, brown, black
4 Core : blue, brown, black, grey
Glass fiber tape.
Earth/Drain wire of annealed tinned copper to BS EN 60228
Electrostatic screen of aluminium fire barrier
Sheath type LTS3 to BS 7655 section 6.1

Properties

Low smoke zero halogen (LSZH), flame retardant

Fire Performance Tests

BS 7629 - 1, 300 / 500 V fire resistant electric cables with non corrosive gases and low emission of smoke when affected by fire.
Category STANDARD 30 & STANDARD 60 when tested in accordance with BS EN 50200-Method of test for resistance to fire of unprotected small cables for use in emergency circuits.
Also meets category ENHANCED 120 when tested in accordance with BS EN 50200 and the 120 min survival time when tested in accordance with BS 8434-2.
Meets requirement for fire resistant cables as described in clause 26 2e of BS 5839-1.

Cable Design Parameters

Part Number	No. of Cores & Nominal Cross Section Area (Sq. mm)	No. of Strands/ Strand Diameter (mm)	Nominal Overall Diameter (mm)
100100201105	2 x 1.5	7/0.53	10
100100201205	2 x 2.5	7/0.67	11.5
100100301105	3 x 1.5	7/0.53	10.8
100100301205	3 x 2.5	7/0.67	12.3
100100401105	4 x 1.5	7/0.53	12
100100401205	4 x 2.5	7/0.67	13.5

Electrical Properties

Part Number	No. of Cores & Nominal Cross Section Area (Sq. mm)	Max. Conductor Resistance at 20°C (Ω/km)	Current Rating (A)		Voltage Drop DC or Single Phase AC (mV/A/m)
			DC or Single Phase AC enclosed	DC or Single Phase AC Clipped	
100100201105	2 x 1.5	12.1	17.5	20.0	29
100100201205	2 x 2.5	7.41	24.0	27.0	18
100100301105	3 x 1.5	12.1	17.5	20.0	29
100100301205	3 x 2.5	7.41	24.0	27.0	18
100100401105	4 x 1.5	12.1	17.5	20.0	29
100100401205	4 x 2.5	7.41	24.0	27.0	18

Cable Type - 2

FFX200 05SOZ1-U - CU/SR/OSCR/LSZH 300/500V Class 1

Technical Data

Plain annealed copper conductor to BS EN 60228, class 1
Insulation of high performance ceramified silicone rubber
EI 2 to BS 7655 Section 1.1
Core colours:
2 Core : blue, brown
3 Core : blue, brown, black
4 Core : blue, brown, black, grey
Glass fiber tape
Earth/Drain wire of annealed tinned copper to BS EN 60228
Electrostatic screen of aluminium fire barrier
Sheath Type LTS3 to BS 7655 section 6.1

Properties

Low smoke zero halogen (LSZH), flame retardant

Fire Performance Tests

BS 7629 - 1, 300 / 500 V fire resistant electric cables with non corrosive gases and low emission of smoke when affected by fire.
Category STANDARD 60 when tested in accordance with BS EN 50200-Method of test for resistance to fire of unprotected small cables for use in emergency circuits.
In addition, it shall meet the 30 min survival time when tested in accordance with BS EN 50200, Annex E.
Meets requirement for the fire resistant cables as described in clause 26 2d of BS 5839-1

Cable Design Parameters

Part Number	No. of Cores & Nominal Cross Section Area (Sq. mm)	No. of Strands/ Strand Diameter (mm)	Nominal Overall Diameter (mm)
100200200001	2 x 1	1/1.13	7.5
100200201105	2 x 1.5	1/1.38	8.5
100200201205	2 x 2.5	1/1.78	9.9
100200301105	3 x 1.5	1/1.38	9.1
100200301205	3 x 2.5	1/1.78	10.7
100200401105	4 x 1.5	1/1.38	10.1
100200401205	4 x 2.5	1/1.78	11.6

Electrical Properties

Part Number	No. of Cores & Nominal Cross Section Area (Sq. mm)	Max. Conductor Resistance at 20°C (Ω/km)	Current Rating (A)		Voltage Drop DC or Single Phase AC (mV/A/m)
			DC or Single Phase AC enclosed	DC or Single Phase AC Clipped	
100200200001	2 x 1	18.1	13.1	15.5	44
100200201105	2 x 1.5	12.1	17.5	20	29
100200201205	2 x 2.5	7.41	24	27	18
100200301105	3 x 1.5	12.1	17.5	20	29
100200301205	3 x 2.5	7.41	24	27	18
100200401105	4 x 1.5	12.1	17.5	20	29
100200401205	4 x 2.5	7.41	24	27	18

Cable Type - 3

FFX200 05mZOZ1-R - Cu/MGT/LS0H /OSCR/LSZH 300/500V Class 2

Technical Data

Plain annealed copper conductor to BS EN 60228, class 2
Primary insulation of glass mica fire resistant tap
Secondary insulation to BS EN 50363-5, Type EI 5, Low smoke zero halogen (LSZH) cross-linkable flame retardant insulation

Core colours:

2 Core : Blue, Brown
3 Core : Blue, Brown, Black
4 Core : Blue, Brown, Black, Grey
Glass fiber tape
Earth/Drain wire of annealed tinned copper to BS EN 60228
Electrostatic screen of aluminium fire barrier
Sheath Type LTS3 to BS 7655 section 6.1

Properties

Low smoke zero halogen (LSZH), flame retardant

Fire Performance Tests

BS 7629 - 1, 300 / 500 V fire resistant electric cables with non corrosive gases and low emission of smoke when affected by fire Category STANDARD 60 when tested in accordance with BS EN 50200-Method of test for resistance to fire of unprotected small cables for use in emergency circuits.

In addition, it shall meet the 30 min survival time when tested in accordance with BS EN 50200, Annex E.

Meets requirement for the fire resistant cables as described in clause 26 2d of BS 5839-1

Cable Design Parameters

Part Number	No. of Cores & Nominal Cross Section Area (Sq. mm)	No. of Strands/ Strand Diameter (mm)	Nominal Overall Diameter (mm)
100100201105	2 x 1.5	7/0.53	10
100100201205	2 x 2.5	7/0.67	11.5
100100301105	3 x 1.5	7/0.53	10.8
100100301205	3 x 2.5	7/0.67	12.3
100100401105	4 x 1.5	7/0.53	12
100100401205	4 x 2.5	7/0.67	13.5

Electrical Properties

Part Number	No. of Cores & Nominal Cross Section Area (Sq. mm)	Max. Conductor Resistance at 20°C (Ω/km)	Current Rating (A)		Voltage Drop DC or Single Phase AC (mV/A/m)
			DC or Single Phase AC enclosed	DC or Single Phase AC Clipped	
100100201105	2 x 1.5	12.1	17.5	20.0	29
100100201205	2 x 2.5	7.41	24.0	27.0	18
100100301105	3 x 1.5	12.1	17.5	20.0	29
100100301205	3 x 2.5	7.41	24.0	27.0	18
100100401105	4 x 1.5	12.1	17.5	20.0	29
100100401205	4 x 2.5	7.41	24.0	27.0	18

Code Designations

FFX – Fire Alarm Cable, 200 – 300/500 V Multicore (Type), 05 – 300/500 V (Voltage), mS – Mica Tape + Silicon Rubber,
mZ – Mica Tape + Thermosetting LS0H, S – Silicon Rubber, O – Overall Aluminium screen, Z1 –LSZH,
U – Solid conductor to EN 60228 class 1, R – Stranded conductor to EN 60228 class 2

APPENDIX

Table No. 1-1

Current Rating for H05V2-K/H07V2-K/BS 6231/Trirated Cable

Nominal Cross Section Area (Sq. mm)	Max. Current Rating (A)	Voltage Drop (mV/A/m)
0.50	11	46.0
0.75	14	31.0
1.00	17	22.0
1.50	21	15.0
2.50	30	9.1
4.00	41	5.7
6.00	53	3.8
10.00	75	2.2
16.00	100	1.4
25.00	136	0.9
35.00	167	0.6

Current ratings are based on a conductor operating temperature of 85°C and an ambient air temperature of 45°C and assumes single cable isolated in free air

Table No. 1-2

Current Rating Conversion Factor for H05V2-K/H07V2-K/BS 6231/Trirated Cable

Multiply the current carrying capacity of the cable by the factors given below for various ambient temperature

Ambient Temperature (°C)	Derating Factor
45°C	1.0
50°C	0.97
55°C	0.90
60°C	0.82
65°C	0.73
70°C	0.63
75°C	0.52

Where cables are to be grouped, the following factors should be applied :

Number of Cables in Group	Reduction Factor
2	0.80
3	0.70
4	0.65
5	0.60
6	0.56
7	0.53
8	0.50

Table No. 2-1

Current Rating - H05Z-K/H07Z-K/H05Z-R/H07Z-R/6491B/6181XY.

Current Carrying Capacity (Amperes)

Conductor Cross Sectional area	Reference Method A (Enclosed in Conduits in Thermally Insulating Wall, etc.)		Reference Method B (Enclosed in Conduits on a Wall or in Trunking, etc.)		Reference Method C (Clipped Direct)		Reference Method F (in Free Air or on Perforated Cable Tray etc. Horizontal or Vertical etc.) Touching			Reference Method G (in free air) Spaced by One Cable Diameter	
	2 Cable, Single-Phase AC or DC	3 or 4 Cables, Three-Phase AC	2 Cable, Single-Phase AC or DC	3 or 4 Cables, Three-Phase AC	2 Cable, Single-Phase AC or DC Flat and Touching	3 or 4 Cables, Three-Phase AC Flat and Touching or Trefoil	2 Cable, Single-Phase AC or DC Flat	3 Cables. Three-Phase A. C. Flat	3 Cables, Three-Phase A. C. Trefoil	2 Cable, Single-Phase AC or DC or 3 Cables. Three-Phase A. C. Flat	
										Horizontol	Vertical
1	2	3	4	5	6	7	8	9	10	11	12
(Sq. mm)	(A)	(A)	(A)	(A)	(A)	(A)	(A)	(A)	(A)	(A)	(A)
0.5	6	5	10	8	12	11	-	-	-	-	-
0.75	9	8	14	12	16.5	14	-	-	-	-	-
1	14	13	17	15	19	17.5	-	-	-	-	-
1.5	19	17	23	20	25	23	-	-	-	-	-
2.5	26	23	31	28	34	31	-	-	-	-	-
4	35	31	42	37	46	41	-	-	-	-	-
6	45	40	54	48	59	54	-	-	-	-	-
10	61	54	75	66	81	74	-	-	-	-	-
16	81	73	100	88	109	99	-	-	-	-	-
25	106	95	133	117	143	130	161	141	135	182	161
35	131	117	164	144	176	161	200	176	169	226	201
50	158	141	198	175	228	209	242	216	207	275	246
70	200	179	253	222	293	268	310	279	268	353	318
95	241	216	306	269	355	326	377	342	328	430	389
120	278	249	354	312	413	379	437	400	383	500	454
150	318	285	393	342	476	436	504	464	444	577	527
185	362	324	449	384	545	500	575	533	510	661	605
240	424	380	528	450	644	590	679	634	607	781	719
300	486	435	603	514	743	681	783	736	703	902	833
400	-	-	683	584	868	793	940	868	823	1085	1008
500	-	-	783	666	990	904	1083	998	946	1253	1169
630	-	-	900	764	1130	1033	1254	1151	1088	1454	1362
800	-	-	-	-	1288	1179	1358	1275	1214	1581	1485
1000	-	-	-	-	1443	1323	1520	1436	1349	1775	1671

Ambient temperature: 30°C. Conductor operating temperature: 90°C

Notes :

1 Where a conductor operates at a temperature exceeding 70°C it must be ascertained that the equipment connected to the conductor is suitable for the conductor operating temperature (see Regulation 512.1.2)

2 Where cables in this table are connected to equipment or accessories designed to operate at a temperature not exceeding 70°C, the current ratings given in the equivalent table for 70°C thermoplastic insulated cables (Table 4DIA) must be used (see also Regulation 523.1)

3 The above table is in accordance with Table 4E1A of the 17th Edition of IEE Wiring Regulations

Table No. 2-2

Voltage Drop - H05Z-K/H07Z-K/H05Z-R/H07Z-R/6491B/6181XY.

Voltage Drop (per ampere per meter)

Conductor Cross Sectional area	2 Cable DC	2 Cables, Single-Phase AC									3 or 4 Cables, Three-Phase AC											
		Reference Method A & B (Enclosed in Conduit or Trunking)			Reference Methods C, F & G (Clipped Direct, on Tray or in Free Air)						Reference Method A & B (Enclosed in Conduit or Trunking)			Reference Method C, F & G (Clipped Direct, on Tray or in Free Air)								
					Cable Touching			Cable Spaced						Cables Touching, Trefoil			Cables Touching, Flat			Cables Spaced*, Flat		
1	2	3			4			5			6			7			8			9		
(Sq. mm)	(mV/A/m)	(mV/A/m)			(mV/A/m)			(mV/A/m)			(mV/A/m)			(mV/A/m)			(mV/A/m)			(mV/A/m)		
0.5	93	93			93			93			80			80			80			80		
0.75	62	62			62			62			54			54			54			54		
1	46	46			46			46			40			40			40			40		
1.5	31	31			31			31			27			27			27			27		
2.5	19	19			19			19			16			16			16			16		
4	12	12			12			12			10			10			10			10		
6	7.9	7.9			7.9			7.9			6.8			6.8			6.8			6.8		
10	4.7	4.7			4.7			4.7			4			4			4			4		
16	2.9	2.9			2.9			2.9			2.5			2.5			2.5			2.5		
		r	x	z	r	x	z	r	x	z	r	x	z	r	x	z	r	x	z	r	x	z
25	1.85	1.85	0.31	1.90	1.85	0.190	1.85	1.85	0.28	1.85	1.6	0.27	1.65	1.6	0.165	1.6	1.6	0.190	1.6	1.60	0.27	1.65
35	1.35	1.35	0.29	1.35	1.35	0.180	1.35	1.35	0.27	1.35	1.15	0.25	1.15	1.15	0.155	1.15	1.15	0.180	1.15	1.15	0.26	1.2
50	0.99	1.00	0.29	1.05	0.99	0.180	1.00	0.99	0.27	1.00	0.87	0.25	0.90	0.86	0.155	0.87	0.86	0.180	0.87	0.86	0.26	0.89
70	0.68	0.70	0.28	0.75	0.68	0.175	0.71	0.68	0.26	0.73	0.6	0.24	0.65	0.59	0.150	0.61	0.59	0.175	0.62	0.59	0.25	0.65
95	0.49	0.51	0.27	0.58	0.49	0.170	0.52	0.49	0.26	0.56	0.44	0.23	0.5	0.43	0.145	0.45	0.43	0.170	0.46	0.43	0.25	0.49
120	0.39	0.41	0.26	0.48	0.39	0.165	0.43	0.39	0.25	0.47	0.35	0.23	0.42	0.34	0.140	0.37	0.34	0.165	0.38	0.34	0.24	0.42
150	0.32	0.33	0.26	0.43	0.32	0.165	0.36	0.32	0.25	0.41	0.29	0.23	0.37	0.28	0.140	0.31	0.28	0.165	0.32	0.28	0.24	0.37
185	0.25	0.27	0.26	0.37	0.26	0.165	0.30	0.25	0.25	0.36	0.23	0.23	0.32	0.22	0.140	0.26	0.22	0.165	0.28	0.22	0.24	0.33
240	0.190	0.21	0.26	0.33	0.20	0.160	0.25	0.195	0.25	0.31	0.185	0.22	0.29	0.170	0.140	0.22	0.170	0.165	0.24	0.170	0.24	0.29
300	0.155	0.175	0.25	0.31	0.160	0.160	0.22	0.155	0.25	0.29	0.150	0.22	0.27	0.140	0.140	0.195	0.135	0.160	0.21	0.135	0.24	0.27
400	0.120	0.140	0.25	0.29	0.130	0.155	0.20	0.125	0.24	0.27	0.125	0.22	0.25	0.110	0.135	0.175	0.110	0.160	0.195	0.110	0.24	0.26
500	0.093	0.120	0.25	0.28	0.105	0.155	0.185	0.098	0.24	0.26	0.100	0.22	0.24	0.090	0.135	0.160	0.880	0.160	0.180	0.085	0.24	0.25
630	0.072	0.100	0.25	0.27	0.086	0.155	0.175	0.078	0.24	0.25	0.088	0.21	0.23	0.074	0.135	0.150	0.710	0.160	0.170	0.680	0.23	0.24
800	0.056	-			0.072	0.150	0.170	0.064	0.24	0.25	-			0.062	0.130	0.145	0.059	0.155	0.165	0.055	0.23	0.24
1000	0.045	-			0.063	0.150	0.165	0.054	0.24	0.24	-			0.055	0.130	0.140	0.050	0.155	0.165	0.047	0.23	0.24

Conductor Operating Temperature: 90°C.

r = Resistive Component
x = Reactive Component
z = Impedance Value
*Spacings larger than those specified in Method 12 (see table 4A of the 17th Edition of IEE Wiring Regulations) will result in larger volt drop
The above table is in accordance with Table 4E1B from the 17th Edition of IEE Wiring Regulations

Table No. 3-1

Current Rating - PVC Insulated Building Wire (H07V-R) / 6181Y

Current Carrying Capacity (Amperes)

Conductor Cross Sectional area	Reference Method A (Enclosed in Conduits in Thermally Insulating Wall, etc.)		Reference Method B (Enclosed in Conduits on a Wall or in Trunking, etc.)		Reference Method C (Clipped Direct)		Reference Method F (in Free Air or on Perforated Cable Tray Horizontal or Vertical)				
							Touching			Spaced by One Diameter	
	2 Cable, Single-Phase AC or DC	3 or 4 Cables, Three-Phase AC	2 Cable, Single-Phase AC or DC	3 or 4 Cables, Three-Phase AC	2 Cable, Single-Phase AC or DC Flat and Touching	3 or 4 Cables, Three-Phase AC Flat and Touching or Trefoil	2 Cable, Single-Phase AC or DC Flat	3 Cables. Three-Phase A. C. Flat	3 Cables, Three-Phase A. C. Trefoil	2 Cable, Single-Phase AC or DC or 3 Cables. Three-Phase A. C. Flat	
										Horizontol	Vertical
1	2	3	4	5	6	7	8	9	10	11	12
(Sq. mm)	(A)	(A)	(A)	(A)	(A)	(A)	(A)	(A)	(A)	(A)	(A)
1	11	10.5	13.5	12	15.5	14	-	-	-	-	-
1.5	14.5	13.5	17.5	15.5	20	18	-	-	-	-	-
2.5	20	18	24	21	27	25	-	-	-	-	-
4	26	24	32	28	37	33	-	-	-	-	-
6	34	31	41	36	47	43	-	-	-	-	-
10	46	42	57	50	65	59	-	-	-	-	-
16	61	56	76	68	87	79	-	-	-	-	-
25	80	73	101	89	114	104	131	114	110	146	130
35	99	89	125	110	141	129	162	143	137	181	162
50	119	108	151	134	182	167	196	174	167	219	197
70	151	136	192	171	234	214	251	225	216	281	254
95	182	164	232	207	284	261	304	275	216	341	311
120	210	188	269	239	330	303	352	321	264	396	362
150	240	216	300	262	381	349	406	372	308	456	419
185	273	245	341	296	436	400	463	427	356	521	480
240	321	286	400	346	515	472	546	507	409	615	569
300	367	328	458	394	594	545	629	587	485	709	659
400	-	-	546	467	694	634	754	689	656	852	795
500	-	-	626	533	792	723	868	789	749	982	920
630	-	-	720	611	904	826	1005	905	855	1138	1070
800	-	-	-	-	1030	943	1086	1020	971	1265	1188
1000	-	-	-	-	1154	1058	1216	1149	1079	1420	1337

Ambient Temperature: 30°C Conductor Operating Temperature: 70°C

The above table is in accordance with Table 4D1A of the 17th Edition of IEE Wiring Regulations

Table No. 3-2

Voltage Drop - PVC Insulated Building Wire (H07V-R) / 6181Y

Voltage Drop (per ampere per meter)

Conductor Cross Sectional area	2 Cable DC	2 Cables, Single-Phase AC									3 or 4 Cables, Three-Phase AC											
		Reference Method A & B (Enclosed in Conduit or Trunking)			Reference Methods C, F & G (Clipped Direct, on Tray or in Free Air)						Reference Method A & B (Enclosed in Conduit or Trunking)			Reference Method C, F & G (Clipped Direct, on Tray or in Free Air)								
					Cable Touching			Cable Spaced						Cables Touching, Trefoil			Cables Touching, Flat			Cables Spaced*, Flat		
1	2	3			4			5			6			7			8			9		
(Sq. mm)	(mV/A/m)	(mV/A/m)			(mV/A/m)			(mV/A/m)			(mV/A/m)			(mV/A/m)			(mV/A/m)			(mV/A/m)		
1	44	44			44			44			38			38			38			38		
1.5	29	29			29			29			25			25			25			25		
2.5	18	18			18			18			15			15			15			15		
4	11	11			11			11			9.5			9.5			9.5			9.5		
6	7.3	7.3			7.3			7.3			6.4			6.4			6.4			6.4		
10	4.4	4.4			4.4			4.4			3.8			3.8			3.8			3.8		
16	2.8	2.8			2.8			2.8			2.4			2.4			2.4			2.4		
		r	x	z	r	x	z	r	x	z	r	x	z	r	x	z	r	x	z	r	x	z
25	1.75	1.8	0.33	1.8	1.75	0.2	1.75	1.75	0.29	1.8	1.5	0.29	1.55	1.5	0.175	1.5	1.5	0.25	1.55	1.5	0.32	1.55
35	1.25	1.3	0.31	1.3	1.25	0.195	1.25	1.25	0.28	1.3	1.1	0.27	1.1	1.1	0.17	1.1	1.1	0.24	1.1	1.1	0.32	1.1
50	0.93	0.95	0.3	1	0.93	0.19	0.95	0.93	0.28	0.97	0.81	0.26	0.85	0.8	0.165	0.82	0.8	0.24	0.84	0.8	0.32	0.86
70	0.63	0.65	0.29	0.72	0.63	0.185	0.66	0.63	0.27	0.69	0.56	0.25	0.61	0.55	0.16	0.57	0.55	0.24	0.6	0.55	0.31	0.63
95	0.46	0.49	0.28	0.56	0.47	0.18	0.5	0.47	0.27	0.54	0.42	0.24	0.48	0.41	0.155	0.43	0.41	0.23	0.47	0.41	0.31	0.51
120	0.36	0.39	0.27	0.47	0.37	0.175	0.41	0.37	0.26	0.45	0.33	0.23	0.41	0.32	0.15	0.36	0.32	0.23	0.4	0.32	0.3	0.44
150	0.29	0.31	0.27	0.41	0.3	0.175	0.34	0.3	0.26	0.39	0.27	0.23	0.36	0.26	0.15	0.3	0.26	0.23	0.34	0.26	0.3	0.4
185	0.23	0.25	0.27	0.37	0.24	0.17	0.29	0.24	0.26	0.35	0.22	0.23	0.32	0.21	0.145	0.26	0.21	0.22	0.31	0.21	0.3	0.36
240	0.18	0.195	0.26	0.33	0.185	0.165	0.25	0.185	0.25	0.31	0.17	0.23	0.29	0.16	0.145	0.22	0.16	0.22	0.27	0.16	0.29	0.34
300	0.145	0.16	0.26	0.31	0.15	0.165	0.22	0.15	0.25	0.29	0.14	0.23	0.27	0.13	0.14	0.19	0.13	0.22	0.25	0.13	0.29	0.32
400	0.105	0.13	0.26	0.29	0.12	0.16	0.2	0.115	0.25	0.27	0.12	0.22	0.25	0.105	0.14	0.175	0.105	0.21	0.24	0.1	0.29	0.31
500	0.186	0.11	0.26	0.28	0.098	0.155	0.185	0.093	0.24	0.26	0.1	0.22	0.25	0.086	0.135	0.16	0.086	0.21	0.23	0.081	0.29	0.3
630	0.068	0.094	0.26	0.27	0.081	0.155	0.175	0.076	0.24	0.25	0.08	0.22	0.24	0.072	0.135	0.15	0.072	0.21	0.22	0.066	0.28	0.29
800	0.053	-			0.068	0.15	0.165	0.061	0.24	0.25	-			0.06	0.13	0.145	0.06	0.21	0.22	0.053	0.28	0.29
1000	0.042	-			0.059	0.15	0.16	0.05	0.24	0.24	-			0.052	0.13	0.14	0.052	0.2	0.21	0.044	0.28	0.28

Conductor Operating Temperature: 70°C.

r = Resistive Component
x = Reactive Component
z = Impedance Value
*Spacings larger than one cable diameter will result in a larger voltage drop
The above table is in accordance with Table 4D1B of the 17th Edition of IEE Wiring Regulations
For cables having conductors of 16 mm2 or less Crosssectional area their inductances can be ignored and (mV/A/m)r values only are tabulated. For cables having conductors greater than 16 mm2, Cross sectional area the impedance values are given as (mV/A/m)z, together with the resistive component (mV/A/m)r and the reactive component (mV/A/m)x
The above paragraph is extracted from Appendix 4 of the 17th Edition of IEE Wiring Regulations

Table No. 4-1

Current Rating - H03/H05VVH2-F & H03/H05VV-F, H03/H05V2V2H2-F & H03/H05V2V2-F.

Conductor Cross Sectional Area (Sq. mm)	Current-Carrying Capacity	
	Single-Phase AC (A)	Three-Phase AC (A)
0.5	3	3
0.75	6	6
1	10	10
1.25	13	-
1.5	16	16
2.5	25	20
4	32	25
6	40	-
10	63	-

The above table is in accordance with table 4F3A of the 17 edition of IEE wiring regulation

Table No. 4-2

Voltage Drop for H03/H05VVH2-F & H03/H05VV-F, H03/H05V2V2H2-F & H03/H05V2V2-F.

Conductor Cross Sectional Area (Sq. mm)	Current-Carrying Capacity	
	Single-Phase AC (mV/A/m)	Three-Phase AC (mV/A/m)
0.5	93	80
0.75	62	54
1	46	40
1.25	37	-
1.5	32	27
2.5	19	16
4	12	10

Conductor operating temperature: 60°C*

*The tabulated values above are for 60°C thermoplastic or thermosetting insulated flexible cords
For other types of flexible cords they are to be multiplied by the following factors: for thermoplastic or thermoset insulation at 90°C: 1.09, at 105°C: 1.31
The above table is in accordance with Table 4F3B of the 17th Edition of IEE Wiring Regulations

Table No. 4-3

Current Rating Conversion Factor for H03/H05VVH2-F & H03/H05VV-F, H03/H05V2V2H2-F & H03/H05V2V2-F

Multiply the current carrying capacity of the cable by the factors given below for various ambient temperature

Ambient Temperature (°C)	Reduction Factor
35	0.91
40	0.82
45	0.71
50	0.58
55	0.41

Table No. 5

Current Rating as per DIN VDE 0298-4, at 30oC Ambient Temperature

Current Carrying Capacity (Amperes)

Nominal Cross Sectional Area (Sq. mm)	JB-500, 750, YCY, YSY, Black (0.6 / 1.0 kV), H JZ-500, YCY, YSY, CY, YCY-Black (0.6 / 1.0 kV), EB, EB CY, H, HCH
0.5	9
0.75	12
1	15
1.5	18
2.5	26
4	34
6	44
10	61
16	82
25	108
35	135
50	168
70	207
95	250
120	292
150	335
185	382
240	453
300	523

Current rating conversion factor for deviating ambient temperature

Ambient Temperature (°C)	Derating Factor
30	1.09
40	1
45	0.78
50	0.7
55	0.6
60	0.48

Current rating conversion factor for different numbers of loading cores in multicore cables

Number of loaded cores	5	7	10	14	19	24	40	61
Conversion Factor	0.75	0.65	0.55	0.50	0.45	0.40	0.35	0.30

Note:

*Current carring capacity is in accordance to VDE0298-4, 2003-08, table 11, column2

For different installation methods, conversion factors from table 5-1 shall be used

Table No. 6-1

Current Ratings - Single Core (Non-Magnetic Armour) Copper Conductor BS 5467

Current Carrying Capacity (Amperes)

Conductor Cross Sectional Area	Reference Method 1 (Clipped Direct)		Reference Method 2 (On a Perforated Cable Tray)		Reference Method 12 (Free Air)						
	2 Cables Single AC or DC Flat & Touching Phase	3 or 4 Cables, Three-Phase AC Flat & AC Touching Phase	2 Cables, Single-Phase Flat & Touching	3 or 4 Cables, Three-Phase AC Flat & Touching	2 Cables, Single-Phase AC		2 Cables DC		3 or 4 Cables, Three-Phase AC		
					Horizontal Flat Spaced	Vertical Flat Spaced	Horizontal Spaced	Vertical Spaced	Horizontal Flat Spaced	Vertical Flat Spaced	3 Cables Trefoil
1	2	3	4	5	6	7	8	9	10	11	12
Sq. mm	AMP	AMP	AMP	AMP	AMP	AMP	AMP	AMP	AMP	AMP	AMP
50	237	220	253	232	282	266	284	270	288	266	222
70	303	277	322	293	357	337	356	349	358	331	285
95	367	333	389	352	436	412	446	426	425	393	346
120	425	383	449	405	504	477	519	497	485	449	402
150	488	437	516	462	566	539	600	575	549	510	463
185	557	496	587	524	643	614	688	660	618	574	529
240	656	579	689	612	749	714	815	782	715	666	625
300	755	662	792	700	842	805	943	906	810	755	720
400	853	717	899	767	929	889	1137	1094	848	797	815
500	962	791	1016	851	1032	989	1314	1266	923	871	918
630	1082	861	1146	935	1139	1092	1528	1474	992	940	1027
800	1170	904	1246	987	1204	1155	1809	1744	1042	978	1119
1000	1261	961	1345	1055	1289	1238	2100	2026	1110	1041	1214

Table No. 6-2

Voltage Drop - Single Core (Non-Magnetic Armour) Copper Conductor BS 5467

Voltage Drop - Per Ampere Per Meter (mV)

Conductor Cross Sectional Area	2 Cables DC	2 Cables, Single-Phase AC						3 or 4 Cables, Three-Phase AC							
		Reference Methods 1 & 11 (Touching)			Reference Method 12 (Spaced)			Reference Methods 1, 11 & 12 (in Trefoil Touching)			Reference Methods 1 & 11 (Flat & Touching)			Reference Method 12 (Flat Spaced)	
1	2	3			4			5			6			7	
Sq. mm	mV	mV			mV			mV			mV			mV	
		r	x	z	r	x	z	r	x	z	r	x	z	r	x
50	0.98	0.99	0.21	1	0.98	0.29	1	0.86	0.18	0.87	0.84	0.25	0.88	0.84	0.33
70	0.67	0.68	0.2	0.71	0.69	0.29	0.75	0.59	0.17	0.62	0.6	0.25	0.65	0.62	0.32
95	0.49	0.51	0.2	0.55	0.53	0.28	0.6	0.44	0.17	0.47	0.46	0.24	0.52	0.49	0.31
120	0.39	0.41	0.19	0.45	0.43	0.27	0.51	0.35	0.17	0.39	0.38	0.24	0.44	0.41	0.3
150	0.31	0.33	0.19	0.38	0.36	0.27	0.45	0.29	0.16	0.33	0.31	0.23	0.39	0.34	0.29
185	0.25	0.27	0.19	0.33	0.3	0.26	0.4	0.23	0.16	0.28	0.26	0.23	0.34	0.29	0.29
240	0.2	0.21	0.18	0.28	0.24	0.26	0.35	0.18	0.16	0.24	0.21	0.22	0.3	0.24	0.28
300	0.16	0.17	0.18	0.25	0.2	0.25	0.32	0.15	0.15	0.21	0.17	0.22	0.28	0.2	0.27
400	0.12	0.15	0.17	0.22	0.18	0.24	0.3	0.13	0.15	0.2	0.16	0.21	0.27	0.2	0.27
500	0.09	0.13	0.17	0.21	0.17	0.24	0.29	0.11	0.15	0.18	0.15	0.2	0.25	0.19	0.24
630	0.07	0.11	0.17	0.2	0.15	0.23	0.27	0.09	0.15	0.17	0.14	0.2	0.24	0.18	0.23
800	0.06	0.09	0.16	0.19	0.15	0.23	0.27	0.09	0.14	0.17	0.13	0.18	0.23	0.18	0.2
1000	0.05	0.09	0.16	0.18	0.14	0.21	0.25	0.08	0.14	0.16	0.13	0.17	0.21	0.17	0.18

Note : Spacings larger than those specified in Method 12 (see Table 4E3B, BS 7671) - 17th Edition, (FE Wiring Regulations) will result in larger voltage drop.
Conductor Operating Temperature : 90°C

Table No. 6-3

Current Ratings - Multicore Armoured Copper Conductor BS 5467

Current Carrying Capacity (Amperes)

Conductor Cross Sectional Area (Sq. mm)	Reference Method 1 (Clipped Direct) Area		Reference Method 11 (On a Perforated Horizontal or Vertical Tray) or Reference Method 13 (Free Air)	
	2 Core Cable, Single-Phase AC or DC	3 or 4 Core Cable, Three-Phase AC	3 or 4 Core Cable, Three-Phase AC	2 Core Cable, Single-Phase AC or DC
1	2	3	4	5
1.5	27	23	29	25
2.5	36	31	39	33
4	49	42	52	44
6	62	53	66	56
10	85	73	90	78
16	110	94	115	99
25	146	124	152	131
35	180	154	188	162
50	219	187	228	197
70	279	238	291	251
95	338	289	354	304
120	392	335	410	353
150	451	386	472	406
185	515	441	539	463
240	607	520	636	546
300	698	599	732	628
400	787	673	847	728

Notes :

1. Where the conductor is to be protected by a Semi-enclosed fuse to BS 3036, see item 4 of the preface to appendix 4 of BS 7671, the IEE Wiring Regulations, 17th Edition
2. Where a conductor operates at a temperature exceeding 70°C it shall be ascertained that the equipment connected to the conductor is suitable for the conductor operating temperature (see Regulation 512-1-2 of BS 7671, the IEE Wiring Regulations, 17th Edition)
   Ambient Temperature: 30°C
   Conductor Operating Temperature: 90°C

Table No. 6-4

Voltage Drop - Multicore Armoured Copper Conductor BS 5467

Voltage Drop - Per Ampere Per Meter (mV)

Conductor Cross Sectional Area	2 Cables DC	2 Core Cables, Single-Phase AC			3 or 4 Core Cable, Three-Phase AC		
1	2	3			4		
Sq. mm	mV	mV			mV		
1.5	31	-	31	-	-	27	-
2.5	19	-	19	-	-	16	-
4	12	-	12	-	-	10	-
6	7.9	-	7.9	-	-	6.8	-
10	4.7	-	4.7	-	-	4	-
16	2.9	-	2.9	-	-	2.5	-
		r	x	z	r	x	z
25	1.85	1.85	0.16	1.9	1.6	0.14	1.65
35	1.35	1.35	0.155	1.35	1.15	0.135	1.15
50	0.98	0.99	0.155	1	0.86	0.135	0.87
70	0.67	0.67	0.15	0.69	0.59	0.13	0.6
95	0.49	0.5	0.15	0.52	0.43	0.13	0.45
120	0.39	0.4	0.145	0.42	0.34	0.13	0.37
150	0.31	0.32	0.145	0.35	0.28	0.125	0.3
185	0.25	0.26	0.145	0.29	0.22	0.125	0.26
240	0.195	0.2	0.14	0.24	0.175	0.125	0.21
300	0.155	0.16	0.14	0.21	0.14	0.12	0.185
400	0.12	0.13	0.145	0.195	0.115	0.125	0.17

Conductor Operating Temperature: 90°C

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