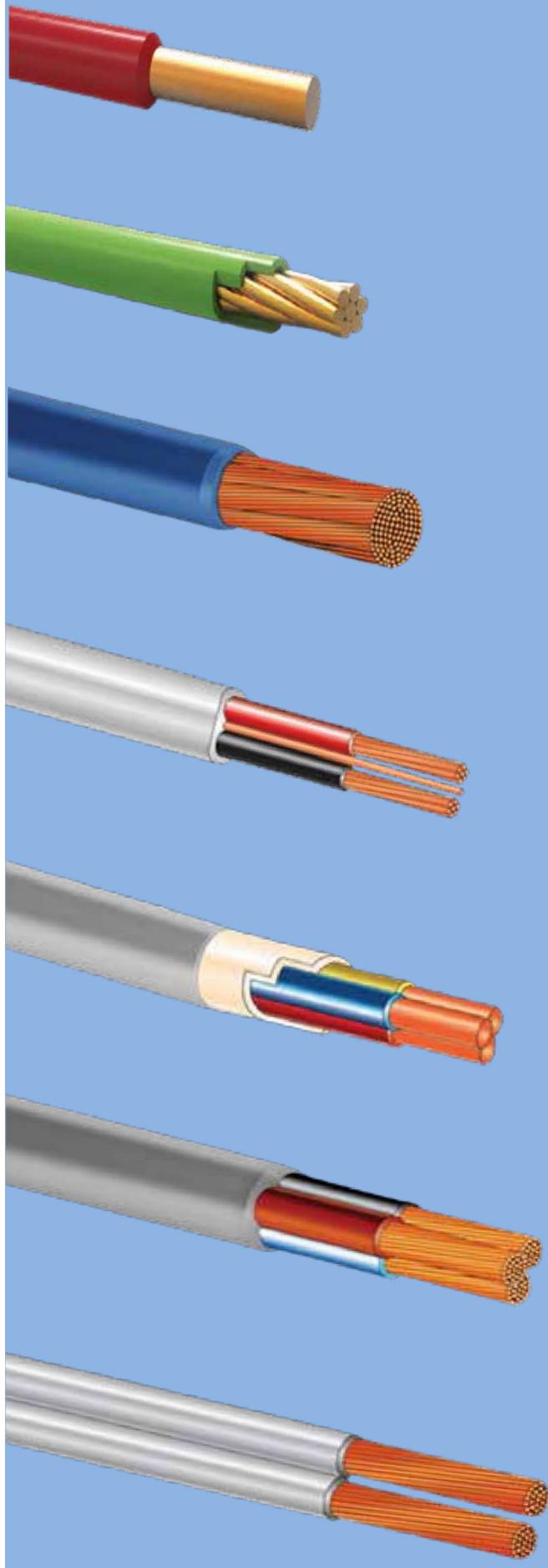




**TUFNELL**  
BRITISH ENGINEERING

## WIRES & WIRING CABLES



**ISO 9001: 2015**  
Quality Management System



Certified ISO 9001:2015

**ISO 14001: 2015**  
Environmental Management



Certified ISO 14001:2015

**OSHSAS 18001: 2007**  
Occupational Health & Safety



Certified OHSAS 18001:2007

[www.tufnelloverseas.com](http://www.tufnelloverseas.com)



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# Introduction

Tufnell Overseas Goods Wholesalers LLC is an ISO Certified Cable Manufacturer processing both Copper and Aluminum Rods as input raw material to produce wire and cable as finished product. We are located in Jebel Ali Free zone Dubai – UAE.

TufnelliEMS LLC is privately owned with sister companies in Angola, Rwanda, and South Africa where the group has interests in Wire & Cable, Steel Forming, Paints, and Household plastic products manufacturing. Our partner companies are:

- Milbridge Holding SA (Secursalem Angola) (Steel Forming, Wire & Cable, Paints) - [www.milbridgeholding.com](http://www.milbridgeholding.com)
- Primeplast Lda – Angola – Plastic Products Manufacturing
- Afriprecast – Rwanda (Precast Concrete Solutions)
- Primecement Ltd (Cement Production)

Our team is committed to providing our customers value by offering high levels of industry experience, superior customer service, and a large selection of quality cables in both copper and aluminium wires, building wires, flexible cables, control cables, low voltage power cables, overhead conductors and underground cables.

# Vision, Mission & Core Values

**Our Vision:** To be a leading quality manufacturer of cables and related products in the Middle East and Africa.

**Our Mission:** We are committed to developing and improving manufacturing methods to ensure the highest possible level of value, quality and products to meet our clients' needs through being a responsible and dependable manufacturer

**Our Core Values:** Our corporate values center on four core elements

## Ownership

- We trust our employees to make every effort to do right by the company, and we make every effort to do right by employees in return

## Integrity

- We treasure loyalty, uphold honesty, and practice good business ethics.

## Reliability

- We uphold service excellence, take pride in our product quality and ensure commitments are duly fulfilled and are consistently upheld.

## Teamwork

- We embrace teamwork, harmony and mutual respect with our customers, suppliers, and employees

# Company Quality Policy

Tufnell Overseas Goods Wholesalers LLC is committed to supplying products and services to its clients that fully satisfy their requirements and expectations. Quality permeates our entire process all the way from procurement of raw materials, production, quality testing, and delivery and after sales backup services to the customer.

Todate Lustre Electro Mechanical Services LLC has acquired ISO certifications for its Quality Management Systems, Environmental Management and Occupational Health & Safety as follows:

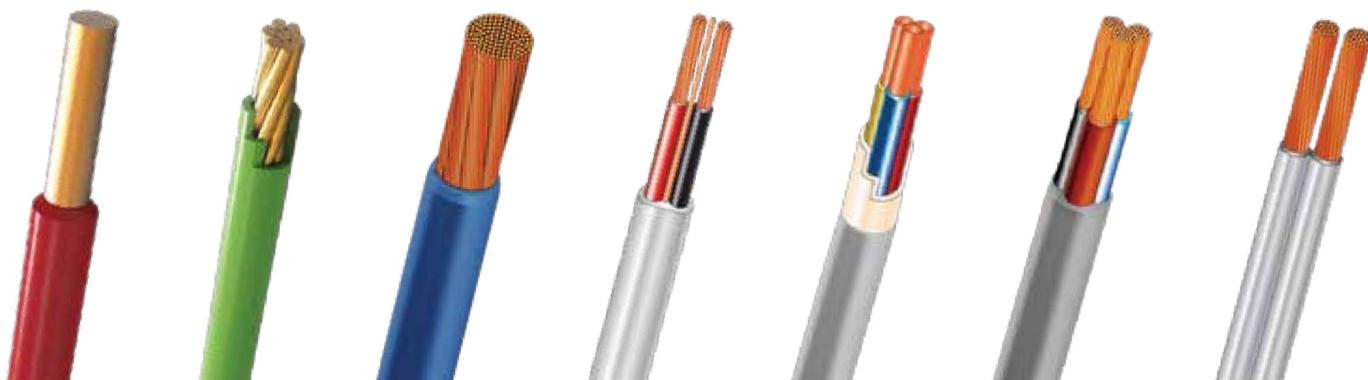
- ISO 9001:2015 Quality Management System
- ISO 14001:2015 Environmental Management
- OSHAS 18001:2007 Occupational Health & Safety

Our products are manufactured to international standards. Our cables are individually tested in our laboratory to ensure that the products meet the highest standards. Certificates of Conformity are available upon request for each shipment.

The cables manufactured by Tufnell Overseas Goods Wholesalers LLC are clearly marked with the company name, cable size details and voltage ratings.

The management of Tufnell EMS LLC are committed to implementing the following policy:-

- **Customers:** Provide products and services that comply with the requirements and expectations of our customers.
- **Owners:** Provide products that will deliver a profit to the organization without compromise to quality and the necessary resources for Organizational, Operational support management of the business.
- **Employees:** Provide a safe working environment; develop our team to improve our core competencies and their development and job satisfaction.
- **Suppliers:** Select our suppliers and partners fairly and without prejudice to our stakeholders.
- **Community:** Engage in charitable works for the benefit of our community and society.
- **Statutory/Regulatory Requirements:** Comply with applicable legal and statutory requirements



## CU/PVC WIRES 450/750 VOLTS (ROUND SOLID)

Copper Conductor PVC insulation, BS EN 50525-2-31 (BS 6004) and IEC 60227

H07V-U as per BS EN 50525-2-31 (BS 6004) Type IEC 01 as per IEC 60227

Conductor: Round Solid (Class 1)

Insulation: PVC – Type TI 1 as per BS EN 50525-2-31 (BS 6004), Type C as per IEC 60227

Based on special request, PVC insulation rated 85°C and 90°C (105°C for reduced duration) can also be provided.



For internal wiring of equipment rated voltage up to 1000 V AC and up to 750 V DC to earth.

Nominal Cross Section	Conductor (Solid)		Nominal Thickness of Insulation	Approx. Overall Diameter	Weight of Finished Cable (Approx.)	Maximum Conductor DC Resistance at 20°C	Standard Packing Length
	Number of Wires in Conductor	Approx. Diameter of Conductor					
mm <sup>2</sup>		mm	mm	mm	Kg / Km	Ohm / Km	
1 x 1.5	1	1.38	0.7	2.8	20	12.1	100 Yards
1 x 2.5	1	1.78	0.8	3.4	32	7.41	100 Yards
1 x 4	1	2.25	0.8	3.9	47	4.61	100 Yards
1 x 6	1	2.76	0.8	4.4	65	3.08	100 Yards
1 x 10	1	3.57	1.0	5.6	110	1.83	100 Yards

Color: green/yellow blue black green red yellow brown grey orange white

Packing: 100 Yards in Coils or Spools

Based on specific requirement, wires can also be Supplied in km lengths in wooden or steel drums.

## CU/PVC WIRES 450/750 VOLTS (ROUND STRANDED)

Copper Conductor, PVC insulation, BS EN 50525-2-31 (BS 6004) and IEC 60227

H07V-R as per BS EN 50525-2-31 (BS 6004), Type IEC 01 as per IEC 60227

Conductor: Round Stranded (Class 2)

Insulation: PVC – Type TI 1 as per BS EN 50525-2-31 (BS 6004), Type C as per IEC 60227

Based on special request, PVC insulation rated 85°C and 90°C (105°C for reduced duration) can also be provided.



For internal wiring of equipment rated voltage up to 1000 V AC and up to 750 V DC to earth.

Nominal CROSS Section  mm <sup>2</sup>	Conductor (Stranded)		Nominal Thickness of Insulation  mm	Approx. Overall Diameter  mm	Weight of Finished Cable (Approx)  Kg / Km	Maximum Conductor DC Resistance at 20°C  Ohm / Km	Standard Racking Length
	Number of Wires in Conductor	Approx. Diameter of Conductor  mm					
1 x 1.5	7	1.56	0.7	3.0	21	12.1	100 Yards
1 x 2.5	7	1.98	0.8	3.6	33	7.41	100 Yards
1 x 4	7	2.52	0.8	4.1	48	4.61	100 Yards
1 x 6	7	3.12	0.8	4.7	68	3.08	100 Yards
1 x 10	7	4.01	1.0	6.0	113	1.83	100 Yards
1 x 16	7	5.03	1.0	7.0	170	1.15	100 Yards
1 x 25	7	6.30	1.2	8.7	265	0.727	100 Yards
1 x 35	7	7.44	1.2	9.8	361	0.524	100 Yards
1 x 50	19	8.10	1.4	10.9	470	0.387	3000 Drum
1 x 70	19	9.70	1.4	12.5	660	0.268	3000 Drum
1 x 95	19	11.40	1.6	14.6	920	0.193	3000 Drum
1 x 120	37	12.90	1.6	16.1	1140	0.133	2000 Drum
1 x 150	37	14.30	1.8	17.9	1410	0.124	2000 Drum
1 x 185	37	16.00	2.0	20.0	1770	0.0991	2000 Drum
1 x 240	61	18.40	2.2	22.8	2320	0.0754	1000 Drum
1 x 300	61	20.40	2.4	25.2	2900		1000 Drum
1 x 400	61	23.20	2.6	28.4	3700	0.0470	500 Drum
1 x 500	61	26.70	2.8	32.3	4730	0.0366	500 Drum
1 x 630	61	30.40	2.8	36.0	6050	0.0283	500 Drum

Color: green/yellow blue black green red yellow brown grey orange white

Based on specific requirement, Wires can also be supplied in km lengths in wooden or steel drums.

## CU/PVC WIRES 450/750 VOLTS (ROUND FLEXIBLE)

Copper Conductor PVC insulation, BS EN 50525-2-31 (BS 6004) and IEC 60227

H07V-K as per BS EN 50525-2-31 (BS 6004) Type IEC 02 as per IEC 60227

Conductor: Flexible (Class 5)

Insulation: PVC – Type TI 1 as per BS EN 50525-2-31 (BS 6004), Type C as per IEC 60227

*Based on special request, PVC insulation rated 85°C and 90°C (105°C for reduced duration) can also be provided.*



For internal wiring of equipment rated voltage up to 1000 V AC and up to 750 V DC to earth.

Nominal Cross Section	Conductor (Round Flexible)		Nominal Thickness of Insulation	Approx. Overall Diameter	Weight of Finished Cable Approx.	Maximum Conductor DC Resistance at 20°C	Standard Packing Length
	Numbers of Wires in Conductor	Diameter of Conductor Approx.					
mm <sup>2</sup>	No x mm	mm	mm	mm	Kg / Km	Ohm / Km	
1 x 1.5	27 x 0.25	1.55	0.7	3.0	20	13.3	100 C
1 x 2.5	45 x 0.25	2.00	0.8	3.6	30	7.98	100 C
1 x 4	50 x 0.30	2.51	0.8	4.2	45	4.95	100 C
1 x 6	76 x 0.30	3.09	0.8	4.7	65	3.30	100 C
1 x 10	74 x 0.40	4.07	1.0	6.1	110	1.91	100 C
1 x 16	118 x 0.40	5.08	1.0	7.1	165	1.21	100 C
1 x 25	182 x 0.40	6.35	1.2	9.0	255	0.780	100 C
1 x 35	257 x 0.40	7.50	1.2	10.0	345	0.554	100 C
1 x 50	371 x 0.40	8.95	1.4	12.0	495	0.386	1000 D
1 x 70	336 x 0.50	10.70	1.4	14.0	690	0.272	1000 D
1 x 95	444 x 0.50	12.30	1.6	16.0	910	0.206	1000 D
1 x 120	568 x 0.50	14.00	1.6	17.2	1150	0.161	1000 D
1 x 150	708 x 0.50	15.60	1.8	19.2	1435	0.129	1000 D
1 x 185	864 x 0.50	17.20	2.0	21.2	1745	0.106	1000 D
1 x 240	1134 x 0.50	20.00	2.2	24.4	2265	0.0801	1000 D
1 x 300	1414 x 0.50	22.00	2.4	27.0	2815	0.0641	1000 D

Color: green/yellow    blue    black    green    red    yellow    brown    grey    orange    white

## CU/LSZH WIRES 450/750 VOLTS (ROUND SOLID)

Copper Conductor LSZH Insulation BS EN 50525-3-41 (BS 7211)

H07Z-U as per BS EN 50525-3-41 (BS 7211)

Conductor: Round Solid (Class 1)

Insulation: Low Smoke Thermosetting Insulation Type EI5 as per BS EN 50525-3-41 (BS 7211)



For internal wiring of equipment rated voltage up to 1000 V AC and up to 750 DC earth.

Nominal Cross Section	Conductor (Solid)		Nominal Thickness of Insulation	Approx. Overall Diameter	Weight of Finished Cable (Approx)	Maximum Conductor DC Resistance at 20°C	Standard Packing Length
	Number of Wires in Conductor	Approx. Diameter of Conductor					
mm <sup>2</sup>		mm	mm	mm	Kg / Km	Ohm / Km	
1 x 1.5	1	1.38	0.7	3.0	20	12.1	100 Yards
1 x 2.5	1	1.78	0.8	3.5	32	7.41	100 Yards
1 x 4	1	2.25	0.8	4.0	47	4.61	100 Yards
1 x 6	1	2.76	0.8	5.0	65	3.08	100 Yards
1 x 10	1	3.57	1.0	6.0	110	1.83	100 Yards

Color: green/yellow    blue    black    green    red    yellow    brown    grey    orange white

# CU/LSZH WIRES 450/750 VOLTS (ROUND STRANDED)

Copper Conductor LSZH Insulation BS EN 50525-3-41 (BS 7211)

H07Z-R as per BS EN 50525-3-41 (BS 7211)

Conductor: Round Solid (Class 2)

Insulation: Low Smoke Thermosetting Insulation Type EI5 as per BS EN 50525-3-41 (BS 7211)



For internal wiring of equipment rated voltage up to 1000 V AC and up to 750 V DC to earth.

Nominal Cross Section	Conductor (Round Stranded)		Nominal Thickness of Insulation	Approx. Overall Diameter	Weight of Finished Cable Approx.	Maximum Conductor DC Resistance at 20°C	Standard Packing Length
	Numbers of Wires in Conductor	Approx. Diameter of Conductor.					
mm <sup>2</sup>	No	mm	mm	mm	Kg / Km	Ohm / Km	Yards
1 x 1.5	7	1.56	0.7	3.0	21	12.1	100 C
1 x 2.5	7	1.98	0.8	3.6	33	7.41	100 C
1 x 4	7	2.52	0.8	4.1	48	4.61	100 C
1 x 6	7	3.12	0.8	4.7	68	3.08	100 C
1 x 10	7	4.01	1.0	6.0	113	1.83	100 C
1 x 16	7	5.03	1.0	7.0	170	1.15	100 C
1 x 25	7	6.30	1.2	8.7	265	0.727	100 C
1 x 35	7	7.44	1.2	9.8	360	0.524	100 C
1 x 50	19	8.10	1.4	10.9	470	0.387	3000 D
1 x 70	19	9.70	1.4	12.5	663	0.268	3000 D
1 x 95	19	11.40	1.6	14.6	920	0.193	3000 D
1 x 120	37	12.90	1.6	16.1	1140	0.153	2000 D
1 x 150	37	14.30	1.8	17.9	1410	0.124	2000 D
1 x 185	37	16.00	2.0	20.0	1770	0.0991	2000 D
1 x 240	61	18.40	2.2	22.8	2320	0.0754	1000 D
1 x 300	61	20.40	2.4	25.2	2900	0.0601	1000 D
1 x 400	61	23.20	2.6	28.4	3700	0.0470	500 D
1 x 500	61	26.70	2.8	32.3	4730	0.0366	500 D
1 x 630	61	30.40	2.8	36.0	6050	0.0283	500 D

Color: green/yellow      blue      black      green      red      yellow      brown      grey      orange      white

## CU/LSZH WIRES 450/750 VOLTS (ROUND FLEXIBLE)

Copper Conductor LSZH Insulation BS EN 50525-3-41 (BS 7211)

H07Z-K as per BS EN 50525-3-41 (BS 7211)

Conductor: Round Flexible (Class5)

Insulation: Low Smoke Thermosetting Insulation Type EI5 as per BS EN 50525-3-41 (BS 7211)



For internal wiring of equipment rated voltage up to 1000 V AC and up to 750 V DC to earth.

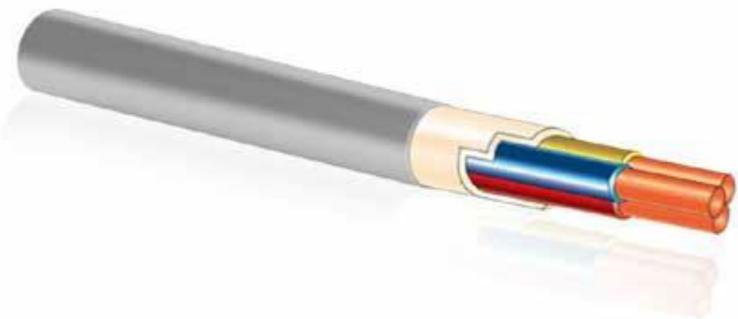
Nominal Cross Section	Conductor (Round Flexible)		Nominal Thickness of Insulation	Approx. Overall Diameter	Weight of Finished Cable Approx.	Maximum Conductor DC Resistance at 20°C	Standard Packing Length
	Numbers of Wires in Conductor	Approx. Diameter of Conductor					
mm²	No x mm	mm	mm	mm	Kg / Km	Ohm / Km	M ± 5%
1 x 1.5	27 x 0.25	1.55	0.7	3.0	20	13.3	100 C
1 x 2.5	45 x 0.25	2.00	0.8	3.6	30	7.98	100 C
1 x 4	50 x 0.30	2.51	0.8	4.1	45	4.95	100 C
1 x 6	76 x 0.30	3.09	0.8	4.7	65	3.30	100 C
1 x 10	74 x 0.40	4.07	1.0	6.1	110	1.91	100 C
1 x 16	118 x 0.40	5.08	1.0	7.1	165	1.21	100 C
1 x 25	182 x 0.40	6.35	1.2	9.0	255	0.780	100 C
1 x 35	257 x 0.40	7.50	1.2	10.0	345	0.554	100 C
1 x 50	371 x 0.40	8.95	1.4	12.0	495	0.386	1000 D
1 x 70	336 x 0.50	10.70	1.4	14.0	690	0.272	1000 D
1 x 95	444 x 0.50	12.30	1.6	16.0	910	0.206	1000 D
1 x 120	568 x 0.50	14.00	1.6	17.2	1150	0.161	1000 D
1 x 150	708 x 0.50	15.60	1.8	19.2	1435	0.129	1000 D
1 x 185	864 x 0.50	17.20	2.0	21.2	1745	0.106	1000 D
1 x 240	1134 x 0.50	20.0	2.2	24.4	2265	0.0801	1000 D
1 x 300	1414 x 0.50	22.0	2.4	27.0	2815	0.0641	1000 D

Color: green / yellow    blue    black    green    red    yellow    brown    grey    orange white

# CU/PVC/PVC CABLES 300/500 VOLTS (ROUND SOLID)

Copper Conductor PVC insulated and PVC Sheathed - IEC 60227

H05VV-U, IEC 60227  
TYPE 60227 IEC 10



Nominal Cross Section	Numbers of Wires in Conductor	Approx. Diameter of Conductor	Nominal Thickness of Insulation	Nominal Thickness of Sheath	Approx. Overall Diameter	Weight of Finished Cable Approx.	Maximum Conductor DC Resistance at 20°C	Standard Packing Length
mm²		mm	mm	mm	mm	Kg / Km	Ohm / Km	M ± 5%
2 x 1.5	1	1.38	0.7	1.2	8.0	94	12.1	100 C
2 x 2.5	1	1.78	0.8	1.2	9.2	133	7.41	100 C
2 x 4	1	2.25	0.8	1.2	10.1	176	4.61	100 C
2 x 6	1	2.76	0.8	1.2	11.1	227	3.08	100 C
2 x 10	1	3.57	1.0	1.4	13.9	367	1.83	1000/2000
3 x 1.5	1	1.38	0.7	1.2	8.4	113	12.1	100 C
3 x 2.5	1	1.78	0.8	1.2	10.0	163	7.41	100 C
3 x 4	1	2.25	0.8	1.2	10.7	219	4.61	100 C
3 x 6	1	2.76	0.8	1.4	12.2	298	3.08	100 C
3 x 10	1	3.57	1.0	1.4	15.0	467	1.83	1000/2000
4 x 1.5	1	1.38	0.7	1.2	9.1	138	12.1	100 C
4 x 2.5	1	1.78	0.8	1.2	10.6	201	7.41	100 C
4 x 4	1	2.25	0.8	1.4	12.1	284	4.61	100 C
4 x 6	1	2.76	0.8	1.4	13.3	372	3.08	1000/2000
4 x 10	1	3.57	1.0	1.4	16.3	594	1.83	1000/2000
5 x 1.5	1	1.38	0.7	1.2	10.0	165	12.1	100 C
5 x 2.5	1	1.78	0.8	1.2	11.5	242	7.41	100 C
5 x 4	1	2.25	0.8	1.4	13.2	343	4.61	100 C
5 x 6	1	2.76	0.8	1.4	15.0	452	3.08	1000/2000
5 x 10	1	3.57	1.0	1.4	17.8	734	1.83	1000/2000

#### Colour of Insulation:

2 cores: Red, Black

3 cores: Red, Yellow and Blue

4 cores: Red, Yellow, Blue and Black

5 cores: Red, Yellow, Blue, Black and Green

Colour of Outer sheath – Grey.

**Note:** Colour code as per BS Standards shall only be provided based on specific request which is as follows:

2 cores: brown and blue

3 cores: green/yellow, blue, brown

4 cores: green/yellow, blue, brown, black

5 cores: green/yellow, blue, brown, black and grey

## CU/PVC/PVC CABLES 300/500 VOLTS (ROUND STRANDED)

Copper Conductor PVC insulated and PVC Sheathed and IEC 60227

H05VV-R, IEC 60227  
TYPE 60227 IEC 10



Cross Section	Numbers of Wires in Conductor	Approx. Diameter of Conductor	Nominal Thickness of Insulation	Nominal Thickness of Sheath	Approx. Overall Diameter	Weight of Finished Cable Approx.	Maximum Conductor DC Resistance at 20°C	Standard Packing Length
mm <sup>2</sup>		mm	mm	mm	mm	Kg / Km	Ohm / Km	M ± 5%
2 x 1.5	7	1.56	0.7	1.2	8.3	100	12.1	100 C
2 x 2.5	7	1.98	0.8	1.2	9.6	140	7.41	100 C
2 x 4	7	2.52	0.8	1.2	10.7	190	4.61	100 C
2 x 6	7	3.12	0.8	1.2	11.8	246	3.08	100 C
2 x 10	7	4.01	1.0	1.4	14.8	396	1.83	1000/2000
2 x 16	7	5.03	1.0	1.4	16.9	555	1.15	1000/2000
2 x 25	7	6.30	1.2	1.4	20.0	830	0.727	1000
2 x 35	7	7.44	1.2	1.6	23.0	1210	0.524	1000
3 x 1.5	7	1.56	0.7	1.2	8.8	121	12.1	100 C
3 x 2.5	7	1.98	0.8	1.2	10.2	170	7.41	100 C
3 x 4	7	2.52	0.8	1.2	11.4	235	4.61	100 C
3 x 6	7	3.12	0.8	1.4	13.0	320	3.08	100 C
3 x 10	7	4.01	1.0	1.4	16.0	500	1.83	1000/2000
3 x 16	7	5.03	1.0	1.4	18.0	714	1.15	1000/2000
3 x 25	7	6.30	1.2	1.6	22.0	1100	0.727	1000
3 x 35	7	7.44	1.2	1.6	24.0	1440	0.524	1000
4 x 1.5	7	1.56	0.7	1.2	9.6	148	12.1	100 C
4 x 2.5	7	1.98	0.8	1.2	11.1	215	7.41	100 C
4 x 4	7	2.52	0.8	1.4	12.8	304	4.61	100 C
4 x 6	7	3.12	0.8	1.4	14.2	399	3.08	1000/2000
4 x 10	7	4.01	1.0	1.4	17.3	635	1.83	1000/2000
4 x 16	7	5.03	1.0	1.4	19.8	912	1.15	1000/2000
4 x 25	7	6.30	1.2	1.6	24.0	1400	0.727	1000
4 x 35	7	7.44	1.2	1.6	27.0	1980	0.524	1000
5 x 1.5	7	1.56	0.7	1.2	10.4	176	12.1	100 C
5 x 2.5	7	1.98	0.8	1.2	12.2	250	7.41	100 C
5 x 4	7	2.52	0.8	1.4	14.0	360	4.61	100 C
5 x 6	7	3.12	0.8	1.4	15.5	484	3.08	1000/2000
5 x 10	7	4.01	1.0	1.4	19.0	786	1.83	1000/2000
5 x 16	7	5.03	1.0	1.6	22.2	1153	1.15	1000/2000
5 x 25	7	6.30	1.2	1.6	27.0	1740	0.727	1000
5 x 35	7	7.44	1.2	1.6	30.0	2310	0.524	1000

### Colour of Insulation:

2 cores: Red, Black

3 cores: Red, Yellow and Blue

4 cores: Red, Yellow, Blue and Black

5 cores: Red, Yellow, Blue, Black and Green

Colour of Outer sheath – Grey.

**Note:** Colour code as per BS Standards shall only be provided based on specific request which is as follows:

2 cores: brown and blue

3 cores: green/yellow, blue, brown

4 cores: green/yellow, blue, brown, black

5 cores: green/yellow, blue, brown, black and grey

## CU/PVC/PVC CABLES 300/500 VOLTS

Flexible Copper Conductor PVC insulated and Sheathed, BS EN 50525-2-11 (BS 6500) and IEC 60227

H05VV-F, IEC 60227 & BS EN 50525-2-11 (BS 6500)

TYPE 60227 IEC 53

H05V2V2-F Heat Resistant Cables can be made on special request.



Nominal Cross Section	Numbers & diameter of Wires in Conductor	Approx. Diameter of Conductor	Nominal Thickness of Insulation	Nominal Thickness of Sheath	Approx. Overall Diameter	Weight of Finished Cable Approx.	Maximum Conductor DC Resistance at 20°C	Standard Packing Length
mm <sup>2</sup>	no x mm	mm	mm	mm	mm	Kg / Km	Ohm / Km	M ± 5%
2 x 0.75	22 x 0.20	1.20	0.6	0.8	6.4	56	26.0	100
2 x 1	29 x 0.20	1.30	0.6	0.8	6.6	63	19.5	100
2 x 1.5	27 x 0.25	1.55	0.7	0.8	7.5	83	13.3	100
2 x 2.5	45 x 0.25	2.00	0.8	1.0	9.2	128	7.98	100
2 x 4	50 x 0.3	2.51	0.8	1.1	10.4	175	4.95	100
3 x 0.75	22 x 0.20	1.20	0.6	0.8	6.78	67	26.0	100
3 x 1	29 x 0.20	1.30	0.6	0.8	7.0	75	19.5	100
3 x 1.5	27 x 0.25	1.55	0.7	0.9	8.2	105	13.3	100
3 x 2.5	45 x 0.25	2.00	0.8	1.1	9.8	160	7.98	100
3 x 4	50 x 0.3	2.51	0.8	1.2	11.3	225	4.95	100
4 x 0.75	22 x 0.20	1.20	0.6	0.8	7.4	81	26.0	100
4 x 1	29 x 0.20	1.30	0.6	0.9	7.8	95	19.5	100
4 x 1.5	27 x 0.25	1.55	0.7	1.0	9.1	132	13.3	100
4 x 2.5	45 x 0.25	2.00	0.8	1.1	11.0	197	7.98	100
4 x 4	50 x 0.3	2.51	0.8	1.2	12.4	275	4.95	100
5 x 0.75	22 x 0.20	1.20	0.6	0.9	8.3	101	26.0	100
5 x 1	29 x 0.20	1.30	0.6	0.9	8.5	114	19.5	100
5 x 1.5	27 x 0.25	1.55	0.7	1.1	10.2	163	13.3	100
5 x 2.5	45 x 0.25	2.00	0.8	1.2	12.1	243	7.98	100
5 x 4	50 x 0.3	2.51	0.8	1.4	13.9	345	4.95	100

### Colour of Insulation:

2 cores: blue, brown.

3 cores: green/yellow, blue, brown.

4 cores: green/yellow, blue, brown black.

5 cores: green/yellow, blue, brown, black, grey.

Colour of Outer sheath – White.

## PVC INSULATION, NON-SHEATHED CORDS FOR INTERNAL WIRING

Single Core and Twisted Twin

COPPER CONDUCTOR: BS EN 50525-2-11 (BS 6500) and IEC 60227, 300 / 500 VOLTS H05V-K,  
TYPE 60227 IEC 06



CONDUCTOR		Radial Thickness of insulation	Mean overall diameter (upper limit) single	Maximum Conductor DC Resistance at 20°C	Approximate Weight	
Nom. cross sectional area	Nom. diameter of strand				Single	Twin
mm <sup>2</sup>	mm	mm	mm	Ω / Km	Kg / Km	Kg / Km
0.5	0.20	0.6	2.4	39.0	9	19
0.75	0.20	0.6	2.6	26.0	12	24
1.0	0.20	0.6	2.8	19.5	15	29

### Construction:

- Annealed Copper conductor as per BS EN 60228 (BS 6360) or IEC 60228, Class 5 (Class 1 and Class 2 conductors can be provided based on special request)
- PVC Insulation Type TI 1

380 V NYFAF – PVC INSULATION, NON-SHEATHED FLEXIBLE CORDS FOR INTERNAL WIRING  
Single, Three and Four

Nominal Cross Section	CONDUCTOR		Nominal Thickness of Insulation	Overall Dimension max	Maximum Conductor DC Resistance at 20°C	Approx. Weight of Finished Cable
	Max. Diameter of Wire in Conductor	Approx. Diameter of Conductor				
mm <sup>2</sup>	mm	mm	mm	mm	Ω / Km	Kg / Km
1 x 0.50	0.21	0.9	0.6	2.4	37.1	9
1 x 0.75	0.21	1.1	0.6	2.6	24.7	12
3 x 0.50	0.21	0.9	0.6	5.2	39.0	27
3 x 0.75	0.21	1.1	0.6	5.6	26.0	36
4 x 0.50	0.21	0.9	0.6	5.8	39.0	36
4 x 0.75	0.21	1.1	0.6	6.2	26.0	48

### Construction:

Annealed copper conductor  
PVC Insulation.

## PVC INSULATION, NON-SHEATHED FLEXIBLE CORDS FOR INTERNAL WIRING – PARALLEL TWIN COPPER CONDUCTOR

H03VH-H 300/300 VOLTS - IEC 60227



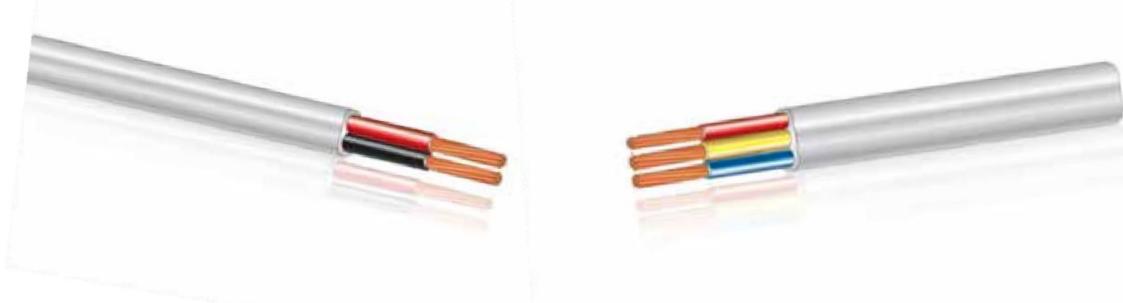
CONDUCTOR		Radial Thickness of Insulation	Mean overall dimensions		Maximum Conductor DC Resistance at 20°C	Approx. Weight of Finished Cable
Nom. Cross Sectional area	Maximum diameter of Wire		Lower Limit	Upper Limit		
mm <sup>2</sup>	mm	mm	mm	mm	Ω / Km	Kg / Km
2 x 0.50	0.16	0.8	2.4 x 4.9	3.0 x 5.9	39.0	22
2 x 0.75	0.16	0.8	2.6 x 5.2	3.1 x 6.3	26.0	28

### Construction:

- Annealed Copper conductor as per BS EN 60228 (BS 6360) or IEC 60228 Class 6.
- The conductors shall be laid parallel and covered with PVC insulation.
- The insulation shall be provided with a groove on each side between the conductors to facilitate separation of the cores.

# PVC INSULATED, PVC SHEATHED CABLES SINGLE CORE, FLAT TWIN AND FLAT THREE CORES WITHOUT EARTH CONTINUITY CONDUCTOR

COPPER CONDUCTOR – STANDARD: BS EN 50525-2-31 (BS 6004) – 300 / 500 VOLTS



No. & Cross Sectional area of conductor	Number of Wires in Conductor	Radial Thickness of insulation	Radial Thickness of Sheath	Mean overall dimensions		Maximum Conductor DC Resistance at 20°C	Approx. Weight of Finished Cable
				Lower Limit	Upper Limit		
mm <sup>2</sup>	mm	mm	mm	mm	mm	Ω / Km	Kg / Km
1 x 1.0	1	0.6	0.8	3.8	4.5	18.1	27
1 x 1.5	1	0.7	0.8	4.2	4.9	12.1	34
1 x 2.5	1	0.8	0.8	4.8	5.8	7.41	48
1 x 4	7	0.8	0.9	5.4	6.8	4.61	70
1 x 6	7	0.8	0.9	6.0	7.4	3.08	91
1 x 10	7	1.0	0.9	7.2	8.8	1.83	142
1 x 16	7	1.0	1.0	8.4	10.5	1.15	209
1 x 25	7	1.2	1.1	10.0	12.5	0.727	318
1 x 35	7	1.2	1.1	11.0	13.5	0.524	418
2 x 1.0	1	0.6	0.9	4.0 x 6.2	4.7 x 7.4	18.1	50
2 x 1.5	1	0.7	0.9	4.4 x 7.0	5.4 x 8.4	12.1	67
2 x 2.5	1	0.8	1.0	5.2 x 8.4	6.2 x 9.8	7.41	101
2 x 4	7	0.8	1.0	5.6 x 9.6	7.2 x 11.5	4.61	142
2 x 6	7	0.8	1.1	6.4 x 10.5	8.0 x 13.0	3.08	190
2 x 10	7	1.0	1.2	7.8 x 13.0	9.6 x 16.0	1.83	304
2 x 16	7	1.0	1.3	9.0 x 15.5	11.0 x 18.5	1.15	437
3 x 1.0	1	0.6	0.9	4.0 x 8.4	4.7 x 9.8	18.1	72
3 x 1.5	1	0.7	0.9	4.4 x 9.8	5.4 x 11.5	12.1	101
3 x 2.5	1	0.8	1.0	5.2 x 11.5	6.2 x 13.5	7.41	152
3 x 4	7	0.8	1.1	5.8 x 13.5	7.4 x 16.5	4.61	218
3 x 6	7	0.8	1.1	6.4 x 15.0	8.0 x 18.0	3.08	285
3 x 10	7	1.0	1.2	7.8 x 19.0	9.6 x 22.5	1.83	451
3 x 16	7	1.0	1.3	9.0 x 22.0	11.0 x 26.5	1.15	655

## Construction:

Plain annealed copper conductor Class 1 or Class 2 as per BS EN 60228 (BS 6360).

- PVC Insulation Type TI 1
- PVC Sheath Type 6
- The sheath shall be closely fitting but shall not adhere to the cores and in the case of twin and three-core the cores shall be laid parallel.

## Colour of Insulation as per BS EN 50525-2-31 (BS 6004):

Single : Brown or Blue  
Twin : Brown and Blue  
Three-core: Brown, Black (center), Grey

## Colour of Insulation General

Single : Black  
Twin : Red, Black  
Three-core: Red, Yellow, Blue

Color of Sheath: Grey

## PVC INSULATION, PVC SHEATHED CABLES,

With Earth Continuity Conductor, Flat Twin and Flat Three Cores



No. & Cross Sectional area of conductor	Number of Wires in Conductor	Radial Thickness of insulation	Radial Thickness of Sheath	Mean overall dimensions		Earth continuity conductor cross section	Maximum Conductor DC Resistance at 20°C	Approx. Weight of Finished Cable
				Lower Limit	Upper Limit			
mm <sup>2</sup>	mm	mm	mm	mm	mm	mm <sup>2</sup>	Ω / Km	Kg / Km
2 x 1.0	1	0.6	0.9	4.0 x 7.2	4.7 x 8.6	1.0	18.1	65
2 x 1.5	1	0.7	0.9	4.4 x 8.2	5.4 x 9.6	1.0	12.1	83
2 x 2.5	1	0.8	1.0	5.2 x 9.8	6.2 x 11.5	1.5	7.41	128
2 x 4	7	0.8	1.0	5.6 x 10.5	7.2 x 13.0	1.5	4.61	161
2 x 6	7	0.8	1.1	6.4 x 12.5	8.0 x 15.0	2.5	3.08	228
2 x 10	7	1.0	1.2	7.8 x 15.5	9.6 x 19.0	4	1.83	361
2 x 16	7	1.0	1.3	9.0 x 18.0	11.0 x 22.5	6	1.15	522
3 x 1.0	1	0.6	0.9	4.0 x 9.6	4.7 x 11.0	1.0	18.1	85
3 x 1.5	1	0.7	0.9	4.4 x 10.5	5.4 x 12.5	1.0	12.1	114
3 x 2.5	1	0.8	1.0	5.2 x 12.5	6.2 x 14.5	1.0	7.41	171
3 x 4	7	0.8	1.1	5.8 x 14.5	7.4 x 18.0	1.5	4.61	237
3 x 6	7	0.8	1.1	6.4 x 16.5	8.0 x 20.0	2.5	3.08	313
3 x 10	7	1.0	1.2	7.8 x 21.0	9.6 x 25.5	4	1.83	513
3 x 16	7	1.0	1.3	9.0 x 24.5	11.0 x 29.5	6	1.15	731

### Construction:

Plain annealed copper conductor Class 1 or Class 2 as per BS EN 60228 (BS 6360).

- PVC Insulation Type TI 1
- PVC Sheath Type 6
- The sheath shall be closely fitting but shall not adhere to the cores which shall be laid parallel with un-insulated earth continuity conductor.

### Colour of Insulation as per BS EN 50525-2-31 (BS 6004):

Single : Brown or Blue  
Twin : Brown and Blue  
Three-core: Brown, Black (center), Grey

### Colour of Insulation General

Single : Black  
Twin : Red, Black  
Three-core: Red, Yellow, Blue

**Color of Sheath:** Grey

# Current Rating of CU/PVC Wires

**TABLE 1**

Current carrying capacity and associated voltage drop for single core PVC insulated cables, non-armoured, with or without sheath  
CU/PVC 450 / 750 V Wires - BS EN 50525-2-31 (BS 6004) & BS 6231

Conductor operating temperature: 70°C Ambient temperature: 30°C

C.S.A.	Conductor		Reference Method A (enclosed in conduit in the thermally insulating wall etc.)										Reference Method B (enclosed in conduit on a wall or in trunking etc.)										Reference Method C (clipped direct)										Reference Method F(in free air or on a perforated cable tray horizontal or vertical)									
	Current carrying capacity	Voltage drop	2 cables, single-phase a.c. or d.c.	3 or 4 cables three-phase a.c.	Current carrying capacity	Voltage drop	2 cables, single-phase a.c. or d.c.	3 or 4 cables three-phase a.c.	Current carrying capacity	Voltage drop	2 cables, single-phase a.c. or d.c. and touching	3 or 4 cables three-phase a.c. and touching or tinfoil	Current carrying capacity	Voltage drop	2 cables, single-phase a.c. or d.c.	3 cables, three phase a.c.	Current carrying capacity	Voltage drop	2 cables, single-phase a.c. or d.c.	3 cables, three phase a.c.	Current carrying capacity	Voltage drop	2 cables, single phase a.c. or d.c. or 3 cables three phase a.c.	Space by one diameter																		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	mV/ A/m	mV/ A/m	mV/ A/m	mV/ A/m	mV/ A/m	mV/ A/m	mV/ A/m	mV/ A/m	mV/ A/m	mV/ A/m										
mm <sup>2</sup>	A	A/m	A	mV/ A/m	A	mV/ A/m	A	mV/ A/m	A	mV/ A/m	A	mV/ A/m	A	mV/ A/m	A	mV/ A/m	A	mV/ A/m	A	A	A	A	mV/ A/m	mV/ A/m	mV/ A/m	mV/ A/m	mV/ A/m	mV/ A/m	mV/ A/m	mV/ A/m	mV/ A/m	mV/ A/m										
1.0	11	44	10.5	38	13.5	44	12	38	15.5	44	14	38	-	44	-	38	-	38	-	44	-	44	-	44	38	38	38	38	38	38	38	38	38									
1.5	14.5	29	13.5	25	17.5	29	15.5	25	20	29	18	25	-	29	-	25	-	25	-	25	-	25	-	25	29	29	29	29	29	29	29	29	29									
2.5	20	18	18	15	24	18	21	15	27	18	25	15	-	18	-	15	-	15	-	15	-	15	-	15	18	18	18	18	18	18	18	18	18									
4	26	11	24	9.5	32	11	28	9.5	37	11	33	9.5	-	11	-	9.5	-	9.5	-	9.5	-	9.5	-	9.5	11	11	11	11	11	11	11	11	11									
6	34	7.3	31	6.4	41	7.3	36	6.4	47	7.3	43	6.4	-	7.3	-	6.4	-	6.4	-	6.4	-	6.4	-	6.4	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3									
10	46	4.4	42	3.8	57	4.4	50	3.8	65	4.4	59	3.8	-	4.4	-	3.8	-	3.8	-	3.8	-	3.8	-	3.8	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4									
16	61	2.8	56	2.4	76	2.8	68	2.4	87	2.8	79	2.4	-	2.8	-	2.4	-	2.4	-	2.4	-	2.4	-	2.4	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8									
25	80	1.80a	73	1.55	101	1.80	89	1.55	114	1.75	104	1.55	131	1.80	114	1.55	110	1.50	146	1.30	1.80	1.55	1.55	1.55	1.55	1.55	1.55	1.55	1.55	1.55	1.55											
35	99	1.30a	89	1.10	125	1.30	110	1.10	141	1.25	129	1.10	162	1.30	143	1.10	137	1.10	181	1.62	1.30	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15												
50	119	1.00a	108	0.85	151	1.00	134	0.85	182	0.95	167	0.84	196	1.00	174	0.84	167	0.82	219	1.97	0.97	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86												
70	151	0.72a	136	0.61	192	0.72	171	0.61	234	0.66	214	0.60	251	0.72	225	0.60	216	0.57	281	2.54	0.69	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63												
95	182	0.56 a	164	0.48	232	0.56	207	0.48	284	0.50	261	0.47	304	0.56	275	0.47	264	0.43	341	3.11	0.54	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51												
120	210	0.47a	188	0.41	269	0.47	239	0.41	330	0.41	303	0.40	352	0.47	321	0.40	308	0.36	396	3.62	0.45	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44												
150	240	0.41a	216	0.36	300	0.41	262	0.36	381	0.34	349	0.34	406	0.41	372	0.34	356	0.30	456	4.19	0.39	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40												
185	273	0.37a	245	0.32	341	0.37	296	0.32	436	0.29	400	0.31	463	0.37	427	0.31	409	0.26	521	4.80	0.35	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36												
240	321	0.33a	286	0.29	400	0.33	346	0.29	515	0.25	472	0.27	546	0.33	507	0.27	485	0.22	615	5.69	0.31	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34												
300	367	0.31a	328	0.27	458	0.31	394	0.27	594	0.22	545	0.25	629	0.31	587	0.25	561	0.190	709	6.59	0.29	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32												
400	-	0.29a	-	0.25	546	0.29	467	0.25	694	0.20	634	0.24	754	0.29	689	0.24	656	0.175	852	7.95	0.27	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31												
500	-	0.28a	-	0.25	626	0.28	533	0.25	792	0.185	723	0.23	868	0.28	789	0.23	749	0.160	982	9.20	0.26	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30												
630	-	0.27a	-	0.24	720	0.27	611	0.24	904	0.175	826	0.22	1005	0.27	905	0.22	855	0.150	1138	10.70	0.25	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29												
800	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
1000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-							

Where more precise calculation requires the use of resistive and reactive components of cable impedance, reference should be made to Table 4D1A and 4D1B of BS 7671.

**Notes:**

- The current carrying capacities in columns 2 & 4 are also applicable to flexible cables to BS EN 50525-2-31 (BS 6004) (HO7V-K) where the cables are used in fixed installations.
- Spacing larger than one cable diameter will result in a larger voltage drop.
- Cables to BS 6231 when installed in conduit or trunking are rated for 70 °C

**Correction Factors  
For Ambient Temperature**

Ambient Temperature 25°C 30°C 35°C 40°C 45°C 50°C 55°C 60°C

Correction Factor 1.03 1.0 0.94 0.87 0.79 0.71 0.61 0.50

## Current Rating of CU/LSZH Wires

**TABLE 2**

Current carrying capacity and associated voltage drop for single core XLPE insulated cables, non-armoured, with or without sheath CU/LSZH 450 / 750 V Wires - BS EN 50525-3-41 (BS 7211)

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

C.S.A.	Conductor		Reference Method A (enclosed in conduit in thermally insulating wall etc.)				Reference Method B (enclosed in conduit on a wall or in trunking etc.)				Reference Method C (clipped direct)				Reference Method F(in free air or on a perforated cable tray horizontal or vertical)						Reference Method G (in free air)			
			2 cables, single-phase a.c. or d.c.		3 or 4 cables three- phase a.c.		2 cables, single-phase a.c. or d.c.		3 or 4 cables three- phase a.c.		2 cables, single-phase a.c. or d.c. and touching		3 or 4 cables three- phase a.c. and touching or trefoil		Touching			Space by one diameter						
	Current carrying capacity	Voltage drop	Current carrying capacity	Voltage drop	Current carrying capacity	Voltage drop	Current carrying capacity	Voltage drop	Current carrying capacity	Voltage drop	Current carrying capacity	Voltage drop	Current carrying capacity	Voltage drop	Current carrying capacity	Voltage drop	Current carrying capacity	Voltage drop	Current carrying capacity	Voltage drop	Horiz	Vert	Single phase	Three phase
mm <sup>2</sup>	A	mV/ A/m	A	mV/ A/m	A	mV/ A/m	A	mV/ A/m	A	mV/ A/m	A	mV/ A/m	A	mV/ A/m	A	mV/ A/m	A	mV/ A/m	A	mV/ A/m	A	mV/ A/m	mV/ A/m	
1	14	46	13	40	17	46	15	40	19	46	17.5	40	-	46	-	40	-	40	-	-	-	46	40	
1.5	19	31	17	27	23	31	20	27	25	31	23	27	-	31	-	27	-	27	-	-	-	31	27	
2.5	26	19	23	16	31	19	28	16	34	19	31	16	-	19	-	16	-	16	-	-	-	19	16	
4	35	12	31	10	42	12	37	10	46	12	41	10	-	12	-	10	-	10	-	-	-	12	10	
6	45	7.9	40	6.8	54	7.9	48	6.8	59	7.9	54	6.8	-	7.9	-	6.8	-	6.8	-	-	-	7.9	6.8	
10	61	4.7	54	4.0	75	4.7	66	4.0	81	4.7	74	4.0	-	4.7	-	4.0	-	4.0	-	-	-	4.7	4.0	
16	81	2.9	73	2.5	100	2.9	88	2.5	109	2.9	99	2.5	-	2.9	-	2.5	-	2.5	-	-	-	2.9	2.5	
25	106	1.90	95	1.65	133	1.90	117	1.65	143	1.85	130	1.60	135	1.85	141	1.60	135	1.60	182	161	1.85	1.65		
35	131	1.35	117	1.15	164	1.35	144	1.15	176	1.35	161	1.15	169	1.35	176	1.15	169	1.15	226	201	1.35	1.20		
50	158	1.05	141	0.90	198	1.05	175	0.90	228	1.00	209	0.87	207	1.00	216	0.87	207	0.87	275	246	1.00	0.89		
70	200	0.75	179	0.65	253	0.75	222	0.65	293	0.71	268	0.61	246	0.71	279	0.62	268	0.61	353	318	0.73	0.65		
95	241	0.58	216	0.50	306	0.58	269	0.50	355	0.52	326	0.45	328	0.52	342	0.46	328	0.45	430	389	0.56	0.49		
120	278	0.48	249	0.42	354	0.48	312	0.42	413	0.43	379	0.37	383	0.43	400	0.38	383	0.37	500	454	0.47	0.42		
150	318	0.43	285	0.37	393	0.43	342	0.37	476	0.36	436	0.31	444	0.36	464	0.32	444	0.31	577	527	0.41	0.37		
185	362	0.37	324	0.32	449	0.37	384	0.32	545	0.30	500	0.26	510	0.30	533	0.28	510	0.26	661	605	0.36	0.33		
240	424	0.33	380	0.29	528	0.33	450	0.29	644	0.25	590	0.22	607	0.25	634	0.24	607	0.22	781	719	0.31	0.29		
300	486	0.31	435	0.27	603	0.31	514	0.27	743	0.22	681	0.195	703	0.22	736	0.21	703	0.195	902	833	0.29	0.27		
400	-	0.29	-	0.25	683	0.29	584	0.25	868	0.20	793	0.175	823	0.20	868	0.195	823	0.175	1085	1008	0.27	0.26		
500	-	0.28	-	0.24	783	0.28	666	0.24	990	0.185	904	0.160	946	0.185	998	0.180	946	0.160	1253	1169	0.26	0.25		
630	-	0.27	-	0.23	900	0.27	764	0.23	1130	0.175	1033	0.150	1088	0.175	1151	0.170	1088	0.150	1454	1362	0.25	0.24		
800	-	-	-	-	-	-	-	-	-	-	1288	0.170	1179	0.145	1214	0.170	1275	0.165	1214	0.145	1581	1485	0.25	0.24
1000	-	-	-	-	-	-	-	-	-	-	1443	0.165	1323	0.140	1349	0.165	1436	0.165	1349	0.140	1775	1671	0.24	0.24

Where more precise calculation requires the use of resistive and reactive components of cable impedance, reference should be made to Table 4E1A and 4EIB of BS 7671.

Notes:

- Where the conductor is to be protected by a semi-enclosed fuse to BS 3036, see item 5.1 of the preface to Appendix 4 of BS 7671
- Spacing larger than those specified in Method C (Table 4A) will result in a larger voltage drop.

### Correction Factors For Ambient Temperature

Ambient Temperature 25°C 30°C 35°C 40°C 45°C 50°C 55°C 60°C 65°C 70°C 75°C 80°C  
Correction Factor 1.03 1.0 0.94 0.87 0.79 0.71 0.61 0.50 0.65 0.58 0.50 0.41

## Current Rating of CU/PVC/PVC 300/500 V Cables

**TABLE 3**

Current carrying capacity for Multicore PVC insulated, PVC sheathed, non-armoured cables as per BS EN 50525-2-31 (BS 6004)

Conductor operating temperature: 70°C Ambient temperature: 30°C For Installation required to comply with BS 7671

Conductor	Reference Method A (enclosed in conduit in the thermally insulating wall etc.)				Reference Method B (enclosed in conduit on a wall or in trunking etc.)				Reference method C (clipped direct)				Reference method F (in free air or on a perforated cable tray etc, horizontal or vertical)			
	1 two-core cable, single-phase a.c. or d.c.		1 three-core or 1 four-core cable, three-phase a.c.		1 two-core cable, single-phase a.c. or d.c.		1 three-core or 1 four-core cable, three-phase a.c.		1 two-core cable, single-phase a.c. or d.c.		1 three-core cable or 1 four-core cable, three-phase a.c.		1 two-core cable, single-phase a.c. or d.c.		1 three-core cable or 1 four-core cable, three phase a.c.	
C.S.A.	Current carrying capacity	Voltage drop	Current carrying capacity	Voltage drop	Current carrying capacity	Voltage drop	Current carrying capacity	Voltage drop	Current carrying capacity	Voltage drop	Current carrying capacity	Voltage drop	Current carrying capacity	Voltage drop	Current carrying capacity	Voltage drop
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
mm <sup>2</sup>	A	mV/A/m	A	mV/A/m	A	mV/A/m	A	mV/A/m	A	mV/A/m	A	mV/A/m	A	mV/A/m	A	mV/A/m
1.0	11	44	10	38	13	44	11.5	38	15	44	13.5	38	17	44	14.5	38
1.5	14	29	13	25	16.5	29	15	25	19.5	29	17.5	25	22	29	18.5	25
2.5	18.5	18	17.5	15	23	18	20.	15	27	18	24	15	30	18	25	15
4	25	11	23	9.5	30	11	27	9.5	36	11	32	9.5	40	11	34	9.5
6	32	7.3	29	6.4	38	7.3	34	6.4	46	7.3	41	6.4	51	7.3	43	6.4
10	43	4.4	39	3.8	52	4.4	46	3.8	63	4.4	57	3.8	70	4.4	60	3.8
16	57	2.8	52	2.4	69	2.8	62	2.4	85	2.8	76	2.4	94	2.8	80	2.4
25	75	1.75	68	1.50	90	1.75	80	1.50	112	1.75	96	1.50	119	1.75	101	1.50
35	92	1.25	83	1.10	111	1.25	99	1.10	138	1.25	119	1.10	148	1.25	126	1.10
50	110	0.94	99	0.81	133	0.94	118	0.81	168	0.94	144	0.81	180	0.94	153	0.81
70	139	0.65	125	0.57	168	0.65	149	0.57	213	0.65	184	0.57	232	0.65	196	0.57
95	167	0.50	150	0.43	201	0.50	179	0.43	258	0.50	223	0.43	282	0.50	238	0.43
120	192	0.41	172	0.35	232	0.41	206	0.35	299	0.41	259	0.35	328	0.41	276	0.35
150	219	0.34	196	0.29	258	0.34	225	0.29	344	0.34	299	0.29	379	0.34	319	0.29
185	248	0.29	223	0.25	294	0.29	255	0.25	392	0.29	341	0.25	434	0.29	364	0.25
240	291	0.24	261	0.21	344	0.24	297	0.21	461	0.24	403	0.21	514	0.24	430	0.21
300	334	0.21	298	0.185	394	0.21	339	0.185	530	0.21	464	0.185	593	0.21	497	0.185
400	-	0.185	-	0.160	470	0.185	402	0.160	634	0.185	557	0.160	715	0.185	597	0.160

Where more precise calculation requires the use of resistive and reactive components of cable impedance, reference should be made to Table 4D2A and 4D2B of BS 7671.

**Correction Factors  
For Ambient Temperature**

Ambient Temperature 25°C 30°C 35°C 40°C 45°C 50°C 55°C 60°C

Correction Factor 1.03 1.0 0.94 0.87 0.79 0.71 0.61 0.50

For grouping refer to Table 4C1 of BS 7671

## Current Rating for Flat Cables

**TABLE 4**

Current carrying capacity and associated voltage drop for thermoplastic (PVC) insulated and Sheathed flat cable with protective earth continuity conductor for CU/PVC/PVC Cables

BS EN 50525-2-31 (BS 6004)

Conductor operating temperature: 70°C Ambient temperature: 30°C

For installation required to comply with BS 7671

Conductor mm <sup>2</sup>	Reference method 100 ( above a plasterboard ceiling covered by thermal insulation not exceeding 100mm in thickness)	Reference method 101 ( above a plasterboard ceiling covered by thermal insulation not exceeding 100mm in thickness)	Reference method 102 (in a stud wall with thermal insulation with cable touching the inner surface wall)	Reference method 103 (in a stud wall with thermal insulation with cable not touching the inner surface wall)	Reference method C (slipped direct)	Reference method A (enclosed in conduit in an insulated wall)	Voltage drop mV/A/m
1	2	3	4	5	6	7	8
mm <sup>2</sup>	A	A	A	A	A	A	mV/A/m
1	13	10.5	13	8	16	11.5	44
1.5	16	13	16	10	20	14.5	29
2.5	21	17	21	13.5	27	20	18
4	27	22	27	17.5	37	26	11
6	34	27	35	23.5	47	32	7.3
10	45	36	47	32	64	44	4.4
16	57	46	63	42.5	85	57	2.8

**Notes:**

Wherever practicable a cable is to be fixed in a position such that it will not be covered with thermal insulation, reference should be made to Table 4D5 of BS 7671

**Correction Factors**

**For Alternative Ambient Temperatures**

Ambient Temperature 25°C 30°C 35°C 40°C 45°C 50°C 55°C 60°C

Correction Factor 1.03 1.0 0.94 0.87 0.79 0.71 0.61 0.50



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