

# COPPER CONDUCTOR MULTI CORE BS 5467 SWA PVC 0.6/1KV CABLE



## APPLICATION

Multi-core PVC cable with steel wire armour (SWA). Power and auxiliary fixed wiring cables for use in power networks, underground, outdoor and indoor applications and for use in cable ducting.

## CHARACTERISTICS

**Voltage Rating** U<sub>o</sub>/U  
0.6/1kV

**Temperature Rating**  
Fixed: -25°C to +90°C

**Minimum Bending Radius**  
1.5mm<sup>2</sup> to 16mm<sup>2</sup> - Fixed: 6 x overall diameter  
25mm<sup>2</sup> and above - Fixed: 8 x overall diameter

## CONSTRUCTION

**Conductor**  
Class 2 stranded copper conductor

**Insulation**  
XLPE (Cross-Linked Polyethylene)

**Bedding**  
PVC (Polyvinyl Chloride)

**Armour**  
SWA (Steel Wire Armour)

**Sheath**  
PVC (Polyvinyl Chloride)

## CABLE THIRD-PARTY ACCREDITATIONS

Cables are type tested and accredited by Kenya Bureau and Standards (KEBS)

## STANDARDS

KS IEC/EN 60502-1, IEC/EN 60228  
Flame Retardant according to IEC/EN 60332-1-2



## CORE IDENTIFICATION

1 core: Red Black  
2 core: Red Black  
3 core: Red Yellow Blue  
4 core: Red Yellow Blue Black  
5 core and above: Red Yellow  
 Green/yellow Blue Black

**Sheath Colour**  
● Black



**DIMENSIONS**

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NO. OF CORES	NOMINAL CROSS SECTIONAL AREA (mm)	NOMINAL THICKNESS OF INSULATION (mm)	NOMINAL DIAMETER (mm)		NOMINAL WEIGHT kg/km	BW/CW GLAND	WRAPARO UND CLEATS
			Under Armour	Overall			
2	1.5	0.6	7.3	12.1	302	20S	CC5
2	2.5	0.7	8.5	13.6	346	20S	CC6
2	4	0.7	9.4	14.7	410	20S	CC7
2	6	0.7	10.5	15.9	499	20	CC7
2	10	0.7	12.3	18	648	20	CC8
2	16	0.7	14.3	20.4	978	20	CC9
2	25	0.9	14.7	20.4	1290	25	CC9
2	35	0.9	16.8	23.3	1500	25	CC10
2	50	1	19	25.8	1890	25	CC11
2	70	1.1	22	29	2450	32	CC12
2	95	1.1	25.1	33.1	3300	32	CC14
2	120	1.2	27.9	36.1	4020	40	CC16
2	150	1.4	30.9	39.3	4750	40	CC16
3	1.5	0.6	7.8	12.6	330	20S	CC5
3	2.5	0.7	9.2	14.1	390	20S	CC6
3	4	0.7	10	15.3	464	20S	CC7
3	6	0.7	11.2	16.6	568	20	CC7
3	10	0.7	13.1	19.5	866	20	CC8
3	16	0.7	15.3	21.6	1152	25	CC9
3	25	0.9	18.9	23.6	1800	25	CC11
3	35	0.9	21.3	25.7	2230	32	CC12
3	50	1	21.7	28.5	2490	32	CC12
3	70	1.1	25.2	32.2	3290	32	CC14
3	95	1.1	28.8	37	4440	40	CC16
3	120	1.2	32	40.4	5470	40	CC16
3	150	1.4	35.9	45.5	6930	50S	CC18
3	185	1.6	40	49.8	8350	63S	CC20
3	240	1.7	44.9	55.1	10400	63S	
3	300	1.8	49.8	60.2	12600	63S	
3	400	2	55.8	66.6	14600	75S	
4	1.5	0.6	8.5	13.3	365	20S	CC6
4	2.5	0.7	9.9	15	438	20S	CC6
4	4	0.7	11	16.4	532	20	CC7
4	6	0.7	12.3	18.7	764	20	CC8
4	10	0.7	14.5	21.1	1013	25	CC9
4	16	0.7	17	23.4	1360	25	CC10
4	25	0.9	21	26.1	2160	32	CC11
4	35	0.9	23.6	28.6	2690	32	CC12
4	50	1	25	32	3130	32	CC14
4	70	1.1	29.5	37.7	4500	40	CC16
4	95	1.1	33.3	41.7	5600	50S	CC18
4	120	1.2	37.5	47.1	7400	50	CC20
4	150	1.4	41.6	51.4	8780	50	
4	185	1.6	46.4	56.6	10630	63S	



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4	240	1.7	52.6	63	13390	63	
4	300	1.8	58	68.8	16290	75S	
4	400	2	65.4	78.1	19800	90	
5	1.5	0.6	9.7	14.3	410	20S	CC6
5	2.5	0.7	11.7	16.1	470	20S	CC7
5	4	0.7	13	17.8	710	20	CC7
5	6	0.7	14.5	20	876	25	CC8
5	10	0.7	17.2	22.9	1165	25	CC10
5	16	0.7	20	26.6	1742	32	CC11
5	25	0.9	24.7	31.5	2323	32	CC14
5	35	0.9	27.8	34.8	2932	40	CC14
5	50	1	32.4	40.4	4192	50S	CC16
7	1.5	0.6	10.2	15.2	470	20S	CC6
7	2.5	0.7	12.3	17.1	600	20	CC7
7	4	0.7	13.6	19.1	881	20	CC8
12	1.5	0.6	13.7	19.4	780	20	CC8
12	2.5	0.7	16.3	22.4	1000	25	CC9
19	1.5	0.6	16.2	22.2	1000	25	CC9
19	2.5	0.7	19.9	26.6	1540	25	CC11
27	1.5	0.6	20	26.7	1500	32	CC11
27	2.5	0.7	24	30.7	1950	32	CC14
37	1.5	0.6	22.3	29	1800	32	CC12
37	2.5	0.7	26.9	33.8	2350	40	CC14



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## CONDUCTORS

### Class 2 Stranded Conductors for Single Core and Multi-Core Cables

NOMINAL CROSS SECTIONAL AREA mm <sup>2</sup>	MINIMUM NO. OF WIRES IN CONDUCTOR						MAXIMUM RESISTANCE OF CONDUCTOR AT 20°C ohms/km
	Circular		Circular Compacted		Shaped		Annealed Copper Conductor
	Cu	Al	Cu	Al	Cu	Al	Plain Wires
1.5	7	-	6	-	-	-	12.1
2.5	7	-	6	-	-	-	7.41
4	7	-	6	-	-	-	4.61
6	7	-	6	-	-	-	3.08
10	7	7	6	6	-	-	1.83
16	7	7	6	6	-	-	1.15
25	7	7	6	6	6	6	0.727
35	7	7	6	6	6	6	0.524
50	19	19	6	6	6	6	0.387
70	19	19	12	12	12	12	0.268
95	19	19	15	15	15	15	0.193
120	37	37	18	15	18	15	0.153
150	37	37	18	15	18	15	0.124
185	37	37	30	30	30	30	0.0991
240	37	37	34	30	34	30	0.0754
300	61	61	34	30	34	30	0.0601
400	61	61	53	53	53	53	0.047



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## ELECTRICAL CHARACTERISTICS XLPE/PVC/SWA/PVC

### Current Carrying Capacity

NOMINAL CROSS SECTIONAL AREA	REFERENCE METHOD C (CLIPPED DIRECT)		REFERENCE METHOD E (IN FREE AIR OR ON A PERFORATED CABLE TRAY, HORIZONTAL OR VERTICAL)		REFERENCE METHOD D (DIRECT IN GROUND OR IN DUCTING IN GROUND, IN OR AROUND BUILDINGS)	
	Amps		Amps		Amps	
mm <sup>2</sup>	1 Two Core Cable Single-Phase	1 Three or 1 Four Core Cable Three-Phase	1 Two Core Cable Single-Phase	1 Three or 1 Four Core Cable Three-Phase	1 Two Core Cable Single-Phase	1 Four Core Cable Three-Phase
	AC or DC	AC	AC or DC	AC	AC or DC	AC
1.5	27	23	29	25	25	21
2.5	36	31	39	33	33	28
4	49	42	52	44	43	36
6	62	53	66	56	53	44
10	85	73	90	78	71	58
16	110	94	115	99	91	75
25	146	124	152	131	116	96
35	180	154	188	162	139	115
50	219	187	228	197	164	135
70	279	238	291	251	203	167
95	338	289	354	304	239	197
120	392	335	410	353	271	223
150	451	386	472	406	306	251
185	515	441	539	463	343	281
240	607	520	636	546	395	324
300	698	599	732	628	446	365
400	787	673	847	728	-	570

Air ambient temperature:  
30°C Ground ambient  
temperature: 20°C  
Conductor operating temperature: 90°C

#### Notes

- 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 of the 17th Edition of IEE Wiring Regulations).
- 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 4D4A) must be used (see also Regulation 523.1 of the 17th Edition of IEE Wiring Regulations).

The above table is in accordance with Table 4E4A of the 18th Edition of IEE Wiring Regulations BS7671 and IEC 60364-5-52



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## VOLTAGE DROP

NOMINAL CROSS SECTIONAL AREA mm <sup>2</sup>	TWO CORE CABLE DC	TWO CORE CABLE SINGLE-PHASE AC			THREE OR FOUR CORE CABLE THREE-PHASE AC		
		mV/A/m			mV/A/m		
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	0.14	0.19	0.115	0.12	0.165

Conductor operating temperature: 90°C

R = Resistive Component

x = Reactive Component

z = Impedance Value

The above table is in accordance with Table 4E4B of the 18th Edition of IEE Wiring Regulations BS7671 and IEC 60364-5-52

For cables having conductors of 16mm<sup>2</sup> or less cross sectional area their inductances can be ignored and (mV/A/m) r values only are tabulated. For cables having conductors greater than 16mm<sup>2</sup>, 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 18th Edition of IEE Wiring Regulations BS7671



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