

SINGLE CORE CU/ PVC /PVC (6181Y)



APPLICATION

Fixed installation in dry or damp areas for domestic and light industrial wiring. Also used in connection to (smart) meters.

CHARACTERISTICS

Voltage Rating U₀/U
300/500V

Temperature Rating
Fixed: -15°C to +70°C

Minimum Bending Radius

Up to 6mm² - Fixed: 3 x overall diameter
10mm² to 25mm² - Fixed: 4 x overall diameter

CONSTRUCTION

Conductor

1mm² to 2.5mm²: Class 1 solid copper conductor
4mm² to 25mm²: Class 2 stranded copper conductor

Insulation

PVC (Polyvinyl Chloride)

Sheath

PVC (Polyvinyl Chloride)

Insulation Colour

- Blue
- Brown

Sheath Colour

- Grey

CABLE THIRD-PARTY ACCREDITATION

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

STANDARDS

KS -EAS 114 , KS-IEC 60228

Flame Retardant according to IEC/EN 60332-1-2



DIMENSIONS

NOMINAL CROSS SECTIONAL AREA mm ²	NOMINAL DIAMETER OF CONDUCTOR mm	NOMINAL THICKNESS OF INSULATION mm	NOMINAL THICKNESS OF SHEATH mm	NOMINAL OVERALL DIAMETER mm	NOMINAL WEIGHT kg/km
1	1.13	0.6	0.8	4.1	28
1.5	1.38	0.7	0.8	4.6	34
2.5	1.76	0.8	0.8	5.3	49
4	2.5	0.8	0.9	6.1	75
6	3	0.8	0.9	6.7	99
10	3.85	1	0.9	8.1	155
16	4.8	1	1.0	9.3	225
25	5.9	1.2	1.1	11.1	340

COLOUR CODES

COLOUR	Blue	Brown
CODE	BL	BR

CONDUCTORS

Class 1 Solid Conductors for Single Core and Multi-Core Cables

NOMINAL CROSS SECTIONAL AREA mm ²	MAXIMUM RESISTANCE OF CONDUCTOR AT 20°C ohms/km		
	Plain Wires	Circular, Annealed Copper Conductors	Metal-Coated Wires
1	18.1		18.2
1.5	12.1		12.2
2.5	7.41		7.56

The above table is in accordance with EN 60228

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

NOMINAL CROSS SECTIONAL AREA mm ²	MINIMUM NO. OF WIRES IN CONDUCTOR mm						MAXIMUM RESISTANCE OF CONDUCTOR AT 20°C ohms/km	
	Circular		Circular Compacted		Shaped		Annealed Copper Conductor	
	Cu	Al	Cu	Al	Cu	Al	Plain Wires	Metal-Coated Wires
4	7	-	6	-	-	-	4.61	4.7
6	7	-	6	-	-	-	3.08	3.11
10	7	7	6	6	-	-	1.83	1.84
16	7	7	6	6	-	-	1.15	1.16
25	7	7	6	6	6	6	0.727	0.734

The above table is in accordance with EN 60228



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ELECTRICAL CHARACTERISTICS

Current Carrying Capacity

NOMINAL CROSS SECTIONAL AREA mm ²	REFERENCE METHOD A (ENCLOSED IN CONDUIT IN THERMALLY INSULATING WALL ETC) Amps		REFERENCE METHOD A (ENCLOSED IN CONDUIT IN THERMALLY INSULATING WALL ETC) Amps		REFERENCE METHOD C (CLIPPED DIRECT) Amps		REFERENCE METHOD F (IN FREE AIR OR ON A PERFORATED CABLE TRAY ETC HORIZONTAL OR VERTICAL ETC) Amps				
	2 Cables Single-Phase AC or DC	3 or 4 Cables Three-Phase AC	2 Cables Single-Phase AC or DC	3 or 4 Cables Three-Phase AC	2 Cables Single-Phase AC or DC	3 or 4 Cables Three-Phase AC	Touching			Spaced by one diameter Cables Single-Phase AC or DC or Cables Three-Phase AC flat	
							2 Cables Single-Phase AC or DC flat	3 Cables Three-Phase AC flat	3 Cables Three-Phase AC trefoil	Horizontal	Vertical
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

Ambient temperature: 30°C

Conductor operating temperature: 70°C

The above table is in accordance with Table 4D1A of the 18th Edition of IEE Wiring Regulations BS7671 and IEC 60364-5-52.

VOLTAGE DROP

NOMINAL CROSS SECTIONAL AREA mm ²	2 CABLES DC mV/A/m	2 CABLES SINGLE-PHASE AC mV/A/m						3 OR 4 CABLES THREE-PHASE AC mV/A/m														
		Reference Methods A and B enclosed in conduit or trunking)			Reference Methods C, F and G (clipped direct, on tray or in free air)			Reference Methods A and B enclosed in conduit or trunking)			Reference Methods C, F and G (clipped direct, on tray or in free air)											
		Cables Touching			Cables Spaced*						Cables touching, Trefoil			Cables touching, Flat			Cables spaced*, Flat					
1	44	44			44			38			38			38			38					
1.5	29	29			29			25			25			25			25					
2.5	18	18			18			15			15			15			15					
4	11	11			11			9.5			9.5			9.5			9.5					
6	7.3	7.3			7.3			6.4			6.4			6.4			6.4					
10	4.4	4.4			4.4			3.8			3.8			3.8			3.8					
16	2.8	2.8			2.8			2.4			2.4			2.4			2.4					
25	1.75	r	x	z	r	x	z	r	x	z	r	x	z	r	x	z	r	x	z	r	x	z
		1.80	0.33	1.80	1.75	0.20	1.75	1.75	0.29	1.80	1.50	0.29	1.55	1.50	0.175	1.50	0.15	0.25	1.55	1.50	0.32	1.55

Conductor operating temperature: 70°C r =

Resistive Component

x = Reactive Component z =

Impedance Value

* Spacing's larger than one cable diameter will result in larger volt drop.



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DE-RATING FACTORS

For Ambient Air Temperatures other than 30°C

AMBIENT TEMPERATURE	25°C	30°C	35°C	40°C	45°C	50°C	55°C	60°C
DE-RATING FACTOR	1.03	1.00	0.94	0.87	0.79	0.71	0.61	0.50



All of the above information, including drawings, illustrations and graphic designs, reflects our present understanding and is to the best of our knowledge and belief correct reliable. Users, however, should independently evaluate the suitability of each product for the desired application. Under no circumstances does this constitute an assurance any particular quality or performance. Such an assurance is only provided in the context of our product specifications or explicit contractual arrangements. Our liability for products set forth our standard terms and conditions of sale



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