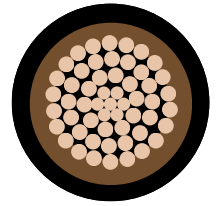




6181Y

Non-Armoured PVC Power Cable



DESCRIPTION

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)

APPLICATION

Suitable for fixed installation in dry or damp locations for domestic, commercial, and light industrial wiring. Also widely used for connections to conventional and smart metering systems.

TECHNICAL DATA

Voltage Grade: 300/500V

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

Min Bending Radius: Up to 6mm² - Fixed: 3 x OD
10mm² to 25mm² - Fixed: 4 x OD

Approvals/Standards: BS 6004, EN 60228
Flame Retardant according to IEC/EN 60332-1-2

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No. of Cores	Nom. CSA	Nom. Diameter of Cond.	Nom. Thickness of Insulation	Nom. OD	Nom. Weight
	mm ²	mm	mm	mm	Kg/Km
1	1	1.13	0.6	4.1	28
1	1.5	1.38	0.7	4.6	34
1	2.5	1.76	0.8	5.3	49
1	4	2.5	0.8	6.1	75
1	6	3	0.8	6.7	99
1	10	3.85	1	8.1	155
1	16	4.8	1	9.3	225
1	25	5.9	1.2	11.1	340

ALL FIGURES QUOTED ARE APPROXIMATE

Nom. CSA	Max. Resistance of Conductor at 20°C ohms/km	
	Circular, Annealed Copper Conductors	
mm ²	Plain Wires	Metal-Coated Wires
1	18.1	18.2
1.5	12.1	12.2
2.5	7.41	7.56

ALL FIGURES QUOTED ARE APPROXIMATE

Nom. CSA	Min. No. of Wires in Conductor						Max. Resistance of Conductor at 20°C	
	Circular		Circular Compacted		Shaped		ohms/km	
mm ²	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	-	-	-	1.83	1.84
16	7	7	6	6	-	-	1.15	1.16
25	7	7	6	6	6	6	0.727	0.734

ALL FIGURES QUOTED ARE APPROXIMATE

De-Rating Factor								
Ambient Temp. (°C)	25	30	35	40	45	50	55	60
De-Rating Factor	1.03	1.00	0.94	0.87	0.79	0.71	0.61	0.50

For Ambient Air Temperatures other than 30°C

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Non-Armoured PVC Power Cable

Current Carrying Capacity											
Nom. CSA	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				
							Touching			Spaced by one diameter 2 Cables Single-Phase AC or DC or 3 Cables Three- Phase AC flat	
mm ²	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	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

ALL FIGURES QUOTED ARE APPROXIMATE

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

VOLTAGE DROP																						
Nom. CSA	2 CABLES DC	2 CABLES SINGLE-PHASE AC									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)											
mm²	mV/A/m										Cables touching, Trefoil			Cables touching, Flat			Cables spaced*, Flat					
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	1.80	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

ALL FIGURES QUOTED ARE APPROXIMATE

Conductor operating temperature: 70°C, r = Resistive Component, x = Reactive Component, z = Impedance Value

* Spacings larger than one cable diameter will result in larger volt drop.

E&OE. Manufacturers reserve the right to amend the specification without prior notice.

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